

BULLETIN
OF THE
Agricultural Experiment Station
OF THE
UNIVERSITY OF TENNESSEE



NUMBER 84

MARCH 1909

SHEEP AND LAMBS IN TENNESSEE

A PRELIMINARY REPORT

BY

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The Agricultural Experiment Station

OF THE UNIVERSITY OF TENNESSEE

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Bulletins of this Station will be sent, upon application, free of charge, to any farmer in the State.

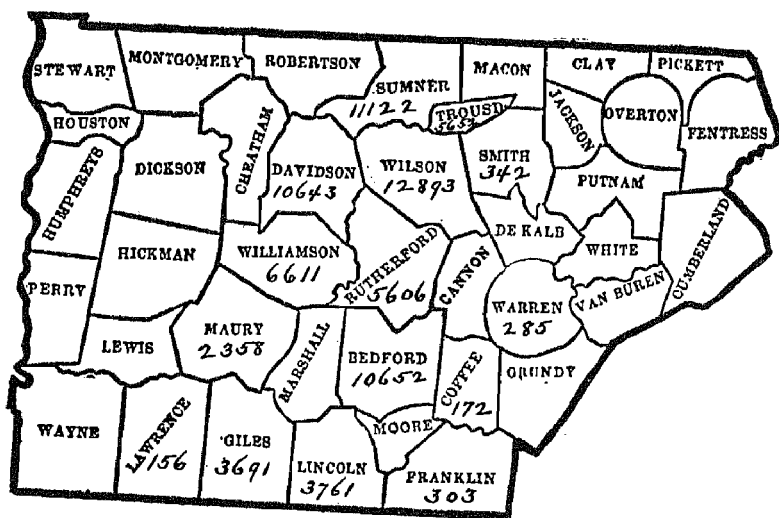
SHEEP AND LAMBS IN TENNESSEE

A PRELIMINARY REPORT

Lamb production in Tennessee for the early market has developed largely during the past four or five years, having reached its maximum during the seasons of 1907 and 1908.

AREA AND SCOPE OF PRODUCTION

The counties of Tennessee which produce lambs for the early spring market in large enough numbers to merit comment are given in the table on page 90, with the numbers produced in each of the seasons, 1907 and 1908, together with the principal shipping points in each of the counties, with the numbers shipped from each.



MAP SHOWING NUMBERS OF LAMBS SHIPPED FROM MIDDLE TENNESSEE COUNTIES TO LOUISVILLE MARKET IN 1908

Sheep and lamb shipments of 1907 and 1908, classified by counties and shipping points

County	Shipping point	1907	1908	Total 1907	Total 1908
Wilson	Silver Springs	688	463		
	Lebanon	10840	11201		
	Mt. Juliet	802	1220	12330	12893
Bedford	Wartrace	2952	3574		
	Bellbuckle	5401	3530		
	Shelbyville	4114	3548	12467	10652
Davidson	Nashville	8316	9973		
	Edgefield Jc.	1102	870	9418	10843
Maury	Columbia	7793	1179		
	Mt. Pleasant	300	1179	8093	2358
Jefferson	New Market	181		181	
Haywood	Brownsville	119			
	Portland	300		419	
Sumner	Gallatin	9431	11122	9431	11122
Warren	Morrison	780	285	780	285
Hardin	Petersburg	3072	1540	3072	1540
	Prospect	422			
	Aspen Hill	303			
	Wales	196	263		
	Lynnville	2840	3428	3770	3601
Williamson	Callender	479			
	West Harpeth	3766	3369		
	Thompsons Station	2150	1541		
	Franklin	3450	1701	9845	6611
Rutherford	Smyrna	436	436		
	Murfreesboro	1902	3697		
	Hendersonville	318	1473	2220	5606
Troutdale	Harrisville	4496	5052	4496	5052
Lincoln	Fayetteville	3832	2886		
	Howell	808			
	Kelso		1029		
	Coldwater		346	4730	3761
Hamilton	Avondale	250		250	
Henry	Puris		228		228
Franklin	Maxwell		303		303
Obion	Obion		116		116
Smith	Bush Creek		200		
	Lancaster		142		342
Coffee	Tullahoma		172		172
Lawrence	Lawrenceburg		156		156
				81947	76331
Shipped to Louisville from Tennessee.....				89127	89247
Shipped to St. Louis from Tennessee.....				25467	37680

In this table there is no distinction made between sheep and lambs, because the terminal books of the Bourbon Stock Yards at Louisville, from which these data were gathered, did not show in the statements of car lots whether a car contained all sheep, all lambs, or both. The greater proportion were lambs, but just what the percentage is can not be known.

