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CURRENT STATUS APPLICATION OF THE SELECTION INDEX THEORY IN PIG BREEDING

K. Rönningen

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HAL Authorization

I. — Détermination de la valeur génétique des porcs

ESTIMATION OF BREEDING VALUE IN PIGS
REPORT OF A WORKING GROUP:

B. LINDHÉ, G. AVERDUNK, E. W. BRASCAMP, H. DUNIEC,
Z. GAJIC, C. LEGAULT and D. E. STEANE

The present investigation has given some information on testing procedures and combinations, the breeding goal, which variates that are recorded, how they are recorded, how indexes are presented and finally the direction of the genetic gain. No information has been collected on selection intensities or lengths of generation intervals.

The presentation given does not give a complete picture of advantages or disadvantages of selection programs of all individual countries. It has not been possible to include and comment all « specific » solutions. The main shortage, however, is the lack of information of breeding companies, which play a significant role in pig breeding in some European countries.

Under the different headings comments have been made on testing procedures and details in recording techniques. A more general problem is the possible interaction between central test practices and commercial production systems. STANDAL (1977) found that genetic correlations between « the same » characters tested at station and on the farm deviated significantly from unity, indicating a genotype-environment interaction. One explanation proposed was a possible genotype sex interaction. The problem nevertheless remains. An examination of the validity of station test records might be worth while in many countries.

The possible existence of genotype-sex interaction might be considered in the design of national breeding programs. All countries except Great Britain have made the implicit assumption of no interaction between any of the « sexes ». To what extent this assumption reduces the efficiency of a program is probably difficult to estimate.

CURRENT STATUS APPLICATION OF THE SELECTION INDEX THEORY IN PIG BREEDING

K. RÖNNINGEN

*Inst. f. Husdjursförädling Lantbrukshögskolan,
S-750 07 Uppsala 7, Sweden*

In the present report we have discussed the current status of application of the selection index theory in pig breeding. It seems justifiable to state that still more developmental and extension work will have to be carried out in order to make full use of the theory. In particular, more research should be devoted to: (i) defining the aggregate genotype in a more suitable way, (ii) estimating genetic parameters (including heterotic effects), (iii) developing a data bank, including simplifications, and (iv) evaluating the more recent methods of ranking potential breeding animals.

APTITUDE AU NOURRISSAGE ET AMÉLIORATION GÉNÉTIQUE DE LA PRODUCTIVITÉ DES TRUIES

C. LEGAULT

*I.N.R.A., Département de Génétique animale
C.N.R.Z., 78350 Jouy-en-Josas, France*

La fourniture périodique aux éleveurs et aux techniciens chargés de les conseiller d'informations objectives sur les composantes de la productivité numérique du troupeau a contribué largement à l'obtention d'un progrès spectaculaire (au rythme annuel de 0,4 à 0,5 porcelet sevré-truie-an dans les races *Large White* et *Landrace Français*). Ce progrès est d'autant plus marqué que l'élevage est plus spécialisé et plus grand : il provient essentiellement de l'amélioration des tech-