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СОДЕРЖАНИЕ

СЕЛЬСКОХОЗЯЙСТВЕННЫЕ НАУКИ

ХИМИЧЕСКИЕ НАУКИ

По результатам проведенных морфологических и биохимических исследований в качестве перспективных выделены формы Сижжак-1, Чимган-7, Чимган-8, Сижжак -10 (Рис 1).

ВЫВОДЫ

Отмечено, что 3 вида (B.oblonga, B.integgerima, B.nummularia) из 8 видов барбариса (B.oblonga, B.heteropoda, B.integgerima, B.nummularia, B.sibirica, B.kaschgarica, B.crataegina, B.densiflora), распространенных в республиках Центральной Азии, встречаются во флоре Узбекистана.

По массе 100 штук плодов барбариса выделены формы Сижжак – 3 (29,5 г) Нанай – 5 (31,4 г), Чимган – 8 (30,1 г) и Сижжак–10 (41,5 г.). Средняя урожайность кустов составила 3–5,5 кг. По результатам проведенных исследований эти формы рекомендованы для применения в селекционных целях Сижжак-1, Чимган-7, Чимган-8, Сижжак -10.

В плодах барбариса сильно проявляется полиморфизм: ягоды *B. oblonga* темного-синего-черного цвета, средняя их длина 9,9±0,004 мм, диаметр 5,1±0,0,04 мм, форма удлиненная, эллипсовидная. Плоды *B. nummularia* розовато-красного цвета, шаровидные, 6,3±0,04 мм в диаметре. Ягоды *B.integgerima* темно-красного цвета, удлиненной, цилиндрической формы, длина 9,0±0,13 мм, диаметр равен 5,5±0,10 мм.

Установлено содержание витамина С в плодах барбариса цельнокрайнего в количестве 102 мг%, в плодах барбариса монетного – 176 мг %, в плодах барбариса продолговатого выявлено содержание 100-185 мг % витамина С. В качестве кустов барбариса, богатых витамином С отмечены плоды форм Чимган–6 (185,009 мг %) и Чимган–8 (176,485 мг %), произрастающие вокруг Чимганских гор. Рекомендуется использовать ягоды этих видов барбариса в качестве витаминного источника.

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JUSTIFICATION OF MILK PRODUCTION TECHNOLOGY IN OPTIMIZING THE CONDITIONS OF LIVESTOCK

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ABSTRACT

Scientifically substantiated that in order to ensure optimal conditions for maintenance in the winter, the livestock of various sexual groups in one room it is expedient to carry out the reconstruction of the cows. The need for animals for animals in the room should be determined by the number of days to stay cows in the technological group depending on their physiological state and age, taking into account the general coefficients that are recommended by departmental technological design standards for specialized milk production.

Investigated that unpredictable maintenance of dry cows in a separate isolated section, equipped with combinations, or binding in a separate isolated section provides more optimal values of air temperature, contributes to reducing the level of carbon dioxide by 0.06-0.08%, relative humidity By 16-20%, microbial pollution of air - in 2.1-2.3 times, the level of production noise - 6.5-7.9 times, improves the efficiency of the use of production space and internal equipment of the premises.

Key words: maintenance, cattle, dry, period, cow, productivity.

Introduction. Reforming the agrarian sector of Ukraine's economy and the transition of agricultural enterprises to market principles of management set before domestic science and practice a number of unresolved problems to improve existing and developing new efficient technological solutions in the field of livestock production. One of these problems is a decrease in the number of cattle in farms, which in turn led to the maintenance of various sexual and age groups of animals in the premises, especially in the winter-stall period. In this case, to ensure the full compliance with hygienic requirements for the maintenance of various technological groups of cattle in accordance with the departmental norms of technological design is not always possible [2].

The small number of cattle in most farms does not allow us to apply modern milk production technologies, increase its number and improve quality. Therefore, along with an increase in the number of livestock, it is envisaged to carry out the reconstruction of existing

livestock premises in order to ensure the most optimal conditions of animal retention.

