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### Capital Requirements on a Grade A Dairy Farm

Everett E. Carrell

*University of Tennessee, Knoxville*

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To the Graduate Council:

I am submitting herewith a thesis written by Everett E. Carrell entitled "Capital Requirements on a Grade A Dairy Farm." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Animal Science.

Charles S. Hobbs, Major Professor

We have read this thesis and recommend its acceptance:

H. J. Smith, French Bell, Robert S. Dotson, R. J. Cooper, T. J. Whatley

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

THE UNIVERSITY OF TENNESSEE  
THE GRADUATE SCHOOL

ABSTRACT OF EDUCATIONAL RESEARCH STUDY COMPLETED

Author of Study Everett E. Carroll Date December 4, 1961  
Title of Study Capital Requirements on a Grade A Dairy Farm  
Course Number 201A  
Under direction of what department Agr. Econ. & Rural Sociology Date Completed December 4, 1961  
Abstract approved by \_\_\_\_\_  
(signature of major professor)

Note: The student should consult with his major professor and follow his advice concerning the general format of the abstract. Additional pages, if required, should be 8½ x 11 inches and of quality equivalent to that required in the case of the thesis.

The purpose of this study was to determine if it was possible to secure a satisfactory return on capital invested in converting a cotton farm to a modern dairy, cotton, and hog system of farming. One of the eight farm management units located on the Ames Plantation in West Tennessee which was supervised by the University of Tennessee in cooperation with the Hobart Ames Foundation was used in the study. The unit was one formerly rented to a tenant for a standing rent of two bales of cotton. A new farming system was developed providing for a 50-50 sharing of income and operating expenses by the landlord and tenant. The permanent capital improvements were paid for by the landlord.

A total of \$40,448 was invested by the landlord in four years of which \$16,000 represented the original investment in land. The landlord's total net cash income for the four years was \$8,271. This represents a return of 20.4 per cent on total investment to the landlord on this farm. The return on new capital invested on this farm over the four-year period totaled 26.3 per cent. In the case of this farm, if we assume that capable supervision could be obtained at a cost of \$500 per year, then the rate of return on the landlord's total investment would have still amounted to 15.5 per cent.

From this study it is evident that under conditions of good management it was possible to secure a satisfactory return on investment of new capital in this farm.

November 14, 1961

I am submitting herewith a problem in lieu of thesis (Agricultural Economics 501a) written by Everett E. Carrell entitled "Capital Requirements on a Grade A Dairy Farm". I recommend that it be accepted for three quarter hours credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Animal Husbandry.

Charles Hobbs  
Major Professor

We have read this problem and  
recommend its acceptance:

Frank J. Bell  
H. J. Smith  
Robert L. Johnson  
R. G. Cooper  
C. F. Whitting

CAPITAL REQUIREMENTS ON A GRADE A  
DAIRY FARM

---

AGRICULTURAL ECONOMICS 501a  
Problem in Lieu of Thesis

Submitted  
in .

Partial Fulfillment of the Requirements  
for the degree of Master of Science

---

by  
Everett E. Carrell  
November 1961

1269851

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Everett E. Carrell

## TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION . . . . .	1
II. PROCEDURE . . . . .	3
Period Covered in the Study . . . . .	3
Leasing Arrangement . . . . .	3
Soil Description . . . . .	3
Land Use . . . . .	4
Type of Farming . . . . .	4
Records . . . . .	4
III. FARM INCOME . . . . .	5
Sources of Income . . . . .	5
Comparison of Landlord's and Tenant's Income . . . . .	5
Landlord's Estimated and Actual Net Cash Income . . . . .	5
Tenant's Estimated and Actual Net Cash Income . . . . .	5
IV. FARM EXPENSES . . . . .	7
Type of Expenses . . . . .	7
Comparison of Landlord's and Tenant's Cash Expenses . . . . .	7
Landlord's Estimated and Actual Operating Expenses . . . . .	7
Tenant's Estimated and Actual Operating Expenses . . . . .	7
V. INVESTMENTS AND DEPRECIATION . . . . .	8
VI. RETURNS ON INVESTMENT . . . . .	9
Returns on New Investment to Landlord Over Returns Under Previous Leasing System . . . . .	9

CHAPTER	PAGE
Return to Landlord on Total Investment with Land	
Valued at \$80.00 per Acre . . . . .	10
Returns on Investment if Previous Leasing System Used . .	10
Return on Total Investment to Landlord Allowing \$500 per	
Year For Supervision . . . . .	11
VII. SUMMARY . . . . .	12



# LIST OF TABLES

TABLE	PAGE
I. Land Use Chart . . . . .	13
II. Comparison of Landlord's and Tenant's Income on Farm 1957 Through 1960 . . . . .	14
III. Comparison of Landlord's and Tenant's Expenses, 1957 Through 1960 . . . . .	16
IV. Comparison of Landlord's and Tenant's Actual Investment in Capital Improvements in 1957 Through 1960 . . . . .	20
V. Landlord's and Tenant's Depreciation on Capital Improvements in 1957 Through 1960 . . . . .	21
VI. Total Depreciation . . . . .	22
VII. Probable Income to Tenant and Landlord Under Existing System	23
VIII. Returns to Landlord on Total Investment With Land Valued at \$80.00 Per Acre . . . . .	24
IX. Returns to Old System, Land Valued at \$80.00 Per Acre . . .	25
X. Returns to Landlord on Total Investment With Land Valued at \$80.00 Per Acre and Supervision at \$500.00 Per Year . .	26

## LIST OF FIGURES

FIGURE	PAGE
1. Soils Map . . . . .	27
2. Land Use Map . . . . .	29
3. Comparison of Landlord and Tenant Income . . . . .	31
4. Landlord Estimated and Actual Net Cash Income . . . . .	32
5. Tenant Estimated and Actual Net Cash Income . . . . .	33
6. Comparison of Landlord and Tenant Cash Expenses . . . . .	34
7. Landlord Estimated and Actual Operating Expenses . . . . .	35
8. Tenant Estimated and Actual Operating Expenses . . . . .	36

## CHAPTER I

## INTRODUCTION

In recent years there has been increased interest in changing the methods of operating farms in the cotton producing section of the state. In the past much of the land has been operated by sharecropper or rented by tenants for a portion of the crop. For example many of the tenants pay the landlord a third of the cotton and a fourth of the corn as rent. Another method has been to rent a certain track of land for a certain number of bales of cotton. Farm labor has become scarcer and investment in farm land and current operating expenses has increased in recent years. With the increased interest in livestock in this area the possibility of utilizing some of the land for livestock production has raised question as to the amount of capital needed to change from farming systems emphasizing crops to those with emphasis on a combination of livestock and crops. In addition to the amount of capital needed what returns can be expected for capital invested? Farmers and farm labor not accustomed to this type of farming need more experience or supervision. If this supervision is paid, can a satisfactory return on investment be expected?

The University of Tennessee in cooperation with the Hobart Ames Foundation has set up eight farm management units on the Ames Plantation to study these questions. These units have been put in operation on tracts of land that were formerly operated by either sharecroppers or tenants. Records are kept of capital invested and income received.

These farms have received farm management assistance through the University of Tennessee. Farm number 1 or the dairy unit has been used by the author to study questions relating to capital needs under the new farming system.

## CHAPTER II

## PROCEDURE

Period Covered in the Study. The period of time covered in this study is 1956 through 1960. In 1956 a portion of the farm now operated as the dairy unit was leased to a tenant for a certain number of bales of cotton. In 1957 this tract was planned for a dairy, hog, and cotton farm. The farm has been operated as this type farm from 1957 through 1960. Records used in this study cover these years.

Leasing Arrangement. In 1956 a portion of the farm now operated as the dairy unit was leased for two bales of cotton. The tenant was responsible for paying all operating expenses on this farm. This lease allowed the tenant to have a small corn acreage as well as some livestock pasture. In 1957 under the new farming system income and operating expenses were set up on a 50-50 basis. That is, all the operating capital and income was to be divided equally between the landlord and tenant. The permanent capital improvements were to be paid for by the landlord while the investment in cattle and hogs were divided equally between the two parties. The tenant furnished the labor needed to carry out operational jobs.

