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RELATIONSHIPS OF VARIOUS PARAMETERS WITH THE
LAMBING PERFORMANCE OF HOGGETS

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The broad objective of this project was the study of the oestrus behaviour of ewe hoggets. Data were collected from three generations (1968, 1969, 1970) of ewe hoggets from a Perendale flock. Lambs were identified at birth, and age of dam, date of birth and weaning weights were recorded. After weaning ewe hoggets were run together. From April (1969) or early May (1970, 1971) rams or well-grown ram hoggets harnessed with tuppung crayons were run with the ewe hoggets and pre-tuppung weights were taken just prior to this. Wool weights were recorded when the ewe hoggets were shorn at the end of the tuppung period.

For statistical analysis hoggets were divided into three fertility groups: (1) those that lambed; (2) those that showed oestrus but did not lamb; and (3) those not showing oestrus. Differences between group means occurred in all variables except age of dam (Table 1). The latter result was felt to be inconclusive.

The bigger sheep and those with heavier fleece weights have a better chance of lambing or showing oestrus. The higher growth from weaning to pre-tuppung in 1968 may be compensation for the lower weaning weights of that year. This would indicate that "pre-tuppung" weight, rather than growth or weaning weight is the important factor in hogget lambing performance. An analysis of linear discriminant functions tended to reinforce this view. It showed that pre-tuppung weight was the most important variable for discriminating between groups and that growth, hogget age and wool weights were of about equal importance.

TABLE 1: MEAN PERFORMANCE (kg)

Group	<i>Weaning Weight</i>			<i>Pre-tupping Weight</i>			<i>Wool Weight</i>		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
(1)	22.0 aA	22.5 aA	25.7 aA	28.5 aA	27.4 aA	28.3 aA	2.10 aA	1.50 aA	1.50 aA
(2)	21.2 bA	20.3 bA	25.0 aA	26.1 aA	24.6 bB	27.4 aA	1.99 aA	1.30 bA	1.46 aA
(3)	19.1 bA		21.6 bB	22.6 bB		24.5 bB	1.69 bA		1.26 bB

Notes:

- (1) Duncan's lettering — small letters indicate 5% significance; capitals 1%.
 (2) In 1969 groups (2) and (3) were combined because of difficulties in recording tupping.