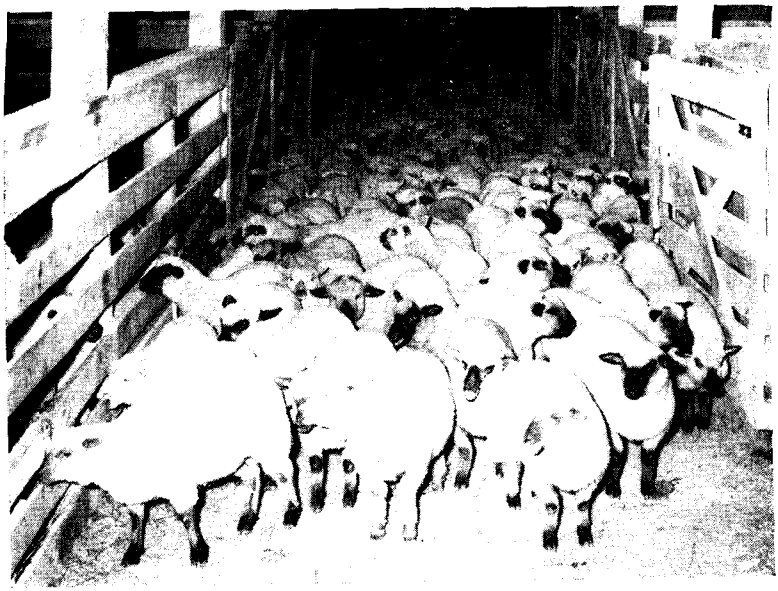
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MARKETING OF TENNESSEE LAMBS THROUGH COOPERATIVE LAMB POOLS

1954

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AGRICULTURAL EXPERIMENT STATION
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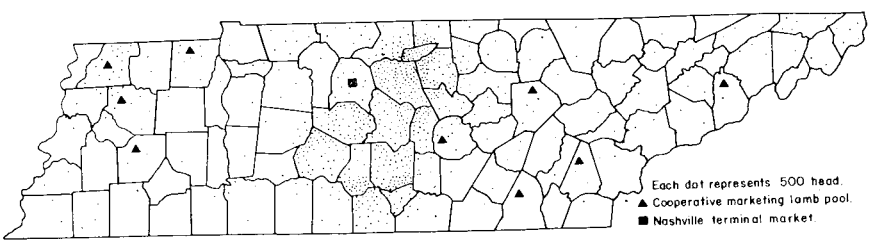
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MARKETING OF TENNESSEE LAMBS THROUGH COOPERATIVE LAMB POOLS, 1954

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Introduction

The accurate reflection of consumer preference for various products is a reasonable requirement of any marketing system. The degree to which this is accomplished is especially important where such products form a major part of the producers' income. Although the importance of lamb production varies widely between the different sections of the State, as shown in figure 1, spring lambs are nevertheless an important source of income to many Tennessee farmers.



Source: U. S. Bureau of the Census, 1950 Census of Agriculture, Vol. I.

Figure 1. Sheep on Farms in Tennessee, 1950.

On January 1, 1954, sheep and lambs on Tennessee farms numbered 293,000 head which means that about 245,000 lambs were marketed during the 1954 marketing year.[1] This is eight percent larger than the 1953 crop, but is 16,000 head less than the 1943-52 average of 261,000 head. The ten leading counties suppling this sheep production are all located in the Central Basin Area of Middle Tennessee, and their production accounts for approximately 65 percent of the total.[2] Individual flocks maintained by Tennessee farmers are not large. According to the last census the breeding

[1] John S. Robinson, "Tennessee Lamb Crop," Tennessee Market Bulletin, Tennessee State Department of Agriculture, August, 1954, p. 7. The 1954 lamb crop in the United States totaled 20,170,000—three percent larger than the 19,600,000 head raised in 1953. The 1954 lamb crop was 10 percent below the 1943-52 average.

