

# The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market

by: Richard and Barbara Leverett

Longview Farm  
1512 Burrell Road  
St. Johnsville, NY  
518-568-2833  
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Farmers generally consider confinement barn feeding to be the only acceptable method of raising lambs for the hothouse market. Slow growth rates on pasture are often blamed for poor quality of hothouse lambs raised on pasture. Our main goal for this project was to compare the growth rate of lambs raised for the hothouse market on ewes grazed on intensive rotational pasture to the growth rate of lambs raised on ewes fed a conventional silage/grain diet in the barn. We will discuss some of the problems encountered with pasture raising of lambs.

We have a 600 ewe commercial sheep flock on the star lambing system. Three of the lambing/lactation periods involve the use of pasture as most or all of the forage portion of the ewe's diet. No concentrates are fed to the ewes on pasture. Lambs are fed free-choice creep feed (18% protein) in both barn and pasture raising systems.

Our ewe flock consists primarily of Finn X Dorset ewes. All of the ewes in this project were born in 1991 and lambed for their first time in April 1992. The study group lambed for their second time in December 1992 and for their third time in July 1993 and the resulting lambs were used as the pasture fed group. The control group lambed for their second time in February 1993 and the resulting lambs were used as the barn fed group. Most of the ewes that lambed in the control group in February are currently lambing for their third time as this is being written in October, 1993.

The control group was managed as one group in late gestation. As ewes lambed they were put into individual jugs (4'x5' pens) for 1 or 2 days, then moved to mixing nurseries of 6 to 8 ewes and their lambs for 2 or 3 days. After this they moved to larger nurseries every 2 or 3 days until at about 2 weeks of age they were in nurseries of about 50 ewes and their lambs. Ewes were fed all of the second cutting alfalfa-grass haylage they could eat plus about 1.5 pounds of whole corn per head top dressed on their haylage later in the day. Each nursery had its own 10'x10' creep set up so lambs had free choice creep feed at all times. Ewes and lambs had free choice salt/mineral mix provided in each nursery. The mineral mix contains Bovatec to reduce coccidia problems by reducing the amount of coccidia oocysts that the ewes shed into the environment.

The July lambing ewes were lambed out as a group on a hillside pasture of about three acres where the ewes with lambs were not separated out from the late gestation ewes. The ewes were checked three times daily for lambing difficulties or mothering-up problems but generally no assistance was necessary. Ewes having triplets had one lamb removed to an artificial rearing unit so they were only raising twins on pasture. Much less individual care was necessary for pasture lambing than for the barn raised control group.



The lambs on the pasture system had access to a creep feeder (10'x14') set up on skids that was dragged with a tractor from one pasture to the next as the sheep were moved about. Near the creep area was a salt/mineral feeder that had the same mineral mix with Bovatec that was utilized in February. Water was supplied in all pastures with a 50 gallon stock tank filled by a hose to the nearest building as these pastures are all located near the farmstead. For more remote locations we use a large tank (400-600 gallons) on a running gear with a hose, float-valve, and stock tank. The tank can be drawn to the farmstead, refilled, and when returned to the pasture, gravity flow keeps the stock tank full.

The pasture raised group utilized temporary electric fence to confine them and they were moved every five or six days. The land utilized during the lactation period consisted of about 16.5 acres of land generally unsuitable for crops or hay due to steepness of slope, size and shape of fields, and rock ledge outcrops. Most of the soils in the pastures are classified as Farmington 0-8% slopes (4 acres) or Farmington-Rock Outcrop 15-25% slopes (10.4 acres) both of which are described in our conservation plan as shallow, somewhat excessively drained, high lime, loamy soil formed in till that is 10 to 20 inches thick over limestone bedrock (10" or less in outcrop areas). The other 2.1 acres was a Wassaic Silt Loam 8-15% slopes which is a well drained, medium lime, loamy soil formed in till that is 20 to 40 inches thick over calcareous bedrock. These pastures were divided into seven areas between 2 to 2.5 acres in size. Some areas of the pastures are either too steep, rocky, or both to clip after grazing. Even though the water capacity of these soils is low and we had a very dry summer we had enough summer thunderstorms to provide adequate regrowth for an approximately 35 day return cycle over the previously grazed pastures and the pasture quality improved as it cooled down in August. Crude protein levels rose from 22.2% in mid-July to 27.6% in mid-August while TDN in mid-July was 55.7% and rose to 71.3% by mid-August.