The table shows that the greatest production of sheep and lambs in Tennessee is centered in about 11 counties in the middle portion of the State. These are listed as follows, in the order of production: Wilson, Bedford, Davidson, Sumner, Williamson, Trousdale, Rutherford, Lincoln, Giles, Maury, and Hardin—this last county having a production of 1540

sheep and lambs. The aggregate for the year 1907 shipped through the Louisville market was 89,127, and for the year 1908, 89,247. It will be noticed that the total for the counties for the year 1908 is not so great as in the previous year; yet the total for the State is greater by 120. This is accounted for by the isolated cars and mixed cars of sheep and hogs indicated by the terminal books of the Bourbon Yards as coming from various parts of the State, which were too numerous to be given space in the table showing the production of counties. It will be further noted in the table that the shortage in the county aggregate for 1908 is caused by the increased shipments at some of the points of largest shipment the previous year. This deficit is made up, however, by scattered shipments from various parts of Middle and West Tennessee, showing that sheep raising is becoming more generalized. The variation in shipments from year to year emphasizes the fact that the sheep business is run largely upon a speculative basis. In other words, the sheep are bought, bred, and largely sold the same year; and the lambs produced are not the result of systematic flock husbandry.

This table does not take into account the shipments to Cincinnati or St. Louis. Shipments to Cincinnati are probably small, but in the Louisville market, according to the books of the National Stock Yards of East St. Louis, there were received in 1907, 25,467 sheep and lambs, and in 1908, 37,680. It was impossible to get the numbers shipped from the various points in Tennessee, as in the report from the Louisville market.

MARKET DEMANDS AND CONDITIONS

With the first warm days of spring in the Northern and Eastern States—more especially the latter—there arises a strong demand for the lamb chop, or the conventional leg of mutton. As the demand seems to be associated with the temperature, the opening of the lamb market depends somewhat upon the season. The American people have not yet developed a standardized taste for mutton as they have for other meats; consequently the visible supply gives but little indication as to the demand, or as to the prices that will prevail when the market opens. Therefore the lamb producer feels but little surprise at the wide and wholly unaccountable variations that the market exhibits from season to season. For example, in the season of 1907 lambs sold at phenomenal prices. Veal, which occupies the same position as mutton with reference to supply and demand, was correspondingly low. In 1908 the supply of both lambs and calves was practically the same as in 1907; the consumer clamored for veal at exorbitant prices, while the lamb sold in some instances at from three to four cents lower than in 1907. It may be said, however, that while the slump in prices in the season of 1908 was in many cases disastrous to the dealer and speculator, the entire lamb crop of Tennessee, numbering over 100,000, was cashed in at a wide margin of profit to the Tennessee farmer who produced them.

THE SPRING LAMB

According to court ruling, a spring lamb is one born after January 1 and offered for sale as a spring lamb only on the spring market immediately following. A court made this ruling in a suit brought against a producer who filled his dealer's contract with lambs born in November and December. The Tennessee lamb will bring the best price between May 25 and June 15. This period varies somewhat, depending upon the weather conditions of the North and East. After June 15 the Kentucky lamb becomes an active competitor and prices become lower.

From the reports of farmers living in various parts of the sheep-raising area, there is little doubt that the early lamb business is the most profitable of all lines of stock husbandry in Tennessee. The Tennessee lamb must always sell for a good price for the reason that Tennessee, owing to peculiar geographical and climatic conditions, is enabled to place her lamb crop on the market at least two weeks before Kentucky and Virginia, her most active competitors. These States are strong competitors because they produce lambs of higher quality and better finish. This is due to better breeding. The lamb crop of these States is produced largely from pure-bred or high-grade sheep of Down breeding.

