

2. — Sélection pour la viande bovine

SELECTING "FRIESIANS" FOR MILK AND BEEF

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The *Friesian* breed makes a substantial contribution to beef production in Great Britain. The value of selection for beefing characteristics has been studied based on the discounted gene flow technique (MCCLINTOCK and CUNNINGHAM). The technique has been adapted to consider the use of crossbred females as beef suckler cows. The selection for beef can rarely be justified at a level greater than 1 in 4 — the use of suckler cows making little difference. The parameter under selection and economic values have a large effect. As an initial step visual assessments of beef shape are being recorded and will be reported for progeny tested milk bulls.

APPLICATION OF BLUP IN PERFORMANCE TESTING OF DAIRY BULLS

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The method used in Sweden for performance testing of dual purpose bulls has, especially during recent years, shown some limitations due to many and small testing stations and an intense use of sires over a short time period. To overcome these problems, at least partly, and to get a more efficient estimate of the breeding value for growth rate an application of best linear unbiased prediction (BLUP) in performance testing has been made.

In this procedure the daily gain of a bull on test is corrected for the effect of test station, year and season and the sire effect (the sire's predicted difference) and bull effect are estimated by BLUP. The bull's estimated breeding value is then calculated as the sum of these two effects and finally expressed as a relative breeding value.

The advantages of the BLUP procedure in comparison with the officially used method can be summarized as follows,

1. Bulls can be compared across test stations and across years and season, which means a more efficient utilization of data available.
2. Information on half-sibs of the same sire is used to obtain estimated breeding values of bulls.
3. Sire and station effects are independent of one another.

EVALUATION AND PERFORMANCE TESTED BEEF BULLS BY BLUP

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The heritability of growth rate at station between 180-365 days of age has been computed by maximum likelihood procedure for *Charolais* and *Hereford*. The estimates were 0.48 and 0.43 respectively. The variance components differed and the phenotypic standard deviations were 123 and 96 g per day for *Charolais* and *Hereford* respectively.

BLUP procedure for evaluation of breeding values of bulls was applied to the same data as was used for variance component estimation, namely 272 *Charolais* and 805 *Hereford* bulls by 100 and 276 sires, respectively. The BLUP procedure was compared to two simplified proce-