Between the months of May through October this 16.5 acres of rough pasture was grazed by the ewes from three separate lambing periods. The April lambing (131 ewes) lambed out 205 lambs on winter rye pasture and then completed their lactations on this 16.5 acres. The July lambing (106 ewes) lambed out 155 lambs on the 3 acre hillside pasture and then completed their lactations on the same 16.5 acres. Our October lambing (125 ewes) are currently lambing on the same 16.5 acres and when the grazing period is over (probably October 20, 1993) these ewes will be barn fed and finish their lactations on corn silage and soybean meal. This 16.5 acres of pasture produced enough forage for these ewes to raise 360 lambs for the hothouse market or to be weaned into the



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replacement flock for a total of 14,400 pounds of lamb. At a market value of \$50 per lamb this equals a gross production value of \$18,000.

We market between 1,000 and 1,100 lambs per year. They go mostly to one meat market in the Bronx as hothouse lambs. This is a fresh meat trade and they buy lambs every week. They want a lamb between 35 and 45 pounds that will be "hog-dressed" at slaughter and have a dressing percent between 65% and 70% with the head and hide on. The lamb must be well-muscled with adequate fat cover and a light pink color to be satisfactory. This generally means a milk-fed, fast growing, young lamb.

To measure the growth rate of the lambs we sorted the lambs off from their dams using a Poldenvale sorting chute and then ran the lambs through the chute again to an Arkfeld scale where they were individually weighed and recorded. Each lamb had a brass eartag for identification and this same number was paint branded on their backs for easier reading in the scales. Lambs of the appropriate weights were marked while in the scales to be marketed on the following Monday. All the lambs were weighed on a weekly basis until they were sold.

Internal parasites are often considered to be a major problem of lambs on pasture. Fecal samples were taken on 8/2/93 from several representative lambs and taken to the Cherry Valley Veterinary Clinic. The samples were found to be free of any internal parasite eggs but were heavily contaminated with coccidia oocysts. This was surprising since Bovatec was in the mineral mix and Decox was in the creep feed to reduce the incidence of coccidia. The coccidia level was high enough to warrant treatment so we added Corid powder to their salt so that their intake of Amprolium was 10 mg/kg of body weight. The Bovatec in the mineral mix is added at a low rate to lower the number of oocysts shed into the environment by the ewes and is probably not consumed in high enough amounts by the lambs to reduce their level of coccidia. The lambs probably did not consume enough creep feed to get enough Decox to reduce coccidia levels either because the grass is so palatable that they graze alongside their dams.

The February control group did not seem to have any parasite problems. Several representative samples from these lambs were sent to the Cherry Valley Veterinary Clinic and were found to be free of any internal parasite eggs including coccidia. These lambs spent alot of their free time in the creep areas and probably consumed more creep feed each day so the Decox did a better job of eliminating coccidia as it was intended to do.

To compare the forage quality of the two systems forage samples were sent to the Mitchell Laboratory in New Berlin, NY. The roughage used in February was second cutting alfalfa-grass haylage harvested in late July 1992 and stored in an upright concrete silo. This roughage tested at 32.1% dry matter, 20.0% crude protein, and 63.4% TDN



and was readily eaten by the ewes. The ration was balanced with 1.5 pounds per head of whole corn hand fed later in the day. The pasture grass samples ranged from 19.5% to 22.6% dry matter, 22.2% to 27.6% crude protein, and 55.7% to 71.3% TDN. The TDN on the first pasture sample was lower than NRC requirements for a ewe lactating twins(65%) but the other samples were more than adequate. The NRC recommends that 35% of a lactating ewes diet be from concentrates but no grain was fed to the ewes on pasture.

	FORAGE SAMPLES			
DATE	3/3/93	7/13/93	8/3/93	8/17/93
	HAYLAGE	PASTURE	PASTURE	PASTURE
TYPE	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4
DM%	32.1	19.5	19.4	22.6
CP%	20	22.2	24.2	27.6
ADF%	35.1	36.5	28.2	23.8
NDF%	45	66.2	48.2	58.7
TDN%	63.4	55.7	68.2	71.3
SAMPLE 1 Alfalfa-Grass Haylage				
SAMPLE 2 Orchardgrass-Clover Pasture				
SAMPLE 3 Native Grass-Clover Pasture				
SAMPLE 4 Orchardgrass Pasture				

One measure for the adequacy of the nutrition program is to compare the condition scores of the ewes before lambing to the condition scores of the ewes after the lactation period. The ewes on the pasture system lost more weight than we would have liked and many could be considered thin at weaning. This could be attributed to the lack of concentrate feeding and the inability of the ewes to consume a large enough volume of roughage to meet all their requirements even though the later pasture samples had more than adequate amounts of nutrients.

