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HYGIENIC FUNDAMENTALS OF WORKING CONDITIONS IN MODERN LIVESTOCK COMPLEXES

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✓ ***Resume***

No matter how much the technologies of animal care, meat and milk production in livestock complexes are improved, workers in modern farms are affected by complex unfavorable factors of production and the environment. The complex impact of the harmful factors that appear in livestock complexes on the health of workers and the pathological processes that appear among the workers as a result of the above are not fully established. is relevant in modern animal husbandry complexes.

Key words: livestock complexes, unfavorable factors, pathological processes.

ЗАМОНАВИЙ ЧОРВАЧИЛИК КОМПЛЕКСЛАРИДА МЕҲНАТ ШАРОИТИНИНГ ГИГИЕНИК АСОСЛАРИ

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✓ ***Резюме***

Ҳозирги вақтда чорвачилик комплексларида молларни парваришлаш, гўшт, сут етиштириш техналогиялари нечоғлик такомиллашмасин, замонавий хўжаликларда ишловчилар ишлаб чиқаришнинг комплекс ноқулай омиллари ҳамда атроф-муҳитнинг таъсирида бўладилар. Чорвачилик комплексларида пайдо бўладиган зарарли омилларнинг ишчи хизматчилар соғлиғига комплекс таъсири ва унинг натижасида ишчилар ўртасида пайдо бўладиган патологик жараёнлар охиригача ўрнатилмаган юқоридагилардан келиб чиққан ҳолатда ишлаб чиқаришда пайдо бўладиган зарарли омилларга гигиеник жиҳатидан баҳо бериш, уларнинг ишловчилар соғлиғига таъсир даражасини аниқлаш ва иш шароитини соғломлаштириш тадбирларини ишлаб чиқиш замонавий чорвачилик комплексларида долзарб ҳисобланади.

Калит сўзлар: чорвачилик комплекслари, ноқулай омиллар, патологик жараёнлар.

ГИГИЕНИЧЕСКИЕ ОСНОВЫ УСЛОВИЙ ТРУДА НА СОВРЕМЕННЫХ ЖИВОТНОВОДЧЕСКИХ КОМПЛЕКСАХ

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✓ ***Резюме***

Сколько бы ни совершенствовались технологии ухода за животными, производства мяса и молока в животноводческих комплексах, на работников современных ферм воздействует комплекс неблагоприятных факторов производства и окружающей среды. Комплексное воздействие вредных факторов, возникающих в животноводческих комплексах, на здоровье работников и возникающие в результате этого патологические процессы среди работников до конца не установлены.

Ключевые слова: животноводческие комплексы, неблагоприятные факторы, патологические процессы.

Relevance

The level of study of the problem. Currently, it is one of the most developed and economically profitable agricultural complexes in the livestock sector. Photographic observations, epizootic characteristics of farms and the development of time standards for veterinary work in livestock farms, complex and poultry farms, organizational and technical working conditions, instructions on combating diseases of agricultural animals, instructions on the use of veterinary drugs, technical means and others; technological maps of veterinary activity (E.V. Goroshkova, 2018).

In the last decade, respiratory diseases caused by environmental factors and industrial factors have become more and more relevant and have medical and social importance. According to WHO experts, out of 68 million deaths in 2020, 11.9 million (17.5%) are respiratory diseases (4.7 million chronic obstructive pulmonary disease, 2.5 million pneumonia; 2.4 million tuberculosis; 2.3 million lung cancer) (G.A. Bezrukova, T.A. Novikova, V.F. Spirin, M.L. Shalashova, N.A. Mikhailova, 2015). Among the registered primary occupational diseases in Russia, chronic obstructive pulmonary disease is constantly in the first place (25-30%), and is the main cause of disability of the working-age population. According to observations from different years, up to 70% of deaths from chronic occupational diseases were caused by severe respiratory tract pathology (N.F. Izmerov, 2011; Rospotrebnadzor, 2015).

The purpose of the study is to develop a complex of measures to prevent the negative effects of the working conditions of workers working in modern animal husbandry complexes, harmful factors that appear in the workplace.

Tasks of the research: physical, chemical and hygienic evaluation of workers' exposure to biological factors; health indicators

Research methods. The methods of hygienic, sanitary, chemical, physiological and statistical research are used in the development of measures to improve the quality of life.

Research results.

Cattle rearing in the livestock complex is combined into separate groups.

The number of workers in groups is determined based on the number of livestock. The main production technology is cattle feeding. Distribution of fodder to livestock is carried out as follows: hay is brought in by machinery and distributed by the worker while the machinery is running. In this case, great physical pressure is exerted on the worker. The figure of the worker is in a forced position, and physical pressure occurs on the muscles of the arms, shoulders, and legs.

