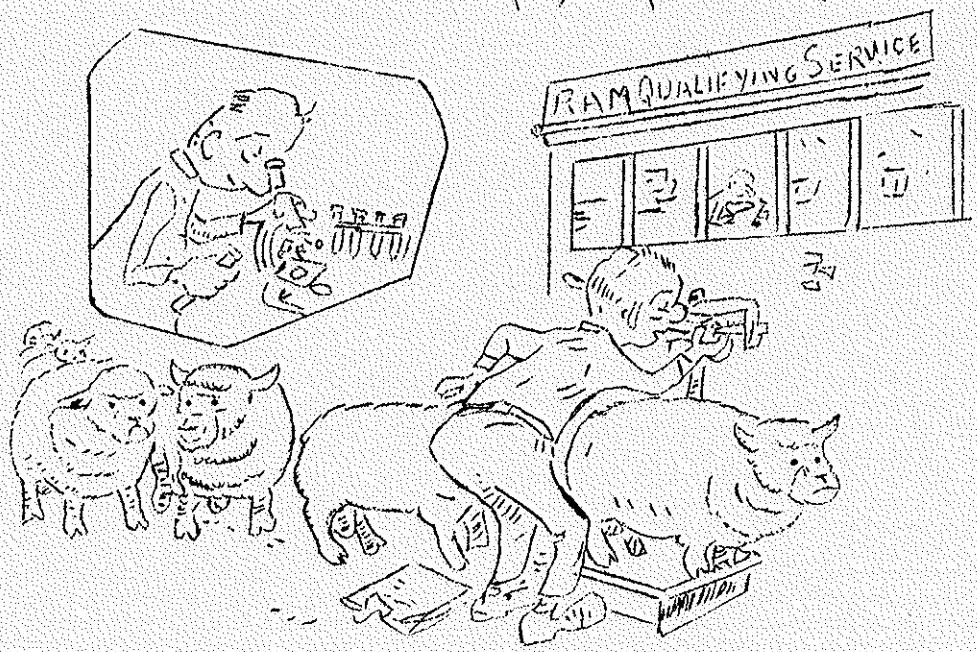
TWELFTH ANNUAL WESTERN DAKOTA SHEEP DAY

FEBRUARY 10, 1971

HETTINGER ARMORY



We used to get by if we "looked good".

Hettinger Branch
Experiment Station
North Dakota
State University

Timothy Faller
Superintendent
Hettinger
No. Dak.

P R O G R A M

10:00 a.m. WOOL GRADING

Merle Light
Animal Science Dept.
N. D. S. U.

11:00 a.m. PROGRESS REPORT --
-Crossbreeding Project
-Selection Study

Timothy C. Faller
Superintendent
Hettinger Branch Station

11:30 a.m. YEAR ROUND CONFINEMENT

Mr. Merle Light
Assoc. Professor of Animal Science
North Dakota State University

12:00 NOON LUNCH

1:00 p.m. GROUP SHEEP PRODUCTION

Mr. Dwight Holaway
Project Supervisor
Pipestone, Minnesota

1:30 p.m. PREDATOR CONTROL

Mr. William K. Pfeifer
Asst. State Supervisor, Wildlife Services
Bureau of Sport Fisheries and Wildlife

2:15 p.m. SHEEP MANAGEMENT FROM OHIO

Dr. Charles Parker
Ohio Agricultural Research and
Development Center
Wooster, Ohio

3:15 p.m. DRAWING AND COFFEE

PRODUCTIVITY OF SELECTED SHEEP BREEDS AND CROSSES UNDER NORTH DAKOTA CONDITIONS

(1971 Progress Report)

The most important factor to a profitable sheep enterprise is the number of lambs marketed per ewe exposed. Many factors influence the percent lamb crop marketed. Of these, selection of parental stock having the genetic capability of conceiving and bearing large numbers of offspring is of primary importance.

An experiment was initiated in 1965 to determine the potential of crossbred offspring of two breeds not commonly raised in North Dakota or other parts of the United States, the North Country Cheviot and the Border Leicester. These breeds are white faced, medium to large in size, clean faced and clean legged. They do not carry a reputation for being outstanding wool producers but are used extensively in the British Isles to sire crossbred commercial ewes. Rams of these two breeds were mated to Columbia and Rambouillet ewes and these crossbred offspring are being compared with each other and with straightbred Columbia and Rambouillet ewes and also with Columbia x Rambouillet crossbreds.

Experimental Procedure:

The Hettinger Branch Experiment Station contracted with a commercial Columbia sheep producer and with a commercial Rambouillet producer to produce the experimental females for this experiment. Each producer randomly allotted his ewes into four groups of about 40 each. Each group was then mated to either a Columbia, Rambouillet, North Country Cheviot or Border Leicester ram considered to be of typical commercial quality. The initial matings were made in the fall of 1965 and the first delivery of eight breeds or breed combinations was made to the experiment station in the fall of 1966. All lambs were handled as a single unit during the winter and summer period that followed. Additional like matings were made in the fall of 1966.

These ewe lambs were delivered the fall of 1967 as the final ewes for evaluation.

