Economic and Environmental Effects of Switchgrass Production on a Representative Cow-Calf Farm in Middle Tennessee

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ABSTRACT

The purpose of this research was to evaluate the economic tradeoffs and land use dynamics of incorporating switchgrass into the farm plan of a representative middle Tennessee cow-calf operation. A net revenue simulation and multi-year mathematical programming model was used to find the optimum mix of switchgrass and cow-calf enterprises that will maximize whole farm net revenues over 30 years on a representative middle Tennessee beef farm under both average and above average management. Land use changes predicted by the mathematical programming model were used to assess the carbon change associated with incorporating, or transitioning to, switchgrass production.

For a wide range of output prices, switchgrass production was found to be not only competitive with, but generally more profitable than cow-calf production in the region. When whole farm net revenues were maximized over time, all cattle was typically sold off within the first five years and switchgrass was produced on all farm acres at the end of the 30 year period. This finding was consistent across all switchgrass prices, discount rates, and operating capital levels used in the optimization models. On-farm greenhouse gas emissions appear to be reduced when acreage is transitioned from cow-calf production to switchgrass production, but this may result in a carbon leakage to a nearby region merely displacing emissions rather than offsetting emissions. Results of this research may be used to encourage Middle Tennessee cow-calf producers to begin growing switchgrass as a means of increasing net revenues.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I
PROBLEM IDENTIFICATION AND EXPLANATION

Introduction

In December 2009, representatives from almost 200 countries convened in Copenhagen for the 15th Conference of Parties to the UN Framework Convention on Climate Change (COP15). The goal of the COP15 was to design a framework that would extend the carbon emissions standards set by the Kyoto Protocol beyond their expiration in 2012 (Dell'Amore 2009). Out of the COP15 came the draft Copenhagen Accord which recognizes controlling global warming as "one of the greatest challenges of our time," (United Nations 2009) and sets a policy objective to limit the increase in global temperatures to within 3.6°F of current temperatures by significantly reducing global carbon emissions (United Nations 2009).

The UN's Intergovernmental Panel on Climate Change associates the increase in global temperatures with human activities that release greenhouse gasses into the atmosphere such as deforestation and the burning of fossil fuels, such as coal and oil, to produce energy and run automobiles (Dell'Amore 2009). Agricultural activities also play an important role in global climate change. According to Cole et al. (1997) about one-fifth of emissions associated with man-made climate change are released during agricultural production, with nitrous oxide and methane making up 50-70% of agriculture related emissions.

In addition to the United States' cooperation with other countries at the COP15 to reduce emissions, the Energy Independence and Security Act (EISA) of 2007 outlines a Renewable Fuel Standard that requires domestic production of 36 billion gallons of renewable fuel by 2022 (US EPA 2010). Switchgrass grown as a dedicated energy crop has been suggested as a potential source of cellulosic feedstock to produce renewable fuels (McLaughlin and Kszos 2005). Switchgrass (Panicum virgatum) is a perennial, warm-weather, prairie grass species native to the United States and may be instrumental in meeting both the goal of the Copenhagen Accord and the EISA. Switchgrass has the potential to produce up to 15.6 tons per acre of dry matter, while establishing an extensive root system that can reach up to 8.2 feet deep (Liebig et al 2005). It is believed that because of its deep root system, switchgrass has the potential to sequester significant amounts of carbon as soil organic carbon (Liebig et al 2005). Perennial switchgrass may also be ideal for production on marginal lands that are subject to soil erosion (McLauglin and Kzsos 2005).

According to the Office of Bioenergy Programs at the University of Tennessee (2010), the Tennessee Biofuels Initiative was created in 2007 to develop a biobased fuels, power, and products industrial sector in Tennessee using switchgrass as a the primary feedstock . As a first step, the University of Tennessee has partnered with DuPont Danisco Cellulosic Ethanol to build a cellulosic ethanol pilot bio-refinery in Vonore, Tennessee, capable of producing 250,000 gallons of ethanol annually from corncobs and switchgrass (Dupont Danisco Cellulosic Ethanol 2010). The Initiative has contracted with 61 farmers in east Tennessee to establish approximately 5,100 acres of switchgrass

(James Larson, personal communication, 2010). The Office of Bioenergy Programs (2010) believes that, depending on market conditions and success with the pilot biorefinery, commercial switchgrass production may eventually displace as much as 30% of Tennessee's present petroleum-based fuel consumption.

The State of Tennessee ranks 20th in the United States in beef cattle production with more than $600 million earned in 2007 (USDA NASS 2007). Beef cattle production is the largest user of agricultural land in the state with over 5.5 million acres designated for beef production, which is just over 50% of the total acreage in farmland within the State of Tennessee (USDA NASS 2007). Bates and Keyser (2010) suggest that switchgrass may be a viable forage crop for beef production due to its high yields, adequate levels of crude protein, and a growing season which compliments that of tall fescue. Additionally, switchgrass can be managed using the same agricultural equipment used for the cultivation of hay and pastureland (McLaughlin et al. 2002).

McLauglin, et al. (2002) states that under certain circumstances switchgrass production could be more profitable per acre than conventional crops. Currently, limited information is available on how switchgrass production competes with, or may affect, beef cattle production within Tennessee. Griffith (2009) performed an initial analysis of the prices and incentives that could induce switchgrass production as an alternative to traditional agricultural activities on a representative east Tennessee farm. His study area included three primary soil types: 1) Dewey; 2) Dandridge; and 3) Dunmore. The Dunmore and Dewy soils are more productive and better suited to row cropping than the Dandridge, which is less productive (Griffith 2009). Cow-calf production was found to be the most efficient enterprise on the more marginal Dandridge soil when switchgrass production was not included in the enterprise alternatives. When a switchgrass alternative was included it was found to be the most efficient enterprise on Dandridge soil depending on the contract incentives and subsidies provided for the establishment of the switchgrass stand. Griffith (2009) included risk when assessing efficiency and indicated that on more marginal soils, switchgrass production can be competitive due to the higher risk associated with cow-calf production.

Griffith's (2009) research, while finding switchgrass to be competitive with cattle production under certain circumstances, did not include management intensity for the cow-calf operation, nor did it consider the dynamics of transitioning land use from one farm enterprise to another. This research will expand on the analysis conducted by Griffith by evaluating the impacts of alternative beef cattle management regimes on net revenues and land use change over time resulting from the adoption of biomass crops and the influence of constraints such as access to land, operating capital, and labor. The type of cattle management conducted at a cow-calf production farm—which may include culling rates, feed and/or backgrounding, and reproduction management—may affect the overall net revenues. It will also provide a multi-year plan to maximize whole farm net revenues through an optimized mix of land use activities. This will allow for a better understanding of the conditions under which dedicated switchgrass production may occur in order to meet biofuel production goals in Tennessee. It may also provide a framework for analyzing these conditions in other regions in the United States in order to meet overall biofuel production goals for the country.

A more detailed analysis of the input costs and carbon emissions under varying beef cattle farm management regimes and switchgrass production will allow for a better understanding of the conditions under which dedicated switchgrass production may occur in order to meet biofuel production goals in Tennessee. It may also provide a framework for analyzing these conditions in other regions in the United States in order to meet overall biofuel production goals for the country.

Research Objectives

The objectives of this research are: 1) to evaluate the economic tradeoffs of incorporating switchgrass into the farm plan of a representative middle Tennessee cow-calf operation under both average and above average management regimes; 2) to find the optimum mix of switchgrass and cow-calf enterprises that will maximize whole farm net revenues over 30 years on a representative middle Tennessee beef farm under both average and above average management regimes; and 3) to assess the net carbon and energy change associated with incorporating, or transitioning to, switchgrass production on a representative middle Tennessee beef farm under both typical and above average management regimes.

Thesis Outline

The following chapters review relevant literature, describe methods and procedures, report results, and summarize findings with respect to potential future research. The literature review covers research surrounding switchgrass production as feedstock for ethanol, switchgrass production in the Tennessee area, beef-cattle production, beef cattle and switchgrass production, and life cycle analysis and carbon flux studies surrounding switchgrass and livestock production. The methods and procedures section describes the conceptual framework and outlines the assumptions made about the average and above average representative farms. It also contains formulas used in this analysis as well as the methods used to gather data that was input into the farm net revenue budgets, optimization models, and carbon flux analysis. The results section describes the whole farm net revenue results for representative farms under average and above average management as well as output generated by the multi-period optimization and changes in carbon emissions associated with a transition from beef cattle production to beef cattle and/or switchgrass production over time. The final part of the thesis outlines the conclusions and limitations of the representative farm simulation and optimization analysis.

CHAPTER II
LITERATURE REVIEW

Switchgrass as a Bioenergy Feedstock

Several studies have been conducted on the potential of switchgrass and concluded that it has great potential as a dedicated energy crop because of its ability to produce high yields on marginal soils (Liebig et al. 2005; McLaughlin et al. 2002; McLaughlin and Kzsos 2005; Mooney et al. 2009).

McLaughlin and Kszos (2005) reviewed the efforts of the ten-year Department of Energy (DOE) sponsored research programs evaluating and developing switchgrass production as a feedstock for the production of biobased fuels, power, and products. Emphasis on switchgrass was based on several factors such as its high levels of productivity compared with other herbaceous crops, its perennial nature, its soil and wildlife enhancing properties, its adaptability to poor soils, and its ability to be managed using equipment and techniques already familiar to the farming community. Ten years of research has resulted in significant contributions to the goal of developing switchgrass as a bioenergy feedstock. Identification of high yielding varieties of switchgrass and of the best management practices for harvesting– single harvest versus multiple harvest –and nitrogen application have increased productivity and may have reduced production costs by $7.27 per dry ton. This savings could result in a gain of more than $1 billion in improved profitability for producers each year. Societal benefits from an increase in farm incomes are projected at $6 billion per year.

McLaughlin et al. (2002) focused on the social and environmental consequences of increased cultivation of switchgrass for bioenergy. Using the Policy Analysis System (POLYSYS) agricultural policy simulation model they found that an increase in the area devoted to the production of switchgrass would result in a decrease in the area devoted to food crop production. This decrease in food crop production would lead to an increase in food crop prices which in turn would lead to a decrease in Loan Deficiency Program payments by the government. Increased production of switchgrass would also result in several ecological benefits such as better stabilized soil, reduced erosion, improved water quality through a decrease in chemical runoff, less nitrogen lost from soils compared to food crop production, and increased wildlife habitat particularly on Conservation Reserve Program lands.

McLaughlin et al (2002) suggested that at a price of $40 per dry ton of bioenergy feedstock, slightly lower than the estimated breakeven price estimated by Mooney et al. (2009), about 3.48 million acres of pastureland would be converted to switchgrass production. The study also indicated that for each dry ton of biomass cultivated for energy 0.091 tons of carbon is contributed back to the soil per year. In addition, savings in GHG emissions plus Soil Organic Carbon (SOC) sequestration could reduce overall GHG emissions by 1.16 to 4.19 tons per acre per year of planted switchgrass. By these estimates, if 3.48 million acres of pastureland were converted to switchgrass production, the State of Tennessee could potentially sequester 1.63 to 5.90 tons of carbon per acre per year in soils.

Epplin (1996) estimated the cost to produce and deliver switchgrass to an ethanol facility in the Southern Plains. This study assumed a vertical integration model of production and transport in which the ethanol conversion facility would be responsible for all aspects of switchgrass production and transport. Delivered costs were based yields of 4.02 dry tons per acre. The estimated delivered cost of $33.64 per dry ton was, according to Epplin (1996), lower than those calculated for other regions. This study attributes lower costs to the vertically integrated system's ability to take advantage of economies of scale. Epplin (1996) also assumed a continuous flow of biomass from the field to the conversion facility with switchgrass harvesting beginning in June and continuing through December. The longer harvest window assumed that the harvest date would have no effect on biomass yield or quality, although other studies have found that switchgrass stands harvested after the growing season may have dry matter yields twice as large as stands that are cut twice yearly and three times as much as the fields that are cut three times a year (Cuomo et al. 1996).

Epplin et al. (2007) analyzed two potential incentive structures that may achieve the conversion of 50-100 million acres of land to dedicated switchgrass production as a bioenergy feedstock. The first assumes the biorefinery would be responsible for the production, harvest, transport, and storage of switchgrass cultivated on land on which the refinery has long-term leases. The second assumes the bio-refinery would enter into long-term contracts with individual farmers who would be responsible for production and harvest, while the refinery would be responsible for transport and storage.

Under the first incentive structure two harvest systems were modeled by Epplin et al. (2007) with each having a different window of time available for harvest, one had eight months available while the other had two months. The eight-month model resulted in a total cost of $48.88 per delivered dry ton of feedstock while the two-month model resulted in a total cost of $65.29 per delivered dry ton of feedstock. Harvest cost per ton contributed significantly to the higher resulting cost of the two-month harvest window model due to the number of times that acreage had to be mowed. Additionally, raking-baling-stacking activity costs were significantly greater than those required for the eight-month model. However, the two-month model required fewer acres be cultivated as it had a higher total yield than the eight-month model. The eight-month model used machine hours more efficiently as fewer passes over the same land were required, resulting in a lower delivery cost for feedstock. The study indicates that the length of the harvest window is important in determining the costs associated with switchgrass production under a vertically integrated system.

Under the second incentive structure studied by Epplin et al. (2007), the University of Tennessee used a competitive bidding process to determine what incentive would be necessary to encourage farmers to produce switchgrass. Contracts for 96 acres were awarded to five bidders for the production of switchgrass on individual acreages ranging from 12-30 acres. The weighted average of the accepted bids was $54.70 per dry ton while a weighted average of $35.99 per dry ton was estimated for the low cost bidders. When transportation costs are included, the price for delivered feedstock ranged from $48 to $67 per dry ton, comparable to the costs estimated using the first incentive structure. The second incentive structure may benefit farmers who can take advantage of scale economies; however the study placed an informal size restriction on individual farmers making the awarded contract price higher than the lowest bidder contract price. This study also assumed a yield of 5.5 tons per acre. Greater potential yields as estimated by Mooney et al. (2009) may considerably lessen the costs of production for Tennessee farmers thereby lowering the break-even price for delivered feedstock.

Mooney et al. (2009) estimated the yield and break-even price of Alamo switchgrass production on four landscapes in western Tennessee, using alternative seeding rates and alternative nitrogen fertilizer application rates over three years. Based on previous studies evaluated in the Mooney et al. (2009) research, estimated farm-gate break-even prices from the Central Plains, Iowa, and Illinois ranged from $53 to $89 per dry ton, with yields ranging from 1.84 to 4.19 dry tons per acre respectively.

Results of the ANOVA analysis conducted by Mooney et al. (2009) found that nitrogen application rates significantly influence yield while seeding rate resulted in few significant differences. The seeding rate results suggest that stands with a lower initial seeding rate will still generate adequate plant density needed to establish a productive stand of switchgrass. At the lower rate, the highest mean yield of 10.19 dry tons per acre, at the end of the third year, were reported in the location typified by moderately well drained, level uplands. The moderate to somewhat poorly drained, eroded sloping upland yielded 8.0 dry tons per acre. The moderate to somewhat poorly drained, eroded sloping upland acreages are considered to be the most likely environment for switchgrass production as they make up more than half of the farm land in western Tennessee.

Break-even prices for moderately well drained, level upland acreages ranged from $39.94 to $48.17 per dry ton while breakeven prices for the moderately drained, sloping upland acreages ranged from $40.53 to $51.14 per dry ton. Farm-gate break-even prices were most sensitive to yield, nitrogen prices, and fuel prices. Costs associated with harvesting activities accounted for more than 50% of overall production costs across all four landscapes. Findings of this study suggest that the Southeast U.S. may have an economic advantage in the production of switchgrass compared to other regions of the country.

While McLaughlin et al. (2002) suggest that a large portion of Tennessee pastureland could be converted to the production of bio-feedstocks, there is little known about the willingness of cow-calf producers to begin cultivating switchgrass for bioenergy. When Jensen et al. (2007) conducted a survey of Tennessee farmers to establish their willingness to begin growing switchgrass; their survey was not specific to cow-calf producers of the region. Jensen et al. (2007) found that about 30% of the farmers surveyed would be willing to grow switchgrass if it were profitable, but they were not convinced of its potential profitability at that time.

Griffith (2009) conducted an assessment of the potential for switchgrass production on cow-calf production in eastern Tennessee based on risk and contract pricing. His study area included three primary soil types: 1) Dewey; 2) Dandridge; and 3) Dunmore. The Dunmore and Dewy soils are more productive and better suited to row cropping than the Dandridge, which is less productive (Griffith 2009). Cow-calf production was found to be the most efficient enterprise on the more marginal Dandridge soil when switchgrass production was not included in the enterprise alternatives. When a switchgrass alternative was included it was found to be the most efficient enterprise on Dandridge soil depending on the contract incentives and subsidies provided for the establishment of the switchgrass stand. Griffith (2009) included risk when assessing efficiency and indicated that on more marginal soils, switchgrass production can be competitive due to the higher risk associated with cow-calf production. Griffith (2009) found that switchgrass production could be profitable enough to induce production on cow-calf farms given the right combination of contract price and carbon credit exchange rate.

Larson et al. (2010) evaluated the investment, operating, and transportation costs as well as dry matter losses during storage of varying switchgrass production, storage, and delivery methods using enterprise budgeting and geographical information system (GIS) analysis. Under the first harvest and storage scenario switchgrass was harvested with a large round baler and stored on-farm. Under the second harvest and storage scenario switchgrass is harvested with a large rectangular baler and stored on-farm. Under the third harvest and storage scenario switchgrass is harvested using a forage chopper and is hauled to a preprocessing facility for packaging and storage.

Total operation costs associated with the first scenario were higher than both subsequent scenarios (Larson et al. 2010). Operation costs for switchgrass chopped and hauled to a preprocessing facility was lower than both rectangular and round bales due to lower harvest, handling, and transportation costs (Larson et al. 2010). However, when dry matter losses harvesting and storage were included, switchgrass harvested with a round baler and stored without protection became the most cost effective of the conventional harvesting options (Larson et al. 2010). Overall, delivery to the preprocessing facility had the lowest dry matter delivery costs in the long- as well as short-term.

Beef Cattle and Switchgrass

The potential relationship between switchgrass and beef production has been rarely mentioned and when it is, it is almost always confined to a discussion of switchgrass as feed for cattle and its nutritional merits. Archibeque, Burns and Huntington (2001) studied urea flux and nitrogen metabolism in steers fed gammagrass or switchgrass with either high or low nitrogen fertilizer applications. They found that application of fertilizer affected nitrogen metabolism for both grasses, and that after maximum nitrogen capacity has been reached the excess nitrogen would not be metabolized but would be excreted. Huntington and Burns (2007) studied the effects of the harvest time, morning or afternoon, on voluntary dry matter intake of gammagrass or switchgrass baleage by the steers. They found that an afternoon harvest increased nitrogen metabolism and dry matter intake for both grasses.

Scaglia et al. (2008) studied the effects of six rotational grazing forage systems on small cow-calf operations within the Appalachian Region. All systems included some combination of tall fescue with other grasses; only one system included switchgrass. Scaglia et al. (2008) found no effect on cow productivity between the different systems, but did find the productivity of the system using switchgrass as a forage was low and required supplemental hay be purchased and fed to the cattle.

Greenhouse Gas Emissions and Carbon Flux

Currently, it is not known how converting acreage dedicated to cow-calf production to switchgrass production could affect GHG emissions or net carbon change. There are many studies that discuss the potential ability of switchgrass to sequester carbon in the soil through its deep root system.

Liebig et al. (2005) compared the sequestration of soil organic carbon (SOC) under switchgrass stands throughout the northern Great Plains and northern Cornbelt with that of nearby cropland where SOC was calculated as total carbon less inorganic carbon. Study results indicated that total carbon was greater for switchgrass at both near-surface and deeper soil depths. At the most shallow soil depths tested, 0-5 cm, significantly more SOC was found under switchgrass at 21% of the test sites. At 7% of the sites, the SOC under croplands was higher. This may be due in part to the perennial nature of switchgrass as well as differences in crop management. The majority of nearby cropland used some sort of tillage that contributed to soil erosion and carbon mineralization at the shallower depths. A similar trend was found at soil depths of 30-60 cm. At these depths, 14% of sites had significantly higher levels of SOC found under switchgrass stands with only 2% of the sites being higher under cropland. Roots for established switchgrass stands can reach up to 2.5 meters and annual production of root biomass can be as great as 2.98 tons per acre where more than half of this biomass is found below 30 cm depths. The study indicates that switchgrass may have the potential to sequester significant amounts of carbon at soil depths that are less susceptible to the mineralization of carbon and erosion.

Other research articles have focused on the Life Cycle Assessment (LCA) of switchgrass cultivation and other agricultural enterprises such as livestock production. Powlson, Richie, and Shield (2005) maintained that "any carbon that can be transferred from atmospheric CO_2 to a storage pool in the biosphere is beneficial in mitigating human-induced climate change." They concluded that since the SOC of arable soils tends to be rather low due to regular tillage, a change in management practices and/or the conversion of arable land to pasture or woodland provided a potential sink for a significant amount of atmospheric carbon.

Adler, DelGrosso, and Parton (2007) modeled GHG flux of corn, soy, alfalfa, reed canarygrass, hybrid poplar, and switchgrass cropping systems in Pennsylvania using DAYCENT—a daily time-step version of the CENTURY biogeochemical model. The study found that cellulosic crops—switchgrass and hybrid poplar—have the most potential for the reduction of net energy emissions. In its assessment, this study included energy requirements and emissions associated with crop production, fossil fuel displacement, conversion of feedstock to biofuels, and the inputs required for feedstock production.

Near-term GHG emissions for Adler, DelGrosso, and Parton (2007) were calculated as:

(1) $$GHG_{net} = \left(-C_{dff}\right) + \left(-\Delta C_{sys}\right) + (\pm C_{FC}) + \left(-C_{CH_4}\right) + C_{N_2ODir} + C_{N_2OInd} + C_{CI} + C_{AgMa}$$

where C_{dff} is displaced fossil fuel carbon; ΔC_{sys} is change in soil organic carbon; C_{FC} is CO_2 emissions from transport of feedstock to the biorefinery, conversion to biofuel, and distribution; C_{CH4} is methane uptake by the soil; C_{N2ODir} and C_{N2OInd} are direct and indirect emissions of nitrous oxide; C_{CI} are carbon dioxide emissions from the production of chemical inputs; and C_{AgMa} are fuel used by agricultural machinery in the planting, tilling, fertilizer, herbicide and pesticide applications, harvesting, and drying of the feedstock. Long-term GHG_{net} assumes ΔC_{sys} to be zero because will eventually reach equilibrium and will no longer be able to sequester excess carbon.

Of the feedstock considered in this study, switchgrass had one of the highest yields, one of the highest levels of fossil fuel displacement, and also one of the largest overall GHG emission reductions per BTU of ethanol produced (Adler, Del Grosso, and Parton 2007). Switchgrass also required relatively low inputs of nitrogen, phosphorus, potassium, limestone, herbicides, and pesticides, and this resulted in a reduction in the carbon dioxide emissions associated with the production of these inputs (Adler, Del Grosso, and Parton 2007). The study indicated that crop management practices such as reducing tillage, changes in harvesting and planting methods, and in the application of nitrogen fertilizer to crops would be a major source of GHG emission reduction for each of the feedstocks considered.

Seungdo and Dale (2004) compared the energy requirements and global warming impacts, associated with cultivating and transporting corn, alfalfa, soy, and switchgrass for bioenergy production with the energy each produced. Cumulative energy is considered the difference between the energy required to produce the fuel and the energy the subsequent fuel produces. In assessing cumulative energy for bio-feedstocks, Seungdo and Dale (2004) included the energy required to produce the fertilizers and agrochemicals used in crop production as well as the energy used in harvesting and transporting the biomass to the refinery.

Carbon dioxide may be captured during the production of ammonia for nitrogen fertilizer and used for other applications. For this reason, carbon dioxide may be considered a co-product rather than an emission. Their study included two cumulative energy values for nitrogen fertilizer: 1) where carbon dioxide generated during production is considered a co-product that can be reused; and 2) where carbon dioxide generated during production is considered an emission. Carbon dioxide, methane, and nitrous oxide emissions were used in the assessment of the global warming impacts.

According to Seungdo and Dale (2004) the cumulative energy required to produce 2.21 lb of switchgrass was 919.38 BTU when carbon dioxide is considered a co-product and 1270.07 BTU when carbon dioxide is considered an emission. The cumulative energy for switchgrass production was found to be less than that for both corn and soy, under both considerations for carbon dioxide, but less than alfalfa only when the carbon dioxide created was considered a co-product. The cumulative energy required to produce 2.21 lb of alfalfa was estimated to be 1175.29 BTU for both CO_2 assumptions, as nitrogen fertilizer was not a required input for production as alfalfa is a legume that fixes its own nitrogen.

The global warming impact associated with the production 2.21 lb of switchgrass was also found to be lower than the impact associated with the production of equivalent values of corn and soy, but it was found to be higher than that for alfalfa production. Again, this is due to the fact that nitrogen fertilizer was not considered as an input in alfalfa production. The most significant GHG emissions associated with the production of switchgrass were nitrous oxide and carbon dioxide, with each making up almost all of the emissions in approximately equal proportions.

Phetteplace, Johnson, and Seidl (2001) developed simulations models to describe the economics, GHG emissions, and soil carbon flux of the United States' beef and dairy production systems. These models were also designed to test the effectiveness of GHG emission mitigation strategies through their effects on meat and milk production, GHG emissions, and the economics of the systems. Beef cow-calf data was collected from Alabama, Texas, Utah, Virginia, and Wisconsin. Cattle were classified by production stage and inputs were based on this production stage as well as body weight, meat and milk yields, manure management and feed type. According to Cole et al. (1997) two principle sources of methane emissions in agriculture production are from enteric fermentation and animal waste processing. Cole et al. (1997) concluded that the greatest potential reduction in methane emissions from ruminant livestock could come from improved dietary supplements for cattle and buffalo in developing regions of Africa, Asia, and Latin America.

Results of Phetteplace, Johnson, and Seidl (2001) showed that the cow-calf stage of production was responsible for the majority of enteric and manure methane emissions. The feedlot stage was responsible for more CO_2 emissions due primarily to the energy required to produce and transport the cattle and their required feed.

Pelletier, Pirog, and Rasmussen (2010) used International Organization for Standardization (ISO) compliant techniques when comparing the life cycle environmental impacts for three beef strategies. These strategies are: 1) weaned calves are sent directly to finish on local feedlots; 2) weaned calves are sent out of state to grain pastures and sent later to finish on local feedlots; and 3) weaned calves are finished on pasture and hay within the state. Life cycle impact assessment calculates impact contributions by material and energy inputs and outputs during all stages of production. Impacts in this study were calculated on a herd that included 100 cows, 15 heifers, and three bulls.

Pelletier, Pirog, and Rasmussen (2010), found the cow-calf phase, the stage of production prior to weaning calves for finishing, to be the most energy and resource intensive phase of cattle production with feed production being the dominant energy contributor in each phase of production. These findings are consistent with research conducted by Phetteplace, Johnson, and Seidl (2001). Pelletier, Pirog, and Rasmussen (2010) estimated that 63% of impacts per pound of live-weight were associated with the cow-calf phase in each of the three finishing scenarios. The article provides a table outlining the annual cradle to farm-gate life cycle energy requirement for the cow-calf phase of beef production as well as tables for the three finishing options. The results suggested that calves sent directly to feedlots for finishing are less GHG intensive than those finished on pasture or those finished on both pasture and feedlot, due to an improved diet which mitigated enteric and manure methane emissions.

Clearly there is a wealth of resources to draw from that can form a solid base of general information for the proposed research, but unfortunately research specific to the objectives of this project has not yet been conducted.

CHAPTER III

METHODS AND PROCEDURES

Conceptual Framework

Decisions are made by firms—in this case by cow-calf producers—to allocate resources based upon the firm's central goal. In a perfectly competitive market, firms are price-takers for both output and production inputs and are generally assumed to seek profit maximization. However, firms may seek to maximize utility rather than profit (Coase 1937; Demsetz 1988).

Informed decisions are made by assessing the utility and the levels of uncertainty for all potential outcomes (Gilboa and Schmeidler 1995). Unfortunately, knowledge of all potential outcomes is unrealistic, if not impossible, in most instances given the number of variables to be considered when performing an economic analysis. For this reason, the principles of bounded rationality are assumed

It is assumed that rational cow-calf producers are risk averse and maximize utility by trading off expected profit and the variability of profit. Expected utility can be expressed as:

(2) $E[U(WFNR)] = f[E(WFNR), Var(WFNR)]$

where E is an expectation operator, U is utility, WFNR is whole farm net revenue, and Var($WFNR$) is the variance of whole farm net revenue for cow-calf producers in middle Tennessee for both average and above average cow-calf management systems, switchgrass production, and a combination of cow-calf and switchgrass production subject to farm resource constraints.

It is also assumed that the farm owners will engage in cow-calf production as a primary source of income with hay production as a supplement. Farms will have the option to continue to engage solely in cow-calf production, change to switchgrass for bio-fuels production entirely, or produce some combination of cow-calf production and switchgrass for bio-fuels.

Description of the Representative Farm

Location and Soils

The Middle Tennessee Grand Division is comprised of 41 counties including Bedford, Cannon, Cheatham, Clay, Coffee, Davidson, DeKalb, Dickson, Fentress, Franklin, Giles, Grundy, Hickman, Houston, Humphreys, Jackson, Lawrence, Lewis, Lincoln, Macon, Marshall, Maury, Montgomery, Moore, Overton, Perry, Pickett, Putnam, Robertson, Rutherford, Sequatchie, Smith, Stewart, Sumner, Trousdale, VanBuren, Warren, Wayne, White, Williamson, and Wilson Counties (Hargett 2010). The representative farm constructed for this study is located in northwestern Bedford County. This county was chosen because of the high beef cattle production farm per square mile ratio and above average number of farms for the region (USDA NASS 2007).

Within Bedford County cattle and livestock operations are more likely to be found in the flatter landscapes within the Inner Nashville Basin and along the Highland Rim (Paul Denton, personal communication, 2011). According to discussions with Dr. Paul

Denton (2011), the Highland Rim area is important to cattle production, but it is relatively small and geographically very different from the area of the Inner Nashville Basin in Bedford County. The representative farm modeled in this research is therefore located within the Inner Nashville Basin where the predominant soils in the area are Talbott, Bradyville, Capshaw, and Godwin (USDA NRCS 2003). Talbott soils are best suited as pasture; Bradyville and Capshaw soils are best suited for hay. Based on discussions with Dr. Denton (2011) and study of soil maps in Bedford County (USDA NRCS 2003), it was determined that soils in the region are not likely to be uniform across large areas. Farms are often comprised of several soil types with the potential for soils to overlap within one acre. For this reason, a composite acre of soil, based on the three predominant soil types was used for the analysis. Using a composite soil acre may more accurately reflect pasture, hay, and switchgrass yields for the representative farms as farm operators are not likely to have the ability to set aside several acres of one particular soil type to be dedicated to specific crop production.

Composition of Representative Farms

Information used to build the average and above average farms was based on the results of a Farm Panel held in Woodbury, Tennessee (Larson 2009). The purpose of this farm panel was to assist the University of Tennessee in the creation of a representative farm model that can be used to provide solutions to current and future management decisions facing beef cattle producers in of Middle Tennessee. To assess the farm resources and financial information for these beef cattle producers, the panel participants were asked to identify the management styles of average and above average producers.

Five beef cattle producers and six regional Extension personnel attended the farm panel in addition to University of Tennessee Extension specialists and researchers. Panel participants were chosen because they are familiar with typical cow-calf production practices in the region. Such a small purposive sample has the potential for bias and error. Therefore, the panel's responses were compared information in Menard et al. (2011), University of Tennessee Extension budgets (Rhea et al. 2007), and the U.S. Department of Agriculture National Agricultural Statistics Service's Agricultural Census for the State of Tennessee (USDA NASS 2007) before using it to create farms that adequately represent average and above average beef cattle operations in Middle Tennessee. For the most part, responses given by the farm panel corresponded with Menard et al. (2011) and USDA NASS (2007). In instances where responses conflicted with survey data, assumptions about the representative farms were adjusted to reflect data collected from all sources.

Panelists agreed that average and above average producers would not grow row crops because of the increased cost of additional equipment and because greater farm acreage would be needed to be profitable. This is consistent with the survey conducted by Menard et al. (2011) which found that the majority of acreage in for cow-calf producers in Middle Tennessee was devoted to pasture, hay, and timber, but not to row crops. Panel participants estimated that the mortality rate, also referred to as death loss, for heifers would be 0.5%, 1% for cows and 0.5% for bulls (Larson 2009). These rates are used to calculate animal units available for sale, as the death loss reflects mortality for cattle after live birth, but before sale at market. Panel estimates will be used when calculating net revenue for the representative farm.

The panel assumed that an average producer would breed cows year round by keeping the bull in the field with the cows and would subsequently have a year round calving regime (Larson 2009). However, a defined breeding and calving time-frame and an annual sale date will be used to simplify the model for this research. Cows will be bred to calve on February 15th, which would result in a spring breeding period. Under average management calves are not preconditioned and are immediately sold 195 days after they are born. Stocker calves will be sold on September 1st at an average sale weight of 535 lb. Under above average management, 195 days after they are born calves will be pre-conditioned for 45 days and then sold on October 15th, at an average sale weight of 603 lb. These weaning and calving dates and the preconditioning regimen are consistent with those used in the University of Tennessee Extension Budgets (Rhea et al. 2007).

Average Management

The average middle Tennessee beef cattle farm is assumed to have 132 acres, of which 33 acres are hayland (dedicated to harvested forage crops), 66 acres are pasture, 29 acres are woodland, and 4 acres are used for house lots, ponds, roads, wasteland, etc (Larson 2009, Menard et al. 2011, USDA NASS 2007). The farm manager was assumed to have a beef herd of 35 head, consisting of 1 bull, 30 cows, and 5 replacement heifers retained from their calf stock (Larson 2009). The average farm manager was assumed have a calving rate of 75% with calves having an average birth weight of 75 lb (Larson 2009).

The equipment used by average producers included one tractor, animal handling equipment including a trailer and headgate, one hay mower, one hay rake, and one 4 foot by 5 foot large round hay baler (Larson 2009, Menard et al. 2011). They were also assumed to keep 90 bales of hay, or 3 for each cow, over winter (Larson 2009). It was also assumed that the average manager will not have storage facilities for hay or, subsequently, switchgrass and thus all hay and switchgrass was assumed to be stored outdoors (Menard et al. 2011).

Above Average Management

The above average producer was assumed to have a larger farm size than average producers but with an identical land distribution to that of an average producer. The above average farm was assumed to have 250 acres, divided between 63 acres of hayland, 125 acres of pasture, 55 acres of woodland, and 7 acres for house lots, ponds, roads, wasteland, etc. (Larson 2009). Of the total 250 acres, it was assumed that 215 acres are owned by the producer and an additional 35 acres were rented at $25 per acre (Larson 2009, Menard et al. 2011). The leased acres are assumed to be dedicated pasture or hayland, but not woodland (Menard et al. 2011). An above average manager is assumed to have a 70 head herd consisting of 2 bulls, 60 cows, 7 replacement heifers retained from their calf stock, and 3 replacement heifers that have been purchased. These producers are assumed to have a 90% calving rate with an average birth weight for calves of 80 lb (Larson 2009, Rhea et al. 2007).

The above average producer was assumed to have one tractor and animal handling equipment such as a trailer, headgate, a squeeze chute, and holding pen, in addition to miscellaneous farm equipment (Larson 2009). It is also assumed that the above average cow-calf producer has haying equipment consisting of a one mower, one rake, one 4 foot by 5 foot large round baler, and one small square baler (Larson 2009, Menard et al. 2011). Above average producers are also assumed to have hay storage buildings on their property having an average storage capacity of 315 bales per barn (Menard et al. 2011).

Net Revenue Budgeting Data and Methods

The crop simulation model ALMANAC (Agricultural Land Management Alternatives with Numerical Assessment Criteria) was chosen to generate crop, hay, pasture, and switchgrass yields because it is capable of simulating perennials and native grasses used for hay and pasture production and for switchgrass production (Kiniry et al. 1992). The ALMANAC model is a daily-time-step, process-based general crop model that uses daily weather data to simulate crop yield distributions under different fertility, crop rotation, and tillage regimes. The model takes into account light interception by leaves, dry matter production, as well as tracking soil parameters such as daily soil water and soil nutrient balances (Kiniry et al. 1992). For the net revenue simulations 100 years of hay, pasture, and switchgrass yields were simulated in ALMANAC for Bradyville, Capshaw, and Talbott soils. A composite yield was then created using proportions used to create the composite acre of soil in which one acre is considered to contain 63.39% Talbott soil, 18.48% Bradyville soil, and 18.13% Capshaw soil.

The @Risk simulation model in Decision Tools Suite (Palisade Corporation 2007) was used to simulate a random set of detrended, correlated prices for hay, switchgrass, steers, heifers, utility cows, fertilizer, and diesel fuel for 100 years. There were no readily available historical prices for switchgrass so the simulation of switchgrass prices was approached from the direction of developing an energy equivalent price series for switchgrass as an ethanol based energy substitute for gasoline. The @Risk price simulation for hay and switchgrass is not correlated to pasture production. Forage yields may have an impact on hay price because hay is produced and sold regionally, but was not accounted for in this analysis. Switchgrass, like hay, was assumed to be produced and sold regionally and would therefore be subject to local weather. Switchgrass yields might also impact their spot market price.

The @Risk model was used to simulate a 100 year distribution of net returns for each crop activity was simulated. The variables that fluctuated in the simulation of net returns were hay, switchgrass, and cattle prices, crop yields, nitrogen, phosphorus, and potassium fertilizer prices, diesel fuel price, and switchgrass harvest and staging costs as a function of harvested yield. Net revenues were simulated in order to assess mean revenues farm operator could expect under the following land use, management, and contract scenarios. Results from the 100 year distribution of net returns does not reflect net revenues or farm operator decision making over time. Land use change and decision making over time are considered in the multi-year optimization portion of this research.

Net revenue scenarios were simulated to represent: a) cow-calf production under average management; b) cow-calf production under above average management; c) switchgrass production as a feedstock for ethanol production on lands previously used for average cow-calf production; and d) switchgrass production as a feedstock for ethanol production on lands previously used for above average cow-calf production. It is assumed that all switchgrass, hay, and pasture will be produced using no-till methods and standard equipment used for hay production.

Farmers are assumed to be price-takers for both inputs used in production and output sold. For the purpose of this study, farmers are assumed to maximize utility by maximizing net revenue. Therefore, the farmers' goal will be to maximize net returns by choosing an optimal mix of cow-calf and switchgrass enterprises. Upon completion of initial net revenue scenarios, a multi-year optimization of cow-calf and switchgrass activities will evaluate the optimal mix of enterprises over a select period of time.

Cow-Calf Production

The cattle enterprise was modeled using the University of Tennessee's enterprise budget for a cow-calf enterprise (Rhea et al. 2007). The Extension budget has a 35 animal unit base which includes 30 cows, 5 replacement heifers, and a breeding bull on 52.5 acres of land. It assumes a 90% calf crop calved in February and March with a 2% death loss (Rhea et al. 2007). The budget assumes the sale of 13 steers weighing 510 pounds, 9 heifers weighing 465 pounds, and 5 cull cows weighing 900 pounds which was adjusted to 1,000 pounds for this study based on feed requirements for a 1,000 pound cow to wean a 510 pound steer (Rhea et al. 2007). Elements of the budget were changed to reflect variations in farm size and management regime as described previously in the "Composition of Representative Farms" section.

Historical prices for medium frame 500-600 lb steers and heifers, 600-700 lb steers and heifers, and cull/utility cows were obtained from NASS for Tennessee for the years 1979 through 2008 (USDA-NASS 2010) for the purpose of simulating cattle prices. The historical prices were inflated to 2010 dollars using the Implicit Domestic Product Price Deflator (U.S. Congress, Council of Economic Advisors 2008) and then put into a cumulative distribution function. The simulated prices were then used to generate 100 years of net returns.

Feed requirements for the animal units carried on the average management farm each year are based on the Dry Matter Intake (DMI) requirements for a 1,000 lb cow that weans a 535 lb steer, while the requirements for animal units on the above average management farm are based on feed requirements for a 1,200 lb cow that weans a 558 lb steer plus preconditioning feed for 45 days designed for calves to gain 1 lb per day and the forage availability as simulated in ALMANAC. DMI for average management was assumed to be 4.307t/AU while DMI for above average management was assumed to be 4.893t/AU (Rankins 2001).

