

2) REPRODUCTION

**Fertilizing ability of twice-washed
deep-frozen goat sperm**

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avec la collaboration technique de G. BARIL, B. LEBŒUF et G. DE MONTIGNY (*)

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The fertilizing ability of twice-washed deep-frozen, thawed goat spermatozoa was tested by inseminating 1247 females in various physiological conditions. With intracervical insemination, the kidding percentages of the inseminated goats was never less than 62 p. 100, even in the most adverse physiological conditions, i.e. following hormonal induction of œstrus in the anœstrus season. Nevertheless, it was necessary to inseminate the females twice during the same induced or natural heat period, and to use relatively large numbers of spermatozoa at each insemination: 200×10^6 total sperm when œstrus was hormonally induced; 125×10^6 total sperm in natural œstrus. Further progress may be obtained with better knowledge of the effects of accessory gland secretions upon spermatozoal freezability.

**Use of SC 21009 subcutaneous implants
for synchronization of œstrus in the ewe**

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Subcutaneous implants containing 3 mg of SC 21009 were placed on the external surface of the ear in *Rasa aragonesa* sheep and removed after 10 or 12 days. This treatment induced the onset of œstrus between 24 and 36 hours after the end of treatment in 75 p. 100 of treated animals. An intra-muscular injection of 500 I.U. of PMSG was given on removal of the implant.

The mean time of appearance of œstrus after the end of treatment was 30 hrs at the beginning (June) or 26 hrs in the middle (September-October) of the breeding season ($P < 0.01$).

The mean interval, end of treat-ovulation (55 ± 3 hrs), was determined by observation of the first ovulations, carried out by serial endoscopy every 4 hrs from 48 hrs after implant removal. Ovulation took place earlier after a longer treatment: at 52 hrs, 9 and 33 p. 100 of ewes ovulated in groups treated for 10 and 12 days, respectively ($P < 0.05$).

At the œstrus induced by this treatment, artificial insemination was carried out systematically (50 ± 2 hrs after implant removal) or after controlled mount. Fertility and prolificacy results obtained in this way with aragonese ewes did not differ significantly from those obtained after treatment with chronogest under the same conditions.