The initial matings of the experimental ewes were made in the fall of 1967 to Hampshire and Suffolk rams. Ewe groups were randomly assigned to Hampshire and Suffolk ram groups and to February and April lambing groups.

RESULTS:

The combined February and April lambing performance for each ewe group is presented in Table 1.

Results of this first year's accumulation of data indicate wide differences in reproductive performance. Less pronounced differences are noted between groups when fleece traits or carcass traits are compared.

It is important that no attempt is made to draw conclusions from these limited data. A most important consideration in a study of this type should be life-time performance which will not be known for several years.

This report is offered as a "progress report". Hence, no attempt has been made to test the data for significant differences or to make recommendations to producers on the basis of this study. However, growers should watch closely in subsequent years when additional data from this experiment are reported. If trends indicated at this early stage continue in the same pattern, it appears that the reproductive performance of North Dakota's commercial ewe flock could be enhanced greatly through the use of a specific crossbreeding program.

TABLE 1. FIRST THRU THIRD YEAR PERFORMANCE CROSSBRED EWES STUDIES

EWE BREED TYPE (Sire= / Dam=)		Ramb. x Ramb.	B. Leic. x Ramb.	N. C. Chev. x Ramb.	Col. x Ramb.	Col. x Col.	B.Leic. x Col.	N.C. Chev. x Col.	Ramb. x Col.
PRODUCTION PERFORMANCE									
Ewes Exposed	1967	16	16	16	16	15	16	16	16
	1968	32	26	31	28	26	28	30	30;
	1969	31	25	27	26	22	28	28	29
Average Body Weight Prebreeding	1967	138.44	151.50	150.81	137.94	129.00	127.13	138.25	129.44
	1968	146.38	161.65	152.45	152.14	134.80	137.96	141.63	141.43
	1969	163.32	177.92	165.70	170.73	155.33	159.78	159.68	157.79
Precent lambs born Per ewe exposed	1967	131.25	187.50	181.50	156.25	140.00	106.25	162.50	112.50
	1968	137.50	207.65	183.87	121.87	138.46	132.14	146.67	130.00
	1969	148.39	184.00	185.19	153.85	140.90	142.56	146.43	134.48
Percent lambs weaned per ewe exposed	1967	131.25	175.00	162.50	131.25	126.67	106.25	150.00	106.00
	1968	134.38	180.77	167.74	121.42	130.77	125.00	140.00	120.00
	1969	125.80	180.00	166.67	134.62	136.36	135.71	139.29	134.48
FLEECE PRODUCTION DATA									
Average Grease Fleece Weight	1967	11.72	11.56	9.72	11.06	9.83	9.72	9.03	10.47
	1968	13.69	13.92	11.62	14.48	12.50	12.36	11.37	12.95
	1969	11.42	11.06	9.48	11.77	10.38	10.26	8.23	10.77
Average Staple Length (mm)	1967	73.31	115.19	91.81	81.44	98.47	142.00	100.59	79.25
	1968	86.75	126.00	104.10	97.50	110.30	161.30	120.10	93.50
	1969	67.13	107.79	73.85	74.85	88.00	122.33	86.68	72.61
Average Fleece Grade (SP Count)	1967, 1968, & 1969	62.4	53.3	56.8	58.6	55.9	50.3	54.6	58.8

TABLE 2. LAMB GROWTH DATA

DAM BREED TYPE / GROWTH DATA	Sire= / Dam=	Ramb x Ramb	B.Leic. x Ramb.	N.C.Chev. x Ramb.	Col. x Ramb.	Col. x Col.	B. Leic. x Col.	N.C. Chev. x Col.	Ramb. x Col.
A.D.G. Birth to Weaning	1967	0.779	0.778	0.675	0.724	0.695	0.778	0.762	0.768
	1968	0.766	0.760	0.703	0.764	0.715	0.848	0.727	0.790
	1969	0.701	0.744	0.680	0.732	0.716	0.724	0.717	0.779
A.D.G. Birth to Market	1967	0.581	0.609	0.535	0.535	0.530	0.603	0.560	0.557
	1968	0.661	0.663	0.602	0.653	0.634	0.655	0.618	0.677
	1969	0.589	0.625	0.546	0.621	0.590	0.596	0.581	0.639
A.D.G. Weaning to Market	1967	0.351	0.380	0.367	0.359	0.369	0.385	0.372	0.334
	1968	0.470	0.441	0.416	0.429	0.448	0.459	0.449	0.438
	1969	0.386	0.423	0.369	0.438	0.406	0.394	0.382	0.385
Average Shrunk Weight at Market	1967	105.76	106.92	103.04	103.24	101.41	106.44	105.91	105.06
	1968	101.31	100.49	99.96	100.27	99.55	99.00	102.03	101.83
	1969	101.22	102.77	99.75	99.53	103.46	99.94	98.77	103.05
Average Days Age to Market	1967	188.83	181.23	197.08	195.52	196.77	178.50	193.75	191.35
	1968	157.78	157.02	171.31	158.40	161.54	154.27	169.97	154.36
	1969	177.44	170.46	186.55	167.21	181.82	174.63	175.18	168.31
Adjusted 90 day weight	1967	72.39	76.11	65.07	68.81	64.29	71.61	72.95	70.47
	1968	75.91	78.58	70.25	75.10	72.48	83.32	71.79	77.88
	1969	69.28	74.34	66.60	69.83	68.75	69.00	70.63	73.75
Adjusted Production Per ewe @ 90 days	1967	95.01	133.19	105.74	90.31	81.44	76.09	109.43	94.87
	1968	102.00	136.62	117.84	91.19	94.78	104.15	100.50	93.46
	1969	87.15	133.81	111.00	94.00	93.75	93.64	98.37	99.18
Average Carcass weight per day	1967	0.290	0.304	0.269	0.270	0.254	0.300	0.278	0.278
	1968	0.324	0.327	0.290	0.322	0.316	0.333	0.306	0.338
	1969	0.285	0.311	0.261	0.286	0.299	0.283	0.270	0.323
Average Carcass weight per ewe per day	1967	0.381	0.532	0.437	0.354	0.322	0.318	0.417	0.295
	1968	0.435	0.591	0.486	0.391	0.413	0.416	0.428	.406
	1969	0.359	0.560	0.435	0.385	0.408	0.384	0.376	0.434

