International Journal of
Biological Engineering and Agriculture
ISSN: 2833-5376
Volume 1 | No 6 | Dec-2022

Hygiene Assessment Based On the Severity of Working Conditions and Indicators of Intensity in Poultry Farms

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Abstract: The purpose of the study is to study the working conditions in poultry factories and assess the severity and intensity of working conditions, study the negative consequences that affect the working body in the production process, and determine the degree of danger of their working conditions and give a hygienic assessment, therefore, develop scientifically based hygienic recommendations in the workplaces.

Keywords: the severity of working conditions in poultry farming, the impact on the body of workers, the negative consequences of non-working conditions.

Large poultry factories include more than 40 people in various occupations. Production methods that are appropriate for each of these are described. However, in farikas, employees are not constrained to a single profession and are instead involved in a variety of production processes.

The degree of mechanization of the primary and auxiliary technologies used to care for poultry, the method of poultry keeping, the climate-geographical conditions, and the time of year all have an impact on the working conditions in poultry factories.

There is a certain amount of physical pressure on the organs that support movement and the senses in industrial-style poultry farms.

Because everything in the incubator workshop is done manually, the work of machine operators and auxiliary workers (egg sorting, lighting, placement, disinfection, picking into cages, sorting of hatched chicks and room equipment, inventory cleaning) requires a high level of physical load. When placing eggs in the incubator, one operator moves 3.5 tons of cargo in a single shift. The egg and chick sorter also keeps an eye on 2,000 chicks for 8 to 10 hours.

White coats and white backgrounds are frequently worn by workers as they work in specialized, semi-dark rooms, which wears out the eyes and the entire body.

The observed data show that the work of the chick care shop, where they are personally cared for for 10-15 days, involves a significant amount of physical labor. When caring for birds in cages, workers are forced to work in a position that requires them to bend over or raise their hands for extended periods of time.

During the upkeep of mother birds, the operation of industrial groups, and the performance of operator duties, physical and nervous-excitatory pressure are observed in the average condition. One worker may travel up to 5 km while performing such work, which requires 36 to 53 percent walking.

Apparently, V.A. According to Kiryushina (2003), keeping poultry on the ground puts more physical strain on the workers because there are more hand tasks to complete. This causes the workers' bodies to physically bend 100 to 150 times as they move from stall to stall, covering up to 8 km in one shift. Manual labor is used to operate conveyors in poultry slaughterhouses. This position is achieved by repeatedly bending the body forward while forcedly sitting or standing.

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High conveyor speed (7.5 m/min), numerous, uniform worker movements, and brief work periods (2–3 seconds) cause the work to become monotonous, straining the eyes and making it difficult to concentrate.

P.B. and V.S. Golenko (2001) According to Vinogradov's (2009) analysis of physiological changes in the dynamics of the organism and the nature of the work process:

- the work performed by those who work in the grocery store and egg warehouse is categorized as being physically demanding and of a medium intensity;
- The work of the operators of the shop for incubators and the shop for caring for poultry kept in cell batteries is of medium severity and intensity;
- medium-heavy, high-intensity work is categorized as being performed by slaughterhouse employees;
- poultry house rearing shops and non-mechanized poultry shops fall under the category of labor intensive and medium intensity.

The work of the poultry-rearing workshop's employees. based on the body's functioning, belongs to class 3.1–3.2. The feed shop regarded the poultry operator's work as being both second- and first-degree "harmful" in terms of intensity.

In accordance with zootechnical requirements, workers who care for poultry in poultry farms spend a lot of time (6–8 hours) inside a structure where the birds are kept in specific microclimates.

The function of the microclimate is to ensure that human life activities proceed normally under conditions of homeostasis at normal temperatures. Homeostasis is preserved in the presence of the cooling and heating effects of the microclimate thanks to the metabolic processes of the heart, lungs, endocrine system, salt water, and proteins. When these are disrupted, various physical and chemical factors have a greater negative impact on the body's physiological functions. Such circumstances lead to an increase in the harmful effects of noise, vibration, and chemicals (F.M. Shleiman, 1990).

