

Hygienic Assessment of Working Conditions According to the Severity and Intensity of the Labor Process in Poultry Farms

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Abstract: The division of labor of workers in poultry farms is carried out in accordance with technological processes. According to the research staff, poultry farm workers are distributed as follows: poultry farm operators. — 18.1%, incubator operators - 8.8%, butchers - 24.9%, pickers - 9.1%, sorters-packers - 10.1%. The poultry operator spends 33-34% of his working time distributing feed, while accumulating up to 2896 ± 186 kg / m, which corresponds to average physical activity in accordance with the "Hygienic classification of indicators of labor severity and intensity of working conditions, harmfulness and danger in the production environment" San P and N 0141-03.

Keywords: severity of the mechanical process, severity, harm and danger.

Relevance: division of labor of workers in poultry farms is carried out according to technological processes. According to the research staff, poultry farm workers are divided as follows: poultry operators. - 18.1%, incubator operators - 8.8%, slaughterhouse workers - 24.9%, assemblers - 9.1%, sorters - packers - 10.1%. Poultry operator spends 33-34% of his working time on feed distribution, while working up to 2896 ± 186 kg/m, which is SanRR 0141-03 "Severity and intensity of the labor process in the production environment, harmfulness and danger of working conditions Hygienic classification of indicators" corresponding to average physical activity.

At the same time, while washing the splash, he performs more than 3000 stereotypical work movements involving the muscles of the arm and shoulder girdle, which corresponds to the first level of heavy work. Bending the body more than 120 times per shift also corresponds to the first level of hard work. During the period of destruction and trapping of chickens that jumped out of cages, when the number of observation objects exceeds 25, the poultry house is very responsible for the final result, which corresponds to the second level of hard work according to SanRR 0141-03.

The average horizontal movement of workers in the poultry house area is 8.6 ± 0.5 km per shift, which corresponds to average heavy work. Table 2 shows the assessment of the burden of work of poultry women by R 2.2.2006-05. Taking into account the information presented in the table, the work of poultry women can be associated with first-class heavy, laborious work. Assessing the severity and intensity of work in hatchery workshops, it should be noted that the main production operations are sorting, sorting, laying and disinfection of eggs, transfer of trays, sampling and sorting of hatched chickens, inventory, cleaning of equipment and buildings. The results of the evaluation of the severity and intensity of labor among the incubator workers according to SanRR 0141-03 were analyzed. Taking into account the information presented in the table, work in incubator workshops can be classified as class 3.1, which corresponds to first-class hard work. Slaughterhouses: does it serve narrowly specialized personnel in person technological operations (slaughter, evisceration, sorting, etc.). The main production operations on the conveyor of slaughterhouses are carried out manually in a standing or sitting position, in

an uncomfortable working position with frequent forward bending of the torso. The pace of work is fast - one worker hangs 18-25 birds per minute and up to 7,000 heads per shift, and handles 1,200-1,400 birds per hour. The density of working time in all operations reaches 84-91%. Many and monotonous labor movements, high speed of the conveyor (up to 7.5 m/min) and short duration of operations (2-3 seconds) cause high monotony of work against the background of significant visual stress

According to SanRR 0141-03, the assessment of the severity and intensity of the labor process among slaughterhouse workers, the work of slaughterhouse workers should be classified as heavy work of moderate and high intensity. The leading unfavorable factor in the working conditions of poultry farmers is dust of a mixed nature, including plant and animal substances, biochemical highly active substances (vaccines, antibiotics, vitamins, enzymes, etc.), as well as various microorganisms. According to the results of the research, the reasons for the high concentration of dust in the working air of the poultry farm are as follows:

- imperfection of technological equipment and ventilation;
- the use of manual labor in feeding birds, cleaning rooms and other operations;
- imperfection of constructions of feed mixers, 70% of these cases are open type;
- manual mixing of feed with fortified additives.

Analyzing the data, it can be noted that the most favorable working conditions in terms of the amount of dust were observed in the hatchery hall and the slaughterhouse (the working conditions are acceptable and correspond to the second class). The greatest amount of dust (143.0 and 12.6) was recorded when the birds were kept in the open air. In this case, according to SanRR 0141-03, working conditions were considered harmful and corresponded to the fourth level of harmfulness. On the example of the poultry factory belonging to "**Chinor Chorva**" LLC of Jondor District, social hygienic assessment of labor, conditions and health of poultry factory workers was carried out using the questionnaire method.

The subjective perception of working conditions is not taken into account in the assessment of objective indicators of the harmfulness and danger of the production environment in the hygienic assessment of the working conditions of workers. In the analysis of such hygienic indicators, it is important to use a different questionnaire method among workers. With this goal in mind, a questionnaire was organized among the workers working in different professions in the poultry factory belonging to "**Chinor Chorva**" LLC of Jondor district. The questions of the questionnaire reflected the attitude of poultry farmers to their profession and community.

