

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

South Dakota Sheep Field Day Proceedings and
Research Reports, 1995

Animal Science Reports

1995

Effect of Ewe Breed on Fall Lambing Performance

A. L. Slyer
South Dakota State University

Bruce Read

Follow this and additional works at: http://openprairie.sdstate.edu/sd_sheepday_1995

Recommended Citation

Slyer, A. L. and Read, Bruce, "Effect of Ewe Breed on Fall Lambing Performance" (1995). *South Dakota Sheep Field Day Proceedings and Research Reports, 1995*. Paper 1.
http://openprairie.sdstate.edu/sd_sheepday_1995/1

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Sheep Field Day Proceedings and Research Reports, 1995 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.



Effect of Ewe Breed on Fall Lambing Performance

A.L. Slyter and Bruce Read
Department of Animal and Range Sciences

SHEEP 95-1

Summary

September-October lambing performance for 1989 through 1994 is reported for purebred and crossbred ewes managed at the SDSU Sheep Unit on a once a year lambing system. Success based on the percentage of ewes exposed that lambled has ranged from zero for purebred Hampshire ewes to a high of 97.1% for one group of crossbred ewes. Year to year variation continues to be of concern, although the lambing rate for mature Finn-Dorset x Targhee (FDT) and Hampshire x FDT (HFDT) ewes has averaged 74.3% with a high of 97.1% and a low of 60.2%.

Key Words: Sheep, Fall Lambing, Breeds

Introduction

Seasonality of lamb production continues to plague the industry and feeds the large price swings found in the market place. This translates into a fluctuating economic picture for lamb producer, feeder, packer, and consumer. This wide price fluctuation makes accurate financial projections difficult if not impossible. Fall lambing offers a means of spreading the available supply of fresh American lamb over more months, thus reducing the common practice of holding lambs back or over finishing lambs.

This study was initiated to evaluate the lambing performance of various purebred and crossbred ewes in a once a year September-October lambing system.

Experimental Procedure

Purebred Hampshire and Columbia ewes and crossbred Finn x Dorset (FD), Finn-Dorset x

Targhee (FDT), and Hampshire x FDT (HFDT) were included in this study. Originally Hampshire and Columbia ewes were placed in the fall flock starting in 1989 if they lambled in the fall under one of the following conditions:

1. Spring lambing ewes (1989-1993) were exposed following weaning (during lactation in 1991) and those that subsequently lambled in September-October were placed in the fall flock.
2. Spring-born maiden yearling ewes were treated with melengestrol acetate (MGA) in 1989 and 1990 and those that subsequently lambled in September were placed in the fall flock.
3. Natural born fall lambs from the "fall" flock remained in the fall flock.

Once in the fall flock they remained there with no other alternative lambing opportunity. Fall-born rams have been used as sires in the Hampshire, Columbia, and FD fall flocks where replacements are retained. Replacements have not been retained in the other crossbred flocks. Crossbred ewes were simply switched to fall lambing or were spring-born ewes that were started on a fall lambing sequence. Ewes were culled for missing two consecutive lambing opportunities or obvious health reasons.

Breeding management for all groups included 2 weeks of flushing and teasing prior to introduction of intact fertile rams. Flushing continued a minimum of 2 weeks after intact rams were introduced. Information is provided on spring lambing performance of ewes of similar breeding for comparison of spring versus fall productivity. Spring and fall groups were managed similarly the rest of the year with

nutritional requirements met using a variety of feeds (pasture, silage, concentrates).

Results and Discussion

Results of fall lambing for 1989 through 1994 for mature ewes are shown in Table 1. The percentage of Hampshire ewes lambing has increased from zero to over 57% in the time

span covered. Lambing rate has shown a small decrease. Percent lambing for Columbia ewes has ranged from a low of 13.3% in 1992 to a high of 76.7% in 1994, while lambing rate has been from 1.0 to 1.33 per ewe lambing. FD ewes have had the highest lambing rate (1.40 to 2.10) but have not done as well as expected on percent lambing (33.3 to 76.5%).