Hydrogen sulfide and ammonia, methyl mercaptan, indole, carbon dioxide, amines cause unpleasant odors in the rooms where livestock are kept.

It is necessary to implement technical, technological and hygienic measures aimed at reducing these factors.

Results of checking microclimate indicators in workplaces.

The main microclimate parameters of the controlled facilities have a negative impact on the health and productivity of not only the workers but also livestock and livestock.

In the closed building of the controlled Otabek-D and Hastinapur breed cattle breeding complexes where cattle are raised for milk and meat, the upper limit of temperature in the warm season of the year is 1.16 and 1.27 times higher, and the lower limit is 1.59-1.73 times higher than the norm. high humidity found that the indicator in the upper limit was 1.02-0.97 times higher than the norm in the lower limit by 1.5-1.37 times.

Air movement speed is one of the main hygienic parameters in livestock complexes in the cold and warm seasons of the year. It was found that the upper limit of the air speed is 1.75-2.33 times lower than the established indicators, and the lower limit is 1.33-1.1 times higher than the norm.

In the cold season of the year, in the closed building where cattle are kept, the temperature is 2.48-1.65 times lower than the upper limit, 3.21-2.23 times lower than the lower limit, and the humidity is 1.06-1.13 times lower than the upper limit. 2-2.12 times higher than the limit, air movement speed was found to be 2.5-2 times higher than the upper limit, and 1.66-1.33 times higher than the lower limit.

In the open building where cattle are kept for milk and meat, in the warm season of the year, the temperature is 1.26-1.27 times higher than the upper limit, 1.72-1.73 times higher than the lower limit, humidity is 1.13-1.04 and 1.13 times higher than the norm. ,32-1.43 times higher, and air movement speed 3.5-1.5 times lower than the standard.

In the controlled Otabek-D and Hastinapur cattle breeding complexes, in the closed building where calves are kept, the temperature in the warm season of the year is 1.13-1.1 times higher than the upper limit, 1.54-1.5 times higher than the norm in the lower limit, humidity is 1 higher than the norm in the upper limit. ,87-1.87 times, at the low limit it is 1.25-1.25 times lower than the norm, and the speed of air

movement is 3.5-3.5 times lower than the norm at the upper limit and 1.5 times lower than the norm at the lower limit , in the cold season, the temperature is 2.3-1.76 and 1.7-1.3 times lower, and the humidity is 1.25-1.25 times lower. 1.5 times higher than the limit, the speed of air movement is 1.5 times lower than the upper limit, and no change was observed in the lower limit.

In the closed building of the Tughruk Department, in the warm season of the year, the temperature is 1.2-1.27 times higher than the upper limit, 1.63-1.73 times higher than the norm in the lower limit, humidity is 1.03 times lower than the norm in the upper limit and unchanged, 1 in the lower limit compared to the norm. ,45 -1.5 times higher, air movement speed was found to be 3.5-1.5 times lower than the norm in the upper limit, while the temperature in the cold season of the year was 2.0-1.76 and 1.47-1.3 times lower, It was found that humidity is 1.06 times higher than the upper limit, 2 times higher than the lower limit, air speed is 1.33 times higher than the upper limit, and 2 times higher than the lower limit.

In the Otabek-D and Hastinapur breeding complexes, the temperature in the poultry house in the warm season of the year is 1.13 times higher than the upper limit, 1.54-1.36 times higher than the norm at the lower limit, humidity is 1.3-1.31 times higher than the norm at the upper limit and 1, It was found to be 95-1.97 times higher, and air movement speed was 3.5-1.5 times lower, and it was found that the temperature in the Hastinapur breed livestock complex did not change at a higher limit compared to the norm. In the cold season of the year, the temperature is 5.47-4.69 times lower than the upper limit, 4.04-4.69 times lower than the lower limit, the humidity ratio is 1.26-1.28 times lower than the upper limit, 2.37-2.4 times lower than the lower limit. times higher, and the speed of air movement has not changed from the upper limit of the norm and 1.5-2 from the lower limit height was determined.

It is clear from the obtained results that sudden changes in microclimatic parameters created conditions for workers' health to deteriorate. In the warm season of the year, the high temperature leads to a decrease in humidity came Calves are reared indoors as a result of the effective working of the deflectors, during the cold and warm season, the microclimate parameters exceed the established standards unchanged.

One of the factors that negatively affect the health of workers in livestock farms is dust of various sizes and types.

As a result of the inspections, the quality of all sections of the complex (except for the section where the damage was caused) was improved (1st schedule).