CARCASS DATA

EWE BREED TYPE	Sire= Dam=	Ramb x Ramb.	B. Leic. x Ramb	N.C. Chev. x Ramb	Col. x Ramb		Col. x Col.	B. Leic x Col.	N.C.Chev. x Col.	Ramb. x Col.
DATA										
Average Cold Carcass weight	1967	52.81	53.31	51.86	52.18		51.26	53.01	52.56	52.46
	1968	51.89	51.37	49.68	50.96		51.06	51.32	52.00	52.17
	1969	51.31	52.39	49.78	51.37		52.27	51.57	48.18	52.89
Average fat at loin	1967	0.16	0.22	0.18	0.18		0.21	0.23	0.19	0.16
	1968	0.22	0.21	0.19	0.19		0.22	0.24	0.24	0.22
	1969	0.19	0.21	0.18	0.21		0.23	0.25	0.19	0.19
Average Loin Eye Area	1967	2.16	2.07	2.27	2.16		2.10	2.10	2.25	2.21
	1968	2.15	2.14	2.19	2.15		2.15	2.14	2.13	2.12
	1969	2.24	2.15	2.28	2.14		2.22	2.19	2.22	2.23
Average USDA Grade*	1967	11.10	10.89	10.92	11.95		11.13	11.63	10.91	11.12
	1968	10.94	10.93	11.06	10.99		10.95	10.93	10.88	10.87
	1969	11.06	11.15	11.40	11.24		11.61	11.38	11.27	11.31

* Number 10's choice-; 11 is choice; 12 is choice+; 13 is prime-

| | | |

RELATIVE RESPONSE OF SELECTION PRESSURE APPLIED TO THE EWE FLOCK

(A Progress Report)

Important to every sheep operation is the selection of the replacement ewes. Many factors of importance should be considered such as: production, soundness, type, etc.

Experimental Objectives

In 1966 an experiment was initiated to determine the rate of change in production of wool and the production of lamb at 120 days when these factors are selected as single traits and the pressure is applied to the ewe flock only.

Experimental Procedure'

The Hettinger Station purebred flock of 90 Columbia ewes were lotted on the basis of weight and age into three groups of 30 ewes each. Three registered rams are to be used each year. Each ram to be exposed to ten ewes from each lot in order to distribute the influence of sires equally across groups.

Culling of ewes will be conducted each fall on the following basis:

1. Age

2. Mechanical (Ill health, spoiled udder, etc.)

3. Flock A. Low lamb production
   Flock B. General type (visual selection)
   Flock C. Low wool production

Each year, 8 ewes will be selected and replaced into the group on the following basis:

Flock A-1 Yearling ewes born as twins will preference to those from ewes with the greatest corrected lamb production at 120 days.

2. Replacement yearlings must be physically sound.

Flock B-1 Ewe lambs showing most desirable Columbia breed type as suggested by the Columbia Sheep Breeders Association.

Flock C-1. Yearling ewes with heaviest fleeces at first shearing.

2. Replacement yearlings must be physically sound.

Results:

Yearly comparisons of productive performance are presented on Chart 1, and graph 1 which shows the comparison of the three groups on the basis of the two traits selected for.

