ISSN: 2776-0960 Volume 4, Issue 9 Sep., 2023

ResearchJet Journal of Analysis and Inventions
https://reserchjet.academiascience.org

THE EFFICIENCY OF USING SEXED SEEDS IN ARTIFICIAL INSEMINATION OF CATTLE

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Abstract

In this article, the efficiency of obtaining female calves by insemination with female seeds of the Black-Ola cattle breed cows, which are kept on a large scale by the population of our country, is presented. The live weight of cows bred with same-sex seeds, the characteristics of seed retention, and growth indicators were studied.

Keywords: Animal husbandry, cattle, selection, fetus, breeding, biotechnology, cow, calf, artificial insemination.

INTRODUCTION

Ensuring food security in the territory of Uzbekistan is becoming more and more urgent with the increase in the population, so the need for milk and milk products is also increasing day by day. It is important to ensure the needs of the population of the Republic of Uzbekistan for livestock products, to maintain stable food security. Demand and demand for industry products is increasing year by year. It is urgent to increase the efficiency of this sector.

In the production of high-quality feed and ecological livestock products, it is important to strengthen the feed base, to feed livestock with balanced energetic and full-value rations, taking into account their physiological condition on a scientific basis. For this purpose, in the cultivation of quality fodder, a reasonable scientific approach should be taken from the arable land, increasing the amount of nutritious crops, timely planting of repeated and intermediate crops, hay for the winter, silage, beetroot, high-quality alfalfa hay, wheat straw and accumulation of other types of nutrients is important. It is very important to

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improve the breed of local breeds of cattle and to create a herd of cattle with high productivity in a short period of time.

Artificial insemination of cows mated with imported and sexed seeds is expected to result in 95-96% female calves, as well as breeding cattle with high productivity in a short period of time by improving fertility and productivity characteristics. it is possible to create a herd.

Place of experiment: Experiments are conducted at the experimental farm of the Research Institute of Livestock and Poultry.

The experimental farm is located at "Shalola" M.F.Y., "Sharshara" street, Qibrai district, Tashkent region.

MAIN RESULTS OBTAINED

In the experimental farm, cows and carcasses were selected on the topic of "Creating a herd of female cattle in a short period of time by inseminating black-and-white cows for maintenance in the territory of Uzbekistan with sex-separated seeds."

2 groups of 9 cows each were selected and experimental groups were formed. 1 control group and 1 experimental group were formed.

Control and experimental groups were formed for the experiment. Artificial insemination of cows with sexed seeds was carried out.

Milk was monitored once a month and quality indicators were determined. The obtained results were analyzed biometrically.

In order to determine the body indices of cows, their live weight and body dimensions were taken. The obtained results were analyzed biometrically. (Table 1)

Table 1 Body dimensions and live weight indicators of cows in the control and experimental farms

Indicators	Groups			
	control n=9		experiment n=9	
	X±Sx	Cv %	X±Sx	Cv %
Live weight, kg.	326.67±5.56	16.50	339.07±9.05	27.15
Yagirin's height, cm.	121.22±0.67	2.00	123.44±1.35	4.04
Gavda. slope length, cm.	126.67±2.87	8.62	134.00±0.38	1.15
Chest circumference, cm.	144.33±2.41	7.23	146.11±3.51	10.54
Stump height, cm.	137.22±0.67	2.00	140.89±1.71	5.13
Chest depth, cm.	56.89±3.40	10.21	61.44±0.84	2.52
Chest width, cm.	33.67±1.02	3.06	36.89±0.84	2.52
Seat bone, cm.	39.00±0.84	2.52	40.00±17.94	2.08
Pocha circumference, cm.	84.00±0.19	0.58	17.94±0.19	0.18

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The live weight of the experimental cows was weighed on an electronic scale, the body dimensions were measured using a measuring tape, a circle and a Lind stick. It was found that the average live weight of dairy cows was 13 kg higher than the control group.

Yagirin's height is 2.22 cm compared to the control group. It was high. The average body length of the experimental cows is 7.33 cm. high, chest circumference 1.78 cm., buttock height 3.67 cm., chest depth 4.55 cm. It was determined that it was a column. The width of the chest compared to the experimental group was 4.55 cm. It was found to be higher than the cows in the control group. The average ischial bone of the cows in the experimental group was 0.15 cm when we measured it with a compass. the difference was not noticeable, and the circumference of the leg was 0.6 cm. it has been.