Steers and heifers produced under average management practices are assumed to be sold in September (Larson 2009, Rhea et al. 2007) while those produced under above average management are assumed to be sold in October (Rhea et al. 2007) to account for a 45 day calf preconditioning regimen. Cull cows are assumed to be sold in the spring (Savage 2010).The model for cow-calf production is based on a model created by Griffith (2008). The net revenue per acre for the cow-calf enterprise (CCNR) are calculated by the following:

$$(3) \quad CCNR = \Big[N_s(1 - DL_s) \times P_s W_s + N_h(1 - DL_h) \times P_h W_h + N_u(1 - DL_u) \times P_u W_u - \big(C_{cattle} \times AU + C_{pasture} \times ACRE + (Y_{forage} - TRF) \times P_{hay}\big)\Big] \div ACRE$$

where N is the number of steers (s), heifers (h), and utility cows (u) sold; P is the output price ($/cwt); W is the average weight per animal sold (cwt); DL is death loss (%); C_{cattle} is the average cost of production ($/AU) of an animal unit ($AU$) excluding the cost of forage production and additional forage costs; $C_{pasture}$ is the cost of forage production ($/acre); TRF is the total forage required for all animals on the farm (ton); Y_{forage} is the forage yield produced on the farm (ton); P_{hay} is the price of hay ($/ton); and $ACRE$ is the number of farm acres.

Switchgrass Production

Recognizing that it would be near impossible to construct and analyze all potential contract possibilities that could be written for switchgrass production, switchgrass net revenues are calculated using three potential production contracts under conditions in which the farmer either receives, or does not receive, Biomass Crop Assistance Program (BCAP) benefits: 1) a spot market contract in which the price per ton of switchgrass was simulated based upon the price per BTU and the ethanol BTUs produced per ton of switchgrass; 2) a fixed price contract in which a set price is paid per ton over the life of the contract; and 3) a fixed plus adjustable rate contract in which a set price is paid for a specific amount of switchgrass and surplus switchgrass is purchased using the spot market price.

The Food, Conservation and Energy Act of 2008 (U.S. Congress 2008) established a Biomass Crop Assistance Program (BCAP) to encourage farmers to produce annual or perennial biomass crops in areas around biomass processing plants. This act allows for the USDA to pay a farmer up to 75% of establishment costs during the first year as well as paying up to $45 per dry ton of biomass for harvest, storage, and transport to a biorefinery (U.S. Congress 2008). Incentives of this type may encourage farmers to contract with energy companies because the input cost subsidy paid to producers lowers production cost risks.

The spot market price was based on an energy equivalent price series for switchgrass used as an ethanol based energy substitute for gasoline. The method for creating the price series was based on the method used by Larson et al. (2005) in their study of farm-level conditions which might induce farmers to supply biomass feedstocks instead of traditional crops. The assumed number of gallons of ethanol produced from one dry ton of switchgrass was 80 gallons (Wang, Saricks, and Santini 1999). A net energy conversion factor of 1.8 was used to calculate the net energy from ethanol produced from a ton of switchgrass after processing (Wang, Saricks, and Santini 1999). Assuming there are 76,000 BTUs per gallon of ethanol (Wang, Saricks, and Santini 1999), then one dry ton of switchgrass produces more than 2.7 million BTUs $[(80 \times 76{,}000) \times ((1.8-1)/1.8)]$. The net energy BTU per dry ton of switchgrass was then multiplied by the national average price per million BTUs of gasoline from 1979 to 2008.

The fixed price per dry ton was calculated based on methods used by Epplin (1996) to create a price equivalent to the production cost that a vertically integrated production and conversion operation would expect to experience. Based on University of Tennessee Budgets the cost for establishing and reseeding an acre of switchgrass is $91.69 for a stand having a five-year stand-life prorated over the lifetime of the stand (University of Tennessee, Institute of Agriculture 2009). Switchgrass annual production expenses are $237.26 per acre, this expense include labor and harvesting activities (University of Tennessee, Institute of Agriculture 2009). If the cost of leasing land is $25 per acre (Larson 2009, Menard et al. 2011) and an acre of switchgrass is estimated to yield 5.26 dry tons (the mean yield for switchgrass with a five-year stand-life, as estimated in ALMANAC), then the cost of production will be $67.29 per ton [(91.69+237.26+25)/5.26]. The price of $67.29 per dry ton, however, reflects Extension estimates for an individual switchgrass producer and does not take into account economies of scale that a large biomass production and conversion facility might achieve. Given the potential for cost savings under a vertically integrated system, a slightly lower price of $65 per dry ton was chosen for the fixed price and fixed price plus adjustable rate contract. A price of $65 per dry ton falls within the range of farm-gate break even prices estimated by Mooney et al. (2009).

Under a spot market contract, the switchgrass producer shoulders the burden of risk since their net revenues are at the mercy of a potentially volatile spot market, while under the fixed price contract, the burden of risk is assumed by the ethanol conversion facility purchasing the switchgrass since it is locked into a fixed-term contract. Under a fixed price contract, ethanol conversion facilities would be unable to adjust the price paid to producers to reflect changes in demand and/or in their production expenses. This type of contract is therefore more likely to be short-term which may be less attractive to switchgrass producers who are expected to benefit from larger yields and smaller prorated annual expenses associated with a longer-term contract, say that of ten years rather than five.

Under the fixed price plus adjustable rate contract a fixed price of $60 per ton of switchgrass will be paid for each ton, up to the estimated mean yield for the stands life. In this case, $65 per ton will be paid for the first 5.26 tons of switchgrass having a five-year stand life, and for the first 6.90 tons of switchgrass having a ten-year stand life. The purchase price for any surplus yields will be based upon the current spot market price. Under this type of contract both the switchgrass producer and the ethanol conversion facility assume the burden of risk.

The net revenue per acre for the switchgrass enterprise is calculated using the following:

(4) $$NR_{SG} = P_{SG} \times Y_{SG} - Est_{SG} - Maint_{SG} - Harvest(Y)_{SG} - Stage\ (Y)_{SG} - Store\ (Y)_{SG}$$

where P_{SG} is the price ($/ton) of switchgrass; Y_{SG} is switchgrass yield (ton); Est_{SG} is the prorated cost ($/acre) of establishing switchgrass; $Maint_{SG}$ is the annual cost ($/acre) of switchgrass stand maintenance; $Harvest(Y)_{SG}$ is the cost ($/ton) associated with harvesting switchgrass, based upon yield; $Stage(Y)_{SG}$ is the cost ($/ton) associated with baling and stacking switchgrass, based upon yield; and $Store(Y)_{SG}$ is the cost ($/ton) associated with storing switchgrass, based upon yield.

Multi-Year Optimization

Upon completion of initial budgets for the typical and above average cow-calf operations and the switchgrass operations, the budgets were used to simulate net revenue for each enterprise activity on the representative farm. It was assumed that the farmers would have a ten-year contract for their switchgrass production. Based upon having a ten-year contract, it was assumed that once the farmers had made the decision to plant switchgrass they would maintain the stand for 10 years. In order to estimate switchgrass and pasture yields simulations were run in ALMANAC for each of the three soil types representing potential planting decisions spanning 40 years. It was assumed that farmers would transition to switchgrass production from cow-calf production; therefore for the first 10 years of each ALMANAC simulation the acreage was planted in pasture and hay.

In order to assess the impacts of switchgrass price, discount rate, and available operating capital on expected net revenue and enterprise mix decisions, varying prices, discount, and operating capital rates were combined and optimized over 30 years for both average and above average management. Switchgrass prices started at \$40 per dry ton and ended at \$80 per dry ton, increasing in \$5 per dry ton increments. Discount rates evaluated started at 2.5% and ended at 10%, increasing in 2.5% increments. Operating capital rates were based on mean, minimum, and maximum rates found in the cow-calf net revenue simulations. Under average management operating capital values were \$5,000, \$10,000, \$15,000, \$20,000, and \$25,000 annually. Under above average management operating capital values were \$15,000, \$20,000, \$25,000, \$30.000, and \$35,000 annually. Farm operators' access to operating capital was assumed to be same in all years. Operating capital conditions do not change over time and do not reflect fluctuations in farm operator net revenues in specific years. It is more realistic to assume that access to operating capital would be based on previous years' net revenues, but including this assumption was beyond the scope of this research and a flat rate for operating capital was chosen. It was assumed that farm operators would have access to operating capital similar to that available under cow-calf production. The terminal condition for the optimization was assumed to be zero. Under this condition all farm products, either cattle, switchgrass, or hay, would be sold at the end of year 30.

Using these switchgrass prices, discount rates, and levels of operating capital, 180 optimizations were run for each management regime. To find the optimum mix of farm enterprises that will maximize net revenues, a linear programming model was created to run in Excel. Whole farm net revenues for both average and above average management cow-calf producers were maximized over 30 years with respect to land, labor, cattle, and operating capital constraints. The following equation represents the net revenue maximization used:

(5) $Max\ ENPV$

$$= E\left[\sum_{t=1}^{30}\left(\frac{1}{(1+\delta)^{t-1}}\right)\left(NR_{maint,t} \times AU_{maint,t} + NR_{sell,t} \times AU_{sell,t}\right.\right.$$

$$\left.\left. + NR_{hay,t} \times ACRE_{hay,t} + NR_{SG,t} \times ACRE_{sg,t}\right)\right]$$

$subject\ to$:

$Land\ constraint \geq 1.5AU_{maint,t} + 1ACRE_{hay,t} + 1ACRE_{SG,t}$

$$Labor\ Constraint\ Period\ 1 \geq 1.27AU_{maint,t} + 0.48ACRE_{hay,t}$$

$$Labor\ Constraint\ Period\ 2 \geq 1.2AU_{maint,t}$$

$$Labor\ Constraint\ Period\ 3 \geq 2AU_{maint,t} + 1.83ACRE_{hay,t} + 0.14ACRE_{SG,t}$$

$$Labor\ Constraint\ Period\ 4 \geq 1.2AU_{maint,t}$$

$$Labor\ Constraint\ Period\ 5 \geq 1.2AU_{maint,t} + 1.93ACRE_{hay,t}$$

$$Labor\ Constraint\ Period\ 6 \geq 1.2AU_{maint,t} + 2.39ACRE_{SG,t}$$

$$Operating\ Capital\ Constraint$$
$$\geq\ Opcap_{maint,t} \times AU_{maint,t} + Opcap_{hay,t} \times ACRE_{hay,t} + Opcap_{SG,t} \times ACRE_{SG,t}$$

where *ENPV* is expected net present value, δ is the discount rate ($\delta > 0$), *NR* is the net revenue coefficient and *Opcap* is the operating capital coefficient for activities *maint* (maintain animal production unit), *sell* (sell animal production unit), *hay* (hay and pasture acreage), and *SG* (switchgrass acreage) in year *t*. Land constraint for average management producers is 99 acres, while the land constraint for above average management producers is 188 acres. Cow-calf production activities were assumed to require 1.5 acres of pasture/grazing land per animal unit maintained. Land restrictions were based upon the number of farm acres already in production for the average and above average cow-calf operation.

Labor restrictions were based upon the availability of labor from a family of four throughout the year (Johnson 1991). These estimates were adjusted to reflect survey results from Menard et al. (2011) indicating that at least one family member worked at full-time, off-farm employment. The labor constraint was adjusted to assume that only one adult was available for full-time on-farm employment while the other adult was only available for a portion of evenings and weekends rather than the assumption by Johnson (1991) that two adults would be available for full-time on-farm employment. The labor constraint in Period 1 (Jan-Feb) and Period 2 (Mar-Apr) is 510 hours, the labor constraint in Period 3 (May-June) is 675 hours, the labor constraint in Period 4 (Jul-Aug) is 705 hours, and the labor constraint in Period 5 (Sep-Oct) and Period 6 (Nov-Dec) is 585 hours. Labor hours required for each activity were calculated using University of Tennessee Extension Budgets (Rhea et al. 2007, University of Tennessee, Institute of Agriculture 2009).

Operating capital for each farm enterprise was calculated using Extension budgets and is comprised of variable annual costs of production (Rhea et al. 2007, University of Tennessee, Institute of Agriculture 2009). Operating costs vary in each year due to changes in fuel, and fertilizer costs. Operating capital restrictions were varied based upon the mean operating capital available under cow-calf production as well as the minimum and maximum operating capital required in the net revenue simulations.

It was assumed that in year one cow-calf producers would have the option to begin planting switchgrass on land previously held for hay and pasture. They would also have the option to sell or maintain production animal units. A production animal unit was created as a composite of a cow, steer calf, heifer, and bull based upon expected birthrate and death loss for steers, heifer, and utility cows. Farmers were assumed to have stocks of production animal units equivalent to those previously described in the

Description of Representative Farms–35 animal units under average management and 70 animal units under above average management.

In addition to requiring 1.5 acres of pasture/grazing, each animal unit was assume to require and fixed DMI amount based cow size, steer and heifer weight at weaning, and preconditioning regimen. An average forage yield was assumed for pasture and hay acreage based on ALMANAC yield simulations. The average forage yields for 1.5 acres of dedicated pasture were insufficient to fulfill DMI requirements for maintaining one animal unit. Farmers were assumed to have the option to purchase remaining DMI requirements from an off-farm source or to produce hay on acreage not dedicated to grazing.

Discounting and Time Frame Data

The net revenue optimization was modeled over 30 years in order to evaluate the potential transition in land use over time from beef cattle production to beef cattle production and/or switchgrass prodcution. Conditions assumed for this research are better suited by a multi-period optimization for several reasons, not the least of which is the fact that switchgrass production requires a time commitment, of ten years in this case, that cannot be adequately represented in a static optimization model. The time frame of 30 years was chosen because it allows land used decisions to be made by an individual farm operator within one generation (Pannell and Schilizzi 2006). A time frame extending beyond 30 years would necessitate an assumption of inter-generational decision making which is beyond the scope of this research.

Unless revenue and cost considerations for both cow-calf and switchgrass production are relatively similar per acre, it is likely that only one enterprise will be chosen that will maximize net revenue rather than a combination of the two. If switchgrass is more profitable per acre, a static optimization would recommend that all acreage be planted with switchgrass with no acreage devoted to cow-calf production. Abruptly changing farm enterprises from cow-calf to switchgrass production on all available acreage within a single period would require and large initial investment that would not yield maximum returns for several years.

Additionally, access to operating capital may make the changing all acreage from cow-calf production to switchgrass production in a single period impossible. Operating capital constraints make transitioning from one enterprise to another over time a more feasible option for farm operators and may increase net revenue. Should access to operating capital change, the rate at which acreage is converted from one enterprise to another may also change.

Much like access to operating capital, switchgrass price and discount rate may affect how farmers choose to transition from cow-calf production to switchgrass production. Lower switchgrass prices may induce farm operators to transition more slowly to switchgrass production, should they choose to grow it at all. Similarly, a lower discount rate will value future earnings more highly than a higher discount rate which may change the rate at which acreage is transitioned.

Two main optimizations were run for both average and above average management farms to maximize expected net present value of switchgrass and cow-calf production over 30 years. Both optimizations used an annual operating capital restriction similar to the mean available operating capital found in the cow-calf net revenue simulations–$10,000 under average management and $20,000 under above average management–and used a discount rate of 5% (Cline 1999, Pannell and Schilizzi 2006). Switchgrass price was then varied between the spot market rate and the fixed price contract.

Due to the fact that switchgrass price, discount rate, and access to operating capital may affect the rate at which cow-calf acreage is converted to switchgrass production over time, these three elements were applied to the optimization model in various combinations. Switchgrass price was varied from $40 per dry ton to $80per dry ton in $5 increments and operating capital ranged from $5,000 to $25,000 annually for average management and from $15,000 to $35,000 annually for above average management in $5,000 increments. The range of switchgrass prices was chosen to reflect the range simulated in @Risk for the spot market pricing. Operating capital restrictions were chosen based on the range of operating capital cow-calf producers experienced in the net revenue simulations (minimum to maximum values).

Discounting short-term decisions for private investors, like those evaluated in this research are common and are used to give a present value to future returns. Discount rates in the short-term generally range from 6% to 8% (Cline 1999. The discount rate may be evaluated using the expected rate of growth of the economy (Pannell and Schilizzi 2006). A range of rates was evaluated beginning at 2.5% and increasing to 5%, then 7.5%, and finally 10%.

Energy Use and Carbon Flux Budgeting Data and Methods

In addition to simulating costs and revenue, total energy use and carbon flux was calculated using the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (Eggleston et al. 2006). According to IPCC guidelines land categories for both average and above average management farms will remain the same under both cow-calf and switchgrass production. Average and above average management farms are comprised of the following three categories: 1) forest land remaining forest land; 2) settlement remaining settlement; and 3) grassland remaining grassland (Eggleston et al. 2006). Hay and pasture lands fall under the category of grasslands, as does land used to cultivate switchgrass. Since the farms lands used for roads and settlements and forest will not be considered for the production of switchgrass, change in greenhouse gas emission will come from changes in grassland management and enteric fermentation by livestock. The IPCC provide guidelines for calculating N_2O emissions in additions to CO_2 and CH_4, but for the purposes of this study only carbon and methane emissions are considered.

According To IPCC guidelines (2006) annual carbon stock change in a land use category is equal to the sum of carbon stock changes in all carbon pools. This change is calculated as follows:

(6) $\Delta C_{LUi} = \Delta C_{AB} + \Delta C_{BB} + \Delta C_{DW} + \Delta C_{LI} + \Delta C_{SO} + \Delta C_{HWP}$

where ΔC_{LUi} is change in carbon stock for land use i, $\Delta C_{AB}$is change in above-ground biomass, ΔC_{BB} is change in below-ground biomass, ΔC_{DW} is change in dead wood, ΔC_{LI} is change in litter, ΔC_{SO} is change in soils stocks, and ΔC_{HWP} is change in harvested wood products. ALMANAC yield simulations provide above- and below-ground biomass estimated for switchgrass and hay/pasture acreage. Dead wood, litter, soil stock, and harvested wood products are either unknown or not applicable for calculating carbon stock changes on acreage in the study area, so this research will focus on above- and below-ground biomass.

Enteric fermentation emissions are calculated according to Eggleston et al. (2006) guidelines as follows:

$$(7) \quad E_{enteric} = EEF_T \times \frac{N_T}{10^6}$$

where $E_{enteric}$ are methane emissions from enteric fermentation in tons per year, EEF_T is the enteric emission factor for the defined livestock population, N_T is the number of head of livestock in category T.

Emissions from manure management are calculated as follows (Eggleston et al. 2006):

$$(8) \quad E_{manure} = MEF_T \times \frac{N_T}{10^6}$$

where E_{manure} are methane emissions from manure management in tons per year, MEF_T is the manure management emission factor for the defined livestock population, N_T is the number of head of livestock in category T.

Emissions from Nitrogen fertilizer (Urea) application are calculated as follows (Eggleston et al. 2006):

$$(9) \quad E_{urea} = U \times UEF$$

where E_{urea} are carbon emissions from urea application, U is the amount of fertilizer applied per year, and UEF is urea emission factor per ton of urea fertilizer applied.

Annual carbon emissions from lime application are calculated as follows (Eggleston et al. 2006):

(10) $E_{lime} = L \times LEF$

where E_{lime} are carbon emissions from urea application, L is the amount of lime applied annually, and LEF is lime emission factor per ton of lime applied.

IPCC established Global Warming Potential (GWP) to compare the ability of greenhouse gases to trap heat in the atmosphere compared to one another (EPA 2011). Under these guidelines the GWP of one ton of methane is equivalent to 21 tons of carbon (EPA 2011). Total carbon emissions are then calculated as follows using the equations described above with methane emissions multiplied by their carbon equivalent factor:

$$E_{Total} = 21(E_{enteric} + E_{manure}) + E_{urea} + E_{lime}$$

Farm enterprise activities over time included in the carbon flux analysis will be based on the optimal enterprise mix when the discount rate is 5%, mean operating capital is $10,000 annually for average management, mean operating capital is $20,000 for above average management, and switchgrass price for both a fixed price contract and spot market contract.

CHAPTER IV

RESULTS

Simulated Net Revenues

Cow-Calf Production

The budgets used to calculate the costs of production for the average and above average management scenarios in the net revenue simulation are presented in Tables 1 and 2, respectively. The budgets, constructed using procedures described in the Methods and Procedures section were used to calculate whole farm, per acre, and per animal unit net revenues for average and above average management using the net revenue equation described in the Methods and Procedures section. Using the correlated 100 year price series simulated by @Risk to calculate net revenues, the cow-calf operation under average management produced mean whole farm net revenues of $2,507.92, which is $25.33 per acre or $71.65 per animal unit. The above average cow-calf operation produced a mean whole farm net revenue of $7097.10, which is $37.75 per acre or $101.39 per animal unit. The following tables depict the revenue and costs assumed in calculating net revenue for cow-calf production as well as the mean, minimum, maximum, and standard deviation of net revenues experienced for average and above average management.

Table 1. Revenue and Expenses for Average Management Beef Cow-Calf Enterprise Fed Hay Over Winter

ITEM	DESCRIPTION	UNIT	QUANTITY	PRICE
REVENUE				
Feeder Heifers	6 head @ 535 lbs.	cwt.	32.1	varies by year
Feeder Steers	11 head @ 535 lbs.	cwt.	58.85	varies by year
Cull Cows	5 head @ 1000 lbs	cwt.	50	varies by year
Death Loss	0.5% Feeder Calves			
	1.0% Cull Cows			
Beef Checkoff	At Market	head	22	$1.00
VARIABLE EXPENSES				
Feed	Pasture	acre	99	$74.12
Salt and Minerals		au	35	$20.90
Vet & Med		head	30	$15.80
Marketing		head	22	$14.00
Truck		head	22	$5.00
Machinery		hour	20	$4.00
FIXED EXPENSES				
Depreciation	Bldgs. & Equip	head	30	$15.58
Repairs	Bldgs. & Equip	head	30	$3.36
Depreciation	Bull	head	30	$5.16
Depr. & Repairs	Fences	head	30	$12.00
Tractor, 50 hp		hour	20	$3.00
INTEREST				
Cow & Sire	$511 @ 7%	head	30	40.88
Bldgs. & Equip	1/2 Investment Cost	head	30	20.18
Fixed Capital	Mach. & Equipment	hour	20	1.08

Table 2. Revenue and Expenses for Above Average Management Beef Cow-Calf Enterprise Fed Hay Over Winter

ITEM	DESCRIPTION	UNIT	QUANTITY	PRICE
REVENUE				
Feeder Heifers	17 head @ 603 lbs.	cwt.	102.51	varies by year
Feeder Steers	27 head @ 603 lbs.	cwt.	162.81	varies by year
Cull Cows	10 head @ 1200 lbs	cwt.	120	varies by year
Death Loss	0.5% Feeder Calves			
	1.0% Cull Cows			
Beef Checkoff	At Market	head	54	$1.00
VARIABLE EXPENSES				
Feed	Pasture	acre	188	$74.12
Salt and Minerals		au	70	$20.90
Vet & Med		head	60	$15.80
Marketing		head	54	$14.00
Truck		head	54	$5.00
Machinery		hour	40	$4.00
FIXED EXPENSES				
Depreciation	Bldgs. & Equip	head	60	$15.58
Repairs	Bldgs. & Equip	head	60	$3.36
Depreciation	Bull	head	60	$5.16
Depr. & Repairs	Fences	head	60	$12.00
Tractor, 50 hp		hour	40	$3.00
INTEREST				
Cow & Sire	$511 @ 7%	head	60	40.88
Bldgs. & Equip	1/2 Investment Cost	head	60	20.18
Fixed Capital	Mach. & Equipment	hour	40	1.08

Table 3. Simulated Cow-Calf Net Revenues Under Average and Above Average Management

Statistic	Average Management Net Revenues			Above Average Management Net Revenues		
	Whole Farm ($)	Acre ($/acre)	Animal Unit ($/au)	Whole Farm ($)	Acre ($/acre)	Animal Unit ($/au)
Mean	2507.92	25.33	71.65	7097.10	37.75	101.39
Standard Deviation	2685.96	27.13	76.74	7397.52	39.35	105.68
Minimum	2666.19	26.93	76.18	7341.42	39.05	104.88
Maximum	2638.32	26.65	75.38	7277.14	38.71	103.96

On-farm forage yields had a significant impact on cow-calf operation net revenue, while the prices of steers, heifers, utility cows and hay had little impact (see Tables 2 and 3 in the Appendix). Mean forage yields for the farms were 1.83 dry tons per acre. Under average management, the forage yields were often adequate to feed the cattle without having to purchase hay. The average management scenario experienced a mean forage surplus of 30.89 dry tons per year on pasture and hayland. However, due to the larger herd size, larger animal size, and preconditioning regimen, the forage yields for farms with above average management were often inadequate and the farms experienced a mean forage surplus of just 2.44 dry tons per year. During years in which farm operators experience a forage surplus, that surplus was assumed to be sold as hay. This serves as an additional source of revenue for farm operators in surplus years. During years in which farm operators experience a forage deficit, it was assumed that additional hay would be purchased from an off-farm source to meet the nutritional requirements of the cattle.

Switchgrass Production

Switchgrass yields per acre simulated using ALMANAC varied between the five-year and ten-year stand life. Mean yields for switchgrass with a five-year stand life were 5.26 dry tons per acre with a standard deviation of 2.71 dry tons per acre, while those with a ten-year stand life had mean yield of 6.90 dry tons per acre with a standard deviation of 2.84 dry tons per acre. Switchgrass stands having a ten-year stand life showed higher mean yields across all three soil types than those having a five-year stand life. Of the three predominant soil types, Talbott, Bradyville, and Capshaw, the Capshaw soils produced the highest mean yields.

Table 4. Switchgrass Yields in Dry Tons per Acre for Five- and Ten-Year Stands

	Assumed Stand Life	
	five-year	***ten-year***
Statistic	**Biomass Yield dry tons/acre**	**Biomass Yield dry tons/acre**
Mean	5.262	6.896
Standard Deviation	2.705	2.836
Minimum	0.004	0.815
Maximum	11.968	13.945

Switchgrass net revenues were calculated using three possible production contracts: 1) a spot market contract; 2) a fixed price contract; and 3) a fixed plus adjustable rate contract. All production contracts were calculated both with BCAP incentives to mitigate risk to the producer, particularly in the first two years of production, and without the BCAP incentives. The following tables depict the revenue and costs assumed in calculating net revenue for switchgrass establishment, reseeding, and annual production costs as well as the mean, minimum, maximum, and standard deviation of net revenues experienced for average and above average management.

Table 5. Establishment and Reseeding Costs for Five- and Ten-Year Stands Prorated Over the Life of the Stand With and Without BCAP Incentives

ITEM		DESCRIPTION	UNIT	QUANTITY	PRICE
VARIABLE EXPENSES					
Seed		PLS (Pure Live Seed)	lb	8.00	$ 15.00
Fertilizer		P2O5	lb	40.00	$ 0.80
		K2O	lb	80.00	$ 0.75
Weed Control	Fall Burndown	Glyphosate	qt	1.00	$ 7.87
	Spring Burndown	Glyphosate	qt	1.50	$ 7.87
	Post-Emerge	Broadleaf Herbicide	pt	2.00	$ 2.50
	Post-Emerge	Grass Herbicide	acre	1.00	$ 8.00
	Post-Emerge	Grass Herbicide	acre	1.00	$ 8.00
Machinery Repair			acre	1.00	$ 8.07
Machinery Fuel		Diesel @ $2.5/Gallon	acre	1.00	$ 11.31
Operating Capital		6 months	acre	$ 152.05	8.00%
MACHINERY EXPENSES					
Machinery Depreciation			acre	1.00	$ 8.70
Interest Expense		Machinery & Equipment	acre	1.00	$ 6.09
Establishment Cost Prorated Over 5 Years-No BCAP			*8%*	*$ 294.96*	$ 73.88
Establishment Cost Prorated Over 5 Years-with BCAP			*8%*	*$ 294.96*	$ 18.47
Establishment Cost Prorated Over 10 Years-No BCAP			*8%*	*$ 294.96*	$ 43.96
Establishment Cost Prorated Over 10 Years-with BCAP			*8%*	*$ 294.96*	$ 10.99
20% Reseeding in Year 2 Prorated Over 4 Years			*8%*	*$ 58.99*	*$ 17.81*
20% Reseeding in Year 2 Prorated Over 9 Years			*8%*	*$ 58.99*	*$ 9.44*

Table 6. Annual Production Costs for Five- and Ten- Year Stands

ITEM		DESCRIPTION	UNIT	QUANTITY	PRICE
VARIABLE EXPENSES					
Fertilizer		Nitrogen	lb	60.00	variable
		P2O5	lb	40.00	variable
		K2O	lb	80.00	variable
Twine		Triple Tie Twine	ton	variable	$ 2.33
Weed Control	Post-Emerge	Broadleaf Herbicide	pt	2.00	$ 2.50
	Post-Emerge	Grass Herbicide	acre	1.00	$ 8.00
Machinery Repair			acre	1.00	$ 9.68
			ton	variable	$ 4.36
Machinery Fuel		Diesel	gallon/acre	5.42	variable
			gallon/ton	2.42	variable
Operating Capital		6 months at 8%	acre	variable	variable
MACHINERY EXPENSES					
Machinery Depreciation			acre	1.00	$ 10.85
Interest Expense		Machinery & Equipment	acre	1.00	$ 5.74

Table 7. Simulated Switchgrass Annual Net Revenues Under Varying Contract Options for Five Year Switchgrass Stands

	Without BCAP Incentives			**RevenuesWith BCAP Incentives**		
Statistic	Spot Market ($/acre)	Fixed Price ($/acre)	Fixed Price + ($/acre)	Spot Market ($/acre)	Fixed Price ($/acre)	Fixed Price + ($/acre)
Mean	37.35	(9.75)	1.01	156.62	109.52	120.34
Standard Deviation	167.87	123.66	142.81	178.91	149.37	161.65
Minimum	(246.77)	(247.11)	(247.11)	(189.86)	(190.20)	(190.20)
Maximum	656.78	321.86	509.41	712.18	539.02	564.94
CV (%)	449.41	1267.78	14198.24	114.23	136.40	134.33

Table 8. Simulated Switchgrass Annual Net Revenues Under Varying Contract Options for Ten-Year Switchgrass Stands

	Without BCAP Incentives			**RevenuesWith BCAP Incentives**		
Statistic	Spot Market ($/acre)	Fixed Price ($/acre)	Fixed Price + ($/acre)	Spot Market ($/acre)	Fixed Price ($/acre)	Fixed Price + ($/acre)
Mean	168.30	102.95	115.88	237.96	172.61	185.54
Standard Deviation	191.40	129.57	151.83	177.78	127.15	146.53
Minimum	(147.29)	(177.26)	(177.26)	(80.66)	(100.23)	(100.23)
Maximum	738.49	420.66	581.31	771.46	453.63	614.28
CV (%)	113.73	125.85	131.02	74.71	73.66	78.97

Results of the 100-year net revenue distribution were meant to provide a mean annual per acre net revenue for switchgrass under varying contracts incentives for five- and ten-year contracts. Farmer incentives to replant switchgrass every five years, rather than allowing stands to mature for ten years, were not evaluated in this research. Even under a five-year contract, farm operators could benefit from renegotiating and signing a new contract after the first five years while replanting every ten years to allow for full maturation of the switchgrass stand while minimizing amortized costs associated with stand establishment and reseeding.

The spot market contract, either with or without BCAP incentives, provided the highest mean net revenue per acre for both five- and ten-year switchgrass contracts. The ten-year stand earned $237.96 per acre with the BCAP incentives and $168.30 per acre without the BCAP incentives. Mean net revenue per acre for a five-year stand under the spot market price contract, with the BCAP incentives, was $156.62 per acre, and $37.35 per acre without the BCAP incentives. The fixed price plus adjustable rate contract earned the second highest mean annual net revenue, followed by the fixed rate contract.

The fixed price contract earned producers the least net revenue per acre for both five- and ten-year contracts. In the case of the five-year stand without BCAP incentives, the fixed price contract lost almost $10 per acre in mean annual net revenues. The fixed price of $65 per dry ton was calculated using Extension budget data that did not account for changes in fuel and fertilizer prices. Fluctuating fuel and fertilizer prices combined with low yields for the five-year stand account for the net loss in revenue per acre.

The ten-year switchgrass contract earned the highest net revenues under all three types of contracts both with, and without, BCAP incentives. This may be explained by the fact that switchgrass, as a perennial grass, takes two to three years to reach maturation and its full yield potential. Under the five-year contract switchgrass stands are only producing at their highest yield for two to three years while ten-year stand may produce high yields for seven to eight years. In several instances, ten-year stand switchgrass yields are highest in years eight or nine with yields declining in years nine and ten. This may be due to a soil nutrient imbalance from over- or under-application of fertilizer. Fertilizer application rates used to calculate ALMANAC yields for this research were based on University of Tennessee Extension (University of Tennessee, Institute of Agriculture 2009) recommendations.

Multi-Year Optimization

Two optimizations were run for the average and above average management farms to maximize expected net present value of whole farm net revenues over 30 years. Both optimizations used an annual operating capital restriction similar to the mean annual available operating capital found in the cow-calf net revenue simulations–$10,000 under average management and $20,000 under above average management–and used a discount rate of 5%. Switchgrass price was varied between the average spot market rate and the fixed price contract rate of $65 per dry ton. Results of these four optimizations are shown in Tables 9, 10, 11, and 12. These four optimizations were used to evaluate carbon change over time and results are discussed in the subsequent Carbon Flux section of this chapter.

Under these conditions all cattle were sold to allow for switchgrass production by year six for the average cow-calf producer, while the above average producer had sold all cattle by year four. The spot market price contract earned the highest discounted net revenue for both average and above average producers (see Tables 9 through 12). .

Table 9. 30-Year Maximized Expected Net Present Value with a Fixed Price Switchgrass Contract of $65 per dry ton Under Average Management

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	34.78	$ 17,921.16
2	5.00	0.00	0.00	34.78	$ 3,061.42
3	5.00	0.00	0.00	42.83	$ 4,706.87
4	5.00	0.00	0.00	42.83	$ 6,979.16
5	5.00	0.00	0.00	44.21	$ 7,476.08
6	0.00	5.00	0.00	44.21	$ 17,499.67
7	0.00	0.00	0.00	44.21	$ 6,020.55
8	0.00	0.00	0.00	57.20	$ 9,093.59
9	0.00	0.00	0.00	59.05	$ 9,197.46
10	0.00	0.00	0.00	59.05	$ 932.36
11	0.00	0.00	0.00	71.81	$ 2,842.70
12	0.00	0.00	0.00	76.55	$ 1,434.75
13	0.00	0.00	0.00	84.15	$ 2,671.22
14	0.00	0.00	0.00	84.15	$ 6,455.96
15	0.00	0.00	0.00	82.77	$ 5,748.04
16	0.00	0.00	0.00	82.77	$ 7,233.03
17	0.00	0.00	0.00	92.56	$ 4,472.67
18	0.00	0.00	0.00	79.58	$ 5,077.31
19	0.00	0.00	0.00	77.72	$ 5,816.32
20	0.00	0.00	0.00	77.72	$ 8,390.51
21	0.00	0.00	0.00	99.00	$ 908.23
22	0.00	0.00	0.00	94.26	$ 2,626.55
23	0.00	0.00	0.00	99.00	$ 2,560.67
24	0.00	0.00	0.00	99.00	$ 1,490.01
25	0.00	0.00	0.00	99.00	$ 7,371.35
26	0.00	0.00	0.00	99.00	$ 8,418.03
27	0.00	0.00	0.00	99.00	$ 7,183.07
28	0.00	0.00	0.00	99.00	$ 1,999.44
29	0.00	0.00	0.00	99.00	$ 6,530.07
30	0.00	0.00	0.00	99.00	$ 676.68
					$ 172,794.93

Conditions considered were a price of $65 per dry ton, a discount rate of 5%, and annual operating capital of $10,000

Table 10. 30-Year Maximized Expected Net Present Value with a Spot Market Price Switchgrass Contract Under Average Management

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	13.00	22.00	0.00	26.44	$ 13,018.12
2	13.00	0.00	0.00	26.44	$ 1,305.94
3	5.00	8.00	0.00	44.45	$ 11,672.66
4	3.00	2.00	0.00	44.65	$ 10,425.37
5	3.00	0.00	0.00	44.65	$ 11,777.17
6	0.00	3.00	0.00	44.65	$ 26,596.53
7	0.00	0.00	0.00	44.65	$ 7,450.95
8	0.00	0.00	0.00	56.58	$ 16,339.65
9	0.00	0.00	0.00	58.87	$ 19,877.20
10	0.00	0.00	0.00	58.87	$ (448.95)
11	0.00	0.00	0.00	73.78	$ 6,350.40
12	0.00	0.00	0.00	78.69	$ 4,154.53
13	0.00	0.00	0.00	83.66	$ 1,112.21
14	0.00	0.00	0.00	83.46	$ 8,886.74
15	0.00	0.00	0.00	83.46	$ 4,026.57
16	0.00	0.00	0.00	90.09	$ 14,815.38
17	0.00	0.00	0.00	93.13	$ 12,532.42
18	0.00	0.00	0.00	81.20	$ 4,516.41
19	0.00	0.00	0.00	78.91	$ 9,746.41
20	0.00	0.00	0.00	78.91	$ 7,271.85
21	0.00	0.00	0.00	99.00	$ (31.12)
22	0.00	0.00	0.00	94.09	$ 2,582.54
23	0.00	0.00	0.00	99.00	$ 3,265.78
24	0.00	0.00	0.00	99.00	$ 5,721.77
25	0.00	0.00	0.00	99.00	$ 6,360.98
26	0.00	0.00	0.00	99.00	$ 13,603.80
27	0.00	0.00	0.00	99.00	$ 9,941.19
28	0.00	0.00	0.00	99.00	$ 6,477.12
29	0.00	0.00	0.00	99.00	$ 5,630.80
30	0.00	0.00	0.00	99.00	$ (86.36)
					$ 244,894.08

Conditions considered were the average simulated spot market price per dry ton, a discount rate of 5%, and annual operating capital of $10,000

Table 11. 30-Year Maximized Expected Net Present Value with a Fixed Price Switchgrass Contract of $65 per dry ton Under Above Average Management

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	13.00	57.00	0.00	63.78	$ 40,329.01
2	13.00	0.00	0.00	63.78	$ 5,623.73
3	13.00	0.00	0.00	88.48	$ 9,074.16
4	0.00	13.00	0.00	88.48	$ 22,022.75
5	0.00	0.00	0.00	88.48	$ 14,518.46
6	0.00	0.00	0.00	88.48	$ 29,676.94
7	0.00	0.00	0.00	88.48	$ 12,597.07
8	0.00	0.00	0.00	113.74	$ 18,474.88
9	0.00	0.00	0.00	117.80	$ 18,846.53
10	0.00	0.00	0.00	117.80	$ 1,945.98
11	0.00	0.00	0.00	145.27	$ 6,320.60
12	0.00	0.00	0.00	149.50	$ 4,261.32
13	0.00	0.00	0.00	166.50	$ 4,621.91
14	0.00	0.00	0.00	166.50	$ 12,243.50
15	0.00	0.00	0.00	166.50	$ 12,318.08
16	0.00	0.00	0.00	166.50	$ 14,169.30
17	0.00	0.00	0.00	185.90	$ 9,593.56
18	0.00	0.00	0.00	160.65	$ 10,500.01
19	0.00	0.00	0.00	156.58	$ 11,026.77
20	0.00	0.00	0.00	156.58	$ 16,736.50
21	0.00	0.00	0.00	188.00	$ 1,727.53
22	0.00	0.00	0.00	183.78	$ 4,760.88
23	0.00	0.00	0.00	188.00	$ 4,525.19
24	0.00	0.00	0.00	188.00	$ 2,906.98
25	0.00	0.00	0.00	188.00	$ 13,466.83
26	0.00	0.00	0.00	188.00	$ 16,080.00
27	0.00	0.00	0.00	188.00	$ 13,296.55
28	0.00	0.00	0.00	188.00	$ 3,820.34
29	0.00	0.00	0.00	188.00	$ 12,260.50
30	0.00	0.00	0.00	188.00	$ 986.18
	Total				***$ 348,732.05***

Conditions considered were a price of $65 per dry ton, a discount rate of 5%, and annual operating capital of $20,000

Table 12. 30-Year Maximized Expected Net Present Value with a Spot Market Price Switchgrass Contract Under Above Average Management

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	9.00	61.00	0.00	52.49	$ 43,830.54
2	9.00	0.00	0.00	52.49	$ 1,417.76
3	9.00	0.00	0.00	89.26	$ 13,194.73
4	0.00	9.00	0.00	89.26	$ 24,637.81
5	0.00	0.00	0.00	89.26	$ 23,011.76
6	0.00	0.00	0.00	89.26	$ 50,068.59
7	0.00	0.00	0.00	89.26	$ 14,923.95
8	0.00	0.00	0.00	113.13	$ 32,704.89
9	0.00	0.00	0.00	117.71	$ 39,788.94
10	0.00	0.00	0.00	117.71	$ (940.02)
11	0.00	0.00	0.00	147.76	$ 12,790.96
12	0.00	0.00	0.00	157.34	$ 8,446.55
13	0.00	0.00	0.00	166.95	$ 2,190.83
14	0.00	0.00	0.00	166.95	$ 17,754.06
15	0.00	0.00	0.00	166.95	$ 8,081.52
16	0.00	0.00	0.00	180.12	$ 29,611.26
17	0.00	0.00	0.00	186.29	$ 25,094.98
18	0.00	0.00	0.00	162.42	$ 9,040.05
19	0.00	0.00	0.00	157.84	$ 19,453.84
20	0.00	0.00	0.00	157.84	$ 14,541.87
21	0.00	0.00	0.00	188.00	$ 39.79
22	0.00	0.00	0.00	178.42	$ 4,792.72
23	0.00	0.00	0.00	188.00	$ 6,057.19
24	0.00	0.00	0.00	188.00	$ 10,952.91
25	0.00	0.00	0.00	188.00	$ 11,771.33
26	0.00	0.00	0.00	188.00	$ 25,826.64
27	0.00	0.00	0.00	188.00	$ 18,617.93
28	0.00	0.00	0.00	188.00	$ 12,292.31
29	0.00	0.00	0.00	188.00	$ 10,631.98
30	0.00	0.00	0.00	188.00	$ (287.33)
					$ 490,340.36

Conditions considered were the average simulated spot market price per dry ton, a discount rate of 5%, and annual operating capital of $20,000

To assess the impacts of switchgrass price, discount rate, and available operating capital on discounted net revenue and enterprise mix decisions, varying prices, discount rates, and operating capital rates were optimized over 30 years for both average and above average management. First, switchgrass price per dry ton and available operating capital were held constant while discount rate was varied. Then the operating capital was increased by $5,000 and price and operating capital were once again held constant while discount rate varied. This step was repeated until maximum available operating capital was considered in the optimization. Finally, switchgrass price per dry ton was in creased by $5 per dry ton and the cycle of increasing annual operating capital and varying discount rate was repeated until maximum switchgrass price was considered in the optimization.