Soil Description. The soil classifications on this farm are shown on the soil map. (Figure 1) The major soil types on the upland fields are Memphis and Loring. These soils are good deep to moderately deep, well drained silt loam soils and are suited to growing most any kind of crops. The Memphis soil is well adapted for alfalfa.

The bottom soils are primarily Tigrett and Briensburg. These soils are also well to moderately well drained and have a high water supplying capacity. These type soils are in the branch bottom and are level and well suited to continuous row crop production. The soils on this farm respond to lime and fertilizer and will produce good crops when properly managed.

Land Use. The land use on this farm is shown on farm map (Figure 2) and land use chart (Table I). Plans were made to utilize the land for its best use in order to maximize income over the long run. The hill land primarily is being used for pasture and the bottom land is being used for row crop. The hill land that is used for row crop is rotated with sod crops for hay and pasture wherever possible. The land is limed and fertilized according to soil test recommendations. The cropping system is planned to produce cotton as a cash crop and to furnish feed and pasture for the livestock on the farm.

Type of Farming. The type of farming carried on is dairy, cotton, and hogs with the major part of the income coming from milk and cotton. The dairy herd is made up of registered Jersey cows. Most of the farm labor is furnished by the family with hired labor being used occasionally.

Records. Records used in this study are those kept on the "so called" dairy unit of the Ames Plantation. These records are used by both the Plantation and tenant. Records include capital improvement, operating expenses, and farm income.

## CHAPTER III

## FARM INCOME

Sources of Income. The sources of income on the farm are crops, livestock and livestock products, miscellaneous, and custom work. Crops from which income is derived are cotton, wheat, and corn. Livestock and livestock products from which income is derived are milk, cattle, and hogs. The amount of income received by both the landlord and tenant from various sources each year is shown in Table II.

Comparison of Landlord's and Tenant's Income. Since the rental arrangement is on a 50-50 basis the landlord's and tenant's income has been approximately the same. The income of both the tenant and landlord has increased each year since 1957. In 1960 the gross income of both tenant and landlord was about five times as great as in 1957. The increase has been in both crops and livestock but income from livestock has made the most increase. A comparison of landlord's and tenant's income by source and year is shown in Figure 3.

Landlord's Estimated and Actual Net Cash Income. Each year the income was estimated when plans were made and 1960 was the first year that the landlord's actual income exceeded the estimated income. A comparison of the estimated and actual net cash income of the landlord is shown in Figure 4.

Tenant's Estimated and Actual Net Cash Income. The tenant's income was estimated each year as plans were made. After the first year 1957 the estimated and actual income of the tenant was relatively close.

The tenant's net income has increased each year. Yearly changes can be seen in Figure 5.



## CHAPTER IV

## FARM EXPENSES

Type of Expenses. A record of farm expenses on items such as crop, livestock, and miscellaneous was maintained for both landlord and tenant for each year 1957 through 1960. These expenses increased each year. A detail record of expenses is shown in Table III.

Comparison of Landlord's and Tenant's Cash Expenses. The comparison of the landlord's and tenant's cash expenses for each operating year is shown in Figure 6. Expenses are shown for crops, livestock, and miscellaneous. This shows that expenses for both crops and livestock increased substantially whereas the miscellaneous did not increase as much.

Landlord's Estimated and Actual Operating Expenses. In three out of the four years the landlord's actual expense was higher than the estimated expenses. This is shown in Figure 7.

Tenant's Estimated and Actual Operating Expenses. Operating expenses for the tenant was slightly higher each year than had been estimated. Expenses increased each year. Figure 8 shows the relationship of the estimated and actual cash operating expenses. Operating expenses were paid on the monthly basis out of receipts and are not included with total investments.

## CHAPTER V

## INVESTMENTS AND DEPRECIATION

Approximately \$17,000 in new investments was required the first year in converting this farm from a cotton to a dairy-cotton and hog system of farming. Most of this capital was required to purchase cows and add buildings and facilities associated with the dairy enterprise. Table IV shows the year by year investment in this farm for both the tenant and the landlord. The landlord's investment was much higher than the tenant's since the landlord provided the more permanent facilities and buildings associated with the operation.

Depreciation on all items added has been set up. The landlord assumed the greater portion of the depreciation. A year by year depreciation schedule is included in Table V.

The total investment, depreciation, and value of all items are included in Table VI. Even though land was available and did not require a cash outlay it was valued at \$80 per acre in order to calculate the total investment in the farm. A total of \$40,448 was invested during this period by the landlord in this farm.

## CHAPTER VI

## RETURNS ON INVESTMENT

Returns on New Investment to Landlord Over Returns Under Previous Leasing System. Under the old rental arrangements, the tenant paid the landlord a specified number of bales of cotton as rent based on a given cotton allotment. In 1956, the cotton allotment was 9 acres and the tenant paid the landlord two bales of cotton valued at approximately \$300.00. In 1957 under the new lease this allotment was increased to 12 acres. Assuming that the rent would have remained in the same proportion to the acreage allotment as in previous years, then under the old system the landlord would have received \$375.00 in rent. The same cotton acreage was grown in 1958; therefore, the rent would have been \$375.00 that year. In 1959 the cotton acreage was increased to 16 acres. Increasing the rent as before would have returned \$468.75 to the landlord. Similarly, in 1960 the cotton acreage was 18 acres or double the 1956 acreage so the rent received would have doubled or totalled \$600.

The new lease went into effect in 1957. A total of \$13,333 was invested by the landlord and the net cash income was \$-324 that year. The low net cash income the first year under the new farming system was because operating expenses were substantially increased for items such as pasture where the benefits would not be reflected in income until later years. In 1958, \$2,655 more was invested in this farm by the landlord that made a total of \$15,987 invested over a two year period. A net cash return to the landlord of \$1,177 in 1958 provided a return on

the new investment of 7.3 per cent. In 1959 \$5,767 more was invested making a total of \$21,754 over a three year period and net cash returns amounted to \$2,930, or a return of 13.4 per cent. In 1960 \$2,693 was invested bringing the total to \$24,448. A net cash return that year of \$4,488 made a return of 18.3 per cent on new investments since 1957. A total of \$24,448 was invested over the four year. Net cash income returned for the four years was \$8,271 or a return for the four years of 33.8 per cent.

In 1957 the net cash income was \$-324 under the new lease. The old lease would have returned \$375 or the landlord lost \$699 by being under the new lease. The other three years the landlord gained a total of \$7,151 over what the old lease would have returned. The \$7,151 gained minus the \$699 loss gives a net gain of \$6,454 for the new lease system. An investment of \$24,448 returned \$6,452, or a return of 26.3 per cent on the new investment. This is shown in Table VII.

Return to Landlord on Total Investment with Land Valued at \$80.00 per Acre. An investment of \$24,448 in new capital plus the original investment in 200 acres of land at \$80.00 per acre makes a total investment of \$40,448 for the landlord under this new farming system. The net cash returned over the four years was \$8,271. This represented a return of 20.4 per cent on total investment to the landlord on this farm. This is shown in Table VIII.

Returns on Investment if Previous Leasing System Used. The 200 acres involved had an estimated value of \$16,000. The yearly return on

this investment under the old system of farming is shown in Table IX. The rate of return amounted to only 2.8 per cent.

Return on Total Investment to Landlord Allowing \$500 per Year For Supervision. One of the limitations to shifting to more modern systems of farming is the lack of managerial "know how" on the part of many land owners and tenants. If we assume that capable managers or supervisors could be obtained, then would it pay to hire this assistance? In the case of this farm if we assume that supervision could be obtained at the rate of \$500 per year, then the rate of return on the landlord's investment would have still amounted to 15.5 per cent (see Table X).

## CHAPTER VII

## SUMMARY

The purpose of this study was to determine if it was possible to secure a satisfactory return on capital invested in converting a cotton farm to a more modern dairy, cotton, and hog system of farming. One of the eight farm management units supervised by the University of Tennessee in cooperation with the Hobart Ames Foundation was used in the study. The unit was one formerly rented to a tenant for a standing rent of two bales of cotton. A new farming system was developed providing for a 50-50 sharing of income and operating expenses by the landlord and tenant.

A total of \$40,448 was invested by the landlord in four years of which \$16,000 represented the original investment in land. The total net cash income for the four years was \$8,271. This represents a return of 20.4 per cent on total investment to the landlord on this farm.

