II. RAISING EARLY LAMBS.

BY W. W. COOKE.

For many years there have been a few early lambs raised in Colorado. The large markets for early lambs—Chicago, New York and Boston—are so distant that Colorado can hardly hope to compete with the eastern states in supplying lambs in the spring to these cities. Kansas City and Omaha are near enough to be reached, but they are never able to handle very many lambs at one time and their total demand for early lambs is not large. The local market in Colorado is still more limited. It is evident, then, that not many people in Colorado can profitably engage in the raising of early lambs. But there is always a demand for some of these lambs and some one has to supply that demand. At the present time the attention of Colorado feeders is turned more particularly to the feeding of lambs raised in the south and west, because for them the market is almost unlimited and they can be handled by the thousands. The object of the present inquiry was to learn whether the small farmer can raise early lambs and realize as much for his labor and feed as his neighbor with the larger farm does with the older lambs.

During the summer of 1895 fifty ewes were purchased for the test. Half were grades of the Shropshire crossed onto the Merino, and the other half were Horned Dorset and Merino. They were a fine lot of ewes, all of them three years old, having dropped their second lamb the spring of 1895. They cost three dollars per head. Fifteen of the Shropshire ewes were served by registered Shropshire bucks, the other ten by registered Dorset bucks. Fifteen of the Dorset ewes were served by the Dorset bucks the other ten by Shropshire bucks. The lambs were dropped during January and February of 1896.

The fifteen Shropshire ewes that were served by Shropshire bucks dropped 14 lambs, of which 11 were buck lambs and 3 ewe lambs. The ten Shropshire ewes served by Dorset bucks dropped 13 lambs, 5 bucks and 8 ewes. The fifteen Dorset ewes served by Dorset bucks dropped 20 lambs, 16

bucks and 4 ewes. The ten Dorset ewes served by Shropshire bucks dropped 9 lambs, 5 bucks and 4 ewes.

To make the comparison a little easier to see, the above figures have been reduced to the basis of 100 ewes and give the following results:

	Lambs.	Sets of Twins.
100 Shropshire ewes served by Shropshire bucks dropped	94	7
100 Shropshire ewes served by Dorset bucks dropped	130	40
100 Dorset ewes served by Dorset bucks dropped	134	33
100 Dorset ewes served by Shropshire bucks dropped	90	0

Figured from the side of the ewe, 200 Shropshire ewes, half served by Shropshire bucks and half by Dorset bucks produced 224 lambs with 47 sets of twins. 200 Dorset ewes, with the same service produced 224 lambs with 33 sets of twins. Figuring from the side of the buck, 200 ewes, half Shropshire and half Dorset and all served by Shropshire bucks, produced 184 lambs with 7 sets of twins. 200 ewes, the same but served by Dorset bucks produced 264 lambs with 73 sets of twins.

It is evident from these last sets of comparisons that the prepotencey toward the production of twins lay with the bucks and not with the ewes. It is generally conceded that the Dorset is one of the most prolific sheep and the bucks ought to have had this quality more pronounced for they were pure bred while the ewes were grades.

So far everything seemed to favor the Dorsets as the more profitable sheep. But these lambs were dropped in the middle of winter and the twins did not seem to have the vigor to stand cold weather so well as those that had been born singly. Moreover the ewes seemed to be able to give an abundance of milk for one lamb but not enough for two.

The ewes were given grain, and a lamb creep was provided where cracked grain was kept all the time. The lambs learned to eat grain before they were a month old and after that, ate nearly as much as the ewes. Yet in spite of this the twin lambs did not do so well as the others and those that we lost were almost entirely from the twins.

We began selling March 10 and sent off the last May 21. The price was 15 cents per pound dressed weight.

The four sets of lambs of different parentage gave the following results:

Record for the Spring of 1896.