Switchgrass prices started at $40 per dry ton and ended at $80 per dry ton, increasing in $5 per dry ton increments. Discount rates evaluated started at 2.5% and ended at 10%, increasing in 2.5% increments. Operating capital rates were based on mean, minimum, and maximum rates found in the cow-calf net revenue simulations. Under the average management scenario the annual operating capital values were $5,000, $10,000, $15,000, $20,000, and $25,000. Under above average management operating capital values were $15,000, $20,000, $25,000, $30.000, and $35,000 annually. It was assumed that farm operators would have access to operating capital similar to that available under cow-calf production. Using these switchgrass prices, discount rates, and levels of operating capital, 180 optimizations were run for each management scenario (see Tables in Appendix).

Switchgrass production was not in the optimal solution until the price of switchgrass reached $45 per dry ton. At lower prices and lower discount rates farm operators would eventually sell all cattle, but would not always plant all available acreage with switchgrass. Cattle sales under these conditions were normally spaced out over three to six years, whereas cattle sales under the lower price and higher discount rate scenarios were sold more quickly and all available acreage was eventually planted with switchgrass.

Management regime appears to have little effect on the rate of land use change over time when switchgrass production is introduced. The optimal solution predicted that the representative farm transitioned away from cattle production to switchgrass production at relatively the same rate when switchgrass price and access to operating capital were sufficiently high for both management scenarios. In instances where the rate of transition differed it was by only one or two years.

When switchgrass price was $40 per dry ton and $45 per dry ton, the representative farm under above average management transitioned away from cattle production two to three years sooner than the representative farm under average management and was more likely to devote some acreage to hay production particularly when the discount rate was lower. The above average management representative farm devoted some acreage to hay in each scenario where the discount rate was 2.5% until the combination of switchgrass price and access to operating capital was sufficiently high (switchgrass price greater than $55 per dry ton and operating capital greater than $20,000 annually). Average management did not engage in hay production when not engaging in switchgrass production even after cattle were sold.

Highest discounted net revenues were created using a combination of high switchgrass price, low discount rate, and high available operating capital. Under these conditions all production animal units were sold within the first year and as many acres of switchgrass were planted as allowed by the available operating capital.

Switchgrass price shows a positive effect on discounted net revenue. As switchgrass price increased expected net revenue also increased across combinations with varying levels of available operating capital with the same discount rate. Higher switchgrass prices induced farmers to sell cattle earlier and begin planting switchgrass acreage earlier (see Figures 1 through 6).

Discount rates had a slight negative effect on discounted net revenue. As the discount rate increased from 2.5% to 10%, expected net revenues decreased across all combinations of switchgrass price and available operating capital. A higher discount rate also induced farmers to sell cattle sooner and plant larger acreages of switchgrass earlier. This is likely due to lower net present value of acreage planted in later years.

Available operating capital had a positive effect on expected net revenue. Higher levels of available operating capital encouraged farmers to plant larger switchgrass acreages earlier. Additionally, when switchgrass price is lower a higher operating capital rate encouraged farmers to hold onto production animal units longer while simultaneously planting switchgrass on acreage previously held for hay production.

Lower available operating capital requires farmers to plant switchgrass acreage across a number of years as switchgrass establishment has a high variable cost per acre.

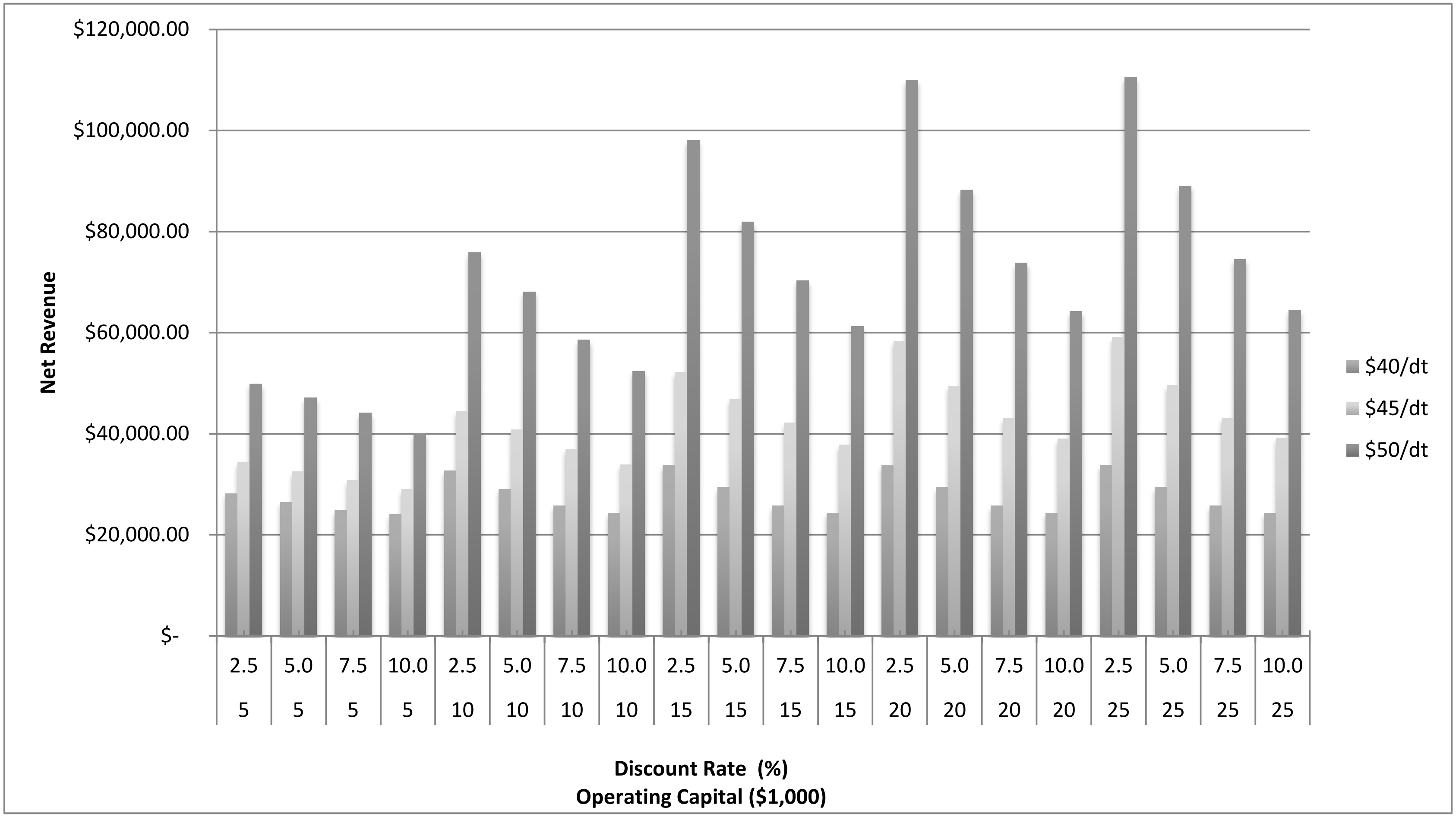

Figure 1. 30-Year Discounted Net Revenue for Average Management when Switchgrass Price is $40 to $50 per Dry Ton

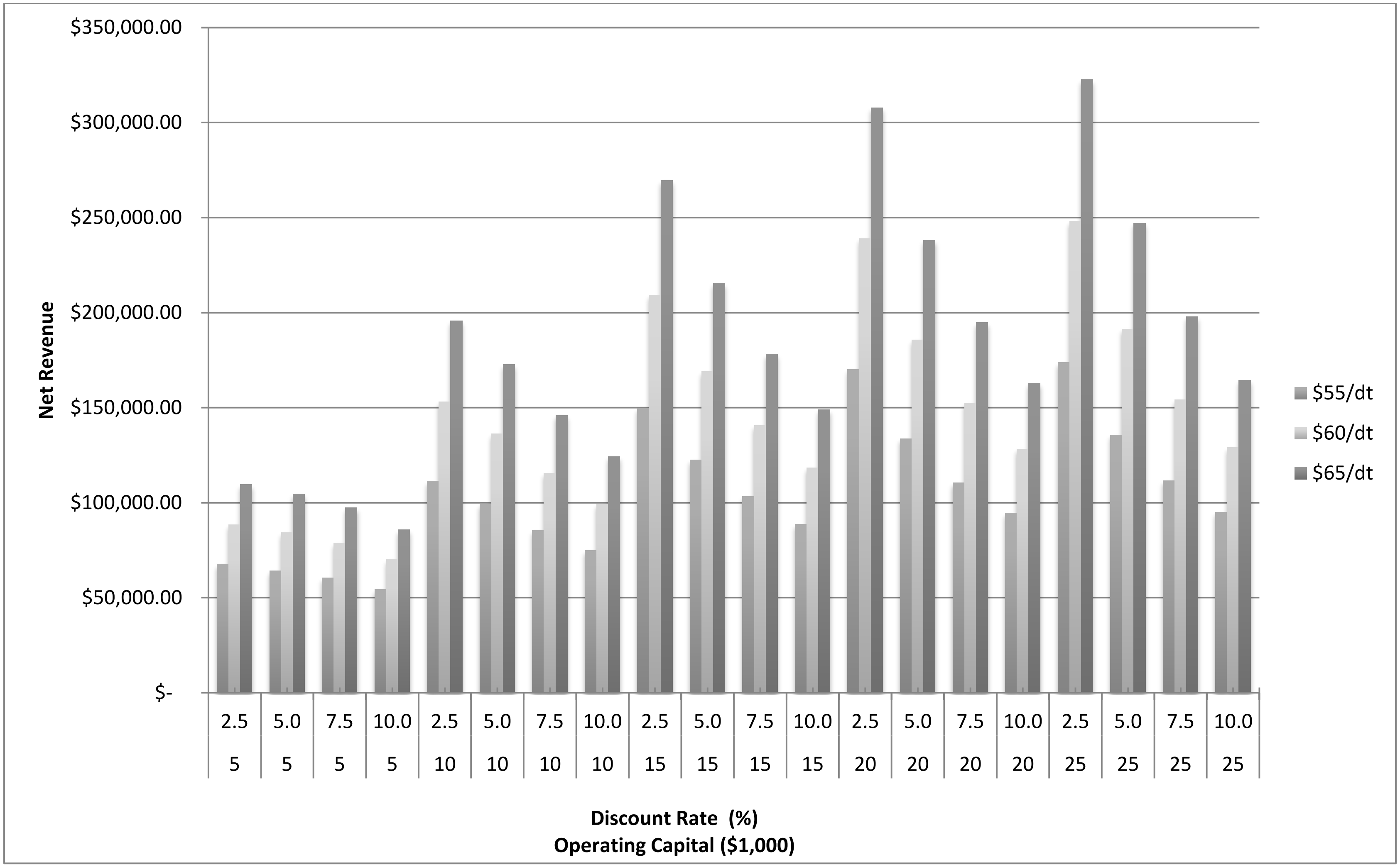

Figure 2. 30-Year Discounted Net Revenue for Average Management when Switchgrass Price is $55 to $65 per Dry Ton

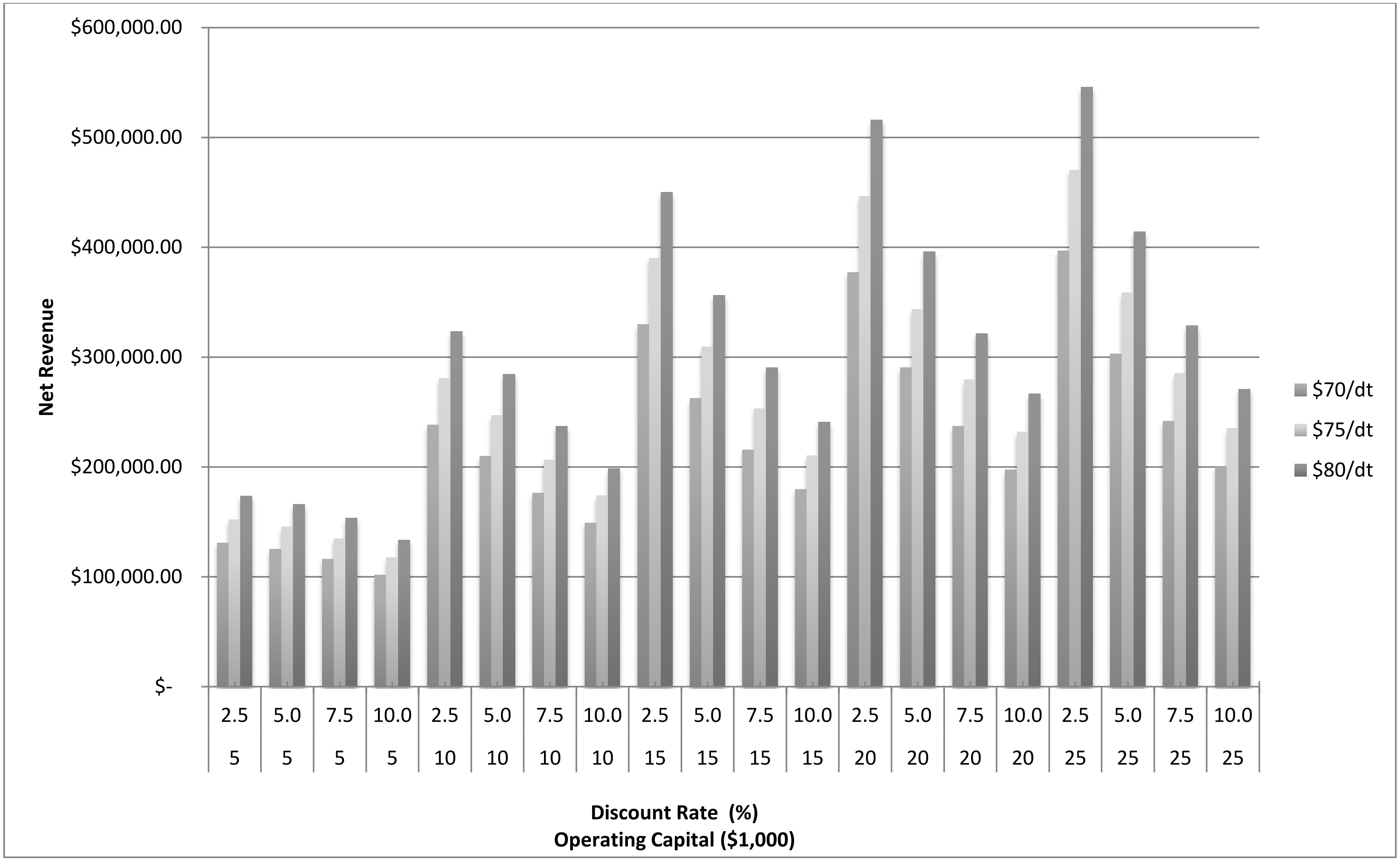

Figure 3. 30-Year Discounted Net Revenue for Average Management when Switchgrass Price is $70 to $80 per Dry Ton

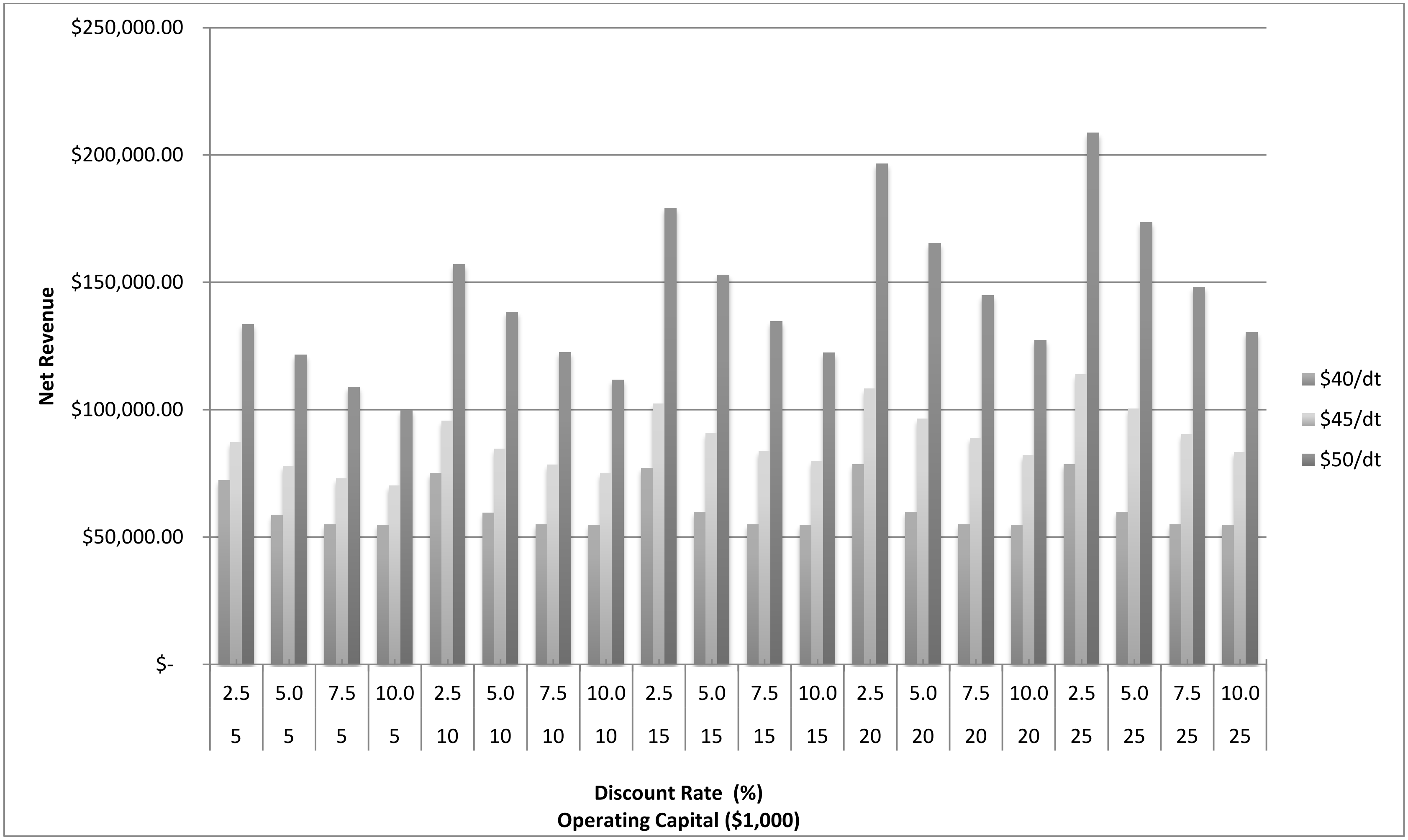

Figure 4. 30-Year Discounted Net Revenue for Above Average Management when Switchgrass Price is $40 to $50 per Dry Ton

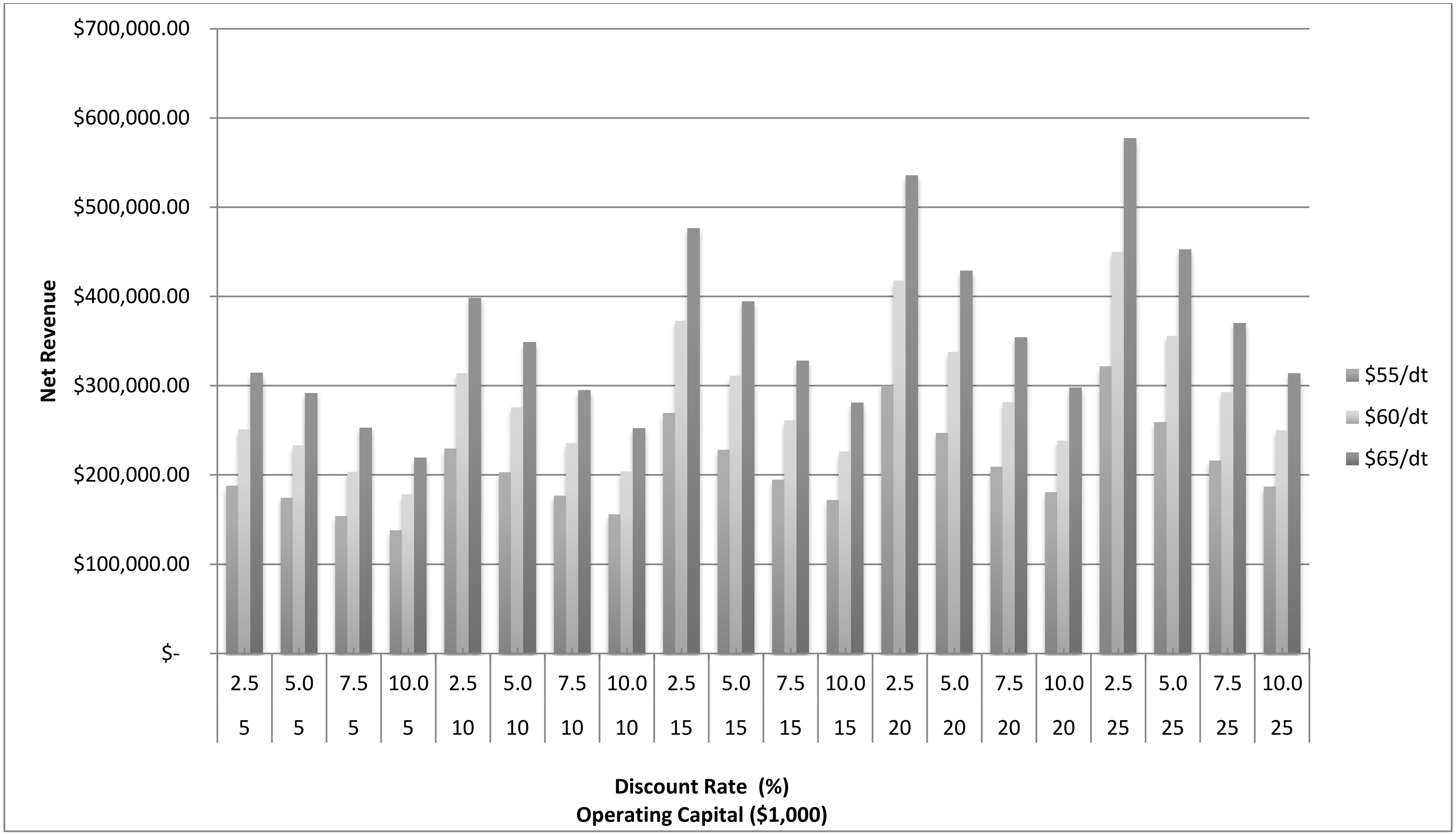

Figure 5. 30-Year Discounted Net Revenue for Above Average Management when Switchgrass Price is $55 to $65 per Dry Ton

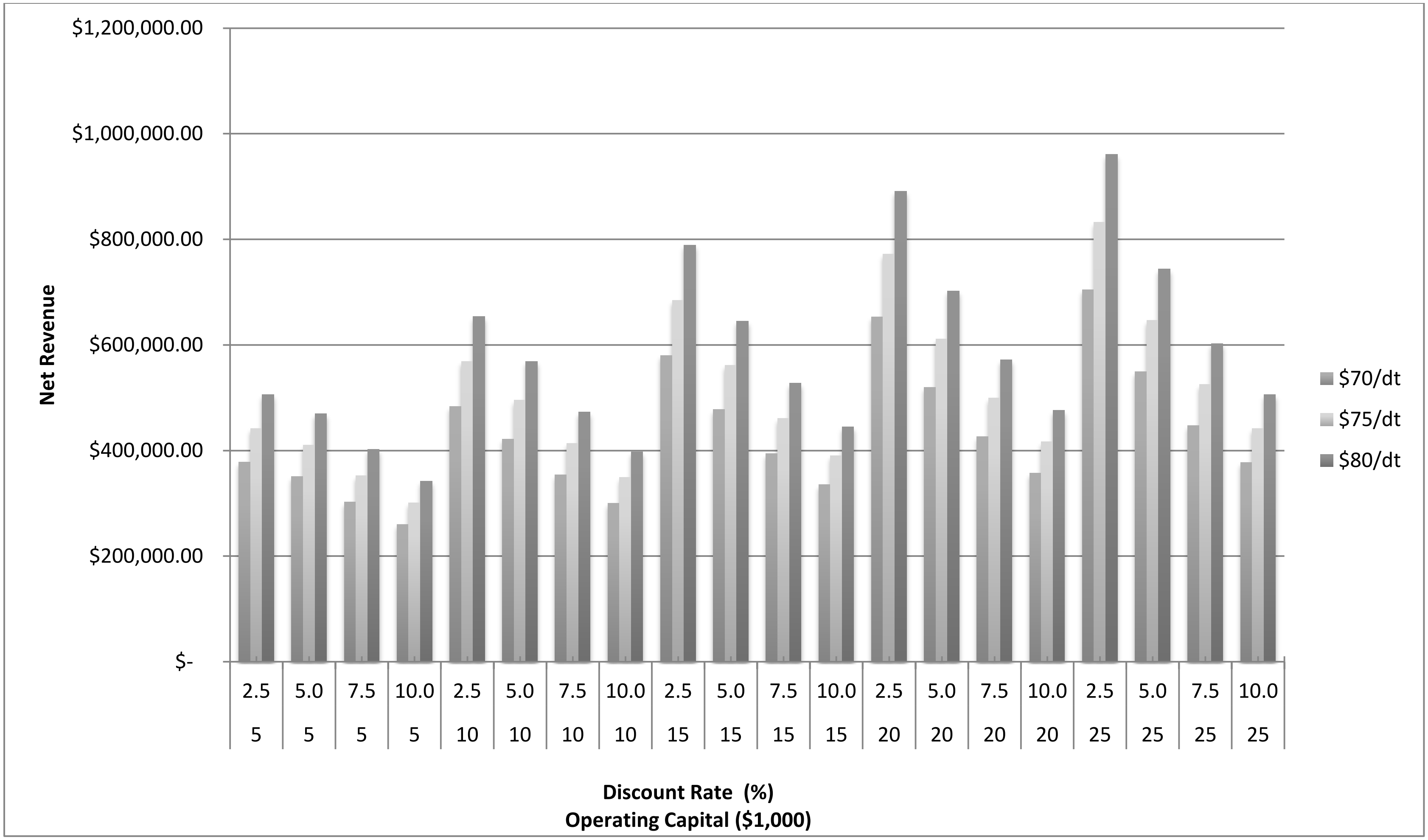

Figure 6. 30-Year Discounted Net Revenue for Above Average Management when Switchgrass Price is $70 to $80 per dry ton

Carbon Flux

Under the average management scenario, cow-calf operation with no switchgrass production emits approximately 62 tons of methane through enteric fermentation and manure management and 77 tons of carbon through lime and urea applications on hay and pasturelands, while producing 5,182 tons of hay and pasture biomass over 30 years. IPCC established Global Warming Potential (GWP) to compare the ability of greenhouse gases to trap heat in the atmosphere compared to one another (EPA 2011). Under these guidelines the GWP of one ton of methane is equivalent to 21 tons of carbon (EPA 2011). Given this carbon equivalency, a middle Tennessee cow-calf operation under average management emitted 1,369 tons of carbon over 30 years.

Should the average management farm transition to switchgrass production under the $65 per ton fixed price contract, biomass production would increase by 13,100 tons to 18,282 tons over 30 years. Carbon emissions from lime and urea applications would decrease by 27 tons to 49 tons, while methane emissions from enteric fermentation would decrease by 60 tons to a little more than one ton. This results in a 1,294 ton reduction of equivalent carbon emissions over 30 years, a displacement of 95% of carbon emissions.

Should the average management scenario representative farm transition to switchgrass production under the spot market price contract, production of hay, pasture, and switchgrass biomass would increase by 13,017 tons to 18,199 tons over 30 years. Carbon emissions from lime and urea applications would decrease by 27 tons to 49 tons, while methane emissions from enteric fermentation would decrease by 60 tons to a little more than one ton over 30 years. This results in a 1,297 ton reduction of equivalent carbon emissions over 30 years, a displacement of 95% of carbon emissions.

Under above the average management farm scenario, cow-calf production emits approximately 123 tons of methane through enteric fermentation and manure management and 120 tons of carbon through lime and urea applications on hay and pasturelands, while producing 10,825 tons of hay and pasture biomass over 30 years. According to IPCC guidelines for calculating GWP (EPA 2011), a middle Tennessee cow-calf operation under above average management emits 2,704 tons of carbon over 30 years.

Should the average management representative farm transition to switchgrass production under the $65 per ton fixed price contract, hay, pasture, and switchgrass biomass production would increase by 24,519 tons to 35,345 tons over 30 years. Carbon emissions from lime and urea applications would decrease by 24 tons to 96 tons, while methane emissions from enteric fermentation would decrease by 122 tons to less than two tons over 30 years. This results in a 2,575 ton reduction of equivalent carbon emissions over 30 years, a displacement of 95% of carbon emissions.

Should the above average management representative farm transition to switchgrass production under the spot market price contract, hay, pasture, and switchgrass biomass production would increase by 24,409 tons to 35,234 tons over 30 years. Carbon emissions from lime and urea applications would decrease by 23 tons to 97 tons, while methane emissions from enteric fermentation would decrease by 122 tons to just over one ton over 30 years. This results in a 2,585 ton reduction of equivalent carbon emissions over 30 years, a displacement of 96% of carbon emissions.

Transitioning from cow-calf production to switchgrass production results in significant increases in above and below ground biomass production over 30 years which may reduce atmospheric carbon. The reduction in atmospheric carbon through biomass production was not quantified for this research because only the individual farm expectations were evaluated in this analysis. The most significant reductions in carbon emissions, of those considered appear to come from reductions in methane emissions. Carbon equivalent methane emission reductions accounted for 95% to 96% of total reductions. Total methane emissions do not decrease to zero in each scenario considered because land use is transitioned over time and some cattle are kept in the first five to ten years of production.

Given the high rate of emissions reduction over the thirty year period, once atmospheric carbon captured during biomass production is quantified it may be possible for cow-calf producers to displace 100% of their carbon emissions over time. Carbon emissions are considered to be displaced rather than offset because as one region transitions from cow-calf to switchgrass production another region may increase cow-calf production to meet a potentially unchanged, or little changed, demand for feeder cattle.

CHAPTER V
CONCLUSIONS AND IMPLICATIONS

The purpose of this research was to evaluate the economic tradeoffs and land use dynamics of incorporating switchgrass into the farm plan of representative middle Tennessee cow-calf operations under average and above average management regimes. A net revenue simulation and a multi-year mathematical programming model were used to find the optimum mix of switchgrass and cow-calf enterprises that will maximize discounted whole farm net revenues over 30 years on representative middle Tennessee beef farms under average and above average management regimes. Land use changes predicted by the mathematical programming model was used to assess the net carbon and energy change associated with incorporating, or transitioning to, switchgrass production on a representative middle Tennessee beef farm under both typical and above average management regimes.

Cow-calf production budgets were based on information gathered through the Farm Panel held in Woodbury, Tennessee, University of Tennessee Extension Budgets for cow-calf production, NASS, and the Southeastern U.S. Switchgrass Production Survey. A survey of cow-calf production and preferences of cow-calf producers would benefit future research by providing more focused, detailed information about this specific industry as well as practices and preferences unique to the region.

This research assumed that cow-calf producers maximized utility by maximizing farm net revenues. Switchgrass production was found to be not only competitive with, but generally more profitable than cow-calf production in the region. When whole farm net revenues were maximized over time, all cattle were typically sold off within the first five years and switchgrass was produced on all farm acres at the end of the 30 year period. This finding was consistent across all switchgrass prices, discount rates, and operating capital levels used in the optimization models. However, these optimization results assumed that cow-calf producers would have advance knowledge about cattle and switchgrass sale prices, as well as all production costs and switchgrass yields spanning the 30 year period. In reality, the only values known with any certainty to the producers would be the contract price of the switchgrass. All other prices and costs would be unknown and switchgrass yields would be uncertain. Not knowing these values in advance would make risk averse cow-calf producers less likely to transitions from cow-calf production to switchgrass production.

Mean net revenue for cow-calf production under average management was $25.33 per acre and $37.75 per acre under above average management. Mean switchgrass net revenue was $37.35 per acre for a five-year stand with a spot market price contract without the benefit of BCAP incentives. Switchgrass grown under these contract conditions earned the lowest mean net revenue per acre and carried the highest risk for producers as measured by the standard deviation of net revenues since the spot market price is the most volatile and a minimum price per ton is not guaranteed and establishment costs are not subsidized.

Given the assumption that farmers maximize utility by maximizing net revenue, switchgrass production would be preferred by average cow-calf producers under all contract options with or without BCAP incentives. Additionally, annual labor required for switchgrass production was less than that required for cow-calf production. Both the net revenue and labor considerations would seem to make switchgrass production preferable to cow-calf production.

Results of this research may be used to encourage Middle Tennessee cow-calf producers to begin growing switchgrass as a means of increasing net revenues. In all optimization scenarios–under all switchgrass prices, discount rates, and levels of operating capital–net revenue was maximized by selling all cattle, generally within the first ten years.

Low per acre net revenues reported by cow-calf producers to NASS (2007), Menard et al. (2011), and comments made by Farm Panel (Larson 2009) participants suggests that cow-calf producers are not motivated solely by profit in their decision to continue cow-calf production activities. If this is the case, then simply providing producers with evidence that switchgrass production is more profitable over time may not convince cow-calf producers to transition to growing switchgrass. Should an ethanol facility be built in the region, a better understanding of how cow-calf producers maximize utility would benefit investors by being better able to provide producers with incentives that would ensure an adequate supply of switchgrass will be grown in the region and delivered to the facility. Certainly, understanding how regional cow-calf producers maximize utility is an area in which further research should be considered.

Overall greenhouse gas emissions appear to be reduced when acreage is transitioned from cow-calf production to switchgrass production. A more in-depth look and regional cow-calf production methods would benefit future carbon flux analysis by providing more precise data about carbon emissions associated with cow-calf production. Additional research into intensive grazing methods of cow-calf production combined with switchgrass production could provide valuable information about net carbon flux and energy flux in an integrated system. Income from switchgrass production may come from more than one revenue stream and may include the sale of switchgrass for biofuel production and also the trade of carbon capture credits generated by the sequestration of SOC by switchgrass (Ney and Schnoor 2002). Therefore, farmers may increase net revenue, and perhaps utility, by maximizing carbon storage and the reduction in carbon emissions.

Additional future research should consider how an increase in switchgrass production versus cow-calf production in one region will affect cow-calf production in a neighboring region. If a carbon leakage, in which carbon emissions are mitigated in one region due to an increase in switchgrass production combined with a reduction in cattle production only to be increased in another region as cattle production is increased to meet market demand, how would this affect net carbon emissions in both regions and the price of feeder cattle? Perhaps an emphasis on switchgrass production combined with intensive grazing practices should be considered to minimize carbon leakage from one region to another.