The spring lamb of Tennessee represents a cross between a sire of Down breeding and a native or a Southern ewe. The Southdown seems to be the most popular, although the Shropshire and Oxford are used in certain localities. The spring lamb ranges in weight from 65 to 90 pounds. The "Easter" lamb weighs from 40 to 45 pounds. When killed for the Eastern market the pluck is not removed. The dressed weight in this case is from 55 to 57 per cent. When killed for the St. Louis or Chicago market the pluck is removed and the dressed percentage is from 51 to 53. The dressed percentage is computed upon the weight as paid for by the killer. The lamb is usually slaughtered not later than twelve hours from the time of purchase. Twenty-four hours are required in shipment from Middle Tennessee points to Louisville. The shrinkage in this shipment is from 6 to 10 per cent. The greater number of the lambs are sold to dealers in Louisville, and by them reshipped to Northern and Eastern killers.

All shipments to Eastern and Northern markets from Louisville are made on foot. Sheep sold on the St. Louis market are slaughtered and shipped to Northern points by refrigerated freight.

THE EASTER LAMB

The market opens with what is known as the "Easter" lamb, which is one of good quality, weighing from 40 to 45 pounds, or never more than 50 pounds. The 40-pound lamb is preferred by the retailer for the reason that it is bought from the producer by the pound and sold to the consumer by the "cut." A cut from a 60-pound lamb will bring no more than a cut from a 40-pound lamb; hence from the butcher's standpoint the lighter the lamb the better.

The Easter lamb holds the same position in the sheep market that the

Christmas steer holds in the beef market. Much undue prominence has been given to it by reason of the high prices that have been paid. The Easter lamb sells at from 9 to 12 cents, but as with the Christmas beef a few loads will supply the demand and the coveted prize will be captured by only a few fortunate shippers; the remainder, if any, being a drug on the market. The Easter lamb should mean little to the sheep grower because it does not pay to market a lamb at 40 pounds. It must be remembered that the lamb at 40 pounds still owes the debt of its birthright, because a ewe has been maintained the entire year in order to produce it, and the lamb may be made to weigh 80 pounds at practically the same cost as the 40-pound lamb.

BREEDING AND FEEDING

Sheep are not handled in the same way in all parts of the sheep-growing area of Tennessee. It is the common practice in the counties north and east of Nashville to purchase the native, or mountain, ewe in the latter part of July or early in August. These ewes are bred to a pure-bred Southdown ram, the object being to have the lambs dropped through January and February and finished for shipment as soon as the market opens in the spring.

The mountain, or native, ewe is bred largely upon the Cumberland Plateau or the Highland Rim. She is an upstanding, heavy-boned sheep. The face and legs are white and destitute of wool; in this respect she somewhat resembles the Leicester. She is rather long in body, inclined toward peakiness. She is exceedingly rugged in constitution, prolific, and a good mother. The lambs resulting from this cross are of exceedingly good type. They are strong, vigorous and growthy. As could be expected from a cross of extremely light bone and compact body, such as the Southdown, with the heavy-boned native, the bone of the lamb is medium. In the section of Tennessee indicated the ewe is largely sold with the lamb, and the following fall a new supply of ewes is purchased to produce the next lamb crop. Following this system, there is a wide margin of profit in the ewes, as they are bought in the fall at 95 and 100 pounds and sold with the lamb the following spring, weighing 125 to 135 pounds. After purchase the ewes are pastured on the permanent blue-grass and clover pastures or are allowed to run on the harvested fields. Winter cereals are planted for winter and spring pasture, such as oats, barley, wheat, vetches, and crimson clover. The sheep receive little if any grain feed. During periods of very bad weather they are run under a shed and fed hay or other roughage. In some instances a small grain ration of bran and corn is fed, but this is the exception rather than the rule. Some farmers feed tobacco dust or stems in the salt. In every case the results seem to be beneficial as a preventive for stomach worms.