From this study it is evident that under conditions of good management it was possible to secure a satisfactory return on investment of new capital in this farm.

In this area of the state sharecrop and rented farms could be converted to livestock and crop farms and return the landlord a satisfactory return on his investment. To do this would require additional capital and more intensive management.

TABLE I  
LAND USE CHART

Field Letter	Number Acres	Major Soil Type	Years			
			1957	1958	1959	1960
			Crops Used			
A	8	Memphis	Millet (Alfalfa)	Alfalfa (Rye)	Rye Millet	Rye Millet
B	12	Memphis	Millet (Oats)	Millet (Wheat)	Millet (Wheat)	Millet (Wheat)
C	2	Memphis	Lespedeza	Lespedeza	Truck Cr.	Truck Cr.
D	4	Memphis	Corn	Corn	Cotton	Oats Alfalfa
E	12	Memphis Gallaway-Henry	Cotton	Cotton	Cotton (Oats)	Oats Alfalfa
F	9	Memphis	Orchard Grass	Orch. Gr. La.-Fescue	Orch. gr. La.-Fescue	Orch. Gr. La.-Fescue
G	6	Briensburg	Ladino-Fescue Silage	Fescue La. - O. Gr.	Orch. Gr. La. Fescue	Fescue La.-O.Gr.
H	4	Tigrett	Corn	Corn	Lespedeza	Lespedeza
I	5	Tigrett Briensburg	Millet (Oats)	Millet (Rye gr.)	Millet (Wheat)	Fescue Ladino
J	8	Memphis	Silage	Millet (Oats)	Millet (Oats)	Millet (Oats)
K	4	Memphis	Lespedeza	Lespedeza	Lespedeza	Lespedeza
L	4	Memphis	Ladino	Ladino	Ladino	Ladino
M	14	Tigrett Briensburg	Corn (Oats)	Oats PP, alf. or. ladino	P. Pasture alf. or.g. ladino	Alf. or. gr.-la.
N	7	Tigrett	Silage	Silage	Silage	Silage
O	4	Tigrett	Silage	Corn-Silage	Corn-Silage	Silage
P	18	Tigrett	Corn-Silage	Corn-Silage	Corn-Silage	Cotton
Q	5	Memphis	PP-Oats	Millet-Oats	Millet-Oats	Millet
R	4	Loring	Pasture-Oats	Millet-Oats	Millet-Oats	Millet
S	7	Loring	Oats	Wheat	Wheat	Lespedeza
T	14	Loring	Corn-Oats	Oats	Lespedeza	Lespedeza
U	4	Tigrett	Corn-Silage	Corn-silage	Corn-Silage	Silage
V	30	Loring			Corn	Corn
W	15	Loring			Corn	Corn
<del>Total</del> 200						

TABLE II

COMPARISON OF LANDLORD'S AND TENANT'S INCOME ON FARM 1957 THROUGH 1960

CASH INCOME	1957		1958	
	Landlord	Tenant	Landlord	Tenant
Crops:				
Cotton	\$ 700.52	\$ 700.52	\$ 921.17	\$ 921.17
Cottonseed	96.47	96.48	111.65	111.67
Wheat				
Cotn				
Total crops	<u>796.99</u>	<u>797.00</u>	<u>1,032.82</u>	<u>1,032.84</u>
Livestock & Livestock Products:				
Milk	1,233.66	1,233.67	4,277.92	4,277.93
Cattle	4.00	4.00	53.25	53.25
Swine			303.21	303.21
Total livestock & livestock products	<u>1,237.66</u>	<u>1,237.67</u>	<u>4,634.38</u>	<u>4,634.39</u>
Miscellaneous			1.04	1.03
Custom work				90.00
Total cash income	\$2,034.65	\$2,034.67	\$5,668.24	\$5,758.26



TABLE II (continued)

CASH INCOME	1959		1960	
	Landlord	Tenant	Landlord	Tenant
Crops:				
Cotton	\$2,124.35	\$2,124.35	\$1,725.54	\$1,725.56
Cottonseed	169.85	169.84	166.53	166.53
Wheat	18.00	18.00		
Corn			378.24	378.24
Total crops	<u>2,312.20</u>	<u>2,312.19</u>	<u>2,270.31</u>	<u>2,270.33</u>
Livestock & Livestock Products:				
Milk	5,160.93	5,160.97	6,780.40	6,780.43
Cattle	144.20	144.20	347.07	347.06
Swine	645.22	645.24	536.50	536.48
Total livestock & livestock products	<u>5,950.35</u>	<u>5,950.41</u>	<u>7,663.97</u>	<u>7,663.97</u>
Miscellaneous			54.00	62.00
Custom Work				36.75
Total cash income	<u>\$8,262.55</u>	<u>\$8,262.60</u>	<u>\$9,988.28</u>	<u>\$10,033.05</u>

TABLE III

## COMPARISON OF LANDLORD'S AND TENANT'S EXPENSES, 1957 THROUGH 1960

CASH EXPENSES	1957		1958	
	Landlord	Tenant	Landlord	Tenant
Crops:				
Fertilizer	\$ 555.10	\$ 555.10	\$1,206.79	\$ 794.28
Seed	78.13	78.12	337.26	337.29
Ginning	56.01	56.01	82.31	82.32
Cotton sales charges	7.38	7.37		
Poison, pre-emerge & defoliate	35.51	35.50	97.50	97.50
Cotton picking & other labor		349.79	221.32	286.43
Lime	159.00			
Total crops	<u>891.13</u>	1,081.89	1,945.18	1,597.82
Livestock:				
Feeds:				
Corn	35.63	35.62	104.30	104.30
Oats & Hay (Cattle)	48.75	48.75	75.16	75.16
Soybean meal	53.37	53.38	127.28	127.27
Tankage	6.00	6.00	10.60	10.60
Cottonseed meal	39.50	39.50	142.50	142.50
Supplement (Hogs)			88.10	88.10
Silage (Cattle)				
Other feeds	22.89	22.89	34.52	34.54
Total feeds	<u>206.14</u>	<u>206.14</u>	<u>582.46</u>	<u>582.47</u>
Veterinary & medicine	41.00	41.01	49.08	49.09
Milk hauling	177.23	177.23	571.52	571.52
Other hauling	99.62	9.63	19.10	14.10
DHIA	19.75	19.75	70.80	70.80
Health Department Inspection	9.00	9.00		
Electricity	38.91	35.64	166.40	166.40
Miscellaneous dairy supplies	67.98	58.96	241.97	207.54
Livestock sale expense			6.49	6.48
Registrations & transfers				
Salt & minerals				
Total livestock	<u>\$659.63</u>	<u>\$557.36</u>	<u>\$1,707.82</u>	<u>\$1,668.40</u>

TABLE III (Continued)

CASH EXPENSES	1959		1960	
	Landlord	Tenant	Landlord	Tenant
Crops:				
Fertilizer	\$ 817.41	\$ 817.41	\$1,076.11	\$1,076.10
Seed	210.02	210.04	309.08	309.07
Ginning	135.32	135.32	150.93	150.93
Cotton sales charges	35.45	35.45	29.10	29.10
Poison, pre-emerge & defoliate	168.60	168.60	166.40	166.40
Cotton picking & other labor	837.60	833.10	642.42	845.93
Lime	104.40			
Total crops	2,308.80	2,199.93	2,374.04	2,577.53
Livestock:				
Feeds:				
Corn				
Oats & Hay (Cattle)			54.00	54.00
Soybean meal			60.00	60.00
Tankage				
Cottonseed meal	220.00	220.00	355.50	355.50
Supplement (Hogs)	149.17	149.16	93.50	93.50
Silage (Cattle)	54.00	54.00		
Other feeds	114.71	114.71	223.82	223.85
Total feeds	537.88	537.87	786.82	786.85
Veterinary & medicine	58.55	58.55	139.60	139.59
Milk hauling	636.79	636.86	624.74	624.75
Other hauling	40.00	40.00	35.87	35.88
DHIA	82.45	82.45	73.33	73.32
Health Department Inspection			6.00	6.00
Electricity	226.48	149.61	144.09	144.12
Miscellaneous dairy supplies	151.63	109.10	165.77	165.81
Livestock sale expense	19.24	19.24	19.11	19.10
Registrations & transfers	175.50	16.50	30.00	30.00
Salt & minerals	1.90	1.90	19.25	19.25
Total livestock	\$1,930.42	\$1,652.08	\$2,044.58	\$2,044.67