The functional state of the organism is disturbed, the capacity for work declines, and the degree of morbidity rises when an unfavorable microclimate is present.

The temperature in the area where the chickens are kept should be 28-18°C, the relative humidity should be 55–57%, and the air movement speed should be 0.8 m/s. After the first 10 days, the temperature should drop to 26–20°C.

However, the microclimate in poultry factories does not always respond to sanitary-hygienic students.

The primary production incubators and slaughterhouses experience an increase in temperature (28-35°C) and a relative humidity of 78-90% during the hot and cold seasons of the year.

Monitoring information shows that the temperature in the structure where the chicks are kept rises to 27.6-34.2°C during the colder months of the year. Temperature varies and ranges from 16.2 to 35.4 °C, with a relative humidity of 49 to 98 percent and an air speed of 0.85 m/s during the hot season.

In contrast, the temperature is kept low (3–14 °C) in the building where eggs are laid and the industrial group is housed during the winter. The wind speed can reach 2.0 m/s during this time of year, and the relative humidity ranges from 40 to 86 percent.

According to N.F. Borisenko (2010), the building's interior temperature during the colder months of the year ranges between 7 and 14°C, with a relative humidity of up to 75 percent and an air speed of 0.9 to 1.0 m/s. In the summer, the room temperature is between 21 and 29 °C, the relative humidity is between 50 and 60 %, and the air movement speed is between 1.1 and 1.9 m/s.

Additionally, because heat is not distributed evenly in the majority of heated poultry rooms, temperature in the horizontal directions varies.

Gases, specifically ammonia, hydrogen sulfate, intestinal gases, and carbon-2 oxide, pollute the air in buildings where poultry are housed. These gases are produced by the respiration of chickens and the

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breakdown of organic matter. The age of the birds, the state of their storage, and the strength of the air exchanger all affect how many gases are present in the air of the buildings.

Poultry operators, employees of the poultry slaughterhouse, egg sorters, and auxiliary workers (on-call plumbers, electricians, and auxiliary workers) are the main occupations in the poultry factory owned by the limited liability company "Chinor Chorva" of the Jondor district under control. These individuals serve as the experimental group for this study. The control group consists of members of the administrative and service apparatus, such as foremen, veterinarians, kitchen and medical staff, technologists, department heads, and accountants.

Poultry operators' workplaces are a limited zone where the subjects of work are concentrated (mainly poultry) (mainly poultry).

Chronometric observations reveal that 69.3 percent of poultry keepers are effective at keeping birds in the field. Delivery and preparation of poultry feed account for 16.2% of the total, followed by feed distribution and watering (27.5%), monitoring and grading of the poultry (11%), and housecleaning (12.3%).

According to the details of the work performed by poultry operators, their bodies are forced to bend 100 to 150 times per shift, or 11 to 17 percent of the time they are working. They also walk up to 8 km while remaining upright for a long time.

In a time trial, poultry operators spend 33 percent of their work time feeding the birds, 16 percent watering, washing the chickens, and 11 percent observing and sorting the birds while keeping the birds in cages.

As a result, operators have a 64% work density. Work in the incubator is distinguished by its certain sequence and its precise management. The processes of egg sorting, cleaning, placing in cages, disinfection, sorting of chicks, and cleaning of rooms define the main production operation.

In time-keeping, the poultry operator spends 23.2 percent of his working time recording the indicators of the incubator and 29.8 percent of his working time monitoring the operation of the equipment. In this case, the intensity of work is 54.9 percent. Also, 81.6 percent of working time is spent on sorting chicks. The work process of the food preparation workshop consists of monitoring the equipment, controlling the operation of mechanisms and aggregates. However, most workflows are done manually. This includes adding components to feeders, repairing feeders, and relocating dropped feeders to lines.

In most cases, this work process is carried out by keeping the body in a forced position, keeping the body bent at 30°C.

The severity and intensity of the work process of the workers of this poultry factory are shown in tables 1.1, 1.2.

