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**Kentucky**  
**Agricultural Experiment Station**  
**University of Kentucky**

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**QUALITY AS A FACTOR IN THE PRICE OF**  
**KENTUCKY LAMBS**

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**BULLETIN NO. 302**

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**Lexington, Ky.**

**April, 1930**

**(91)**

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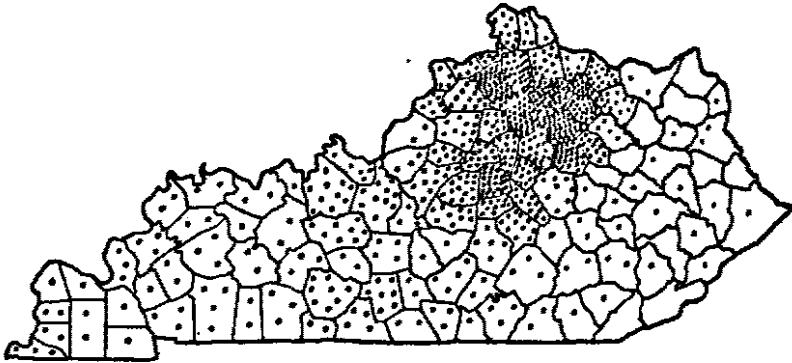


Figure 1. Sheep on farms in Kentucky on January 1, 1925, according to United States Census of Agriculture 1925. Each dot represents 1,000 head.

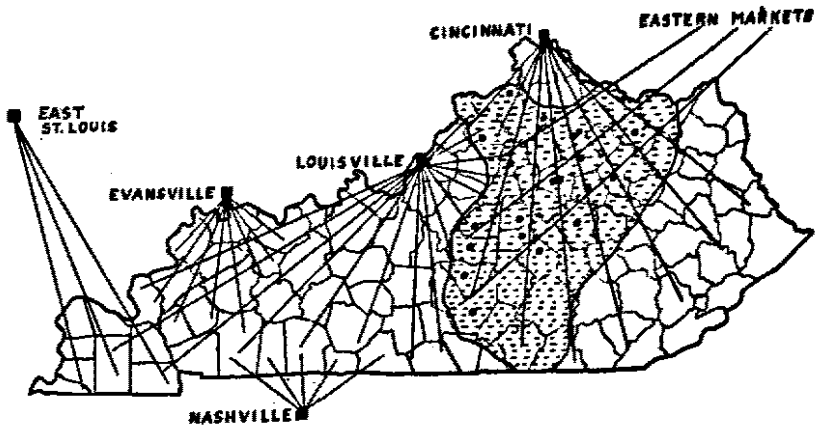


Figure 2. Markets for Kentucky lambs. Dots indicate local auction markets and the shaded section approximately the area served by them.

## BULLETIN NO. 302

### Quality as a Factor in the Price of Kentucky Lambs

By E. C. JOHNSON\* and C. D. PHILLIPS

The accurate reflection of consumer preference is a reasonable requirement of any marketing system. The degree to which this is accomplished is especially important to producers in the case of products which form a major part of their income. Altho the importance of lamb production varies widely between the different sections of the State, as shown by Figure 1, nevertheless spring lambs are an important source of agricultural income in Kentucky and this fact justifies the insistence, by farmers, that lambs be paid for on the basis of quality.

Proper discrimination in the payment for farm products is especially important for farmers who produce high quality products, as spring lambs raised in the bluegrass district. Kentucky has a reputation in the central markets for raising lambs of high quality. A favorable climate, excellent bluegrass pastures, good management and breeding have contributed to the excellence of the lambs from these sections. Breed associations, public agencies and the College of Agriculture are assisting in raising the standrads of quality of lambs marketed. How marketing agencies pay for lambs thus becomes important for sheep growers in Kentucky, as well as the entire sheep industry.

On January 1, 1929,† sheep on farms in Kentucky numbered 958,000 head and approximately 700,000 lambs were sold in that year. Lambs are normally sold at local auction markets or to local buyers who ship to terminal markets like Louisville and Cincinnati. The practice of selling lambs at auction in local markets dates from 1922 when an auction company was organized in Lexington. This plan of marketing spread rapidly thru Central Kentucky and in 1928 there were 21 stockyard companies holding auction sales of lambs, as well as of other livestock, at 19 local markets. It is estimated that 400,000 lambs were sold at the local yards in 1928 and that over 80 percent of

\* Resigned September, 1929.

† Estimates of U. S. Department of Agriculture for 1929.

these were purchased by order buyers for direct shipment to packers at Jersey City and other eastern points. In other sections of the State the sale of lambs direct to local livestock buyers prevailed. Louisville is an important market for lambs from Western and Central Kentucky, and Cincinnati receives a large number from Central Kentucky. The different markets for Kentucky lambs are illustrated in Figure 2.

#### **PURPOSE OF THIS STUDY.**

Consumers' requirements for lamb vary widely among different population groups, particularly among different income classes, but, generally speaking, consumers prefer meat produced from lambs that are fat, well-bred, excellently finished and of medium weight. Butchers and slaughterers are therefore generally willing to pay best prices for fat, well-bred lambs that weigh about eighty pounds. It is well known that the livestock marketing system reflects this preference in prices paid to sheep producers in varying degrees. The purpose of this study is to point out the relationship between the quality of lambs, as measured by grade, weight, and sex, and the price received by Kentucky farmers.

#### **METHOD OF PROCEDURE.**

Data were obtained from the sales records of 9 local stockyards in 1927, and 10 local yards in 1928, representing sales of 259,170 and 268,153 lambs for the two years, respectively. Similar data were obtained from representative firms at the terminal markets of Louisville and Cincinnati. These data include approximately 60 percent of lambs sold at the auction markets, about 15 percent of Kentucky lambs marketed at Louisville and 18 percent of those marketed at Cincinnati. The analysis which follows is based on these data of actual sales of Kentucky lambs at local and terminal markets.

#### **GRADING LAMBS AT CENTRAL KENTUCKY AUCTION YARDS.**

Lambs are graded at the local auction markets by graders employed by the local stockyards companies. The method of classification and grading is similar at all markets. Lambs are

first sorted according to "ewes and wethers" and "ewes and bucks." They are then graded on the basis of quality, weight and finish and placed in pens holding lambs of uniform grade and weight.

The terminology used to designate the various kinds of quality differs considerably between local auction markets. The grade "Tops" in one market may include lambs of a quite different quality in another. Thus, it is impossible to use the grading systems of these markets for price comparisons because of lack of standardized terminology, consequently for the purpose of this study a simplified adaptation of the grades recommended by the United States Department of Agriculture is used. The translation of the local grades into these grades was made possible by the assistance of the officials of the auction companies and lamb buyers.\* The work of rearranging the different sales according to these grades is also simplified by the practice of the various stockyards companies of putting lambs of a given grade and weight in the same pen thruout the season. Occasionally, there is some shifting of pens but the records are sufficiently complete to permit proper classification of prices by grades at five markets. A brief description of the grades used in this study follows:

#### Ewes and Wethers.

*Prime.* This is the best grade and includes a comparatively small number of "hand picked" lambs superior in form, quality and condition. These lambs have good conformation, attractive appearance, fine bone, compact fleeces, and even, firm flesh. Lambs in this grade usually average about 78 to 80 pounds

\* In translating the grades used at the various yards into grades used in this bulletin the following method was used. In securing the record of sale from the sale records of each stockyards company the pens were designated as ewes and bucks or ewes and wethers. In the study of each yard the manager and the lamb grader each graded the lambs in every pen on the basis of the local market grades.

With their assistance these local grades were then placed in the federal grading system; the various pens were graded according to the federal grades; and finally the approval of the method of translation of the various lots of lambs from local to federal grades by some responsible representative from each market included in the analysis was obtained.

Several buyers who are familiar with grades at the various auction markets also assisted in interpreting the local market grades in terms of the federal grades and in classifying the data.



in weight. At some local markets it is called "fancy" or "choice."

*Choice.* Most of the better offerings of lambs are included in this grade. They are often referred to as "tops." Lambs to grade choice must have good form and show high quality and finish. This is the highest grade which lambs fattened on grass can be expected to reach.

*Good.* Lambs in this grade possess some of the points required in "prime" and "choice" grades but may be lacking in one or more of these points. A lack of quality and condition is usually the reason why these lambs are not put into the higher grades. A deficiency in form and appearance also may put the lambs in this grade.

