

PROGRESS IN ESTABLISHING A NEW ZEALAND MERINO SIRE REFERENCING
SCHEME WITH LINKAGES TO THE AUSTRALIAN INDUSTRY

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INTRODUCTION

The earliest attempts at sheep farming in New Zealand (NZ) were based on Merino flocks established in 1834. Over half of the NZ sheep flock consisted of Merinos up until the 1880s. By 1984 only 2.1% of the total flock were Merinos (1.4 million sheep). Most Merinos are run in the hill and high country of the South Island, where conditions are wetter than most areas running Merinos in Australia. The proportion of the Merino wool clip that is 19 μ m and finer is higher in NZ than Australia (11% and 7%, NZWB 1987; AWC 1987).

There are only 60 registered Merino studs in NZ (NZ Flock Book 1987). Only 24 registered studs have over 200 ewes. There is no hierarchical breed structure. The NZ industry has no objective data to validly compare NZ bred and Australian Merino sires. This paper briefly describes the establishment of a Merino sire testing station for this purpose.

ORGANISATION

In September, 1987 the 24 largest Merino studs were circulated with information on how the NZ Ovine Sire Reference Scheme (SRS) operates. This scheme is similar to the W.A. Merino SRS (Lewer 1987). Personal contact with Ambreed and Merino breeders using the Lincoln College Wool Measurement Service (WMS) resulted in two NZ reference sires and imported semen being made available. A subsequent meeting and discussions were held with interested Merino breeders at the Christchurch Royal Show and Merino Annual Dinner in November 1987.

Requests to ram breeders to register their intention to participate in the scheme met with a poor response, despite the subsidised semen and AI costs offered. The main objections to the scheme were the cost of AI,

the poor conception rates experienced in 1986/87 with AI, particularly with frozen Australian semen, the non-availability of a satisfactory Australian fine wool sire, random mating 200 ewes (a large % of most studs), making rams available to other participants and the belief that progeny testing of rams on farm, was already being done. Following discussion with NZ and Australian breeders at the National Ram sale in February 1988, it was decided to organise a test station scheme, which better suited the small size of the NZ industry. A test station approach (Roberts 1986) has the advantages of not interfering with the mating program of the participants, allowing breeders with smaller flocks to participate, requiring less of the more expensive Australian semen, improving the accuracy of performance data with less opportunity for management problems and allowing all test progeny to be viewed together. The disadvantages of the test station approach are that there are less progeny than for reference sires in a SRS, the use of superior reference sires by all breeders does not occur, fewer sires can be tested and only one environment is being assessed.

OPERATION

A commercial farm running fine wool Merinos (Black Forest/Mt. Otekaieke) at Loburn, North Canterbury was made available for the 1988 autumn mating. The test site owner received all semen and insemination free of charge. In addition he received \$400/ram submitted to pay for all management and recording costs. A random sample of 35 Mt. Otekaieke and 15 Black Forest ewes were laproscopically inseminated with frozen or fresh semen, after a synchronisation and PMSG program, to each of the test rams during May 1 and 2, 1988. The NZ rams are all from the Canterbury region (Table 1).

Arrangements were made to include a ram from the N.S.W. scheme to 'link' the NZ, N.S.W. and W.A. test sites (Roberts 1986). However a satisfactory reciprocal agreement, whereby the N.S.W. scheme also progeny tested a NZ bred sire was not negotiated in time for the 1988 mating. It is hoped that some common sires will be used in 1989 to link the Canterbury site with other NZ areas and N.S.W. There have been expressions of interest for the 1989 mating from breeders not participating this year.

DATA HANDLING

The ewes joined to each of the 9 sires will be run together until lambing in September, when the progeny will be tagged. At marking, male lambs will be castrated. The lambs will be shorn in December and then as rising two teeth, 9-10 months later. The progeny will be assessed on the basis of body weight, clean fleece weight, wool fibre diameter,

staple length, staple strength, resistance to compression and susceptibility to yellowing. A visual grading will be given by an independent sheep classer. Breeding value will be estimated by contemporary comparison procedures, adjusting for the number of progeny per sire.

Table 1 Rams tested in 1988 mating

Ram	Hogget Performance		Ram Owner
	Fibre Diameter	Yield	
1. Flaxton 535-85	18.8	74.6	Stevenson Bros, Rangiora
2. Pleasant Park 72-84	20.9	69.8	K. Horton, Geraldine
3. Collinsville Thatcher 85-37	21.8	79.0	Collinsville, S.A.
4. Castle Hill 09-85	17.4	74.8	A. Smith, Amberley
5. Sierra Park Urquhart 51st	17.8	74.7	W. Crawford, Victoria
6. Blackforest 74-85	16.4	71.0	Ambreed NZ, Hamilton
7. Lochaber	16.5	n.a.	J. Allen, Fairlie
8. Cleardale Y986-85	17.2	67.7	J.R. Todhunter, Rakaia
9. Malvern Downs M4 185-85	18.4	69.2	G. Millar, Rangiora

BENEFITS

A number of benefits should result from the Merino sire test station:

- 1) Identification of superior NZ Merino sires: there is currently no valid operation comparing the genetic merit of strains, bloodlines or sires in the NZ Merino industry (Cottle 1988). The owners of genetically superior sires will be able to use this information for publicity and breeding decisions. Semen sales can be generated through interested parties, eg. Ambreed or MAFtech.
- 2) Identification of superior Australian Merino sires: currently the information given in semen catalogues consists of the ram's fibre diameter, clean fleece weight and visual description. This information has limited value in determining the relative worth of the ram in the Australian environment, let alone in NZ.

- 3) Linkage to the Australian schemes: there is a possibility that progeny test station results could identify some NZ fine wool sires that could perform well if they or their semen were used in the high rainfall areas of Australia. NZ ram buyers will be able to make more informed purchases in Australia.
- 4) Objective measurement of wool traits: Merino breeders exposed to publicity surrounding the test station via the news media and field days will be acquainted with the use and interpretation of objective measurements of wool characteristics and the conduct of valid progeny tests.

FUTURE

Assuming continued growing interest in the scheme it is intended to increase the number of test centres to include the Central Otago and Marlborough regions, include stronger Merino wool types and link with the Australian schemes. The first test station was based on fine Merinos due to the current buoyant fine wool market. It is intended to have the scheme self-funding, with AI companies and breeders covering all management, insemination and wool testing costs and receiving the benefits from generated semen sales. The data generated will also provide estimates of the heritabilities and correlations of wool traits for NZ Merinos, many of which are not available.

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