Review of scientific research. Of particular importance under such conditions, modern methods of maintaining dry and lactating cows in the winter-stall period are acquiring [7, 8]. One of the principles that are widely used in the production of milk at small farms is the formation and placement of animals according to technological groups taking into account their physiological state. In accordance with the norms of technological design distinguish such groups of cattle: valid, flood, dry cows; calves up to 15-20-day age; calves to six-month age; Heifies and bulls in different age periods, non-lights, supernumptuous young animals [1]. Compliance with these norms when conducting dairy cattle breeding on small farms makes it possible to rationally use animals, premises, feeds, reduce labor costs for production and increase the efficiency of milk production [13, 14, 15].

Significant distribution in the central regions of Ukraine has a Ukrainian black-and-ruste dairy breed cattle. Animals of this breed are characterized by high productive qualities (6-8 thousand kg of milk for lactation) and fully satisfy the requirements of intensive milk production technology [12]. There are a number of basic factors that provide high performance of cows.

Thus, on the basis of the given data, we can conclude that improving the efficiency of milk production in small specialized farms depends primarily on the use of high-performance dairy breeds of cows, the use of modern methods of their maintenance, feeding, care and operation. A decisive significance also has the creation of optimal sanitary and hygienic conditions for livestock and balanced normalized feeding. Which provide not only high productivity of cattle, but also high quality products. No less important factor in increasing the dairy productivity of cows in small farms is the application of complex mechanization and automation of production processes. The unambiguous response to the possibility of maintaining various sexual groups of cattle on small farms in one room can only be given after special research on the development of new variants of reconstruction of premises and the definition of the most optimal way of maintaining cows, including in the dry period [8].

Therefore, there are currently research on the determination of the most optimal method of maintaining dry cows in the winter-stall period on the basis of studying the parameters of the microclimate of the premises, their influence on immunological reactivity, milk productivity, milk quality, quality of milk and viability of the excretion, which is a prerequisite for the development of scientific and practical approaches to the reconstruction of existing livestock premises.

Purpose and tasks of research. The purpose of the research is to improve the methods of maintaining dry cows, to investigate the indicators of the microclimate of reconstructed premises and examine their influence on dairy productivity, immunological reactivity, quality of milk of cows and viability of the excretion.

Materials and methods of research. Research on studying the microclimate in various ways of maintaining dry cows on their behavior, dairy performance after calving, quality of milk, live mason of newborn calves and work on project development and combinations and reconstruction of livestock premises were conducted during 2018-2020 on the basis of a farm economy.

The purpose of the first stage of research was the development of design and technological decisions and reconstruction of livestock premises.

The size of the sections of the premises for group unusual or tied maintenance of dry cows was substantiated based on the size of a stall on one head, with its width of 1.5 m. The calculations have shown that for maintenance of 50 cows with a finished milk production cycle, the need for a dry cattle. The cows are 10. Based on this, the width of a separate section of the premises, which was 15 meters, was calculated, and the depth is 3.5 m.

The placement of various sexual-age groups of cattle after the reconstruction of the cower envisaged: unpredictable maintenance of dry cows, binding of dry cows, binding maintenance of dry cows, along with a valid, place of maintenance of various sexual groups of cattle, premises for service personnel, Premises for storage of feed, Substrate storage facilities, permanent storage facilities.

In the coward after the reconstruction of feed distribution, the donated cows were made by mobile (KTU-10), and for dry cows with the help of trolleys (Tu-250). The manure of the room was removed by the surface conveyor of TSG-160, and from isolated sections – with the help of trolleys on the TSG-160 conveyor. Wipe with water with the help of handmade automatic type.

