

EXPERIMENTAL EVALUATION OF BEEF BREED  
UTILIZATION STRATEGIES

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Breed utilization methods are discussed in relation to New Zealand pastoral beef production and to provisional results from a large-scale comparison of 11 sire breeds crossed with *Angus* or *Hereford* females. The primary improvement goal is efficient weaned calf production, with secondary emphasis on growth and carcass performance. In general, the dairy crosses are superior for reproductive performance, the continental beef breeds for carcass weight and leanness.

On genetic grounds specific crossbreeding coupling optimum combination of individual and maternal attributes with maximum utilization of heterosis is superior to rotational crossing and breed synthesis. Operational simplicity however favours a single breed structure under extensive farming conditions.

Experimental emphasis on estimation of genetic parameters determining crossbred performance, facilitated when locally adapted purebred females are available, is contrasted with development and comparison of specific "promising" breed combinations. Since selection need not invalidate parameter estimation the two approaches can be usefully combined, the suggested selection criterion being pre-mating liveweight. Experimental design is discussed in terms of choice and number of breeds, precision of comparisons among breed types, genetic and environmental biases and relative emphasis on different production attributes.

**III. — Estimation de la valeur génétique des moutons**

## SELECTION STRATEGIES IN SHEEP IN EUROPEAN COUNTRIES

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A survey has been made by the study group of the current use of information in selection of lambs, yearlings, ewes and rams in seventeen member countries of E.A.A.P. From the information used several main directions of selection can be distinguished. The majority of countries have improvement of meat production as the main aim. Wool is the most important objective in two countries. Selection for dairy production occurs in four countries.

For some of the countries details about adjustments of records, index constructions and parameters used are reviewed. In most cases the selection criteria are simple, often based on a single record. Indices which include several traits are reported from five countries.

Some considerations about genetic gain have been made on few estimates available and information available on the selection in different countries. Problems of implementation are also discussed.

## MODERN DEVELOPMENTS AND SELECTION SCHEMES FOR IN SHEEP BREEDING

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Various aspects of computerized recording schemes and co-operative selection schemes like ram circles, ewe circles and group breeding schemes are discussed.