TABLE III (Continued)

CASH EXPENSES	1957		1958	
	Landlord	Tenant	Landlord	Tenant
Miscellaneous:				
Tractor fuel	\$ 189.51	\$ 189.51	\$ 184.96	\$ 184.95
Equipment rental	458.11	458.12	363.08	363.08
Tires & tubes - trailer	36.88	36.88		
Equipment repairs	4.23	4.23	94.92	80.44
Telephone	11.44	20.49	26.87	63.48
Labor	57.62	322.00		
Road & building repairs	50.00		168.69	
Interest				148.51
Supplies				
Freight & hauling				
Fence repair				
Total miscellaneous	\$807.79	\$1,031.23	\$838.52	\$840.46
Total Cash Costs	\$2,358.55	\$2,670.48	\$4,491.52	\$4,106.68

TABLE III (Continued)

CASH EXPENSES	1959		1960	
	Landlord	Tenant	Landlord	Tenant
Miscellaneous:				
Tractor fuel	\$ 316.35	\$ 260.76	\$ 259.34	\$ 259.33
Equipment rental	442.88	442.88	510.63	510.63
Tires & tubes - trailer				
Equipment repairs	126.60	126.61	165.10	165.07
Telephone	34.46	75.40	35.72	106.75
Labor				
Road & building repairs	122.80		46.37	
Interest		174.78		162.14
Supplies	50.71	51.43	26.67	26.68
Freight & hauling			19.61	4.00
Fence repair			18.00	
Total miscellaneous	1,093.80	1,131.86	1,081.44	1,234.60
Total Cash Costs	\$5,333.02	\$4,983.87	\$5,500.06	\$5,856.80

TABLE IV

COMPARISON OF LANDLORD'S AND TENANT'S ACTUAL INVESTMENT IN CAPITAL IMPROVEMENTS  
IN 1957 THROUGH 1960

Kind of Investment	1957	1958	1959	1960	Total Actual Cost
Landlord's:					
Machinery & Equipment:					
Dairy Equipment	\$617.69	\$275.00	\$	\$	\$892.69
1 - Pipe Line Milker				1,458.95	1,458.95
Water heater			223.16		223.16
Stainless steel milk tank w/ compressor			2,987.57		2,987.57
10 - 10 gallon milk cans			25.00		25.00
1 - Section harrow				25.00	25.00
Total machinery & Equipment	<u>617.69</u>	<u>275.00</u>	<u>3,235.73</u>	<u>1,483.95</u>	<u>5,612.37</u>
Well	816.00				816.00
Water Line				22.00	22.00
Land clearing	740.00	140.00	800.00	100.00	1,780.00
Road Improvement				401.35	401.35
Fencing	269.75	455.50	265.50	120.10	1,110.85
Buildings:					
Dwelling #138					77.03 <sup>1/2</sup>
Dwelling	2,319.51	837.41	282.65		3,439.57
Dairy Barn	2,524.68	101.25		37.49	2,663.42
Loafing barn, Implement Shed & bull pens	2,461.91	160.47	408.05	136.20	3,166.63
Silo	383.17	84.75		243.55	711.47
Grain Bins			698.35	148.89	847.24
Milk Quota		600.00			600.00
Livestock:					
Cows	3,000.00				3,000.00
Bull	200.00				200.00
Total Landlord	<u>13,332.71</u>	<u>2,654.38</u>	<u>5,690.28</u>	<u>2,693.53</u>	<u>24,447.93</u>
Tenant's:					
Milk Quota		600.00			600.00
Machinery & Equipment	223.23	275.00	25.00		523.23
Cows	3,000.00				3,000.00
Bull	200.00				200.00
Total Tenant	<u>\$3,423.23</u>	<u>\$875.00</u>	<u>\$25.00</u>	<u>—</u>	<u>\$4,323.23</u>
1/ Value 1-1-59 (Building built in 1950 - Transferred to Farm Management Account in 1959)					

TABLE V

LANDLORD'S AND TENANT'S DEPRECIATION ON CAPITAL IMPROVEMENTS  
IN 1957 THROUGH 1960

Kind of Investment:	1957	1958	1959	1960	Value 12-31-60
Landlord's:					
Machinery & Equipment:					
Dairy Equipment	\$42.09	\$167.55	\$181.30	\$181.30	\$320.45
1 - Pipe Line Milker				145.89	1,313.06
Water heater			11.16	22.31	189.69
Stainless steel milk tank w/ compressor			149.38	298.76	2,539.43
10 - 10 gallon milk cans			2.50	5.00	17.50
1 - Section harrow				2.50	22.50
Total machinery & Equipment	<u>42.09</u>	<u>167.55</u>	<u>344.34</u>	<u>655.76</u>	<u>4,402.63</u>
Well	81.60	81.60	81.60	81.60	489.60
Water Line				1.10	20.90
Land clearing	62.00				1,718.00
Road Improvement				20.06	381.29
Fencing	9.00	49.73	85.81	105.07	861.24
Buildings:					
Dwelling #138			75.00	2.03	
Dwelling	57.99	157.85	164.92	171.98	2,886.83
Dairy Barn	42.08	131.30	131.30	134.58	2,224.16
Loafing barn, Implement Shed & Bull pens	41.03	131.12	141.32	154.92	2,698.24
Silo	12.77	46.79	46.79	58.96	546.16
Grain Bins			17.46	38.64	791.14
Milk Quota					600.00
Total Landlord	<u>348.56</u>	<u>765.94</u>	<u>1,088.54</u>	<u>1,424.70<sup>2</sup></u>	<u>17,620.19</u>
Tenant's:					
Milk Quota					600.00
Machinery & Equipment	13.63	41.09	51.07	52.32	365.12
Total Tenant	<u>\$ 13.63</u>	<u>\$ 41.09</u>	<u>\$ 51.07</u>	<u>\$ 52.32</u>	<u>\$965.12</u>

2/ Since this Statement was made before the Audit was completed this may be considered to be an estimate.

TABLE VI  
TOTAL DEPRECIATION

Kind of Investment:	Total Actual Cost	Total Depreciation	Value 12-31-60
Landlord's:			
Machinery & Equipment:			
Dairy Equipment	\$ 892.69	\$ 572.24	\$ 320.45
1 Pipe Line Milker	1,458.95	145.89	1,313.06
Water Heater	223.16	33.47	189.69
Stainless steel milk tank with compressor	2,987.57	448.14	2,539.43
10 - 10 gallon milk cans	25.00	7.50	17.50
1 section harrow	25.00	2.50	22.50
Total Machinery & Equipment	5,612.37	1,209.74	4,402.63
Well	816.00	326.40	489.60
Water Line	22.00	1.10	20.90
Land Clearing	1,780.00	62.00	1,718.00
Road Improvement	401.35	20.06	381.29
Fencing	1,110.85	249.61	861.24
Buildings:			
Dwelling #138	77.03	77.02	
Dwelling	3,439.57	552.74	2,886.83
Dairy Barn	2,663.42	439.26	2,224.16
Loafing Barn, Imp. shed & bull pens	3,166.63	468.39	2,698.24
Silo	711.47	165.31	546.16
Grain Bins	847.24	56.10	791.14
Milk Quota	600.00		600.00
Total Landlord	21,247.93	3,627.74	17,620.19
Tenant's:			
Milk Quota	600.00		600.00
Machinery and Equipment	523.23	158.11	365.12
Total Tenant's	\$1,123.23	\$158.11	\$965.12



