

Over the three years the Suffolk, Dorset Horn, and Border Leicester rams produced lambs whose carcasses averaged 5·7 lb., 4·0 lb., and 4·6 lb. respectively more than those sired by Southdown rams. Although the qualitative superiority of the Southdown cross lambs remains unchallenged, it is impossible to disregard such marked quantitative disparities during a world meat famine. The use of any of the three heavier breeds of rams by fat-lamb breeders would increase the annual output of fat lamb by approximately 10,000 tons. Even allowing for the slightly lower price per pound, due largely to the premium paid for light weights, the heavier breeds in this experiment returned more cash per lamb.

Nutrition of the Breeding-ewe.—In an experiment to measure the effect of nutrition during the latter stages of pregnancy, 185 mixed-aged Romney ewes which had been mated to Southdown rams and run together since tupping were divided into three groups five weeks before lambing was due to commence. These groups were grazed on very good, fair, and poor pasture, and gained 5·6 lb., 3·0 lb., and 0·0 lb. per week respectively up till lambing. From then on they were again run together on good pasture. The effect of the three treatments on the lambs is shown in the following table :—

	Birth Weight.		Live Weight, 84 Days.	
	Singles.	Twins.	Singles.	Twins.
	lb.	lb.	lb.	lb.
High plane ..	10·2	9·3	56	48
Medium plane ..	10·2	8·8	54	47
Low plane ..	9·7	7·4	57	44

The lambs were slaughtered in three drafts, being picked as in normal fat-lamb practice. There was no difference between the groups in the proportion killed in each draft. Carcass weights and gradings were similar between groups, confirming the finding that growths of the lambs were little affected by the pre-lambing feeding of their mothers.

At shearing all fleeces were weighed (after skirting, but minus bellies), graded for character, measured for staple length, and graded for faults :—

	High Plane.	Medium Plane.	Low Plane.
Fleece weight (lb.)	8·5	8·4	7·7
Staple length (in.)	4·8	4·6	4·1
Character—			
Percentage excellent	37	33	18
Percentage good	34	33	23
Percentage medium or poor ..	29	34	59

The low-plane treatment had a very detrimental effect on the wool-clip in all characters measured. The incidence of break was similar in all three groups, though the low group showed more bad breaks than fleeces from the other groups. Cotting was markedly affected, 3·4 per cent. of high, 8·67 per cent. of medium, and 21·7 per cent. of low plane fleeces respectively showing cotting.

From this preliminary study it would appear that poor feeding during the pre-lambing period has a more marked effect on the wool-production of the ewe than on the birth weight and growth rate of the lamb.