HETTINGER BRANCH STATION

AGRICULTURAL EXPERIMENT STATION

NORTH DAKOTA UNIVERSITY OF AGRICULTURE

WESTERN DAKOTA SHEEP DAY

ADAMS COUNTY

FEBRUARY 13, 1962

HETTINGER, N. DAK.

LEROY JOHNSON,

SUPERINTENDENT

THIRD ANNUAL WESTERN DAKOTA SHEEP DAY

Hettinger Experiment Station
Hettinger, North Dakota
February 13, 1962

Program

1:15 Winter Rations for the Ewe Flock
Professor Merle R. Light
Animal Husbandry Department
North Dakota State University
Fargo, North Dakota

1:45 Should I Feed My Lambs?
Melvin A. Kirkeide
Extension Livestock Specialist
North Dakota State University
Fargo, North Dakota

2:15 Sheep Trials at the Hettinger Station
LeRoy Johnson
Superintendent

2:45 Our Sheep Business
Howard Alberts
Sheep Buyer
Balthauser and Moyer Commission Co.
West Fargo, North Dakota

3:15 Question and Answer Period

3:30 Awarding of door prizes and coffee.

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REMINDERS FOR SHEEP PRODUCERS

I. Preparing the Ewe Flock

1. Select good sires. Good purebred rams will pay many dividends. Keep in mind the systems of marketing when selecting breed of sires. Are the lambs going to be marketed as fat lambs, feeders, ewe flock replacements etc. Shear the ram before turning with ewes, especially when breeding early in the fall when weather is still warm. A ram in short fleece is much more active.

2. "Flush" ewes from two weeks before and during the breeding season. This can be done by turning ewes on lush new pasture, turning ewes into combined grain fields to glean or by feeding grain at least one pound per head per day.

3. Use marking harnesses or smear the ram's brisket with colored oil paste to detect slow or non-breeding rams. Begin the season with a light color and change colors every sixteen days. Remove the ram after three heat cycles to avoid drawn-out lambing periods.

II. Feeding the Ewe Flock

1. From breeding until four to six weeks before lambing, clean up pastures and fields first. Then after snow comes, feed hay or silage. Four to six pounds per day of hay or equivalent. 3 lbs. silage equal 1 lb. hay. Feed a minimum of 2 lbs. of hay in a silage-hay ration. Legume hay is preferable.

2. Feed salt and mineral free choice the entire year. A good salt-mineral mix is three parts by weight of trace mineralized salt to one part of dicalcium phosphate.

3. From four to six weeks before lambing, feed roughage as above plus $\frac{1}{2}$ to 1 pound of grain per head per day, depending on the condition of the ewes. About $\frac{1}{4}$ pound of protein supplement should be added if roughage is of poor quality.

4. Provide plenty of water at all times.

5. In general, keep ewes in a "gaining" condition from breeding season until lambing.

III. Preparations for Lambing

1. Provide plenty of exercise for ewes. This is most easily done by feeding some distance from the shelter.

2. Do not crowd the ewes or handle roughly.

3. Tag ewes and trim feet shortly before lambing.

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4. Set up lambing pens (jugs) in sheltered area of barn. The number of pens needed should be 10 to 15% of the number of ewes in the flock.

5. Provide heat lamps, especially when lambing early.

6. Put in a supply of tools and medicine that will be needed. Some "musts" are:

a. Sheep shears for odd trim jobs and treating inverted eyelids. (turned in).
b. Curved needle and thread for sewing eyelids.
c. Forceps or balling gun.
d. Hoof trimmers.
e. Iodine for disinfecting navels.
f. Dosing syringe or pop bottle for drenching.
g. Lamb nipples.
h. Hypodermic syringe.
i. Soap and mineral oil.
j. Disinfectant such as lysol or sheep dip.
k. Sulfa pills for treating pneumonia in young lambs.
l. Penicillin.
m. Udder infusion ointment for treating mastitis.
n. Bolettes for inserting in uterus of ewes assisted in lambing.
o. Paint branding irons and branding paint.

IV. Delivery and Care of Lamb and Ewe

1. Watch closely.

2. Sort ewes if large band by rump breeding marks or udders.

3. Do not put ewe in lambing pen before lamb is born. Place her there right after lambing for one to two days or as long as necessary.