TABLE VII

## PROBABLE INCOME TO TENANT AND LANDLORD UNDER EXISTING SYSTEM

Item	Years				
	1956	1957	1958	1959	1960
Cotton Acreage	9.0	12.0	12.0	16.0	18.0
Tenant income above operating expenses	\$500.00	\$625.00	\$625.00	\$781.25	\$1,000.00
Landlord rent received	300.00	375.00	375.00	468.75	600.00
	1957	1958	1959	1960	
Landlord invested	13,332.71	2,654.58	5,767.31	2,693.53	
Total new money	13,333.00	15,987.00	21,754.00	24,447.93	24,448.00
Net Cash Income	-324.00	1,177.00	2,930.00	4,488.00	8,271.00
Return on investment	- 2.4%	7.3%	13.4%	18.3%	33.8%
Landlord Returns					
New System	-324.00	1,177.00	2,930.00	4,488.00	
Old System	375.00	375.00	468.75	600.00	
	<u>-699.00</u>	<u>802.00</u>	<u>2,461.25</u>	<u>3,888.00</u>	
	loss	gain	gain	gain	
	7,151 gain				
	- 699 loss				
	<u>6,452</u>				
Investment	\$24,448.00				
New System Gain	6,452.00				
Return on new investment	26.3%				

TABLE VIII

RETURNS TO LANDLORD ON TOTAL INVESTMENT  
WITH LAND VALUED AT \$80.00 PER ACRE

---

Total Investment in Land (200 Acres at \$80)	=	\$16,000
Total Investment (Under New System)	=	<u>24,448</u>
Total Landlord Invested in Unit	=	40,448
Total Net Cash Income Returned to Landlord	=	\$ 8,271
Return on Investment	=	20.4 per cent

---

*yearly return  
deduct charge for supervision*

TABLE IX

RETURNS TO OLD SYSTEM, LAND VALUED AT \$80.00 PER ACRE

Item	Years			
	1957	1958	1959	1960
Investment in land (200 acres at \$80)	\$16,000.00	\$16,000.00	\$16,000.00	\$16,000.00
Landlord Probable Return	375.00	375.00	468.75	600.00
Return on Investment	2.3%	2.3%	2.9%	3.75%
Total Income for Four Years = \$1,819.00				
Investment	= 16,000.00			
Return on Investment	11.3%			
Yearly Return of	2.8%			

TABLE X

RETURNS TO LANDLORD ON TOTAL INVESTMENT WITH LAND VALUED  
AT \$80.00 PER ACRE AND SUPERVISION AT \$500.00 PER YEAR

---

Total Investment in Land (200 Acres at \$80)	= \$16,000
Total Investment (Under New System)	= 24,448
Total Landlord Investment	= 40,448
Total Net Cash Income Returned to Landlord	= 8,271
Supervision (\$500 Per Year For 4 Years)	= \$ 2,000
Return on Investment with Supervision Charged	15.5%

---

*Per year 4 years*

*3.6 %*



<u>SYMBOL</u>	<u>NAME</u>
2	Tigrett
3	Tigrett
4	Briensburg
6	Dyer
9	Gully wash
20BN	Memphis
20CP	Memphis
22BN	Loring
22CP	Loring
26AL	Calloway
26BN	Calloway
28AL	Henry
30BN	Lexington
30CP	Lexington
33DL	Ruston
35C	Gullied
35D	Gullied
37D	Gullied
50BL	Lintonia
S & SS	Sheet erosion

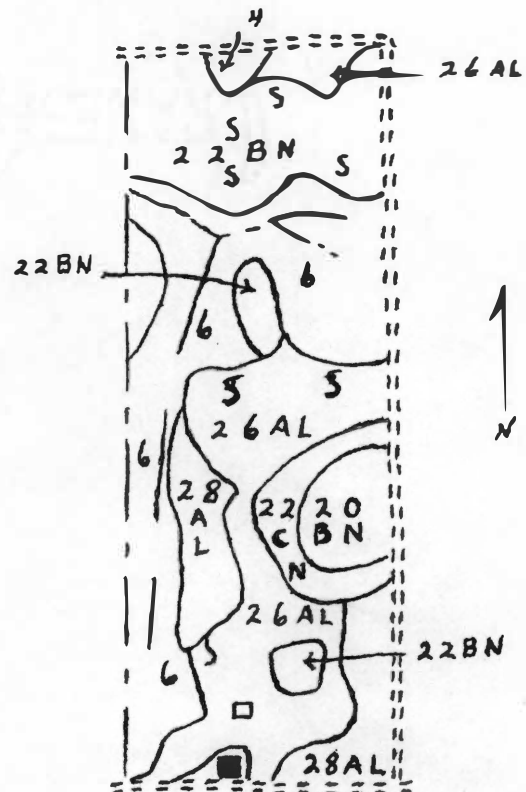


FIGURE 1 (Continued)

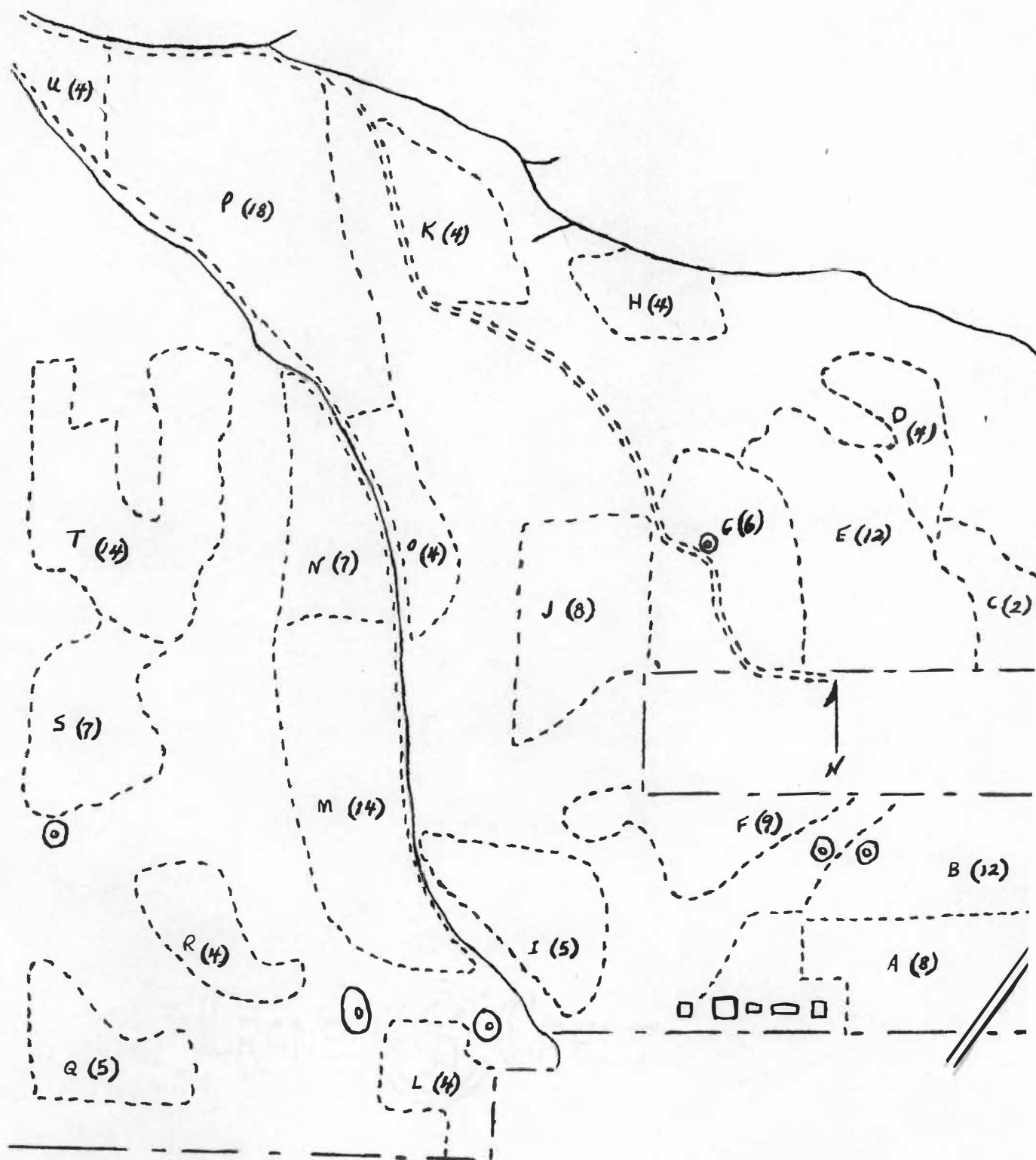


FIGURE 2

LAND USE MAP

LEGEND

- Field boundary  
- - - - - Plantation boundary  
- - - - - Dirt or gravel road  
==== Hard surface road  
□ Buildings  
⊙ Pond