South of Nashville, and in various other parts of the sheep-growing region, more or less use is made of the "Southern" ewe. The Southern ewe comes from the hill country of Mississippi, Alabama, or Georgia. It very much resembles the mountain ewe except that it is a much smaller and

finer-boned sheep. It does not have the constitutional vigor of the mountain sheep and is invariably infested with parasitic worms. The purchase price ranges from \$2.50 to \$4.50. When bred to a Down ram the Southern produces a medium to good lamb for the spring market. Some farmers say it is more profitable to buy these ewes than the more hardy mountain ewe, because of the lower initial cost, and because on good pasturage they will increase from a purchase weight of 80 or 90 pounds to 125 or 130 pounds when sold with the lamb in the spring. The average farmer, however, will always buy the native when possible. With the increase of the spring lamb trade the supply of native or mountain stock ewes soon became exhausted, and it became necessary to import the Southern and even the Western ewe. Some use is made of the Southdown ram, but the Oxford-Southern cross is said to make a heavier-boned, and more stocky lamb. South of Nashville the Oxford is largely used.

When sold with the lamb the ewe is generally unshorn. This, however, depends largely upon the price of wool. The clip of the native will run from $3\frac{1}{2}$ to 6 pounds. It is not a common practice to castrate ram lambs, but there is no doubt that it would pay to do so.

There have been few complaints of disease. This is no doubt due to the almost total shipment of lambs from the State prior to the season July, August and September, when maximum infestation takes place. Unsold late lambs invariably suffer from stomach and intestinal worms unless an effort is made to carry them upon a rotation of pastures which prevents the continuous reinfestation common on permanent pastures.

As the farmer appreciates more and more the specific relation of sheep husbandry to soil fertility and better farm economics, the demand for breeding ewes will not be met unless they are raised at home. In the attempt to raise flocks of breeding ewes on the farms of the State, stomach and intestinal worms will be found the chief barriers. These enemies of the flock can not be intelligently overcome without the shepherd's knowledge of the principal features of their life-histories and the application of this knowledge in provision for definite pasture rotations and the judicious feeding of tobacco. Maximum infestation occurs during the summer months, and adequate temporary pastures provided during the summer will insure minimum attack.

The margin of profit in the spring lamb business has been extremely wide—too wide to be continuous. Following the business as previously outlined, the grower can safely expect 100 lambs from 100 stock ewes, and frequently he gets 125. The only feed given is hay, permanent pasture, and the winter cereal pasture. In the gathering of these data only three men were found who fed any grain to either the ewe or lamb. Thus, when the farmer cashes in both ewe and lamb in the spring he makes a double profit. When estimated upon market values alone, the grower will average at least 100 per cent in the transaction. If estimated in terms of farm values, consideration being given to the increased fertility of the soil, the profits are much greater. In this connection, let it be said that the farm value is the only safe basis for estimates in any line of farming business.

As before stated, the spring lamb must always be an important factor in the sheep business of Tennessee because we can reach the markets two weeks earlier than our competitors. Tennessee has great areas of hill pastures admirably adapted to sheep raising and of very much less value for anything else. While the rich valleys of Middle Tennessee have been much improved by sheep husbandry, and while some sheep will always be raised there, it is the hill country of Tennessee that will produce the greatest number of sheep in the future.

With a production of about 100,000 the supply of native and Southern-stock ewes is drawn upon heavily, and because of the high prices of the breeding ewes, this supply is becoming less each year. This year several cars of Western ewes were imported and with them sheep scab, which caused not a little trouble and expense to the localities infected. When Tennessee produces one hundred times the present output, it is plain that some home breeding must be done. Importation of disease is not profitable, and the farmer would do well to anticipate the inevitable by starting a breeding flock. It is difficult to say without experimentation just what plan should be followed, but it would seem that a few of the best ewe lambs of the native Southdown cross should be selected, care being taken that they come from thrifty and fertile mothers. With these few ewes, the farmer should experiment with pasture and crop rotation until the cheapest and most effective plan is evolved. He should continue to use the Southdown until the bone becomes too fine, and in that event should make use of the Oxford or Hampshire for a time in order to increase the size.