4. As soon as ewe has lambed, remove waxy plug from teats. Make sure lamb nurses soon after birth.

5. Disinfect navel as soon as possible.

6. Give ewe water (preferably warm) soon after birth of lambs.

7. Usually feed only hay and water to ewe while she is in lambing pen.

8. Turn ewes and lambs out of lambing pens in small groups.

9. Check lambs for turned in eyelids.

10. Check udders of ewes for mastitis and to see if both teats are functioning.

11. Watch lambs for sticky feces under tail - remove if necessary.

12. Identify ewes and lambs for branding with identical numbers.

V. Docking and Castrating

1. Dock soon after birth

2. Castrate when lam is one to two weeks old.

VI. Creep Feeding Lambs

1. Begin when earliest lambs are two weeks old.

2. Locate creep in comfortable areas of barn. Lure the lambs into creep by making it as comfortable as possible. Heat lamps in a hover are an excellent help. Use a roller type entrance.

3. Keep feed fresh.

4. Provide top quality hay in creep.

5. There are several good creep feed mixtures. They should be ground or rolled for very young lambs. The mixture should be selected after considering the feeds that are available and the relative costs of the feeds. Suggested Creep Mixture:

750 lbs. barley
750 lbs. oats
200 lbs. wheat
200 lbs. soybean oil meal
100 lbs. molasses (to reduce dustiness and increase palitability)
40 grams per ton auromycin

6. Provide water if possible.

7. Provide salt and mineral free choice.

8. As lambs get older creep feeds need not be ground.

VII. Tagging, facing and shearing

1. Tagging is the removal of wool around the udder and rectal areas of the ewes.

2. Facing is removal of excess wool on the face so the ewe will not become wool blind. This is done only when necessary. Some breeds are naturally open faced.

3. When shearing, always:

a. Shear when fleeces are dry.
b. Keep the wool free from straw and dirt
c. Tie with paper twine only.
d. Avoid "second cuts" when shearing.

VIII. Vaccinating

There are several disease problems that require vaccination. Some of these are: sore mouth, listeriosis, over-eating disease, leptospirosis and vibriosis. Watch for symptons of infectious diseases and consult veterinarian in setting up control program.

IX. Parasite Control

1. Internal-drench at least twice per year, when turning out to pasture and when starting on dry feed in the fall. It is preferable to drench once during the summer too. Provide 10% Phenothiazine in the salt free choice during summer pasture season.

2. External-spray, dust or dip at least once per year.

COBALT BULLETS FOR PREGNANT EWES
(A progress report)

Cobalt is one of the mineral elements classified as a trace mineral, meaning that it is required in very small amounts to meet the nutritional requirements of the animal. The symptoms of cobalt deficiency in lambs are lack of appetite, anemia, lack of thrift and generalized weakness. In fact, when severely deficient, lambs will appear to "starve while standing in front of a full feed bunk". The symptoms of this disease show marked similarities to those in internal parasitism. On occasion, cobalt deficiencies have been confused with parasitism. The amount of cobalt required per lamb is very small and can be met adequately by feeding salt containing 0.1 ounce of cobalt (0.2 ounce of cobalt chloride) per 100 pounds of salt. Hays and pasture grasses containing 0.07 parts per million of cobalt on a dry matter basis have been shown to prevent occurrence of cobalt deficiency in sheep. North Dakota is not definitely known to have cobalt deficient areas. It is thought, however, that cobalt deficiency may occur sporadically. There has been some question as to whether or not the feeding of trace mineralized salt satisfied the needs for cobalt in sheep. Therefore, an experiment was designed to test the value of using cobalt "bullets" for lambs. Cobalt bullets are bullets that are orally administered. They lodge in the stomach and are said to dissolve slowly over a considerable period of time. Theroetically, this guarantees enough cobalt to meed nutritional requirements for an extended period. After obtaining no significant results from the use of cobalt bullets on lambs, it was decided to test the value of their use on pregnant ewes. The first years trial gave some indication that this practice might be beneficial.

Proceedure: Our purebred flock of 100 Columbia ewes was divided into two groups so as to have in each group, equal influences of sires,weight and age of ewes and equal distribution of ewes with different management backgrounds resulting from other trials being conducted on the same band of ewes. One group was given bullets on August 20, 1960. The two groups were handled as one for feeding and management. Trace mineralized salt plus Dicalcuim phosphate in a ratio of 3:1 was fed free choice.

