

# ВЛИЯНИЕ ЙОДСОДЕРЖАЩИХ МЕР ПРЕДОСТОРОЖНОСТИ НА РЕПРОДУКТИВНОЕ ЗДОРОВЬЕ И ПРОДУКТИВНОСТЬ КОРОВ

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## EFFECT OF IODINE CONTAINING PRECAUTIONS ON REPRODUCTIVE HEALTH AND PRODUCTIVITY OF COWS

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**Abstract.** In this article, the results of scientific research on the effects of iodine-preserving drugs on the recovery processes and productivity of the body of cattle reared in local conditions are highlighted. During our experiments, the changes in the cattle's diet were evaluated mathematically and statistically by adding iodine-preserving drugs to the cattle's diet for a certain period of time and in different amounts.

**Аннотация.** В данной статье освещены результаты научных исследований по влиянию йодсохраняющих препаратов на восстановительные процессы и продуктивность организма крупного рогатого скота, выращиваемого в местных условиях. В ходе наших экспериментов изменения в рационе крупного рогатого скота оценивали математически и статистически путем добавления в рацион крупного рогатого скота йодсохраняющих препаратов в течение определенного периода времени и в разных количествах.

**Key words.** Cow, reproductive health, productivity, ration, iodine, potassium iodide, IodASK, control group, experimental group, duration of parturition, time of separation of the placenta, Service-service period, fertilization index.

**Ключевые слова:** Корова, репродуктивное здоровье, продуктивность, рацион, йод, йодид калия, ЙодАСК, контрольная группа, опытная группа, продолжительность отела, время отделения последа, сервис-сервисный период, индекс оплодотворения.

In recent years, the population of our country has been growing rapidly. This, in turn, leads to an increase in the demand for food among the population. The work of our cattle breeders is of particular importance in providing the table of our people with quality and affordable food products. Increasing the number of high-yielding animals is a priority for the continuous supply of livestock products to the population.

For the normal functioning of the animal body, not only proteins, carbohydrates, fats and vitamins, but also various minerals are required. Minerals ensure the normal passage of various physiological processes in the animal body. They are necessary as a plastic material for the construction of individual structural elements of the body. Minerals are part of hemoglobin, nucleoproteins and phosphatides. They play an important role in the processes of nutrient digestion and blood absorption in the intestines, in regulating osmotic pressure and in maintaining the acid-alkaline balance at a normal level [2, 6]. The lack of certain mineral substances in the feed can cause pathological processes in animals, as a result of which productivity decreases significantly, and sometimes it can lead to their death. Therefore, the issue of mineral nutrition of animals is of great importance [4, 7].

**Materials and research methods.** Our scientific research was conducted in 2022-2023 at the farm "Turgunboy Shakirov Livestock" of Andijan region using the "Principle of analogs" on 55 cows of the Swiss breed with an average live weight of 450 kg. During our research, five small groups of cows were formed, each consisting of 11 cows. Their first group was selected for control, and the remaining 4 groups were selected for experimental testing.

Cows in control group 1 were fed only the basic diet. Cows of the 2nd experimental group were given potassium iodide in addition to the main diet. In addition to the main ration, the cows of experimental group 3 were given "YodASK" drug in a dose of 500 µg, cows of experimental group 4 750 µg, and cows of experimental group 5 in a dose of 1000 µg.

**Table 1**

**Scheme of the experiment**

<b>Animal groups</b>	<b>Number of animals (head)</b>	<b>Research conditions</b>
<b>Control 1</b>	11	Basic ration
<b>2nd experiment</b>	11	Basic ration + potassium iodide (13mg per animal)
<b>3rd experiment</b>	11	Basic ration + "YodASK" (500mcg per animal)
<b>4th experiment</b>	11	Basic ration + "YodASK" (750mcg per animal)
<b>5th experiment</b>	11	Basic ration + "YodASK" (1000mcg per animal)

Research results and discussion. It is known that the lack of microelements in the diet of cows has a negative effect on the birth process and their reproductive function. Based on the results obtained during our experiments, it can be said that the use of drugs containing iodine had a positive effect on the birth process, and the reduction of the postpartum period in the cows of the experimental groups helped to increase the milk yield compared to the control (Table 2).

**2 Table**

**Indicators of calving and postpartum period in cows**

Indicators	Control	Experimental groups			
	Group 1	Group 2	Group 3	Group 4	Group 5
Duration of childbirth (Minute)	111±7,14	104±7,46	99±7,9	88±6,9*	90±7,04*
In % to control	100,0	93,7	89,2	79,3	81,1
The time of	544±33,1	482±39,2	456±33,68	409±32,10**	414±31,24**

separation of the placenta (Minute)					
In % to control	100,0	88,6	83,8	75,2	76,1
Service period (day)	74±2,72	71±3,14	69±3,09	64±3,2*	65±2,7*
In % to control	100,0	95,9	93,2	86,5	87,8
Fertilization index	2,1±0,20	1,8±0,26	1,6±0,24	1,5±0,18*	1,5±0,19*
In % to control	100,0	85,7	76,2	71,4	71,4

Cows in experimental group 2, which received additional potassium iodide, had a labor duration of 104 minutes, which is 7 minutes less than the "control group". In the cows of the 3rd experimental group treated with "YodASK" drug, the total length of labor was 99 minutes, which is 12 minutes shorter than the cows in the control group. The duration of labor in experimental animals of group 4 was reduced to 23 minutes compared to the "control group", and in experimental animals of group 5 it was reduced to 21 minutes and was 88 and 90 minutes, respectively.

The same relationship was observed in the duration of placental separation. Thus, separation of the placenta after childbirth in cows of experimental group 3 occurred faster than in the control group - 1 hour 47 minutes, in cows of experimental group 4 - 2 hours 17 minutes, in cows of experimental group 5 - 2 hours 25 minutes. In experimental group 2, although there was no significant difference, this difference was in the average values up to 1 hour.

Positive correlations were also observed between the use of iodine-preserving drugs and the duration of service. Thus, the service life of cows of the 3rd group receiving 500 µg of the drug "YodASK" was 69 days, 64 days of the cows of the 4th group receiving the dose of 750 µg, 65 days of the cows of the 5th group receiving the dose of 1000 µg, and potassium iodide In the 2nd group of

used pigs, this indicator was 71 days. The difference between these indicators compared to the control group is 5, 10, 9 and 3 days, respectively.

This trend continued in the second month of lactation. In the third month of lactation, the highest average daily milk yield was observed in cows of experimental group 4 and was 23.9 kg, which is 2.5% higher than in the control group. The average daily milk yield of the cows in the experimental group 2 was 23.6 kg, which was 1.3% higher than that of the control group. The average daily milk yield of cows of experimental groups 3 and 5 was 23.4 kg, which is 2.3% higher than the control group. During the entire period of the experiment, on average, the average daily milk yield of cows in experimental group 4 increased from 2.3% to 6.5% of the milk yield of cows in all other groups.

Summary. In short, the use of iodine-preserving preparations made it possible to increase the reproductive health of cows and milk yield. At the same time, the use of the drug "IodASK" more than potassium iodide has been proven to be an effective tool in increasing the reproductive health of cows and milk yield.

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