*Fair.* This grade is below good. Lambs grading fair are usually deficient in form, quality and condition. Animals with long, narrow, rough conformation, often paunchy and in only fair condition are placed in this grade.

*Common.* This is the lowest grade and includes lambs of poor conformation, coarse and in poor condition.

#### **Ewes and Bucks.**

Three grades of ewe and buck lambs are generally used: good, fair and common. Ewe and buck lambs generally do not have the quality and finish necessary to grade prime or choice. Some markets have a grade of ewes and bucks early in the season which may be called "choice," but it is doubtful if buck lambs ever have the quality and finish to be classified as strictly "choice." For the purposes of this study the best lots of ewes and bucks were classified as good. The description given for good, fair and common ewes and wethers will apply to ewes and bucks. Coarse rams are classified as fair or common.

#### **Weight Selection.**

Weight is an important factor in the sorting of lambs at the local yards, particularly during periods of large receipts. When daily receipts are three or four thousand head, as is often the case, it is possible to divide the lambs into lots that are reason-

ably uniform from the standpoint of both grade and weight. The weights used, however, are not uniform among all yards. In some markets lambs are classified into weights with five pound intervals. Thus one lot may be "good" lambs of 80 to 85 pounds, another "good" lambs of 75 to 80 pounds, and still another "good" lambs of 70 to 75 pounds. In other markets ten-pound intervals in weight classification may prevail.

In this study a small number of weight classifications was used. Prime and choice ewe and wether lambs are comparatively uniform in weight and no weight selection was made. Good lambs were divided into two groups according to weight, good lambs averaging 73 to 82 pounds, and good light lambs averaging below 73 pounds. A similar weight classification was made for fair lambs and was used for both ewes and weathers and ewes and bucks. In the use of the latter, however, another weight selection was added, which included ewes and bucks over 82 pounds. Average weights for the various grades and classes are given in Table 1.

RELATION OF WEIGHT TO PRICE.

Generally speaking, lambs of medium weight command the best prices at the local auction markets. Figures 3 and 4 illus-

Table 1. Average weight per head for lambs of different grades, sold at local markets in 1927 and 1928.

Grade	Ewes and Wethers		Ewes and Bucks	
	1927	1928	1927	1928
Prime	78 lbs.	80 lbs.	—	—
Choice	80	78	—	—
Good—73-82 lbs.	78	76	77 lbs.	78 lbs.
Good—Below 73 lbs.	72	70	—	70
Fair—Above 82 lbs.	—	—	85	—
Fair—73-82 lbs.	74	75	78	75
Fair—Below 73 lbs.	67	70	70	69
Common	68	66	70	66

PRICE PER CWT. (DOLLARS)

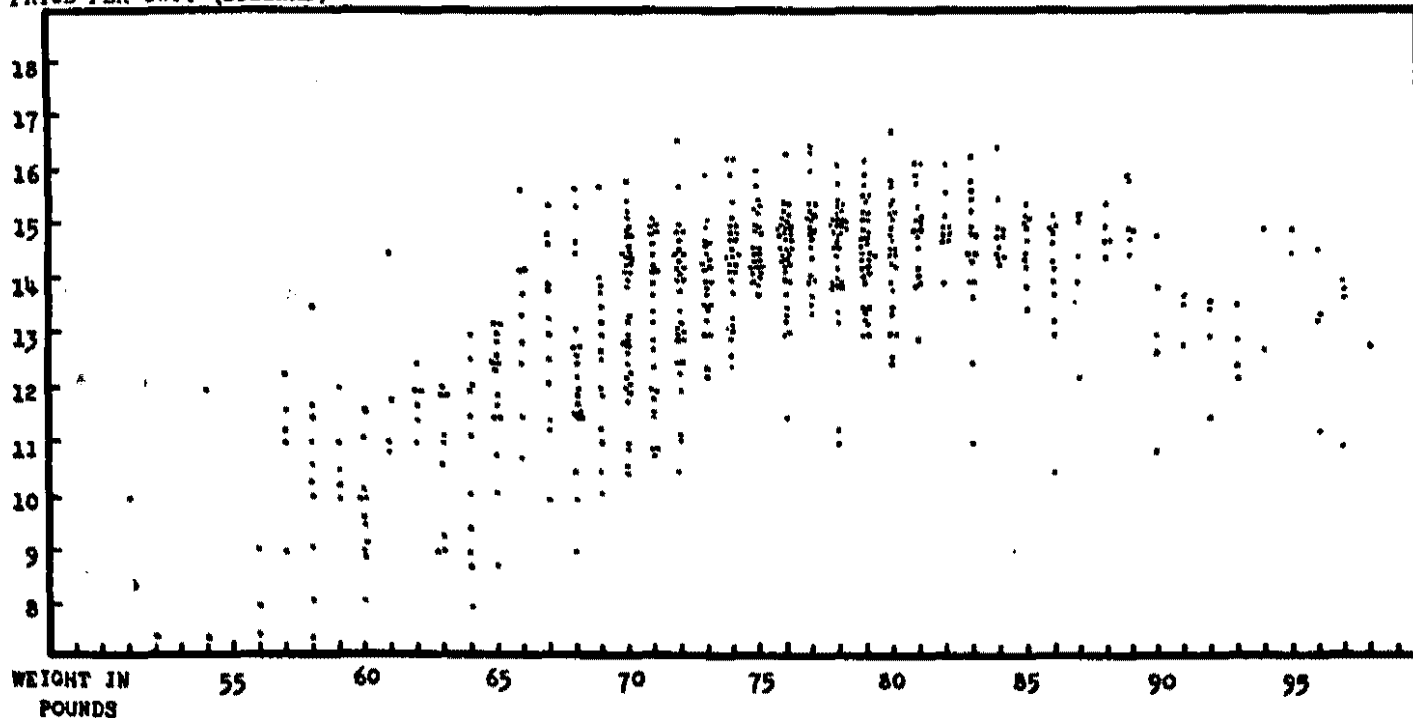


Figure 2. Relation of weight to price of lambs sold at local markets from June 30 to July 9, 1927. Each dot represents one pen. Total, 533 pens, 38,351 lambs. Average number of lambs per pen, 66. Average weight per head, 76 pounds. Average price, \$14.12 per cwt.

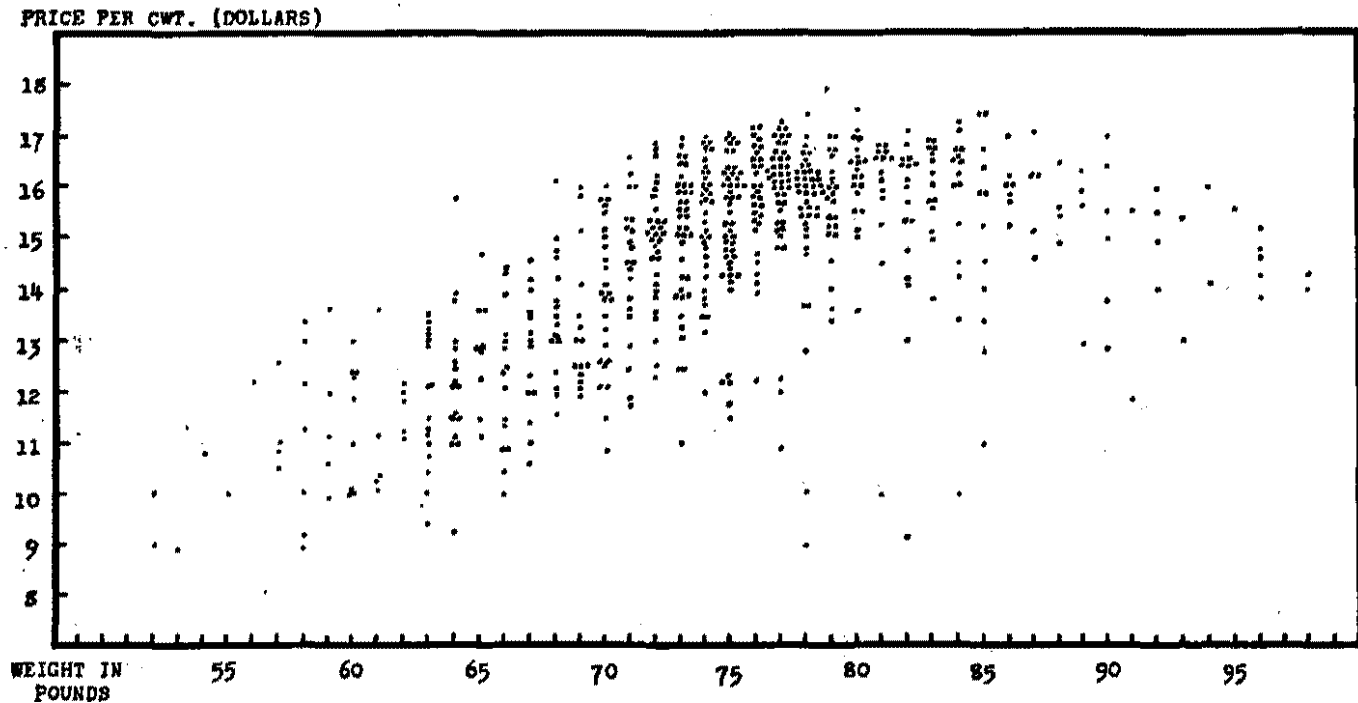


Figure 4. Relation of weight to price of lambs sold at local markets from June 18 to July 7, 1928. Each dot represents one pen. Total, 615 pens, 40,371 lambs. Average number of lambs per pen, 66. Average weight per head, 76 pounds, Average price, \$15.03 per cwt.