Artificial insemination of experimental cows:

Preparations for the artificial escape of experimental cows at the experimental farm of the Scientific Research Institute of Animal Husbandry and Poultry have been started.

Using biotechnologically segregated seeds, in order to care for, preserve, and increase milk productivity of low-productivity black-Ola cattle, cows that have come to the test were brought from the enterprise "Chorvanaslkhizmat LLC" of the Tashkent region. seeds were brought. It will be possible to obtain female calves from artificially bred cows in the first half of 2023, which will allow the creation of a herd of breeding cattle.

The list of artificially bred cows from the "VELVET" breed of the Holstein bull in the system (experimental group).

Table 2

T/r	ID №	Artificial time of fertilization	A pedigree bull is sexed seed (XX)	Estimated time of birth	After a month, when it was checked at the Uzd device
11	26092	10.04.2022	American holster "VELVET" system	16.01.2023	+
22	26355	10.04.2022	-“-	15.01.2023	+
33	26359	10.04.2022	-“-	16.01.2023	+
44	26357	18.04.2022	-“-	23.01.2023	+
55	26074	22.04.2022	-“-	28.01.2023	+
56	26374	22.04.2022	-“-	28.01.2023	+
77	19293	05.05.2022	-“-	08.02.2023	+
78	19296	05.05.2022	-“-	08.02.2023	+
99	19298	08.05.2022	-“-	11.02.2023	+

As it can be seen from the table, in April and May 2022, cows were artificially inseminated with sexed female offspring of the bred bull in the "VELVET" system.

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In the control group, the Holstein in CROSS 208 HO 10262 system was bred with seeds not classified into systematic sex.

Table 3

T/r	ID №	Artificial time of fertilization	A pedigree bull is sexed seed (XX)	Estimated time of birth	After a month, when it was checked at the Uzd device
11	61257	22.04.2022	CROSS 208 HO 10262	03.01.2023	+
22	61246	22.04.2022	-"-	03.01.2023	+
33	61254	27.04.2022	-"-	12.01.2023	+
44	61259	27.04.2022	-"-	1.01.2023	+
55	62161	27.04.2022	-"-	27.01.2023	+
66	19344	27.05.2022	-"-	26.02.2023	-
77	26471	18.04.2022	-"-	17.01.2023	+
88	26472	22.04.2022	-"-	22.01.2023	+
99	26469	22.05.2022	-"-	23.02.2023	-

As can be seen from the table below, the cows in experiment No. 19344 and 26469ID were re-inseminated with CROSS 208 HO 10262 bull semen.

When artificially inseminating experimental black-bred cows, only female calves are obtained, and the number of carcasses increases. As a result, it will be possible to create a herd of cattle with improved productivity in a short period of time.

In cattle breeding, it is important to study changes in their fertility indicators. The condition of keeping, the complete value of the feed ration and other reasons can be.

We continued the cows in the control group based on the technology adopted on the farm. We kept the cows in the experimental group in closed buildings during the winter. In the spring and summer seasons, conditions of protection were created, and on hot summer days, they were kept in tall verandas blocking the sunlight above the spreading areas. The influence of the conditions of keeping the cows in the experimental group on milk productivity and its quality, as well as the effect on fertility characteristics is also being studied.

In addition, the cows in the experimental groups were actively exercised several times a day and the time of sexual orientation was monitored. The cows that came to the cow were separated and brought to special places for artificial insemination, where artificial insemination of cows was carried out.

Early detection of goiter in cows using the UZD device: we artificially inseminated experimental cows with Holstein seeds of the CROSS 208 HO 10262 system, which was included in the 1st ten in the world in April and May of the Scientific Research Institute of Livestock and Poultry. On May 29, 2022, we managed to

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determine the presence of striae in all the artificially driven cows in order to detect the presence of striae in the SIUI CTS-8800 model "UZD" device.