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APPENDIX A

DISCOUNTED 30-YEAR NET REVENUE OPTIMIZATION RESULTS FOR AVERAGE MANAGEMENT

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*2.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	18.00	17.00	0.00	0.00	$ 11,728.10
2	18.00	0.00	0.00	0.00	$ 1,112.47
3	18.00	0.00	0.00	0.00	$ 4,225.12
4	13.00	5.00	0.00	0.00	$ 917.76
5	13.00	0.00	0.00	0.00	$ 1,235.84
6	13.00	0.00	0.00	0.00	$ (648.55)
7	13.00	0.00	0.00	0.00	$ (270.26)
8	13.00	0.00	0.00	0.00	$ 1,921.64
9	0.00	13.00	0.00	0.00	$ 7,943.77
10	0.00	0.00	0.00	0.00	$ (0.00)
11	0.00	0.00	0.00	0.00	$ (0.00)
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 28,165.90

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*5.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ 11,067.27
2	19.00	0.00	0.00	0.00	$ 1,153.83
3	19.00	0.00	0.00	0.00	$ 4,249.77
4	14.00	5.00	0.00	0.00	$ 761.95
5	14.00	0.00	0.00	0.00	$ 1,220.70
6	14.00	0.00	0.00	0.00	$ (586.16)
7	14.00	0.00	0.00	0.00	$ (222.36)
8	14.00	0.00	0.00	0.00	$ 1,752.43
9	0.00	14.00	0.00	0.00	$ 7,054.85
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 26,452.30

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*7.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ 11,067.27
2	19.00	0.00	0.00	0.00	$ 1,134.00
3	19.00	0.00	0.00	0.00	$ 4,054.19
4	15.00	4.00	0.00	0.00	$ 177.73
5	15.00	0.00	0.00	0.00	$ 1,200.88
6	15.00	0.00	0.00	0.00	$ (531.07)
7	15.00	0.00	0.00	0.00	$ (183.63)
8	15.00	0.00	0.00	0.00	$ 1,595.62
9	0.00	15.00	0.00	0.00	$ 6,261.78
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 24,776.77

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*10.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ 11,067.27
2	19.00	0.00	0.00	0.00	$ 1,114.76
3	19.00	0.00	0.00	0.00	$ 3,871.81
4	0.00	19.00	0.00	0.00	$ 7,943.05
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 23,996.90

Average Management at: Switchgrass Price **$40.00** | Discount Rate **2.5%** | Operating Capital **$ 10,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	0.00	$ 8,215.52
4	27.00	8.00	0.00	0.00	$ 673.98
5	27.00	0.00	0.00	0.00	$ 2,566.75
6	27.00	0.00	0.00	0.00	$ (1,347.00)
7	27.00	0.00	0.00	0.00	$ (561.30)
8	27.00	0.00	0.00	0.00	$ 3,991.10
9	0.00	27.00	0.00	0.00	$ 16,498.60
10	0.00	0.00	0.00	0.00	$ (0.00)
11	0.00	0.00	0.00	0.00	$ (0.00)
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 32,694.84

Average Management at: Switchgrass Price **$40.00** | Discount Rate **5.0%** | Operating Capital **$ 10,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	0.00	$ 7,828.52
4	29.00	6.00	0.00	0.00	$ (516.00)
5	29.00	0.00	0.00	0.00	$ 2,528.59
6	29.00	0.00	0.00	0.00	$ (1,214.18)
7	29.00	0.00	0.00	0.00	$ (460.59)
8	29.00	0.00	0.00	0.00	$ 3,630.03
9	0.00	29.00	0.00	0.00	$ 14,613.62
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 29,029.52

Average Management at: Switchgrass Price **$40.00** | Discount Rate **7.5%** | Operating Capital **$ 10,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,088.95
3	35.00	0.00	0.00	0.00	$ 7,468.25
4	31.00	4.00	0.00	0.00	$ (1,543.75)
5	31.00	0.00	0.00	0.00	$ 2,481.81
6	31.00	0.00	0.00	0.00	$ (1,097.54)
7	31.00	0.00	0.00	0.00	$ (379.51)
8	31.00	0.00	0.00	0.00	$ 3,297.61
9	0.00	31.00	0.00	0.00	$ 12,941.01
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 25,750.87

Average Management at: Switchgrass Price **$40.00** | Discount Rate **10.0%** | Operating Capital **$ 10,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,053.51
3	35.00	0.00	0.00	0.00	$ 7,132.29
4	0.00	35.00	0.00	0.00	$ 14,631.93
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 24,311.77

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$40.00	**2.5%**	**$ 15,000.00**
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	0.00	$ 8,215.52
4	35.00	0.00	0.00	0.00	$ (4,484.71)
5	35.00	0.00	0.00	0.00	$ 3,327.26
6	35.00	0.00	0.00	0.00	$ (1,746.10)
7	35.00	0.00	0.00	0.00	$ (727.61)
8	35.00	0.00	0.00	0.00	$ 5,173.65
9	0.00	35.00	0.00	0.00	$ 21,387.07
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 33,802.26

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$40.00	**5.0%**	**$ 15,000.00**
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	0.00	$ 7,828.52
4	35.00	0.00	0.00	0.00	$ (4,103.45)
5	35.00	0.00	0.00	0.00	$ 3,051.75
6	35.00	0.00	0.00	0.00	$ (1,465.39)
7	35.00	0.00	0.00	0.00	$ (555.89)
8	35.00	0.00	0.00	0.00	$ 4,381.07
9	0.00	35.00	0.00	0.00	$ 17,637.13
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 29,393.27

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$40.00	**7.5%**	**$ 15,000.00**
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,088.95
3	35.00	0.00	0.00	0.00	$ 7,468.25
4	35.00	0.00	0.00	0.00	$ (3,765.75)
5	35.00	0.00	0.00	0.00	$ 2,802.05
6	35.00	0.00	0.00	0.00	$ (1,239.16)
7	35.00	0.00	0.00	0.00	$ (428.47)
8	35.00	0.00	0.00	0.00	$ 3,723.10
9	0.00	35.00	0.00	0.00	$ 14,610.82
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 25,753.83

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$40.00	**10.0%**	**$ 15,000.00**
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,053.51
3	35.00	0.00	0.00	0.00	$ 7,132.29
4	0.00	35.00	0.00	0.00	$ 14,631.93
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 24,311.77

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*2.5%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	0.00	$ 8,215.52
4	35.00	0.00	0.00	0.00	$ (4,484.71)
5	35.00	0.00	0.00	0.00	$ 3,327.26
6	35.00	0.00	0.00	0.00	$ (1,746.10)
7	35.00	0.00	0.00	0.00	$ (727.61)
8	35.00	0.00	0.00	0.00	$ 5,173.65
9	0.00	35.00	0.00	0.00	$ 21,387.07
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 33,802.26

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*5.0%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	0.00	$ 7,828.52
4	35.00	0.00	0.00	0.00	$ (4,103.45)
5	35.00	0.00	0.00	0.00	$ 3,051.75
6	35.00	0.00	0.00	0.00	$ (1,465.39)
7	35.00	0.00	0.00	0.00	$ (555.89)
8	35.00	0.00	0.00	0.00	$ 4,381.07
9	0.00	35.00	0.00	0.00	$ 17,637.13
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 29,393.27

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*7.5%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,088.95
3	35.00	0.00	0.00	0.00	$ 7,468.25
4	35.00	0.00	0.00	0.00	$ (3,765.75)
5	35.00	0.00	0.00	0.00	$ 2,802.05
6	35.00	0.00	0.00	0.00	$ (1,239.16)
7	35.00	0.00	0.00	0.00	$ (428.47)
8	35.00	0.00	0.00	0.00	$ 3,723.10
9	0.00	35.00	0.00	0.00	$ 14,610.82
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 25,753.83

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$40.00*	*10.0%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,053.51
3	35.00	0.00	0.00	0.00	$ 7,132.29
4	0.00	35.00	0.00	0.00	$ 14,631.93
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 24,311.77

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$40.00***	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	*$ 494.04*
2	35.00	0.00	0.00	0.00	*$ 2,163.14*
3	35.00	0.00	0.00	0.00	*$ 8,215.52*
4	35.00	0.00	0.00	0.00	*$ (4,484.71)*
5	35.00	0.00	0.00	0.00	*$ 3,327.26*
6	35.00	0.00	0.00	0.00	*$ (1,746.10)*
7	35.00	0.00	0.00	0.00	*$ (727.61)*
8	35.00	0.00	0.00	0.00	*$ 5,173.65*
9	0.00	35.00	0.00	0.00	*$ 21,387.07*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 33,802.26

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$40.00***	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	*$ 494.04*
2	35.00	0.00	0.00	0.00	*$ 2,125.48*
3	35.00	0.00	0.00	0.00	*$ 7,828.52*
4	35.00	0.00	0.00	0.00	*$ (4,103.45)*
5	35.00	0.00	0.00	0.00	*$ 3,051.75*
6	35.00	0.00	0.00	0.00	*$ (1,465.39)*
7	35.00	0.00	0.00	0.00	*$ (555.89)*
8	35.00	0.00	0.00	0.00	*$ 4,381.07*
9	0.00	35.00	0.00	0.00	*$ 17,637.13*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 29,393.27

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$40.00***	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	*$ 494.04*
2	35.00	0.00	0.00	0.00	*$ 2,088.95*
3	35.00	0.00	0.00	0.00	*$ 7,468.25*
4	35.00	0.00	0.00	0.00	*$ (3,765.75)*
5	35.00	0.00	0.00	0.00	*$ 2,802.05*
6	35.00	0.00	0.00	0.00	*$ (1,239.16)*
7	35.00	0.00	0.00	0.00	*$ (428.47)*
8	35.00	0.00	0.00	0.00	*$ 3,723.10*
9	0.00	35.00	0.00	0.00	*$ 14,610.82*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 25,753.83

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$40.00***	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	*$ 494.04*
2	35.00	0.00	0.00	0.00	*$ 2,053.51*
3	35.00	0.00	0.00	0.00	*$ 7,132.29*
4	0.00	35.00	0.00	0.00	*$ 14,631.93*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 24,311.77

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***2.5%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,174.28*
3	19.00	0.00	0.00	10.64	$ *7,435.83*
4	7.00	12.00	0.00	0.00	$ *5,303.48*
5	7.00	0.00	0.00	0.00	$ *665.45*
6	0.00	7.00	0.00	9.56	$ *6,233.86*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.96	$ *1,128.85*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	34.84	$ *1,243.22*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 34,252.25

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***5.0%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,153.83*
3	19.00	0.00	0.00	12.28	$ *7,062.03*
4	7.00	12.00	0.00	0.00	$ *4,947.31*
5	7.00	0.00	0.00	0.00	$ *610.35*
6	0.00	7.00	0.00	12.26	$ *5,804.79*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.19	$ *709.96*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	56.41	$ *1,140.43*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 32,495.97

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***7.5%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,134.00*
3	19.00	0.00	0.00	13.45	$ *6,568.10*
4	0.00	19.00	0.00	0.00	$ *8,510.20*
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	14.18	$ *1,934.97*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.96	$ *625.99*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	90.31	$ *903.17*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 30,743.71

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***10.0%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,114.76*
3	19.00	0.00	0.00	14.53	$ *6,082.41*
4	0.00	19.00	0.00	0.00	$ *7,943.05*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	16.20	$ *1,754.32*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	6.16	$ *579.68*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *433.66*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 28,975.15

	Maintain	Sell	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*2.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	24.22	$ 14,990.38
4	12.00	23.00	0.00	0.00	$ 10,346.53
5	12.00	0.00	0.00	0.00	$ 1,140.78
6	0.00	12.00	0.00	17.47	$ 10,918.42
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.49	$ 1,931.48
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	69.67	$ 2,486.44
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 44,471.20

	Maintain	Sell	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*5.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	26.17	$ 13,821.42
4	13.00	22.00	0.00	0.00	$ 9,050.52
5	13.00	0.00	0.00	0.00	$ 1,133.51
6	0.00	13.00	0.00	22.72	$ 10,771.18
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.41	$ 1,424.25
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 2,001.59
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 40,822.00

	Maintain	Sell	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*7.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,088.95
3	35.00	0.00	0.00	28.40	$ 12,777.00
4	0.00	35.00	0.00	0.00	$ 15,676.69
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	26.58	$ 3,628.78
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	10.03	$ 1,265.28
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 990.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 36,920.87

	Maintain	Sell	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*10.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,053.51
3	35.00	0.00	0.00	30.56	$ 11,782.15
4	0.00	35.00	0.00	0.00	$ 14,631.93
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	30.92	$ 3,349.01
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.13	$ 1,141.20
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 433.66
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 33,885.50

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*2.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	44.79	$ 20,743.35
4	13.00	22.00	0.00	0.00	$ 9,701.69
5	13.00	0.00	0.00	0.00	$ 1,235.84
6	0.00	13.00	0.00	19.72	$ 11,998.82
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	10.16	$ 2,312.48
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 3,533.14
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 52,182.50

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*5.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	46.50	$ 18,475.58
4	15.00	20.00	0.00	0.00	$ 7,854.71
5	15.00	0.00	0.00	0.00	$ 1,307.89
6	0.00	15.00	0.00	25.95	$ 12,384.03
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.72	$ 2,155.85
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 2,001.59
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 46,799.17

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*7.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,088.95
3	35.00	0.00	0.00	46.50	$ 16,161.87
4	0.00	35.00	0.00	0.00	$ 15,676.69
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	35.28	$ 4,816.12
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	15.32	$ 1,932.47
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 990.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 42,160.26

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*10.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	72.13	$ 10,976.50
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	14.46	$ 1,566.35
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.41	$ 1,166.99
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 433.66
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 37,766.49

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	45.78	$ 21,019.41
4	26.00	9.00	0.00	0.00	$ 1,318.82
5	26.00	0.00	0.00	0.00	$ 2,471.68
6	0.00	26.00	0.00	21.58	$ 20,148.38
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	31.64	$ 7,201.94
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 3,533.14
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 58,350.56

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	46.50	$ 18,475.74
4	29.00	6.00	0.00	0.00	$ (516.00)
5	29.00	0.00	0.00	0.00	$ 2,528.59
6	0.00	29.00	0.00	51.99	$ 24,253.98
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.51	$ 86.80
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 2,001.59
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 49,450.23

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	7.00	28.00	0.00	0.00	$ 18,997.20
2	7.00	0.00	0.00	0.00	$ 417.79
3	7.00	0.00	0.00	88.35	$ 18,010.89
4	0.00	7.00	0.00	0.00	$ 3,135.34
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	10.65	$ 1,454.22
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 990.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 43,005.56

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$45.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	96.17	$ 14,635.34
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	2.83	$ 306.01
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 433.66
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 38,997.99

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	46.50	$ 21,221.34
4	35.00	0.00	0.00	0.00	$ (4,484.71)
5	35.00	0.00	0.00	0.00	$ 3,327.26
6	0.00	35.00	0.00	0.00	$ 20,860.73
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	52.50	$ 11,948.95
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 3,533.14
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 59,063.91

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	46.50	$ 18,475.74
4	35.00	0.00	0.00	0.00	$ (4,103.45)
5	35.00	0.00	0.00	0.00	$ 3,051.75
6	0.00	35.00	0.00	52.50	$ 27,512.19
7	0.00	0.00	0.00	0.00	$ 0.00
8	0.00	0.00	0.00	0.00	$ (0.00)
9	0.00	0.00	0.00	0.00	$ (0.00)
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 2,001.59
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 49,557.35

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	99.00	$ 18,509.00
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 990.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 43,122.12

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	99.00	$ 15,065.28
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 433.66
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 39,121.92

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***2.5%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,174.28*
3	19.00	0.00	0.00	11.36	$ *11,610.91*
4	6.00	13.00	0.00	0.00	$ *5,948.32*
5	6.00	0.00	0.00	0.00	$ *570.39*
6	0.00	6.00	0.00	9.16	$ *8,408.06*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.61	$ *2,452.80*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	5.39	$ *515.56*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	34.84	$ *8,013.36*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	3.19	$ *119.47*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 49,880.41

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***5.0%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,153.83*
3	19.00	0.00	0.00	12.39	$ *10,784.32*
4	6.00	13.00	0.00	0.00	$ *5,545.21*
5	6.00	0.00	0.00	0.00	$ *523.16*
6	0.00	6.00	0.00	12.14	$ *8,270.26*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.19	$ *1,672.78*
9	0.00	0.00	0.00	0.93	$ *149.88*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	8.19	$ *471.99*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	56.41	$ *7,186.39*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	10.86	$ *262.22*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 47,087.32

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***7.5%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	19.00	16.00	0.00	0.00	$ *11,067.27*
2	19.00	0.00	0.00	0.00	$ *1,134.00*
3	19.00	0.00	0.00	13.45	$ *10,016.69*
4	0.00	19.00	0.00	0.00	$ *8,510.20*
5	0.00	0.00	0.00	0.00	$ *(0.00)*
6	0.00	0.00	0.00	14.18	$ *4,763.90*
7	0.00	0.00	0.00	0.00	$ *0.00*
8	0.00	0.00	0.00	4.96	$ *1,494.77*
9	0.00	0.00	0.00	2.63	$ *304.77*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	10.76	$ *355.10*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	90.31	$ *6,337.00*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	8.69	$ *122.45*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 44,106.15

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***10.0%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ *23,622.98*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	24.04	$ *8,996.13*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	4.82	$ *1,301.93*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	7.06	$ *1,614.97*
9	0.00	0.00	0.00	4.63	$ *386.97*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	17.11	$ *299.02*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *3,834.60*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 40,056.60

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*2.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	24.22	$ 23,463.57
4	12.00	23.00	0.00	0.00	$ 10,346.53
5	12.00	0.00	0.00	0.00	$ 1,140.78
6	0.00	12.00	0.00	17.47	$ 16,369.54
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.49	$ 4,516.03
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	10.92	$ 1,044.49
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	69.67	$ 16,026.72
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	6.39	$ 238.94
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 75,803.78

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*5.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	35.00	0.00	0.00	26.28	$ 21,690.10
4	12.00	23.00	0.00	0.00	$ 9,648.43
5	12.00	0.00	0.00	0.00	$ 1,046.31
6	0.00	12.00	0.00	22.59	$ 15,832.34
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.41	$ 3,355.07
9	0.00	0.00	0.00	2.07	$ 333.54
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	16.61	$ 957.50
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 12,612.91
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 68,095.74

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*7.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,088.95
3	35.00	0.00	0.00	28.40	$ 20,059.57
4	0.00	35.00	0.00	0.00	$ 15,676.69
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	26.58	$ 8,934.06
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	10.03	$ 3,021.26
9	0.00	0.00	0.00	5.49	$ 636.49
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	21.74	$ 717.65
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 6,947.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 58,575.85

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*10.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	48.09	$ 17,992.25
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	9.64	$ 2,603.87
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	14.11	$ 3,229.93
9	0.00	0.00	0.00	9.26	$ 773.93
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	17.90	$ 312.83
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 3,834.60
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 52,370.40

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*2.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	44.79	$ 36,411.65
4	13.00	22.00	0.00	0.00	$ 9,701.69
5	13.00	0.00	0.00	0.00	$ 1,235.84
6	0.00	13.00	0.00	19.72	$ 18,151.02
7	0.00	0.00	0.00	0.00	$ (0.00)
8	0.00	0.00	0.00	10.16	$ 5,406.86
9	0.00	0.00	0.00	0.41	$ 92.34
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	16.94	$ 1,619.57
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 22,773.42
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ 0.00
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 98,049.58

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*5.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	33.00	2.00	0.00	49.19	$ 34,558.71
4	13.00	20.00	0.00	0.00	$ 8,089.19
5	13.00	0.00	0.00	0.00	$ 1,133.51
6	0.00	13.00	0.00	22.93	$ 16,503.43
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.77	$ 5,094.49
9	0.00	0.00	0.00	4.46	$ 719.82
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	9.64	$ 556.02
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 12,612.91
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 81,887.62

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*7.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	30.00	5.00	0.00	0.00	$ 3,798.18
2	30.00	0.00	0.00	0.00	$ 1,790.53
3	30.00	0.00	0.00	53.86	$ 30,285.85
4	0.00	30.00	0.00	0.00	$ 13,437.16
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	26.63	$ 8,948.07
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	15.84	$ 4,769.88
9	0.00	0.00	0.00	2.67	$ 309.88
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 6,947.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 70,286.66

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*10.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	72.13	$ 26,988.38
4	0.00	0.00	0.00	9.54	$ 2,582.72
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	4.80	$ 1,296.67
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.53	$ 2,866.85
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 3,834.60
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 61,192.21

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***2.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	*$ 494.04*
2	35.00	0.00	0.00	0.00	*$ 2,163.14*
3	35.00	0.00	0.00	45.78	*$ 37,032.98*
4	26.00	9.00	0.00	0.00	*$ 1,318.82*
5	26.00	0.00	0.00	0.00	*$ 2,471.68*
6	0.00	26.00	0.00	21.58	*$ 26,881.42*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	31.64	*$ 16,839.02*
9	0.00	0.00	0.00	0.00	*$ 0.00*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 22,773.42*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 109,974.53

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***5.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	*$ 494.04*
2	35.00	0.00	0.00	0.00	*$ 2,125.48*
3	11.00	24.00	0.00	82.12	*$ 60,577.50*
4	7.00	4.00	0.00	0.00	*$ 1,101.98*
5	7.00	0.00	0.00	0.00	*$ 610.35*
6	0.00	7.00	0.00	12.03	*$ 8,754.70*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.85	*$ 1,933.60*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 12,612.91*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 88,210.56

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***7.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	7.00	28.00	0.00	0.00	*$ 18,997.20*
2	7.00	0.00	0.00	0.00	*$ 417.79*
3	7.00	0.00	0.00	88.35	*$ 40,669.31*
4	0.00	7.00	0.00	0.00	*$ 3,135.34*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	10.65	*$ 3,580.29*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	*$ 0.00*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 6,947.13*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 73,747.06

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$50.00***	***10.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	*$ 23,622.98*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	96.17	*$ 35,984.50*
4	0.00	0.00	0.00	2.83	*$ 764.70*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 3,834.60*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 64,206.79

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*2.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,163.14
3	35.00	0.00	0.00	46.50	$ 37,487.46
4	35.00	0.00	0.00	0.00	$ (4,484.71)
5	35.00	0.00	0.00	0.00	$ 3,327.26
6	0.00	35.00	0.00	0.00	$ 20,860.73
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	52.50	$ 27,938.12
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ 0.00
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 22,773.42
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 110,559.48

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*5.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	35.00	0.00	0.00	0.00	$ 494.04
2	35.00	0.00	0.00	0.00	$ 2,125.48
3	0.00	35.00	0.00	99.00	$ 73,806.26
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 12,612.91
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 89,038.70

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*7.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	99.00	$ 43,899.74
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 6,947.13
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 74,469.85

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*10.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	99.00	$ 37,041.61
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 3,834.60
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 64,499.20

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*2.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	13.00	22.00	0.00	6.44	$ 20,019.60
2	13.00	0.00	0.00	0.00	$ 803.45
3	13.00	0.00	0.00	8.96	$ 11,825.81
4	4.00	9.00	0.00	0.00	$ 4,137.78
5	4.00	0.00	0.00	0.00	$ 380.26
6	0.00	4.00	0.00	5.60	$ 7,088.29
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.11	$ 3,436.67
9	0.00	0.00	0.00	0.72	$ 339.24
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	10.92	$ 3,484.12
12	0.00	0.00	0.00	0.45	$ 128.17
13	0.00	0.00	0.00	9.40	$ 2,666.83
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.34	$ 125.97
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	24.80	$ 10,523.52
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	15.37	$ 2,549.33
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 67,509.04

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*5.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	4.00	31.00	0.00	15.83	$ 31,816.34
2	4.00	0.00	0.00	0.00	$ 242.91
3	4.00	0.00	0.00	5.96	$ 5,814.40
4	2.00	2.00	0.00	0.00	$ 726.85
5	2.00	0.00	0.00	0.00	$ 174.39
6	0.00	2.00	0.00	0.39	$ 1,315.10
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	6.29	$ 3,956.14
9	0.00	0.00	0.00	1.03	$ 355.73
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	22.61	$ 4,823.02
12	0.00	0.00	0.00	0.95	$ 175.22
13	0.00	0.00	0.00	10.34	$ 2,047.22
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	44.77	$ 10,503.03
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	23.78	$ 2,229.03
24	0.00	0.00	0.00	1.60	$ 64.17
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 64,243.53

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*7.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	13.22	$ 31,632.87
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	10.76	$ 7,528.46
4	0.00	0.00	0.00	0.76	$ 414.44
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	7.38	$ 3,516.13
9	0.00	0.00	0.00	2.33	$ 588.07
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	24.42	$ 3,487.75
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	19.86	$ 2,732.03
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	68.85	$ 8,974.81
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	30.15	$ 1,579.97
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 60,454.52

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*10.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	24.04	$ 14,333.42
4	0.00	0.00	0.00	3.18	$ 1,464.59
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	1.60	$ 691.11
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	6.88	$ 2,502.47
9	0.00	0.00	0.00	4.70	$ 872.94
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	16.81	$ 1,612.01
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	33.97	$ 3,245.33
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ 0.00
17	0.00	0.00	0.00	28.95	$ 2,314.35
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	36.08	$ 2,637.29
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	33.97	$ 995.60
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 54,292.10

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$55.00	*2.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	28.00	7.00	0.00	10.79	$ 13,477.94
2	28.00	0.00	0.00	0.00	$ 1,730.51
3	28.00	0.00	0.00	18.56	$ 24,744.00
4	10.00	18.00	0.00	0.00	$ 8,019.29
5	10.00	0.00	0.00	0.00	$ 950.65
6	0.00	10.00	0.00	12.91	$ 16,798.56
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.02	$ 6,713.07
9	0.00	0.00	0.00	1.24	$ 584.18
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	20.13	$ 6,422.25
12	0.00	0.00	0.00	0.62	$ 175.30
13	0.00	0.00	0.00	19.36	$ 5,488.73
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.76	$ 282.09
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	49.25	$ 20,902.85
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	31.06	$ 5,152.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 111,442.20

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$55.00	*5.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	7.00	28.00	0.00	32.66	$ 41,358.66
2	7.00	0.00	0.00	0.00	$ 425.10
3	7.00	0.00	0.00	11.53	$ 11,087.43
4	4.00	3.00	0.00	0.00	$ 973.03
5	4.00	0.00	0.00	0.00	$ 348.77
6	0.00	4.00	0.00	0.00	$ 2,113.46
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.72	$ 7,996.39
9	0.00	0.00	0.00	2.00	$ 687.82
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	46.22	$ 9,857.50
12	0.00	0.00	0.00	1.75	$ 323.44
13	0.00	0.00	0.00	20.53	$ 4,065.58
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ (0.00)
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	76.72	$ 17,997.24
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	22.28	$ 2,088.61
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 99,323.03

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$55.00	*7.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	45.93	$ 32,144.06
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	5.97	$ 3,199.02
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	11.26	$ 5,362.60
9	0.00	0.00	0.00	6.04	$ 1,520.96
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	26.44	$ 3,775.59
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	49.29	$ 6,781.04
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	5.97	$ 794.14
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	43.73	$ 5,700.54
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	49.29	$ 2,583.52
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 85,484.46

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$55.00	*10.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	48.09	$ 28,666.83
4	0.00	0.00	0.00	6.36	$ 2,929.19
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	3.20	$ 1,382.23
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	13.76	$ 5,004.94
9	0.00	0.00	0.00	9.40	$ 1,745.88
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	18.19	$ 1,744.91
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	48.09	$ 4,594.65
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.56	$ 764.43
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	41.35	$ 3,022.15
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	48.09	$ 1,409.55
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 74,887.74

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*2.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	32.00	3.00	0.00	26.61	$ *23,096.79*
2	32.00	0.00	0.00	0.00	$ *1,977.73*
3	32.00	0.00	0.00	24.25	$ *31,262.38*
4	11.00	21.00	0.00	0.00	$ *9,441.26*
5	11.00	0.00	0.00	0.00	$ *1,045.71*
6	0.00	11.00	0.00	11.28	$ *16,023.15*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	13.01	$ *10,881.79*
9	0.00	0.00	0.00	1.69	$ *800.14*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	39.65	$ *12,650.30*
12	0.00	0.00	0.00	0.88	$ *250.29*
13	0.00	0.00	0.00	27.19	$ *7,709.22*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	70.93	$ *30,100.79*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	28.07	$ *4,656.50*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 149,896.04

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*5.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	48.52	$ *49,578.21*
2	11.00	0.00	0.00	0.00	$ *668.01*
3	11.00	0.00	0.00	17.45	$ *16,873.99*
4	6.00	5.00	0.00	0.00	$ *1,699.88*
5	6.00	0.00	0.00	0.00	$ *523.16*
6	0.00	6.00	0.00	0.38	$ *3,423.18*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.02	$ *11,955.54*
9	0.00	0.00	0.00	3.03	$ *1,042.88*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	59.12	$ *12,609.06*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	17.45	$ *3,455.98*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	81.55	$ *19,129.64*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	17.45	$ *1,636.12*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 122,595.65

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*7.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	56.08	$ *56,953.33*
2	1.00	0.00	0.00	0.00	$ *59.68*
3	1.00	0.00	0.00	16.59	$ *11,822.95*
4	0.00	1.00	0.00	0.00	$ *447.91*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	24.61	$ *11,720.22*
9	0.00	0.00	0.00	1.71	$ *431.90*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	56.08	$ *8,009.90*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	16.59	$ *2,281.85*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	82.41	$ *10,742.05*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	16.59	$ *869.37*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 103,339.15

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*10.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ *23,622.98*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	72.13	$ *43,000.25*
4	0.00	0.00	0.00	9.54	$ *4,393.78*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	4.80	$ *2,073.34*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.53	$ *4,555.59*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	72.13	$ *6,891.97*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	14.34	$ *1,146.65*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	12.53	$ *915.45*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	72.13	$ *2,114.32*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 88,714.34

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	13.00	22.00	0.00	66.44	$ 66,505.78
2	13.00	0.00	0.00	0.00	$ 803.45
3	13.00	0.00	0.00	13.06	$ 15,843.57
4	11.00	2.00	0.00	0.00	$ (376.08)
5	11.00	0.00	0.00	0.00	$ 1,045.71
6	0.00	11.00	0.00	0.29	$ 6,798.84
7	0.00	0.00	0.00	0.00	$ (0.00)
8	0.00	0.00	0.00	19.21	$ 16,074.08
9	0.00	0.00	0.00	0.00	$ 0.00
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	66.44	$ 21,198.48
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	13.06	$ 3,704.07
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ (0.00)
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	85.94	$ 36,470.30
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	13.06	$ 2,166.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 170,235.00

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	34.00	1.00	0.00	43.92	$ 31,225.66
2	34.00	0.00	0.00	0.00	$ 2,064.76
3	6.00	28.00	0.00	45.92	$ 56,542.75
4	5.00	1.00	0.00	0.00	$ (105.54)
5	5.00	0.00	0.00	0.00	$ 435.96
6	0.00	5.00	0.00	0.00	$ 2,641.83
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.16	$ 5,755.96
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	43.92	$ 9,367.16
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	45.92	$ 9,093.14
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	53.08	$ 12,450.79
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	45.92	$ 4,304.87
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 133,777.34

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	52.22	$ 55,272.15
2	0.00	0.00	0.00	0.00	$ (0.00)
3	0.00	0.00	0.00	43.62	$ 30,530.23
4	0.00	0.00	0.00	3.16	$ 1,719.46
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	52.22	$ 7,458.01
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	43.62	$ 6,000.68
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	3.16	$ 420.14
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	52.22	$ 6,806.56
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	43.62	$ 2,286.21
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 110,493.44

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ 23,622.98
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	96.17	$ 57,333.67
4	0.00	0.00	0.00	2.83	$ 1,300.92
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	96.17	$ 9,189.29
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	2.83	$ 225.86
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	96.17	$ 2,819.09
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 94,491.83

	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:	***$55.00***	***2.5%***	***$ 25,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	98.65	$ *100,049.95*
2	0.00	0.00	0.00	0.00	$ *(0.00)*
3	0.00	0.00	0.00	0.00	$ *0.00*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ *(0.00)*
6	0.00	0.00	0.00	0.00	$ *0.00*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.35	$ *296.64*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	98.65	$ *31,475.11*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *42,013.69*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ *0.00*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 173,835.40

	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:	***$55.00***	***5.0%***	***$ 25,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ *91,407.96*
2	0.00	0.00	0.00	0.00	$ *(0.00)*
3	0.00	0.00	0.00	0.00	$ *(0.00)*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ *0.00*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ *21,115.27*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ *0.00*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *23,224.24*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ *0.00*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 135,747.47

	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:	***$55.00***	***7.5%***	***$ 25,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ *23,622.98*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	99.00	$ *69,290.48*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ *0.00*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	99.00	$ *13,618.95*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ *0.00*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	99.00	$ *5,188.71*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 111,721.13

	Switchgrass Price	Discount Rate	Operating Capital
Average Management at:	***$55.00***	***10.0%***	***$ 25,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	0.00	$ *23,622.98*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	99.00	$ *59,017.95*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ *0.00*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	99.00	$ *9,459.25*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	99.00	$ *2,901.91*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 95,002.09

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$60.00***	***2.5%***	***$ 5,000.00***
0	35	0	46.5	0	
1	6.00	29.00	0.00	13.74	$ 34,896.41
2	6.00	0.00	0.00	0.00	$ 370.82
3	6.00	0.00	0.00	6.33	$ 9,826.23
4	2.00	4.00	0.00	0.00	$ 1,810.54
5	2.00	0.00	0.00	0.07	$ 268.14
6	0.00	2.00	0.00	0.00	$ 1,192.04
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.79	$ 5,465.19
9	0.00	0.00	0.00	0.25	$ 182.75
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	17.81	$ 9,662.80
12	0.00	0.00	0.00	0.02	$ 9.09
13	0.00	0.00	0.00	8.34	$ 4,114.40
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	1.16	$ 471.74
17	0.00	0.00	0.00	0.87	$ 502.78
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	24.56	$ 15,196.31
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	15.01	$ 4,416.86
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.61	$ 29.65
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 88,415.77

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$60.00***	***5.0%***	***$ 5,000.00***
0	35	0	46.5	0	
1	3.00	32.00	0.00	16.87	$ 38,250.08
2	3.00	0.00	0.00	0.00	$ 182.18
3	3.00	0.00	0.00	5.19	$ 6,502.72
4	1.00	2.00	0.00	0.00	$ 844.09
5	1.00	0.00	0.00	0.00	$ 87.19
6	0.00	1.00	0.00	0.00	$ 528.37
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	6.43	$ 5,515.24
9	0.00	0.00	0.00	0.97	$ 513.84
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	23.53	$ 8,679.04
12	0.00	0.00	0.00	0.62	$ 204.81
13	0.00	0.00	0.00	10.04	$ 3,411.77
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.29	$ 610.17
17	0.00	0.00	0.00	2.69	$ 931.87
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	40.06	$ 13,691.76
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	23.84	$ 3,894.52
24	0.00	0.00	0.00	4.00	$ 377.76
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.24	$ 104.53
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 84,329.95

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$60.00***	***7.5%***	***$ 5,000.00***
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ 41,155.00
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	4.13	$ 3,953.93
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.37	$ 5,451.69
9	0.00	0.00	0.00	1.97	$ 763.69
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	30.16	$ 7,620.44
12	0.00	0.00	0.00	2.99	$ 661.96
13	0.00	0.00	0.00	11.52	$ 2,701.57
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.71	$ 2,030.36
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	63.35	$ 12,070.15
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.93	$ 2,353.07
24	0.00	0.00	0.00	0.00	$ 0.00
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ 0.00
27	0.00	0.00	0.00	9.71	$ 118.69
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 78,880.56

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
			Switchgrass Price	**Discount Rate**	**Operating Capital**
Average Management at:			***$60.00***	***10.0%***	***$ 5,000.00***
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ 39,277.09
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	4.70	$ 3,846.45
4	0.00	0.00	0.00	2.30	$ 1,493.71
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.88	$ 4,924.26
9	0.00	0.00	0.00	3.59	$ 1,034.48
10	0.00	0.00	0.00	5.01	$ 895.09
11	0.00	0.00	0.00	29.37	$ 5,120.56
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	20.67	$ 3,365.01
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ (0.00)
17	0.00	0.00	0.00	23.24	$ 2,962.21
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	55.09	$ 5,919.06
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	20.67	$ 1,049.06
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	23.24	$ 139.22
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 70,026.20

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	2.5%	$ 10,000.00

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	28.52	$ 47,987.72
2	11.00	0.00	0.00	0.00	$ 679.84
3	11.00	0.00	0.00	11.68	$ 18,109.42
4	4.00	7.00	0.00	0.00	$ 3,104.38
5	4.00	0.00	0.00	0.00	$ 380.26
6	0.00	4.00	0.00	0.00	$ 2,384.08
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.70	$ 11,068.88
9	0.00	0.00	0.00	0.47	$ 336.34
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	36.42	$ 19,761.30
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	15.75	$ 7,768.37
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.61	$ 1,063.18
17	0.00	0.00	0.00	1.51	$ 869.26
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	50.03	$ 30,956.50
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	29.16	$ 8,583.15
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	1.20	$ 58.09
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 153,110.76

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	5.0%	$ 10,000.00

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	7.00	28.00	0.00	32.70	$ 51,189.17
2	7.00	0.00	0.00	0.00	$ 425.10
3	7.00	0.00	0.00	11.49	$ 14,482.25
4	4.00	3.00	0.00	0.00	$ 973.03
5	4.00	0.00	0.00	0.00	$ 348.77
6	0.00	4.00	0.00	0.00	$ 2,113.46
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.73	$ 10,921.03
9	0.00	0.00	0.00	2.00	$ 1,052.54
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	46.25	$ 17,061.21
12	0.00	0.00	0.00	1.73	$ 573.59
13	0.00	0.00	0.00	20.52	$ 6,970.44
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.74	$ 3,370.11
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	67.01	$ 22,902.42
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	22.25	$ 3,633.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	9.74	$ 240.28
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 136,257.21

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	7.5%	$ 10,000.00

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	38.96	$ 57,111.63
2	1.00	0.00	0.00	0.00	$ 59.68
3	1.00	0.00	0.00	9.38	$ 9,187.30
4	0.00	1.00	0.00	0.00	$ 447.91
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	16.61	$ 10,816.32
9	0.00	0.00	0.00	3.99	$ 1,546.57
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	59.49	$ 15,028.81
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	18.91	$ 4,437.37
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.09	$ 15,257.73
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.91	$ 1,716.21
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 115,609.54

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	10.0%	$ 10,000.00

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	$ 54,931.20
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	9.40	$ 7,692.91
4	0.00	0.00	0.00	4.59	$ 2,987.42
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.76	$ 9,848.52
9	0.00	0.00	0.00	7.18	$ 2,068.97
10	0.00	0.00	0.00	10.03	$ 1,790.17
11	0.00	0.00	0.00	48.03	$ 8,375.17
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	9.40	$ 1,530.73
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	4.59	$ 585.67
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	85.00	$ 9,132.63
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	9.40	$ 477.21
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.59	$ 27.53
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 99,448.12

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	*2.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	18.00	17.00	0.00	41.22	$ *57,443.28*
2	18.00	0.00	0.00	0.00	$ *1,112.47*
3	18.00	0.00	0.00	19.00	$ *29,478.69*
4	7.00	11.00	0.00	0.00	$ *4,786.78*
5	7.00	0.00	0.00	0.22	$ *899.47*
6	0.00	7.00	0.00	0.00	$ *4,172.15*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	14.37	$ *16,395.58*
9	0.00	0.00	0.00	0.76	$ *548.25*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	53.43	$ *28,988.40*
12	0.00	0.00	0.00	0.05	$ *27.28*
13	0.00	0.00	0.00	25.03	$ *12,343.20*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ *0.00*
17	0.00	0.00	0.00	5.36	$ *3,092.58*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	68.56	$ *42,417.95*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.08	$ *7,382.70*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	5.36	$ *260.04*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 209,348.82

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	*5.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	10.00	25.00	0.00	49.57	$ *65,816.27*
2	10.00	0.00	0.00	0.00	$ *607.28*
3	10.00	0.00	0.00	16.68	$ *20,984.97*
4	5.00	5.00	0.00	0.00	$ *1,817.13*
5	5.00	0.00	0.00	0.00	$ *435.96*
6	0.00	5.00	0.00	0.00	$ *2,641.83*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.15	$ *16,436.27*
9	0.00	0.00	0.00	2.97	$ *1,566.38*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.20	$ *22,208.59*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	16.68	$ *5,665.78*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ *0.00*
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	82.32	$ *28,135.78*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	16.68	$ *2,723.94*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 169,040.18

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	*7.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	58.96	$ *74,643.65*
2	1.00	0.00	0.00	0.00	$ *59.68*
3	1.00	0.00	0.00	13.52	$ *13,141.23*
4	0.00	1.00	0.00	0.00	$ *447.91*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	24.98	$ *16,268.00*
9	0.00	0.00	0.00	1.54	$ *598.43*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	58.96	$ *14,894.37*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	13.52	$ *3,171.36*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ *0.00*
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	85.48	$ *16,285.81*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	13.52	$ *1,226.56*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 140,736.99

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$60.00	*10.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ *70,585.31*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	14.10	$ *11,539.36*
4	0.00	0.00	0.00	6.89	$ *4,481.12*
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	18.00	$ *8,975.16*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ *10,461.91*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	14.10	$ *2,296.09*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	6.89	$ *878.51*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	78.00	$ *8,380.69*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.10	$ *715.82*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	6.89	$ *41.29*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 118,355.26

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*2.5%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	12.00	23.00	0.00	67.48	$ *90,531.15*
2	12.00	0.00	0.00	0.00	$ *741.65*
3	12.00	0.00	0.00	12.22	$ *19,055.89*
4	11.00	1.00	0.00	0.00	$ *(892.78)*
5	11.00	0.00	0.00	0.00	$ *1,045.71*
6	0.00	11.00	0.00	0.00	$ *6,556.23*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.30	$ *22,027.65*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	67.48	$ *36,610.79*
12	0.00	0.00	0.00	0.00	$ *0.00*
13	0.00	0.00	0.00	12.22	$ *6,025.83*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	86.78	$ *53,694.40*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.22	$ *3,596.29*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 238,992.81

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*5.0%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	7.00	28.00	0.00	72.70	$ *90,571.39*
2	7.00	0.00	0.00	0.00	$ *425.10*
3	7.00	0.00	0.00	15.18	$ *18,626.88*
4	7.00	0.00	0.00	0.00	$ *(820.69)*
5	7.00	0.00	0.00	0.00	$ *610.35*
6	0.00	7.00	0.00	0.00	$ *3,698.56*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	11.13	$ *9,548.47*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	72.70	$ *26,819.26*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	15.18	$ *5,155.94*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	83.82	$ *28,648.68*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	15.18	$ *2,478.83*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 185,762.75

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*7.5%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	78.96	$ *92,175.66*
2	1.00	0.00	0.00	0.00	$ *59.68*
3	1.00	0.00	0.00	17.65	$ *17,095.15*
4	0.00	1.00	0.00	0.00	$ *447.91*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	2.39	$ *1,556.88*
9	0.00	0.00	0.00	0.00	$ *0.00*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	78.96	$ *19,947.02*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	17.65	$ *4,141.30*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	81.35	$ *15,498.16*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	17.65	$ *1,601.70*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ *0.00*
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 152,523.47

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*10.0%*	*$ 20,000.00*
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *86,239.42*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	18.81	$ *15,385.81*
4	0.00	0.00	0.00	0.19	$ *125.64*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *13,949.22*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ *3,061.45*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.19	$ *24.63*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.00	$ *8,595.21*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ *954.42*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.19	$ *1.16*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 128,336.97

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*2.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	98.65	$ 133,023.25
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ 0.00
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ (0.00)
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.35	$ 404.62
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	98.65	$ 53,518.60
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ (0.00)
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 61,253.97
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 248,200.44