[2] Agricultural Trends in Tennessee, prepared by the Office of the Agricultural Statistician for Tennessee, U. S. Department of Agriculture, Cooperating with the Tennessee State Department of Agriculture, Nashville, 1952, p. 13.

flocks averaged only 25 head.[3] Flocks of this size, however, permit farmers to give proper care, provide good pastures, and in general use the best methods of flock management. This aids the production of high quality spring lambs.

Cash receipts from the sheep enterprise in Tennessee amounted to $4,345,000 in 1953,[4] or approximately one percent of the cash receipts from all farm marketings. This sum was somewhat below the average of $5,119,000 for the five-year period of 1949-53. Sale of sheep and lambs for slaughter in 1953 brought in $3,583,000, or 83 percent of the cash income received from the sheep enterprise, while 17 percent, or $762,000, was obtained from the sale of wool.[5] The sheep enterprise has the advantage of providing a cash income during spring and early summer, a period when cash income on most farms is seasonally low.

Market Outlets For Tennessee Lambs

Tennessee spring lambs are usually sold in one of three ways, either at auction markets located throughout the State, at the terminal market in Nashville, or through cooperative lamb marketing pools. In 1951, about 36 percent of the Tennessee farmers sold their lambs at auction markets, 34 percent at the Nashville terminal market, and 12 percent through the cooperative lamb pools.[6] Local dealers, other farmers and local packers were relatively unimportant as a market outlet. Considerable variation exists in the method of marketing lambs in various areas of the state. For instance in the Knoxville marketing area, about one-fifth of the spring lambs are sold through cooperative lamb marketing pools, while in West Tennessee about three-fifths of the lambs produced are sold through this outlet. In the Central Basin Area of heaviest production lambs are sold primarily at the Nashville terminal market or at nearby auction markets.

Purpose of the Study

Only at the cooperative lamb pools are all the lambs that are sold officially graded according to the United States Department of Agriculture standards. Records obtained from the sale of lambs at the lamb pools operating in 1954 primarily serve as the basis of this report. The objective is to point out the relationship between the quality of lambs as measured by grade, weight, and sex, and the price received by those producers who sold their lambs through this outlet. Also, the relation of receipts to the seasonal price pattern is analyzed.

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[3] U. S. Bureau of the Census, U. S. Census of Agriculture, 1950, Vol. I, p. 10.

[4] U. S. Department of Agriculture, Farm Income Situation, July-August, 1954, Agricultural Marketing Service, Washington, D. C.

[5] Tennessee's wool production in 1954 is estimated at 1,485,000 pounds. This is five percent larger than the 1953 crop—and is almost equal to the 1943-52 average. For the United States, wool production declined slightly in 1954 compared with 1953, and total wool production in 1954 was 14 percent less than the 1943-52 average.

[6] M. B. Badenhop, Selling and Buying Livestock by Tennessee Farmers, University of Tennessee, Agricultural Experiment Station, Knoxville, Tennessee, Bulletin No. 233, June 1953, p. 34.

Grading Lambs at Cooperative Lamb Pools

The lambs are graded by employees of the University of Tennessee Agricultural Extension Service and the Tennessee State Department of Agriculture. Grading is done immediately after the lambs are unloaded. Lambs of the same grade and weight are then commingled with lambs of a similar weight and grade that belong to other producers. They are then sold by lots to the highest bidder. By handling lambs in this manner, each producer's lambs lose their identity and are sold along with other lambs in the same lot. Since all lambs of a graded lot are assumed to be of the same grade, any difference in value is due to variations in live weight. Grading, then, becomes especially important if producers are to be paid equitably for the quality of lambs sold.

When making bids, buyers carefully examine each lot of lambs and arrive at their estimate of the grade of the lambs. Also the buyers carefully examine the lambs and estimate the yield or dressing percentage. On the basis of his estimated grade and yield, the buyer arrives at a price he is willing to pay for the lot.