The volume of the premises for the maintenance of various sexual groups of cattle (only 125 heads) after the reconstruction was 2259 m^3 (57 × 11 × 35), or 18.1 m^3 per head. Removing from the exhaust air was provided by 10 exhaust mine in the size of 0.5 × 0.5 m. In isolated air volume sections, 184 m^3 (15 × 3.5 × 3.5), or 18.4 m^3 per head.

In the second stage of research, methodological approaches to calculating the number of catchers for various sexual-age groups of cattle before the reconstruction of the priorities are developed.

When reconstruction of existing livestock premises provided an increase in the number of cows by 10-50% (the most optimal variants of expanded reproduction of dairy herds). The specified parameters were used based on the experience of advanced enterprises by increasing the power of active farms.

The purpose of the third stage of research was to give a hygienic assessment of various methods of maintaining dry cows based on studies of parameters of microclimate of premises, physiological state and productivity of animals, live weight of newborn calves and immunological reactivity of cows [9].

In this case, the duration of the dry period, the living mass of cows during the launch, before calving, at the end of lactation, to grow live mass during the dryness and live weight of calves at birth. The

experiment took into account the physiological state of cows of their behavior, consumption of feed and water. The chemical composition of milk was studied in the second month of the second lactation of cows.

The study of the parameters of the microclimate of livestock premises was carried out in three points of premises (sections) four times a day (at the 6th, 12th, 18th, 24th hour).

The total ball estimate of the microclimate in premises for cows in the dry period was carried out according to the methodology of Yu.M. Markov (1983) [4], improved M.V. Demchuk and L.V. Polyovyi (1997) [3].

The average daily increase in body weights was determined by the calculated method for [10].

The fat content of the milk was determined by the method of Gerbera, the amount of sugar (lactose) - refractometrically, the dry matter content - by drying milk at 105 °C. to a constant mass, the content of ash - the method of combustion of weights in a muffle furnace at a temperature of 500 ºC, acidity - titrometric, density - By means of areamer, the content of phosphorus is colorimetrically, calcium - by ozation.

The results of the studies are worked out biometrically using methods of variation statistics [5, 6], using PCs and software. The difference between the indicators of mean values was considered probable at P <0.05.

Research results. In reforming the agrarian sector of the economy in the state there were small farms instead of large, powerful enterprises, where a significant part of milk, beef and is grown by repair young animals. These are enterprises with a complete cycle of production of cattle breeding - milk or beef. The feature of the functioning of small farms is that cattle of different sexual groups is placed in one or two premises often with a violation of the relevant regulatory requirements for its maintenance.

As for a hygienic assessment of various methods of maintenance of cows, depending on their physiological state, as well as notes, newborn calves and young animals in one room in the stall period, then it is not exhausted today and needs to be as soon as possible. This is dictated by the fact that animals of different sexual groups need to provide an optimal microclimate of the premises in the most complicated period of their maintenance, proper conditions for feeding and operating, obtaining high-quality products, to achieve high animal preservation.

The number of calves for calves from 20 days to 6 months (160 days), young (160 days) from 6 to 12 months - (180 days) and from 12 to 18 months (180 days) were determined according to the plan of the benches and the way Growing young animals adopted in the farm. Nonels to 30 days of troubles were in a group of young (heels), and after checking them, they were transferred to a special section where they were 240 days. 15 days prior to the calving of non-balance were transferred to the premorital section of the maternity compartment.

When selecting the cows from the herd, as a rule, 20% of the livestock, they were kept in a sector for fattening within 90 days. The predictable amount of cows is most optimal, because it allows for five years to replace animals in the herd. For farms it is more profitable to use high-performance pregnant printers and moderate (up to 20%) of the reproduction of the herd with its simple expansion. The expanded reproduction of the herd is allowed to 50% or more, that is, for each captured cow, it is necessary to introduce an average of 2.5 cow-first-born.

The use of this approach has made it possible to determine the number of corporates for enterprises of different capacities, which summarize from 50 to 200 cows (Table 1). It should be noted that for maintenance of 42 valid cows, it is necessary to equip eight stanches for dry cows.