trate this point well. Here we discover that relatively low prices prevail for lambs of light weight, that the prices rise as the weight increases up to approximately 70 pounds and that they tend to decrease when the weight exceeds 80 pounds. Between 70 and 80 pounds, therefore, seems to be the range of weights at which most lambs attain the proper finish to command the highest prices. (Those below 70 pounds are usually lacking in finish while those above 80 pounds are likely to be 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 as illustrated in Figures 3 and 4 is the wide range in price within any given weight class. Spreads of three and four dollars per hundred-weight are not uncommon for lambs of the same weight because there are factors other than weight which determine price. Such variations, however, do not disprove the relation between weight and price of lambs, but merely tend to obscure the effect of weight upon price and make the relation expressed in Figures 3 and 4 less distinct.

The analysis of this part of the study, it should be mentioned, is based upon sales for a period of three weeks during June and July, when prices were comparatively stable and average weights were fairly constant. In 1927 the period chosen was June 20 to July 9, inclusive, and in 1928, June 18 to July 7.

#### PRICES OF EWE AND WETHER AND EWE AND BUCK LAMBS.\*

Ewes and weathers sell higher than ewes and bucks. The difference, however, is less at the beginning of the season than during the latter part. In the last week of May, 1927, for example, (see Figures 5 and 6) ewes and wethers sold only \$.06 per hundredweight higher than ewes and bucks; in June the weekly average price of ewes and wethers was \$.64 higher than that of ewes and bucks; in July, \$.78 higher; in August, \$1.24

\* Of 118,663 lambs received at five local yards in 1927, 81 percent were classified as ewes and wethers and 22 percent as ewes and bucks, while 17 percent were unclassified in the records, and no information was available to indicate into which class they would fall. Similarly, at these yards, 47.9 percent were ewes and wethers, 31.4 percent ewes and bucks, and 20.7 percent unclassified, in 1928.

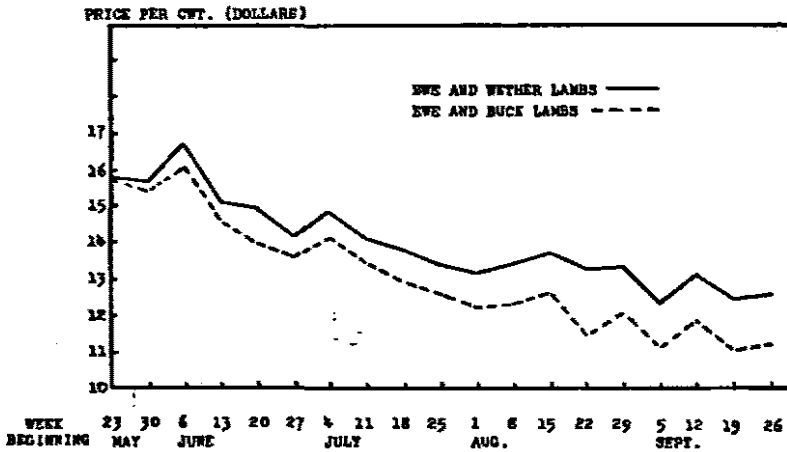


Figure 5. Average weekly prices of ewe and wether and ewe and buck lambs at local markets in 1927.

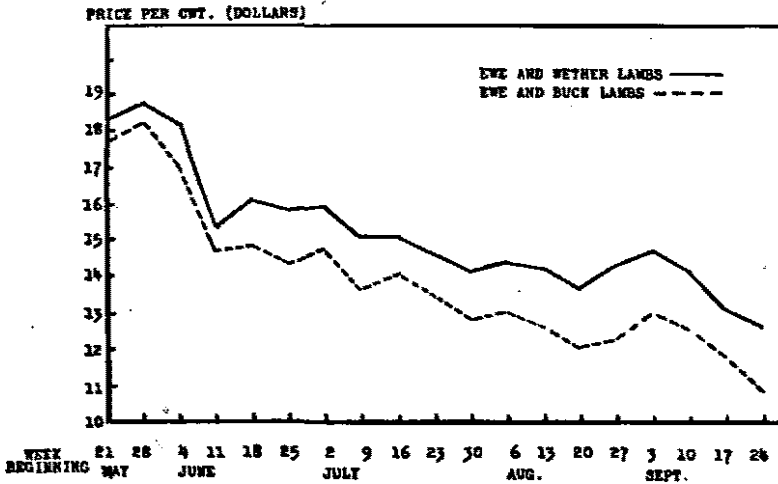


Figure 6. Average weekly prices of ewe and wether and ewe and buck lambs at local markets in 1928.

higher and in September, \$1.30 higher. For similar periods in 1928 the differences in prices of ewes and wethers and ewes and bucks were \$.20, \$.77, \$.95, \$1.38 and \$1.41, respectively. It is

very evident from these figures that the difference in price between ewes and wethers and ewes and bucks is very small early in the season but increases materially as the season progresses.

Table 2. Percentage of total receipts, ewes and wethers and ewes and bucks, at local markets, in 1927 and 1928, with average differences in price.

Date Week Beginning		1927			1928			Weighted average difference in price between E. & W. and E. & B. per hundredweight.	
1927	1928	Ewes and Wethers	Ewes and Bucks	Unclassified	Ewes and Wethers	Ewes and Bucks	Unclassified	1927	1928
May 23	May 21	39.7%	47.8%	12.7%	31.3%	42.4%	22.3%	\$.06	\$.20
30	28	39.2	46.0	14.3	34.6	49.0	16.4	.28	.25
June 6	June 4	41.3	41.0	17.2	39.3	39.1	21.1	.86	.86
13	11	49.0	40.3	19.7	44.3	39.9	15.9	.61	.61
20	18	49.2	35.2	15.6	42.2	36.7	21.1	.98	1.08
27	25	51.3	31.3	17.4	48.6	31.2	20.2	.59	1.05
July 4	July 2	49.3	36.9	14.4	37.7	31.3	31.0	.86	1.01
11	9	50.7	32.1	17.2	49.0	30.4	19.7	.58	1.00
18	16	50.3	29.3	19.3	50.2	35.1	13.7	.81	.37
25	23	56.6	23.1	15.3	51.6	34.5	13.9	.85	.90
Aug. 1	30	53.1	23.9	23.0	48.0	29.5	23.5	.90	1.00
8	Aug. 6	53.4	23.5	17.1	49.2	28.8	22.0	1.06	1.22
15	13	53.4	26.7	19.9	53.3	27.3	18.4	1.03	1.26
22	20	55.3	24.6	13.5	48.6	23.6	27.3	1.80	1.73
29	27	54.3	23.6	16.6	57.0	27.1	15.9	1.34	1.71
Sept. 5	Sept. 3	57.3	19.2	13.5	54.4	21.3	24.3	1.20	1.33
12	10	56.6	23.2	20.2	58.3	21.3	19.3	1.19	1.41
19	17	52.0	27.7	20.2	52.6	25.1	21.1	1.38	1.31
26	24	45.1	23.4	31.5	54.2	21.6	24.2	1.24	1.53
Season		51.0	32.0	17.0	47.3	31.4	20.7	.94*	1.07*

\* Simple average of weekly margins.

Kentucky farmers are to some extent following the practice of castrating a larger percentage of the buck lambs which are to be marketed late in the season than of those to be sold earlier. This is indicated by the decrease in the percentage of lambs classified as ewes and bucks during July, August and September. However, about one-fourth of the receipts classified at local markets during August and September were ewes and bucks, which indicates that there is still room for considerable improvement in each of the following factors: 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.

