

Sélection divergente sur la consommation moyenne journalière résiduelle chez le porc en croissance : caractéristiques phénotypiques de l'activité physique et comportementale des porcs en fonction de la lignée et du sexe

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Divergent selection for residual feed intake in growing pigs: phenotypic characteristics of physical and behavioural activity in groups by line and sex.

Divergent selection for residual feed intake (RFI), defined as the feed consumed over (RFI+) or below (RFI-) the daily consumption predicted from maintenance and production requirements, was conducted in growing pigs to improve feed efficiency. The present study aimed at assessing the impact of selection for RFI on the physical and behavioural activity implicated in the expenditure of energy. Six batches from the 6th generation of RFI Large-White pigs were followed during their growth (30-100kg) and raised in group pens equipped with a single-place electronic feeder (SEF). Each batch included four groups of 12 pigs allocated according to line and sex: RFI+ castrated males, RFI+ females, RFI- castrated males, RFI- females. Measurements concerned the physical (posture) and behavioural (resting, feeding, investigation, social interactions) activity, recorded by 24h-video tape, and the investigative motivation in response to unfamiliar objects introduced 9 hours in the pen. Pigs spent most of the time lying (> 75% records in the day, > 80% at night), regardless of line or sex. In the middle of the growing period (17 weeks of age), pigs from RFI+ groups compared to RFI- groups showed, over 24-h recordings, a higher frequency of electronic feeder use and spent more time standing. Castrated males used electronic feeders significantly more than females, particularly at night, and females showed a higher investigation activity. The introduction of unfamiliar objects induced a similar interest in groups of both lines. In conclusion, RFI+ pigs exhibited more physical activity, and significant sex by time-of-day (day vs. night) interactions were noted for several behaviours.