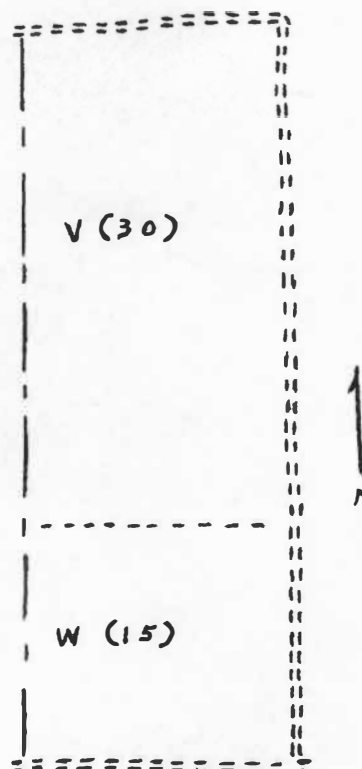


FIGURE 2 (Continued)



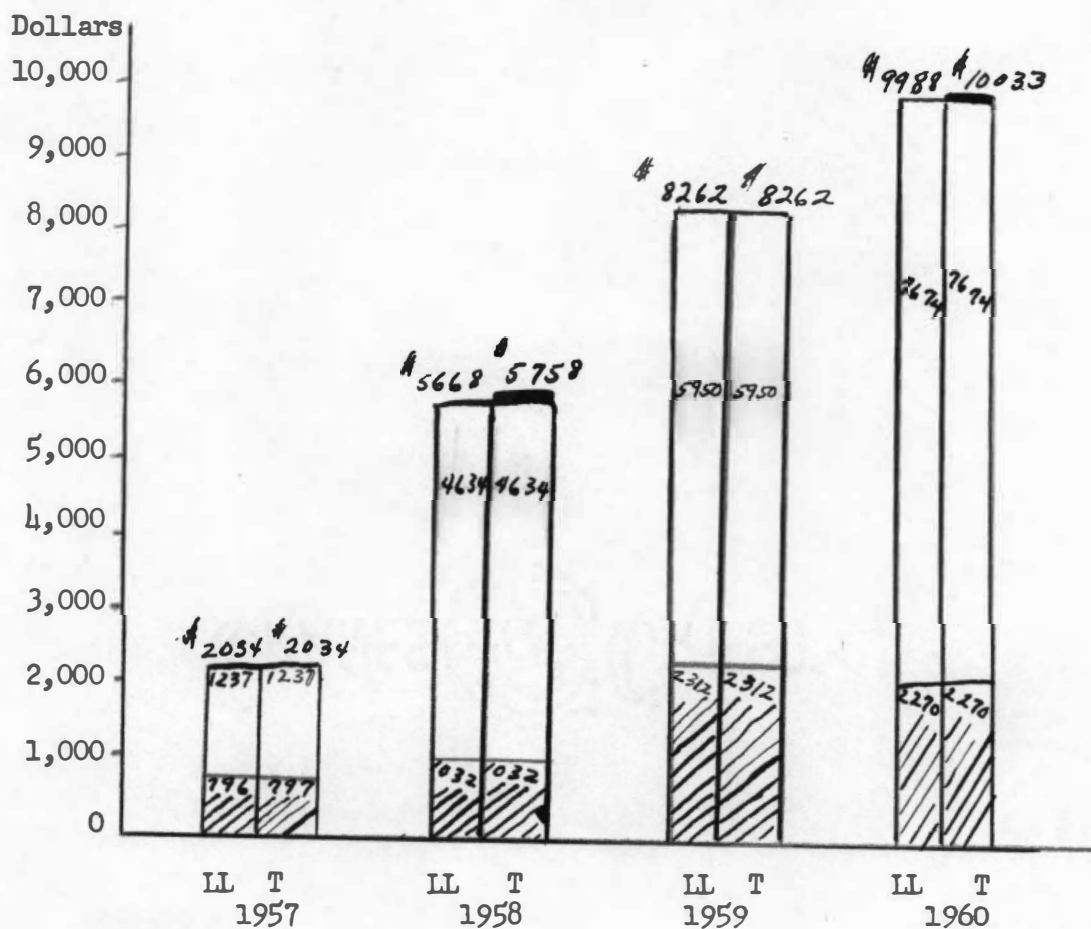


FIGURE 3

## COMPARISON OF LANDLORD AND TENANT INCOME

LL - Landlord

T - Tenant

1 mm = \$1,000



Crop Income



Livestock and Livestock Products Income



Misc. Income

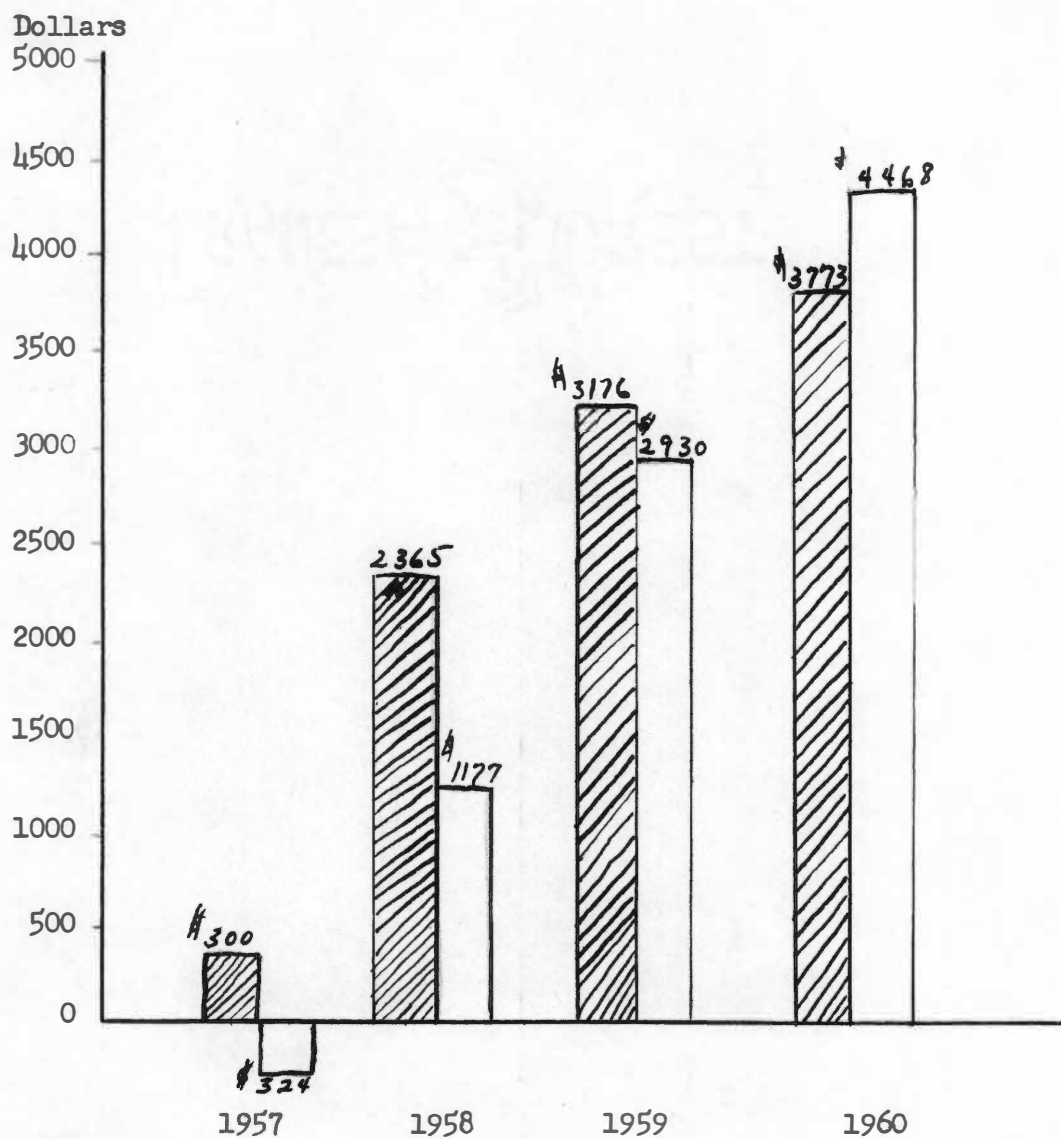


FIGURE 4