As was mentioned earlier the lambs were drafted off from their dams with the use of a handling chute on a weekly basis and weighed. The recorded weights are shown in Tables 1 and 2 on pages 6 through 9. The last recorded weight for each lamb was considered the date of sale as the lambs were marketed within three days of their last weighing. Each lamb's age was calculated by subtracting their birth date from their sale date. Their weight/day of age was calculated by subtracting birth weight (11 pounds for singles, 8 pounds for twins, and 6 pounds for triplets) from their sale weight and dividing by their age. A final adjustment factor determined by sex and type of rearing was multiplied by their weight/day of age to adjust every lamb to a common 'single ewe status'. No adjustments for age of dam were necessary because all the ewes were two-

year olds. The data for these calculations is in Tables 3 and 4 on pages 10 through 13. Averages for each column were calculated and a final adjusted average sale weight was calculated by multiplying the adjusted weight/day of age times the average age at sale and then adding an 11 pound birth weight to arrive at a single ewe lamb status. The results are compared in the following table:

SUMMARY		February	July
		BARN FED	GRAZED
AVERAGE AGE IN DAYS		50.9	51.58
AVERAGE SALE WEIGHT		36.92	36.66
AVERAGE WEIGHT/DAY OF AGE		0.57	0.56
AVERAGE ADJUSTED WEIGHT/DAY OF AGE		0.75	0.78
ADJUSTED AVERAGE SALE WEIGHT		49.37	51.48

As is demonstrated by this table, all of the figures for both the study group and the controls are almost identical. There was no evidence of slow growth of lambs on dams on rotational grazing. As mentioned earlier, the ewes being grazed lost more weight than we would consider desirable, but they did seem to cycle normally and have been serviced by the rams to lamb again in February, 1994.

The quality of lamb produced on pasture is not as high as what is produced in the barn. We have never told our lamb buyer that our summer lambs are grown on pasture because of the stigma this might place against our lambs. Every summer there are comments that the lambs don't have as much fat cover, the meat is redder, and they are dirtier than our winter lambs but they are still acceptable for the market. Because the lambs are hog-dressed the lambs must be free from burdocks and as clean as possible or the meat inspector will make the slaughterhouse skin the lambs and then they are considered unacceptable for the market.

In summary, I would say that pasture raising of hothouse lambs is an acceptable alternative to barn raising if you watch for problems and remedy them quickly as we did with the coccidia outbreak. The lambs must be kept fast growing and clean. The grazing ewes lost more weight than the barn fed group but they should be able to recover their lost weight by their next lambing period in February if kept on a high plane of nutrition. Pasture grazing of the ewes with lambs in the summer gives the shepherd a break from the drudgery of individual feeding of ewes with lambs in jugs and nurseries that is necessary in confinement feeding situations. This makes an excellent way of producing a marketable product from land that could not be used for any other agricultural purpose than grazing.



The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market  
 TABLE 1 RECORDED WEIGHTS-CONTROL GROUP

		3/27/93	4/3/93	4/11/93	4/14/93	4/24/93	4/30/93	5/9/93
DAM #	LAMB#							
709	12		30	35	40			
	13		23	28	33			
319	18		30	41	44			
	19	30	35					
362	38	32	36					
	39	29	36					
136	42	30	32					
	43		33	41				
497	63		25	29	34	38	44	
	64		29	36				
254	65	27	30	34	39			
	66		22	28	34			
113	67		26	36	38			
	68		24	33	42			
329	73		27	37	45			
	74		25	32	37			
349	75	30	33	38	40			
	76		24	33	35			
63	105		20	30	34			
	106		25	31	35			
494	111		28	40	42			
	112		21	24	28	34	40	
33	136		30	39	41			
	137		29					
123	138		29	36	37			
	139		25	30	35			
543	146		25	30	35	40		
	147		23	26	30	34	39	
454	148		20	23	27	32	37	43
	149		20	24	28	34	35	44
198	153		24	26	29	36	42	
	154		25	30	32	38		
450	165		25	31	34			
	166		21	29	34	39		
341	182		27	36	41			
	183		20	26	28	30	34	40
486	197		21	29	33	36	43	
	198		29	36				
568	216		26	35				
	217		23	32	35	42		
425	218		20	27	30	33	35	41
	219		25	32	34	37	41	
56	235		25	34	38	43		
	236		24	31	36	42		

## The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market

TABLE 1 RECORDED WEIGHTS-CONTROL GROUP  
(CONT.)

