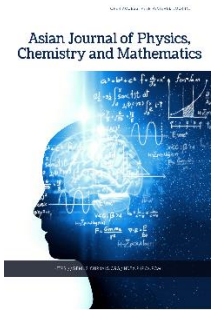

Perspective biotechnology for the reproduction of sheep and goats

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ABSTRACT

Currently, artificial insemination of sheep and goats is based on spontaneous estrus. As a rule, this technology is very time-consuming and energy-intensive and extends 1,5-2,0 months. One of the ways to intensify the process of reproduction is a biotechnological method of synchronization of the sexual cycle. The use of estrus synchronization technology will allow to change fundamentally the technology of artificial insemination of sheep and goats that will significantly reduce costs and uncrease profitability and competitiveness of the branch. This primarily refers to the peasant (farmer) households and individual part-time farms.

Keywords: Sheep, Dairy Goats, Sexual Season, Sexual Cycle, Synchronization, Progestogen, Prostaglandin, Artificial Insemination.

Sheep and goats are known to belong to polycyclic animals with a pronounced sexual season, which falls in Azerbaijan in June-August. Given the breeding season, insemination of sheep and goats is carried out, as a rule, in July and August. Currently, as 80 years ago, artificial insemination of sheep and goats is based on spontaneous sexual hunting. As a rule, it lasts 1.5 months, is a very time-consuming and energy-intensive technology. It is believed that in the sexual season, on average, 36% of the animals inthe total herd show the stage of initiation of sexual hunting everyday. Long-term practice shows that spontaneous hunting in sheep and goats manifests itself unevenly. The period of mass passage into the hunt (up to 15% daily) is followed by the same periods of complete sexual "calm". Accordingly, the unevenness and stretching of insemination create certain technological difficulties, lead to an increase in the incident period.

The result of stretched insemination is a long (up to 3 months) period of lambing and goating. Stretched lambing distracts significant material and labor resources, and thelychia in flocks of young animals of different ages creates great difficulties in its preservation and

cultivation, leads to a decrease in the rate of reproduction and selection of the herd.

One of the ways to intensify the process of reproduction is theiotechnological method of synchronizing the sexual cycle. The main ideaof thisbiotechnological techniqueis theability to control the processesofreproduction, purposefully influencing and changing the manifestation of certain reproductive processes. In this case, we are talking about the practical possibility of regulating the arrival of queens in hunting.

In many years of experiments, two significantly different principles of pharmacological synchronization of the sexual cycle were used to induce synchronous hunting in sheep and goats.

The first approach is based on the prolongation of the luteal phase of the sexual cyclewith prog-estrogenic drugs. Progestogens inhibit the release of follicle-stimulating hormone by the posterior lobe of the pituitary gland, which leads to inhibition of the generative function of the ovaries. Immediately after discontinuation of the use of the drug in animals, the stages of the sexual cycle are evened out, there is an increase in the growth and maturation of follicles in the ovaries simultaneously in all treated animals and animals also simultaneously come to hunt. [1-4]

Another commonmethodof synchronization is the method of using prostaglandin or its synthetic analogues (estrofan, enzaprost, clatraprostin, motaliz, prosolvin, etc.). Their use is based on the resorption (luteolysis) of the acornsabout the body of the sexual cycle and the subsequent growth and maturation of follicles. It should be emphasized that with a single injection of prostaglandin, the arrival of animals in hunting does not exceed 65%, which is associated with the stage the sexual cycle and the development of the yellow bodies,during which prostaglandin does not have a luteolytic effect. After that, the animals turn on the mechanism of follicle formation, ovulation and animals also synchronously come to the hunt.

Many years of experiments conducted on sheep and goats have shown high efficiency in synchronizing the sexual cycle by the methods carried out.

When treated with various preparations of prostaglandin at a dose of 125 μg subcutaneously twice with an interval of 10-12 days, all drugs used ("aniprost", "estrofan", "clatraprostin", "enzaprost") revealed a high synchronizing effect from 95 to 100% of the treated animals showed hunting synchronously, for 48 hours. The fertilization of queens treated with prostaglandin preparations was slightly lower than with natural hunting by 10. At the same time, multiple births in synchronized animals were higher than in the control group by 14.

The use of progestogenic drugs for synchronization also showed a high effect. In a number of experiments, the effectiveness of synchronizing the sexual cycle was studied using intravaginal pessaries impregnated with megestrop acetate or mepregenol acetate, water-soluble at a dose of 30 mg/hol. Pessaries were inserted for 12 days, after which they were removed, and the experimental The animals were injected with 800 IU of Folligona. After removing the pessaries (i.e. stopping the inhibitor), all treated animals come to hunt within 24 hours. [1,5]

In recent years, to synchronize the sexual cycle, the progestogenic drug "Crestar" was used at a dose of 1.5 mg of the active substance with a single injection of a solution of norgestamet at a dose of 1.5 mg and 1.9 mg of estradiol was quite high. All 100% of the goats showed no signs of sexual hunting during treatment. This indicates that the progestogen from the ear implant was actively released into the blood, its concentration in the peripheral blood was sufficient to inhibit the release of FSG by the posterior lobe of the pituitary gland. After removing the implant (i.e., stopping the action of the inhibitor), also all the nerdgoats went hunting for 24 hours.

