

FACTORS INFLUENCING, AND REPEATABILITY OF THE DURATION OF FARROWING IN YORKSHIRE SOWS

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The duration of farrowing was recorded for 92 sows farrowing 401 litters over a period of 16 yr. The data were analyzed to study the effects of parity, season of the year, time of the day, size of the litter, birth weight of the piglets and length of the gestation period, and to calculate the repeatability of the trait. The least-squares mean duration of farrowing was 3.9 h for litters adjusted to 11.2 piglets, 1.14 kg piglet weight and 114.6 days of gestation. The duration of farrowing increased significantly only with increase in the number of piglets born per litter and length of gestation period. All the factors studied accounted for only 18% of the total variation. The repeatabilities of the duration of farrowing, litter size and litter weight were 0.14, 0.10 and 0.21, respectively.

On a enregistré des données sur la durée de mise bas de 92 truies, qui ont produit 401 portées en 16 ans. L'analyse de ces données a porté sur les effets de l'ordre des naissances, de la saison de l'année, de la période du jour, de l'importance numérique de la portée, du poids des porcelets naissants et de la durée de la gestation, et sur la répétabilité de cette caractéristique. La moyenne, calculée selon la méthode des moindres carrées, fut 3.9 h pour la durée des mise bas en établissant à 11.2 le nombre corrigé de porcelets par portée, de 1.14 kg pour le poids des porcelets et de 114.6 jours pour la durée de la gestation. Seulement deux caractéristiques influent significativement sur la durée de la parturition: le nombre de porcelets nés par portée et la durée de la gestation. Tous les facteurs étudiés ne comptent que pour 18% de la variation totale. Les répétabilités de la durée de la mise bas, de l'importance numérique et du poids de la portée furent de 0.14, 0.10 et 0.21 respectivement.

The duration of the farrowing and its relationship to various factors has been reported by Schäfer (1941), Friend et al. (1962), Jones (1966), Randall (1972), DeRoth and Downie (1976), English et al. (1977) and Fahmy and Flipot (unpublished data). Most of these reports had certain drawbacks which might adversely affect the results obtained and the conclusions derived. Most of the reports dealt with a very small sample of sows, and for a trait such as farrowing duration which displays wide variation, estimates obtained from a small sample might be subject to considerable error. All reports considered the trait to be

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normally distributed which might not be true. Each factor affecting the duration of farrowing was dealt with independently without correction either simultaneously or consecutively; for any other factor, therefore, with many factors interacting, the interpretation of results could be inadequate. Finally, in many reports, more than one genetic group, or animals with unknown background were pooled together assuming they would all behave similarly. Also, the authors are not aware of any study in which the genetic component of duration of farrowing was evaluated.

Knowledge of factors influencing this trait is important in view of the strong positive