**Prices of ewe and wether lambs by grades.\***

Grade is an important factor in lamb prices at the local auction markets. The higher grades of lambs sell well above the lower grades. This fact is illustrated in Figures 7 and 8 which give the average weekly prices of different grades for the years 1927 and 1928. The periods considered include 14 weeks each year, beginning with the last week of May and extending thru the month of August. The choice grade which includes most of the better lambs, will be used in this discussion as a basis for comparisons of prices of different grades.

Prime lambs averaged \$.31 per hundredweight above choice lambs in 1927 and \$.45 above in 1928. The number of lambs in this grade is relatively small and producers need to guard against using these prices as the basis for all sales. This precaution is especially important in view of the fact that auction companies occasionally make a special effort to have a small pen of prime lambs bid to unusually high prices in order to advertise their sales. Fortunately this practice has been discontinued by most stockyard companies.

Good ewe and wether lambs weighing 73 to 82 pounds followed choice lambs at a comparatively narrow and stable margin and sold for prices which averaged only \$.30 below choice lambs in 1927 and \$.72 in 1928. Good ewe and wether lambs lacking in condition and averaging below 73 pounds, on the other hand, sold at a fairly large margin below choice lambs. In 1927, for example, good light lambs sold on the average \$.83 below choice lambs and in 1928 the spread was \$1.84.

Fair and common grades of ewe and wether lambs sold at prices much lower than choice lambs. In 1927, fair lambs weighing 73 to 82 pounds average \$1.62 per hundredweight below choice lambs, fair lambs under 73 pounds, \$2.22 lower, and common lambs, \$2.98 less than choice lambs. In 1928, when lamb prices were somewhat higher, the same grades sold at \$1.90,

\* The records of only five stockyards companies were sufficiently detailed as to both grade and price to be used in this analysis. These companies were located in five different markets and, altho each company held a sale only one day each week, the auctions were so arranged that they occurred from Monday to Friday, inclusive, each week.



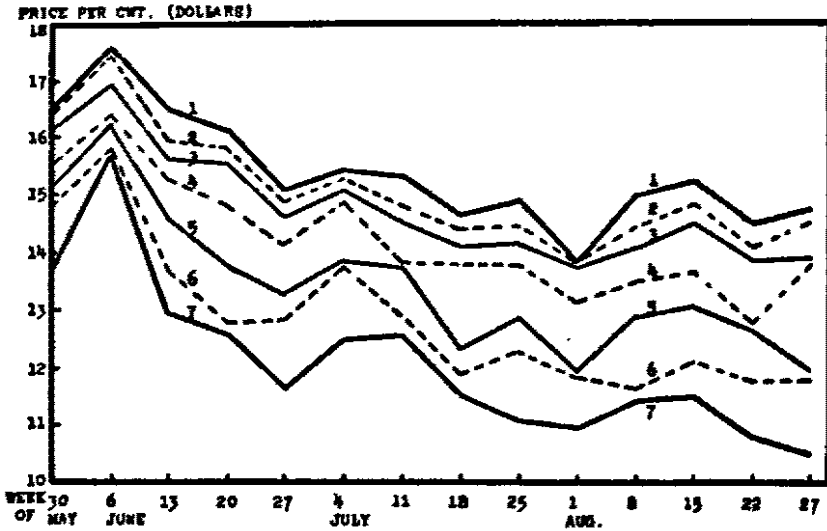


Figure 7. Average weekly prices by grades of ewe and wether lambs sold at local markets in Central Kentucky in 1927. 1, Prime; 2, Choice; 3, Good, 73-82 lbs.; 4, Good, under 73 lbs.; 5, Fair, 73-82 lbs.; 6, Fair, under 73 lbs.; 7, Common.

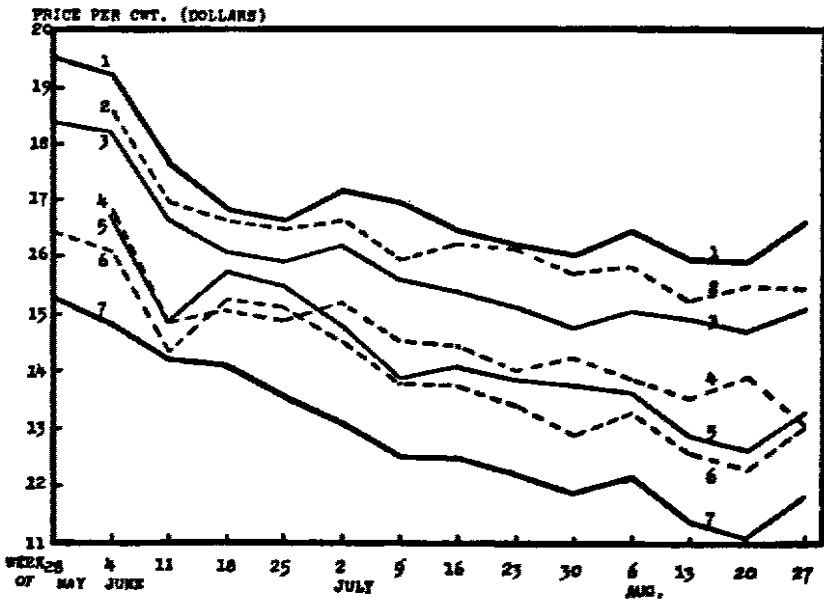


Figure 8. Average weekly prices by grades of ewe and wether lambs sold at local markets in Central Kentucky in 1928. 1, Prime; 2, Choice; 3, Good, 73-82 lbs.; 4, Good, under 73 lbs.; 5, Fair, 73-82 lbs.; 6, Fair, under 73 lbs.; 7, Common.

\$2.45 and \$3.25, respectively, below choice grades. (See Tables 3 and 4.)

The three highest grades, prime, choice and good (73 to 82 pounds), sold at prices which show more regular margins throughout the season than those of the lower grades. It is possible to grade these lambs more uniformly because of the larger number, and competition for them is very keen. Eastern packers are the important buyers of these high-grade lambs.

The margin between choice lambs and the low grades, fair and common, varies greatly from time to time. The price of low-grade lambs shows less uniform relationship to prices of high-grade lambs because of the greater variation in quality and finish within the low grades. Demand is also less regular.

There is a tendency for the margins between choice and low grade lambs to widen as the season advances. In June, 1928, common lambs sold for prices which averaged \$3.08 lower than the price for which choice lambs sold. In August, on the other hand, they sold for \$3.88 below the prices of choice lambs.

Prices of ewe and buck lambs by grades.

Prices of ewe and buck lambs also differ greatly between grades, as is illustrated in Figures 9 and 10. The prices of good ewe and buck lambs weighing 73 to 82 pounds, sold at local auction markets, are used as a basis for the comparison of prices by grades which follows.

Table 3. Average difference in price per hundredweight between choice ewe and wether lambs and ewe and wether lambs of other grades sold at local markets in 1927.

Month	Prime (dollars)	Choice	Good 73-82 lbs. (dollars)	Good Below 73 lbs. (dollars)	Fair 73-82 lbs. (dollars)	Fair Below 73 lbs. (dollars)	Common (dollars)
June	+ .39	-	- .39	- .73	- 1.45	- 2.11	- 2.73
July	+ .34	-	- .34	- .68	- 1.32	- 2.03	- 2.64
August	+ .31	-	- .34	- 1.01	- 1.65	- 2.47	- 3.20
Season	+ .31	-	- .30	- .68	- 1.33	- 2.23	- 2.98

Table 4. Average differences in price per hundredweight between choice ewe and wether lambs and ewe and wether lambs of other grades sold at local markets in 1927.