Receipts in Relation to Seasonal Price Pattern

The Tennessee spring lamb grower can plan his marketing program with more certainty than most any other livestock producer. The early spring lamb reaches the market at the time of peak prices. By carefully following proved practices of breeding and management,[7] he can get the bulk of his lamb crop on the peak market in May. Thus he avoids much of the competition from other lamb producing regions.

The Nashville terminal market is the principal price orientation point for lambs marketed in Tennessee. Consequently, the price of lambs marketed through lamb pools generally follow rather closely the effects of the seasonal pattern of receipts and the resulting price on the Nashville market. The index of receipts and price for choice and good lambs was calculated for 25 weeks of the marketing season for 1953 and 1954 for Nashville,[8] and are shown in figure 2. During this period, which accounted for 85 to 90 percent of the sheep and lambs marketed, the index of receipts varied greatly reaching its peak between the 10th and 14th week of the season. This is generally around the last week or two in May and the first week or two in June. The price index did not decline below the average index of 100 until after the 14th week, or the middle or latter half of June. In general, prices were near their peak during the weeks of heaviest receipts or fairly early in the marketing season and then decline as heavy marketings continued until about

[7] Paul P. Hite, Sheep Production in Tennessee, University of Tennessee, Agricultural Extension Service, Knoxville, Publication 317.

[8] B. D. Raskopf, et al., Prices Paid For Sheep and Hogs, 1931-46, at Nashville Livestock Market, Univ. of Tenn., Agricultural Experiment Station, Knoxville, Rural Research Series Mono. 217, 1947. The seasonal pattern of receipts follows very closely the same pattern of receipts for 1931-46 for the Nashville market.

