

### Early pregnancy diagnosis by echotomography in the sow

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It was previously demonstrated in a small number of sows that ultrasonic echography may be used in the diagnosis of pregnancy (BOTERO *et al.*, 1984). The present work was made to confirm this hypothesis.

A total of 2257 presumably pregnant sows of different breeds and parities were scanned between 18 and 90 days after insemination. The scanning instruments used were a SAL 22 A and a SAL 32 A Toshiba real-time B-scope with a probe of 3.5 Mhz. The procedure for examination and interpretation of the pictures was that previously described (BOTERO *et al.*, 1984). Diagnosis was checked on the basis of the farrowing date and of the number of born piglets in pregnant sows, and by return to oestrus in non-pregnant ones. The accuracy of the diagnosis was calculated according to the physiological stage. It reached 93.1 p. 100 for 2257 scans. In pregnant sows the accuracy was better after Day 21 than earlier (99.6 vs 96.6 p. 100). The errors mainly occurred between Day 18 and 21 and in sows having further littered less than 5 piglets.

In non-pregnant sows the accuracy was lower, but different cases have to be considered. When diagnosis was performed early (18-25 days) and before normal return to oestrus, accuracy ranged around 75 p. 100. It then decreased linearly to 50 p. 100 in case of late return to oestrus. On the other hand, after the 26th day post-insemination, the accuracy of the diagnosis varied between 70 and 80 p. 100 when the pregnancy test took place less than 20 days before return to oestrus. It fell to 60 p. 100 for returns occurring more than 40 days after examination.

The examination conditions are liable to affect the accuracy. Pregnancy diagnosis can be made from Day 20 after insemination when sows are tethered (93.3 p. 100) and 2 days later when they are immobilized in cubicles or in pens (93.8 p. 100). This technique is difficult to use when animals are not tethered in pens or reared outside, tethered or not. Besides, a training period is required for the operator. It may be concluded that echotomography is a reliable means of diagnosing gestation, but it can only be used from Day 20 to 22 post-insemination.

### Use of echotomography for diagnosing infertility

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Echotomography enables to visualize the uterus and its content and thus to make a pregnancy diagnosis. In the present study, this technique was used to detect cystic follicles or pyometritis in 41 sows culled for infertility.