A comparative study, by simulation, of bull and cow evaluation methods

P. LEROY

Faculté de Médecine Vétérinaire, Université de Liège
45, rue des Vétérinaires, B - 1070 Bruxelles

The efficiency of different evaluation methods of dairy cattle has been studied on simulated data. For sire evaluation : the contemporary comparison, the index based on up to three records of the daughters and the direct comparison (Blup « 1st lactations » and « all lactations ») have been compared. For cow evaluation : the index with and without paternal half-sibs and the direct comparison (BLUP « all lactations »). 3 600 lactations corresponding to 1 800 daughters of 30 sires distributed in three groups recorded in 62 herds were generated by routines using 0.20 as value of h, 0.45 as value of repeatability and a phenotypic « within herd » variance equal to .60.

Two versions were built differing by the presence (version 1) or not (version 2) of a great number of connections between groups of sires. The efficiency was measured by the rank correlation between true values and values estimated by the different methods. All these correlations are higher for the Blup method. Furthermore the superiority of the direct comparison is also well illustrated when comparing the average true breeding values of the 150 best cows seleced on the basis of the three methods.

SESSION V a

PROBLÈMES DE CHOIX DES REPRODUCTEURS DANS LES PETITES POPULATIONS

Horse breeding problems

B. LANGLOIS *, D. MINKEMA ** and E. BRUNS ***

* *Station de Génétique appliquée, C.N.R.Z.-I.N.R.A., F 78350 Jouy-en-Josas*
** *I.V.O. « Schoonoord », Postbus 501, Driebergsweg 10 D, 3700 Am Zeist, Hollande*
*** *Tierzucht institut Albrecht-Thaer-Weg 1, 3400 Göttingen, R.F.A.*

The purpose of this paper is to give a short survey of present problems concerning the genetic improvement of horse breeds.

The evolution of these populations in Europe, characterized by a deep change from production of draught horses towards that of leisure horses, is described and the influence of the demographical parameters on the selection of these horse population, is discussed.

The generation interval represents an important handicap only surmounted in the case of racing breeds where a high selection intensity can be paractised since all animals are subjected to performance testing. In the other cases, the farmer mostly does not use modern breeding techniques, but crossings leading to earlier visible results.