DAM #	LAMB#	3/27/93	4/3/93	4/11/93	4/14/93	4/24/93	4/30/93	5/9/93
20	259		29	36				
	260		20	26	28	33	38	
43	267		25	32				
	268		23	30	33			
205	283		30	35				
	284		28	33				
426	291		23	31	34			
	292		27	34				
370	305		21	26	28	34	39	
	306		24	28	32	40		
22	319		23	27	29	40		
	320		21	25	27	33	35	42
180	323		28	28	30	36	41	
	324		28	35				
660	332		25	35				
	333		22	26	31	39		



The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market  
 TABLE 2 RECORDED WEIGHTS-STUDY GROUP

DATES		8/8/93	8/13/93	8/20/93	8/27/93	9/3/93	9/10/93	9/17/93	9/24/93
DAM #	LAMB #								
376	722	20	23	26	28	34	38		
	723	24	27	30	31	34	38		
102	724	40							
	725	33	37						
458	728	22	22	24	28	32	37		
	729	24	25	28	33	36			
90	731	29	30	31	35	36			
	732	18	20	23	24	29	34	39	
54	736	27	29	32	33	36	40		
	737	26	28	31	34	40			
226	738	35	37						
462	741	28	31	35					
	743	29	32	36					
135	742	32	38						
368	745	25	27	30	36				
	746	25	27	29	33	40			
367	747	35	40						
256	748	23	25	28	28	32	35	39	42
	749	20	23	24	26	29	33	35	38
125	750	23	24	28	31	37			
	751	22	24	29	32	35	39		
100	758	17	17	19	21	26	31	36	38
	759	16	17	20	23	28	33	37	39
59	764	27	29	33	36	41			
	765	30	32	36					
77	767	28	31	34	39				
	768	28	31	35					
83	769	24	24	25	29	35	42		
	770	29	33	35					
520	776	34	37						
145	771	24	26	31	33	37			
	772	23	26	29	31	34	39		
84	773	33	38						
420	775	25	26	27	32	38			
	777	18	19	21	21	27	31	36	42
496	778	25	29	33	34	39			
	779	25	24	25	28	31	36		
85	782	25	26	29	34	36	42		
	783	27	29	32	33	36	39		
67	800	21	22	23	27	33	38		
	438	21	23	26	30	33	37		
119	446	21	22	24	27	32	39		
	447	19	21	23	27	31	36		
999	450	26	28	33	40				

## The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market

TABLE 2 RECORDED WEIGHTS-STUDY GROUP  
(CONT.)

DAM #	LAMB #	8/8/93	8/13/93	8/20/93	8/27/93	9/3/93	9/10/93	9/17/93	9/24/93
353	453	36	38						
388	456	25	26	30	34	37			
104	457	21	24	27	32	37			
	458	25	28	32	37				
592	464	32	33	38					
112	477	19	21	23	27	32	38		
	478	17	19	20	23	26	32	37	



## The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market

TABLE 3 DATA CALCULATIONS-CONTROL GROUP

DAM #	LAMB #	BIRTH DATE	SALE DATE	AGE IN DAYS	SALE WEIGHT	WEIGHT/ DAY OF AGE	ADJUSTED WEIGHT/ DAY OF AGE
709	12	2/19	4/14	54	40	0.63	0.74
	13	2/19	4/14	54	33	0.50	0.59
319	18	2/19	4/14	54	44	0.67	0.67
	19	2/19	4/3	43	35	0.63	0.70
362	38	2/21	4/3	41	36	0.68	0.68
	39	2/21	4/3	41	36	0.68	0.76
136	42	2/21	4/3	41	32	0.59	0.59
	43	2/21	4/11	49	41	0.67	0.67
497	63	2/22	4/30	67	44	0.54	0.54
	64	2/22	4/11	48	36	0.58	0.58
254	65	2/22	4/14	51	39	0.61	0.67
	66	2/22	4/14	51	34	0.51	0.57
113	67	2/22	4/14	51	38	0.59	0.59
	68	2/22	4/24	61	42	0.56	0.62
329	73	2/22	4/24	61	45	0.61	0.61
	74	2/22	4/24	61	37	0.48	0.53
349	75	2/22	4/14	51	40	0.63	0.70
	76	2/22	4/14	51	35	0.53	0.59
63	105	2/23	4/14	50	34	0.52	0.58
	106	2/23	4/14	50	35	0.54	0.60
494	111	2/23	4/14	50	42	0.68	0.68
	112	2/23	5/9	75	40	0.43	0.47
33	136	2/24	4/11	46	41	0.72	0.72
	137	2/24	4/4	39	29	0.54	0.60
123	138	2/24	4/14	49	37	0.59	0.59
	139	2/24	4/14	49	35	0.55	0.61
543	146	2/24	4/24	59	40	0.58	0.61
	147	2/24	4/30	65	39	0.51	0.59
454	148	2/24	5/9	74	43	0.47	0.47
	149	2/24	5/9	74	44	0.49	0.54
198	153	2/24	4/30	65	42	0.55	0.59
	154	2/24	4/24	59	38	0.54	0.63
450	165	2/24	4/18	53	34	0.49	0.49
	166	2/24	4/24	59	39	0.53	0.58
341	182	2/24	4/18	53	41	0.62	0.69
	183	2/24	5/9	74	40	0.43	0.48
486	197	2/25	4/30	64	43	0.55	0.61
	198	2/25	4/4	45	36	0.62	0.69
568	216	3/1	4/11	41	35	0.66	0.73
	217	3/1	4/24	54	42	0.63	0.70
425	218	3/1	5/9	69	41	0.48	0.48
	219	3/1	4/30	60	41	0.55	0.55
56	235	3/1	4/24	54	43	0.65	0.72
	236	3/1	4/24	54	42	0.63	0.63