In conclusion, it should be noted that the technology of their work is related to the classification of working conditions into classes based on their danger and safety, as well as the hygienic criteria for evaluation.

Here:

- poultry operators at the first level (class 3.1 working conditions); workshops for poultry milking, food preparation, and egg sorting at the permitted level (2nd class).
- according to speed: permitted level (class 2) - workshops for egg sorting, food preparation, poultry slaughter, and poultry operators.

Table 1.1. **Evaluation of the poultry factory work process by weight**

Factors	Professions	Working class			
		1	2	3.1	3.2
The severity of the work	Poultry operator	-	-	+	-
	Food preparation shop	-	+	-	-

	Poultry slaughtering, egg sorting workshop	-	+	-	-

Table 1.2. **Poultry factory work conditions assessment by intensity**

Factors	Professions	Working class			
		1	2	3.1	3.2
The severity of the work	Poultry operator	-	+		-
	Food preparation shop	-	+	-	-
	Poultry slaughtering, egg sorting workshop	-	+	-	-

Hygienic assessment of the severity and intensity of working conditions in the poultry factory of Gijduvon Poultry "Omad Trade" Limited Liability Company.

The factory's primary occupations are poultry operators, slaughterers of poultry, egg sorters, and auxiliary workers. These workers are chosen as the experimental group, while the administrative and service workers (vets, cooks, technologists, shop managers, and accountants) are chosen as the control group.

Chronometric analysis reveals that 74 percent of poultry operators' workdays are spent caring for poultry under actual conditions. Additionally, 14.2 percent goes toward food preparation and transportation, 14.2 percent goes toward food distribution and watering, 27.9 percent goes toward poultry observation and sorting, and 14 percent goes toward room cleaning.

Operators spend 13–17% of the working day in a forced posture during timekeeping, according to the job's specifications (bent 130-140 times per shift). They also walk 6 to 8 kilometers on foot each day.

Operators in a caged poultry house devote 32% of their workday to feeding the birds, 19% of their time to cleaning the feeders and water troughs, and 9% of their time to keeping an eye on the birds. Therefore, there is a 60% work density.

The primary production steps in a hatchery are egg sorting, cage placement, disinfection, lighting of eggs, chick sorting, and equipment and room cleaning.

During the timing check, the on-duty operator records instrument readings for 25.1% of working hours and observes equipment operation for 29.2% of working hours. The working day's density is 54.3 percent. Additionally, poultry sorting takes up 81.2 percent of the working day. The working day's density is 54.3 percent. Additionally, poultry sorting takes up 81.2 percent of the working day.

Monitoring the operation of mechanisms and aggregates while recording measurement device readings constitutes the work process in the feed preparation workshop. Here, the majority of the work is done manually.

Unfavorable working conditions in this workshop include adding components to the combi-corner, managing aggregates' work, fixing equipment, and re-placing raw materials that dropped to the floor into the technological line. The body is bowed at a mandatory working angle of 30° to 35° for this technological process.

Table 2.1 shows how the employees of this poultry factory rated the difficulty and speed of the work process. As a result, they are classified as follows after taking into account the assessment based on the hygienic criteria of division into classes according to the severity and intensity of working conditions:

- In accordance with weight: class I (3.1 class working conditions).
- Operators of poultry slaughter, food preparation, and egg sorting businesses are permitted (class 2).

- based on speed: permitted (class 2): poultry operators, staff members of poultry slaughterhouses, chefs, and egg-sorting businesses.

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Factors	Professions	Working class			
		1	2	3.1	3.2
The severity of the work	Poultry operator	-	-	+	-
	Food preparation shop	-	+	-	-
	Poultry slaughtering, egg sorting workshop	-	+	-	-

All of this involves the deliberate examination of the technological procedures and rules governing the production of poultry factories in terms of hygiene, the hygienic foundation of working conditions in the execution of technological procedures, the assessment of worker diseases based on the findings of temporary incapacitation and medical examination, and the implementation of hygienically based preventive measures as a result of the inspections. calls for development and advice.

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