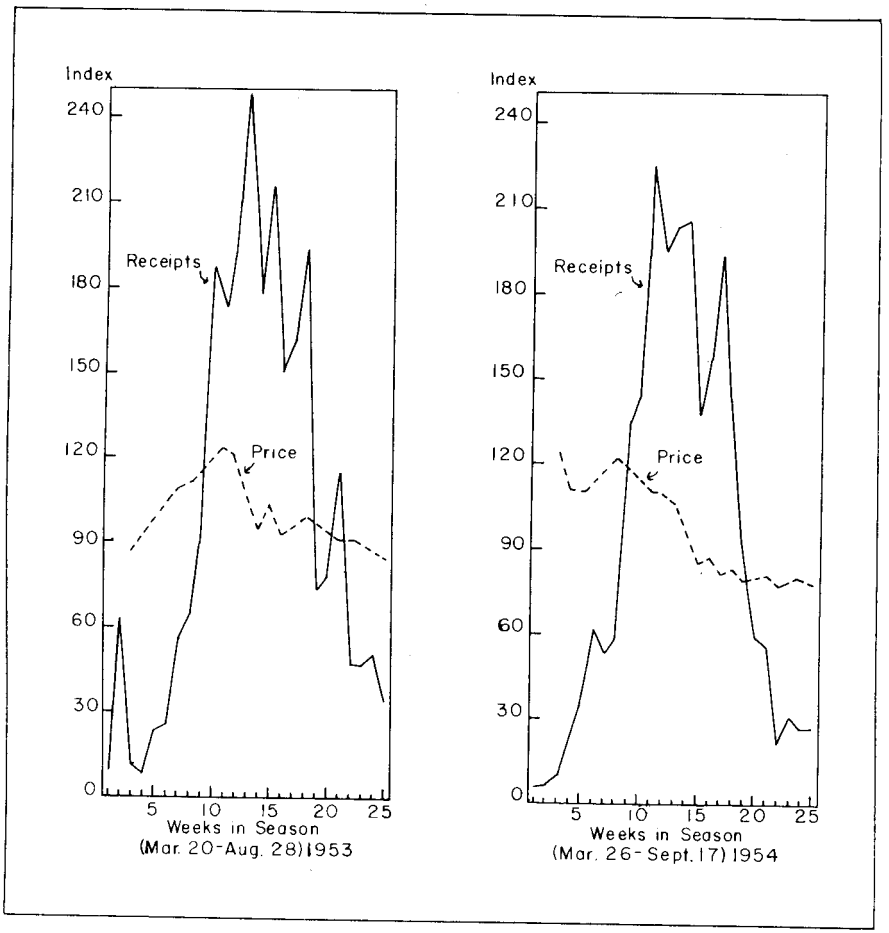


Figure 2. The Relation of the Index of Receipts for 25 Weeks of the Marketing Season to the Index of Price for Choice and Good Lambs, Nashville, 1953 and 1954.

the 20th week of the season or about the end of July. After this period price tended to become more steady.

Relation of Grade to Price

Grade is an important factor in lamb prices at the cooperative lamb marketing pools. The higher grades of lambs sell well above the lower grades. This relationship for 1954 is indicated in table 1. During the marketing season, prime lambs sold for an average of $26.50 per hundredweight, while choice lambs brought $24.70, or $1.80 less per hundred pounds than the prime lambs. Good lambs brought $21.30, or $5.20 per hundredweight less than prime lambs, while utility lambs were worth only $15.00, or $11.50 per hundred-

weight less than the top grade. The wide price differential between utility and the higher grade lambs is particularly noticeable, and is evidence that lamb producers would gain considerably by marketing fewer lambs of the lower grades.

TABLE 1. *Average Price Per Hundredweight for Lambs of Different Grades Sold at Nine Cooperative Lamb Pools, Tennessee, 1954.*

Grade	Average Price Per Hundredweight (Dollars)			
	May	June	July	Marketing Season
Prime	27.30	24.70	21.00	26.50
Choice	26.40	23.05	19.25	24.70
Good	24.75	20.05	17.40	21.30
Utility	18.60	15.30	13.10	15.00
Cull	9.95	11.20	11.65	11.25
All grades	26.80	19.75	15.35	22.15

Average prices for all grades and qualities are relatively lower at the close of the marketing season than at the beginning. Two explanations may be given for this situation: first, a relatively larger proportion of Tennessee lambs fall in the lower grades late in the season; and, second, the competition from other areas becomes relatively greater because of heavier marketings from these areas during the latter part of the Tennessee marketing season. Prime lambs sold in May for an average of $27.30 per hundredweight which was $2.60 per hundredweight more than what prime lambs were sold for in June and $6.30 per hundredweight more than they brought when sold in July. Monthly price differentials for choice and good lambs were somewhat greater than the differential for prime lambs. Cull lambs, however, were worth more toward the end of the marketing season primarily because they were purchased for feeder lambs to be marketed later in the fall. These results indicate that there is still room for considerable improvement in the selection of the time of breeding in order to have early lambs, and methods of feeding and of handling lambs after birth such as will finish them for market at an earlier age than is now customary. Early spring lamb producers usually place the rams with the ewes by July 15 and remove by October 15 in order to have lambs born from December through February. The lambs should then be ready to go to market weighing from 70 to 90 pounds at 115 to 135 days of age.[2]

Relation of Grade to Time of Marketing

Lambs marketed early in the marketing season were of better quality than those marketed during the middle or latter part of the marketing period. Table 2 shows that about one-third of all

[2] John S. Robinson, "Early Spring Lambs Bring Top Dollar," Tennessee Market Bulletin, Tennessee State Department of Agriculture, Nashville, Sept. 1954, p. 3.

lambs sold in May graded prime and another third graded choice while only 10 percent of the lambs graded in July fell in these two grades. For the entire season 17 percent of all lambs sold graded prime, 24 percent choice, 34 percent good, 22 percent utility, and 3 percent were graded as culls. The percentage of lambs grading prime in 1954 was considerably less than the percent of the total lambs that were marketed as prime lambs in the three previous marketing seasons (table 3). Extreme drouth conditions and poor pastures were probably responsible for this difference. A summary of weight and price relationships for 1951 through 1954 are also included in table 3.