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*5.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ 121,093.29
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ (0.00)
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ 0.00
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ 36,522.68
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 33,835.56
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 191,451.53

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*7.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ 110,405.84
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	0.00	$ 0.00
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ 0.00
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ 25,010.43
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 18,861.12
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ 0.00
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 154,277.38

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$60.00*	*10.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ 101,110.28
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ 0.00
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ 17,262.03
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 10,636.49
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 129,008.81

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***2.5%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	6.00	29.00	0.00	13.74	$ *39,489.27*
2	6.00	0.00	0.00	0.00	$ *370.82*
3	6.00	0.00	0.00	6.33	$ *12,041.71*
4	2.00	4.00	0.00	0.01	$ *1,822.91*
5	2.00	0.00	0.00	0.07	$ *279.61*
6	0.00	2.00	0.00	0.00	$ *1,192.04*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.79	$ *6,921.80*
9	0.00	0.00	0.00	0.25	$ *246.48*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	17.81	$ *13,641.80*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	8.36	$ *5,878.78*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	1.74	$ *1,033.18*
17	0.00	0.00	0.00	0.31	$ *243.91*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	24.57	$ *19,978.64*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.93	$ *6,312.51*
24	0.00	0.00	0.00	0.72	$ *200.28*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	1.34	$ *8.31*
30	0.00	0.00	0.00	0.00	$ -
					$ 109,662.06

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***5.0%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	4.00	31.00	0.00	15.83	$ *41,307.81*
2	4.00	0.00	0.00	0.00	$ *242.91*
3	4.00	0.00	0.00	5.96	$ *9,369.98*
4	2.00	2.00	0.00	0.28	$ *1,055.47*
5	2.00	0.00	0.00	0.13	$ *317.81*
6	0.00	2.00	0.00	0.00	$ *1,056.73*
7	0.00	0.00	0.00	0.00	$ *0.00*
8	0.00	0.00	0.00	6.26	$ *6,807.06*
9	0.00	0.00	0.00	1.03	$ *733.60*
10	0.00	0.00	0.00	0.00	$ *0.00*
11	0.00	0.00	0.00	22.59	$ *11,849.50*
12	0.00	0.00	0.00	1.58	$ *754.56*
13	0.00	0.00	0.00	10.14	$ *4,883.84*
14	0.00	0.00	0.00	0.00	$ *0.00*
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	1.97	$ *756.60*
17	0.00	0.00	0.00	2.94	$ *1,379.84*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	39.03	$ *17,520.93*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	24.87	$ *5,792.31*
24	0.00	0.00	0.00	3.98	$ *591.23*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.23	$ *213.79*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	8.52	$ *34.97*
30	0.00	0.00	0.00	0.00	$ -
					$ 104,668.95

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***7.5%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	18.96	$ *44,707.78*
2	1.00	0.00	0.00	0.00	$ *59.68*
3	1.00	0.00	0.00	4.95	$ *6,220.63*
4	0.00	1.00	0.00	0.36	$ *804.27*
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	0.00	$ *(0.00)*
7	0.00	0.00	0.00	0.00	$ *(0.00)*
8	0.00	0.00	0.00	8.18	$ *6,760.33*
9	0.00	0.00	0.00	2.04	$ *1,068.13*
10	0.00	0.00	0.00	4.00	$ *1,415.50*
11	0.00	0.00	0.00	25.20	$ *9,132.67*
12	0.00	0.00	0.00	1.92	$ *620.33*
13	0.00	0.00	0.00	13.63	$ *4,521.48*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ *0.00*
17	0.00	0.00	0.00	10.77	$ *3,069.53*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	61.00	$ *15,292.54*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	27.23	$ *3,514.70*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	10.77	$ *275.72*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 97,463.29

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***10.0%***	***$ 5,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *44,184.38*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	4.70	$ *4,890.12*
4	0.00	0.00	0.00	2.30	$ *1,929.69*
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.88	$ *6,256.00*
9	0.00	0.00	0.00	3.59	$ *1,401.60*
10	0.00	0.00	0.00	5.01	$ *1,314.64*
11	0.00	0.00	0.00	29.37	$ *7,424.21*
12	0.00	0.00	0.00	8.30	$ *1,815.68*
13	0.00	0.00	0.00	13.64	$ *3,137.94*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *(0.00)*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	21.13	$ *3,698.08*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	55.93	$ *7,930.56*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	21.94	$ *1,583.74*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	21.13	$ *275.49*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 85,842.12

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$65.00	2.5%	$ 10,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	28.52	$ 57,522.17
2	11.00	0.00	0.00	0.00	$ 679.84
3	11.00	0.00	0.00	11.68	$ 22,196.04
4	4.00	7.00	0.00	0.00	$ 3,104.38
5	4.00	0.00	0.00	0.00	$ 380.26
6	0.00	4.00	0.00	0.00	$ 2,384.08
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.70	$ 14,022.69
9	0.00	0.00	0.00	0.47	$ 452.35
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	36.42	$ 27,900.68
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	15.75	$ 11,070.21
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	3.75	$ 2,227.85
17	0.00	0.00	0.00	0.41	$ 319.76
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	50.06	$ 40,704.06
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	29.01	$ 12,263.58
24	0.00	0.00	0.00	1.41	$ 392.20
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	2.59	$ 16.02
30	0.00	0.00	0.00	0.00	$ -
					$ 195,636.18

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$65.00	5.0%	$ 10,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	34.78	$ 64,995.16
2	5.00	0.00	0.00	0.00	$ 303.64
3	5.00	0.00	0.00	8.05	$ 12,570.67
4	5.00	0.00	0.00	0.00	$ (586.21)
5	5.00	0.00	0.00	1.38	$ 1,954.01
6	0.00	5.00	0.00	0.00	$ 2,641.83
7	0.00	0.00	0.00	0.00	$ (0.00)
8	0.00	0.00	0.00	12.98	$ 14,122.31
9	0.00	0.00	0.00	1.86	$ 1,319.25
10	0.00	0.00	0.00	0.00	$ (0.00)
11	0.00	0.00	0.00	47.54	$ 24,936.45
12	0.00	0.00	0.00	4.74	$ 2,266.26
13	0.00	0.00	0.00	15.65	$ 7,532.74
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.79	$ 4,597.85
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	68.82	$ 30,897.75
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	20.39	$ 4,748.62
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	9.79	$ 494.62
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 172,794.93

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$65.00	7.5%	$ 10,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	38.96	$ 67,650.17
2	1.00	0.00	0.00	0.00	$ 59.68
3	1.00	0.00	0.00	9.38	$ 11,593.84
4	0.00	1.00	0.00	0.00	$ 447.91
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	16.61	$ 13,723.50
9	0.00	0.00	0.00	3.99	$ 2,088.67
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	59.49	$ 21,561.36
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	18.91	$ 6,272.86
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.09	$ 20,076.66
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.91	$ 2,441.13
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ 0.00
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 145,915.78

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$65.00	10.0%	$ 10,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	$ 64,745.78
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	9.40	$ 9,780.24
4	0.00	0.00	0.00	4.59	$ 3,859.38
5	0.00	0.00	0.00	0.00	$ (0.00)
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.76	$ 12,511.99
9	0.00	0.00	0.00	7.18	$ 2,803.21
10	0.00	0.00	0.00	10.03	$ 2,629.28
11	0.00	0.00	0.00	48.03	$ 12,143.02
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	9.40	$ 2,163.01
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	4.59	$ 804.06
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	85.00	$ 12,052.72
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	9.40	$ 678.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.59	$ 59.90
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 124,231.38

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***2.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	18.00	17.00	0.00	41.22	$ *71,221.85*
2	18.00	0.00	0.00	0.00	$ *1,112.47*
3	18.00	0.00	0.00	19.00	$ *36,125.12*
4	7.00	11.00	0.00	0.00	$ *4,786.78*
5	7.00	0.00	0.00	0.22	$ *967.61*
6	0.00	7.00	0.00	0.00	$ *4,172.15*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	14.37	$ *20,770.87*
9	0.00	0.00	0.00	0.76	$ *737.35*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	53.43	$ *40,928.28*
12	0.00	0.00	0.00	0.05	$ *39.06*
13	0.00	0.00	0.00	25.03	$ *17,589.51*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	5.36	$ *4,185.97*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	68.56	$ *55,741.71*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.08	$ *10,604.79*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ *0.00*
27	0.00	0.00	0.00	5.36	$ *531.87*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 269,515.40

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***5.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	6.00	29.00	0.00	53.74	$ *88,682.51*
2	6.00	0.00	0.00	0.00	$ *364.37*
3	6.00	0.00	0.00	12.22	$ *18,723.78*
4	6.00	0.00	0.00	0.00	$ *(703.45)*
5	6.00	0.00	0.00	0.00	$ *523.16*
6	0.00	6.00	0.00	0.00	$ *3,170.19*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.66	$ *21,388.43*
9	0.00	0.00	0.00	2.78	$ *1,976.03*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	64.34	$ *33,747.68*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	12.22	$ *5,882.73*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	86.78	$ *38,961.38*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.22	$ *2,846.03*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 215,562.85

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***7.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ *92,450.18*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	12.40	$ *15,042.77*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	25.12	$ *20,750.93*
9	0.00	0.00	0.00	1.48	$ *775.54*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ *21,746.63*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	12.40	$ *4,113.47*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	86.60	$ *21,708.87*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.40	$ *1,600.79*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 178,189.17

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$65.00***	***10.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ *85,307.18*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	14.10	$ *14,670.36*
4	0.00	0.00	0.00	6.89	$ *5,789.07*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	18.00	$ *11,402.44*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ *15,168.55*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	14.10	$ *3,244.51*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	6.89	$ *1,206.09*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	78.00	$ *11,060.36*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.10	$ *1,018.20*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	6.89	$ *89.85*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 148,956.59

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	68.52	$ 115,253.99
2	11.00	0.00	0.00	0.00	$ 679.84
3	11.00	0.00	0.00	11.10	$ 21,223.62
4	11.00	0.00	0.00	0.00	$ (1,409.48)
5	11.00	0.00	0.00	0.00	$ 1,045.71
6	0.00	11.00	0.00	0.00	$ 6,556.23
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.37	$ 28,009.12
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	68.52	$ 52,489.37
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	11.10	$ 7,803.60
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ (0.00)
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	87.90	$ 71,466.49
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	11.10	$ 4,694.55
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 307,813.04

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	7.00	28.00	0.00	72.70	$ 112,369.86
2	7.00	0.00	0.00	0.00	$ 425.10
3	7.00	0.00	0.00	15.18	$ 23,155.61
4	7.00	0.00	0.00	0.00	$ (820.69)
5	7.00	0.00	0.00	0.00	$ 610.35
6	0.00	7.00	0.00	0.00	$ 3,698.56
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	11.13	$ 12,102.96
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	72.70	$ 38,133.19
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	15.18	$ 7,306.95
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	83.82	$ 37,633.32
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	15.18	$ 3,535.06
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 238,150.28

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	78.96	$ 113,534.97
2	1.00	0.00	0.00	0.00	$ 59.68
3	1.00	0.00	0.00	17.65	$ 21,622.35
4	0.00	1.00	0.00	0.00	$ 447.91
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	2.39	$ 1,975.33
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	78.96	$ 28,617.37
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	17.65	$ 5,854.33
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	81.35	$ 20,393.02
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	17.65	$ 2,278.26
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 194,783.21

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ 105,868.58
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	18.81	$ 19,560.48
4	0.00	0.00	0.00	0.19	$ 162.32
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ 20,224.73
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ 4,326.01
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.19	$ 33.82
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.00	$ 11,343.47
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ 1,357.60
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.19	$ 2.52
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 162,879.52

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*2.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	98.65	*$ 165,996.54*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	0.00	*$ 0.00*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ (0.00)*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.35	*$ 512.60*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	98.65	*$ 75,562.10*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	*$ 0.00*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 80,494.24*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 322,565.48

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*5.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	*$ 150,778.61*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	0.00	*$ 0.00*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	*$ 51,930.09*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 44,446.89*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	*$ (0.00)*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 247,155.59

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*7.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	*$ 137,187.06*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	0.00	*$ 0.00*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	*$ 0.00*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	*$ 35,881.68*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 24,818.12*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	*$ 0.00*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 197,886.85

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*10.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	*$ 125,401.19*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ -
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	*$ 25,027.93*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	*$ 0.00*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	*$ 14,037.44*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	*$ 0.00*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 164,466.56

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*2.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	14.78	$ *46,597.47*
2	5.00	0.00	0.00	0.00	$ *309.02*
3	5.00	0.00	0.00	5.28	$ *11,893.26*
4	1.00	4.00	0.00	0.00	$ *1,938.67*
5	1.00	0.00	0.00	0.00	$ *95.06*
6	0.00	1.00	0.00	0.00	$ *596.02*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.91	$ *8,594.62*
9	0.00	0.00	0.00	0.21	$ *256.75*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	18.60	$ *18,401.13*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.41	$ *6,760.04*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.00	$ *1,565.16*
17	0.00	0.00	0.00	0.10	$ *100.44*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	25.47	$ *25,658.60*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.09	$ *7,769.87*
24	0.00	0.00	0.00	0.69	$ *262.51*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	1.25	$ *32.48*
30	0.00	0.00	0.00	0.00	$ -
					$ 130,831.13

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*5.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	3.00	32.00	0.00	16.87	$ *48,367.23*
2	3.00	0.00	0.00	0.00	$ *182.18*
3	3.00	0.00	0.00	5.19	$ *9,598.67*
4	1.00	2.00	0.00	0.00	$ *844.09*
5	1.00	0.00	0.00	0.00	$ *87.19*
6	0.00	1.00	0.00	0.00	$ *528.37*
7	0.00	0.00	0.00	0.00	$ *0.00*
8	0.00	0.00	0.00	6.43	$ *8,466.23*
9	0.00	0.00	0.00	0.97	$ *870.52*
10	0.00	0.00	0.00	0.00	$ *0.00*
11	0.00	0.00	0.00	23.53	$ *16,001.69*
12	0.00	0.00	0.00	0.62	$ *385.84*
13	0.00	0.00	0.00	10.04	$ *6,258.49*
14	0.00	0.00	0.00	0.00	$ *0.00*
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.29	$ *1,150.91*
17	0.00	0.00	0.00	2.69	$ *1,597.62*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	40.06	$ *22,279.62*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	23.84	$ *7,213.46*
24	0.00	0.00	0.00	4.00	$ *812.47*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.24	$ *323.59*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	8.40	$ *118.13*
30	0.00	0.00	0.00	0.00	$ -
					$ 125,086.30

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*7.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *51,975.77*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	4.13	$ *6,074.58*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	0.00	$ *0.00*
7	0.00	0.00	0.00	0.00	$ *(0.00)*
8	0.00	0.00	0.00	8.37	$ *8,382.27*
9	0.00	0.00	0.00	1.97	$ *1,299.06*
10	0.00	0.00	0.00	4.18	$ *1,951.31*
11	0.00	0.00	0.00	25.99	$ *12,274.72*
12	0.00	0.00	0.00	1.29	$ *547.70*
13	0.00	0.00	0.00	13.10	$ *5,617.26*
14	0.00	0.00	0.00	0.00	$ *0.00*
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	10.88	$ *3,931.17*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	62.12	$ *19,311.23*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.99	$ *4,351.23*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ *0.00*
27	0.00	0.00	0.00	10.88	$ *424.48*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ *0.00*
30	0.00	0.00	0.00	0.00	$ -
					$ 116,140.78

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*10.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *49,091.67*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	4.70	$ *5,933.78*
4	0.00	0.00	0.00	2.30	$ *2,365.67*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.88	$ *7,587.73*
9	0.00	0.00	0.00	3.59	$ *1,768.72*
10	0.00	0.00	0.00	5.01	$ *1,734.19*
11	0.00	0.00	0.00	29.37	$ *9,727.86*
12	0.00	0.00	0.00	8.30	$ *2,400.68*
13	0.00	0.00	0.00	13.64	$ *4,055.20*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	2.65	$ *576.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	18.66	$ *4,153.49*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	55.75	$ *9,819.50*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	21.94	$ *2,054.07*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	2.65	$ *65.72*
27	0.00	0.00	0.00	18.66	$ *374.83*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 101,709.13

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*2.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	28.52	*$ 67,056.62*
2	11.00	0.00	0.00	0.00	*$ 679.84*
3	11.00	0.00	0.00	11.68	*$ 26,282.67*
4	4.00	7.00	0.00	0.00	*$ 3,104.38*
5	4.00	0.00	0.00	0.00	*$ 380.26*
6	0.00	4.00	0.00	0.00	*$ 2,384.08*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	9.70	*$ 16,976.50*
9	0.00	0.00	0.00	0.47	*$ 568.36*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	36.42	*$ 36,040.05*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	15.75	*$ 14,372.05*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	3.75	*$ 2,927.95*
17	0.00	0.00	0.00	0.41	*$ 403.29*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	50.06	*$ 50,433.42*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	29.01	*$ 15,989.67*
24	0.00	0.00	0.00	1.41	*$ 536.07*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	2.59	*$ 67.38*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 238,202.59

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*5.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	34.78	*$ 75,425.15*
2	5.00	0.00	0.00	0.00	*$ 303.64*
3	5.00	0.00	0.00	8.05	*$ 14,972.92*
4	5.00	0.00	0.00	0.00	*$ (586.21)*
5	5.00	0.00	0.00	1.38	*$ 2,297.43*
6	0.00	5.00	0.00	0.00	*$ 2,641.83*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	12.98	*$ 17,103.02*
9	0.00	0.00	0.00	1.86	*$ 1,659.15*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	47.54	*$ 32,334.97*
12	0.00	0.00	0.00	4.74	*$ 2,960.86*
13	0.00	0.00	0.00	15.65	*$ 9,750.22*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ (0.00)*
17	0.00	0.00	0.00	9.79	*$ 5,807.97*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	68.82	*$ 38,274.33*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.39	*$ 6,167.45*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	9.79	*$ 747.70*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 209,860.43

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*7.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	*$ 80,328.55*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	8.27	*$ 12,149.17*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	16.74	*$ 16,764.53*
9	0.00	0.00	0.00	3.94	*$ 2,598.12*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	60.33	*$ 28,490.36*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	17.99	*$ 7,712.35*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	81.01	*$ 25,182.73*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	17.99	*$ 3,011.42*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 176,237.24

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*10.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	*$ 74,560.36*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	9.40	*$ 11,867.57*
4	0.00	0.00	0.00	4.59	*$ 4,731.34*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.76	*$ 15,175.46*
9	0.00	0.00	0.00	7.18	*$ 3,537.45*
10	0.00	0.00	0.00	10.03	*$ 3,468.38*
11	0.00	0.00	0.00	48.03	*$ 15,910.87*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	9.40	*$ 2,795.29*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	4.59	*$ 1,022.45*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	85.00	*$ 14,972.81*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	9.40	*$ 880.38*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	4.59	*$ 92.27*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 149,014.63

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			$70.00	2.5%	$ 15,000.00
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	17.00	18.00	0.00	42.26	$ 87,515.77
2	17.00	0.00	0.00	0.00	$ 1,050.67
3	17.00	0.00	0.00	18.08	$ 40,672.08
4	6.00	11.00	0.00	0.00	$ 4,914.91
5	6.00	0.00	0.00	0.00	$ 570.39
6	0.00	6.00	0.00	0.00	$ 3,576.13
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	14.49	$ 25,358.38
9	0.00	0.00	0.00	0.72	$ 879.97
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	54.25	$ 53,678.98
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	24.09	$ 21,984.06
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	5.45	$ 5,363.71
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	69.46	$ 69,974.77
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	24.09	$ 13,282.09
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ 0.00
27	0.00	0.00	0.00	5.45	$ 816.53
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ 0.00
30	0.00	0.00	0.00	0.00	$ -
					$ 329,638.43

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			$70.00	5.0%	$ 15,000.00
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ 118,678.78
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	5.53	$ 9,517.41
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.43	$ 26,910.90
9	0.00	0.00	0.00	2.50	$ 2,232.37
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	70.54	$ 47,981.60
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	5.53	$ 3,446.40
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ (0.00)
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ 0.00
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	93.47	$ 51,982.66
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	5.53	$ 1,673.03
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 262,423.15

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			$70.00	7.5%	$ 15,000.00
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ 108,681.34
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	12.40	$ 18,223.75
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	25.12	$ 25,146.80
9	0.00	0.00	0.00	1.48	$ 976.82
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ 28,335.31
12	0.00	0.00	0.00	0.00	$ (0.00)
13	0.00	0.00	0.00	12.40	$ 5,317.11
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	86.60	$ 26,919.57
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.40	$ 2,076.16
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 215,676.86

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			$70.00	10.0%	$ 15,000.00
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ 100,029.05
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	14.10	$ 17,801.35
4	0.00	0.00	0.00	6.89	$ 7,097.01
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	18.00	$ 13,829.72
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ 19,875.19
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	14.10	$ 4,192.93
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	6.89	$ 1,533.67
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	78.00	$ 13,740.03
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.10	$ 1,320.58
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	6.89	$ 138.41
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 179,557.92

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	78.92	$ *163,239.64*
2	1.00	0.00	0.00	0.00	$ *61.80*
3	1.00	0.00	0.00	0.00	$ *234.73*
4	1.00	0.00	0.00	0.00	$ *(128.13)*
5	1.00	0.00	0.00	0.00	$ *95.06*
6	0.00	1.00	0.00	0.00	$ *596.02*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.08	$ *35,153.92*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	78.92	$ *78,084.47*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *(0.00)*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ *0.00*
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *99,734.52*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ *0.00*
24	0.00	0.00	0.00	0.00	$ *0.00*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 377,072.03

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *150,364.04*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	7.37	$ *12,689.88*
4	0.00	0.00	0.00	0.00	$ *(0.00)*
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	0.00	$ *0.00*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	11.63	$ *15,315.86*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *54,414.52*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.37	$ *4,595.20*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	91.63	$ *50,957.47*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	7.37	$ *2,230.71*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 290,567.68

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *137,034.12*
2	0.00	0.00	0.00	0.00	$ *(0.00)*
3	0.00	0.00	0.00	16.54	$ *24,298.33*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	2.46	$ *2,465.27*
9	0.00	0.00	0.00	0.00	$ *0.00*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *37,780.42*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	16.54	$ *7,089.48*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	82.46	$ *25,634.39*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	16.54	$ *2,768.21*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 237,070.22

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *125,497.73*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	18.81	$ *23,735.14*
4	0.00	0.00	0.00	0.19	$ *198.99*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *26,500.25*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ *5,590.57*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.19	$ *43.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.00	$ *14,091.72*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ *1,760.77*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.19	$ *3.88*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 197,422.06

			Switchgrass Price	Discount Rate		Operating Capital
Average Management at:			*$70.00*	*2.5%*	*$*	*25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	35	0	46.5	0		
1	0.00	35.00	0.00	98.65	$	198,969.83
2	0.00	0.00	0.00	0.00	$	(0.00)
3	0.00	0.00	0.00	0.00	$	(0.00)
4	0.00	0.00	0.00	0.00	$	0.00
5	0.00	0.00	0.00	0.00	$	(0.00)
6	0.00	0.00	0.00	0.00	$	(0.00)
7	0.00	0.00	0.00	0.00	$	-
8	0.00	0.00	0.00	0.35	$	620.57
9	0.00	0.00	0.00	0.00	$	-
10	0.00	0.00	0.00	0.00	$	-
11	0.00	0.00	0.00	98.65	$	97,605.59
12	0.00	0.00	0.00	0.00	$	-
13	0.00	0.00	0.00	0.00	$	0.00
14	0.00	0.00	0.00	0.00	$	-
15	0.00	0.00	0.00	0.00	$	-
16	0.00	0.00	0.00	0.00	$	-
17	0.00	0.00	0.00	0.00	$	-
18	0.00	0.00	0.00	0.00	$	-
19	0.00	0.00	0.00	0.00	$	-
20	0.00	0.00	0.00	0.00	$	-
21	0.00	0.00	0.00	99.00	$	99,734.52
22	0.00	0.00	0.00	0.00	$	-
23	0.00	0.00	0.00	0.00	$	0.00
24	0.00	0.00	0.00	0.00	$	-
25	0.00	0.00	0.00	0.00	$	-
26	0.00	0.00	0.00	0.00	$	-
27	0.00	0.00	0.00	0.00	$	-
28	0.00	0.00	0.00	0.00	$	-
29	0.00	0.00	0.00	0.00	$	-
30	0.00	0.00	0.00	0.00	$	-
					$	**396,930.51**

			Switchgrass Price	Discount Rate		Operating Capital
Average Management at:			*$70.00*	*5.0%*	*$*	*25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	35	0	46.5	0		
1	0.00	35.00	0.00	99.00	$	180,463.94
2	0.00	0.00	0.00	0.00	$	0.00
3	0.00	0.00	0.00	0.00	$	0.00
4	0.00	0.00	0.00	0.00	$	(0.00)
5	0.00	0.00	0.00	0.00	$	0.00
6	0.00	0.00	0.00	0.00	$	0.00
7	0.00	0.00	0.00	0.00	$	-
8	0.00	0.00	0.00	0.00	$	-
9	0.00	0.00	0.00	0.00	$	-
10	0.00	0.00	0.00	0.00	$	-
11	0.00	0.00	0.00	99.00	$	67,337.49
12	0.00	0.00	0.00	0.00	$	-
13	0.00	0.00	0.00	0.00	$	0.00
14	0.00	0.00	0.00	0.00	$	-
15	0.00	0.00	0.00	0.00	$	-
16	0.00	0.00	0.00	0.00	$	-
17	0.00	0.00	0.00	0.00	$	-
18	0.00	0.00	0.00	0.00	$	-
19	0.00	0.00	0.00	0.00	$	-
20	0.00	0.00	0.00	0.00	$	-
21	0.00	0.00	0.00	99.00	$	55,058.21
22	0.00	0.00	0.00	0.00	$	-
23	0.00	0.00	0.00	0.00	$	-
24	0.00	0.00	0.00	0.00	$	-
25	0.00	0.00	0.00	0.00	$	-
26	0.00	0.00	0.00	0.00	$	-
27	0.00	0.00	0.00	0.00	$	-
28	0.00	0.00	0.00	0.00	$	-
29	0.00	0.00	0.00	0.00	$	-
30	0.00	0.00	0.00	0.00	$	-
					$	**302,859.65**

			Switchgrass Price	Discount Rate		Operating Capital
Average Management at:			*$70.00*	*7.5%*	*$*	*25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	35	0	46.5	0		
1	0.00	35.00	0.00	99.00	$	163,968.28
2	0.00	0.00	0.00	0.00	$	-
3	0.00	0.00	0.00	0.00	$	0.00
4	0.00	0.00	0.00	0.00	$	-
5	0.00	0.00	0.00	0.00	$	-
6	0.00	0.00	0.00	0.00	$	-
7	0.00	0.00	0.00	0.00	$	-
8	0.00	0.00	0.00	0.00	$	0.00
9	0.00	0.00	0.00	0.00	$	-
10	0.00	0.00	0.00	0.00	$	-
11	0.00	0.00	0.00	99.00	$	46,752.93
12	0.00	0.00	0.00	0.00	$	-
13	0.00	0.00	0.00	0.00	$	0.00
14	0.00	0.00	0.00	0.00	$	-
15	0.00	0.00	0.00	0.00	$	-
16	0.00	0.00	0.00	0.00	$	-
17	0.00	0.00	0.00	0.00	$	-
18	0.00	0.00	0.00	0.00	$	-
19	0.00	0.00	0.00	0.00	$	-
20	0.00	0.00	0.00	0.00	$	-
21	0.00	0.00	0.00	99.00	$	30,775.11
22	0.00	0.00	0.00	0.00	$	-
23	0.00	0.00	0.00	0.00	$	0.00
24	0.00	0.00	0.00	0.00	$	-
25	0.00	0.00	0.00	0.00	$	-
26	0.00	0.00	0.00	0.00	$	-
27	0.00	0.00	0.00	0.00	$	-
28	0.00	0.00	0.00	0.00	$	-
29	0.00	0.00	0.00	0.00	$	-
30	0.00	0.00	0.00	0.00	$	-
					$	**241,496.32**

			Switchgrass Price	Discount Rate		Operating Capital
Average Management at:			*$70.00*	*10.0%*	*$*	*25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	35	0	46.5	0		
1	0.00	35.00	0.00	99.00	$	149,692.10
2	0.00	0.00	0.00	0.00	$	-
3	0.00	0.00	0.00	0.00	$	-
4	0.00	0.00	0.00	0.00	$	-
5	0.00	0.00	0.00	0.00	$	-
6	0.00	0.00	0.00	0.00	$	-
7	0.00	0.00	0.00	0.00	$	-
8	0.00	0.00	0.00	0.00	$	-
9	0.00	0.00	0.00	0.00	$	-
10	0.00	0.00	0.00	0.00	$	-
11	0.00	0.00	0.00	99.00	$	32,793.83
12	0.00	0.00	0.00	0.00	$	-
13	0.00	0.00	0.00	0.00	$	-
14	0.00	0.00	0.00	0.00	$	-
15	0.00	0.00	0.00	0.00	$	-
16	0.00	0.00	0.00	0.00	$	-
17	0.00	0.00	0.00	0.00	$	-
18	0.00	0.00	0.00	0.00	$	-
19	0.00	0.00	0.00	0.00	$	-
20	0.00	0.00	0.00	0.00	$	-
21	0.00	0.00	0.00	99.00	$	17,438.39
22	0.00	0.00	0.00	0.00	$	-
23	0.00	0.00	0.00	0.00	$	-
24	0.00	0.00	0.00	0.00	$	-
25	0.00	0.00	0.00	0.00	$	-
26	0.00	0.00	0.00	0.00	$	-
27	0.00	0.00	0.00	0.00	$	-
28	0.00	0.00	0.00	0.00	$	-
29	0.00	0.00	0.00	0.00	$	-
30	0.00	0.00	0.00	0.00	$	-
					$	**199,924.31**

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*2.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	14.78	$ *51,539.06*
2	5.00	0.00	0.00	0.00	$ *309.02*
3	5.00	0.00	0.00	5.28	$ *13,741.60*
4	1.00	4.00	0.00	0.00	$ *1,938.67*
5	1.00	0.00	0.00	0.00	$ *95.06*
6	0.00	1.00	0.00	0.00	$ *596.02*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.91	$ *10,090.04*
9	0.00	0.00	0.00	0.21	$ *309.16*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	18.60	$ *22,556.89*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.41	$ *8,313.10*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.00	$ *1,939.40*
17	0.00	0.00	0.00	0.10	$ *121.25*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	25.47	$ *30,608.53*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.09	$ *9,580.49*
24	0.00	0.00	0.00	0.69	$ *332.96*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	1.25	$ *57.24*
30	0.00	0.00	0.00	0.00	$ -
					$ 152,128.50

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*5.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	2.00	33.00	0.00	17.91	$ *56,052.31*
2	2.00	0.00	0.00	0.00	$ *121.46*
3	2.00	0.00	0.00	4.07	$ *8,671.94*
4	2.00	0.00	0.00	0.00	$ *(234.48)*
5	2.00	0.00	0.00	0.00	$ *174.39*
6	0.00	2.00	0.00	0.00	$ *1,056.73*
7	0.00	0.00	0.00	0.00	$ *(0.00)*
8	0.00	0.00	0.00	6.55	$ *10,139.02*
9	0.00	0.00	0.00	0.93	$ *998.10*
10	0.00	0.00	0.00	0.00	$ *(0.00)*
11	0.00	0.00	0.00	24.33	$ *20,335.57*
12	0.00	0.00	0.00	0.12	$ *94.97*
13	0.00	0.00	0.00	9.61	$ *7,351.08*
14	0.00	0.00	0.00	0.00	$ *0.00*
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.57	$ *1,595.88*
17	0.00	0.00	0.00	2.47	$ *1,773.65*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	40.97	$ *27,175.66*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	22.95	$ *8,540.69*
24	0.00	0.00	0.00	4.03	$ *1,035.84*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.24	$ *433.08*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	8.29	$ *199.19*
30	0.00	0.00	0.00	0.00	$ -
					$ 145,515.09

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*7.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *57,386.15*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	4.13	$ *7,134.91*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ *(0.00)*
6	0.00	0.00	0.00	0.00	$ *0.00*
7	0.00	0.00	0.00	0.00	$ *(0.00)*
8	0.00	0.00	0.00	8.37	$ *9,847.56*
9	0.00	0.00	0.00	1.97	$ *1,566.75*
10	0.00	0.00	0.00	4.18	$ *2,423.36*
11	0.00	0.00	0.00	25.99	$ *15,128.91*
12	0.00	0.00	0.00	1.29	$ *678.40*
13	0.00	0.00	0.00	13.10	$ *6,888.85*
14	0.00	0.00	0.00	0.00	$ *0.00*
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	10.88	$ *4,759.14*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	62.12	$ *23,049.21*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.99	$ *5,347.51*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ *0.00*
27	0.00	0.00	0.00	10.88	$ *570.22*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ *0.00*
30	0.00	0.00	0.00	0.00	$ -
					$ 134,780.96

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*10.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *53,998.96*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	4.70	$ *6,977.45*
4	0.00	0.00	0.00	2.30	$ *2,801.65*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.88	$ *8,919.47*
9	0.00	0.00	0.00	3.59	$ *2,135.84*
10	0.00	0.00	0.00	5.01	$ *2,153.74*
11	0.00	0.00	0.00	29.37	$ *12,031.51*
12	0.00	0.00	0.00	8.30	$ *2,985.69*
13	0.00	0.00	0.00	13.64	$ *4,972.47*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	2.65	$ *715.31*
16	0.00	0.00	0.00	9.89	$ *2,598.29*
17	0.00	0.00	0.00	9.15	$ *2,470.51*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	55.38	$ *11,656.53*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	21.94	$ *2,524.40*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	12.54	$ *423.66*
27	0.00	0.00	0.00	9.15	$ *248.16*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 117,613.64

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*2.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	28.52	$ *76,591.07*
2	11.00	0.00	0.00	0.00	$ *679.84*
3	11.00	0.00	0.00	11.68	$ *30,369.29*
4	4.00	7.00	0.00	0.00	$ *3,104.38*
5	4.00	0.00	0.00	0.00	$ *380.26*
6	0.00	4.00	0.00	0.00	$ *2,384.08*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.70	$ *19,930.32*
9	0.00	0.00	0.00	0.47	$ *684.37*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	36.42	$ *44,179.43*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	15.75	$ *17,673.89*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	3.75	$ *3,628.05*
17	0.00	0.00	0.00	0.41	$ *486.81*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	50.06	$ *60,162.78*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	29.01	$ *19,715.76*
24	0.00	0.00	0.00	1.41	$ *679.93*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	2.59	$ *118.74*
30	0.00	0.00	0.00	0.00	$ -
					$ 280,769.00

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*5.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	34.78	$ *85,855.13*
2	5.00	0.00	0.00	0.00	$ *303.64*
3	5.00	0.00	0.00	8.05	$ *17,375.17*
4	5.00	0.00	0.00	0.00	$ *(586.21)*
5	5.00	0.00	0.00	1.38	$ *2,640.85*
6	0.00	5.00	0.00	0.00	$ *2,641.83*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	12.98	$ *20,083.73*
9	0.00	0.00	0.00	1.86	$ *1,999.06*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	47.54	$ *39,733.50*
12	0.00	0.00	0.00	4.74	$ *3,655.47*
13	0.00	0.00	0.00	15.65	$ *11,967.70*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.79	$ *7,018.10*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	68.82	$ *45,650.91*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	20.39	$ *7,586.29*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	9.79	$ *1,000.78*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 246,925.93

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*7.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	$ *91,149.32*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	8.27	$ *14,269.82*
4	0.00	0.00	0.00	0.00	$ *(0.00)*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	16.74	$ *19,695.11*
9	0.00	0.00	0.00	3.94	$ *3,133.49*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.33	$ *35,115.10*
12	0.00	0.00	0.00	0.00	$ *(0.00)*
13	0.00	0.00	0.00	17.99	$ *9,458.20*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	81.01	$ *30,057.23*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	17.99	$ *3,700.94*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 206,579.23

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*10.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	$ *84,374.94*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	9.40	$ *13,954.90*
4	0.00	0.00	0.00	4.59	$ *5,603.30*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.76	$ *17,838.93*
9	0.00	0.00	0.00	7.18	$ *4,271.69*
10	0.00	0.00	0.00	10.03	$ *4,307.49*
11	0.00	0.00	0.00	48.03	$ *19,678.72*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	9.40	$ *3,427.57*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	4.59	$ *1,239.59*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	85.00	$ *17,892.91*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	9.40	$ *1,081.97*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	4.59	$ *155.24*
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 173,827.24

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*2.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	17.00	18.00	0.00	42.26	$ *101,643.08*
2	17.00	0.00	0.00	0.00	$ *1,050.67*
3	17.00	0.00	0.00	18.08	$ *46,996.98*
4	7.00	10.00	0.00	0.00	$ *4,270.08*
5	7.00	0.00	0.00	0.00	$ *665.45*
6	0.00	7.00	0.00	0.00	$ *4,172.15*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	14.49	$ *29,770.60*
9	0.00	0.00	0.00	0.72	$ *1,059.58*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	54.25	$ *65,801.97*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	24.09	$ *27,034.68*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ *0.00*
17	0.00	0.00	0.00	5.45	$ *6,474.57*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	69.46	$ *83,473.94*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	24.09	$ *16,377.23*
24	0.00	0.00	0.00	0.00	$ *0.00*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	5.45	$ *1,092.70*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 389,883.68

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*5.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ *136,670.01*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	5.53	$ *11,167.64*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ *(0.00)*
6	0.00	0.00	0.00	0.00	$ *(0.00)*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.43	$ *31,600.92*
9	0.00	0.00	0.00	2.50	$ *2,689.72*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	70.54	$ *58,960.21*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	5.53	$ *4,230.21*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	93.47	$ *62,001.24*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	5.53	$ *2,057.91*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 309,377.86

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*7.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ *124,912.49*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	12.40	$ *21,404.73*
4	0.00	0.00	0.00	0.00	$ *(0.00)*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	25.12	$ *29,542.67*
9	0.00	0.00	0.00	1.48	$ *1,178.11*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ *34,924.00*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	12.40	$ *6,520.75*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	86.60	$ *32,130.26*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.40	$ *2,551.53*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 253,164.54

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$75.00*	*10.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ *114,750.91*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	14.10	$ *20,932.35*
4	0.00	0.00	0.00	6.89	$ *8,404.95*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	18.00	$ *16,256.99*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ *24,581.83*
12	0.00	0.00	0.00	0.00	$ *0.00*
13	0.00	0.00	0.00	14.10	$ *5,141.35*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	6.89	$ *1,859.39*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	78.00	$ *16,419.69*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.10	$ *1,622.95*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	6.89	$ *232.86*
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 210,203.28

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$75.00***	***2.5%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	2.00	33.00	0.00	77.91	$ *186,840.56*
2	2.00	0.00	0.00	0.00	$ *123.61*
3	2.00	0.00	0.00	1.07	$ *3,016.89*
4	2.00	0.00	0.00	0.00	$ *(256.27)*
5	2.00	0.00	0.00	0.00	$ *190.13*
6	0.00	2.00	0.00	0.00	$ *1,192.04*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.02	$ *41,129.54*
9	0.00	0.00	0.00	0.00	$ *0.00*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	77.91	$ *94,503.43*
12	0.00	0.00	0.00	0.00	$ *0.00*
13	0.00	0.00	0.00	1.07	$ *1,201.74*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	97.93	$ *117,687.70*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	1.07	$ *728.00*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 446,357.37

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$75.00***	***5.0%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *174,352.36*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	7.37	$ *14,890.19*
4	0.00	0.00	0.00	0.00	$ *(0.00)*
5	0.00	0.00	0.00	0.00	$ *0.00*
6	0.00	0.00	0.00	0.00	$ *0.00*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	11.63	$ *17,985.10*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *66,865.04*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.37	$ *5,640.28*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	91.63	$ *60,778.47*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	7.37	$ *2,743.89*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 343,255.31

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$75.00***	***7.5%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *158,675.66*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	16.54	$ *28,539.64*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	2.46	$ *2,896.22*
9	0.00	0.00	0.00	0.00	$ *0.00*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *46,565.33*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	16.54	$ *8,694.33*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *(0.00)*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	82.46	$ *30,596.32*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	16.54	$ *3,402.04*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 279,369.54

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$75.00***	***10.0%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *145,126.89*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	18.81	$ *27,909.80*
4	0.00	0.00	0.00	0.19	$ *235.66*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *32,775.77*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ *6,855.13*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.19	$ *52.13*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.00	$ *16,839.98*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ *2,163.94*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.19	$ *6.53*
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 231,965.84