Month	Prime (dollars)	Choice	Good 73-82 lbs. (dollars)	Good Below 73 lbs. (dollars)	Fair 73-82 lbs. (dollars)	Fair Below 73 lbs. (dollars)	Common (dollars)
June	+ .28	—	— .88	— 2.08	— 1.28	— 2.34	— 3.08
July	+ .43	—	— .67	— 1.69	— 2.12	— 2.38	— 3.63
August	+ .64	—	— .64	— 1.81	— 2.34	— 2.72	— 3.53
Season	+ .45	—	— .72	— 1.84	— 1.90	— 2.45	— 3.52

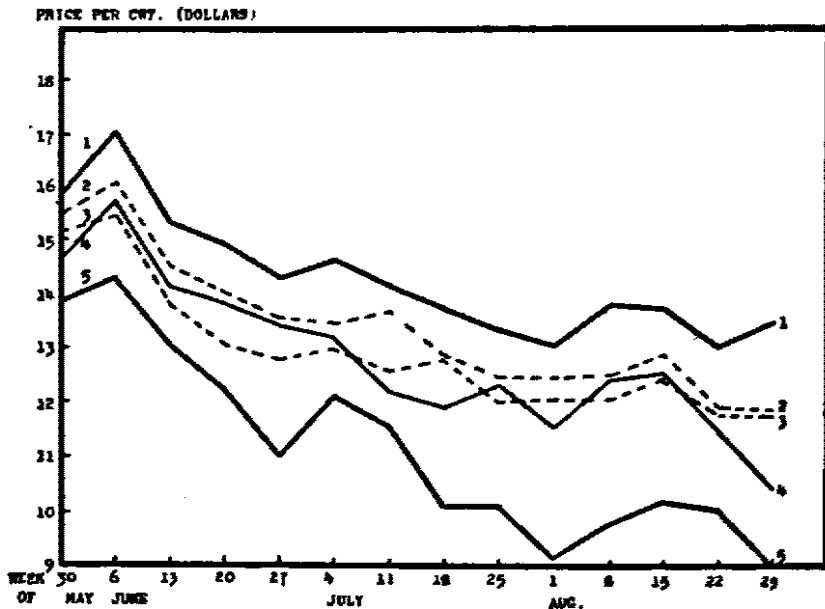


Figure 3. Average weekly prices by grades of ewe and buck lambs sold at local markets in Central Kentucky in 1927. 1, Good, 72-82 lbs.; 2, Fair, 73-82 lbs.; 3, Fair, below 73 lbs.; 4, Fair, above 82 lbs.; 5, Common.

In 1927 fair ewe and buck lambs weighing 72 to 83 pounds averaged \$.94 lower in price than the good ewe and buck lambs of the same weight. Fair ewe and buck lambs below 73 pounds,

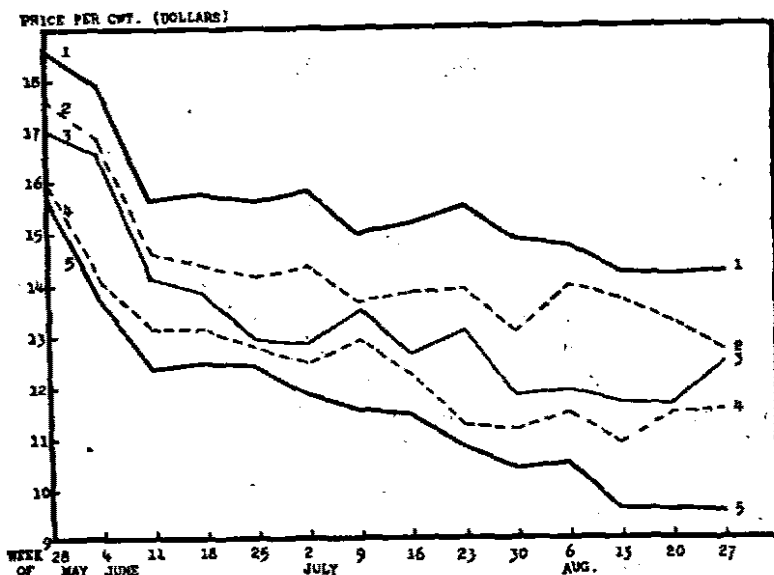


Figure 10. Average weekly prices by grades of ewe and buck lambs sold at local markets in Central Kentucky in 1928. 1, Good, 73-82 lbs.; 2, Fair, 73-82 lbs.; 3, Good, below 73 lbs.; 4, Fair, below 73 lbs.; 5, Common.

averaged \$1.42 less than the good grade of 72 to 83 pounds; fair lambs above 83 pounds averaged \$1.49 less, and common ewe and buck lambs were sold on the average \$3.15 below the good grade. (See Table 5.)

There were not enough fair ewe and buck lambs over 83 pounds in 1928 to allow an analysis of this grade, but in addition to the other grades mentioned above, good light ewes and bucks weighing below 73 pounds were included. In 1928, the prices of good ewe and buck lambs weighing less than 73 pounds averaged \$2.24 below the good 73 to 82 pound lambs. These good light lambs usually show good conformation and quality, but are lacking in weight and condition. The fair ewe and buck lambs weighing 73 to 82 pounds, which are lambs of only fair conformation and quality but in good condition, were only \$1.24 below the good lambs of 73 to 82 pounds. Prices for fair light ewe and buck lambs (below 73 pounds) and common ewe and

buck lambs averaged \$3.04 and \$3.96 lower, respectively, than prices of good lambs weighing 73 to 82 pounds.

Choice ewe and wether lambs represent a grade which producers can attain with well bred lambs. Not only must the lambs be well bred but good sheep husbandry practices must be followed in order to produce lambs of this quality. In one sense a choice grade of ewes and wethers is a goal which producers of Kentucky lambs can strive for. Prices of good ewe and buck lambs sold at local markets in 1927 and 1928 averaged 94 percent while common ewe and buck lambs were only 72 percent of the price received for choice ewe and wether lambs. When the ewe and buck lambs are compared directly with the same grade of ewes and wethers, the former sell at from 3 percent in the case of good, to 7 percent in the case of common, below the latter. Undoubtedly if the buck lambs had been castrated, properly fed and cared for, they would have netted the producer better returns.

Table 5. Average difference in price per hundredweight between good ewe and buck lambs and ewe and buck lambs of other grades sold at local markets in 1927.

Month	Good 73-82 lbs.	Fair 73-82 lbs. (dollars)	Fair Below 73 lbs. (dollars)	Fair Above 83 lbs. (dollars)	Common (dollars)
June	—	-.30	-1.42	-1.16	-2.80
July	—	-.37	-1.40	-1.55	-2.97
August	—	-1.12	-1.42	-1.75	-3.25
Season	—	-.34	-1.42	-1.40	-2.15

As in the case of ewes and wethers, the spread between the different grades of ewe and buck lambs increases as the season progresses and for the same reasons. This is illustrated by Figures 9 and 10 and Table 5.

#### TIME OF MARKETING AND ITS RELATION TO GRADE AND PRICE.

A significant feature of the data thus far presented is the

(gradual increase in the spread in price between the high and low grades as the marketing season progresses.) Prices for all low grades and qualities are relatively lower at the close of the season than at the beginning.) Two explanations may be given for this situation; first, a relatively larger proportion of Kentucky lambs fall into the lower grades late in the season, and, second, the competition from other areas becomes relatively greater for these grades of lambs.

The number of lambs in the low grades was relatively much greater at the close of the 1928 season than at the beginning.

Table 6. Receipts of ewe and wether lambs at local markets in 1928 giving percentage distribution by grades for each two weeks period.

Date	Prime	Choice	Good 73-82 lbs.	Good 72 lbs. down	Fair 73-83 lbs.	Fair 62 lbs. down	Com- mon
May 28-June 9	8	17	48	1	13	5	8
June 11-23	4	23	33	3	13	14	10
June 25-July 7	4	23	37	4	10	13	11
July 9-21	3	19	35	6	11	14	13
July 23-Aug. 4	1	19	36	4	11	14	15
Aug. 6-18	3	15	37	6	14	15	11
Aug. 20-Sept. 1	2	15	33	7	9	15	20
Season Average	3	18	36	5	11	14	13

The percentage of ewe and wether lambs grading Prime, as illustrated in Table 6, was 8 during the two weeks, May 28 to June 9, 1928, and 2 during the two weeks, August 20 to September 1, while for the same period the percentages grading Common were 8 and 20 respectively. Similar data for 1927 show that the low-grade lambs had relatively greater competition for a satisfactory market outlet and that the position of good-quality lambs strengthened as the season progressed. Moreover, the weight of lambs, a factor very closely related to quality, as previously pointed out, was more satisfactory from the consumers' and buyers' point of view early in the season when a

much larger proportion of lambs weigh between 70 and 80 pounds, the weights which command the best prices, than in the late summer and fall. Lambs marketed in May, 1927, at the local auction markets averaged 75 pounds while in October they averaged 70 pounds. In 1928, the decline was from 77 to 66 pounds for the corresponding period.

