

## CYTOGÉNÉTIQUE ET GÉNÉTIQUE DES LIGNÉES CELLULAIRES DES ANIMAUX DOMESTIQUES

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Ce texte présente un bilan des techniques disponibles en cytogénétique et génétique des cellules en culture d'animaux domestiques. Les résultats de l'application à deux modèles sont discutés : le métabolisme des bases puriques et pyrimidiques et le cycle cellulaire.

## V. — Séance libre et boîte aux suggestions

I. — *Étude sur les bovins laitiers*

## TWO WAY SELECTION FOR BUTTERFAT PRODUCTION IN " RED DANISH " CATTLE

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The experimental design of a two way selection is given. The experiment is carried through in four different stables each of which has a capacity of 50-60 cows. Thus four replications of the experiment are present. The difference in butterfat yield between the high and the low line is expected to be 4 genetic standard deviations in the early eighties. Preliminary results indicate even higher response to selection.

## GENETIC PROGRESS IN MILK PRODUCTION IN THE SWEDISH DAIRY POPULATIONS

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By using the BLUP method, breeding values for milk production for AI bulls of the two main Swedish dual-purpose breeds SRB and SLB were estimated. The material analysed consisted of 305-day first lactations records, or lactation records extrapolated on a 305-day basis, for all purebred cows with records completed between January 1966 and December 1974.

The genetic trend of the AI sire population was calculated as the linear regression of the average breeding value for each year-group of sires on time. The genetic progress values found were  $+ 22 \pm 6$  and  $+ 22 \pm 10$  kg FCM per year for the SRB and SLB breeds respectively for the period 1961 to 1969.

On the assumption that the genetic trend in the cow population moves parallel with that of the population of sires, the former was estimated as the linear regression of the average breeding value of the sires of each year-batch first lactation cows on time. For the period studied, 1966 to 1974, the genetic progress worked out at  $+ 42 \pm 3.5$  kg FCM for SRB and  $+ 51 \pm 3.6$  kg for SLB. These findings correspond closely to earlier reports on genetic trends in Swedish cow populations.