EFFECT OF SEASON ON POSTWEANING OESTRUS IN THE SOW

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The time for the occurrence of oestrus was studied after 2 900 weanings. Of the weanings 974 were after the first litter. All the sows were of the Norwegian landrace breed.

Figure 1 shows the percentage of primiparous and pluriparous sows which came into heat during the first 7 days of the postweaning period in the different months of the year. Among primiparous sows weaned during the period Januar - June 72.7 per cent came into heat within 7 days after weaning, while the corresponding figure during July - December was 49.5 per cent.

As is evident from Table 1 the average length of weaning to oestrus period in primiparous sows was longer during July - December than during January - June ($P < 0.01$).

Seasonal variation was not demonstrated in the pluriparous sows.

The period July - December represents the time of the year with decreasing daylight hours in Norway. It is therefore tempting to suggest that decreasing daylight is unfavourable for normal sexual functions in primiparous sows. Mauget (1978) has shown that postweaning oestrus does not occur in the European wild pig if lactation extends to late June. The anoestrus period in the wild pig lasts from June to December, and Mauget suggested a photoperiodic rhythm to be involved.

Heat stress has been suggested to be the main reason for the seasonal breeding problems in the sow. During the present study, the mean temperature in the months July, August, September, October, November and December was 15.8, 15.2, 9.7, 6.8, 2.8 and -5.4°C, respectively. Thus, high temperature does not seem to be responsible for the seasonal variation. This is in agreement with an American study, which showed seasonal variation in the weaning to oestrus period both in herds with and without cooling systems designed to reduce the heat stress (Hurtgen et al., 1980).

Table 1.
The time lapse between weaning and first oestrus in primiparous (n = 974) and pluriparous (n = 1926) sows.

	Average length in days of weaning to oestrus period ($\bar{X} \pm SE$).	
	Primiparous sows	Pluriparous sows
January	16.2 ± 2.5	8.7 ± 1.0
February	11.9 ± 2.4	8.1 ± 0.9
March	9.4 ± 1.9	9.3 ± 0.8
April	10.1 ± 1.8	8.5 ± 0.8
May	11.4 ± 1.5	7.8 ± 0.8
June	13.1 ± 1.6	8.7 ± 0.8
July	18.3 ± 1.6	9.5 ± 0.9
August	17.0 ± 1.7	9.4 ± 0.7
September	15.9 ± 1.7	8.6 ± 0.8
October	19.8 ± 1.7	8.8 ± 0.7
November	17.9 ± 1.8	9.2 ± 0.7
December	24.0 ± 2.1	9.2 ± 0.7

References: Hurtgen, J.P., A.D. Leman and B. Crabo: Proceedings, 6th World IPVS Congress, Copenhagen, 1980, 2. Mauget, R.: In Environmental Endocrinology. Eds.: I. Assenmacher & D.S. Farner, Springer-Verlag, Berlin Heidelberg, 1978, 79-80.

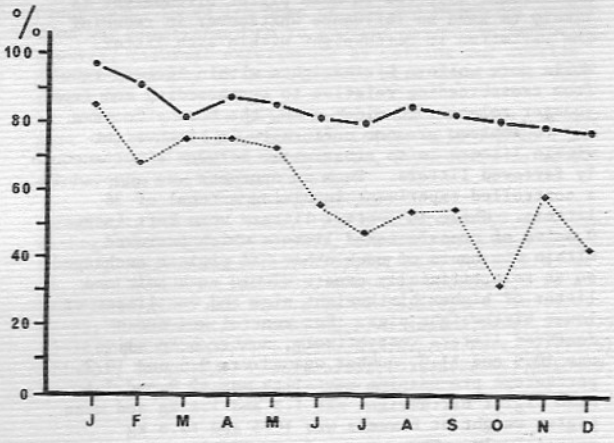

Figure 1.
The percentage of primiparous (•·····•) and pluriparous (•——•) sows which came into oestrus within 7 days after weaning in the different months of the year.