LANDLORD ESTIMATED AND ACTUAL NET CASH INCOME

1 inch = \$1000



Estimated



Actual

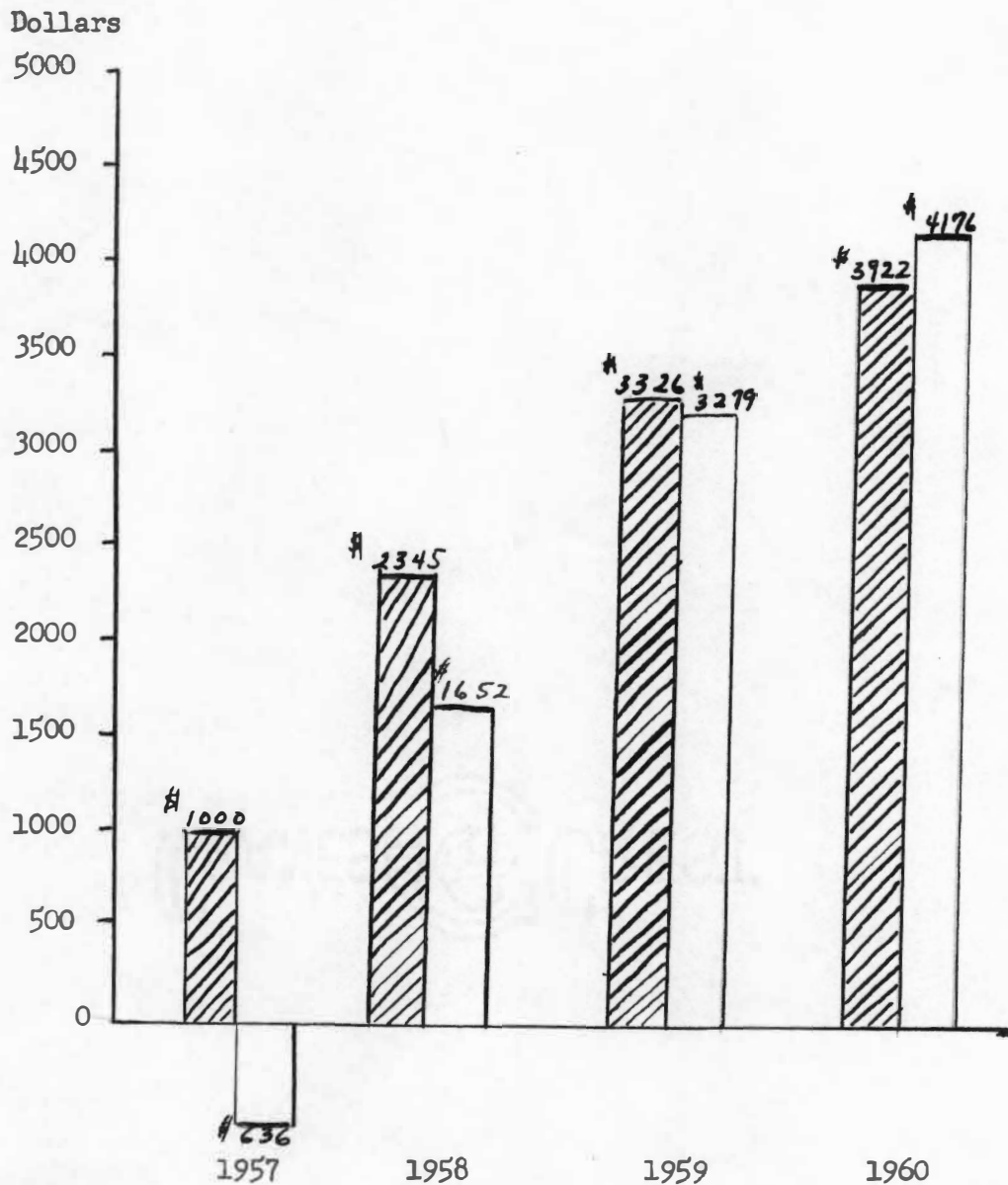


FIGURE 5

TENANT ESTIMATED AND ACTUAL NET CASH INCOME

1 inch = \$1000



Estimated



Actual

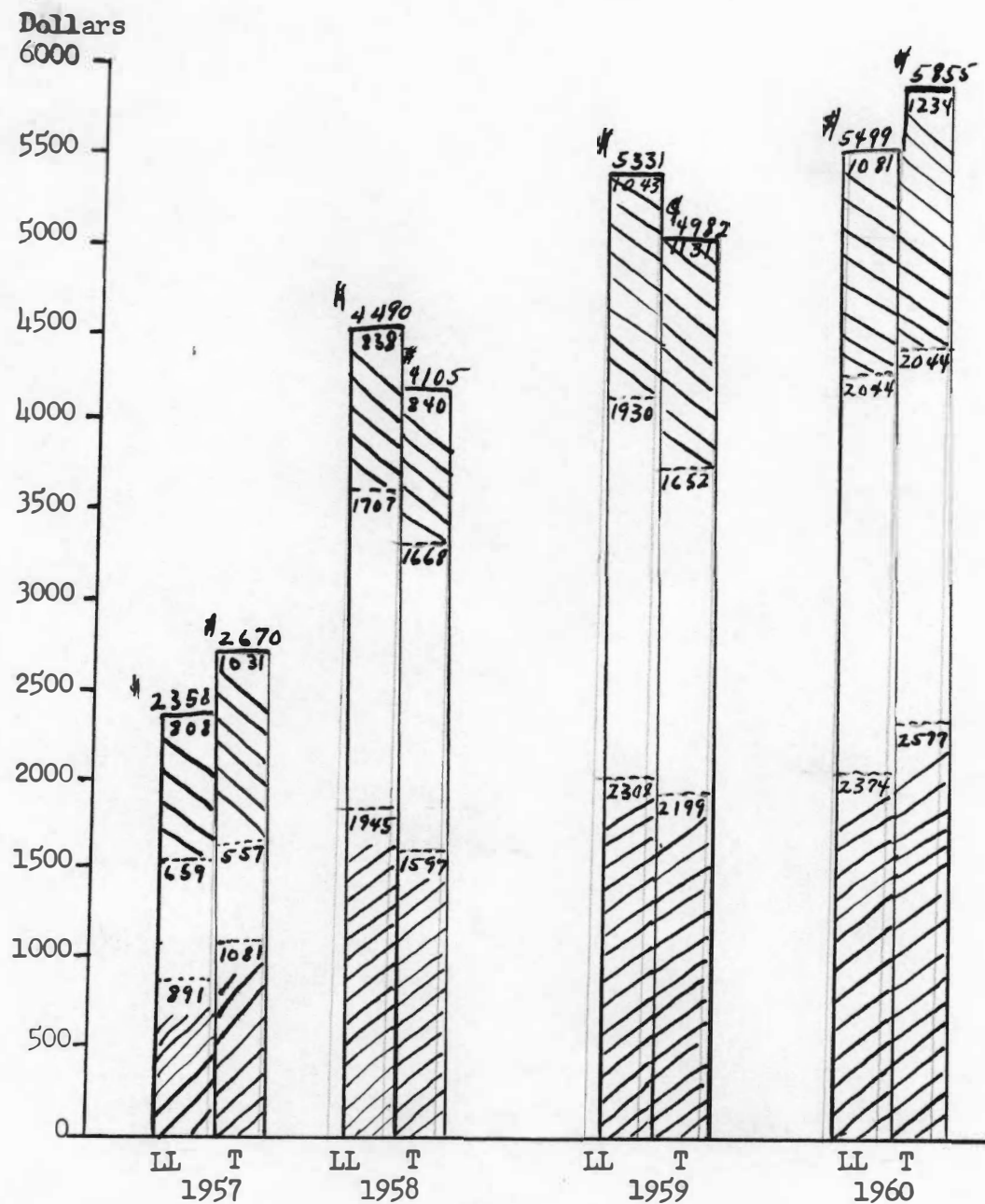


FIGURE 6

## COMPARISON OF LANDLORD AND TENANT CASH EXPENSES

1 inch = \$1000

LL = Landlord