The competition from other lamb-producing regions also becomes increasingly keen after the last of June. This not only causes the price of all lambs to decline but depresses the price of low grades relatively more because of the relatively large supply of lambs of this quality that come in competition with Kentucky lambs. Beginning in July, it will be noted from Figure 11, the total number of lambs marketed in the United States rises substantially over the number marketed in June or May and that the supply rises sharply until the maximum is reached in October. Moreover, the sources of these greater receipts are chiefly the intermountain states. At this time their flock management and feeding conditions are more nearly comparable to Kentucky sheep raising conditions than earlier in the season. There is, consequently, relatively greater competition for the medium and low-quality lambs produced in Kentucky late in the marketing season.

These data are very significant for Kentucky agriculture. They indicate rather clearly that the State's principal advantage in spring lamb production is in producing lambs of high quality. Since the luxuriant native grasses and the mild spring weather of Kentucky are favorable conditions for the production of good lambs, farmers who have available farm equipment and bluegrass pastures will probably continue to be well compensated for any additional expense incurred in marketing lambs early in the season. Farmers, on the other hand, whose resources favor later marketing will also find that the observance of good flock management practice will result in substantially higher prices.

Sheep producers must not, of course, overlook other factors that determine lamb prices, in planning their production and

marketing programs. Another important factor is the seasonal movement of prices. During the two years included in this study, lamb prices for all grades were highest in May and de-

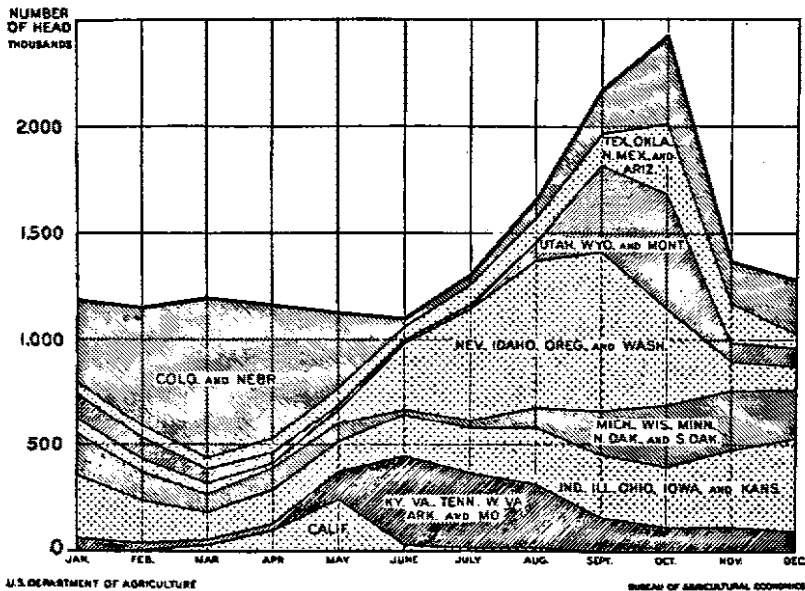


Figure 11. Origin of market receipts of sheep and lambs by months in 1926.

clined during the remainder of the Kentucky lamb marketing season. Fat lamb prices have shown a similar seasonal movement over a longer period of years. In the ten-year period, 1919-28, fat lamb prices at Chicago averaged \$14.70 in May, \$14.42 in June, \$14.30 in July, \$13.61 in August, and \$13.35 in September. It is a fortunate coincidence that the level of prices is highest at the time of year when natural advantages favor the production of high-quality lambs in Kentucky. In view of the above circumstances sheepmen should consider carefully the possibilities of breeding and finishing lambs that are now marketed in August and September for an earlier market.



**RELATION OF PRICE TO QUALITY OF LAMBS IN OTHER LOCAL MARKETS.**

Data are not available to analyze the relation of prices to quality of lambs in other local livestock markets outside of the territory served by the local auctions because livestock dealers do not keep sufficiently detailed records. It may be assumed, however, that because local traders observe the standards adopted by central market dealers, the basis of purchase can be no better and frequently is far less discriminating, so far as quality and price are concerned, than that which prevails in the central markets. For this reason and because much livestock is now sold by farmers in the central markets, an analysis was made of the relation between price and quality of Kentucky lambs in the two principal markets for Kentucky livestock, Louisville and Cincinnati.

**QUALITY AND PRICE OF KENTUCKY LAMBS AT LOUISVILLE**

Data were obtained on the sale by grades at Louisville for 38,037 lambs in 1927 and 27,946 lambs in 1928. The grades used at this market, "Tops," "second" and culls, do not correspond to those used at the local auction markets. The chief grade, commonly called "Tops," consists of choice ewe, wether and buck lambs ranging in weight from 60 to 90 pounds. Finish and quality are the chief grade factors. Within this grade some consideration is given to sex altho the sorting on this basis is less discriminating than at the local auction markets, buck lambs frequently being included with ewes and wethers. At the auction markets there is a more pronounced tendency to keep the bucks separate from the wethers altho including them with the ewe lambs. Generally speaking, ewes and wethers within this grade commanded a premium of approximately 50 cents per hundredweight over lots consisting of ewes, wethers and bucks. The discrimination of dealers in sorting lambs for sale was not sufficiently consistent, however, to permit statistical demonstration of the premiums paid for the various qualities marketed within this group.

The other principal quality group consists of low-grade and

PRICE PER CWT. (DOLLARS)

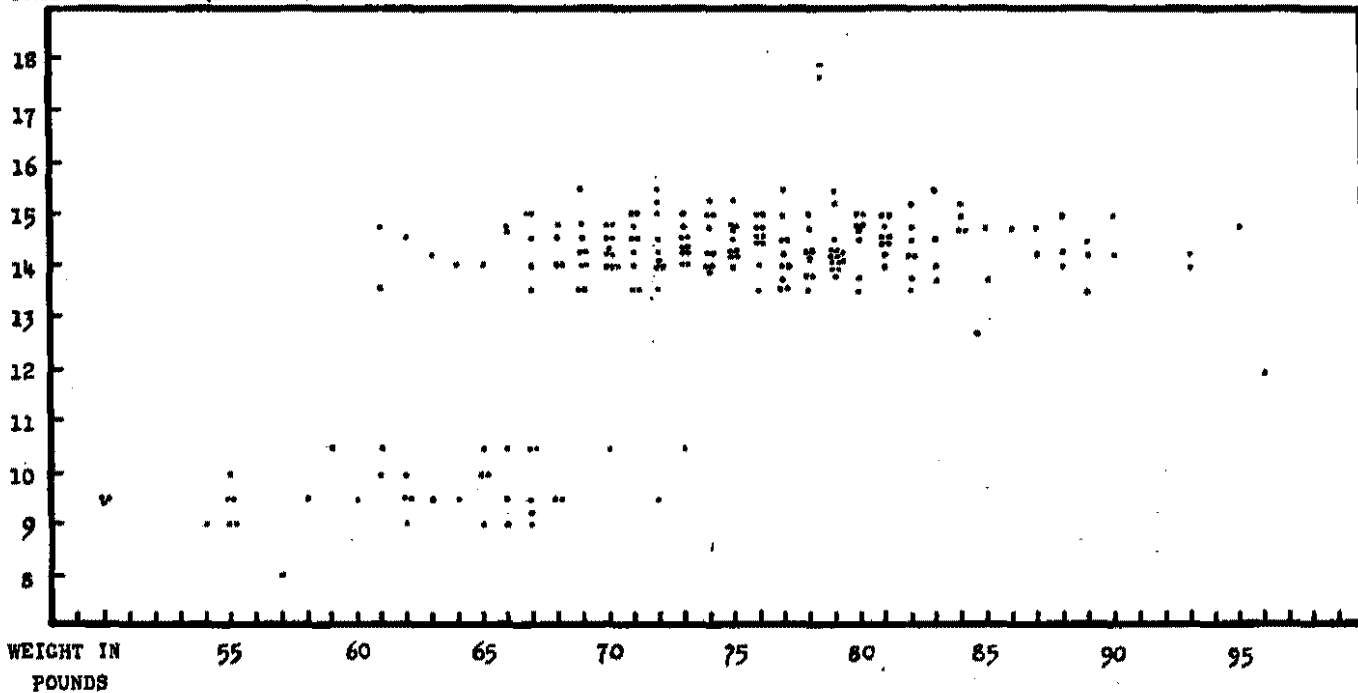


Figure 12. Relation of weight to price of lambs sold at Louisville from June 20 to July 9, 1927. Each dot represents one lot. Total, 189 lots, 4,492 lambs. Average number of lambs per lot, 24. Average weight per head, 76 pounds. Average price \$14.09 per cwt.

