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# METHODS OF INDEPENDENT CULLING LEVELS OF SELECTION INDEX IN THE ESTIMATION OF POLISH MERINO BREEDING VALUE

J. Klewiec, M. J. Radomska

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by the setting-up of 10 flocks from breeding stock from the central flock. The nucleus flock is now situated at the University Farm, Bangor. Body weight of ewes is 70 kg, litter size is 1.9 for 1 year old and 2.9 for mature ewes as an average for all recorded females.

#### Llyn group

While the *Llyn* breed is at present of little importance nationally, with only about 4 000 breeding ewes it possesses the attributes of high prolificacy, precociousness, good milk yield and acceptable meat type conformation. Mean weight of mature white-faced is 53 kg, recorded litter size ranges from 1.23 at 1 year old to 1.96 for mature ewes (M.L.C. 1978). Twelve breeders recording their flocks with M.L.C. formed a group breeding scheme in 1978 and the nucleus flock of 60 ewes is maintained at the University Farm. Breeding objectives are 200 per cent live lambs reared and mean weight of twin lambs at 8 weeks 20 kg. The structure and operation of the groups will be discussed.

### CURRENT APPLICATION OF AND EFFORTS TOWARDS SELECTION STRATEGIES IN CZECHOSLOVAKIA BASED ON RAM AND EWE SELECTION

V. JAKUBEC

*Research Institute of Animal Production, Praha, 10*

The emphasis of breeding activities in Czechoslovakia is given on a within elite and multiplier flock selection. Lambs selection is based on the lamb's own performance according to the weaning weight, conformation and quantitative and qualitative wool production. The breeding values of rams and ewes are evaluated on a flock basis by the means of an index in which the same traits as in the lambs are included. In this time the existing progeny testing stations are successively transferred to ram performance testing stations.

### METHODS OF INDEPENDENT CULLING LEVELS OF SELECTION INDEX IN THE ESTIMATION OF POLISH MERINO BREEDING VALUE

J. KLEWIEC and M. J. RADOMSKA

*Warsaw University of Agriculture, Institute of Biological Basis of Animal Breeding*

A comparison of two methods for selection : the independent culling levels and the selection index, with regard to two characters of wool productivity, namely fleece weight and staple length. With data on 1763 ewes in hand, we have worked out premises for selection by the independent culling levels technique and by the selection index  $I = 6.9504 X_1 + 3.6630 X_2$ . The results obtained point out at a similar efficiency of both methods. Regarding fleece weight, the genetic gain expected on application of the former method is 0.12 kg, while of the latter method — 0.13 kg. Regarding the staple length, the respective values are 0.08 and 0.09 cm. Having a scarce number of characters to deal with, the independent culling levels method seems more useful.

### ESTIMATION OF BREEDING VALUE IN ICELANDIC SHEEP

S. HALLGRÍMSSON and J. V. JONMUNDSSON

*The Agricultural Society of Iceland, Baedahöllin, P.O. Box 7080 Reykjavik, Iceland*

The aim of this paper is to give a short description of the different computations done on the material from sheep recording in Iceland to make the results more useful to the breeder.

For better understanding of the different steps in correcting the data and the calculations there is a brief description of the sheep management, which might be of interest. It is also pointed out, that over 80 per cent of the income from sheep is derived from meat.

One of the greatest difficulties in using data from the sheep recording in Iceland is the different treatment of lambs after weaning and before slaughtering. This has been solved by