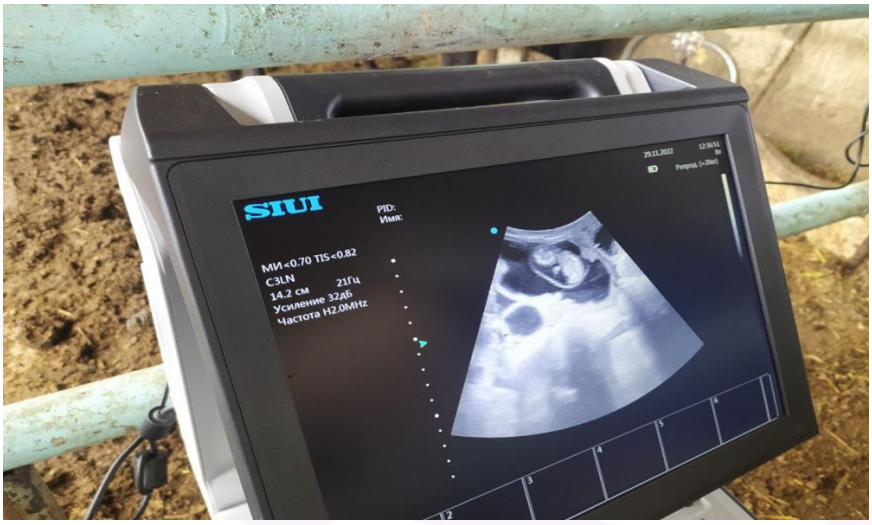

Figure 1. View of the embryo in the "UZI" device.

Calving (breeding) of experimental cows: Cows were transferred to the farrowing ward 10 days before calving. They were kept in groups and under the porch of the building. Cows were fed according to the diet of dairy cows, only 10-14 days before calving, milk-producing juicy feeds were sharply reduced from the diet.

Cows were transferred to a specially prepared room (box) 1-2 days before calving. The floor of the room was covered with straw and all necessary measures were taken.

As 2 cows in the experiment were tired during childbirth, they were assisted by an obstetrician, and the rest of the cows gave birth normally. After the cows gave birth, the impurities were cleaned from her body. The external genitalia were washed and disinfected. The cow's udder was washed with warm water (37-38 os) and the first milk was expressed in a separate container, after which the calf was nursed.

DISCUSSION

Growth and development of young calves in groups

In the experimental farm, young female calves are being cared for in order to replenish the main herd. Cows in the herd are repaired depending on the state of care of female calves, their growth and development farts. Technological processes of keeping, feeding and caring for young calves have been developed.

It can be seen that the positive and negative situations in the process of care had an effect on their growth.

The growth and development of female calves in the experiment is presented in the table below. Table 4

№	ID. №	Control group					sex	ID. №	Experimental group					sex
		Live weight at birth, kg	1st month	2nd month	Absolute growth, kg (absolute)	Average daily growth, grams			Live weight at birth, kg	1st month	2nd month	Absolute growth, kg (absolute)	Average daily growth, grams	
1	05253	28	42	60	74	530	♀	05239	32	43,0	62	75	550	♀
2	05249	30	43,5	61	74,5	510	♀	05327	31	44,5	62,5	76	530	♀
3	**1244**	29	42,5	60,5	74	520	♂	05219	30	43,5	61,5	75	520	♀
4	05252	29	42,5	60,5	73,5	520	♀	05224	29	42,5	60	74	530	♀
5	**05250**	28	42	60	74	530	♂	05242	29	42,5	60	75	540	♀
6	05251	29,5	43	60,5	72,5	520	♀	05237	30	43,5	61,5	73,5	560	♀
7	**05254**	31	44,5	61,5	75	510	♂	05241	32	44,5	62	76,5	540	♀
8	05248	28	42	60	74	530	♀	05239	32	43,0	62	75	550	♀
9	**05256**	29	42,5	60,5	74	520	♂	**05243**	32	44,5	62	76,5	540	♂
	Total:	261,5	384,5	544,5	665,5	4690		**Total:**	277	391,5	553,5	676,5	4860	
	Average	29,2	42,7	60,5	74	520		**Average**	30,7	43,2	61,3	75	540	

CONCLUSION

1. If the conditions of care, feeding and feeding of cows during the estrous period and after calving are carried out in a timely manner, the ervis period of cows will be shortened, they will be inseminated and fertilized in time, and their fertility will improve.
2. Early detection of strait cattle in 28 days using the UZI device gives good results and economic efficiency is achieved.
3. During the artificial insemination of cows, the period from 18 to 28 months of age is considered to be a high period of retention of seeds, and it was observed that this indicator is lower in older cows.
4. Sex homozygous cells XX chromosomal are considered 4% lighter than XY chromosomal germ cells, and 90% result can be achieved in the extraction of seeds.
5. Insemination with same-sex seeds will greatly help in the future breeding of calves according to the plan.
6. In the short term, it is possible to increase the number of female cattle and influence milk production.
7. In the territory of Uzbekistan, it is possible to increase the income of the population by providing a large amount of black-and-white cattle adapted to care for households and inseminating them with same-sex seeds.

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