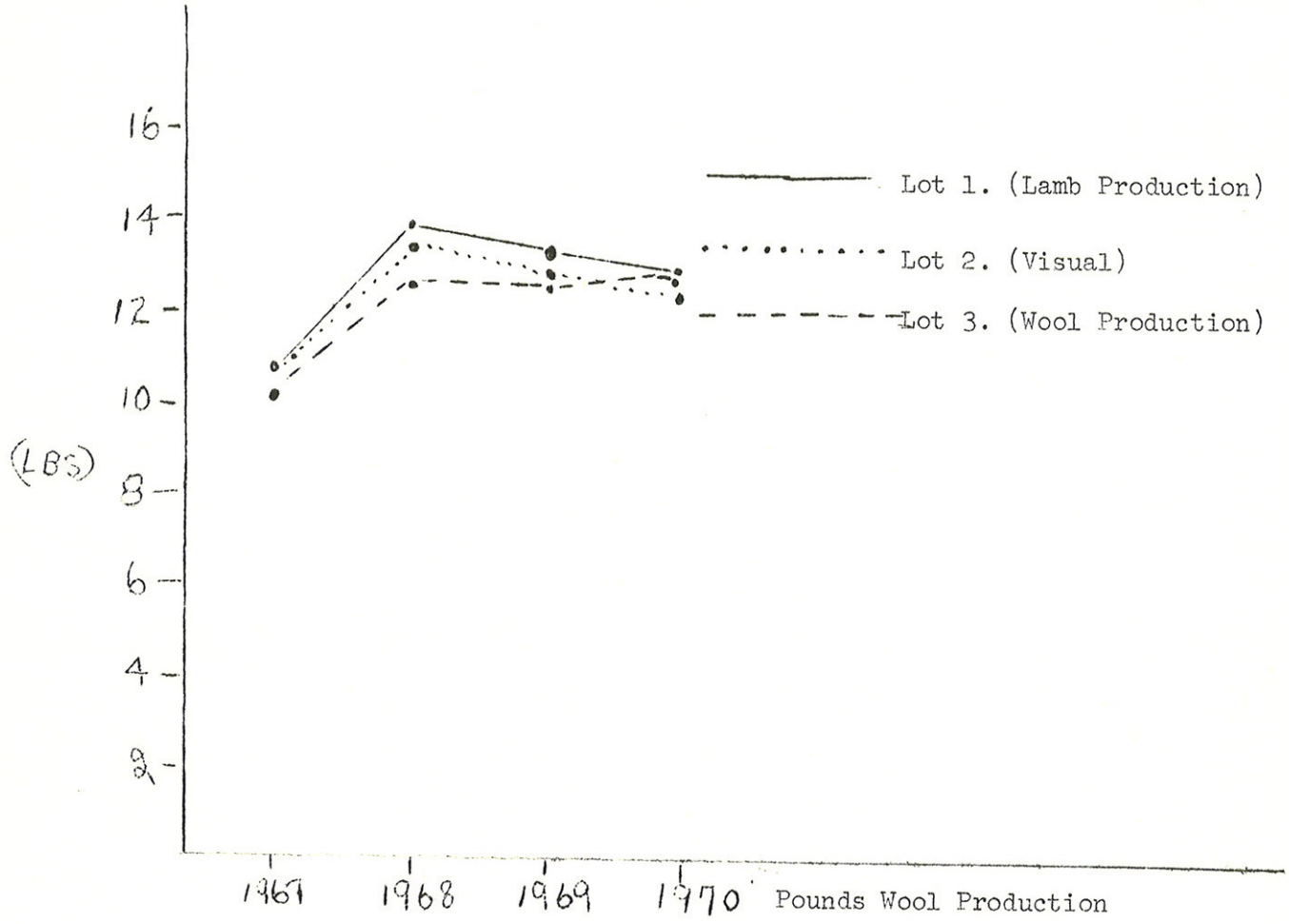
This report is offered as a progress report, no attempt has been made to test the data for significance or to make recommendations on the basis of data collected.