Table 1. Distribution of poultry factory workers by age

Age category	Number of employees	Percentage of those who participated in the inspection (%)
20-29 year	32	15,1
30-39 year	35	16,2
40-49 year	91	43,4
50-59 year	69	32,6

301 workers of the factory were surveyed, and the most noticeable group in the survey are workers aged 40-49 (41.6%) and workers with more than 20 years of experience (38.1%). There are also 2 groups in the survey, which have a small number of workers: 20-29 years old -13.5% and 30-39 years old -14.5% of workers (see tables 1-2)

Table 2. Distribution of factory workers based on seniority

Work experience (years) Number of employees Percentage of those who participated in the inspection (%)	Work experience (years) Number of employees Percentage of those who participated in the inspection (%)	Work experience (years) Number of employees Percentage of those who participated in the inspection (%)
Up to 5 years	81	34,8

5-9	32	13,6
10-14	18	9,9
15-19	25	12,9
20-25	36	11,3
More than 20 years	119	42,6

Thus, mostly workers over 40 years old (72%) and more than 10 years of work experience work in the factory.

The family composition of workers is reflected in Tables 3, 4 and 5.

Table 3. Family composition of factory workers

Gender	Married	Unmarried (unmarried girls) % Divorced	Unmarried (unmarried girls) % Divorced	Unmarried (unmarried girls) % Divorced
Men	80,5	7,9	4,1	7,5
Women	58,4	8,1	29,0	5,5

Table 3 shows that 58.4% of women are married, and 8.1% of them are single. As can be seen from the above results, 70.9% of factory workers are married. Married men outnumber married women (80.5% and 58.4%, respectively). Among women, the number of divorced (20%) and widows (5.5%) is high.

Table 4 shows the family structure of workers and the number of children in them, which mainly evaluates the spread of infectious diseases and the assessment of its contactogenicity and its influence on the dynamics of its spread.

Table 4. Proportion of persons with children under 18 years of age in the family (%)

Gender	1 child	2 children	3 children	4 and more children
Men	66,4	36,6	-	-
Women	72	26	2,0	-

As can be seen from Table 4, the majority of employees are of childbearing age, 66.4% of them are men and 72% are women, and they are young people who have started a new family. If the risk factors of the working conditions of the enterprise are not prevented, the factors spread among the workers of this enterprise may also affect their fertility status, and if they become disabled, it will cause great damage to the economy of the enterprise.

Table 5. Family relationship of factory workers (%).

Gender	Good	Satisfactory	Bad
Men	76,1	23,9	-
Women	42,0	54,2	3,8

It should be noted that 15.4% of workers live in apartments allocated by the factory, 9.9% rent, 18.9% in communal houses, 1.9 in dormitories and 45.9% own their own apartment.

Central heating system is available in 28.8%, hot water in 58.6%, bath, shower in 58.6%, gas in 72%. 95.9% of workers rate their living conditions as good, 32% of workers as bad.

Most of the families have 1, 2, 3 children, and most of the workers of the factory rate their family relations as good and satisfactory. 75.3% of factory workers are busy with various household chores on weekends, 5.5% watch TV, 0.6% read books. 2.1% of workers, 1.5% of women are engaged in physical education.

The results of the survey showed that 78.9% of workers are satisfied with their profession, 8.1% are not satisfied, and 13% do not have a clear assessment.

45.6% of the surveyed workers are satisfied with their monthly salary, 19.1% rated the work as hard, 16.3% rated the working conditions as bad, 14% rated the nervous tension as strong, and 8.2% rated the work process as poorly organized.

19.8% of the polled workers rated dust as a harmful factor, 21.6% of workers rated it as noise, 17.6% of workers rated it as a harmful factor, and 19.4% of workers rated it as toxic gases.

49.1% of the surveyed workers rated their work as hard physical work, 41.2% as moderate physical work, 7.0% as very hard work, and 3.0% as light work. 47.9% of women evaluate their work as carrying heavy loads, and 39.1% as uncomfortable working conditions. Men rated 29.2 and 48.6%, respectively.

In terms of work intensity: 48.9% of workers rated the work pressure as tight and intense, 43.4% as low intensity, and 4.4% as extremely intense.

As a result of the survey, 95.4% of workers assessed their working conditions differently: 67.0% of workers assessed their working conditions as harmful, and 8.4% of workers assessed them as very harmful.

93% of workers stated that factory working conditions were the cause of their health loss, including 93.5% of women and 79.8% of men. Among them, 17.7% of workers associate their health with disinfectants, 15.9% with high dust, 14.2% with noise, and 14.8% with toxic gases. As a result of the survey, 23% were considered healthy, 61.4% had diseases of the upper respiratory organs, 2.8% were temporarily ill, and 14.1% were chronically ill.

In conclusion, it should be noted that the examination of the subjective conditions of the workers indicates that it can be used as additional information in the assessment of the harmfulness and danger of the working conditions of the workers.

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