Table 1. September lambing performance of various ewe breeds^a

Breed of ewe	Year	No. exposed	No. lambing	Percent lambing	Lambs born per ewe lambing
Hampshire	1989	11	--	--	--
	1990	9	--	--	--
	1991	22	--	--	--
	1992	24	7	29.2	1.71
	1993	45	18	40.0	1.44
	1994	66	38	57.6	1.29
Columbia	1989	12	8	66.7	1.30
	1990	20	13	65.0	1.10
	1991	43	16	37.2	1.00
	1992	45	6	13.3	1.33
	1993	25	11	44.0	1.09
	1994	43	33	76.7	1.09
Finn-Dorset	1989	6	2	33.3	1.40
	1990	17	13	76.5	2.10
	1991	21	14	66.7	1.71
	1992	28	15	53.6	2.00
	1993	40	18	45.0	1.89
	1994	23	13	56.5	1.62
FDT or HFDT ^b	1989	35	34	97.1	1.90
	1990	69	45	65.2	1.50
	1991	88	53	60.2	1.51
	1992	153	94	61.4	1.33
	1993	142	100	70.4	1.39
	1994	82	75	91.5	1.45

^a Ewes 24 months of age or older at lambing.

^b FDT = 1/4 Finn, 1/4 Dorset, 1/2 Targhee; HFDT = Hampshire x FDT.

Crossbred FDT and HFDT ewes have had the highest percentage of ewes lambing, ranging from a low of 60.2% to a high of 97.1%. On average, ewes were younger in 1992 and 1993 for this group which may account in part for the reduced performance. Percent lambing was the lowest (60.2%) among this group of ewes. Obviously considerable variability exists from year to year. Although selection progress is expected to be slow, selecting replacements from fall-born progeny should result in improved fall performance. Additional data are needed before this can be adequately evaluated.

Table 2 shows a comparison of fall versus spring lambing performance where contemporary

groups were available. As expected, a higher percentage of ewes lambed with a higher lambing rate in the spring system. It will be interesting to determine if this difference can be reduced over time with selection.

Fall lambing performance of ewe lambs is shown in Table 3. The success in getting fall-born ewe lambs to conceive at 7 to 8 months of age and lamb their first time in the fall is difficult as the results show for Columbia, Hampshire, and FD ewe lambs. Success for spring-born FDT and HFDT ewe lambs was considerably better in 1994 than 1993. No apparent reason is available for this difference.

Table 2. Lambing performance of various ewe breeds - Fall vs spring

Breed of ewe ^a /year	Sept-Oct			Feb-Mar		
	No. exposed	Percent lambing	Lambs born per ewe lambing	No. exposed	Percent lambing	Lambs born per ewe lambing
Hampshire						
1991-92	22	0.0	0.0	85	92.9	1.90
1992-93	24	29.2	1.71	53	81.1	1.79
1993-94	45	40.0	1.44	51	92.2	1.74
1994-95	66	57.6	1.29	62	85.5	1.77
Columbia						
1991-92	43	37.2	1.00	57	84.2	1.70
1992-93	45	13.3	1.33	63	82.5	1.60
1993-94	25	44.0	1.09	38	84.2	1.69
1994-95	43	76.7	1.09	48	87.5	1.64
Finn-Dorset						
1991-92	21	66.7	1.71	NA ^c	NA	NA
1992-93	28	53.6	2.00	NA	NA	NA
1993-94	40	45.0	1.89	NA	NA	NA
1994-95	23	56.6	1.62	6	83.3	2.6
FDT or HFDT^b						
1991-92	88	60.2	1.50	95	91.6	2.20
1992-93	153	61.4	1.33	18	94.4	2.41
1993-94	142	70.4	1.39	71	91.5	2.14
1994-95	82	91.5	1.45	NA	NA	NA

^a Ewes 24 months of age or older at lambing time.

^b FDT = 1/4 Finn, 1/4 Dorset, 1/2 Targhee; HFDT = Hampshire x FDT.

^c NA = not applicable.

Table 3. September lambing performance of ewe lambs

Breed of ewe	Year	No. exposed	No. lambing	Percent lambing	Lambs born per ewe lambing
Columbia ^a	1993	4	0	--	--
	1994	17	0	--	--
Hampshire ^a	1993	20	7	35.0	1.00
	1994	16	1	6.3	1.00
FD ^a	1993	11	5	45.5	2.2
	1994	9	0	--	--
FDT or HFDT ^b	1993	96	3	3.1	1.00
	1994	104	29	27.9	1.21

^a Fall-born; September-October.

^b Spring-born; March-April.

In summary, fall lambing performance of ewe lambs has been unsatisfactory. In general fall lambing performance of mature FDT and HFDT ewes is approaching acceptable levels when labor, feed, and markets are considered. Lambing labor is greatly reduced, weather losses reduced, winter feed requirements for the dry

ewe are lower, and out of season market prices are expected to be higher for the fall system. In addition, fall lambs definitely aid in providing a more continuous supply of lamb for the industry and consumer. Additional work is in progress on increasing reproductive performance of ewe lambs and continued selection for fall lambing.