PROCEDURES FOR STIMULATING SPERMATOGENESIS IN RAMS AND BOARS

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Under current conditions of intensification of the sheep exploitation system, one of the most important bio-economic objectives is the transformation of the seasonality polycyclicality into annual policing in order to be able to harvest, preserve and store quality semen from rams all over during the calendar year (M. Zăhan, V. Miclea et al., 2010, Dărăban S., 2006).

One of the basic factors determining the stimulation of the reproductive system in zootechnical animals with a seasonal reproduction period is the season of the year, which determines the quantity and quality of the biological material (sperm) and finally the rational use of valuable genetic material. Rams exhibits libido and can mount throughout the year, but the number of ejaculates and their quality can vary depending on the season and even the month. Thus, due to the suboptimal temperatures associated with the duration of the daylight, there is a decrease in the quality of the sperm in the rams and diminishes the desire for mating until its disappearance (M. Zăhan, 2017, S. Dărăban, 2006). Various methods of reproductive system and spermatogenesis stimulation at the animals of zootechnical season with seasonal reproduction are currently known (M. Zăhan, 2017).

The closest solution for stimulation of spermatogenesis in zootechnical animals with seasonal reproduction system is the stimulation of the breeding function by supplementing the basic feed ration of males with *Strongylocentrotus pallidus* and *Strongylocentrotus nudus* in the amount of 0.3-0.6 and 0.08-0.21 g / kg body weight respectively over a period of 10-30 days (*Patent RF No 2197253; МКИ; GA 61K 35/56, 2003.01.27*). Thus, when using this procedure, the ejaculate volume obtained from males is on average 0.6 ± 0.04 ml with 2.18 ± 0.1 billion spermatozoa per milliliter with a mobility of 74.4 ± 3.7 %, of which 29.1 ± 2.0 % possessed rectilinear motion.

The disadvantage of this process is that it does not provide for the regulation of spermatogenesis in males with seasonal reproduction and does not ensure the achievement of quality ejaculates, which can be subjected to the conservation protocol, for the purpose of rational exploitation of valuable genetic material.

The **problem** solved by the present invention consists in the elaboration of a new method of stimulation of spermogenesis at rams in the out of season period, which ensures the increase of the quantitative and qualitative level of the semen collected from reproducers with valuable genetic potential.

The **essence** of the invention consists in proposing a new method of stimulating spermatogenesis at rams in out of season period, based on supplementation of the basic feed stock with ZooBioR complex biopreparation obtained from the biomass of the cyanobacteria *Spirulina platensis* CNMN-CB-02 in an amount of 0.5 or 5 g per 0.5 kg of feed. The positive effect is caused by the supplementation of the base feed ration with *ZooBioR*, which stimulates the germinating epithelium, spermatogenesis, the secretion of the genital organs, the genital instinct in males, increasing the quantity and quality of the semen obtained from the rams in the out of season period. In addition, the process enhances breeding function at rams in the out of season period, resulting in an increase in the so-called "breeding rate", the basic index in assessing the efficiency of the use of high zootechnical breeders.

The **technical result** of the invention consists in increasing the ejaculate volume by the end of the experiment by 0.3 ml which is 50 % relative to the control, the sperm concentration in the ejaculate

by 0.3-0.64 billion / ml or 13.8-29.3 % versus the control the sperm motility with 7.4-17.9 % and the number of sperm with recurrent movements by 15.8-38.5 %, compared to the nearest solution, because of the inclusion in the basic ration of rams of *ZooBioR* complex biopreparations with the following composition per 1 kg of talc: *Amino acid* and *oligopeptide* extract – 3.5-5 g; *Phospholipids* – 3.5-5 g; Proteoglycans, including sulfated polysaccharides – 3.5-5 g; *Protein extract* – 3.5-5 g; *Mixoxantophyll* – 0.75-1.25 g, possessing antioxidant action, stimulating germ epithelium favoring the quantity and quality of biological material collected from rams in the out of season period.

Embodiment of the invention will allow:

– Effective use of the sheep genetic background and the achievement of an increased number of descendants with valuable genetic potential;

– Ejaculation of quantity and good quality with increased fecundant capacity from rams in the out of season period;

– Conservation of semen obtained from rams in the out of season period that will allow the creation of a sperm bank from rams with valuable genetic potential;

– The use of preserved semen in improving breeds of sheep raised in the country and the exchange of valuable genes.

The **invention relates to veterinary, animal husbandry**, especially to the stimulation of spermatogenesis in rams, and can be used to stimulate spermatogenesis at rams in the out of season period, to preserve, improve and efficiently utilize the native genofond. The required procedure involves feeding fodder breeders supplemented with *ZooBioR* 0.5 g or 5 g per 0.5 kg of feed, which is administered daily to offspring over 45-50 days.