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$75.00	2.5%	$ 25,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	97.50	$ 228,863.30
2	1.00	0.00	0.00	0.00	$ 61.80
3	1.00	0.00	0.00	0.00	$ 234.73
4	1.00	0.00	0.00	0.00	$ (128.13)
5	1.00	0.00	0.00	0.00	$ 95.06
6	0.00	1.00	0.00	1.31	$ 3,327.05
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.19	$ 394.22
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	97.50	$ 118,259.73
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	1.31	$ 1,554.93
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	97.69	$ 117,402.69
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	1.31	$ 262.42
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 470,327.81

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$75.00	5.0%	$ 25,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ 210,149.27
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	0.00	$ 0.00
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ (0.00)
8	0.00	0.00	0.00	0.00	$ 0.00
9	0.00	0.00	0.00	0.00	$ 0.00
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ 82,744.90
12	0.00	0.00	0.00	0.00	$ (0.00)
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 65,669.54
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 358,563.71

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$75.00	7.5%	$ 25,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ 190,749.50
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ 0.00
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ 57,624.19
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 36,732.11
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ 0.00
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 285,105.80

Average Management at:			Switchgrass Price	Discount Rate	Operating Capital
			$75.00	10.0%	$ 25,000.00
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ 173,983.01
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ -
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ 40,559.73
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ 20,839.33
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 235,382.06

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*2.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	5.00	30.00	0.00	14.78	$ *56,480.65*
2	5.00	0.00	0.00	0.00	$ *309.02*
3	5.00	0.00	0.00	5.28	$ *15,589.95*
4	2.00	3.00	0.00	0.00	$ *1,293.84*
5	2.00	0.00	0.00	0.00	$ *190.13*
6	0.00	2.00	0.00	0.00	$ *1,192.04*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	4.91	$ *11,585.46*
9	0.00	0.00	0.00	0.21	$ *361.57*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	18.60	$ *26,712.65*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.41	$ *9,866.15*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	2.00	$ *2,313.65*
17	0.00	0.00	0.00	0.10	$ *142.05*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	25.47	$ *35,558.46*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.09	$ *11,391.11*
24	0.00	0.00	0.00	0.69	$ *403.40*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	1.30	$ *92.80*
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 173,482.93

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*5.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *67,302.40*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	1.84	$ *4,272.62*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	6.81	$ *12,096.98*
9	0.00	0.00	0.00	0.83	$ *1,049.02*
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	25.94	$ *25,717.71*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.79	$ *7,066.32*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	3.16	$ *2,334.00*
17	0.00	0.00	0.00	2.01	$ *1,685.64*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	42.88	$ *33,036.62*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	21.08	$ *9,313.52*
24	0.00	0.00	0.00	4.08	$ *1,270.17*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	4.23	$ *541.00*
28	0.00	0.00	0.00	7.13	$ *268.82*
29	0.00	0.00	0.00	0.90	$ *30.43*
30	0.00	0.00	0.00	0.00	$ -
					$ 165,985.25

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*7.5%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *62,796.54*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	4.13	$ *8,195.24*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.37	$ *11,312.85*
9	0.00	0.00	0.00	1.97	$ *1,834.43*
10	0.00	0.00	0.00	4.18	$ *2,895.41*
11	0.00	0.00	0.00	25.99	$ *17,983.10*
12	0.00	0.00	0.00	1.29	$ *809.10*
13	0.00	0.00	0.00	13.10	$ *8,160.43*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ *0.00*
17	0.00	0.00	0.00	10.88	$ *5,587.11*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	62.12	$ *26,787.20*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.99	$ *6,343.79*
24	0.00	0.00	0.00	0.00	$ *0.00*
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	10.88	$ *715.96*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 153,421.15

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*10.0%*	*$ 5,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	20.00	$ *58,906.25*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	4.70	$ *8,021.12*
4	0.00	0.00	0.00	2.30	$ *3,237.63*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.88	$ *10,251.20*
9	0.00	0.00	0.00	3.59	$ *2,502.96*
10	0.00	0.00	0.00	5.01	$ *2,573.30*
11	0.00	0.00	0.00	29.37	$ *14,335.17*
12	0.00	0.00	0.00	8.30	$ *3,570.69*
13	0.00	0.00	0.00	13.64	$ *5,889.73*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	2.65	$ *854.63*
16	0.00	0.00	0.00	9.89	$ *3,085.80*
17	0.00	0.00	0.00	9.15	$ *2,905.32*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	55.38	$ *13,558.85*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	21.94	$ *2,994.74*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	12.54	$ *536.51*
27	0.00	0.00	0.00	9.15	$ *312.62*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 133,536.51

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*2.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	11.00	24.00	0.00	28.52	$ 86,125.52
2	11.00	0.00	0.00	0.00	$ 679.84
3	11.00	0.00	0.00	11.54	$ 34,066.83
4	5.00	6.00	0.00	0.00	$ 2,459.54
5	5.00	0.00	0.00	0.16	$ 844.80
6	0.00	5.00	0.00	0.00	$ 2,980.10
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	9.70	$ 22,884.65
9	0.00	0.00	0.00	0.46	$ 791.79
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	36.39	$ 52,267.35
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	15.79	$ 21,033.96
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	3.74	$ 4,313.69
17	0.00	0.00	0.00	0.42	$ 583.66
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	50.02	$ 69,835.41
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	29.04	$ 23,472.73
24	0.00	0.00	0.00	1.41	$ 824.32
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	2.71	$ 192.83
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 323,357.00

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*5.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	4.00	31.00	0.00	35.83	$ 99,224.45
2	4.00	0.00	0.00	0.00	$ 242.91
3	4.00	0.00	0.00	8.15	$ 19,774.57
4	4.00	0.00	0.00	0.00	$ (468.97)
5	4.00	0.00	0.00	0.00	$ 348.77
6	0.00	4.00	0.00	0.00	$ 2,113.46
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	13.11	$ 23,287.60
9	0.00	0.00	0.00	1.86	$ 2,335.62
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	48.66	$ 48,244.26
12	0.00	0.00	0.00	0.25	$ 226.03
13	0.00	0.00	0.00	19.22	$ 17,426.31
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.90	$ 8,316.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	69.64	$ 53,655.74
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	19.47	$ 8,598.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	9.90	$ 1,267.24
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 284,592.80

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*7.5%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	$ 101,970.09
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	8.27	$ 16,390.48
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ 0.00
8	0.00	0.00	0.00	16.74	$ 22,625.69
9	0.00	0.00	0.00	3.94	$ 3,668.86
10	0.00	0.00	0.00	8.35	$ 5,790.82
11	0.00	0.00	0.00	51.98	$ 35,966.20
12	0.00	0.00	0.00	9.71	$ 6,075.00
13	0.00	0.00	0.00	8.27	$ 5,149.59
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ 0.00
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	81.02	$ 34,935.27
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	17.98	$ 4,388.45
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 236,960.46

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*10.0%*	*$ 10,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	40.00	$ 94,189.51
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	9.40	$ 16,042.23
4	0.00	0.00	0.00	4.59	$ 6,475.27
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.76	$ 20,502.40
9	0.00	0.00	0.00	7.18	$ 5,005.92
10	0.00	0.00	0.00	10.03	$ 5,146.59
11	0.00	0.00	0.00	48.03	$ 23,446.57
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	9.40	$ 4,059.85
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	4.59	$ 1,481.02
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	85.00	$ 20,813.00
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	9.40	$ 1,283.55
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	4.59	$ 196.59
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 198,642.51

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*2.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	8.00	27.00	0.00	51.65	$ 144,685.62
2	8.00	0.00	0.00	0.00	$ 494.43
3	8.00	0.00	0.00	8.05	$ 23,837.75
4	8.00	0.00	0.00	0.00	$ (1,025.08)
5	8.00	0.00	0.00	0.00	$ 760.52
6	0.00	8.00	0.00	0.00	$ 4,768.17
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	15.58	$ 36,763.81
9	0.00	0.00	0.00	0.32	$ 543.98
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	61.18	$ 87,883.41
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	15.69	$ 20,894.50
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ 0.00
17	0.00	0.00	0.00	6.23	$ 8,673.19
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	77.08	$ 107,614.70
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	15.69	$ 12,680.74
24	0.00	0.00	0.00	0.00	$ 0.00
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	6.23	$ 1,565.17
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 450,140.92

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*5.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ 154,661.25
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	5.53	$ 12,817.87
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.43	$ 36,290.94
9	0.00	0.00	0.00	2.50	$ 3,147.06
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	70.54	$ 69,938.82
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	5.53	$ 5,014.02
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	93.47	$ 72,019.81
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	5.53	$ 2,442.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 356,332.57

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*7.5%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ 141,143.65
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	12.40	$ 24,585.72
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	25.12	$ 33,938.54
9	0.00	0.00	0.00	1.48	$ 1,379.39
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ 41,512.68
12	0.00	0.00	0.00	0.00	$ (0.00)
13	0.00	0.00	0.00	12.40	$ 7,724.38
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	86.60	$ 37,340.96
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.40	$ 3,026.90
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 290,652.22

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*10.0%*	*$ 15,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	60.00	$ 129,472.78
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	14.10	$ 24,063.35
4	0.00	0.00	0.00	6.89	$ 9,712.90
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	18.00	$ 18,684.27
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	60.00	$ 29,288.46
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	14.10	$ 6,089.77
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	6.89	$ 2,221.53
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	78.00	$ 19,099.36
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	14.10	$ 1,925.33
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	6.89	$ 294.89
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 240,852.63

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	1.00	34.00	0.00	78.92	$ *215,996.91*
2	1.00	0.00	0.00	0.00	$ *61.80*
3	1.00	0.00	0.00	0.00	$ *234.73*
4	1.00	0.00	0.00	0.00	$ *(128.13)*
5	1.00	0.00	0.00	0.00	$ *95.06*
6	0.00	1.00	0.00	0.00	$ *596.02*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.08	$ *47,387.08*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	78.92	$ *113,354.06*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ *0.00*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *138,215.07*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 515,812.61

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *198,340.67*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	7.37	$ *17,090.50*
4	0.00	0.00	0.00	0.00	$ *(0.00)*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	11.63	$ *20,654.34*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *79,315.55*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	7.37	$ *6,685.36*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	91.63	$ *70,599.46*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	7.37	$ *3,257.06*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 395,942.94

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *180,317.21*
2	0.00	0.00	0.00	0.00	$ *(0.00)*
3	0.00	0.00	0.00	16.54	$ *32,780.95*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	2.46	$ *3,327.17*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *55,350.24*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	16.54	$ *10,299.18*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *0.00*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	82.46	$ *35,558.25*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	16.54	$ *4,035.87*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ *0.00*
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 321,668.86

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$80.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	80.00	$ *164,756.04*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	18.81	$ *32,084.46*
4	0.00	0.00	0.00	0.19	$ *272.34*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	80.00	$ *39,051.28*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ *8,119.69*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.19	$ *62.29*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	80.00	$ *19,588.24*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ *2,567.11*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.19	$ *8.27*
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 266,509.73

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$80.00***	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	98.65	$ *264,916.42*
2	0.00	0.00	0.00	0.00	$ *(0.00)*
3	0.00	0.00	0.00	0.00	$ *(0.00)*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ *(0.00)*
6	0.00	0.00	0.00	0.00	$ *(0.00)*
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.35	$ *836.52*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	98.65	$ *141,692.58*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ *0.00*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ *(0.00)*
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *138,215.07*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ *0.00*
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 545,660.59

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$80.00***	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ *239,834.60*
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ *0.00*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ *0.00*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ *98,152.31*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ *(0.00)*
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *76,280.86*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 414,267.77

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$80.00***	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ *217,530.72*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	0.00	$ *0.00*
4	0.00	0.00	0.00	0.00	$ *0.00*
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ *0.00*
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ *68,495.44*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ *(0.00)*
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *42,689.10*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 328,715.27

			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$80.00***	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	35	0	46.5	0	
1	0.00	35.00	0.00	99.00	$ *198,273.92*
2	0.00	0.00	0.00	0.00	$ *0.00*
3	0.00	0.00	0.00	0.00	$ *0.00*
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	99.00	$ *48,325.62*
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ *0.00*
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	99.00	$ *24,240.28*
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 270,839.82

APPENDIX B

DISCOUNTED 30-YEAR NET REVENUE OPTIMIZATION RESULTS FOR ABOVE AVERAGE MANAGEMENT

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$40.00***	***2.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	48.00	22.00	0.00	0.00	$ 17,569.74
2	48.00	0.00	20.59	0.00	$ 2,671.07
3	48.00	0.00	0.00	0.00	$ 11,438.52
4	35.00	13.00	0.00	0.00	$ 2,076.15
5	35.00	0.00	0.00	0.00	$ 2,600.53
6	35.00	0.00	0.00	0.00	$ (1,906.62)
7	35.00	0.00	0.00	0.00	$ (2,134.52)
8	35.00	0.00	0.00	0.00	$ 5,793.62
9	0.00	35.00	15.22	0.00	$ 24,943.90
10	0.00	0.00	152.19	0.00	$ 1,943.04
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	20.59	0.00	$ 929.29
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	167.41	0.00	$ 6,421.52
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 72,346.25

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$40.00***	***5.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	48.00	22.00	0.00	0.00	$ 17,569.74
2	48.00	0.00	0.00	0.00	$ 2,092.85
3	48.00	0.00	0.00	0.00	$ 10,899.70
4	0.00	48.00	0.00	0.00	$ 26,738.83
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	188.00	0.00	$ 1,402.19
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 58,703.31

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$40.00***	***7.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	48.00	22.00	0.00	0.00	$ 17,569.74
2	48.00	0.00	0.00	0.00	$ 2,061.87
3	48.00	0.00	0.00	0.00	$ 10,398.10
4	0.00	48.00	0.00	0.00	$ 24,916.37
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 54,946.08

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$40.00***	***10.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	$ 54,812.11
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	0.00	$ -
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ -
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 54,812.11

Above
Average Management at: Switchgrass Price ***$40.00*** | Discount Rate ***2.5%*** | Operating Capital ***$ 20,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	*$ 5,155.61*
2	64.00	0.00	27.46	0.00	*$ 3,561.43*
3	64.00	0.00	0.00	0.00	*$ 15,251.35*
4	47.00	17.00	0.00	0.00	*$ 2,514.23*
5	47.00	0.00	0.00	0.00	*$ 3,492.14*
6	47.00	0.00	0.00	0.00	*$ (2,560.32)*
7	47.00	0.00	0.00	0.00	*$ (2,866.35)*
8	47.00	0.00	0.00	0.00	*$ 7,780.01*
9	0.00	47.00	0.00	0.00	*$ 33,334.36*
10	0.00	0.00	160.54	0.00	*$ 2,049.67*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	27.46	0.00	*$ 1,239.06*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	160.54	0.00	*$ 6,158.23*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 75,109.41

Above
Average Management at: Switchgrass Price ***$40.00*** | Discount Rate ***5.0%*** | Operating Capital ***$ 20,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	*$ 5,155.61*
2	64.00	0.00	0.00	0.00	*$ 2,790.47*
3	64.00	0.00	0.00	0.00	*$ 14,532.94*
4	0.00	64.00	0.00	0.00	*$ 35,651.77*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ 0.00*
8	0.00	0.00	0.00	0.00	*$ (0.00)*
9	0.00	0.00	0.00	0.00	*$ (0.00)*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	188.00	0.00	*$ 1,402.19*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 59,532.98

Above
Average Management at: Switchgrass Price ***$40.00*** | Discount Rate ***7.5%*** | Operating Capital ***$ 20,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	*$ 5,155.61*
2	64.00	0.00	0.00	0.00	*$ 2,749.16*
3	64.00	0.00	0.00	0.00	*$ 13,864.13*
4	0.00	64.00	0.00	0.00	*$ 33,221.83*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 54,990.73

Above
Average Management at: Switchgrass Price ***$40.00*** | Discount Rate ***10.0%*** | Operating Capital ***$ 20,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	0.00	*$ -*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 54,812.11

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$40.00***	***2.5%***	***$***	***25,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue	
yr	(au)	(au)	(acre)	(acre)	($)	
0	70	0	83	0		
1	70.00	0.00	0.00	0.00	*$*	*500.31*
2	70.00	0.00	54.51	0.00	*$*	*4,545.03*
3	70.00	0.00	0.00	0.00	*$*	*16,681.17*
4	59.00	11.00	0.00	0.00	*$*	*(3,035.91)*
5	59.00	0.00	0.00	0.00	*$*	*4,383.75*
6	59.00	0.00	0.00	0.00	*$*	*(3,214.02)*
7	59.00	0.00	0.00	0.00	*$*	*(3,598.19)*
8	59.00	0.00	0.00	0.00	*$*	*9,766.39*
9	0.00	59.00	0.00	0.00	*$*	*41,845.26*
10	0.00	0.00	133.49	0.00	*$*	*1,704.32*
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	54.51	0.00	*$*	*2,459.77*
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	133.49	0.00	*$*	*5,120.64*
21	0.00	0.00	0.00	0.00	*$*	-
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***77,158.54***

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$40.00***	***5.0%***	***$***	***25,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue	
yr	(au)	(au)	(acre)	(acre)	($)	
0	70	0	83	0		
1	70.00	0.00	0.00	0.00	*$*	*500.31*
2	70.00	0.00	0.00	0.00	*$*	*3,052.07*
3	70.00	0.00	0.00	0.00	*$*	*15,895.40*
4	0.00	70.00	0.00	0.00	*$*	*38,994.12*
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	0.00	*$*	-
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	0.00	*$*	-
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	188.00	0.00	*$*	*1,402.19*
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	0.00	*$*	-
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***59,844.11***

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$40.00***	***7.5%***	***$***	***25,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue	
yr	(au)	(au)	(acre)	(acre)	($)	
0	70	0	83	0		
1	70.00	0.00	0.00	0.00	*$*	*500.31*
2	70.00	0.00	0.00	0.00	*$*	*3,006.89*
3	70.00	0.00	0.00	0.00	*$*	*15,163.90*
4	0.00	70.00	0.00	0.00	*$*	*36,336.38*
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	0.00	*$*	-
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	0.00	*$*	-
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	0.00	*$*	-
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***55,007.48***

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$40.00***	***10.0%***	***$***	***25,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue	
yr	(au)	(au)	(acre)	(acre)	($)	
0	70	0	83	0		
1	0.00	70.00	0.00	0.00	*$*	*54,812.11*
2	0.00	0.00	0.00	0.00	*$*	-
3	0.00	0.00	0.00	0.00	*$*	-
4	0.00	0.00	0.00	0.00	*$*	-
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	0.00	*$*	-
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	0.00	*$*	-
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	0.00	*$*	-
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***54,812.11***

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***2.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	83.00	0.00	*$ 5,301.43*
3	70.00	0.00	0.00	0.00	*$ 16,681.17*
4	70.00	0.00	0.00	0.00	*$ (11,417.06)*
5	70.00	0.00	0.00	0.00	*$ 5,201.06*
6	70.00	0.00	0.00	0.00	*$ (3,813.24)*
7	70.00	0.00	0.00	0.00	*$ (4,269.04)*
8	70.00	0.00	0.00	0.00	*$ 11,587.25*
9	0.00	70.00	0.00	0.00	*$ 49,646.92*
10	0.00	0.00	105.00	0.00	*$ 1,340.54*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	83.00	0.00	*$ 3,745.67*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	105.00	0.00	*$ 4,027.65*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 78,532.66

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***5.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,052.07*
3	70.00	0.00	0.00	0.00	*$ 15,895.40*
4	0.00	70.00	0.00	0.00	*$ 38,994.12*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	188.00	0.00	*$ 1,402.19*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 59,844.11

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***7.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,006.89*
3	70.00	0.00	0.00	0.00	*$ 15,163.90*
4	0.00	70.00	0.00	0.00	*$ 36,336.38*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 55,007.48

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***10.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	0.00	*$ -*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 54,812.11

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***2.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	83.00	0.00	*$ 5,301.43*
3	70.00	0.00	0.00	0.00	*$ 16,681.17*
4	70.00	0.00	0.00	0.00	*$ (11,417.06)*
5	70.00	0.00	0.00	0.00	*$ 5,201.06*
6	70.00	0.00	0.00	0.00	*$ (3,813.24)*
7	70.00	0.00	0.00	0.00	*$ (4,269.04)*
8	70.00	0.00	0.00	0.00	*$ 11,587.25*
9	0.00	70.00	0.00	0.00	*$ 49,646.92*
10	0.00	0.00	105.00	0.00	*$ 1,340.54*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	83.00	0.00	*$ 3,745.67*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	105.00	0.00	*$ 4,027.65*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 78,532.66

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***5.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,052.07*
3	70.00	0.00	0.00	0.00	*$ 15,895.40*
4	0.00	70.00	0.00	0.00	*$ 38,994.12*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	188.00	0.00	*$ 1,402.19*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 59,844.11

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***7.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,006.89*
3	70.00	0.00	0.00	0.00	*$ 15,163.90*
4	0.00	70.00	0.00	0.00	*$ 36,336.38*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 55,007.48

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$40.00***	***10.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	0.00	*$ -*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 54,812.11

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$45.00***	***2.5%***	***$***	***15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	70	0	83	0		
1	48.00	22.00	0.00	0.00	*$*	*17,569.74*
2	48.00	0.00	20.59	0.00	*$*	*2,671.07*
3	48.00	0.00	0.00	38.59	*$*	*22,231.24*
4	14.00	34.00	0.00	0.00	*$*	*18,076.52*
5	14.00	0.00	0.00	0.00	*$*	*1,040.21*
6	0.00	14.00	0.00	24.94	*$*	*15,056.08*
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	11.63	*$*	*2,647.29*
9	0.00	0.00	5.95	0.00	*$*	*47.09*
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	100.12	0.00	*$*	*4,518.24*
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	87.88	0.00	*$*	*3,370.98*
21	0.00	0.00	0.00	0.00	*$*	-
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***87,228.46***

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$45.00***	***5.0%***	***$***	***15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	70	0	83	0		
1	48.00	22.00	0.00	0.00	*$*	*17,569.74*
2	48.00	0.00	0.00	0.00	*$*	*2,092.85*
3	48.00	0.00	0.00	41.68	*$*	*20,443.25*
4	0.00	48.00	0.00	0.00	*$*	*26,738.83*
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	31.36	*$*	*5,387.24*
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	12.65	*$*	*2,142.88*
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	18.78	0.00	*$*	*140.07*
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	169.22	*$*	*3,421.30*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***77,936.16***

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$45.00***	***7.5%***	***$***	***15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	70	0	83	0		
1	0.00	70.00	0.00	0.00	*$*	*54,812.11*
2	0.00	0.00	0.00	0.00	*$*	*0.00*
3	0.00	0.00	0.00	68.89	*$*	*12,879.57*
4	0.00	0.00	0.00	0.00	*$*	-
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	8.96	*$*	*1,222.87*
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	16.89	*$*	*2,130.46*
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	188.00	*$*	*1,880.25*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***72,925.26***

			Switchgrass Price	Discount Rate		Operating Capital
Above						
Average Management at:			***$45.00***	***10.0%***	***$***	***15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)		Net Revenue ($)
0	70	0	83	0		
1	0.00	70.00	0.00	0.00	*$*	*54,812.11*
2	0.00	0.00	0.00	0.00	*$*	-
3	0.00	0.00	0.00	72.13	*$*	*10,976.50*
4	0.00	0.00	0.00	0.00	*$*	-
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	14.46	*$*	*1,566.35*
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	21.17	*$*	*1,990.98*
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	0.00	*$*	-
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	0.00	*$*	-
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	188.00	*$*	*823.51*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	0.00	*$*	-
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	-
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***70,169.45***

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$45.00***	***2.5%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	*$ 5,155.61*
2	64.00	0.00	27.46	0.00	*$ 3,561.43*
3	64.00	0.00	0.00	51.45	*$ 29,641.66*
4	19.00	45.00	0.00	0.00	*$ 23,848.05*
5	19.00	0.00	0.00	0.00	*$ 1,411.72*
6	0.00	19.00	0.00	33.25	*$ 20,305.26*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	15.51	*$ 3,529.72*
9	0.00	0.00	7.93	0.00	*$ 62.79*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	131.31	0.00	*$ 5,925.89*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	56.69	0.00	*$ 2,174.50*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 95,616.63

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$45.00***	***5.0%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	*$ 5,155.61*
2	64.00	0.00	0.00	0.00	*$ 2,790.47*
3	64.00	0.00	0.00	55.57	*$ 27,257.67*
4	0.00	64.00	0.00	0.00	*$ 35,651.77*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	41.81	*$ 7,182.99*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	16.86	*$ 2,857.18*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 3,801.00*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 84,696.68

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$45.00***	***7.5%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	91.85	*$ 17,172.76*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	11.94	*$ 1,630.49*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	22.53	*$ 2,840.62*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 1,880.25*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 78,336.23

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$45.00***	***10.0%***	***$ 20,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	96.17	*$ 14,635.34*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	19.28	*$ 2,088.47*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	28.22	*$ 2,654.64*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 823.51*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 75,014.07

Above
Average Management at:

			Switchgrass Price	**Discount Rate**	**Operating Capital**
			$45.00	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	13.68	0.00	*$ 3,461.25*
3	70.00	0.00	0.00	69.32	*$ 36,070.02*
4	21.00	49.00	0.00	0.00	*$ 25,917.14*
5	21.00	0.00	0.00	0.00	*$ 1,560.32*
6	0.00	21.00	0.00	38.56	*$ 22,833.27*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	17.11	*$ 3,893.37*
9	0.00	0.00	10.00	0.00	*$ 79.13*
10	0.00	0.00	0.08	0.00	*$ 1.07*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	122.25	0.00	*$ 5,517.15*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	65.75	0.00	*$ 2,521.92*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 102,354.95

Above
Average Management at:

			Switchgrass Price	**Discount Rate**	**Operating Capital**
			$45.00	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,052.07*
3	70.00	0.00	0.00	74.48	*$ 32,948.22*
4	0.00	70.00	0.00	0.00	*$ 38,994.12*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	46.65	*$ 8,013.52*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	21.16	*$ 3,584.95*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 3,801.00*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 90,894.20

Above
Average Management at:

			Switchgrass Price	**Discount Rate**	**Operating Capital**
			$45.00	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	114.82	*$ 21,465.95*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	14.93	*$ 2,038.11*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	28.16	*$ 3,550.77*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 1,880.25*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 83,747.20

Above
Average Management at:

			Switchgrass Price	**Discount Rate**	**Operating Capital**
			$45.00	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	120.22	*$ 18,294.17*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	24.10	*$ 2,610.59*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	35.28	*$ 3,318.29*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 823.51*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 79,858.68

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***2.5%***	***$ 30,000.00***
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,098.14*
3	70.00	0.00	0.00	83.00	*$ 39,895.86*
4	26.00	44.00	0.00	0.00	*$ 22,107.53*
5	26.00	0.00	0.00	0.00	*$ 1,931.82*
6	0.00	26.00	0.00	46.47	*$ 27,995.88*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	20.53	*$ 4,673.41*
9	0.00	0.00	12.01	0.00	*$ 95.03*
10	0.00	0.00	0.06	0.00	*$ 0.72*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	108.93	0.00	*$ 4,916.06*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	79.07	0.00	*$ 3,032.84*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 108,247.61

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***5.0%***	***$ 30,000.00***
0	70	0	83	0	
1	57.00	13.00	0.00	0.00	*$ 10,586.79*
2	57.00	0.00	0.00	0.00	*$ 2,485.26*
3	57.00	0.00	0.00	102.50	*$ 36,413.08*
4	0.00	57.00	0.00	0.00	*$ 31,752.36*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	41.25	*$ 7,086.17*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.60	*$ 4,337.25*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 3,801.00*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 96,461.92

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***7.5%***	***$ 30,000.00***
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	137.78	*$ 25,759.15*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	17.92	*$ 2,445.73*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	32.30	*$ 4,073.80*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 1,880.25*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 88,971.04

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$45.00***	***10.0%***	***$ 30,000.00***
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	144.26	*$ 21,953.01*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	28.92	*$ 3,132.71*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	14.81	*$ 1,393.41*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 823.51*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 82,114.75

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***2.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,098.14*
3	70.00	0.00	0.00	83.00	*$ 39,895.86*
4	38.00	32.00	0.00	0.00	*$ 12,964.46*
5	38.00	0.00	0.00	0.00	*$ 2,823.43*
6	0.00	38.00	0.00	62.15	*$ 39,673.24*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	30.57	*$ 6,957.32*
9	0.00	0.00	12.28	0.00	*$ 97.23*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	83.00	0.00	*$ 3,745.67*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	105.00	0.00	*$ 4,027.65*
21	0.00	0.00	0.00	0.00	*$ -*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 113,783.32

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***5.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	34.00	36.00	0.00	0.00	*$ 28,432.09*
2	34.00	0.00	0.00	0.00	*$ 1,482.44*
3	34.00	0.00	0.00	136.32	*$ 38,934.76*
4	0.00	34.00	0.00	0.00	*$ 18,940.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	29.35	*$ 5,041.55*
7	0.00	0.00	0.00	0.00	*$ (0.00)*
8	0.00	0.00	0.00	22.33	*$ 3,783.39*
9	0.00	0.00	0.00	0.00	*$ 0.00*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ 0.00*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 3,801.00*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 100,415.23

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***7.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	160.74	*$ 30,052.34*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	20.90	*$ 2,853.36*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	6.35	*$ 801.34*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 1,880.25*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 90,399.39

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			***$45.00***	***10.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	168.31	*$ 25,611.84*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	19.69	*$ 2,133.11*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ 0.00*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 823.51*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 83,380.57

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$50.00***	***2.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	48.00	22.00	0.00	0.00	*$ 17,569.74*
2	48.00	0.00	20.59	0.00	*$ 2,671.07*
3	48.00	0.00	0.00	38.59	*$ 35,729.50*
4	14.00	34.00	0.00	0.00	*$ 18,076.52*
5	14.00	0.00	0.00	0.00	*$ 1,040.21*
6	0.00	14.00	0.00	24.94	*$ 22,836.60*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	11.63	*$ 6,189.70*
9	0.00	0.00	5.95	0.00	*$ 47.09*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	16.60	*$ 1,586.79*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	72.82	0.00	*$ 3,286.29*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	10.67	0.00	*$ 409.40*
21	0.00	0.00	0.00	104.51	*$ 24,040.08*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 133,482.98

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$50.00***	***5.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	48.00	22.00	0.00	0.00	*$ 17,569.74*
2	48.00	0.00	0.00	0.00	*$ 2,092.85*
3	48.00	0.00	0.00	41.68	*$ 32,880.80*
4	0.00	48.00	0.00	0.00	*$ 26,738.83*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	31.36	*$ 13,175.64*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	12.65	*$ 5,046.89*
9	0.00	0.00	0.00	3.42	*$ 550.96*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	25.26	*$ 1,456.53*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	169.22	*$ 21,559.16*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	18.78	*$ 453.34*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 121,524.74

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$50.00***	***7.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	68.89	*$ 30,547.83*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	8.96	*$ 3,010.70*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	16.89	*$ 5,087.18*
9	0.00	0.00	0.00	9.05	*$ 1,050.20*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	39.65	*$ 1,308.95*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ 0.00*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 13,192.52*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 109,009.50

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$50.00***	***10.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	72.13	*$ 26,988.38*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	14.46	*$ 3,905.80*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	21.17	*$ 4,844.90*
9	0.00	0.00	0.00	13.89	*$ 1,160.90*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	51.33	*$ 897.06*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 7,281.87*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 99,891.02

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$50.00***	***2.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	$ 5,155.61
2	64.00	0.00	27.46	0.00	$ 3,561.43
3	64.00	0.00	0.00	51.45	$ 47,639.33
4	19.00	45.00	0.00	0.00	$ 23,848.05
5	19.00	0.00	0.00	0.00	$ 1,411.72
6	0.00	19.00	0.00	33.25	$ 30,679.29
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	15.51	$ 8,252.93
9	0.00	0.00	7.93	0.00	$ 62.79
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	22.13	$ 2,115.72
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	48.66	0.00	$ 2,195.87
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	139.34	$ 32,053.43
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 156,976.17

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$50.00***	***5.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	64.00	6.00	0.00	0.00	$ 5,155.61
2	64.00	0.00	0.00	0.00	$ 2,790.47
3	64.00	0.00	0.00	55.57	$ 43,841.06
4	0.00	64.00	0.00	0.00	$ 35,651.77
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	41.81	$ 17,567.52
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	16.86	$ 6,729.19
9	0.00	0.00	0.00	4.56	$ 734.62
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	33.68	$ 1,942.04
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	188.00	$ 23,951.80
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 138,364.08

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$50.00***	***7.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	$ 54,812.11
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	91.85	$ 40,730.44
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	11.94	$ 4,014.26
7	0.00	0.00	0.00	0.00	$ 0.00
8	0.00	0.00	0.00	22.53	$ 6,782.91
9	0.00	0.00	0.00	12.07	$ 1,400.27
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	49.61	$ 1,637.45
12	0.00	0.00	0.00	0.00	$ (0.00)
13	0.00	0.00	0.00	0.00	$ 0.00
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ (0.00)
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	188.00	$ 13,192.52
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 122,569.97

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$50.00***	***10.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	$ 54,812.11
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	96.17	$ 35,984.50
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	19.28	$ 5,207.74
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	28.22	$ 6,459.86
9	0.00	0.00	0.00	18.52	$ 1,547.86
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	25.80	$ 450.89
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	188.00	$ 7,281.87
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 111,744.84

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*2.5%*	*$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	$ 500.31
2	70.00	0.00	13.68	0.00	$ 3,461.25
3	70.00	0.00	0.00	69.32	$ 60,319.27
4	21.00	49.00	0.00	0.00	$ 25,917.14
5	21.00	0.00	0.00	0.00	$ 1,560.32
6	0.00	21.00	0.00	38.56	$ 34,864.68
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	17.11	$ 9,103.18
9	0.00	0.00	9.91	0.04	$ 88.06
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	28.10	$ 2,686.88
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	13.82	0.00	$ 623.80
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	174.18	$ 40,066.79
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 179,191.68

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*5.0%*	*$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	$ 500.31
2	70.00	0.00	0.00	0.00	$ 3,052.07
3	70.00	0.00	0.00	74.48	$ 55,172.16
4	0.00	70.00	0.00	0.00	$ 38,994.12
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	46.65	$ 19,598.76
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	21.16	$ 8,443.22
9	0.00	0.00	0.00	6.39	$ 1,030.84
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	39.33	$ 2,267.33
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	188.00	$ 23,951.80
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 153,010.62

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*7.5%*	*$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	$ 54,812.11
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	114.82	$ 50,913.06
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	14.93	$ 5,017.83
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	28.16	$ 8,478.64
9	0.00	0.00	0.00	15.09	$ 1,750.34
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	15.01	$ 495.38
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	188.00	$ 13,192.52
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 134,659.87

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$50.00*	*10.0%*	*$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	$ 54,812.11
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	120.22	$ 44,980.63
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	24.10	$ 6,509.67
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	35.28	$ 8,074.83
9	0.00	0.00	0.00	8.40	$ 701.96
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.00	$ -
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	188.00	$ 7,281.87
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.00	$ -
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 122,361.07

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***2.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.79	0.00	*$ 3,119.24*
3	62.00	8.00	0.00	94.21	*$ 80,087.02*
4	19.00	43.00	0.00	0.00	*$ 22,650.41*
5	19.00	0.00	0.00	0.00	*$ 1,411.72*
6	0.00	19.00	0.00	34.49	*$ 31,336.15*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	20.17	*$ 10,734.14*
9	0.00	0.00	2.96	1.38	*$ 333.31*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	33.99	*$ 3,249.90*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ 0.00*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 43,246.49*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 196,668.69

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***5.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	56.00	14.00	0.00	0.00	*$ 11,362.67*
2	56.00	0.00	0.00	0.00	*$ 2,441.66*
3	56.00	0.00	0.00	103.40	*$ 67,244.90*
4	0.00	56.00	0.00	0.00	*$ 31,195.30*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	40.24	*$ 16,908.73*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.62	*$ 10,220.72*
9	0.00	0.00	0.00	9.63	*$ 1,552.20*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	9.12	*$ 525.79*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 23,951.80*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 165,403.78

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***7.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	137.78	*$ 61,095.67*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	17.92	*$ 6,021.39*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	32.30	*$ 9,727.55*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ 0.00*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 13,192.52*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 144,849.24

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***10.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	144.26	*$ 53,976.75*
4	0.00	0.00	0.00	19.08	*$ 5,165.44*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	9.60	*$ 2,593.35*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	15.05	*$ 3,444.91*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 7,281.87*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 127,274.44

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***2.5%***	***$ 35,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	70.00	0.00	0.00	0.00	*$ 500.31*
2	70.00	0.00	0.00	0.00	*$ 3,098.14*
3	42.00	28.00	0.00	125.00	*$ 109,730.50*
4	15.00	27.00	0.00	0.00	*$ 13,721.67*
5	15.00	0.00	0.00	0.00	*$ 1,114.51*
6	0.00	15.00	0.00	24.11	*$ 23,091.35*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	23.04	*$ 12,263.36*
9	0.00	0.00	0.00	3.44	*$ 770.21*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	12.41	*$ 1,186.35*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 43,246.49*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 208,722.91

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***5.0%***	***$ 35,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	153.35	*$ 80,875.12*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	10.24	*$ 4,304.01*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	24.40	*$ 9,737.32*
9	0.00	0.00	0.00	0.00	*$ 0.00*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ 0.00*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 23,951.80*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 173,680.37

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***7.5%***	***$ 35,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	160.74	*$ 71,278.28*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	20.90	*$ 7,024.96*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	6.35	*$ 1,913.46*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 13,192.52*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 148,221.32

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$50.00***	***10.0%***	***$ 35,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	168.31	*$ 62,972.88*
4	0.00	0.00	0.00	19.69	*$ 5,330.47*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 7,281.87*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 130,397.33

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***2.5%***	***$ 15,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	10.00	60.00	0.00	24.56	*$ 66,078.23*
2	10.00	0.00	50.81	0.00	*$ 1,791.37*
3	10.00	0.00	0.00	37.00	*$ 38,619.02*
4	4.00	6.00	0.00	0.00	*$ 2,940.53*
5	4.00	0.00	0.00	0.00	*$ 297.20*
6	0.00	4.00	0.00	0.00	*$ 2,765.87*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	12.42	*$ 10,395.59*
9	0.00	0.00	0.00	1.48	*$ 702.07*
10	0.00	0.00	6.43	0.00	*$ 82.12*
11	0.00	0.00	0.00	41.18	*$ 13,137.99*
12	0.00	0.00	0.00	0.87	*$ 245.58*
13	0.00	0.00	0.00	36.11	*$ 10,240.00*
14	0.00	0.00	0.28	0.00	*$ 12.47*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	3.28	*$ 1,224.02*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	22.34	0.00	*$ 826.68*
20	0.00	0.00	42.24	0.00	*$ 1,620.24*
21	0.00	0.00	0.00	64.73	*$ 27,469.24*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	55.14	*$ 9,145.97*
24	0.00	0.00	0.00	0.28	*$ 20.52*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 187,614.70

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***5.0%***	***$ 15,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	10.00	60.00	0.00	47.53	*$ 79,593.66*
2	10.00	0.00	0.00	0.00	*$ 436.01*
3	10.00	0.00	0.00	18.84	*$ 17,824.87*
4	0.00	10.00	0.00	0.00	*$ 5,570.59*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.03	*$ 17.65*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	18.90	*$ 11,881.91*
9	0.00	0.00	0.00	3.06	*$ 1,054.78*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	68.19	*$ 14,543.98*
12	0.00	0.00	0.00	3.31	*$ 611.41*
13	0.00	0.00	0.00	31.40	*$ 6,216.61*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	133.45	*$ 31,305.03*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	54.55	*$ 5,113.67*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 174,170.15

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***7.5%***	***$ 15,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	39.65	*$ 78,841.78*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	32.27	*$ 22,585.37*
4	0.00	0.00	0.00	2.28	*$ 1,243.31*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	22.15	*$ 10,548.38*
9	0.00	0.00	0.00	7.00	*$ 1,764.21*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	73.26	*$ 10,463.24*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	59.58	*$ 8,196.09*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	26.00	*$ 3,457.70*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	102.42	*$ 13,349.46*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	59.58	*$ 3,122.65*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 153,572.18