1st schedule

The amount of dust in livestock complex workplaces

T/p	Sources of checks	The standard of permissible concentration of dust, mg/m³,	Amount of dust in workplaces of "Otabek D" livestock complex, mg/m³	Amount of dust in workplaces of "Hastinapur" livestock complex, mg/m³
1	A closed building where livestock is kept	4,0	9,2±0,7	10,2±0,9
2	An open building where livestock is kept	4,0	6,5 ±0,5	7,4 ±0,7
3	Closed maternity ward	4,0	8,6±0,6	8,8±0,7
4	A closed building where calves are kept	4,0	4,8±0,2	4,1±0,3
5	An open building where calves are kept	4,0	4,2±0,3	3,5±0,2
6	Omukhta fodder preparation workshop	4,0	10,6±0,5	12,6±0,7
7	Workers in the field of respiratory organs when distributing coarse hay to livestock	4,0	7,6±0,4	10,4±0,7

As can be seen from the figures presented in Table 1 above, it is clear that the amount of dust in different sections of the livestock complex is not uniform.

The composition of the dust that appears in the technological process in the departments of the complex consists of coarse dust, fine grain, skin epithelium, consisting of wool.

Organic substances in dust sensitivity of the organism workers make them allergic can cause diseases.

Workers in the process of spreading coarse hay with the highest dust around respiratory organs (10.4±0.7 mg/m³) and learning to prepare food was observed in the shop (12.6±0.7 mg/m3).

"Otabek D" and "Hastinapur breeder breeder" cattle breeding complex, the amount of dust determined in the workplaces of the closed building where livestock is kept is 2.3-2.55 times compared to the standard level, the open building where livestock is kept is 1.62-18.5 times, indoor maternity section by 2.15-2.2 times, closed building for keeping calves by 1.2-1.02 times, open building with calves by 1.05-0.87 times, closed feed production shop by 2.65-3.15 times, livestock During distribution of rough hay to cattle, it was found that the respiratory organs of the workers were 1.9-2.6 times higher.

It was observed that the amount of dust in the air of workplaces in the closed and open building of the department for keeping young calves did not exceed the REM.

In the main departments of the inspected animal husbandry complex. Measurement of noise level gave the following results (see table 2).

The noise level recorded at workplaces in the closed dairy and meat cattle building of the "Otabek D" livestock complex is 0.88-1.1 times, the closed building where calves are kept is 0.875-1.025 times, and the fodder preparation workshop is 1.1-1.15 times. , it was observed that the poultry house increased 1,025-1,075 times.

The fact that the buzokchas are not enough to be found in the workshop is marked with enthusiasm. Degreesining.

As a result of the work of the masters installed in the national food processing shop, the level of enthusiasm increased by 110-118%. It was noted that the level of enthusiasm for the death of the main mullahs in the market was 84-89 degrees, exceeding the allowed level by 1,025 to 1,075 percent.

Table 2

Indicators of noise level in the sections of the livestock complex

Verified sources	Noise level norm, db	Noise level recorded in the working places of the livestock complex "Otabek D", db	Noise level recorded in the working places of the livestock complex "khastinapur", db
Closed building for dairy and meat livestock	80	71-88	78-86
A closed building where calves are kept	80	70-82	70-81
Omukhta fodder preparation workshop	80	88-92	90-95
Bird house	80	82-86	84-89

It was observed that the level of noise recorded at workplaces in a closed building for meat cattle increased by 0.975-1.075 times, in a closed building where calves are stored by 0.875-1.012 times, in a feed preparation workshop by 1.12-1.18 times, and in a slaughterhouse by 1.05-1.11 times.

In the Hastinapur industrial complex, the level of enthusiasm in the shop for starting the breakers was improved.

It is worth noting that the impact on the workers of the associated shops of the farmers is 1.0-1.5 percent.

Based on the timing results, it was determined that the noise affects the workers in the feed preparation workshop for 5.0-5.5 hours, and in the poultry house for 4.0-5.0 hours.

In addition, these shops have a negative impact on the hearing system of the workers.

Conclusion

1. The amount of dust detected in the workplaces of the modern livestock complexes "Otabek D" and "Hastinapur" livestock complex is 2.3-2.55 times higher than the standard level in the closed building where livestock is kept, and 1.62-18.5 times in the open building where livestock is kept. , closed maternity ward 2.15-2.2 times, closed building where calves are kept 1.2-1.02 times, open building where calves are kept 1.05-0.87 times, dry feed preparation shop 2.65-3.15 times, it was found that when distributing coarse hay to livestock, the respiratory organs of the workers were 1.9-2.6 times higher. It can be seen that all buildings have a high dust content.

2. Modern livestock complexes "Otabek D" and "Hastinapur" livestock complexes, despite the automation and mechanization of working conditions due to the high share of manual (physical) labor in working conditions physical (manual labor), physical (high, low temperature, humidity, noise, low lighting) factors were determined for the health of workers.

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