The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market  
 TABLE 3 (CONT.) DATA CALCULATIONS-CONTROL GROUP

DAM #	LAMB #	BIRTH DATE	SALE DATE	AGE IN DAYS	SALE WEIGHT	WEIGHT/DAY OF AGE	ADJUSTED WEIGHT/DAY OF AGE
20	259	3/2	4/4	40	36	0.70	0.70
	260	3/2	4/30	59	38	0.51	0.56
43	267	3/2	4/4	40	32	0.60	0.60
	268	3/2	4/14	43	33	0.58	0.58
205	283	3/3	4/4	39	35	0.69	0.69
	284	3/3	4/4	39	33	0.64	0.64
426	291	3/3	4/14	42	34	0.62	0.62
	292	3/3	4/4	39	34	0.67	0.67
370	305	3/3	4/30	58	39	0.53	0.53
	306	3/3	4/24	52	40	0.62	0.68
22	319	3/5	4/24	50	40	0.64	0.64
	320	3/5	5/9	65	42	0.52	0.58
180	323	3/5	4/30	55	41	0.60	0.60
	324	3/5	4/4	36	35	0.75	0.75
660	332	3/5	4/11	36	35	0.75	0.75
	333	3/5	4/24	49	39	0.63	0.63

AVERAGE AGE IN DAYS	50.90
AVERAGE SALE WEIGHT	36.92
AVERAGE WEIGHT/DAY OF AGE	0.57
AVERAGE ADJUSTED WEIGHT/DAY OF AGE	0.75
ADJUSTED AVERAGE SALE WEIGHT	49.37



## The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market

TABLE 4 DATA CALCULATIONS-STUDY GROUP

DAM #	LAMB #	BIRTH DATE	SALE DATE	AGE IN DAYS	SALE WEIGHT	WEIGHT/ DAY OF AGE	ADJUSTED WEIGHT/ DAY OF AGE
376	722	7/4	9/10	68	38	0.44	0.49
	723	7/4	9/10	68	38	0.44	0.44
102	724	7/4	8/8	35	40	0.91	0.91
	725	7/4	8/13	40	37	0.73	0.80
458	728	7/4	9/10	68	37	0.46	0.48
	729	7/4	9/13	61	36	0.44	0.52
90	731	7/6	9/3	59	36	0.47	0.53
	732	7/6	9/17	73	39	0.42	0.47
54	736	7/6	9/10	66	40	0.48	0.48
	737	7/6	9/3	59	40	0.54	0.60
226	738	7/6	8/20	45	37	0.58	0.58
462	741	7/7	8/20	44	35	0.61	0.00
	743	7/7	8/20	44	36	0.64	0.64
135	742	7/7	8/13	37	38	0.73	0.65
368	745	7/7	8/27	51	36	0.55	0.61
	746	7/7	9/3	58	40	0.55	0.61
367	747	7/7	8/13	37	40	0.78	0.78
256	748	7/8	9/24	78	42	0.44	0.44
	749	7/8	9/24	78	38	0.38	0.38
125	750	7/8	9/3	57	37	0.51	0.56
	751	7/8	9/10	64	39	0.48	0.54
100	758	7/9	9/24	77	38	0.39	0.43
	759	7/9	9/24	77	39	0.40	0.45
59	764	7/10	9/3	55	41	0.60	0.60
	765	7/10	8/20	41	36	0.68	0.68
77	767	7/11	8/27	47	39	0.66	0.66
	768	7/11	8/20	40	35	0.68	0.75
83	769	7/11	9/10	61	42	0.56	0.56
	770	7/11	8/20	40	35	0.68	0.68
520	776	7/11	8/13	33	37	0.79	0.70
145	771	7/11	9/3	54	37	0.54	0.54
	772	7/11	9/10	61	39	0.51	0.56
84	773	7/11	8/13	33	38	0.82	0.82
420	775	7/12	9/3	53	38	0.57	0.57
	777	7/12	9/24	74	42	0.46	0.51
496	778	7/12	9/3	53	39	0.58	0.65
	779	7/12	9/10	60	36	0.47	0.52
85	782	7/12	9/10	60	42	0.57	0.57
	783	7/12	9/10	60	39	0.52	0.52
67	800	7/14	9/10	58	38	0.52	0.52
	438	7/14	9/10	58	37	0.50	0.56
119	446	7/15	9/10	57	39	0.54	0.54
	447	7/15	9/10	57	36	0.49	0.55
999	450	7/15	8/27	33	40	0.88	0.88

