

**Body composition changes of multiparous sows during
the reproductive cycle
Influence of the level of feed intake during lactation**

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An experiment was carried out in 50 multiparous sows to determine the nature and importance of the tissues involved in the body composition changes occurring between mating and weaning. They were distributed into 5 groups at 1st post-weaning oestrus, fed 1.8 kg feed/d (3 000 kcal DE/kg and 13.5 p. 100 TCP) during gestation, 3 kg/d (group 4) and 6 kg/d (group 5) during lactation (3 050 kcal DE/kg and 17 p. 100 TCP) and slaughtered at different stages of the reproductive cycle. At slaughtering, viscera and carcass weights were measured. Fat and muscle thickness were estimated and fat and eye muscle areas were measured on a cross section of the loin. The carcass was thereafter cut and the different cuts weighed. After measurement of its specific gravity a ham was dissected. The dry matter and lipid content of *M. longissimus dorsi* were determined.

During gestation the net weight gain of sows was negative (—5.6 kg), but this weight loss remained restricted as compared to that observed in non-mated females (group 3 : —14.5 kg). The difference in the weight change between both groups of animals was due to the uterus and mammary gland development, since no difference was observed in the various criteria estimated on the carcass. This indicates that the weight loss during gestation was mainly bound to a fat tissue regression while the muscle mass was not affected. The weight of fat tissues kept on decreasing during lactation, even when sows were fed *ad libitum*. A decrease in the muscle mass was only observed in females subjected to a severe feed restriction during lactation. Therefore, it seems that in multiparous sows restricted during gestation, the pregnancy anabolism is only limited to the development of the reproductive organs. Moreover, it seems difficult to prevent a reduction in the fat mass of these animals during lactation. Changes in the live weight, even the net weight do not represent good indices of the changes in the body reserves of breeding sows.

**Potential prolificacy and winter breeding
in free-living wild sows (*Sus scrofa scrofa*)**

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The genital tracts of wild sows (*Sus scrofa scrofa* n = 36 chromosomes) belonging to two populations living in a closed forest (Parc de Chambord) and in an open forest (Arc-en-Barrois), were obtained after a battu in the forests and subjected to a series of observations. The data were gathered from 396 pregnant sows examined in Chambord from 1974 to 1981 and from 110 animals in Arc-en-Barrois, between 1977 and 1981. The measurements involved : estimation of mating and farrowing dates, counting and weighing of foetuses and of corpora lutea, weighing of the animal, of the uterus, ovaries, corpora lutea as well as of the foeto-placental annexes.

The main results show the existence of a sexual activity and consequently a breeding season : mating from November to January, farrowing from March to May at Chambord and