Table 1.

Number of catchers for cows on farms of varying power

Indicator	Power Farm, Cows						
	50	75	100	125	150	175	200
Cows	42	62	83	104	125	145	166
Cows during dryness, goal.	8	13	17	21	25	30	34
Number of cattle in the maternity department, pc.	8	12	16	20	23	27	31
Topped cows for fattening, goal.	3	4	5	7	8	9	10
Total cattle, pc.	61	91	127	152	181	211	241

Here is a data in Table 1 indicate that for the power of the farm for 50 cows, it is necessary to have 61 catomysets. The calculations showed that with an increase in the power of the farm to 75 cows, the total number of corporate increases by 49%, to 100 cows - by 108%, to 125 cows - by 149%, to 175 cows - by 246%, to 200 cows - by 295%.

For expanded reproduction of the herd, you must take into account the need for additional catomies. Their number for non-elegants predict according to the growth rate of the herd. The calculations showed that with a simple reproduction of the herd for a farm with a capacity of 50 cows, the need for non-tersels in the catchers is 8, and with an extended (from 10 to 50%) - from 8 to 11 catfish (Table 2).

Table 2.

Number of farms on farms of varying power with an extended reproduction of herd (%), heads

Indicator	Power farm, Cows						
	50	75	100	125	150	175	200
10	8	10	14	18	22	26	29
20	9	12	16	20	25	28	32
30	9	13	17	21	26	30	33
40	10	14	18	22	28	32	36
50	11	15	20	24	30	35	39

An analysis of the methods of maintaining cows in a dry period showed that the overwhelming majority of farms in connection with small stocks on farms uses an attached way to keep animals together with the valid. This is primarily due to the lack of relevant requirements for the maintenance of dry farms on small farms and the need for appropriate structural changes in the domestic equipment of the premises, recommendations from which today are absent.

In order to improve the method of maintaining cows in a dry period on small farms, a special module with dimensions was developed: the length of the stall - 2.0 m, width - 1.5 m, and the combination length - 1.2 m, height - 0.8 m. Length the stall is increased in order to improve comfortable conditions for animals relaxing and based on the fact that for dry cows and legislative livestock laws, the use of combines are not provided. The developed module with combination with combination is developed in the reconstruction of the premises and was used to maintain dry cows unusual, or an anchored manner. The combustions for the maintenance of dry cows were equipped in an isolated section, which was arranged in the face of the room.

It is shown that the short stall for cows is undesirable because the animals relaxing on the edge of the tray of the Gnostic conveyor, are polluted by excrement. These observations are taken into account when determining the optimal size of the cows of the Ukrainian black-and-risky dairy breeds depending on the weight of their body and a recipient length of the body.

Using an unusual-combined method of maintaining the cows of the Ukrainian dairy black and rustic breed in the dry period in isolated sections, and lactating - an anchored method in the stars is an optimal solution in the reconstruction of existing livestock premises.

Determination of air temperature of the premises showed that only the cows, which in the dry period were kept on the leash, together with the duration, were influenced by the temperature factor. The highest values of the minimum air temperature indoors are marked from the 24th to the 6th hour, which was 1.7 and 0.8 ^{o}C higher than the average figures per day. Subsequently, the minimum temperature from the 6th to the 12th hour in this premises decreased by 1.6 ^{o}C (Table 3).

Table 3.

Minimum air temperature of premises in various ways of maintaining cows in a dry period, ^{o}C, M ± m, n = 60

Method of detention	Research time, h.				On the average
	6	12	18	24	
Tied (along with lactating cows)	14,5± 0,57	12,9± 0,57	12,0± 0,53	15,4± 0,59	13,7± 0,55
Tied (in a separate section)	16,7± 0,34*	15,8± 0,31*	15,8± 0,28*	17,0± 0,30*	16,3± 0,31*
Unhindered (in a separate section with combos)	16,8± 0,24*	15,0± 0,32*	14,9± 0,30*	16,9± 0,31*	15,9± 0,29*

* P <0,05, here and then compared with the maintenance on the privilege together with the valid

The minimum temperature of the room in which the dry cows were kept in an isolated section in the isolated section, was higher by 2.6 ^{O}C compared with similar studies when maintaining dry cows, along with lactivating.