TABLE 2. *Percent of Lambs Sold by Months According to Different Grades in Nine Cooperative Lamb Marketing Pools, Tennessee, 1954.*

Grade	Percent of Lambs Sold in Each Grade			
	May	June	July	Marketing Season
Prime	32	10	1	17
Choice	34	21	9	24
Good	29	37	34	34
Utility	5	28	51	22
Cull	*	4	5	3
All grades	100	100	100	100

* Less than .5 of 1 percent.

TABLE 3. *Summary of Results of Spring Ewe and Wether Lambs Graded and Sold at Cooperative Lamb Pools, Tennessee, 1951-54.*

Year	Grade				
	Prime	Choice	Good	Utility	Cull
	Average weight per lamb (pounds)				
1951	88	80	72	67	50
1952	88	80	71	64	46
1953	88	81	76	67	47
1954	90	84	79	71	56
	Average price per hundredweight (dollars)				
1951	34.50	32.55	29.55	25.65	19.80
1952	30.20	27.65	22.60	15.00	12.10
1953	27.80	25.50	21.80	14.90	10.50
1954	26.50	24.70	21.30	15.00	11.25
	Percent of lambs in each grade				
1951	35	29	20	14	2
1952	28	22	24	23	3
1953	29	26	27	16	2
1954	17	24	34	22	3

Relation of Grade to Weight

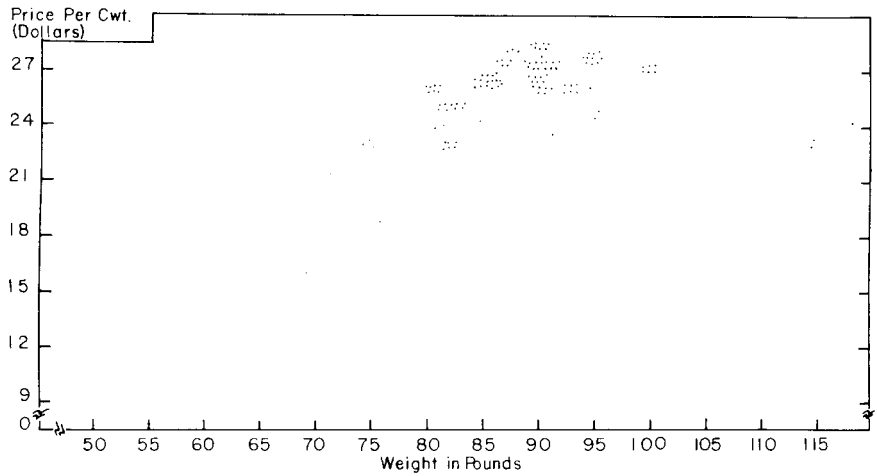
Table 4 indicates that all the lambs marketed in May weighed an average of 86 pounds which was 10 pounds more per head than those sold in June. July lambs weighed even less. All lambs sold during the marketing season averaged 80 pounds in weight. According to grade, prime lambs weighed an average of 90 pounds with the largest number being sold in May. Choice lambs weighed an average of 84 pounds while good and utility averaged 79 and 71 pounds, respectively.