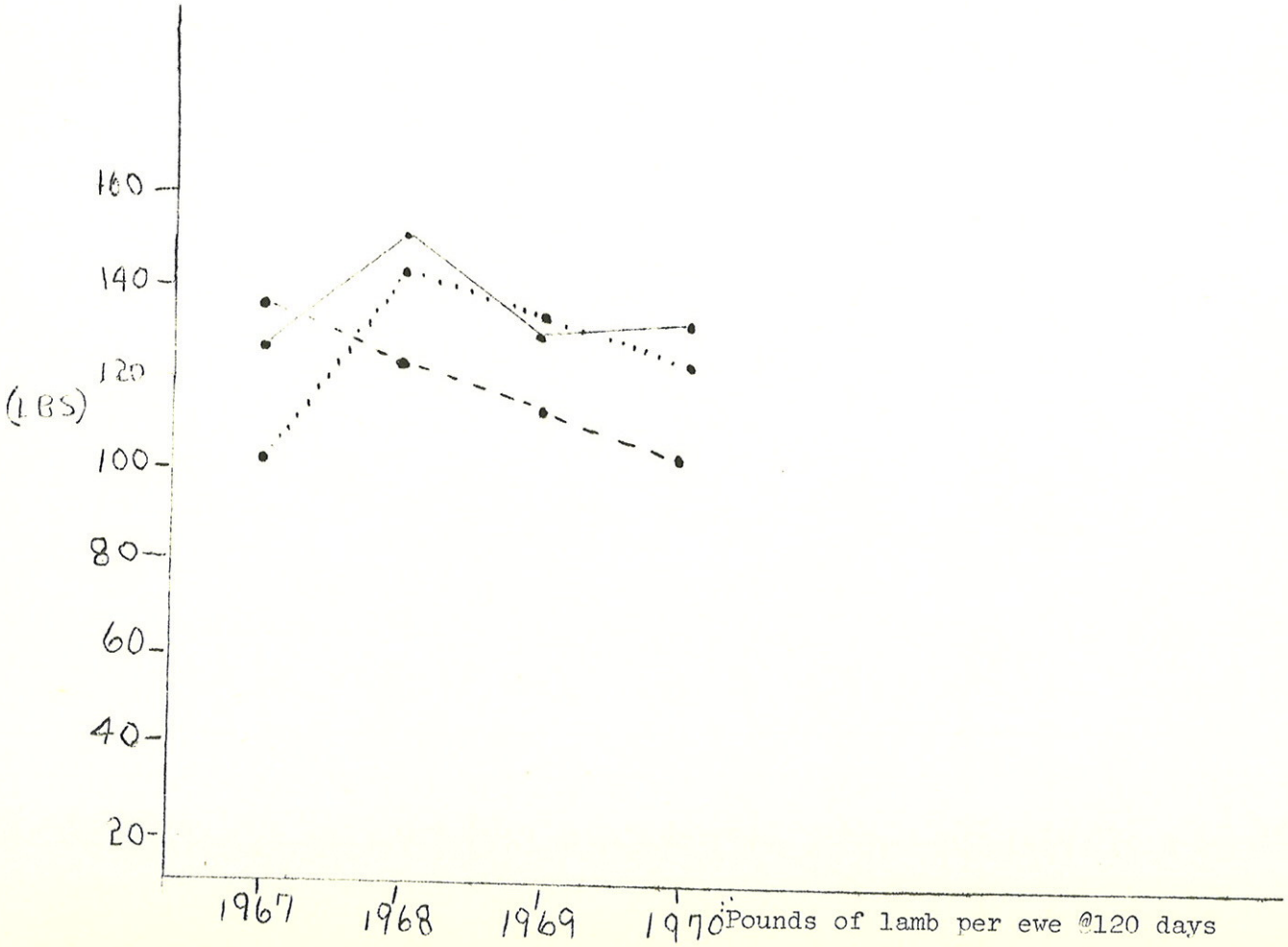
DATA COMPARISON "SELECTION STUDY"