During the day, the minimum air temperature in the premises with unusual maintenance of cows in a substantive period in a separate section with combinations, as well as tied in a separate section in the stars changed to a much lesser extent than when their tied up with lactic in steams.

Table 4.

Maximum air temperature of premises for various ways of maintaining cows in a dry period, OS, M ± m, n = 60

Method of detention	*An hour of doba*				On the average
	6	12	18	24	
Tied (along with lactating cows)	18,4± 0,43	16,2± 0,46	15,8± 0,30	18,8± 0,36	17,3± 0,37
Tied (in a separate section)	18,4± 0,34	17,3± 0,34	17,5± 0,28*	18,5± 0,31	17,9± 0,31
Unhindered (in a separate section with combos)	19,0± 0,32	17,4± 0,34	17,1± 0,31*	18,9± 0,38	18,1± 0,33

Researchers found that the minimum air temperature in the room with an adjacent maintenance of dry cows in the stars together with lactating cows, as well as tied into a separate section and unusual in separate sections with combinations was highest for 24 hours a day that meets the generally accepted The value of this indicator when maintaining cattle.

It is shown that in separate hours of day, the maximum air temperature of the room increased to 19 °C. with unusual maintenance of dry cows in a separate section with combinations. However, the average daily oscillations of the maximum air temperatures in this room did not exceed 1.1 ºC (see Table 4).

It has been shown that with an adjacent maintenance of dry cows, along with the relative humidity of the air, the relative humidity of the premises during the day changed to a small extent and was slightly higher than the established normative indicators.

In the afternoon (from the 6th to 12 hours), the relative humidity of air indoors in the adjacent maintenance of dry cows has significantly increased, remaining practically at this level until 18 hours, and then gradually declined by 3.6%. This can be explained by the fact that in this period, the main technological operations indoors are carried out, as well as the main physiological processes such as defecation, urination, air gas exchange, which are the main source of water vapor in the room.

Excessive humidity in the room is also associated with an incomplete removal at night through exhaust ventilation channels. However, despite this, at 6 years. In the morning, the humidity of air decreases by 3.6% (premises, which kept dry cows along with the valid), but its value was higher than the permissible norm.

The chemical composition of the animal livestock space is significantly different from the atmospheric. Thus, in the air of livestock premises, as a result of animal life, the amount of carbon dioxide, ammonia, hydrogen sulfide, which cause various breathing functions accompanied by hypoxia and reduce animal productivity.

The conducted studies have found that the concentration of carbon dioxide in the air of the premises for dry cows, which were kept tied together with the valid cows, averaged 0.26%, which corresponds to its permissible level. It has been found that the highest level of carbon dioxide in the air of the room, where the maintenance of dry cows was tied together with the valid, observed at 6 o'clock, then it decreased by an average of 0.13% and again grew at 24th o'clock. the day. A significant increase in carbon dioxide content in the air of livestock premises in this period can be explained by the lack of efficiency of ventilation under this method of maintaining cows.

The concentration of ammonia in the air of the room with unfamiliar maintenance of dry cows in a separate section with combos compares with similar indices of air, which served as control, at six o'clock in the morning was the lowest - 4.3 mg / m^3. This is due to the fact that the surface area of the floor, from which the ammonia is allocated, in a separate section after the reconstruction of the premises decreased, and the combination of covers and the use of unbundled maintenance of dry cows contributed to the improvement of the hygienic conditions of this part of the premises.

The results of the study of general microbial pollution of air of livestock premises in various ways to retain dry cows are given in Table 5.