TABLE 4. *Average Weight Per Head for Lambs of Different Grades Sold at Nine Cooperative Lamb Marketing Pools, Tennessee, 1954.*

	Average Weight (Pounds)			
Grade	May	June	July	Marketing Season
Prime	92	86	82	90
Choice	87	83	83	84
Good	82	78	77	79
Utility	73	72	69	71
Cull	57	56	55	56
All grades	86	76	72	80

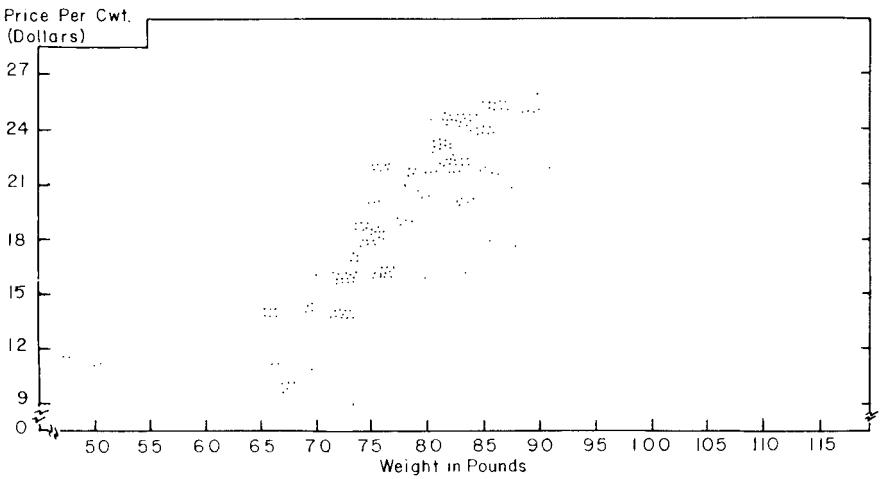
Generally speaking, lambs weighing from 85 to 90 pounds commanded the best price at the cooperative lamb pools in 1954. Figures 3 and 4 illustrate this point well. Here one discovers that relatively low prices prevail for lambs of light weight, that the prices rise as the weight increases up to approximately 85 to 90 pounds, and that they tend to decrease when the weight exceeds that level. During the 1954 marketing season, between 85 and 90 pounds seemed to be the range of weights at which most lambs attained the proper finish to command the highest prices. Those below 80 pounds were usually lacking in finish while those over 90 pounds were likely too mature and coarse or too large and consequently past the proper stage to produce the type of meat most in demand.

Another interesting feature of these data (figures 3, 4, and 5) is the range in price within any given weight class. Spreads of two dollars per hundredweight were not uncommon for lambs of the same weight because there are factors other than weight which determine price. Greater price variations tended to occur as the marketing season progressed. In general, heavy lambs weighing from 95 to 115 pounds were sold at a discount of approximately one to three dollars per hundredweight in their respective grades. Also at these lamb pools, buck lambs in their respective grades generally were discounted at the rate of about one dollar per hundredweight. Undoubtedly if the buck lambs had been castrated, properly fed and cared for, they would have netted the producer better returns.



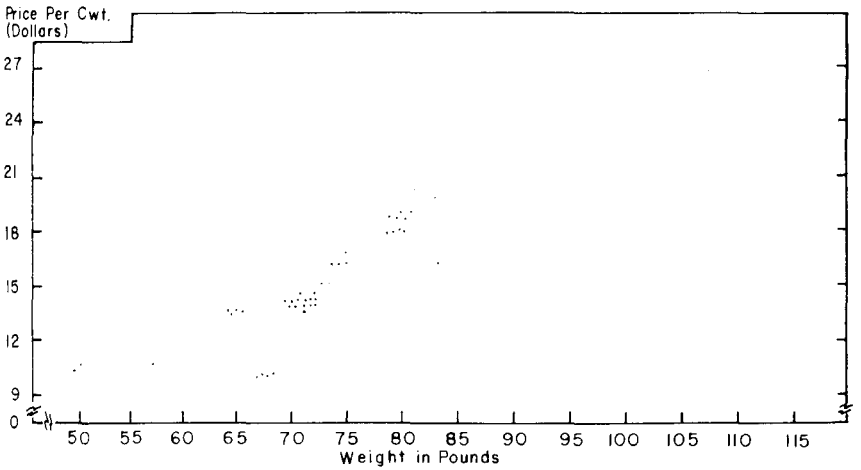
Each dot represents approximately 50 lambs. Average weight per head, 86 pounds, average price, $26.80 per hundredweight.