Kentucky, our most active competitor, raises a better-bred lamb and feeds the ewe and lamb for finish. There is no doubt that a small grain ration fed to the ewe in the early spring before the grass becomes strong would cause a heavier flow of milk, and consequently a more growthy lamb. If the lamb, in the morning before going to pasture, could be induced to eat grain, provided in a creep, it would tend to produce better gains and prevent shrinkage in transportation. Grass-fed animals of any kind are notoriously poor travelers. In this investigation only three men were found who fed the ewe and lamb late in the season. All three expressed the opinion that the money put into feed was well spent. One of these fed corn and bran and the other two fed bran alone.

The great menace to lamb production in Tennessee is the worthless cur dog. The greater number of the canine population have no reason or excuse for being in existence other than misplaced affection on the part of their owners, which, however, would not stand the test of judicious taxation. In Middle Tennessee the sentiment of the people is against the dog. Here the yearly loss is heavy, but not so great as to be prohibitive. In other sections, where the profits of the business are not known, sheep raising is a hazardous proposition both to the sheep and the owner.

If the Station has the privilege of continuing these investigations, an effort will be made to conduct tests in the breeding and feeding of spring lambs, the results of which will be published in subsequent reports.

SPRING LAMB PRODUCTION IN MIDDLE TENNESSEE

In order to gather data on spring lamb production the Station sent out a circular letter to some fifty representative spring lamb producers in Middle Tennessee, with blanks as follows:

The Station will be glad to get opinions and reports from all sheep raisers in Tennessee.

LAMB FEEDER'S BLANK

Name P. O.

Co. Date

No. acres in farm No. acres in pasture.....

Nature of pasture: Hill, bottom, or woodland.....

Crops used for pasture, and treatment of same.....

Do you feed ewes and lambs otherwise than by natural pastures?.....

When do you feed? How do you feed?.....

What grain do you feed?..... Roughage?.....

.....If bought, cost per ton or bu.?

Total No. sheep on farm this year.....Rams Lambs.....

Ewes Breed of ram

Is he registered? Breed of ewes.....

How long is ram kept in service?

How many ewes per ram? Breed of ewes?.....

If grade ewe is most desirable, how long should grading be continued for best results?

What ewe is best suited to your purposes?

Why? How many ewes

did you purchase this year? How many were kept in your flock during the summer?.....

How were they handled on the pastures?.....

Kind of ewe purchased Price per head.....

Where purchased From
whom When
purchased When bred

How many did you sell with the lambs in the spring?.....

Reasons for selling ewes with spring lambs when others must be purchased
in the fall

Weight of ewes when purchased When sold.....

Price sold for Increase in weight of the Southern
ewe in 3 years on good pastures What class of ewes are most
subject to disease?

Weight of clip Price per pound received this year.....

How is same graded?.....

Per cent of lambs to ewes in flock.....

Date and No. of lambs each sale this year.....

State how these drafts were graded, and prices received for each draft
.....

What does the market demand in the early spring lamb?.....

Is there any difference made in wether lambs over ram lambs; and if so, is
there enough difference to pay for the trouble of castration?.....

What is the average shrinkage per lamb in shipment?.....

Does it pay to feed ewe and lamb to produce finish, and will such feeding
cause any decrease in the shrinkage in shipment?.....

Have you ever experimented in feeding?.....

With what results?.....

How do you handle your pastures in the summer season, and how long are the ewes kept on any one area?.....

What winter pasture crops do you plant, and what do you consider best suited to the purpose?

What was your loss from sheep-killing dogs this year?.....
Protection against dogs?

Do worms or other parasites give you any trouble, and how do you treat same?

Do you feed tobacco? How prepared?.....

In what quantity?

Do you own wagon scales?..... How far are you from shipping point? Give estimate of number of sheep raised in your county

Please give names and addresses of principal dealers and traders in live stock in your county.....

Give freight rates per car to Louisville, and No. sheep or lambs per car

To whom did you sell your lambs this year?.....

Remarks