

Preliminary results from breeding experiments with Finnsheep in Poland

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Abstract. Polish Lowland (PL) ewes were mated to Finnsheep × East Friesian (EF) F1 rams to create a synthetic dam line (66), and to Polish Heath × EF F1 rams to create another synthetic dam line (77). Performance of both groups were recorded and compared to purebred PL (88). The numbers of animals in the composite lines were too small for statistical analyses and conclusive results. Contrary to expectations line 77 excelled line 88 in lambing rate by 3 %, while line 66 was inferior to it. In litter size, both composite lines slightly excelled line 88. Line 66 excelled line 88 in lamb survival, while line 77 was a little inferior to it. In fleece weights, line 66 was equal with line 88, but line 77 lagged 24 % behind. Both of the composite lines excelled line 88 in daily gain by 10 %, being rather similar to each other.

Index words: Finnsheep, Polish Lowland, East Friesian, Polish Heath, synthetic, dam line, lambing rate, lamb survival, fleece, growth rate

Introduction and experimental

Very good results of commercial crossing of Polish Lowland (PL) (Corriedale type) ewes to Finnsheep (F) rams encouraged us to make an attempt to create a synthetic dam line. PL ewes were mated to F × East Friesian (EF) F1 rams. The latter breed was introduced into the gene pool because of its high growth potential, milking ability and good quality of wool. In the years 1987—88, performance of the resulting progeny, called line 66, was recorded. Still earlier we had started the creation of another dam line to which, instead of F, Polish native Wrzosowka (W = Polish Heath)

breed was introduced. The formula of this line, called line 77, was as follows: 50 % of PL breed, 25 % of W and 25 % of EF. The performance of this line has also been recorded for several years. Both new lines were compared to purebred PL, called in this experiment line 88 and used as a control.

Because of the small numbers of animals, the results were calculated as simple means, weighted by the numbers of animals in different age classes in different years. Relative values were computed by using the same annual means of line 88, since age class means of this line were not available.

Table 1. Fecundity, prolificacy and lamb survival of ewes of two composite lines and of Polish Lowland in 1985—88.

Line	Age of ewes	No. of ewe years	Fecundity		Prolificacy		Lamb survival	
			EL/EM %	Rel. %	LB/EM %	Rel. %	LW/LB %	Rel. %
66	2—3	22	90.9	96.8	144.0	109.0	100.0	106.0
77	2—4	55	98.3	103.4	164.9	119.8	90.1	96.5
88 (PL)	mix.	520	95.5	100.0	137.8	100.0	93.4	100.0

EL = ewes lambed; EM = No. ewes mated; LB = No. lambs born; LW = No. lambs weaned.

Table 2. Fleece weights of ewes of two composite lines and of Polish Lowland in 1986—88.

Line	Age of ewes	No. of ewe years	Mean fleece weight, kg (a)	Relative to line 88, % (b)
66	2—3	22	5.12	99.3
77	2—4	47	4.05	77.6
88 (PL)	mixed	400	5.12	100.0

(a) weighted with numbers of ewes in different age classes in different years;

(b) comparisons made to corresponding years and relative values weighted with the numbers of ewes in different age classes;

Table 3. Average daily gains (ADG) of lambs of two composite lines and Polish Lowland from 70 to 185 days of age in 1987

Line	Ram lambs			Ewe lambs		
	No. lambs	ADG g	Rel. %	No. lambs	ADG g	Rel. %
66	11	121	110	13	102	113
77	12	147	135	14	96	107
88 (PL)	76	110	100	71	90	100

Results and conclusions

The data recorded concerned: (1) reproduction, (2) fleece weight, and (3) lamb growth rate. The results are shown in tables 1, 2 and 3, respectively, from which the following preliminary conclusions can be made without statistical significances:

1. Surprisingly, line 66 with 25 % F genes had the lowest fertility rate, while line 77 with 25 % W showed the best result.
2. Line 66 was inferior to line 77 also in lit-

ter size, but it excelled line 88.

3. In lamb survival, line 66 showed the best mean, while line 77 had the lowest value.
4. Line 66 was very similar to line 88 in fleece weight, but line 77 gave a 24 % lower value.
5. The composite lines 66 and 77 were equal in growth rate, exceeding that of line 88 by more than 10 %.
6. The results need to be confirmed in further experiments on more numerous material.

References

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