Figure 3. Relation of Weight to Price of Lambs Sold at Nine Cooperative Lamb Pools from May 10 to May 31, 1954.



Each dot represents approximately 50 lambs. Average weight per head, 76 pounds, average price, $19.75 per hundredweight.

Figure 4. Relation of Weight to Price of Lambs Sold at Nine Cooperative Lamb Pools from June 1 to June 30, 1954.



Each dot represents approximately 50 lambs. Average weight per head, 72 pounds, average price, $15.35 per hundredweight.

Figure 5. Relation of Weight to Price of Lambs Sold at Nine Cooperative Lamb Pools from July 1 to July 30, 1954.

Relation of Kind of Ewes and Kind of Ram Used to Grade of Lambs Marketed

Data were obtained from 78 lamb producers who marketed lambs through the cooperative lamb pools in the West Tennessee area during the 1954 season on the kind of ewes used and the kind of rams used in their sheep production program. Native ewes made up 42 percent of the ewe breeding stock, while northwestern crossbred ewes made up 36 percent and southwestern crossbred 22 percent. Thirty-one percent of the producers used more than one kind of breeding stock in their ewe flock.

The performance of the native ewes was somewhat better than for the southwestern or northwestern crossbred ewes. Slightly more than one-half of the lambs from native ewes graded either prime or choice compaed with only 43 percent for the southwestern and 46 percent for the northwestern crossbred ewes.

Of the rams used, 81 percent were purebred. The purebred rams performed better than the crossbred rams on the basis of the grade of lambs produced when marketed. Fifty-one percent of all the lambs that were born from ewes bred to a purebred ram sold in the top two grades compared with only 43 percent in the top two grades when crossbred rams were used. The predominant breed of ram used was the Hampshire with approximately 60 percent of the purebred rams of this breed. Of the other purebred rams used, 13 percent were Southdown, 12 percent Shropshires, 5 percent Suffolk, and 10 percent of various other breeds.

SUMMARY

If Tennessee lamb producers carefully follow proved practices of breeding and management, they can get their lamb crop on the market at the time of peak prices which is generally during the last week or two of May and the first week or two of June. As a general rule lamb prices do not decline below the average price of the marketing season until the middle or latter half of June. On the Nashville market, prices are generally near their peak during the weeks of heaviest receipts or fairly early in the marketing season.

Grade is an important factor in lamb prices at the cooperative lamb marketing pools. During the 1954 marketing season, prime lambs averaged $26.50 per hundredweight, while choice lambs brought $24.70, good lambs $21.30, and utility lambs $15.00 per hundred pounds. The wide price differential between utility and the higher grade lambs is particularly noticeable and is evidence that lamb producers would gain considerably by marketing fewer lambs in the lower grades. Average prices for the respective grades were from six to seven dollars less for lambs marketed in July than for those marketed in May.

Lambs marketed during May and early June were of better quality than those marketed during the middle or latter part of the marketing period. During 1954 about one-third of all lambs sold in May graded prime and another third graded choice while only 10 percent of the lambs graded in July fell in these two grades. The percentage of lambs grading prime and choice in 1954 was considerably less than the percent of lambs marketed in those grades in the three previous marketing seasons. Extreme drouth and poor pasture conditions were probably responsible for this difference.

All lambs sold during the marketing season averaged 80 pounds in weight. Those sold in May averaged 86 pounds compared with 72 pounds for those sold in July. According to grade, prime lambs averaged 90 pounds, choice lambs 84 pounds, good lambs 79 pounds and utility and cull lambs, 71 and 54 pounds, respectively. Generally speaking, lambs weighing from 85 to 90 pounds commanded the best price at the cooperative lamb pools in 1954.