Thus, it has been established that the synchronization of sexual hunting in goats can significantly preserve the timing of insemination and receipt of offspring, while maintaining at a high level the physiological functions associated with reproduction.

Synchronization achieves several goals at once. [2,5,6]

First, there is no need to wait for the spontaneous origin of animals in hunting. As you know, sheep and goats belong to animals with a clearly defined sexual cycle. However, within the sexual season, the onset of the arrival of queens in hunting can vary considerably depending on many and varied conditions, mainly climatic. The synchronization method allows you to overcome this biological barrier and introduce an element of clear planning in the conduct of mating.

Secondly, the synchronization method allows you to regulate the number of animals that come to hunt daily, which also makes artificial insemination predictable.

Thirdly, with a well-organized synchronization, there is no need to keep prolific samplers on the broodstock and conduct a daily laborious sample of queens in the hunt, because more than 95% of the processed sheep and goats come to the hunt synchronously, within 48 hours after processing. It is very important that all the resulting offspring will be from the producers assigned to the mating.

Fourth,the time of artificial insemination and, accordingly, lambing and goatry are significantly reduced. Depending on the desire and capabilities of the agricultural producer, as well as the conditions of management, the insemination of the flock (600-650 queens) is carried out in 8 days (instead of the usual 35-40). At the same time, the period of obtaining offspring lasts 15-20 days (instead of the usual 40).

Fifth, obtaining almost identical age young animals simplifies their care, contributes to greater safety and simultaneous implementation of planned veterinarybut preventive measures. [1-7]

Thus, the use of technology for synchronizing sexual hunting will make it possible to fundamentally change the technology of artificial insemination of sheep and goats, which will significantly reduce costs and increase the profitability and competitiveness of the industry. First of all, this applies to peasant (farm) farms and personal subsidiary plots.

Literature

1. M.M. Aibazov, K.K. Ashurbetov, L.S. Malakhova. Biological methods of reproduction of sheep and goats. // Sheep, goats, woolen business, No3, 2002, p.25.
2. Aibazov A-M.M. Theoretical foundations, development and improvement of biotechnological methods of sheep reproduction: authorsf. dis.... doct. agricultural sciences. Stavropol': SNIIZHK, 2003. 50 s.
3. Aksenova P.V. Aibazov M.M., Kovalenko D.V. Biotechnological methods and techniques of intensificationand reproduction of sheep and goats // Sheep, goats, woolen business. 2012. № 2. S. 35-38.
4. Aibazov A.-M.M., Aksenova P.V., Kovalenko D,V. Results and prospects of development and application of biotechnological methods and techniques of intensification of reproduction of sheep and goats // Collection of scientific works of SNIIZHK. 2012. № 5. T. I. S. 47-53.
5. 5.Antonenko, T.I. Indicators of reproduction of queens with different toned hair
6. and the growth energy of their offspring/ T.I. Antonenko, E.N. Chernobay, N.I. Efimova //Sheep, goats, woolen business. No 3. P. 24.
7. G.A.Burova. Artificial insemination of sheep. M. :, RSAU-MSA, 2010, 59 p.
8. Chernobay, E.N. Productive features of sheep of the soviet merino breed of various linear affiliation /E.N. Chernobay, V.I. Guzenko, A.M. Yakovenko // Sheep, goats woolen business. 2010. № 3. p. 20.
9. Chernobay, E.N. Sherst productivity of finelyrune yarok various genotypes /E.N. Chernobay, V.I. Guzenko // Zootechnia. 2011.№ 8. p. 23.
10. 9.Chernobay, E.N. Histological structure of the skin at the yaroks of various

genotypes /E.N. Chernobay, V.I. Guzenko // Zootechnia. 2011.№ 10. p. 26.

11. 10.Chernobay, E.N. Influence of genotype on meat productivity and interior features of yarok /E.N. Chernobay, V.I. Guzenko //Zootechnia. 2012.№ 3. p. 14
12. 11.Chernobay E.N. Productive features of baranchikov and yarochek of various origin /E.N. Chernobay, V.I. Guzenko //Zootechnia. 2012. № 7. With. 20.
13. 12.A.F.Zipper. Keeping sheep and goats. M.:, ed. AST, 2010, 47 p.