Dam.....	Sire.....	No. of Lambs.	Average Date of Birth.	Average Date of Sale.	Age in Days at Time of Sale.	Live Weight. Pounds.	Dressed Weight. Pounds.	Selling Price Per Head.
Shropshire	Shropshire	13	Feb. 1	April 20	79	47	22	$3 30
"	Dorset.....	10	" 3	" 25	82	48	22	3.30
Dorset.....	Dorset.....	15	" 9	" 16	67	47	22	3.30
" . ..	Shropshire	9	Jan. 22	" 3	72	51	23	3.45
Total and Average...		47	Feb. 1	April 16	74	48	22	$3.30

The reason that the dressed weights are so nearly equal, is that we sold from week to week, selecting the lambs as soon as they were large enough to dress over twenty pounds. We finally sold 47 lambs from the 50 ewes, of which 25 came from the twenty-five ewes that were served by Dorset bucks, while 22 were from the twenty-five ewes served by Shropshire bucks.

In the matter of rapidity of growth the ewe seemed to be the controlling factor, rather than the buck as might naturally have been expected. The lambs from Dorset ewes dressed 22 pounds by the time they were 69 days old, averaging 49 pounds live weight, while the lambs from Shropshire ewes required eleven days longer to reach the same weight.

Taking the whole experiment through, the Dorset ewes served by Dorset bucks gave the best results, giving us fifteen lambs from fifteen ewes that sold for $3.30 per head at 67 days old.

The average for all classes is January 30 for date of birth and April 16 for the date of sale when they were 77 days old, weighed 48 pounds alive, 22 pounds dressed and sold for $3.30 at the farm.

As fast as the lambs were sold the ewes were taken off from grain and when the last lambs were gone, the ewes were sheared and turned out to pasture on native grass until the next winter.

The same method of procedure was adopted in 1897, except that as the lambs were dropped a little earlier, they were allowed to grow a little larger before they were sold.

This season all the ewes were served by Shropshire bucks and though the lambs sold are one more than 1896, the difference in favor of the Dorsets is larger than in 1896.

There are 21 lambs credited to the Shropshires. One more lamb was dropped but so late in the season that it could not be sold with the others in the spring and was carried over until the next season. It is counted in the summary as worth $2.00, though of course we actually received more than that for it at the time of sale.

The record for the spring of 1897 is as follows.

Record for the Spring of 1897.

DAM.	No. of Lambs Sold	Average Date of Birth.	Average Date of Sale.	Age at Date of Sale, Days.	Live Weight, Lbs.	Dressed Weight, Lbs.	Selling Price.
Shropshire	21	Jan. 15	March 27	71	54	27	$4.05
Dorset	27	Jan. 12	April 2	80	56	26	3.90
Total and Average.....	48	Jan. 13	March 30	76	55	26.5	$3.97

Again for the third year the same experiment was repeated. The ewes were all served by Shropshire bucks, but were getting so old that several did not lamb the spring of 1898.

Instead of selling the lambs for slaughter they were all sold April 13 at $3.50 per head for breeding purposes. This was about the price they would have brought if they had been fed a little more grain and sold for meat.

The following is the record for the spring of 1898:

Record for the Spring of 1898.

DAM.	No. of Lambs Sold	Average Date of Birth.	Date of Sale.	Age at Date of Sale, Days.	Live Weight.	Selling Price
Shropshire	17	Jan. 1	April 13	102	61	$3.60
Dorset	23	Dec. 25	April 13	109	59	3.40
Total and Average ..	40	Dec. 28	April 13	106	60	$3.50

This closed the experiment. The total records for the three years will be considered first with reference to the two breeds, the Shropshire and the Horned Dorset. Then it will be treated as a whole with reference to the financial side of the question.

Shropshires.

Year.	No. of Lambs Sold.	Age in Days at Date of Sale.	Live Weight.	Dressed Weight.	Selling Price Per Head.	Total Selling Price.
1896	23	80	47	22	$3.30	$75.90
1897	21	71	54	27	4.05	87.05
1898	17	102	61		3.60	61.20
Total.....	61	84	54	26	$3.64	$224.15

Horned Dorsets.