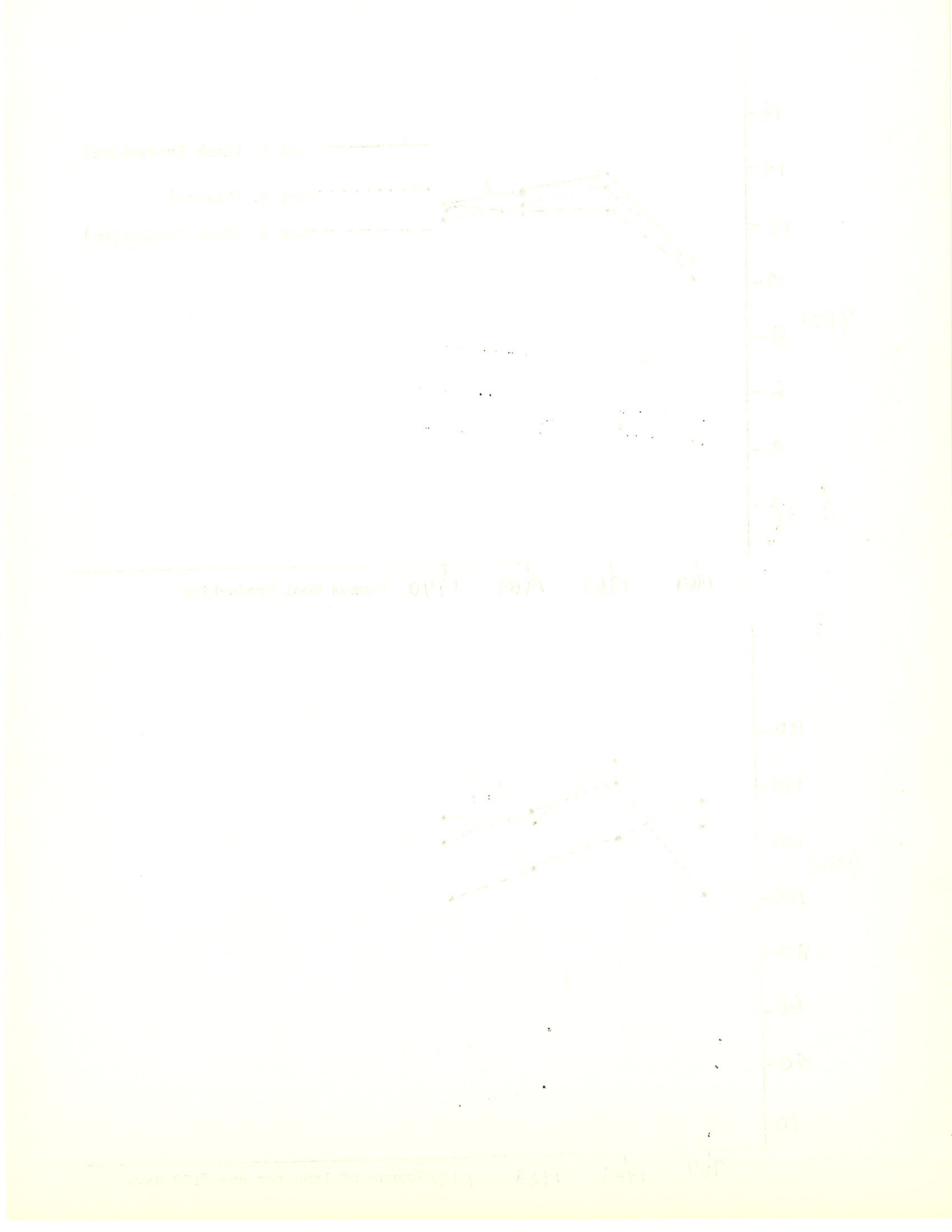
	1967	1968	1969	1970	1967	1968	1969	1970	1967	1968	1969	1970
Ewes Exposed	30	30	30	30	29	30	30	30	30	30	30	30
Age @ Breeding	2.60	2.93	2.87	2.7	2.59	2.73	2.67	2.76	2.57	2.97	2.83	2.73
Initial Weight (Lbs)	156.7	154.9	163.6	166.6	155.0	153.6	162.4	167.4	153.8	146.9	157.9	163.9
Gain During Breeding	3.5	8.6	-2.5	-5.4	3.0	6.7	-3.3	-3.9	2.2	8.1	-2.6	-4.6
Gain Breeding to Lambing	15.6	24.9	39.3	21.6	13.9	20.8	37.1	17.7	13.2	20.0	34.0	16.0
Ewes Lambing	30	30	30	24	27	28	29	24	30	29	27	26
% Lambs Dropped Per Ewe Exposed	173.3	180.0	160.0	143.3	137.9	173.3	153.3	133.3	173.0	160.0	130.0	133.3
% Lambs Weaned Per Ewe Exposed	146.7	153.3	140.0	133.3	113.8	150.0	150.0	123.3	156.7	133.3	123.3	106.7
Corrected Pounds of Lamb Per *Ewe Exposed @ 120 days	126.4	147.2	127.6	130.9	101.3	140.7	131.2	118.5	135.1	120.6	111.1	102.5
*Grease Fleece Weight	10.8	13.97	13.33	13.19	10.8	13.63	12.92	12.75	10.4	12.78	12.76	12.88
Lambs Birth Weight	10.5	10.7	11.0	12.07	10.3	10.0	10.8	11.9	9.7	9.9	10.4	11.8
Uncorrected Weaning Weight	77.1	84.1	81.7	73.3	79.2	82.8	78.2	74.6	76.0	80.8	81.6	76.0
Corrected Weaning Weight	86.2	96.0	91.2	75.3	89.1	93.8	87.4	76.9	86.2	90.5	90.1	76.9
Age in Days @ Weaning	121.3	120.3	117.2	124.5	119.2	119.9	118.9	124.2	120.4	120.4	120.4	123.4
Birth Type of Dam @ Lotting												
% Single	20.0	10.0	6.7	6.7	31.0	23.4	23.3	23.3	20.0	26.7	30.0	23.3
% Twin	70.0	86.7	93.3	93.3	65.5	73.3	76.7	73.3	76.7	70.0	66.7	73.3
% Triplet	10.0	3.3	0.0	0.0	3.5	3.3	0.0	3.3	3.3	3.3	3.3	3.3
Production of 1 & 2 Yr. Olds												
% Lambs Dropped			146.7	75.0			140.0	100.0			125.0	112.5
% Lambs Weaned			126.7	75.0			140.0	100.0			125.0	87.5
Pounds of Lamb Per Ewe Exposed @ 120 Days			114.5	60.7			124.6	83.9			113.9	64.5
Grease Fleece Weight			13.40	12.3			12.67	11.68			13.84	13.31

*Values Chosen as Primary Production Factors.

* 1970 Production Figures Affected by Low Fertility Ram in Breeding Pens.


16
14
12
10
8
6
4
2
(LBS)
Lot 1. (Lamb Production)
Lot 2. (Visual)
Lot 3. (Wool Production)
1967
1968
1969
1970
Pounds Wool Production


160
140
120
100
80
60
40
20
(LBS)
1967
1968
1969
1970
Pounds of lamb per ewe @120 days



Project: H-7-36

Personnel: Merle R. Light, James Tilton

Objectives:

1. To determine nutrient requirements (energy) for confined ewes.

Nature of Work and Principle Results:

Twenty Hampshire and twenty Suffolk ewes were allotted according to age, weight and breed into four groups. The effects of feeding restricted rations during the maintenance period was tested. The period was between 6-12-70 and 9-18-70. Ewes in groups 1 and 3 were fed a limited ration to cause a decrease in body weight during the maintenance period. The ration fed was 3.4 lbs. of alfalfa pellets during the first two week period. Decreasing amounts were fed at subsequent intervals until a level of 2.8 lbs. was reached. Average daily consumption for the 98 day period was 2.97 lbs.

Lots 2 and 4 were fed a ration calculate to maintain body weight. Ewes in these lots were fed 4.0 lbs. of alfalfa pellets during the first two week period.

The allowance was reduced in subsequent periods until they were being maintained on 3.4 lbs. Average consumption for the entire period was 3.5 lbs. The results of the feeding regime as it affected body weights are shown in tables 1 and 2.