Table 5.

Microbial air pollution of premises in various ways of maintaining dry cows, CFU, M ± m, n = 60

Method of detention	*An hour of doba*				On the average
	6	12	18	24	
Tied (along with lactating cows)	74,9± 1,35	82,6± 1,45	83,4± 1,33	77,5± 1,31	79,5± 1,28
Tied (in a separate section)	36,6± 0,85*	40,6± 1,03*	41,6± 0,80*	36,0± 0,74*	38,8± 0,83*
Unhindered (in a separate section with combos)	33,9± 1,29*	36,2± 1,17*	36,6± 0,98*	30,2± 1,07*	34,2± 1,02*

On average, this indicator with an adjacent maintenance of dry cows, along with the valid, was 45.3 thousand / m^3, or 43.0% higher than similar indicators with unbundled animal maintenance in a separate combination section.

Increasing the level of ammonia in the air of premises at night for various methods of maintaining dry cows, which in some cases exceeded the MPC, is likely to be due to a decrease in the intensity of air exchange in the room during this period of day with styling maintenance of cattle. The inflow of clean air from the outside during the afternoon and removal of manure contributed to a decrease in ammonia in the air. This is evidenced by the comparative analysis of ammonia content in the air of premises in various ways of maintaining dry cows.

It has been established that the content of ammonia in the air of the premises to a lesser extent depends on the method of maintaining dry cows, and to a greater extent from the efficiency of ventilation and gnoing systems.

It has been established that the transfer of dry cows into a separate section, which was achieved by the reconstruction of the premises contributed to a decrease in general microbial pollution of air in this part of the building. Thus, with an adjacent maintenance of cows in a separate section, microbial pollution of air decreased by an average of 40.7 CFUs compared to similar air indices when maintaining dry cows together with the valid. This is due to the fact that in a separate section of the room, where dry cows were kept unhindered, there was a significantly lower saw load, a smaller number of animals and excluded a number of technological operations for their maintenance.

When comparing the general microbial pollution of air premises, with an adjacent maintenance of dry cows in an isolated section and unqualified, it has been found that in the last method the number of microorganisms in the air was 13.4% less than in the first case.

It has been established that in the air of the room where the dry cows with lactivating, the highest microbial pollution was observed at 18th. (83.4 CFU), reducing to a small extent at 12 years. and at 24th, reaching the lowest level in the morning at 6th.

It is shown that in the sections of the room with the maintenance of dry cows, along with the actual speed of air on the 6-year. was the lowest, gradually increasing 2.2 times on the 12th and 18 hours.

At this time, the speed of air did not change and only at 24 hours. She decreased again to her values in the morning. The average value of air velocity per day in this premises is somewhat dominated by a normative figure.

The lowest design and technological regime is registered for premises with the maintenance of dry cows, along with lactivating (Table 6).

Table 6.

Estimation of microclimate of premises in various ways of maintaining dry cows

№	Microclimate parameters	Method of detention					
		tied (along with a valid)		tied (in a separate section)		unbudden (in a separate section with combinations)	
		indicator	Score, Bal	indicator	Score, Bal	indicator	Score, Bal
1	Air temperature, ^{O}C						
	- Minimal	13,7	5	16,3	5	15,9	5
	- Maximum	17,3	4	17,9	4	18,1	4
2	Relative humidity, %	86,1	2	70,3	4	67,6	5
3	Air speed, m / s	0,26	5	0,27	4	0,24	5
4	General microbial pollution, CFU	79,5	4	38,8	5	34,2	5
5	Concentration of carbon dioxide,%	0,26	2	0,18	4	0,20	4
6	Concentration of ammonia, mg / m^3	19,8	3	18,4	3	18,0	3
7	Level of production noises, dB						
	- Distribution of feed	79,6	1	10,6	5	12,2	5
	- Removal of manure	4,5	5	4,0	5	3,4	5
	- work of milking machine	45,7	3	–		–	
GPA		3,4		4,33		4,55	
Estimation of the technological solution		Level of marginal daily oscillations		Permissible design and technological mode		Optimal design and technological mode	

Today in existing normative documents there are no data on the permissible level of production noise and their impact on the health of dry cows in the retention period. Therefore, a ballroom assessment of production noise was proposed, which has been reflected in the previously developed microclimate scope of the premises. It was accepted to evaluate the level of production noises up to 16 dB - 5 points, and more than 67 dB - in 2 points.