Year.	No. of Lambs Sold.	Age in Days at Date of Sale.	Live Weight.	Dressed Weight.	Selling Price Per Head.	Total Selling Price.
1896	24	69	49	22	$3.30	$ 80.55
1897	27	80	56	26	3.90	105.30
1898	23	109	59	..	3.40	78.20
Total.....	74	86	55	25	$3.57	$264.05

The financial results are in favor of the Horned Dorsets. The first year they grew the faster, but in both the other years the Shropshires made the most weight and sold for the most per head. But the Dorsets produced so many more lambs as to more than overbalance their slower growth. On the whole the Dorsets brought in $40 more than the

Shropshires or about one-sixth of the total income. This difference is due entirely to the larger number of lambs reared by the Dorsets. Their record is practically one hundred per cent. since 74 lambs were sold from 25 ewes in three years.

ARE EARLY LAMBS PROFITABLE.

It is a difficult matter to estimate the cost of running sheep in such small numbers as we had in this experiment. But we will give the income side and the winter expenses and each one can estimate for himself what the cost would be, in his own case, of carrying the ewes through the summer.

Year.	No. of Lambs Sold.	Age in Days at Date of Sale.	Live Weight.	Dressed Weight.	Selling Price per Head.	Total Selling Price.
1896	47	74	48	22	$3.30	$156.45
1897	48	76	55	26.5	3.97	192.35
1898	40	106	60	..	3.50	140.00
Total.....	135	..	..	..	....	488.80
Average.....	45	85	54	25	$3.62	$162.93

The above figures show a yearly income from fifty ewes of $162.93 for the lambs. To this should be added the return for the wool. This has amounted to about 70 cents per year per head, or $35.00 for the 50 ewes. This gives a total yearly income of $197.93, or $3.96 per ewe. The ewes were sold at the end of the experiment for a little more than they cost, so there was no loss in that respect.

Here are some items that can be estimated in the expense of these ewes as follows:

The ewes were kept in the corrals and fed hay after about the first of November. As soon as the lamb was dropped grain was given to the ewe and continued until the lamb was sold. When on hay alone, the ewes ate about five

pounds of hay per head per day and decreased to about four pounds when a pound of grain was added. The lambs ate a pound of hay and a pound of grain after they were 30 days old until they were sold. This makes 85 pounds of grain for each ewe and 25 pounds of grain for each lamb, or 110 pounds of grain for the ewe and lamb, costing us on an average 64 cents.

Each ewe ate 715 pounds of hay and the lamb 25 pounds or 740 pounds of hay, which at $3.00 per ton comes to $1.11 or a total cost for winter feed of $1.75. Subtracting this from the income of $3.96 leaves $2.21 as the return for the summer feed of the ewes and the labor of caring for the sheep and lambs through the winter.

These returns compare very favorably with any that can be obtained from running sheep on the range. They represent a clear profit of at least forty per cent. on the investment. Indeed so profitable is the business that if one was sure of a market at the above prices there would be thousands and tens of thousands of early lambs raised each year in Colorado. But, as stated at the beginning of this article, the local market that pays these prices is quite limited and will buy only the very best of stock. There is money in the business for a few breeders near each of the larger cities, but if many went into the business they would break the market and themselves.

RAISING EARLY LAMBS IN THE ARKANSAS VALLEY.

The Arkansas Valley in Colorado is naturally tributary to Kansas City. There are more early lambs raised in the Arkansas Valley than in all the rest of the state together and most of these lambs are marketed in Kansas City, though a few are sent west to Pueblo and Colorado Springs.

The following quotations will give an idea of how the business is carried on and what returns are expected. It can be said as a preface to what follows that the early lamb business in the Arkansas Valley is founded almost entirely on the aged ewe. The old ewes that are too weak or have too poor teeth to stand another year on the range, are brought to the farm in the fall, bred to drop their lambs early, are fed heavily during the winter and spring so that by early summer they are in excellent condition for mutton and bring considerably more than could have been gotten for them fresh from the range the preceding fall. Thus there are two sources of income, the return from the lamb and the increased value of the ewe.