Results of second years trial:

	Cobalt Bullets	No Cobalt Bullets
Number of ewes in lot	50	50
Average fleece weight	12.3	12.4
Average birth weight	11.2	11.1
Average 30 day weight	28.5	27.6
Percent lambs dropped	136	132
Percent lambs weaned	110	120
Percent of ewes dropping twins	46	42
Percent of ewes weaning a set of twins	30	34
Percent of twins weaned as sets from those dropped	65.2	81
Average birth weight of twins	10.9	10.5
Average birth weight of singles	11.6	12.3
Average 30 day weight of twins	26.0	24.5
Average 30 day weight of singles	32.3	31.6
Average weaning weight of twins	70.8	70.0
Average weaning weight of singles	86.1	83.5
Average age in days at weaning of twins	127.9	130.2
Average age in days at weaning of singles	127.8	127.5
Average weight per day of age-twins	.553	.538
Average weight per day of age-singles	.673	.655
Average weaning weight all lambs	78.4	75.8
Average age (days of all lambs at weaning	127.8	129.0
Average weight per day of age all lambs	.613	.588
Average weight of lamb produced per ewe at 120 days	80.9*	84.67*

* Average weight of lamb produced per ewe at 120 days obtained by multiplying Average weight per day x 120 days x percent of lambs weaned.

Average of two years trial:

Average weight of lamb produced per ewe at 120 days:

	Cobalt Bullets	No Cobalt Bullets
1960	85.68	78.87
1961	80.90	84.67
Average	83.29	81.77
Average difference	1.52	

Summary: In the two successive trials, there was no difference in ewe gain or fleece production between lots. It will be noted from the results indicated above that the production of lamb per ewe at 120 days reversed itself in the two trials. Inconsistant results indicate there might be some other factor or factors bringing about these small differences. From information gathered the two years, lambs would have to be worth 28¢ per pound to break even on the cost of bullets.

CREEP FEEDING EARLY LAMBS UNTIL PASTURES ARE AVAILABLE

Purpose: Many sheep producers in the area do not finish their lambs for market, but rather, market grass through the production of feeder lambs. Also, many of these producers like to lamb in March so that the majority of their lambing work load is over when spring field work starts. This test was designed to determine whether or not creep feeding early lambs until pastures are available is a profitable practice.

Proceedure: Our purebred flock of 100 Columbia ewes was divided at lambing time into two groups of similar management background. That is, both groups had as nearly as possible equal representation of influences from other trials and sires as well as age and weight of ewes. One group of lambs was creep fed and one was not. The first lamb was born on January 16 and all lambs were placed on creep at about one week of age. Lambs and ewes went to pasture May 4; were weaned June 15.

Creep rations used:

First ration:
- 250 lbs. Corn
- 800 lbs. Oats
- 550 lbs. Barley
- 200 lbs. Soybean Oil Meal
- 200 lbs. Wheat bran
- 40 lbs. Trace mineralized salt
- 100 lbs. Vitamin supplement
- 40 gms. Aureomycin

Cost including grinding and mixing -- $56.45 per ton.

Second ration:
- 500 lbs. Corn
- 1000 lbs. Barley
- 500 lbs. Oats

Cost including rolling -- $36.00 per ton.

Whole oats was fed in seperate feeders and alfalfa hay was available in the creep at all times.

Creep feed cost per lamb --- $1.29

Results:

	Lot 1 Creep Fed	Lot 2 No Creep
Number of ewes in lot	50	50
Number of lambs at weaning	57	58
Number of sets of twins at weaning	17	15
Average birth weight	11.1	11.2
Average 30 day weight	28.2	27.9
Average weight at pasture	60.2	40.2
Average age at pasture	86.0	85.3
Average weight of lamb per day at pasture	.70	.471
Average weight at weaning	80.9	73.3
Average at weaning	128.6	128.3
Average weight of lamb per day at weaning	.629	.571
Average weaning weight adjusted to 120 days	75.48	68.52
Difference in gain per lamb at 120 days	6.96	
Average weight loss of ewes Jan. 13 to May 3	33.6	43.1

Average results for two years trials:

	Lot 1	Lot 2
Weaning weight at 120 days 1960	80.16	76.56
Weaning weight at 120 days 1961	75.48	68.52
Average of two years	77.82	72.54

Summary: As would be expected, the lambs that were creep fed gained faster while on creep feed than those not creep fed. However, after being turned to pasture, the lambs that had not been creep fed seemed to "catch up". The break even prices or price of lambs necessary to pay for the extra feed was $16.40 per cwt. the first year and $18.53 per cwt. the second year. The second trial seems to prove more strongly than the first that although lambs on creep feed gain much more rapidly it is not a profitable practice if the lambs are to be turned to pasture without creep feed.

