

OPPORTUNITIES FOR INTENSIFICATION OF THE REPRODUCTIVE PROCESS IN EWES OF THE ILE DE FRANCE BREED

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Abstract

Fertility is a major factor influencing the efficiency of sheep farming. The intensification of the breeding process is an opportunity to increasing the number of lambs per ewe and year, as well as the farm revenues. The purpose of the present study is to explore the possibilities of increasing the number of lambs born in the Ile-de-France breed by the combined application of two methods of hormonal stimulation - implants and vaginal sponges.

The experiment involves 173 ewes of the Ile-de-France breed on the farm of the Agricultural Institute - Stara Zagora. The experimental group consists of 110 ewes and the control - of 63. Animals from both groups are fed the same ration according to their physiological condition. Melovine melatonin implants (CEVA ANIM. HEALTH) were put on the ewes of the experimental group in February, and after 35 days - vaginal sponges. The following indicators were monitored: number of inseminated, mated, lambled and aborted ewes, number of lambs born (live births, stillbirths and preterm births), type of birth of the lambs, and their live weight on the 10th, 30th and 70th day.

The fertility rates in the two groups are close - 74.6 and 73.64%. Fecundity rate of the experimental group is significantly higher (182.5%) than of the control (134.78%). It varies with age, with the lowest difference between the two groups in the animals at 1.5 years, and the largest - in those at 3.5 years - 96.13%. No significant differences are found in the live weight of the lambs born at birth, on the 10th, 30th and 70th day.

The application of a combined hormonal stimulation method - implants and vaginal sponges does not significantly affect fertility. Fecundity is significantly higher in the experimental than in the control group.

Key words: *Ewes, Fertility, Fecundity, Melatonin, Intravaginal sponges.*