WM. AND H. G. GREENE, Olney.

We raised some early lambs in 1898 that were dropped from the latter part of January to the early part of March. Our experience is that owing to the extra care and feed necessary, these early lambs are not so profitable as the later lambs.

W. A. COLT, Manzanola.

We have been quite successful both in raising early lambs and feeding sheep on alfalfa. We breed the ewes to lamb in February and usually feed the ewe well and get her at least half fattened by lambing time. After lambing we feed the ewe all the grain she can eat and provide corn chop for the lambs. We usually have a "lamb creep" into an adjoining lot where the lamb can find corn chop and bran at any time.

As soon as the alfalfa starts we turn both ewe and lamb out during the day and provide grain and hay in the lots at night. The main point is not to compel the ewe to live entirely on the green alfalfa. There is some loss from bloat with the best of management, usually two to three per cent.

We often market the ewe and lamb in the same car, usually when the lamb is about three months old. Some, however, market the lamb and keep the ewe a few weeks and then send her in. All this class of sheep business is done with the old ewes. The ewe and lamb sometimes bring as low as five dollars, while some of our best farmers have received as high as seven dollars.

W. H. NEY, Fowler.

During the months of January and February, 1898, we lambed 350 Shropshire ewes. These were all young ewes and of course harder to handle during lambing than older ewes. We saved over 100 per cent. of large strong lambs. The work was easier than it would have been to lamb in summer time on open range or pasture; the cost no more; a larger per cent. of lambs saved; better lambs and no loss in the ewes. The result has been entirely satisfactory to us and I can see no reason why anyone, properly prepared for it, cannot do equally well.

We have comfortable sheep barns with ample room for all breeding stock. We feed liberally on alfalfa with mixed grain ration of wheat and oats in sufficient quantities to keep the ewes in good condition. The lambs get grain with their mothers and appreciate it.

We have raised California Merinos and Shropshires.

The California Merinos require more care and warmer quarters than the Shropshires. The Shropshires can stand any amount of dry cold and their lambs are soon up and strong. The Merino lambs must have close attention and warm quarters, but the same attention would be necessary during the spring months and then other farm work would be crowding and prevent the expenditure of the necessary time to make a successful lambing.

When spring comes winter lambs are ready to go to the range or pasture with their mothers and will hold their own anywhere.

E. M. SMITH, on the farm of A. M. LAMBRIGHT, Las Animas.

My early lambs in 1897 sold as follows: Lambs dropped in January sold in April at Kansas City for 7c per pound, live weight, and weighed 48½ pounds or $3.40 per head. None of these lambs had any green alfalfa, but the ewes were turned onto the alfalfa after the lambs were sold. These ewes were sold in Kansas City in June, weighing 81 pounds, at $3.85 or $3.02 per head.

My March lambs sold in Kansas City in June for $4.25 per hundred pounds and weighed 61 pounds or $2.60 per head. These lambs were dropped in the corral and were fed alfalfa hay, corn chop and bran until March 26, when they and the ewes were turned onto alfalfa pasture and remained there until they were sold in June. We had 600 ewes and 590 lambs on 95 acres of alfalfa and with the addition of one-fourth pound of corn chop per day for a ewe and her lamb, they kept in fine shape. We commenced selling in June and sold until fall. The ewes were sold as soon as fat, some ewes going with each bunch of lambs. The April lambs in August weighed 71 pounds. In 1898 the feed on the range was so good that we pastured but little on alfalfa.

JOHN McNAUGHT, Las Animas.

In 1898 I lambed 200 ewes in January and sold the lambs in Kansas City in March for 8c per pound. They weighed 53 pounds or $4.24 per head. Two weeks later I sold the ewes for $4.75 per hundred pounds and as they weighed 96 pounds each they brought $4.56 per head. Neither these ewes nor lambs had any green alfalfa.

In April and May I lambed 500 ewes on alfalfa pasture. They remained there until May 26 when they were turned on the range.