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***10.0%***	***$ 15,000.00***
	Maintain	Sell	Hay	Switchgrass	Net Revenue
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	72.13	*$ 43,000.25*
4	0.00	0.00	0.00	9.54	*$ 4,393.78*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	4.80	*$ 2,073.34*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	20.64	*$ 7,507.40*
9	0.00	0.00	0.00	14.10	*$ 2,618.82*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	50.42	*$ 4,836.03*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	88.50	*$ 8,456.06*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ 0.00*
17	0.00	0.00	0.00	14.34	*$ 1,146.65*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	85.16	*$ 6,223.74*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	88.50	*$ 2,594.15*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 137,662.34

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	15.00	55.00	0.00	36.39	*$ 71,368.39*
2	15.00	0.00	57.47	0.00	*$ 2,189.52*
3	15.00	0.00	0.00	45.44	*$ 48,070.05*
4	6.00	9.00	0.00	0.00	*$ 4,410.79*
5	6.00	0.00	0.00	0.00	*$ 445.81*
6	0.00	6.00	0.00	0.00	*$ 4,148.80*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	16.99	*$ 14,216.58*
9	0.00	0.00	0.00	1.82	*$ 861.70*
10	0.00	0.00	8.68	0.00	*$ 110.87*
11	0.00	0.00	0.00	57.60	*$ 18,377.24*
12	0.00	0.00	0.00	1.99	*$ 561.93*
13	0.00	0.00	0.00	45.21	*$ 12,819.51*
14	0.00	0.00	0.00	0.00	*$ 0.00*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	3.77	*$ 1,407.03*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	23.97	0.00	*$ 919.30*
21	0.00	0.00	0.00	89.01	*$ 37,774.19*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	71.25	*$ 11,819.16*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 229,500.85

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	13.00	57.00	0.00	62.64	*$ 87,617.04*
2	13.00	0.00	0.00	0.00	*$ 566.81*
3	13.00	0.00	0.00	25.92	*$ 24,355.55*
4	0.00	13.00	0.00	0.00	*$ 7,241.77*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.11	*$ 15,787.22*
9	0.00	0.00	0.00	4.12	*$ 1,417.27*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	90.37	*$ 19,274.96*
12	0.00	0.00	0.00	4.77	*$ 881.50*
13	0.00	0.00	0.00	42.18	*$ 8,350.67*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ (0.00)*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	141.06	*$ 33,091.00*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	46.94	*$ 4,400.03*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 202,983.82

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	21.01	*$ 67,544.69*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	72.45	*$ 50,707.20*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	8.37	*$ 4,482.42*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.43	*$ 12,108.56*
9	0.00	0.00	0.00	10.95	*$ 2,760.35*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	70.80	*$ 10,111.39*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	72.45	*$ 9,966.43*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ (0.00)*
17	0.00	0.00	0.00	8.37	*$ 1,112.74*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	107.18	*$ 13,970.71*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	72.45	*$ 3,797.13*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 176,561.62

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$55.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	96.17	*$ 57,333.67*
4	0.00	0.00	0.00	12.72	*$ 5,858.37*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	6.40	*$ 2,764.45*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	27.52	*$ 10,009.87*
9	0.00	0.00	0.00	18.80	*$ 3,491.77*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	26.38	*$ 2,530.61*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	96.17	*$ 9,189.29*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	19.12	*$ 1,528.87*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	72.70	*$ 5,313.44*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	96.17	*$ 2,819.09*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 155,651.54

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	27.00	43.00	0.00	63.56	*$ 83,104.61*
2	27.00	0.00	20.98	0.00	*$ 1,751.98*
3	27.00	0.00	0.00	37.49	*$ 43,148.79*
4	9.00	18.00	0.00	0.00	*$ 9,310.88*
5	9.00	0.00	0.00	0.00	*$ 668.71*
6	0.00	9.00	0.00	0.00	*$ 6,223.20*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	23.34	*$ 19,531.88*
9	0.00	0.00	0.00	1.50	*$ 708.86*
10	0.00	0.00	16.47	0.00	*$ 210.25*
11	0.00	0.00	0.00	85.34	*$ 27,228.15*
12	0.00	0.00	0.00	1.72	*$ 487.48*
13	0.00	0.00	0.00	44.42	*$ 12,597.13*
14	0.00	0.00	0.00	0.00	*$ 0.00*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	128.86	*$ 54,683.68*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	59.14	*$ 9,811.02*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 269,466.62

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	6.00	64.00	0.00	50.89	*$ 84,998.02*
2	6.00	0.00	0.00	0.00	*$ 261.61*
3	6.00	0.00	0.00	61.69	*$ 52,307.75*
4	0.00	6.00	0.00	0.00	*$ 3,342.35*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	28.04	*$ 17,627.02*
9	0.00	0.00	0.00	6.39	*$ 2,198.31*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	91.82	*$ 19,583.33*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	61.75	*$ 12,227.40*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	126.25	*$ 29,615.73*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	61.75	*$ 5,788.68*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 227,950.19

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	87.71	*$ 107,969.67*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	33.81	*$ 23,660.80*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	40.29	*$ 19,181.93*
9	0.00	0.00	0.00	10.42	*$ 2,626.87*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	103.48	*$ 14,779.56*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	33.81	*$ 4,650.50*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ 0.00*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	154.19	*$ 20,098.40*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	33.81	*$ 1,771.80*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 194,739.52

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	120.22	*$ 71,667.09*
4	0.00	0.00	0.00	15.90	*$ 7,322.96*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	8.00	*$ 3,455.57*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	34.40	*$ 12,512.34*
9	0.00	0.00	0.00	9.47	*$ 1,759.83*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	120.22	*$ 11,486.62*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	23.91	*$ 1,911.09*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	43.88	*$ 3,206.74*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	120.22	*$ 3,523.87*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 171,658.21

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***2.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	34.00	36.00	0.00	77.59	*$ 88,542.34*
2	34.00	0.00	11.22	0.00	*$ 1,802.57*
3	34.00	0.00	0.00	43.08	*$ 50,291.65*
4	12.00	22.00	0.00	0.00	*$ 11,216.86*
5	12.00	0.00	0.00	0.00	*$ 891.61*
6	0.00	12.00	0.00	0.53	*$ 8,746.44*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	28.18	*$ 23,580.20*
9	0.00	0.00	0.00	1.76	*$ 830.43*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	103.23	*$ 32,938.02*
12	0.00	0.00	0.00	1.13	*$ 318.90*
13	0.00	0.00	0.00	52.69	*$ 14,941.64*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	134.18	*$ 56,943.94*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	53.82	*$ 8,927.53*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 299,972.14

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***5.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	19.00	51.00	0.00	96.30	*$ 106,005.26*
2	19.00	0.00	0.00	0.00	*$ 828.42*
3	19.00	0.00	0.00	36.39	*$ 34,360.84*
4	0.00	19.00	0.00	0.00	*$ 10,584.12*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	37.96	*$ 23,860.16*
9	0.00	0.00	0.00	6.07	*$ 2,089.59*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	107.59	*$ 22,946.69*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	36.39	*$ 7,204.28*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	151.61	*$ 35,567.05*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	36.39	*$ 3,410.64*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 246,857.06

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***7.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	24.27	*$ 69,518.66*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	115.37	*$ 80,745.76*
4	0.00	0.00	0.00	14.26	*$ 7,759.13*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	34.11	*$ 16,241.18*
9	0.00	0.00	0.00	0.00	*$ 0.00*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	24.27	*$ 3,465.55*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	115.37	*$ 15,870.48*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	14.26	*$ 1,895.92*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	58.37	*$ 7,608.84*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	115.37	*$ 6,046.53*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 209,152.05

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$55.00***	***10.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	*$ 54,812.11*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	144.26	*$ 86,000.50*
4	0.00	0.00	0.00	19.08	*$ 8,787.56*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	9.60	*$ 4,146.68*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	15.05	*$ 5,474.17*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	0.00	*$ -*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	144.26	*$ 13,783.94*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	28.69	*$ 2,293.30*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	15.05	*$ 1,100.04*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	144.26	*$ 4,228.64*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 180,626.94

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$55.00*	*2.5%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	2.00	68.00	0.00	137.51	$ 159,795.03
2	2.00	0.00	0.00	0.00	$ 88.52
3	2.00	0.00	0.00	0.64	$ 1,102.00
4	2.00	0.00	0.00	0.00	$ (326.20)
5	2.00	0.00	0.00	0.00	$ 148.60
6	0.00	2.00	0.00	0.00	$ 1,382.93
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	38.33	$ 32,074.80
9	0.00	0.00	0.00	0.01	$ 3.34
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	149.02	$ 47,548.24
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	0.64	$ 181.09
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	187.36	$ 79,512.57
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.64	$ 105.93
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 321,616.84

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$55.00*	*5.0%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	22.00	48.00	0.00	109.38	$ 112,636.38
2	22.00	0.00	0.00	0.00	$ 959.22
3	22.00	0.00	0.00	45.62	$ 42,666.15
4	0.00	22.00	0.00	0.00	$ 12,255.30
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	33.00	$ 20,744.04
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	109.38	$ 23,329.66
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	45.62	$ 9,032.32
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	142.38	$ 33,401.22
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	45.62	$ 4,276.07
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 259,300.35

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$55.00*	*7.5%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	28.31	$ 71,969.75
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	134.59	$ 94,203.39
4	0.00	0.00	0.00	16.63	$ 9,052.32
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	8.46	$ 4,028.79
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	28.31	$ 4,043.14
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	134.59	$ 18,515.55
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	16.63	$ 2,211.90
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	36.77	$ 4,792.85
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	134.59	$ 7,054.28
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 215,871.98

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$55.00*	*10.0%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	0.00	$ 54,812.11
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	168.31	$ 100,333.92
4	0.00	0.00	0.00	19.69	$ 9,068.31
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ -
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	0.00	$ -
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	168.31	$ 16,081.26
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	19.69	$ 1,574.42
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	0.00	$ 0.00
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	168.31	$ 4,933.41
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 186,803.45

Above
Average Management at:

	Switchgrass Price	Discount Rate	Operating Capital
	$60.00	**2.5%**	**$ 15,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	16.00	54.00	0.00	37.70	$ 84,203.70
2	16.00	0.00	13.82	0.00	$ 1,075.06
3	16.00	0.00	0.00	22.96	$ 34,332.25
4	5.00	11.00	0.00	0.00	$ 5,771.53
5	5.00	0.00	0.00	0.00	$ 371.50
6	0.00	5.00	0.00	0.00	$ 3,457.33
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	13.96	$ 15,926.56
9	0.00	0.00	0.00	0.92	$ 662.88
10	0.00	0.00	9.77	0.00	$ 124.73
11	0.00	0.00	0.00	50.88	$ 27,602.92
12	0.00	0.00	0.00	1.25	$ 624.26
13	0.00	0.00	0.00	26.80	$ 13,220.09
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	2.48	$ 1,008.90
17	0.00	0.00	0.00	1.32	$ 760.94
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	27.17	0.00	$ 1,005.48
20	0.00	0.00	36.59	0.00	$ 1,403.48
21	0.00	0.00	0.00	73.11	$ 45,233.42
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	47.34	$ 13,934.06
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 250,719.11

Above
Average Management at:

	Switchgrass Price	Discount Rate	Operating Capital
	$60.00	**5.0%**	**$ 15,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	9.00	61.00	0.00	48.77	$ 95,848.31
2	9.00	0.00	0.00	0.00	$ 392.41
3	9.00	0.00	0.00	17.53	$ 21,746.46
4	0.00	9.00	0.00	0.00	$ 5,013.53
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.05	$ 16,352.90
9	0.00	0.00	0.00	3.01	$ 1,585.32
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	69.16	$ 25,514.13
12	0.00	0.00	0.00	2.72	$ 903.30
13	0.00	0.00	0.00	30.89	$ 10,494.11
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	14.60	$ 5,050.48
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	118.41	$ 40,469.79
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	54.99	$ 8,981.70
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	14.60	$ 360.08
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 232,712.51

Above
Average Management at:

	Switchgrass Price	Discount Rate	Operating Capital
	$60.00	**7.5%**	**$ 15,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	$ 107,408.15
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	12.40	$ 11,861.78
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	25.12	$ 16,355.06
9	0.00	0.00	0.00	5.91	$ 2,291.08
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	90.49	$ 22,861.33
12	0.00	0.00	0.00	8.97	$ 1,985.89
13	0.00	0.00	0.00	34.55	$ 8,104.71
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ 0.00
17	0.00	0.00	0.00	22.97	$ 4,800.94
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	121.51	$ 23,150.58
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	43.52	$ 3,948.83
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	22.97	$ 280.66
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 203,049.00

Above
Average Management at:

	Switchgrass Price	Discount Rate	Operating Capital
	$60.00	**10.0%**	**$ 15,000.00**

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	$ 101,774.44
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	14.10	$ 11,539.36
4	0.00	0.00	0.00	6.89	$ 4,481.12
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	29.63	$ 14,772.78
9	0.00	0.00	0.00	10.78	$ 3,103.45
10	0.00	0.00	0.00	15.04	$ 2,685.26
11	0.00	0.00	0.00	88.10	$ 15,361.67
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	37.55	$ 6,113.16
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	6.89	$ 878.51
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	143.56	$ 15,423.57
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	37.55	$ 1,905.81
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	6.89	$ 41.29
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 178,080.42

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above Average Management at:			***$60.00***	***2.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	22.00	48.00	0.00	51.72	*$ 95,102.83*
2	22.00	0.00	14.32	0.00	*$ 1,353.83*
3	22.00	0.00	0.00	29.06	*$ 43,861.87*
4	7.00	15.00	0.00	0.00	*$ 7,840.62*
5	7.00	0.00	0.00	0.00	*$ 520.11*
6	0.00	7.00	0.00	0.00	*$ 4,840.27*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	18.78	*$ 21,429.53*
9	0.00	0.00	0.00	1.16	*$ 838.42*
10	0.00	0.00	13.40	0.00	*$ 171.04*
11	0.00	0.00	0.00	68.91	*$ 37,388.76*
12	0.00	0.00	0.00	0.94	*$ 468.07*
13	0.00	0.00	0.00	35.24	*$ 17,378.68*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	3.68	*$ 1,498.52*
17	0.00	0.00	0.00	1.49	*$ 860.12*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	22.19	0.00	*$ 851.23*
21	0.00	0.00	0.00	98.60	*$ 61,007.57*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	62.04	*$ 18,260.57*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 313,672.02

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above Average Management at:			***$60.00***	***5.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	13.00	57.00	0.00	63.78	*$ 107,522.92*
2	13.00	0.00	0.00	0.00	*$ 566.81*
3	13.00	0.00	0.00	24.70	*$ 30,720.79*
4	0.00	13.00	0.00	0.00	*$ 7,241.77*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.25	*$ 21,672.98*
9	0.00	0.00	0.00	4.07	*$ 2,143.50*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	91.25	*$ 33,663.87*
12	0.00	0.00	0.00	4.22	*$ 1,400.47*
13	0.00	0.00	0.00	41.70	*$ 14,167.81*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	19.40	*$ 6,712.54*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	122.67	*$ 41,925.04*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	45.93	*$ 7,501.50*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	19.40	*$ 478.58*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 275,718.57

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above Average Management at:			***$60.00***	***7.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 124,940.16*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	16.54	*$ 15,815.71*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	33.49	*$ 21,806.74*
9	0.00	0.00	0.00	7.87	*$ 3,054.78*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.66	*$ 30,481.77*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	25.98	*$ 6,095.20*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	162.02	*$ 30,867.44*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	25.98	*$ 2,357.40*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 235,419.21

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above Average Management at:			***$60.00***	***10.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 117,428.55*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	18.81	*$ 15,385.81*
4	0.00	0.00	0.00	9.19	*$ 5,974.83*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	39.51	*$ 19,697.05*
9	0.00	0.00	0.00	14.37	*$ 4,137.94*
10	0.00	0.00	0.00	20.06	*$ 3,580.34*
11	0.00	0.00	0.00	86.07	*$ 15,006.71*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	18.81	*$ 3,061.45*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	9.19	*$ 1,171.34*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	160.01	*$ 17,190.86*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	18.81	*$ 954.42*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	9.19	*$ 55.05*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 203,644.35

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$60.00*	*2.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	28.00	42.00	0.00	65.07	$ 105,251.84
2	28.00	0.00	16.10	0.00	$ 1,666.58
3	28.00	0.00	0.00	35.72	$ 54,146.39
4	10.00	18.00	0.00	0.00	$ 9,147.78
5	10.00	0.00	0.00	0.18	$ 928.16
6	0.00	10.00	0.00	0.00	$ 6,914.67
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	23.52	$ 26,842.84
9	0.00	0.00	0.00	1.43	$ 1,031.08
10	0.00	0.00	16.82	0.00	$ 214.71
11	0.00	0.00	0.00	86.41	$ 46,882.56
12	0.00	0.00	0.00	1.41	$ 704.18
13	0.00	0.00	0.00	43.46	$ 21,432.38
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ 0.00
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	130.11	$ 80,502.68
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	57.89	$ 17,039.57
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 372,705.43

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$60.00*	*5.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	16.00	54.00	0.00	80.04	$ 121,201.65
2	16.00	0.00	0.00	0.00	$ 697.62
3	16.00	0.00	0.00	30.54	$ 37,969.61
4	0.00	16.00	0.00	0.00	$ 8,912.94
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	31.61	$ 27,123.95
9	0.00	0.00	0.00	5.07	$ 2,671.94
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	114.30	$ 42,168.58
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	37.02	$ 12,577.61
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	150.98	$ 51,600.29
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	37.02	$ 6,046.95
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 310,971.14

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$60.00*	*7.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	$ 142,472.17
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	20.67	$ 19,769.64
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	41.86	$ 27,258.43
9	0.00	0.00	0.00	9.84	$ 3,818.47
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	115.63	$ 29,210.56
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	20.67	$ 4,849.73
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	167.33	$ 31,878.83
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	20.67	$ 1,875.70
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 261,133.53

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$60.00*	*10.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	$ 133,082.66
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	23.51	$ 19,232.27
4	0.00	0.00	0.00	11.49	$ 7,468.54
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	49.39	$ 24,621.31
9	0.00	0.00	0.00	3.62	$ 1,041.65
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	100.00	$ 17,436.52
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	23.51	$ 3,826.82
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	11.49	$ 1,464.18
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	153.01	$ 16,438.92
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	23.51	$ 1,193.03
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	11.49	$ 68.81
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 225,874.71

			Switchgrass	Discount		Operating
Above			**Price**	**Rate**		**Capital**
Average Management at:			***$60.00***	***2.5%***	***$***	***30,000.00***
	Maintain	Sell	Hay	Switchgrass		Net Revenue
yr	(au)	(au)	(acre)	(acre)		($)
0	70	0	83	0		
1	34.00	36.00	0.00	77.59	*$*	*114,476.03*
2	34.00	0.00	11.21	0.00	*$*	*1,802.37*
3	34.00	0.00	0.00	43.08	*$*	*65,361.62*
4	12.00	22.00	0.00	0.00	*$*	*11,216.86*
5	12.00	0.00	0.00	0.57	*$*	*1,490.18*
6	0.00	12.00	0.00	0.00	*$*	*8,297.60*
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	28.17	*$*	*32,145.61*
9	0.00	0.00	0.00	1.72	*$*	*1,244.86*
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	103.25	*$*	*56,016.32*
12	0.00	0.00	0.00	2.86	*$*	*1,423.99*
13	0.00	0.00	0.00	51.41	*$*	*25,356.76*
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	*0.00*
17	0.00	0.00	0.00	0.59	*$*	*338.92*
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	133.14	*$*	*82,377.23*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	54.27	*$*	*15,974.85*
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.59	*$*	*28.50*
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***417,551.71***

			Switchgrass	Discount		Operating
Above			**Price**	**Rate**		**Capital**
Average Management at:			***$60.00***	***5.0%***	***$***	***30,000.00***
	Maintain	Sell	Hay	Switchgrass		Net Revenue
yr	(au)	(au)	(acre)	(acre)		($)
0	70	0	83	0		
1	0.00	70.00	0.00	120.00	*$*	*172,958.76*
2	0.00	0.00	0.00	0.00	*$*	*0.00*
3	0.00	0.00	0.00	11.06	*$*	*12,433.89*
4	0.00	0.00	0.00	0.00	*$*	-
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	0.00	*$*	-
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	40.85	*$*	*35,061.71*
9	0.00	0.00	0.00	5.00	*$*	*2,635.38*
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	131.09	*$*	*48,359.60*
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	11.06	*$*	*3,757.56*
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	176.94	*$*	*60,473.28*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	11.06	*$*	*1,806.53*
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	*0.00*
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***337,486.72***

			Switchgrass	Discount		Operating
Above			**Price**	**Rate**		**Capital**
Average Management at:			***$60.00***	***7.5%***	***$***	***30,000.00***
	Maintain	Sell	Hay	Switchgrass		Net Revenue
yr	(au)	(au)	(acre)	(acre)		($)
0	70	0	83	0		
1	0.00	70.00	0.00	120.00	*$*	*160,004.19*
2	0.00	0.00	0.00	0.00	*$*	*0.00*
3	0.00	0.00	0.00	24.81	*$*	*23,723.56*
4	0.00	0.00	0.00	0.00	*$*	*(0.00)*
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	0.00	*$*	*0.00*
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	43.19	*$*	*28,126.08*
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	120.00	*$*	*30,315.88*
12	0.00	0.00	0.00	0.00	*$*	*0.00*
13	0.00	0.00	0.00	24.81	*$*	*5,819.67*
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	0.00	*$*	-
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	163.19	*$*	*31,091.19*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	24.81	*$*	*2,250.84*
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	0.00	*$*	*0.00*
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***281,331.41***

			Switchgrass	Discount		Operating
Above			**Price**	**Rate**		**Capital**
Average Management at:			***$60.00***	***10.0%***	***$***	***30,000.00***
	Maintain	Sell	Hay	Switchgrass		Net Revenue
yr	(au)	(au)	(acre)	(acre)		($)
0	70	0	83	0		
1	0.00	70.00	0.00	120.00	*$*	*148,736.77*
2	0.00	0.00	0.00	0.00	*$*	-
3	0.00	0.00	0.00	28.21	*$*	*23,078.72*
4	0.00	0.00	0.00	13.78	*$*	*8,962.25*
5	0.00	0.00	0.00	0.00	*$*	-
6	0.00	0.00	0.00	0.00	*$*	-
7	0.00	0.00	0.00	0.00	*$*	-
8	0.00	0.00	0.00	26.01	*$*	*12,965.10*
9	0.00	0.00	0.00	0.00	*$*	-
10	0.00	0.00	0.00	0.00	*$*	-
11	0.00	0.00	0.00	120.00	*$*	*20,923.83*
12	0.00	0.00	0.00	0.00	*$*	-
13	0.00	0.00	0.00	28.21	*$*	*4,592.18*
14	0.00	0.00	0.00	0.00	*$*	-
15	0.00	0.00	0.00	0.00	*$*	-
16	0.00	0.00	0.00	0.00	*$*	-
17	0.00	0.00	0.00	13.78	*$*	*1,757.01*
18	0.00	0.00	0.00	0.00	*$*	-
19	0.00	0.00	0.00	0.00	*$*	-
20	0.00	0.00	0.00	0.00	*$*	-
21	0.00	0.00	0.00	146.01	*$*	*15,686.99*
22	0.00	0.00	0.00	0.00	*$*	-
23	0.00	0.00	0.00	28.21	*$*	*1,431.64*
24	0.00	0.00	0.00	0.00	*$*	-
25	0.00	0.00	0.00	0.00	*$*	-
26	0.00	0.00	0.00	0.00	*$*	-
27	0.00	0.00	0.00	13.78	*$*	82.58
28	0.00	0.00	0.00	0.00	*$*	-
29	0.00	0.00	0.00	0.00	*$*	-
30	0.00	0.00	0.00	0.00	*$*	-
					$	***238,217.05***

Above *Average Management at:*			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
			$60.00	*2.5%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	2.00	68.00	0.00	137.51	*$ 205,757.85*
2	2.00	0.00	0.00	0.00	*$ 88.52*
3	2.00	0.00	0.00	0.64	*$ 1,325.39*
4	2.00	0.00	0.00	0.00	*$ (326.20)*
5	2.00	0.00	0.00	0.00	*$ 148.60*
6	0.00	2.00	0.00	0.00	*$ 1,382.93*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	38.33	*$ 43,749.76*
9	0.00	0.00	0.00	0.01	*$ 5.09*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	149.02	*$ 80,848.51*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.64	*$ 314.96*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	187.36	*$ 115,925.54*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.64	*$ 187.97*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 449,408.91

Above *Average Management at:*			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
			$60.00	*5.0%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	22.00	48.00	0.00	112.56	*$ 148,559.12*
2	22.00	0.00	0.00	0.00	*$ 959.22*
3	22.00	0.00	0.00	42.23	*$ 52,467.25*
4	0.00	22.00	0.00	0.00	*$ 12,255.30*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	33.22	*$ 28,507.02*
9	0.00	0.00	0.00	0.00	*$ 0.00*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	112.56	*$ 41,523.55*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	42.23	*$ 14,346.04*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	145.77	*$ 49,821.24*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	42.23	*$ 6,897.17*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 355,335.90

Above *Average Management at:*			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
			$60.00	*7.5%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 177,536.20*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	28.94	*$ 27,677.49*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.06	*$ 12,410.59*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 35,368.53*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	28.94	*$ 6,789.62*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	159.06	*$ 30,303.54*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	28.94	*$ 2,625.98*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 292,711.94

Above *Average Management at:*			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
			$60.00	*10.0%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 164,390.88*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	32.91	*$ 26,925.17*
4	0.00	0.00	0.00	15.09	*$ 9,811.03*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ 0.00*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 24,411.13*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	32.91	*$ 5,357.54*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	15.09	*$ 1,923.41*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	140.00	*$ 15,041.61*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	32.91	*$ 1,670.24*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	15.09	*$ 90.40*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 249,621.42

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*2.5%*	*$ 15,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	16.00	54.00	0.00	40.04	*$ 100,187.32*
2	16.00	0.00	9.38	0.00	*$ 957.25*
3	16.00	0.00	0.00	20.46	*$ 38,159.50*
4	6.00	10.00	0.00	0.00	*$ 5,009.61*
5	6.00	0.00	0.00	0.00	*$ 445.81*
6	0.00	6.00	0.00	0.00	*$ 4,148.80*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	14.23	*$ 20,571.53*
9	0.00	0.00	0.00	0.82	*$ 793.43*
10	0.00	0.00	10.37	0.00	*$ 132.33*
11	0.00	0.00	0.00	52.61	*$ 40,297.99*
12	0.00	0.00	0.00	4.10	*$ 2,921.99*
13	0.00	0.00	0.00	21.58	*$ 15,168.93*
14	0.00	0.00	2.96	0.00	*$ 133.78*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	5.01	*$ 2,975.03*
17	0.00	0.00	0.00	1.06	*$ 830.80*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	28.15	0.00	*$ 1,041.81*
20	0.00	0.00	32.30	0.00	*$ 1,239.00*
21	0.00	0.00	0.00	73.20	*$ 59,513.78*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	45.32	*$ 19,160.15*
24	0.00	0.00	0.00	2.12	*$ 592.32*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	4.09	*$ 25.31*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 314,306.47

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*5.0%*	*$ 15,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	5.00	65.00	0.00	53.76	*$ 119,985.69*
2	5.00	0.00	0.00	0.00	*$ 218.01*
3	5.00	0.00	0.00	12.19	*$ 18,483.40*
4	0.00	5.00	0.00	0.00	*$ 2,785.29*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.66	*$ 21,391.38*
9	0.00	0.00	0.00	2.78	*$ 1,975.32*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	73.01	*$ 38,296.34*
12	0.00	0.00	0.00	0.36	*$ 171.60*
13	0.00	0.00	0.00	28.82	*$ 13,876.39*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	14.85	*$ 6,970.86*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	122.72	*$ 55,094.52*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	50.44	*$ 11,748.33*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	14.85	*$ 749.89*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 291,747.03

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*7.5%*	*$ 15,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 123,639.31*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	12.40	*$ 15,042.77*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.12	*$ 20,750.93*
9	0.00	0.00	0.00	5.91	*$ 3,094.13*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	90.49	*$ 32,798.44*
12	0.00	0.00	0.00	8.97	*$ 2,892.46*
13	0.00	0.00	0.00	34.55	*$ 11,457.17*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ (0.00)*
17	0.00	0.00	0.00	22.97	*$ 6,548.04*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	121.51	*$ 30,462.34*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	43.52	*$ 5,616.79*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	22.97	*$ 588.18*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 252,890.55

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$65.00*	*10.0%*	*$ 15,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 116,496.30*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	14.10	*$ 14,670.36*
4	0.00	0.00	0.00	6.89	*$ 5,789.07*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	29.63	*$ 18,767.99*
9	0.00	0.00	0.00	10.78	*$ 4,204.81*
10	0.00	0.00	0.00	15.04	*$ 3,943.91*
11	0.00	0.00	0.00	88.10	*$ 22,272.63*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	37.55	*$ 8,638.25*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	6.89	*$ 1,206.09*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	143.56	*$ 20,355.15*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	37.55	*$ 2,710.87*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	6.89	*$ 89.85*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 219,145.27

	Maintain	Sell	Hay	Switchgrass	Net Revenue
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			*$65.00*	*2.5%*	*$ 20,000.00*
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	23.00	47.00	0.00	51.31	$ 111,018.37
2	23.00	0.00	13.08	0.00	$ 1,365.29
3	23.00	0.00	0.00	28.90	$ 54,006.44
4	8.00	15.00	0.00	0.37	$ 8,192.50
5	8.00	0.00	0.00	0.33	$ 1,047.01
6	0.00	8.00	0.00	0.00	$ 5,531.74
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	18.68	$ 27,004.00
9	0.00	0.00	0.00	1.19	$ 1,153.62
10	0.00	0.00	13.14	0.00	$ 167.70
11	0.00	0.00	0.00	68.41	$ 52,400.14
12	0.00	0.00	0.00	5.54	$ 3,954.39
13	0.00	0.00	0.00	30.82	$ 21,661.01
14	0.00	0.00	2.53	0.00	$ 114.18
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	6.08	$ 3,614.99
17	0.00	0.00	0.00	1.89	$ 1,472.75
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	19.25	0.00	$ 738.57
21	0.00	0.00	0.00	95.60	$ 77,730.24
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	62.28	$ 26,332.25
24	0.00	0.00	0.00	2.90	$ 807.47
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	5.67	$ 35.06
30	0.00	0.00	0.00	0.00	$ -
					$ 398,347.71

	Maintain	Sell	Hay	Switchgrass	Net Revenue
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			*$65.00*	*5.0%*	*$ 20,000.00*
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	13.00	57.00	0.00	63.78	$ 126,648.31
2	13.00	0.00	0.00	0.00	$ 566.81
3	13.00	0.00	0.00	24.70	$ 38,091.76
4	0.00	13.00	0.00	0.00	$ 7,241.77
5	0.00	0.00	0.00	0.00	$ (0.00)
6	0.00	0.00	0.00	0.00	$ 0.00
7	0.00	0.00	0.00	0.00	$ 0.00
8	0.00	0.00	0.00	25.25	$ 27,471.15
9	0.00	0.00	0.00	4.07	$ 2,887.46
10	0.00	0.00	0.00	0.00	$ 0.00
11	0.00	0.00	0.00	91.25	$ 47,865.26
12	0.00	0.00	0.00	4.22	$ 2,019.42
13	0.00	0.00	0.00	41.70	$ 20,078.49
14	0.00	0.00	0.00	0.00	$ 0.00
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	19.40	$ 9,110.33
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	122.67	$ 55,073.34
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	45.93	$ 10,697.91
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	19.40	$ 980.05
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 348,732.05

	Maintain	Sell	Hay	Switchgrass	Net Revenue
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			*$65.00*	*7.5%*	*$ 20,000.00*
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	$ 146,581.70
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	16.54	$ 20,057.02
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	33.49	$ 27,667.90
9	0.00	0.00	0.00	7.87	$ 4,125.51
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	120.66	$ 43,731.25
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	25.98	$ 8,616.45
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	162.02	$ 40,616.45
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.98	$ 3,353.16
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 294,749.45

	Maintain	Sell	Hay	Switchgrass	Net Revenue
Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			*$65.00*	*10.0%*	*$ 20,000.00*
yr	(au)	(au)	(acre)	(acre)	($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	$ 137,057.70
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	18.81	$ 19,560.48
4	0.00	0.00	0.00	9.19	$ 7,718.76
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	39.51	$ 25,023.99
9	0.00	0.00	0.00	14.37	$ 5,606.41
10	0.00	0.00	0.00	20.06	$ 5,258.55
11	0.00	0.00	0.00	86.07	$ 21,757.97
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ 4,326.01
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	9.19	$ 1,608.12
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	160.01	$ 22,687.51
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ 1,357.60
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	9.19	$ 119.80
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 252,082.90

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$65.00***	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	27.00	43.00	0.00	66.32	*$ 129,578.65*
2	27.00	0.00	15.75	0.00	*$ 1,613.21*
3	27.00	0.00	0.00	34.54	*$ 64,424.55*
4	10.00	17.00	0.00	0.00	*$ 8,548.96*
5	10.00	0.00	0.00	0.00	*$ 743.01*
6	0.00	10.00	0.00	0.00	*$ 6,914.67*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	23.67	*$ 34,215.84*
9	0.00	0.00	0.00	1.38	*$ 1,339.78*
10	0.00	0.00	17.17	0.00	*$ 219.20*
11	0.00	0.00	0.00	87.37	*$ 66,928.12*
12	0.00	0.00	0.00	0.34	*$ 242.54*
13	0.00	0.00	0.00	43.47	*$ 30,553.09*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	9.83	*$ 7,677.70*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	120.78	*$ 98,204.08*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	57.39	*$ 24,262.89*
24	0.00	0.00	0.00	0.00	*$ 0.00*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ (0.00)*
27	0.00	0.00	0.00	9.83	*$ 975.52*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ 0.00*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 476,441.82

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$65.00***	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 183,253.04*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	9.22	*$ 13,111.96*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	34.05	*$ 37,034.80*
9	0.00	0.00	0.00	4.17	*$ 2,958.39*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	129.70	*$ 68,033.18*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	20.09	*$ 9,672.33*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ (0.00)*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	167.91	*$ 75,384.96*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.09	*$ 4,679.42*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 394,128.08

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$65.00***	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 169,524.10*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	20.67	*$ 25,071.28*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	41.86	*$ 34,584.88*
9	0.00	0.00	0.00	9.84	*$ 5,156.89*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	115.63	*$ 41,907.49*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	20.67	*$ 6,855.79*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ 0.00*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	167.33	*$ 41,947.28*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.67	*$ 2,667.98*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 327,715.68

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$65.00***	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 157,619.10*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	23.51	*$ 24,450.60*
4	0.00	0.00	0.00	11.49	*$ 9,648.45*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	49.39	*$ 31,279.98*
9	0.00	0.00	0.00	3.62	*$ 1,411.32*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	100.00	*$ 25,280.92*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	23.51	*$ 5,407.52*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	11.49	*$ 2,010.15*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	153.01	*$ 21,695.15*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	23.51	*$ 1,696.99*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	11.49	*$ 149.74*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 280,649.92

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above					
Average Management at:			***$65.00***	***2.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	33.00	37.00	0.00	78.83	*$ 142,986.12*
2	33.00	0.00	11.46	0.00	*$ 1,764.69*
3	33.00	0.00	0.00	42.25	*$ 78,795.14*
4	12.00	21.00	0.00	0.00	*$ 10,618.04*
5	12.00	0.00	0.00	0.00	*$ 891.61*
6	0.00	12.00	0.00	0.00	*$ 8,297.60*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	28.31	*$ 40,932.93*
9	0.00	0.00	0.00	1.69	*$ 1,639.06*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	104.30	*$ 79,890.40*
12	0.00	0.00	0.00	0.78	*$ 558.49*
13	0.00	0.00	0.00	52.42	*$ 36,844.97*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.50	*$ 388.42*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	134.29	*$ 109,191.66*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	53.21	*$ 22,496.59*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.50	*$ 49.35*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 535,345.08

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above					
Average Management at:			***$65.00***	***5.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	*$ 208,941.23*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	11.06	*$ 15,734.35*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	40.85	*$ 44,441.76*
9	0.00	0.00	0.00	5.00	*$ 3,550.06*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	131.09	*$ 68,760.52*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	11.06	*$ 5,325.18*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	176.94	*$ 79,438.58*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	11.06	*$ 2,576.29*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ (0.00)*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 428,767.98

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above					
Average Management at:			***$65.00***	***7.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	*$ 192,466.50*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	24.81	*$ 30,085.53*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	43.19	*$ 35,685.73*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.00	*$ 43,493.25*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	24.81	*$ 8,226.95*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	163.19	*$ 40,910.86*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	24.81	*$ 3,201.58*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 354,070.41

			Switchgrass Price	**Discount Rate**	**Operating Capital**
Above					
Average Management at:			***$65.00***	***10.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	*$ 178,180.50*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	28.21	*$ 29,340.72*
4	0.00	0.00	0.00	13.78	*$ 11,578.13*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	26.01	*$ 16,471.42*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.00	*$ 30,337.10*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	28.21	*$ 6,489.02*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	13.78	*$ 2,412.18*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	146.01	*$ 20,702.79*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	28.21	*$ 2,036.39*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	13.78	*$ 179.69*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 297,727.95

Above
Average Management at: **Switchgrass Price** ***$65.00*** | **Discount Rate** ***2.5%*** | **Operating Capital** ***$ 35,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	2.00	68.00	0.00	137.51	$ 251,720.67
2	2.00	0.00	0.00	0.00	$ 88.52
3	2.00	0.00	0.00	0.64	$ 1,548.78
4	2.00	0.00	0.00	0.00	$ (326.20)
5	2.00	0.00	0.00	0.00	$ 148.60
6	0.00	2.00	0.00	0.00	$ 1,382.93
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	38.33	$ 55,424.71
9	0.00	0.00	0.00	0.01	$ 6.85
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	149.02	$ 114,148.77
12	0.00	0.00	0.00	0.00	$ (0.00)
13	0.00	0.00	0.00	0.64	$ 448.82
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	187.36	$ 152,338.52
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	0.64	$ 270.01
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 577,200.99

Above
Average Management at: **Switchgrass Price** ***$65.00*** | **Discount Rate** ***5.0%*** | **Operating Capital** ***$ 35,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	$ 234,629.42
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	12.90	$ 18,356.75
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	35.10	$ 38,176.56
9	0.00	0.00	0.00	0.00	$ 0.00
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	140.00	$ 73,437.00
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	12.90	$ 6,212.71
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ 0.00
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	175.10	$ 78,610.98
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	12.90	$ 3,005.68
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 452,429.10

Above
Average Management at: **Switchgrass Price** ***$65.00*** | **Discount Rate** ***7.5%*** | **Operating Capital** ***$ 35,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	$ 215,408.90
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	28.94	$ 35,099.79
4	0.00	0.00	0.00	0.00	$ 0.00
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	19.06	$ 15,746.27
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	140.00	$ 50,742.13
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	28.94	$ 9,598.10
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	159.06	$ 39,874.45
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	28.94	$ 3,735.17
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 370,204.81

Above
Average Management at: **Switchgrass Price** ***$65.00*** | **Discount Rate** ***10.0%*** | **Operating Capital** ***$ 35,000.00***

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	$ 198,741.90
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	32.91	$ 34,230.83
4	0.00	0.00	0.00	15.09	$ 12,674.66
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	0.00	$ 0.00
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	140.00	$ 35,393.28
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	32.91	$ 7,570.52
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ (0.00)
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	15.09	$ 2,640.63
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	140.00	$ 19,851.06
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	32.91	$ 2,375.79
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	15.09	$ 196.71
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 313,675.39

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***2.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	12.00	58.00	0.00	45.03	*$ 125,544.77*
2	12.00	0.00	8.01	0.00	*$ 743.78*
3	12.00	0.00	0.00	15.13	*$ 33,546.14*
4	6.00	6.00	0.00	0.00	*$ 2,614.32*
5	6.00	0.00	0.00	0.00	*$ 445.81*
6	0.00	6.00	0.00	0.00	*$ 4,148.80*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	14.81	*$ 25,922.38*
9	0.00	0.00	0.00	0.60	*$ 734.55*
10	0.00	0.00	11.63	0.00	*$ 148.51*
11	0.00	0.00	0.00	56.29	*$ 55,699.65*
12	0.00	0.00	0.00	1.56	*$ 1,443.83*
13	0.00	0.00	0.00	19.91	*$ 18,166.38*
14	0.00	0.00	2.93	0.00	*$ 132.39*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	6.21	*$ 4,846.45*
17	0.00	0.00	0.00	0.14	*$ 135.46*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	28.34	0.00	*$ 1,048.82*
20	0.00	0.00	31.62	0.00	*$ 1,212.98*
21	0.00	0.00	0.00	77.14	*$ 77,708.77*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	41.62	*$ 22,945.69*
24	0.00	0.00	0.00	2.02	*$ 771.37*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	3.67	*$ 95.50*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 378,056.35