T = Tenant

/// Crop Expense

/ Livestock Expense

\\ Misc Expense

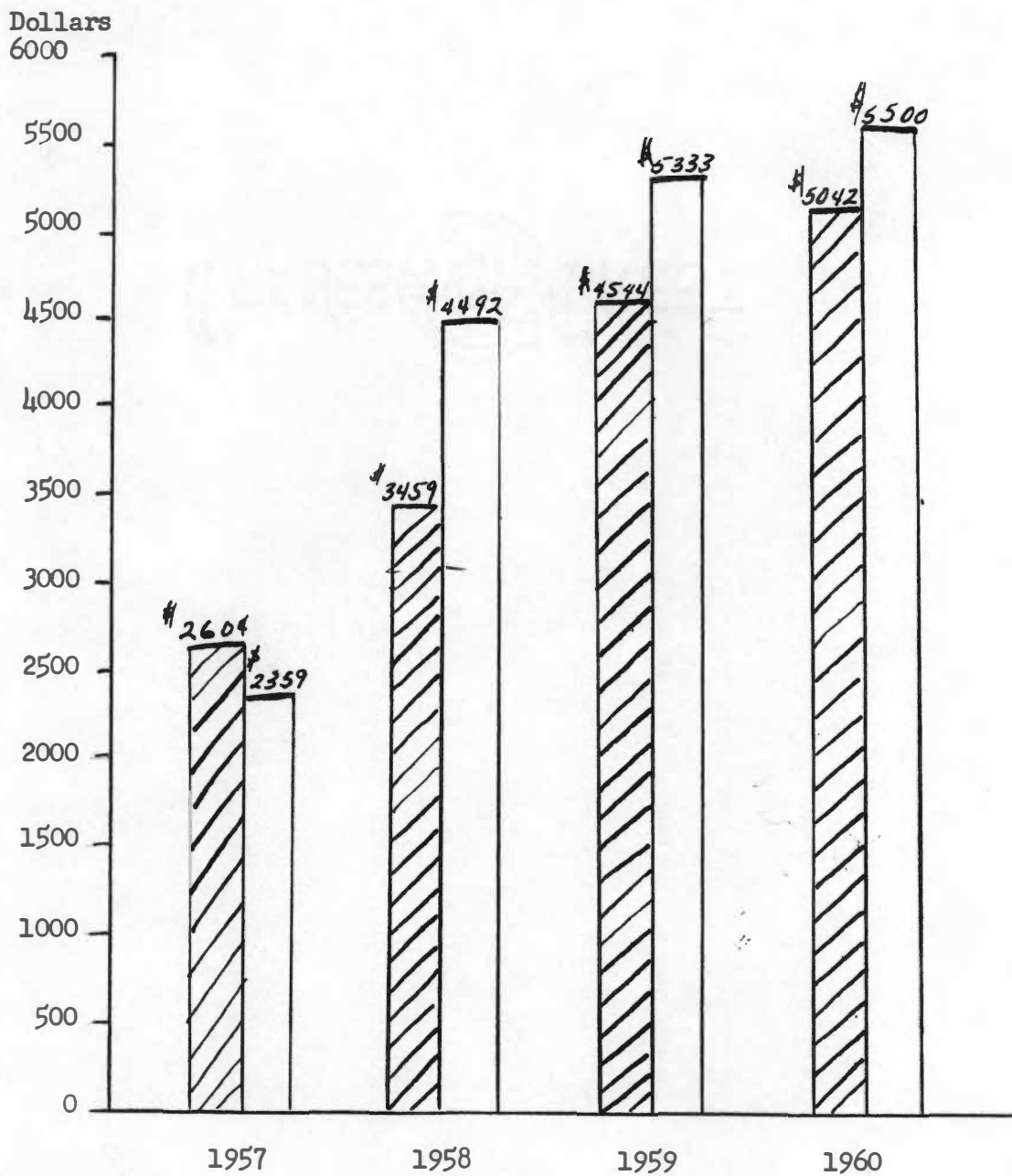



FIGURE 7

## LANDLORD ESTIMATED AND ACTUAL OPERATING EXPENSES

1 inch = \$1000

 Estimated

 Actual

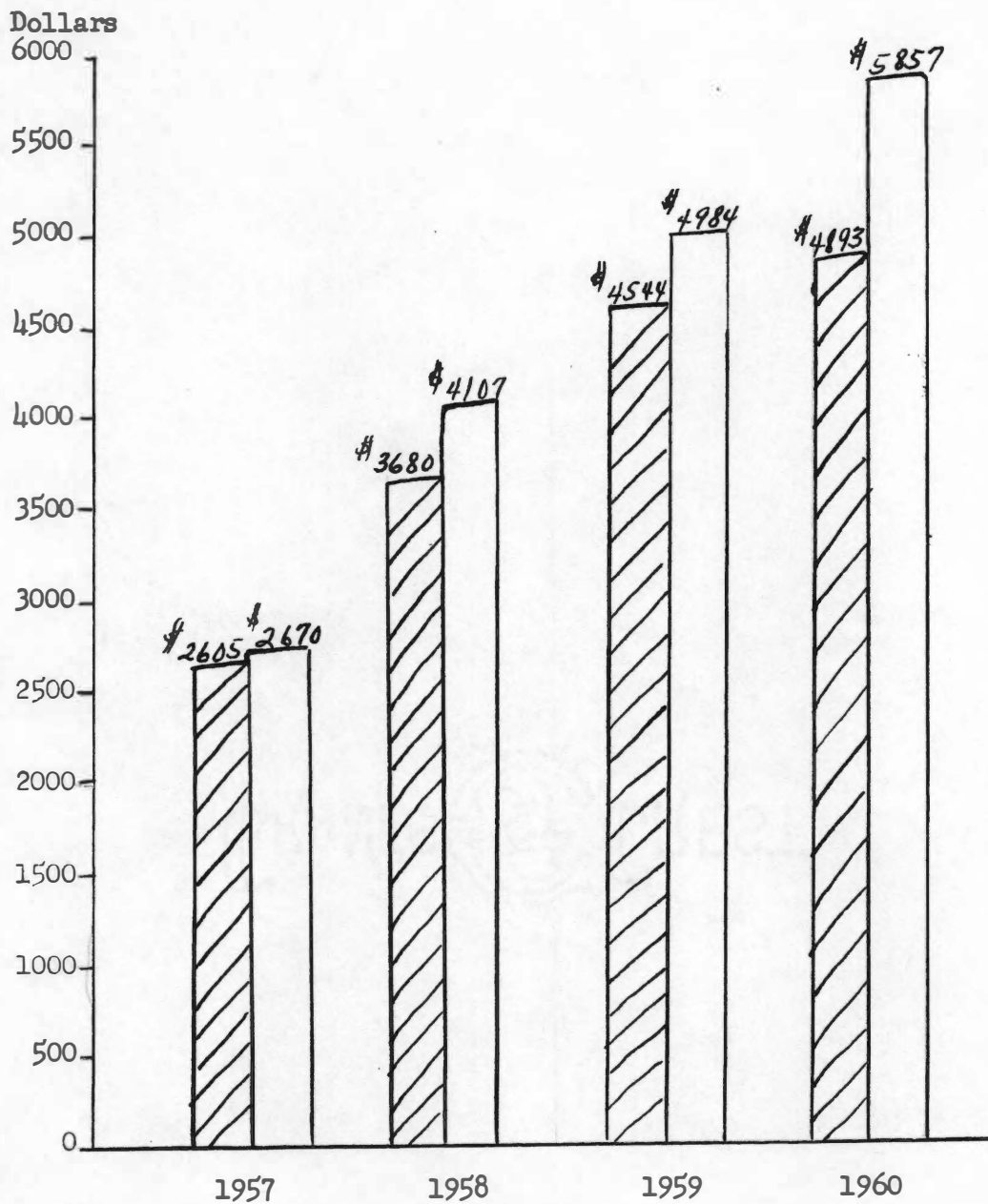


FIGURE 8

## TENANT ESTIMATED AND ACTUAL OPERATING EXPENSES

1 inch = \$1000

 Estimated

 Actual