Evaluation of the microclimate of reconstructed premises in various ways of maintaining dry cows in the stall, namely, along with the lactation, unhindered in a separate section and unusual in a separate section with combos on nine indicators showed that the most optimal project. Technological regime for maintenance of dry cows is the latest version of the manner of animals.

Analysis of microclimate parameters and design and technological decisions on the expediency of reconstruction of livestock premises showed that the most optimal is the abnormal content of dry cows in a separate section with combinations. The tied method of maintaining dry cows in a separate section of the premises according to the data of the ball assessment of the microclimate parameters is less effective. Keep dry cows along with lactivating not appropriate.

Thus, conducted researches have been established that according to sanitary and hygienic requirements, the state of premises and methods of maintaining dry cows in the steady period are expedient to evaluate the following parameters: production noises, minimum and maximum temperature, relative humidity, speed of motion, general microbial air pollution, carbon dioxide. gas and ammonia in the air.

The maintenance of dry cows together with the valid cows on the leash, which has recently been widespread in most agricultural enterprises, is inappropriate. Under such conditions it is difficult to maintain a microclimate at the level of indicators within the limits of permissible parameters. The most rationally retaining cows in a dry period of unhindered way in isolated sections with combinations.

It is known that dairy productivity of cows, in addition to a number of well-known factors, depends to a large extent from the weight of the body of animals. In this indicator in dairy cattle breeding determine the need for animals in nutritious and biologically active substances, control physiological functions and clinical conditions. Studies have established that the use of proposed methods of maintaining dry cows did not affect their body weight.

After calving the body weight of the cows, which was kept in a dry period in an isolated section, equipped with combinations, was 6.2 kg higher, and those held in an isolated section tied, not changed compared to similar indicators in cows, held together with the dear cows.

In studying the influence of various methods of maintaining dry cows on their future dairy performance it has been established that animals were held in a dry period with the dedicated cows, for the first month of lactation, milk was obtained by 14.8% less, and in 305 days - By 15.9% compared to similar indicators in cows, which were kept in a dry period in an isolated section with combinations (Table 7).

Table 7.

Dairy productivity of cows and feed costs for milk production in various ways to maintain them, M ± m, n = 10

Indicator	Method of detention		
	teasing		unbudden (in a separate section with combinations)
	along with the valid	in a separate section	
Hoping of milk for the first month of lactation, kg	531,1±7,76	617,6±11,65*	623,4±12,19*
Hoping of milk in 305 days of lactation, c	42,22±1,47	48,76±1,61*	50,22±1,32
Average daily hopes, kg: For the first month of lactation in 305 days of lactation	 17,7 13,8	 20,6 16,0	 20,8 16,5
Milk coefficient	8,0±0,29	9,0±0,33	9,3±0,26

Higher naturies of cows, which in the dry period were kept in separate sections in the same feeding conditions, can be explained by a significantly better microclimate state in premises after reconstruction and preparation of cows until the next lactation. These indicators could not be achieved with the detention of dry cows in the stars together with the valid.

Thus, the way to maintain cows in a dry period and their subsequent lactation were interconnected. This is confirmed by the magnitude of the milk of the cows of control and experimental groups both for the first month and 305 days of lactation.

The method of maintaining cows for equivalent feeding has a relative effect on the chemical composition of milk because it operates in a complex with other factors. This is confirmed by studies that have shown that the content of fat in milk of cows of the first and second experimental groups in the second month of lactation did not change in comparison with control (Table 8).