PRICE PER CWT. (DOLLARS)

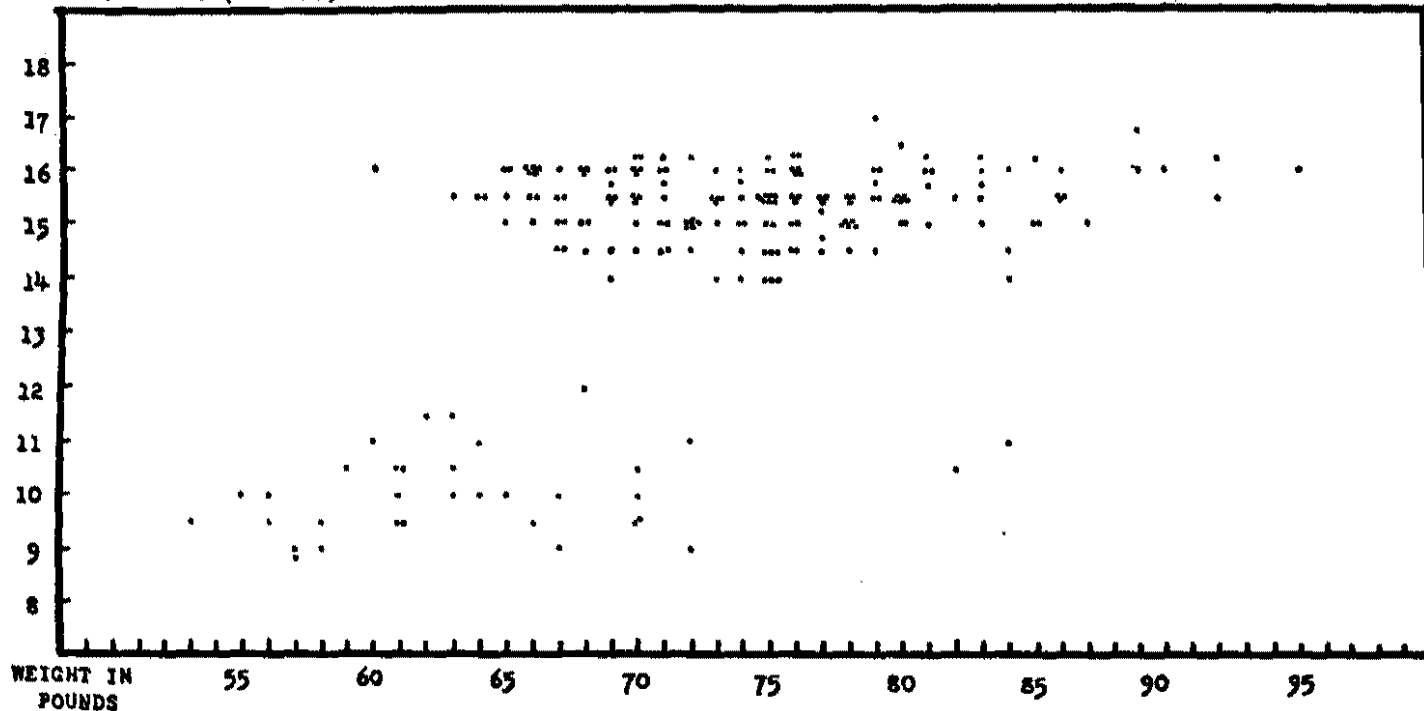


Figure 13. Relation of weight to prices of lambs sold at Louisville from June 13 to July 7, 1928. Each dot represents one lot. Total 313 lots, 4,804 lambs. Average number of lambs per lot, 23. Average weight per head, 74 pounds. Average price \$15.00 per cwt.

cull lambs which sell for comparatively low prices. The prices of lambs in this group, like those for lambs classed as "tops," do not arrange themselves into groups that seem to have any relation to different qualities of lambs. This situation may be due partly to the lack of sufficiently detailed information in the dealers' records, altho it seems likely that it may be attributed in considerable part to a lack of careful sorting of lambs for quality in preparing them for sale. That there is some sorting of lambs for quality is shown by the range in prices within the two groups. In the upper group the range in price is about \$2.00 per hundredweight (see Figures 12 and 13) and approximately \$1.50 per hundredweight in the lower group.

Another significant feature is that there is a price range between the higher and lower grades in which practically no lambs are sold. Thus in 1927, during the period studied, all sales, with one exception, were within the ranges of \$13.50 to \$15.50 or \$10.00 and less. Only one sale was made between \$10.50 and \$13.50. Considering the wide range in quality that was observed on the market, these data indicate that lambs of high and low quality were combined with those of medium quality within the general range to which they belong.

Weight, it will be noted by reference to Figures 12 and 13, is a relatively unimportant factor in this market. Lambs included in the low quality lots have a lower average weight than those in the better group but this is explained by the close correlation between weight and conformation, finish and other characteristics of quality, rather than to a definite policy of discrimination on the basis of weight as a quality factor.

#### **QUALITY AND PRICE OF KENTUCKY LAMBS AT CINCINNATI.**

Data available for Kentucky lambs sold at Cincinnati, presented in Figures 14 and 15, show that weight is taken into consideration when selling lambs in that market altho, judging by the wide variation in the price of the various weight groups, it is not a very important factor and such characteristics as grade, sex, and the like are probably more significant in determining price. These other factors and their relative importance can

PRICE PER CWT. (DOLLARS)

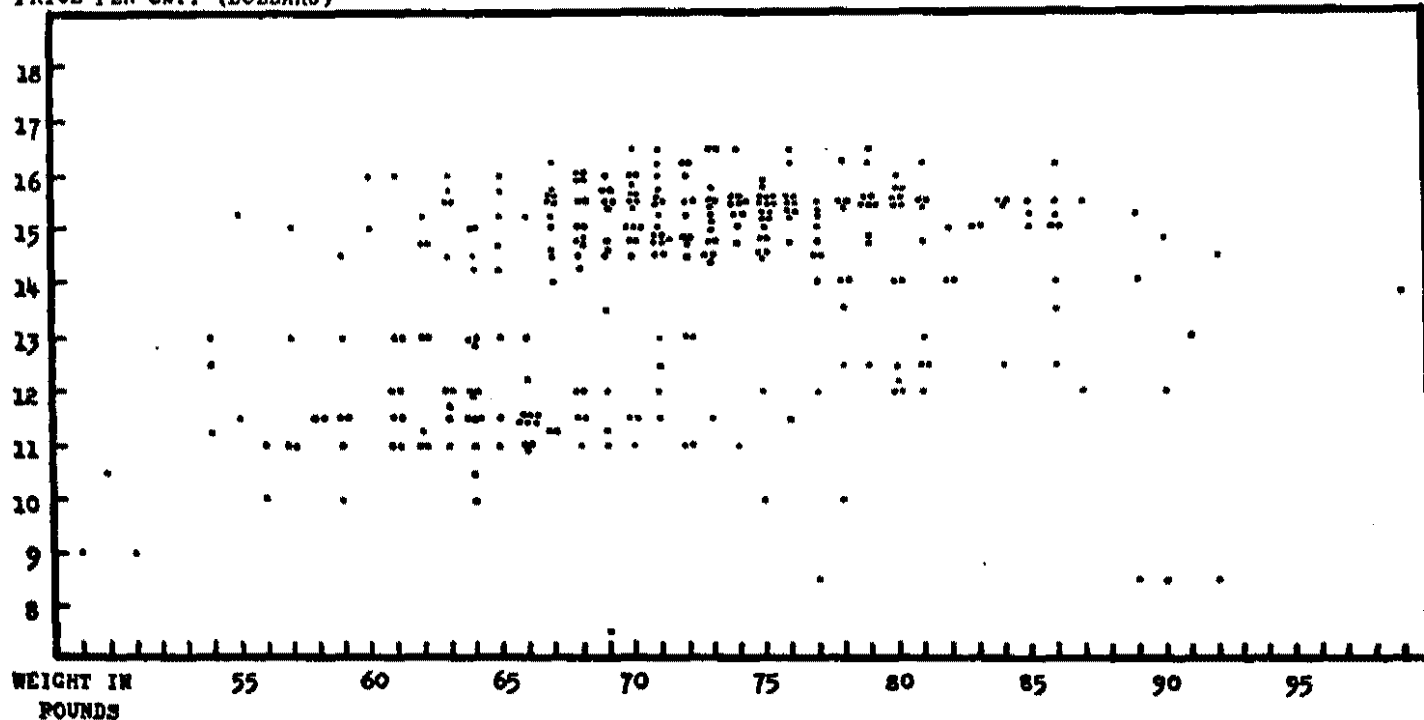


Figure 14. Relation of weight to price of lambs sold at Cincinnati from June 30 to July 9, 1927. Each dot represents one lot. Total 303 lots, 11,338 lambs. Average number of lambs per lot, 38. Average weight per head, 71 pounds. Average price \$14.79 per cwt.