TABLE 1 MAINTENANCE & POST FLUSHING EWE WEIGHTS

Lot 1. Suffolks--Sub Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Wt. Change	Post Flushing Wt. 10-12-70
66-170	180	149	-31.0	158
67-237	128	119	- 9.0	132
67-210	134	124	-10.0	143
67-124	143	139	- 4.0	148
67-402	154	146	- 8.0	167
67-100	158	170	+12.0	184
67-106	167	132	-35.0	155
67-234	166	138	-28.0	149
67-158	172	187	+15.0	203
67-245	193	180	-13.0	191
Average	159.5	148.4		163.0

Lot 2. Suffolks--Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Wt. Change	Post Flushing Wt. 10-02-70
66-347	160	173	+13.0	184
67-125	130	150	+20.0	151
67-361	144	151	+ 7.0	162
67-283	143	116	-27.0	138
67-216	156	154	- 2.0	170
67-320	156	171	+15.0	190
67-182	187	179	- 8.0	190
67-376	172	179	+ 7.0	188
67-409	178	182	+ 4.0	193
68-883	167	149	-18.0	169
Average	159.3	160.4		173.5

TABLE 2 MAINTENANCE AND POST FLUSHING EWE WEIGHTS

Lot 3. Hampshire--Sub Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Wt. Change	Post Flushing Wt. 10-12-70
65-019	186	141.0	-45.0	166.0
63-451	152.0	165.0	+13.0	185.0
64-367	154.0	147.0	- 7.0	151.0
65-571	179.0	169.0	-10.0	195.0
67-541	152.0	140.0	-12.0	160.0
67-962	132.0	144.0	+12.0	160.0
66-740	174.0	182.0	+ 8.0	190.0
68-821	172.0	161.0	-11.0	185.0
68-016	182.0	174.0	- 8.0	188.0
68-584	137	96.0	-41.0	114.0
Average	162.0	151.9		169.4

Lot 4. Hampshire-Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Wt. Change	Post Flushing Wt. 10-02-70
08	178	194.0	+16.0	198.0
63-118	162	162.0	0.0	172.0
65-035	174	177.0	+ 3.0	189.0
66-012	155	150.0	- 5.0	165.0
67-099	168	174.0	+ 6.0	184.0
67-964	138	151.0	+13.0	165.0
68-044	171	155	-16.0	172.0
68-049	163	178	+15.0	191.0
68-845	196	193	- 3.0	206.0

Lot 2. Surfolio--Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Change	Post Plushing Wt. 10-02-70
66-347	160	173	+13.0	184
67-125	130	150	+20.0	151
67-361	144	151	+ 7.0	162
67-283	143	116	-27.0	136
67-216	152	134	- 2.0	170
67-320	156	171	+15.0	190
67-183	127	129	- 8.0	190
67-376	172	179	+ 7.0	188
67-409	178	182	+ 4.0	193
68-883	107	169	-18.0	196
Average	159.3	160.4		173.5

TABLE 2 MAINTENANCE AND POST PLUSHING RWE WEIGHTS

Lot 3. Hampshire--Sub Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Change	Post Plushing Wt. 10-12-70
65-019	186	141.0	-45.0	156.0
63-451	152.0	165.0	+13.0	185.0
66-367	154.0	147.0	- 7.0	151.0
65-571	179.0	169.0	-10.0	195.0
67-541	152.0	140.0	-12.0	160.0
67-962	132.0	144.0	+12.0	150.0
66-740	174.0	182.0	+ 8.0	190.0
68-821	172.0	161.0	-11.0	185.0
68-016	182.0	174.0	- 8.0	188.0
68-584	137	96.0	-41.0	116.0
Average	162.0	151.9		169.4

Lot 4. Hampshire-Maintenance

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Change	Post Plushing Wt. 10-02-70
68	178	194.0	+16.0	198.0
63-118	162	162.0	0.0	172.0
65-035	174	177.0	+ 3.0	189.0
66-012	155	150.0	- 5.0	165.0
67-099	168	174.0	+ 6.0	184.0
67-064	138	151.0	+13.0	165.0
66-044	171	155	-16.0	172.0
68-049	103	178	+15.0	191.0
68-845	196	193	- 3.0	209.0

Ident.	Initial Wt. 6-12-70	Final Wt. 9-18-70	Wt. Change	Post Flushing Wt. 10-02-70
66-132	165	168	+ 3.0	179.0
Average	167.0	170.2		182.1

Discussion:

The average body weight change of ewes on maintenance and sub-maintenance levels was close to that which was calculated as desirable at the beginning of the experiment. Suffolk ewes in Lot 2, and Hampshire ewes in Lot 4 gained an average of 1.1 lbs. and 3.2 lbs respectively. Suffolk ewes in Lot 1 and Hampshires in Lot 3 lost 8.9 lbs. and 10.0 lbs. respectively. Although the average performance in all lots was about as "aimed for", individual performance varied widely. Individual ewes in the sub-maintenance groups lost as much as one third of their body weight, other ewes gained from 6-8% of their original weight. Variation in individual response was also noted in groups on maintenance rations. Individual ewes in Lots 2 and 4 lost nearly 10% of their initial weight while others gained approximately 10% of their initial weight.