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***5.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 149,867.90*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	5.53	*$ 9,517.41*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ 0.00*
8	0.00	0.00	0.00	20.43	*$ 26,910.90*
9	0.00	0.00	0.00	2.50	*$ 2,232.37*
10	0.00	0.00	0.00	0.00	*$ 0.00*
11	0.00	0.00	0.00	77.82	*$ 52,930.98*
12	0.00	0.00	0.00	0.00	*$ (0.00)*
13	0.00	0.00	0.00	23.38	*$ 14,571.17*
14	0.00	0.00	0.00	0.00	*$ (0.00)*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ (0.00)*
17	0.00	0.00	0.00	15.14	*$ 8,977.83*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	128.37	*$ 71,393.15*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	44.49	*$ 13,459.76*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	15.14	*$ 1,155.77*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 351,017.26

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***7.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 139,870.46*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	12.40	*$ 18,223.75*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ (0.00)*
8	0.00	0.00	0.00	25.12	*$ 25,146.80*
9	0.00	0.00	0.00	5.91	*$ 3,897.19*
10	0.00	0.00	0.00	0.00	*$ (0.00)*
11	0.00	0.00	0.00	90.49	*$ 42,735.55*
12	0.00	0.00	0.00	8.97	*$ 3,799.03*
13	0.00	0.00	0.00	34.55	*$ 14,809.63*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	22.97	*$ 8,295.15*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	121.51	*$ 37,774.09*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	43.52	*$ 7,284.75*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	22.97	*$ 895.70*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 302,732.10

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***10.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 131,218.17*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	14.10	*$ 17,801.35*
4	0.00	0.00	0.00	6.89	*$ 7,097.01*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	29.63	*$ 22,763.20*
9	0.00	0.00	0.00	10.78	*$ 5,306.17*
10	0.00	0.00	0.00	15.04	*$ 5,202.57*
11	0.00	0.00	0.00	88.10	*$ 29,183.59*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	37.55	*$ 11,163.34*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	6.89	*$ 1,533.67*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	143.56	*$ 25,286.73*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	37.55	*$ 3,515.93*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	6.89	*$ 138.41*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 260,210.13

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$70.00*	*2.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	15.00	55.00	0.00	61.29	*$ 152,115.73*
2	15.00	0.00	10.34	0.00	*$ 938.34*
3	15.00	0.00	0.00	18.83	*$ 41,785.80*
4	8.00	7.00	0.00	0.00	*$ 2,886.94*
5	8.00	0.00	0.00	0.00	*$ 594.41*
6	0.00	8.00	0.00	0.00	*$ 5,531.74*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.89	*$ 34,817.57*
9	0.00	0.00	0.00	0.75	*$ 913.81*
10	0.00	0.00	15.83	0.00	*$ 202.06*
11	0.00	0.00	0.00	75.98	*$ 75,177.61*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	27.71	*$ 25,281.88*
14	0.00	0.00	2.84	0.00	*$ 128.28*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	8.50	*$ 6,641.33*
17	0.00	0.00	0.00	0.03	*$ 28.92*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	18.24	0.00	*$ 699.50*
21	0.00	0.00	0.00	103.69	*$ 104,457.15*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	54.70	*$ 30,154.46*
24	0.00	0.00	0.00	2.64	*$ 1,004.97*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.05	*$ 7.45*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	4.81	*$ 125.05*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 483,492.99

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$70.00*	*5.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 181,553.17*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	7.37	*$ 12,689.88*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	27.24	*$ 35,881.20*
9	0.00	0.00	0.00	3.33	*$ 2,976.50*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	103.76	*$ 70,574.63*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	31.17	*$ 19,428.22*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	20.18	*$ 11,970.44*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	136.64	*$ 75,992.54*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	31.17	*$ 9,431.30*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	20.18	*$ 1,541.03*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 422,038.92

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$70.00*	*7.5%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 168,223.25*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	16.54	*$ 24,298.33*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	33.49	*$ 33,529.07*
9	0.00	0.00	0.00	7.87	*$ 5,196.25*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.66	*$ 56,980.73*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	25.98	*$ 11,137.70*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ 0.00*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	162.02	*$ 50,365.46*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	25.98	*$ 4,348.91*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 354,079.68

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$70.00*	*10.0%*	*$ 20,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 156,686.86*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	18.81	*$ 23,735.14*
4	0.00	0.00	0.00	9.19	*$ 9,462.68*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	39.51	*$ 30,350.93*
9	0.00	0.00	0.00	14.37	*$ 7,074.89*
10	0.00	0.00	0.00	20.06	*$ 6,936.76*
11	0.00	0.00	0.00	86.07	*$ 28,509.23*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	18.81	*$ 5,590.57*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	9.19	*$ 2,044.90*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	160.01	*$ 28,184.17*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	18.81	*$ 1,760.77*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	9.19	*$ 184.54*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 300,521.44

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*2.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	26.00	44.00	0.00	67.57	*$ 154,739.45*
2	26.00	0.00	15.41	0.00	*$ 1,559.85*
3	26.00	0.00	0.00	33.21	*$ 73,564.59*
4	10.00	16.00	0.00	0.00	*$ 7,950.14*
5	10.00	0.00	0.00	0.00	*$ 743.01*
6	0.00	10.00	0.00	0.00	*$ 6,914.67*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	23.81	*$ 41,677.64*
9	0.00	0.00	0.00	1.33	*$ 1,617.79*
10	0.00	0.00	17.49	0.00	*$ 223.25*
11	0.00	0.00	0.00	88.30	*$ 87,364.27*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	42.73	*$ 38,988.14*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	9.89	*$ 9,737.17*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	121.79	*$ 122,691.89*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	56.32	*$ 31,049.42*
24	0.00	0.00	0.00	0.00	*$ 0.00*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ (0.00)*
27	0.00	0.00	0.00	9.89	*$ 1,482.32*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 580,303.58

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*5.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 213,238.43*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	9.22	*$ 15,862.35*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	34.05	*$ 44,851.50*
9	0.00	0.00	0.00	4.17	*$ 3,720.62*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	129.70	*$ 88,218.29*
12	0.00	0.00	0.00	10.87	*$ 6,790.09*
13	0.00	0.00	0.00	9.22	*$ 5,744.00*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	167.91	*$ 93,382.49*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.09	*$ 6,077.58*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 477,885.36

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*7.5%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 196,576.03*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	20.67	*$ 30,372.91*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	41.86	*$ 41,911.33*
9	0.00	0.00	0.00	9.84	*$ 6,495.31*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	115.63	*$ 54,604.41*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	20.67	*$ 8,861.85*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ (0.00)*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	167.33	*$ 52,015.72*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.67	*$ 3,460.27*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 394,297.83

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*10.0%*	*$ 25,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 182,155.55*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	23.51	*$ 29,668.92*
4	0.00	0.00	0.00	11.49	*$ 11,828.35*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	49.39	*$ 37,938.66*
9	0.00	0.00	0.00	3.62	*$ 1,780.98*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	100.00	*$ 33,125.31*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	23.51	*$ 6,988.22*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	11.49	*$ 2,556.12*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	153.01	*$ 26,951.39*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	23.51	*$ 2,200.96*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	11.49	*$ 230.68*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 335,425.13

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*2.5%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	14.00	56.00	0.00	102.54	$ 226,211.47
2	14.00	0.00	12.59	0.00	$ 953.87
3	14.00	0.00	0.00	16.92	$ 37,668.38
4	14.00	0.00	0.00	0.00	$ (2,283.41)
5	14.00	0.00	0.00	0.00	$ 1,040.21
6	0.00	14.00	0.00	0.00	$ 9,680.54
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	31.07	$ 54,388.66
9	0.00	0.00	0.00	0.67	$ 813.20
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	121.80	$ 120,513.43
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	32.07	$ 29,263.61
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ 0.00
17	0.00	0.00	0.00	2.39	$ 2,355.46
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	153.54	$ 154,675.49
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	32.07	$ 17,680.17
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	2.39	$ 358.58
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 653,319.65

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*5.0%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	$ 244,923.70
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	11.06	$ 19,034.82
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	40.85	$ 53,821.80
9	0.00	0.00	0.00	5.00	$ 4,464.75
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	131.09	$ 89,161.44
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	11.06	$ 6,892.80
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	176.94	$ 98,403.88
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	11.06	$ 3,346.06
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ (0.00)
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 520,049.25

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*7.5%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	$ 224,928.82
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	24.81	$ 36,447.50
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	43.19	$ 43,245.39
9	0.00	0.00	0.00	0.00	$ 0.00
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	120.00	$ 56,670.62
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	24.81	$ 10,634.22
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	163.19	$ 50,730.54
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	24.81	$ 4,152.32
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 426,809.40

Above			Switchgrass Price	Discount Rate	Operating Capital
Average Management at:			*$70.00*	*10.0%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	$ 207,624.23
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	28.21	$ 35,602.71
4	0.00	0.00	0.00	13.78	$ 14,194.02
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	26.01	$ 19,977.75
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	120.00	$ 39,750.38
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	28.21	$ 8,385.86
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	13.78	$ 3,067.34
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	146.01	$ 25,718.60
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	28.21	$ 2,641.15
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	13.78	$ 276.81
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 357,238.86

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***2.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	1.00	69.00	0.00	138.10	*$ 299,521.82*
2	1.00	0.00	0.00	0.00	*$ 44.26*
3	1.00	0.00	0.00	0.00	*$ 238.30*
4	1.00	0.00	0.00	0.00	*$ (163.10)*
5	1.00	0.00	0.00	0.00	*$ 74.30*
6	0.00	1.00	0.00	0.00	*$ 691.47*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	38.39	*$ 67,192.16*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	149.61	*$ 148,035.61*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 189,394.84*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ 0.00*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 705,029.65

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***5.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 276,608.97*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	12.90	*$ 22,207.29*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	35.10	*$ 46,234.25*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 95,225.41*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	12.90	*$ 8,041.60*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	175.10	*$ 97,378.70*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	12.90	*$ 3,903.74*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ (0.00)*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 549,599.95

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***7.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 253,281.60*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	28.94	*$ 42,522.08*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.06	*$ 19,081.96*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 66,115.73*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	28.94	*$ 12,406.59*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	159.06	*$ 49,445.36*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	28.94	*$ 4,844.37*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 447,697.68

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$70.00***	***10.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 233,092.92*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	32.91	*$ 41,536.49*
4	0.00	0.00	0.00	15.09	*$ 15,538.29*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ 0.00*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 46,375.44*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	32.91	*$ 9,783.50*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	15.09	*$ 3,357.84*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	140.00	*$ 24,660.52*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	32.91	*$ 3,081.34*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	15.09	*$ 303.03*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 377,729.37

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***2.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	9.00	61.00	0.00	48.77	*$ 150,827.79*
2	9.00	0.00	6.98	0.00	*$ 583.67*
3	9.00	0.00	0.00	11.13	*$ 28,611.37*
4	6.00	3.00	0.00	0.00	*$ 817.86*
5	6.00	0.00	0.00	0.00	*$ 445.81*
6	0.00	6.00	0.00	0.00	*$ 4,148.80*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	15.25	*$ 31,328.68*
9	0.00	0.00	0.00	0.44	*$ 647.54*
10	0.00	0.00	12.58	0.00	*$ 160.64*
11	0.00	0.00	0.00	59.06	*$ 71,630.75*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	18.27	*$ 20,498.87*
14	0.00	0.00	3.17	0.00	*$ 143.03*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	6.52	*$ 6,312.85*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	28.08	0.00	*$ 1,039.14*
20	0.00	0.00	31.21	0.00	*$ 1,197.21*
21	0.00	0.00	0.00	80.11	*$ 96,275.72*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	38.90	*$ 26,444.48*
24	0.00	0.00	0.00	1.22	*$ 589.31*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.62	*$ 123.72*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	3.41	*$ 156.37*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 441,983.64

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***5.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 167,859.14*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	5.53	*$ 11,167.64*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ 0.00*
8	0.00	0.00	0.00	20.43	*$ 31,600.92*
9	0.00	0.00	0.00	2.50	*$ 2,689.72*
10	0.00	0.00	0.00	0.00	*$ 0.00*
11	0.00	0.00	0.00	77.82	*$ 65,042.05*
12	0.00	0.00	0.00	0.00	*$ (0.00)*
13	0.00	0.00	0.00	23.38	*$ 17,885.07*
14	0.00	0.00	0.00	0.00	*$ 0.00*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	15.14	*$ 10,848.42*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	128.37	*$ 85,152.70*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	44.49	*$ 16,556.21*
24	0.00	0.00	0.00	0.00	*$ 0.00*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	15.14	*$ 1,546.98*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 410,348.84

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***7.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 156,101.62*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	12.40	*$ 21,404.73*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ (0.00)*
7	0.00	0.00	0.00	0.00	*$ (0.00)*
8	0.00	0.00	0.00	25.12	*$ 29,542.67*
9	0.00	0.00	0.00	5.91	*$ 4,700.24*
10	0.00	0.00	0.00	0.00	*$ (0.00)*
11	0.00	0.00	0.00	90.49	*$ 52,672.65*
12	0.00	0.00	0.00	8.97	*$ 4,705.59*
13	0.00	0.00	0.00	34.55	*$ 18,162.10*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	22.97	*$ 10,042.26*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	121.51	*$ 45,085.85*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	43.52	*$ 8,952.72*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	22.97	*$ 1,203.22*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 352,573.64

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***10.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 145,940.04*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	14.10	*$ 20,932.35*
4	0.00	0.00	0.00	6.89	*$ 8,404.95*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	29.63	*$ 26,758.40*
9	0.00	0.00	0.00	10.78	*$ 6,407.53*
10	0.00	0.00	0.00	15.04	*$ 6,461.23*
11	0.00	0.00	0.00	88.10	*$ 36,094.54*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	37.55	*$ 13,688.43*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	6.89	*$ 1,859.39*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	143.56	*$ 30,218.31*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	37.55	*$ 4,320.99*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	6.89	*$ 232.86*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 301,319.01

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***2.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	15.00	55.00	0.00	61.29	*$ 172,601.82*
2	15.00	0.00	10.34	0.00	*$ 938.34*
3	15.00	0.00	0.00	18.83	*$ 48,374.44*
4	9.00	6.00	0.00	0.00	*$ 2,125.02*
5	9.00	0.00	0.00	0.00	*$ 668.71*
6	0.00	9.00	0.00	0.00	*$ 6,223.20*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.89	*$ 40,875.62*
9	0.00	0.00	0.00	0.75	*$ 1,100.33*
10	0.00	0.00	15.83	0.00	*$ 202.06*
11	0.00	0.00	0.00	75.98	*$ 92,155.91*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	27.71	*$ 31,090.14*
14	0.00	0.00	2.84	0.00	*$ 128.28*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	8.50	*$ 8,229.33*
17	0.00	0.00	0.00	0.03	*$ 34.91*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	18.24	0.00	*$ 699.50*
21	0.00	0.00	0.00	103.69	*$ 124,608.49*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	54.70	*$ 37,181.39*
24	0.00	0.00	0.00	2.64	*$ 1,274.67*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.05	*$ 9.97*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	4.81	*$ 220.38*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 568,742.52

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***5.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 205,541.48*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	7.37	*$ 14,890.19*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ 0.00*
8	0.00	0.00	0.00	27.24	*$ 42,134.56*
9	0.00	0.00	0.00	3.33	*$ 3,586.29*
10	0.00	0.00	0.00	0.00	*$ 0.00*
11	0.00	0.00	0.00	103.76	*$ 86,722.73*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	31.17	*$ 23,846.76*
14	0.00	0.00	0.00	0.00	*$ 0.00*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	20.18	*$ 14,464.56*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	136.64	*$ 90,638.52*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	31.17	*$ 11,600.99*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	20.18	*$ 2,062.65*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 495,488.72

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***7.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 189,864.79*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	16.54	*$ 28,539.64*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	33.49	*$ 39,390.23*
9	0.00	0.00	0.00	7.87	*$ 6,266.99*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.66	*$ 70,230.20*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	25.98	*$ 13,658.94*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ 0.00*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	162.02	*$ 60,114.47*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	25.98	*$ 5,344.66*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 413,409.92

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$75.00***	***10.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	*$ 176,316.01*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	18.81	*$ 27,909.80*
4	0.00	0.00	0.00	9.19	*$ 11,206.61*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	39.51	*$ 35,677.87*
9	0.00	0.00	0.00	14.37	*$ 8,543.37*
10	0.00	0.00	0.00	20.06	*$ 8,614.97*
11	0.00	0.00	0.00	86.07	*$ 35,260.50*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	18.81	*$ 6,855.13*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	9.19	*$ 2,479.18*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	160.01	*$ 33,680.83*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	18.81	*$ 2,163.94*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	9.19	*$ 310.48*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 349,018.69

Above
Average Management at: **Switchgrass Price** *$75.00* | **Discount Rate** *2.5%* | **Operating Capital** *$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	1.00	69.00	0.00	98.65	$ 262,356.37
2	1.00	0.00	7.04	0.00	$ 231.03
3	1.00	0.00	0.00	0.00	$ 238.30
4	1.00	0.00	0.00	0.00	$ (163.10)
5	1.00	0.00	0.00	0.00	$ 74.30
6	0.00	1.00	0.00	0.00	$ 691.47
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	27.42	$ 56,345.15
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	23.23	0.00	$ 296.53
11	0.00	0.00	0.00	111.24	$ 134,928.72
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	14.91	$ 16,735.67
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	11.20	$ 13,308.69
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	147.72	$ 177,526.48
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	29.08	$ 19,768.09
24	0.00	0.00	0.00	0.00	$ (0.00)
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ 0.00
27	0.00	0.00	0.00	11.20	$ 2,246.08
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 684,583.78

Above
Average Management at: **Switchgrass Price** *$75.00* | **Discount Rate** *5.0%* | **Operating Capital** *$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	$ 243,223.83
2	0.00	0.00	0.00	0.00	$ (0.00)
3	0.00	0.00	0.00	9.22	$ 18,612.73
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	34.05	$ 52,668.20
9	0.00	0.00	0.00	4.17	$ 4,482.86
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	129.70	$ 108,403.41
12	0.00	0.00	0.00	10.87	$ 8,383.01
13	0.00	0.00	0.00	9.22	$ 7,050.35
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ 0.00
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	167.91	$ 111,380.02
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	20.09	$ 7,475.74
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 561,680.15

Above
Average Management at: **Switchgrass Price** *$75.00* | **Discount Rate** *7.5%* | **Operating Capital** *$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	$ 223,627.96
2	0.00	0.00	0.00	0.00	$ (0.00)
3	0.00	0.00	0.00	20.67	$ 35,674.55
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	41.86	$ 49,237.78
9	0.00	0.00	0.00	9.84	$ 7,833.73
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	115.63	$ 67,301.33
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	20.67	$ 10,867.91
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	167.33	$ 62,084.16
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	20.67	$ 4,252.55
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 460,879.98

Above
Average Management at: **Switchgrass Price** *$75.00* | **Discount Rate** *10.0%* | **Operating Capital** *$ 25,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	$ 206,691.99
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	23.51	$ 34,887.25
4	0.00	0.00	0.00	11.49	$ 14,008.26
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	49.39	$ 44,597.33
9	0.00	0.00	0.00	3.62	$ 2,150.65
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	100.00	$ 40,969.71
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	23.51	$ 8,568.92
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	11.49	$ 3,098.98
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	153.01	$ 32,207.62
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	23.51	$ 2,704.92
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	11.49	$ 388.10
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 390,273.73

	Switchgrass Price	Discount Rate	Operating Capital
Above ***Average Management at:***	*$75.00*	*2.5%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	2.00	68.00	0.00	117.51	*$ 301,409.89*
2	2.00	0.00	8.47	0.00	*$ 313.44*
3	2.00	0.00	0.00	0.93	*$ 2,684.38*
4	2.00	0.00	0.00	0.00	*$ (326.20)*
5	2.00	0.00	0.00	0.00	*$ 148.60*
6	0.00	2.00	0.00	0.00	*$ 1,382.93*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	32.82	*$ 67,435.78*
9	0.00	0.00	0.00	0.02	*$ 31.44*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	132.85	*$ 161,137.47*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	18.67	*$ 20,953.36*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ 0.00*
17	0.00	0.00	0.00	3.64	*$ 4,323.57*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	165.69	*$ 199,119.07*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	18.67	*$ 12,693.25*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	3.64	*$ 729.68*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 772,036.67

	Switchgrass Price	Discount Rate	Operating Capital
Above ***Average Management at:***	*$75.00*	*5.0%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	*$ 280,906.17*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	11.06	*$ 22,335.28*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	40.85	*$ 63,201.84*
9	0.00	0.00	0.00	5.00	*$ 5,379.43*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	131.09	*$ 109,562.35*
12	0.00	0.00	0.00	0.00	*$ (0.00)*
13	0.00	0.00	0.00	11.06	*$ 8,460.41*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ (0.00)*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	176.94	*$ 117,369.18*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	11.06	*$ 4,115.83*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 611,330.51

	Switchgrass Price	Discount Rate	Operating Capital
Above ***Average Management at:***	*$75.00*	*7.5%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	*$ 257,391.13*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	24.81	*$ 42,809.46*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	43.19	*$ 50,805.05*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.00	*$ 69,847.99*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	24.81	*$ 13,041.49*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	163.19	*$ 60,550.21*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	24.81	*$ 5,103.06*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 499,548.40

	Switchgrass Price	Discount Rate	Operating Capital
Above ***Average Management at:***	*$75.00*	*10.0%*	*$ 30,000.00*

yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	*$ 237,067.97*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	28.21	*$ 41,864.70*
4	0.00	0.00	0.00	13.78	*$ 16,809.91*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	26.01	*$ 23,484.08*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	120.00	*$ 49,163.65*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	28.21	*$ 10,282.70*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	13.78	*$ 3,718.77*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	146.01	*$ 30,734.41*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	28.21	*$ 3,245.91*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	13.78	*$ 465.72*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 416,837.82

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$75.00*	*2.5%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	1.00	69.00	0.00	138.10	*$ 345,684.43*
2	1.00	0.00	0.00	0.00	*$ 44.26*
3	1.00	0.00	0.00	0.00	*$ 238.30*
4	1.00	0.00	0.00	0.00	*$ (163.10)*
5	1.00	0.00	0.00	0.00	*$ 74.30*
6	0.00	1.00	0.00	0.00	*$ 691.47*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	38.39	*$ 78,883.21*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	149.61	*$ 181,468.34*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	0.00	*$ 0.00*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 225,931.93*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ -*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 832,853.14

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$75.00*	*5.0%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 318,588.51*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	12.90	*$ 26,057.83*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ 0.00*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	35.10	*$ 54,291.94*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 117,013.81*
12	0.00	0.00	0.00	0.00	*$ (0.00)*
13	0.00	0.00	0.00	12.90	*$ 9,870.48*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ 0.00*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	175.10	*$ 116,146.42*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	12.90	*$ 4,801.80*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 646,770.80

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$75.00*	*7.5%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 291,154.30*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	28.94	*$ 49,944.38*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.06	*$ 22,417.64*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 81,489.32*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	28.94	*$ 15,215.07*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	159.06	*$ 59,016.27*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	28.94	*$ 5,953.57*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 525,190.55

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			*$75.00*	*10.0%*	*$ 35,000.00*
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 267,443.94*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	32.91	*$ 48,842.15*
4	0.00	0.00	0.00	15.09	*$ 18,401.92*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 57,357.59*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	32.91	*$ 11,996.48*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	15.09	*$ 4,070.97*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	140.00	*$ 29,469.97*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	32.91	*$ 3,786.89*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	15.09	*$ 509.83*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 441,879.74

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$80.00***	***2.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	7.00	63.00	0.00	51.27	*$ 174,785.40*
2	7.00	0.00	6.30	0.00	*$ 476.93*
3	7.00	0.00	0.00	8.46	*$ 24,753.97*
4	7.00	0.00	0.00	0.00	*$ (1,141.71)*
5	7.00	0.00	0.00	0.00	*$ 520.11*
6	0.00	7.00	0.00	0.00	*$ 4,840.27*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	15.54	*$ 36,657.64*
9	0.00	0.00	0.00	0.33	*$ 572.58*
10	0.00	0.00	13.22	0.00	*$ 168.73*
11	0.00	0.00	0.00	60.90	*$ 87,473.77*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	16.04	*$ 21,354.84*
14	0.00	0.00	4.09	0.00	*$ 184.65*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	6.63	*$ 7,656.91*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	27.12	0.00	*$ 1,003.60*
20	0.00	0.00	30.94	0.00	*$ 1,186.72*
21	0.00	0.00	0.00	82.20	*$ 114,755.81*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	37.02	*$ 29,920.91*
24	0.00	0.00	0.00	0.52	*$ 304.39*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	1.15	*$ 289.80*
28	0.00	0.00	0.00	3.38	*$ 240.82*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 506,006.16

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$80.00***	***5.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 185,850.37*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	5.53	*$ 12,817.87*
4	0.00	0.00	0.00	0.00	*$ -*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	20.43	*$ 36,290.94*
9	0.00	0.00	0.00	2.50	*$ 3,147.06*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	77.82	*$ 77,153.12*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	23.38	*$ 21,198.97*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ (0.00)*
17	0.00	0.00	0.00	15.14	*$ 12,719.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	128.37	*$ 98,912.24*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	44.49	*$ 19,652.65*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	15.14	*$ 1,938.19*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 469,680.42

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$80.00***	***7.5%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 172,332.78*
2	0.00	0.00	0.00	0.00	*$ (0.00)*
3	0.00	0.00	0.00	12.40	*$ 24,585.72*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ (0.00)*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	25.12	*$ 33,938.54*
9	0.00	0.00	0.00	5.91	*$ 5,503.29*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	90.49	*$ 62,609.76*
12	0.00	0.00	0.00	8.97	*$ 5,612.16*
13	0.00	0.00	0.00	34.55	*$ 21,514.56*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	22.97	*$ 11,789.36*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	121.51	*$ 52,397.61*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	43.52	*$ 10,620.68*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	22.97	*$ 1,510.74*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 402,415.19

			Switchgrass Price	Discount Rate	Operating Capital
Above					
Average Management at:			***$80.00***	***10.0%***	***$ 15,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	60.00	*$ 160,661.90*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	14.10	*$ 24,063.35*
4	0.00	0.00	0.00	6.89	*$ 9,712.90*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	29.63	*$ 30,753.61*
9	0.00	0.00	0.00	10.78	*$ 7,508.89*
10	0.00	0.00	0.00	15.04	*$ 7,719.89*
11	0.00	0.00	0.00	88.10	*$ 43,005.50*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	37.55	*$ 16,213.52*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	6.89	*$ 2,221.53*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	143.56	*$ 35,149.88*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	37.55	*$ 5,126.04*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	6.89	*$ 294.89*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 342,431.89

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$80.00***	***2.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	9.00	61.00	0.00	68.77	$ 216,052.29
2	9.00	0.00	8.28	0.00	$ 618.12
3	9.00	0.00	0.00	10.84	$ 31,713.65
4	9.00	0.00	0.00	0.00	$ (1,467.91)
5	9.00	0.00	0.00	0.00	$ 668.71
6	0.00	9.00	0.00	0.00	$ 6,223.20
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	20.76	$ 48,991.16
9	0.00	0.00	0.00	0.43	$ 732.65
10	0.00	0.00	17.73	0.00	$ 226.33
11	0.00	0.00	0.00	81.51	$ 117,072.72
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	21.01	$ 27,977.51
14	0.00	0.00	5.61	0.00	$ 253.14
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	8.86	$ 10,230.19
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	14.54	0.00	$ 557.61
21	0.00	0.00	0.00	109.94	$ 153,492.85
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	49.05	$ 39,641.00
24	0.00	0.00	0.00	0.58	$ 337.59
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	1.63	$ 408.87
28	0.00	0.00	0.00	4.48	$ 318.98
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 654,048.68

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$80.00***	***5.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	$ 229,529.80
2	0.00	0.00	0.00	0.00	$ (0.00)
3	0.00	0.00	0.00	7.37	$ 17,090.50
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	27.24	$ 48,387.93
9	0.00	0.00	0.00	3.33	$ 4,196.08
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	103.76	$ 102,870.82
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	31.17	$ 28,265.29
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	20.18	$ 16,958.67
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	136.64	$ 105,284.51
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	31.17	$ 13,770.67
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	20.18	$ 2,584.26
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 568,938.51

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$80.00***	***7.5%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	$ 211,506.33
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	16.54	$ 32,780.95
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	33.49	$ 45,251.39
9	0.00	0.00	0.00	7.87	$ 7,337.72
10	0.00	0.00	0.00	16.71	$ 11,581.64
11	0.00	0.00	0.00	103.97	$ 71,932.40
12	0.00	0.00	0.00	9.43	$ 5,895.69
13	0.00	0.00	0.00	16.54	$ 10,299.18
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	162.04	$ 69,870.54
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	25.96	$ 6,336.42
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 472,792.26

			Switchgrass Price	Discount Rate	Operating Capital
Above Average Management at:			***$80.00***	***10.0%***	***$ 20,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	80.00	$ 195,945.17
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	18.81	$ 32,084.46
4	0.00	0.00	0.00	9.19	$ 12,950.53
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	39.51	$ 41,004.81
9	0.00	0.00	0.00	14.37	$ 10,011.85
10	0.00	0.00	0.00	20.06	$ 10,293.18
11	0.00	0.00	0.00	86.07	$ 42,011.76
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	18.81	$ 8,119.69
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	9.19	$ 2,962.03
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	160.01	$ 39,177.49
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.81	$ 2,567.11
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	9.19	$ 393.18
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 397,521.27

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$80.00***	***2.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	2.00	68.00	0.00	97.51	*$ 291,765.76*
2	2.00	0.00	7.18	0.00	*$ 278.99*
3	2.00	0.00	0.00	1.22	*$ 3,799.19*
4	2.00	0.00	0.00	0.00	*$ (326.20)*
5	2.00	0.00	0.00	0.00	*$ 148.60*
6	0.00	2.00	0.00	0.00	*$ 1,382.93*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	27.30	*$ 64,410.90*
9	0.00	0.00	0.00	0.04	*$ 61.43*
10	0.00	0.00	23.18	0.00	*$ 295.96*
11	0.00	0.00	0.00	110.40	*$ 158,579.44*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	15.93	*$ 21,218.83*
14	0.00	0.00	0.00	0.00	*$ 0.00*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ 0.00*
17	0.00	0.00	0.00	11.15	*$ 15,524.35*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	146.77	*$ 204,910.63*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	30.08	*$ 24,310.38*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	11.15	*$ 2,801.53*
28	0.00	0.00	0.00	0.00	*$ 0.00*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 789,162.74

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$80.00***	***5.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 273,209.22*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	9.22	*$ 21,363.12*
4	0.00	0.00	0.00	0.00	*$ 0.00*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	34.05	*$ 60,484.91*
9	0.00	0.00	0.00	4.17	*$ 5,245.10*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	129.70	*$ 128,588.53*
12	0.00	0.00	0.00	10.87	*$ 9,975.93*
13	0.00	0.00	0.00	9.22	*$ 8,356.69*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	167.91	*$ 129,377.55*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.09	*$ 8,873.90*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 645,474.95

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$80.00***	***7.5%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 250,679.89*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	20.67	*$ 40,976.19*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	41.86	*$ 56,564.23*
9	0.00	0.00	0.00	9.84	*$ 9,172.15*
10	0.00	0.00	0.00	15.62	*$ 10,831.98*
11	0.00	0.00	0.00	100.00	*$ 69,187.80*
12	0.00	0.00	0.00	0.00	*$ 0.00*
13	0.00	0.00	0.00	20.67	*$ 12,873.97*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	167.33	*$ 72,152.61*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	20.67	*$ 5,044.83*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 527,483.66

			Switchgrass	Discount	Operating
Above			**Price**	**Rate**	**Capital**
Average Management at:			***$80.00***	***10.0%***	***$ 25,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	100.00	*$ 231,228.43*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	23.51	*$ 40,105.58*
4	0.00	0.00	0.00	11.49	*$ 16,188.16*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	49.39	*$ 51,256.01*
9	0.00	0.00	0.00	3.62	*$ 2,520.31*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	100.00	*$ 48,814.11*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	23.51	*$ 10,149.61*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	11.49	*$ 3,702.54*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	153.01	*$ 37,463.85*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	23.51	*$ 3,208.89*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	11.49	*$ 491.48*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 445,128.98

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***2.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	2.00	68.00	0.00	117.51	$ 340,687.45
2	2.00	0.00	8.47	0.00	$ 313.44
3	2.00	0.00	0.00	0.93	$ 3,009.07
4	2.00	0.00	0.00	0.00	$ (326.20)
5	2.00	0.00	0.00	0.00	$ 148.60
6	0.00	2.00	0.00	0.00	$ 1,382.93
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	32.82	$ 77,430.25
9	0.00	0.00	0.00	0.02	$ 36.77
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	132.85	$ 190,824.56
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	18.67	$ 24,867.87
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	3.64	$ 5,065.38
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	165.69	$ 231,320.06
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	18.67	$ 15,092.15
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	3.64	$ 914.10
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 890,766.43

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***5.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	$ 316,888.64
2	0.00	0.00	0.00	0.00	$ (0.00)
3	0.00	0.00	0.00	11.06	$ 25,635.74
4	0.00	0.00	0.00	0.00	$ -
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	40.85	$ 72,581.89
9	0.00	0.00	0.00	5.00	$ 6,294.12
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	131.09	$ 129,963.27
12	0.00	0.00	0.00	0.00	$ 0.00
13	0.00	0.00	0.00	11.06	$ 10,028.03
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	176.94	$ 136,334.48
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	11.06	$ 4,885.60
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 702,611.77

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***7.5%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	$ 289,853.44
2	0.00	0.00	0.00	0.00	$ 0.00
3	0.00	0.00	0.00	24.81	$ 49,171.43
4	0.00	0.00	0.00	0.00	$ (0.00)
5	0.00	0.00	0.00	0.00	$ 0.00
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	43.19	$ 58,364.70
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	120.00	$ 83,025.36
12	0.00	0.00	0.00	0.00	$ (0.00)
13	0.00	0.00	0.00	24.81	$ 15,448.77
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	0.00	$ -
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ 0.00
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	163.19	$ 70,369.89
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	24.81	$ 6,053.80
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	0.00	$ -
27	0.00	0.00	0.00	0.00	$ 0.00
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 572,287.40

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***10.0%***	***$ 30,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	120.00	$ 266,511.70
2	0.00	0.00	0.00	0.00	$ -
3	0.00	0.00	0.00	28.21	$ 48,126.70
4	0.00	0.00	0.00	13.78	$ 19,425.80
5	0.00	0.00	0.00	0.00	$ -
6	0.00	0.00	0.00	0.00	$ -
7	0.00	0.00	0.00	0.00	$ -
8	0.00	0.00	0.00	26.01	$ 26,990.41
9	0.00	0.00	0.00	0.00	$ -
10	0.00	0.00	0.00	0.00	$ -
11	0.00	0.00	0.00	120.00	$ 58,576.93
12	0.00	0.00	0.00	0.00	$ -
13	0.00	0.00	0.00	28.21	$ 12,179.54
14	0.00	0.00	0.00	0.00	$ -
15	0.00	0.00	0.00	13.78	$ 4,443.05
16	0.00	0.00	0.00	0.00	$ -
17	0.00	0.00	0.00	0.00	$ -
18	0.00	0.00	0.00	0.00	$ -
19	0.00	0.00	0.00	0.00	$ -
20	0.00	0.00	0.00	0.00	$ -
21	0.00	0.00	0.00	146.01	$ 35,750.21
22	0.00	0.00	0.00	0.00	$ -
23	0.00	0.00	0.00	28.21	$ 3,850.66
24	0.00	0.00	0.00	0.00	$ -
25	0.00	0.00	0.00	0.00	$ -
26	0.00	0.00	0.00	13.78	$ 589.77
27	0.00	0.00	0.00	0.00	$ -
28	0.00	0.00	0.00	0.00	$ -
29	0.00	0.00	0.00	0.00	$ -
30	0.00	0.00	0.00	0.00	$ -
					$ 476,444.76

VITA

Hanna Leah Watts was born in Denver, Colorado on August 24, 1979, to Bob Watts and Donna Justice. She graduated from Pomona High School in May, 1997 after spending her senior year at Kauklahden Lukio in Kauklahti, Finland. She then earned her Associate of Applied Science Degree in Computer Graphic Design from Spencerian College in Lexington, Kentucky in 2002. In May, 2008 she earned her Bachelor of Arts degree in Geography from Eastern Kentucky University. Later, she attended the University of Tennessee, Knoxville, where she earned a Master of Science degree in Agricultural Economics in May, 2012.

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***2.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	1.00	69.00	0.00	138.10	*$ 391,847.04*
2	1.00	0.00	0.00	0.00	*$ 44.26*
3	1.00	0.00	0.00	0.00	*$ 238.30*
4	1.00	0.00	0.00	0.00	*$ (163.10)*
5	1.00	0.00	0.00	0.00	*$ 74.30*
6	0.00	1.00	0.00	0.00	*$ 691.47*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	38.39	*$ 90,574.26*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	149.61	*$ 214,901.08*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	0.00	*$ -*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	188.00	*$ 262,469.02*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	0.00	*$ 0.00*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 960,676.62

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***5.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 360,568.06*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	12.90	*$ 29,908.37*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	35.10	*$ 62,349.63*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 138,802.22*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	12.90	*$ 11,699.37*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	175.10	*$ 134,914.13*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	12.90	*$ 5,699.86*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 743,941.65

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***7.5%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 329,027.00*
2	0.00	0.00	0.00	0.00	*$ 0.00*
3	0.00	0.00	0.00	28.94	*$ 57,366.67*
4	0.00	0.00	0.00	0.00	*$ (0.00)*
5	0.00	0.00	0.00	0.00	*$ 0.00*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	19.06	*$ 25,753.33*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 96,862.92*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	28.94	*$ 18,023.56*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	0.00	*$ -*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ 0.00*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	159.06	*$ 68,587.18*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	28.94	*$ 7,062.77*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	0.00	*$ -*
27	0.00	0.00	0.00	0.00	*$ 0.00*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 602,683.42

Above			**Switchgrass Price**	**Discount Rate**	**Operating Capital**
Average Management at:			***$80.00***	***10.0%***	***$ 35,000.00***
yr	Maintain (au)	Sell (au)	Hay (acre)	Switchgrass (acre)	Net Revenue ($)
0	70	0	83	0	
1	0.00	70.00	0.00	140.00	*$ 301,794.96*
2	0.00	0.00	0.00	0.00	*$ -*
3	0.00	0.00	0.00	32.91	*$ 56,147.81*
4	0.00	0.00	0.00	15.09	*$ 21,265.54*
5	0.00	0.00	0.00	0.00	*$ -*
6	0.00	0.00	0.00	0.00	*$ -*
7	0.00	0.00	0.00	0.00	*$ -*
8	0.00	0.00	0.00	0.00	*$ -*
9	0.00	0.00	0.00	0.00	*$ -*
10	0.00	0.00	0.00	0.00	*$ -*
11	0.00	0.00	0.00	140.00	*$ 68,339.75*
12	0.00	0.00	0.00	0.00	*$ -*
13	0.00	0.00	0.00	32.91	*$ 14,209.46*
14	0.00	0.00	0.00	0.00	*$ -*
15	0.00	0.00	0.00	15.09	*$ 4,863.84*
16	0.00	0.00	0.00	0.00	*$ -*
17	0.00	0.00	0.00	0.00	*$ -*
18	0.00	0.00	0.00	0.00	*$ -*
19	0.00	0.00	0.00	0.00	*$ -*
20	0.00	0.00	0.00	0.00	*$ -*
21	0.00	0.00	0.00	140.00	*$ 34,279.42*
22	0.00	0.00	0.00	0.00	*$ -*
23	0.00	0.00	0.00	32.91	*$ 4,492.44*
24	0.00	0.00	0.00	0.00	*$ -*
25	0.00	0.00	0.00	0.00	*$ -*
26	0.00	0.00	0.00	15.09	*$ 645.63*
27	0.00	0.00	0.00	0.00	*$ -*
28	0.00	0.00	0.00	0.00	*$ -*
29	0.00	0.00	0.00	0.00	*$ -*
30	0.00	0.00	0.00	0.00	*$ -*
					$ 506,038.86