PRICE PER CWT. (DOLLARS)

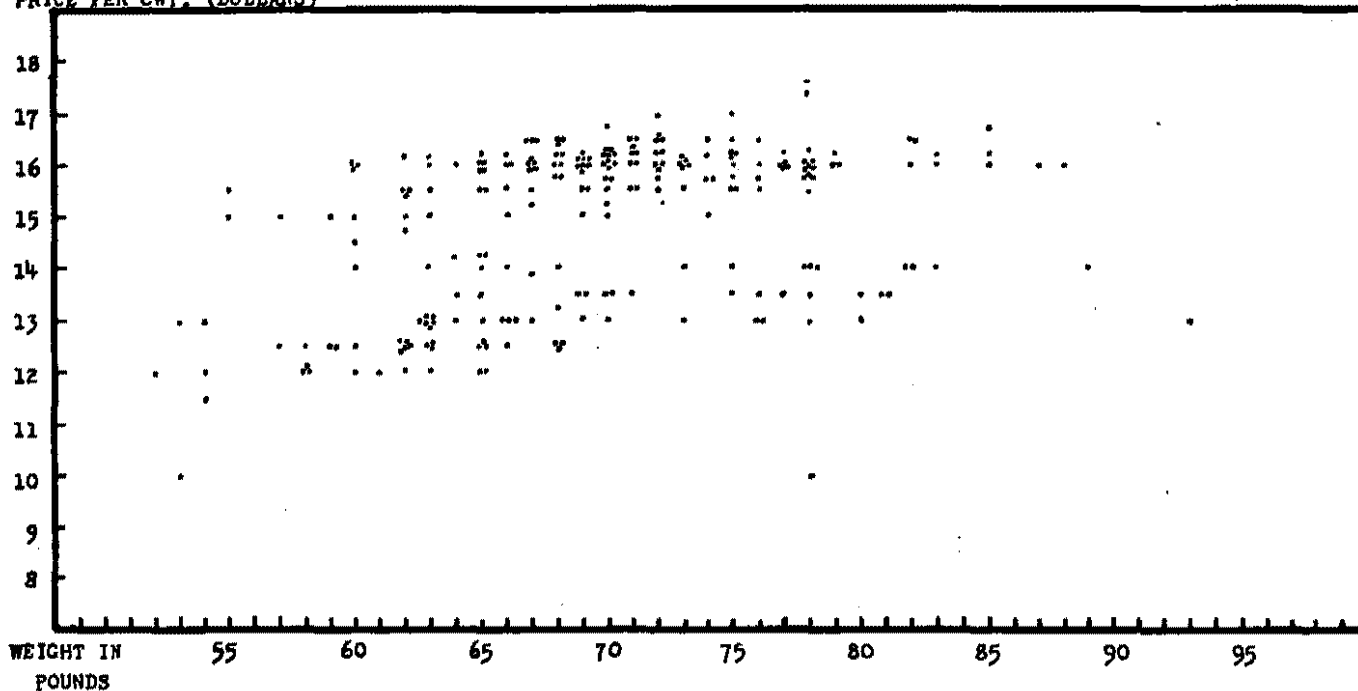


Figure 15. Relation of weight to price of lambs sold at Cincinnati from June 18 to July 7, 1928. Each dot represents one lot. Total 239 lots, 8,608 lambs. Average number of lambs per lot, 28. Average weight per head, 69 pounds. Average price \$14.68 per cwt.

not be demonstrated, however, since commission dealers do not preserve records of grade, sex, finish or other characteristics of lambs that they sell.

Generally speaking, the evidence available for this market indicates that the policy of grading is not greatly dissimilar to that of other central livestock markets. There is some grading but, as discovered by examining the data in Figures 14 and 15, there is not a sharp differentiation of the various characteristics of commercial value in sorting and grouping lambs for sale. The tendency, altho less pronounced at Cincinnati than in some other markets for which information is available, is to sort lambs into two general groups by including the superior and inferior animals with the medium quality within the general quality range to which they belong.

#### CONCLUSION.

This study of the relation of quality to price of lambs presents several significant conclusions:

1. Quality is an important factor in determining lamb prices. Sex, weight, conformation and finish are the principal characteristics that are given consideration. Ewe and wether lambs are generally given preference over ewe and buck lambs, particularly late in the season, and the discrimination against bucks would doubtless be more apparent if buck lambs were sold separate from ewes. Medium-weight lambs generally command a premium over those of light or heavy weights. Likewise the lambs with broad, deep, medium-length bodies, well-developed legs, and finished with a good covering of fat sell for best prices. Expressed in terms of market grades, best prices are generally paid for prime and choice lambs, either ewe or wether, weighing from 70 to 80 pounds.

2. High-quality lambs not only command a premium under ordinary marketing conditions, but also sell at relatively better prices than low-quality lambs as a marketing season progresses. The premium paid for ewe and wether lambs as well as for high-grade lambs is much larger toward the close of a marketing season than at the beginning. These are very

significant facts for Kentucky lamb producers because they emphasize the importance not only of producing lambs for the early market when high-quality lambs can be produced to the best advantage in Kentucky, but also of adopting good flock practices when producing lambs for the late markets.

3. Prices paid for lambs are related to the various quality characteristics in varying degrees at different markets. This situation may be accounted for in part by the different emphasis which buyers give to the same quality factors in different markets, altho it is probable, since most of Kentucky lambs are destined for the same consumer lamb market, that the chief reason is variation in selling practices. Various marketing agencies, including traders, auction companies and commission dealers, follow different market policies in sorting and grouping lambs for sale. To the extent that lambs are not classified according to any one or all of these factors there is no relation between quality and price.

4. It is important that any marketing system be organized in such a way that buyers preferences may be accurately reflected in prices paid for products at each stage in the marketing process. Such an organization is advantageous to lamb producers, dealers and consumers. It not only indicates consumer market requirements to producers but also compensates them for the additional trouble and expense necessary in meeting such requirements. It is advantageous to dealers in that an important source of the criticism of middlemen is eliminated and in that their market will receive its share of lambs of different quality. Consumers are assured a supply of lamb of the quality demanded. Markets that grade produce poorly and mingle high quality with low quality products almost invariably receive more than their share of products of low quality, thus acquiring a reputation for handling products of such character, which works to their own disadvantage so far as obtaining satisfactory outlets and prices is concerned. The only important advantage that livestock dealers may realize from poor sorting and grading



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is from the superior bargaining that comes as a result of the confusion as to the basis of sale which is created thereby.

5. Cooperation of all livestock marketing agencies is essential to develop and maintain a market organization in which prices at each stage of the marketing process are closely correlated to consumers' preference for meats. The first step in obtaining such an organization for lamb marketing is the promulgation of a satisfactory set of grades. Livestock exchanges in various markets have developed grades and more recently the United States Department of Agriculture has promulgated federal grades, but these different systems of grades have not gained general recognition by livestock traders and have been used chiefly for quotations. Grades are needed that will better express market requirements. The Division of Livestock, Meats and Wool of the Department of Agriculture is continuing its research along this line with a view ultimately to better adapt the lamb grades to livestock market practices.

The second step in this program is the observance of market grades by all livestock marketing agencies in lamb marketing. Universal acceptance is important since the objective of grading is not realized just to the extent that farmers, dealers, meat packers and retail butchers fail to recognize commercial qualities in buying, selling and handling lambs and lamb products. There are, it must be recognized, practical limits to the number of grades that can be used in individual markets. Large volume permits of more grades than small volume. Markets with abundant facilities can sort and grade in recognition of a wider range of quality than those whose stockyard equipment is limited. On the other hand many Kentucky markets can sort and grade livestock better without appreciable increase in cost. The insistence of livestock producers for this service and a willingness of dealers to give it, is all that is necessary in most instances. When farmers and dealers once accept grades and adjust their marketing practices to a grading system the livestock marketing system will function much better in establishing prices that relate more closely to consumer preference, and its influence in directing and controlling production will accordingly be much more effective.