The individual response of ewes to limited feeding of alfalfa pellets during maintenance shows this practice to be of doubtful value. Aggressive ewes consume more than their share. Less aggressive ewes lose more weight than desirable. It is not known whether more uniform response would have been seen had long hay been fed or if ewes had been fed a double allowance on alternate days.

To this time one ewe has been lost in each of Lots 1 and 3. In addition several ewes in Lot 1 appear to lack thrift and have developed wool breaks.

All ewes were flushed prior to breeding. Flushing rations consisted of 4.0 lbs. of alfalfa pellets and 1.0 lb. of whole oats. This ration was fed through the breeding period. Rapid weight gains were seen in all groups. Sub-maintenance groups 1 and 3 gained respectively 1.04 and 1.25 lbs. per head daily. Maintenance groups 2 and 4 gained .935 and .850 lbs. per head daily. Conception of all ewes appears to have been good. No dry ewes are apparent at this time.

Publications:

None

HETTINGER BRANCH EXPERIMENT STATION

FLOCK CALENDAR - OUTLINE

PRIOR TO BREEDING

1. Bag and mouth ewes and cull those that don't meet requirements.
2. Replace culled ewes with top-end yearlings saved for replacement.
3. Drench ewes (Phenothiazine).
4. Evaluate Sires:
   a. Be sure they are vigorous, healthy and in good breeding condition.
   b. Allow 3 rams to 100 ewes under range conditions and 2 when pen breeding, as in small lots or pastures.
5. Crutch Ewes
6. Flush Ewes (if in thin condition).
   a. 1# grain 2 weeks to 5 weeks (Usually 17 days).
   b. Moving ewes to a more lush better quality pasture prior to breeding will serve as an effective flush.

   *if ewes are overconditioned the effect of flushing will be lessened.

BREEDING

1. Test Rams with marking harness or water color paint on brisket to see if they are getting the job done (change colors at the end of first 17 days).
2. Leave rams in NO LONGER than 57 days (38-40 days more desirable).
3. Remove rams (don't winter rams with ewes).

PRIOR TO LAMBING (First 15 Weeks)
Early Pregnancy

1. Watch general health of ewes, if possible sort off thin ewes and give extra feed so they can catch up.
2. Feed the poor quality roughage you have on hand during this period saving the better for lambing.

LAST SIX WEEKS BEFORE LAMBING

1. Drench Ewes (Thiabemdazole).
2. Six - four weeks before feed 1/4 - 1/3# oats per ewe per day.
3. Shear ewes, trim hooves and vaccinate ewes for example: Entro-toxemia, Vibriosis, Soremouth.

4. Four weeks before lambing increase grain to 1/2 - 3/4# per head per day. (Usually done immediately after shearing.)

5. Check facilities and equipment to be sure everything is in order.

6. Two weeks before lambing increase grain to 1# per head per day.

LAMBING

1. Watch ewes closely as extra effort will be repaid with more lambs at weaning time.

2. Put ewe and lambs in lambing pen (jug) after lambing (not before).

3. Be available to provide assistance if ewe has troubles.

4. Disinfect lambs navel with iodine as soon after birth as possible.

5. Use heat lamps in cold weather.

6. Be sure both teats are functioning and lambs nurse as soon as possible.

7. Brand ewes and lambs with identical numbers on same sides.

8. Turn ewes and lambs out of pen as soon as all are doing well. (24 hrs. - 6 days)

9. Bunch up ewes and lambs in small groups 4-8 ewes and then combine groups until they are in a workable size unit. (Don't ever put a new set of twins into a large groups of ewes and lambs.)

10. Castrate and dock lambs 1-2 weeks after birth.

SUPPLIES THAT MAY BE NEEDED DURING SEASON

1. Good disinfectant.

2. Forceps or Balling gun.

3. Syringe and needles.

4. Hoof trimmer.

5. Sulfa urea Boluses for ewes that were assisted in lambing.

6. Iodine for disinfecting navels.

7. Soap and mineral oil.

8. Tri-sulfa pills for treatment of early pneumonia symptoms.

9. Mastitis ointment

10. Branding paint and irons.

11. Heat lamps for severe weather.

12. Docking and castrating tools.

13. Surgical scissors.

14. Needle and thread in case a suture is needed.

15. Crate for mothering-up lambs and adopting.

END OF LAMBING TO WEANING

1. Feeding practices will vary depending on the time that lambs were born.

   A. Dec. 15 - March 1 - Lambs are usually creep fed and not allowed to go on pasture before market.

   B. Lambs born after March 1 are usually not creep fed and allowed to go on pasture during summer.

2. Drench ewes before turning them on pasture. (Phenathiazine).

   *try and drench according to a program that works for you, (don't wait until signs of worminess appear, it is too late then).

3. Rotate pastures if possible, this also is helpful in internal parasite control.

WEANING TO PRE-BREEDING

1. Time of rest for ewes.

2. Time for shepherd to adjust ewes conditions so they can be effectively flushed, for next breeding season.