## The Use of Rotational Grazing in the Production of Lambs for the Hothouse Market

TABLE 4 (CONT.) DATA CALCULATIONS-STUDY GROUP

DAM #	LAMB #	BIRTH DATE	SALE DATE	AGE IN DAYS	SALE WEIGHT	WEIGHT/ DAY OF AGE	ADJUSTED WEIGHT/ DAY OF AGE
353	453	7/16	8/13	28	38	0.96	0.86
388	456	7/16	9/3	49	37	0.55	0.49
104	457	7/16	9/3	49	37	0.59	0.66
	458	7/16	8/27	42	37	0.69	0.69
592	464	7/20	8/20	31	38	0.87	0.87
112	477	7/24	9/10	48	38	0.63	0.69
	478	7/24	9/17	55	37	0.53	0.59

AVERAGE AGE IN DAYS	51.58
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AVERAGE SALE WEIGHT	36.66
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AVERAGE WEIGHT/DAY OF AGE	0.56
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AVERAGE ADJUSTED WEIGHT/DAY OF AGE	0.78
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ADJUSTED AVERAGE SALE WEIGHT	51.48
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## The Use of Rotational Grazing in the Production of Hothouse Lambs

TABLE 5

Condition Scores of Ewes

Control Group			Study Group		
DAM #	PRELAMB SCORE	WEANING SCORE	DAM #	PRELAMB SCORE	WEANING SCORE
20	2.0	1.5	54	3.5	1.5
22	2.5	1.5	59	3.0	1.5
33	2.5	1.5	67	2.5	2.0
43	3.0	2.0	77	2.0	1.0
56	3.0	2.0	83	3.5	1.0
63	3.5	2.0	84	3.5	2.0
113	2.0	1.5	85	3.0	1.5
123	2.0	1.5	90	3.5	2.0
136	2.5	1.5	100	2.0	1.0
180	2.5	1.5	102	3.5	2.0
198	3.0	2.5	104	3.5	1.0
205	2.0	1.0	112	3.0	1.0
254	2.5	1.5	119	2.0	1.0
319	2.5	2.0	125	2.0	1.0
329	3.0	2.0	135	3.5	2.0
341	3.0	2.0	145	3.5	1.5
349	3.0	1.5	226	3.0	2.5
362	2.5	1.0	256	2.5	1.5
370	2.5	1.5	353	3.5	1.5
425	2.0	1.5	367	3.5	1.5
426	2.5	1.5	368	3.5	2.0
450	2.5	1.5	376	2.0	1.0
454	3.0	2.0	388	4.0	2.0
486	3.5	2.0	420	3.0	1.0
494	2.5	2.0	458	3.5	2.0
497	2.5	1.5	462	3.0	1.0
543	2.5	2.0	496	3.0	1.5
568	2.0	1.0	520	3.0	1.0
660	2.0	1.5	592	3.5	1.5
709	2.0	1.5	999	2.5	1.5
<b>AVERAGE</b>	2.6	1.7	<b>AVERAGE</b>	3.03	1.48
<b>NET CHANGE</b>		-0.9	<b>NET CHANGE</b>		-1.55