FARM FLOCKS OF SHEEP ON WESTERN NORTH DAKOTA FARMS
(A progress report)

Objectives: 1. to determine whether or not sheep production might be considered by farmers in this area who have limited amounts of pasture available. It has been observed that many farmers in this area have several things available which might well be considered for use in including sheep production in their farming programs. Most of them have a certain amount of land that is too steep or rocky or sandy to be cultivated. The native grass that does grow on these areas is probably not lush enough in most years to produce top feeder lambs. However, it is felt that it will maintain dry ewes through the summer. Many of these same farms have also got several acres of crop land that is farmed in strips. There is always a certain amount of grain that is left in the field after combining. Sheep will pick up most of this so it is felt that these strips might well be used for "flushing" a ewe flock during breeding season. Also, most of these farmers have some extra time available during February and March before they must start their spring field work. The lamb market is almost always at its peak in the spring or early summer. Considering these factors, it is felt that many farmers might include a sheep flock in their programs by lambing before field work starts, weaning when the grass is ready on these hills and full feeding their lambs from birth to finish, thus taking advantage of this early higher market.
Proceedure: Forty unregistered Columbia ewes of mixed ages were used in this trial. They represent quite closely the quality of ewes that are available for purchase in this area almost every year. They also represent what is normally considered a one ram flock. They were bred to Hampshire ram lambs to start lambing about January 15. A pole type shelter was constructed which served as housing all winter with no specially heated lambing quarters. Heat lamps were used. Lambs were creep fed until weaned and continued on full feed to market. Complete records were kept of costs and returns. The only cost we do not have is the value of native grass pasture and the labor required during a normally slack season. This will vary a great deal from farm to farm. Lambs were marketed in two groups

as they reached the desirable market weight and choice grade. The first marketing was on June 5 and the second on July 10. Farmers who are interested could use the information collected to determine the size of their individual enterprises in terms of "ram flocks".

Data: Feed prices used on basis of local market:

Crested wheat hay	$15.00 per ton
Alfalfa Hay	20.00 per ton
Corn and cob meal	1.15 per bu. or .0174 per lb. (ground)
Oats	65 per bu.
Barley	75 per bu.
Corn	1.15 per bu.
Corn silage	7.00 per ton
Mixed creep ration 1st batch	.0263 per lb.
Mixed creep ration 2nd batch	.018 per lb.

For creep rations used see creep feeding trial.

Feed costs: (began Lot feeding Nov. 16, weaned lambs April 15, ewes to pasture May 4)

Feed for ewes, Nov. 16 to April 15	$396.44	
Feed for ewes April 16 to pasture	24.30	
Feed for lambs	226.94	
Vitamin supplements other than fed in the creep mix	16.30	
Total feed cost		$ 663.98
Costs other than feed:		
Ram @ $80.00(plan to use average of 3 years)	26.66	
40 ewes @ $20.00 --$800.00 at estimated annual replacement cost of 20%	160.00	
Housing-Pole barn @ $525.00 depreciated @ 20 years	26.25	
Shearing @ .40 (39 head)	15.60	
Veterinary expenses including drenching and vaccinations and prorated cost of tools, etc.	.53	
estimated at 1.00 per head	40.00	
Bedding (estimated cost)	25.00	
Total cost		$ 293.51
Total expense for flock		$ 957.49

Income:

39 fleeces or 600# @ 41¢	246.00	
1 fleece dead wool 8# @ 20¢	1.60	
Estimated wool subsidy 20¢ per lb.	120.00	
Lambs sold:		
June 5, 25 head - 2280# @ 18.50--421.80		
Less charges 39.50	382.30	
July 10, 22 head - 1985# @ 19.00 377.15		
Less charges 37.05	340.10	
1 subject lamb net	14.40	
Estimated salvage from ewes replaced	20.00	
Total income from flock		$1124.40
Profit from flock		166.91
Profit per ewe		4.17

Summary: This is the second year of this trial. The lambing percentage (lambs weaned) was 120% as compared to 90% for the first year. This is probably due to a more abundant summer pasture supply in 1960 than 1959, plus some corrections in management such as force feeding salt. Lamb prices were lower this year than they have been for several years. Two lambs were lost from Urinary Calculi but salt was force fed this year which seemed to help considerably. The average return from the two years of trial showed a profit of $ .78 per ewe. This is low, but care should be taken to study feed prices and other costs such as housing and replacement costs used in this trial. It is very probably that many of these items could be reduced on specific farms.

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