Table 8.

Chemical composition of milk of cows for various methods of their maintenance in the dry period, %, M ± m, n = 10

Indicator	Method of detention		
	tied (along with a valid)	tied (in a separate section)	unbudden (in a separate section with combinations)
Gustine, °A	30,2±0,15	30,8±0,41	30,6±0,40
Acidity, °T	19,1±0,28	17,4±0,35	17,1±0,66
Dry substance	11,3±0,29	11,6±0,30	11,8±0,32
Ash	0,7±0,03	0,7±0,03	0,7±0,03
Calcium, mg / 100ml	118,9±3,23	111,7±2,84	124,0±3,57
Phosphorus, mg / 100 ml	67,0±4,19	73,0±4,06	72,0±3,01
Milk sugar	4,3±0,17	4,3±0,20	4,5±0,18
Fat	3,8±0,09	3,8±0,06	3,9±0,01
Output of milk fat, kg	154,3±7,27	184,3±7,30*	194,3±5,94*

The yield of milk fat in the cows of the experimental groups differed substantially. Thus, the amount of milk fat in the cows of the second experimental group was 35.4 kg, and in the cows of the first group - by 24.9 kg higher than the control group.

Studies have shown that the acidity of the milk of cows, which were kept in a dry period (first group) or unhindered in a separate section with combination (second group) compared with control tended to reduce and ranged within the limits established normative indicators.

Proceeding from this, it is proposed to contain cows in the dry period in an isolated section unusual in combinations or (as an exception) in an isolated section are tied up, and for the equipment of the required amount of stall for dry cows to use the proposed module to maintain cows in a dry period.

Studies have shown that the reconstruction of the correlations ensures compliance with the established requirements for the maintenance of various sexual groups of cattle, optimizing their feeding, provides high productivity and quality of milk.

Thus, studies show that containing cows in a dry period are attributed together with lactating economically unprofitable. The maintenance of dry cows in an isolated bond section and in the further use of pastures for valid cows increases the profitability of milk production by 5.92%, and in an isolated section unusual - by 9.26% compared to control.

Conclusions:

On the basis of experimental studies, the advantage of unjust maintenance of dry cows of the Ukrainian black and rye dairy breed in a separate section of the cowar over an adjacent maintenance in the stars reached by reconstruction of livestock premises and ensuring the optimal parameters of the microclimate.

1. It shows the expediency of using new approaches to calculating the number of corporate accommodations in livestock premises, which depends on the number and period of stay of animals in the corresponding sexual group, as well as the rates of expansion of the herd. To maintain the cows of the Ukrainian black-and-rusty dairy breed, it is recommended to use a stall, the size of which depends on the weight of their body and a recipient length of the body.

2. The most optimal maintenance of the dry cows of the Ukrainian black and row dairy breed is unusual in a separate section, equipped with combinations with dimensions: length 1200 mm, height 800 mm or tied in stars (sizes: width - 1500 mm, length - 2000 mm).

3. Maintenance of dry cows in the stall period in separate sections with combinations provides more optimal minimum and maximum air temperatures, reduces relative humidity by an average of 16-20% over a day and meets established hygienic requirements compared to their tied maintenance along with the valid in stalls.

4. Blessed in combinations or bonded in the stars in a separate section of the premises of dry cows contributes to a decrease in the concentration of carbon dioxide in the air by an average of 0.06-0.08%, with the content of ammonia and air velocity within the normative values.

5. General microbial pollution of air separate section of the premises during the day with unexplored maintenance of dry cows in combinations an average of 2.1-2.3 times lower than when maintained in the stars together with the valid cows.

6. It is proved that the dairy performance of cows, which in the dry period were kept unhindered separately from the lactation, for the first month and 305 days of lactation, compared with the retention of animals in the stars, was greater than 15.5 and 18.9% respectively.

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