Social responsibility and professional competence of safeguard specialists for the quality and safety of food products

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Abstract. The article analyses the opinion of technologists in processing enterprises of the Stavropol Territory on the importance of social responsibility and professional competence of workers and how this is reflected in the actual competence profile of the Federal State Educational Standard for graduates of higher education programs. In the quality management system for training future process technologists, the analysis of actual required competencies in the production processes versus to needed competencies of the staff, is a determining factor to be able to update the content of educational programs. The level of professional competence is characterized by different aspects in the business and personal qualities of the specialist: it is reflected in the level of knowledge, skills, and experience needed to achieve the goal in a particular type of professional activity, as well as the moral position of the specialist. These aspects together are reflected in the social responsibility of a process technologist in processing enterprises and ensuring the quality and safety of food products. The opinion of the professional community confirms this viewpoint.

1. Introduction

The article analyses the opinion of technologists in processing enterprises of the Stavropol Territory on the importance of social responsibility and professional competence of workers and how this is reflected in the actual competence profile of the Federal State Educational Standard for graduates of higher education programs. In the quality management system for training future process technologists, the analysis of actual required competencies in the production processes versus to needed competencies of the staff, is a determining factor to be able to update the content of educational programmes. The level of professional competence is characterized by different aspects in the business and personal qualities of the specialist: it is reflected in the level of knowledge, skills, and experience needed to achieve the goal in a particular type of professional activity, as well as the moral
position of the specialist. These aspects together are reflected in the social responsibility of a process technologist in processing enterprises and ensuring the quality and safety of food products. The opinion of the professional community confirm this viewpoint.

2. Materials and methods
A survey of specialists in the direction of preparation “Food products of animal origin” was conducted on April 2017 using the questionnaire method. A total of 42 specialists took part in the survey, including directors of enterprises, deputy directors of enterprises, technologists, and engineers of enterprises of the Stavropol Territory engaged in the production of food products of animal origin. They expressed their opinion on the importance of social responsibility and professional competence of workers in the current list of competencies of the Federal State Educational for graduates of higher education programs.

The significance of the study of social responsibility and professional competence of food and processing enterprises technologists is confirmed by the growing need to ensure the quality and safety of food products in relation with innovative developments and technologies of the 21st century in physical and biological chemistry, nanotechnology, microbiology, fermentology and much more.

The scientific community widely discusses the issues of social responsibility of food processing and food processing industry specialists.

Lewis, S.G., Boyle, M. discussed food security issues and related social risks and social responsibility of workers in the article “The Expanding Role of Traceability in Seafood: Tools and Key Initiatives”. The authors stressed the issue of how traceability of food products, expressed in the ability to document the entire path of the product from the manufacturer to the end consumer, is associated with critical requirements for environmental sustainability and social responsibility. [1, 2, 3, 4, 5]

An urgent issue for the food and processing business in terms of social responsibility is how to increase work efficiency, fulfill their corporate social responsibilities to society whilst reducing costs at the same time. One of the possibilities to solve this issue is the introduction of innovative technologies. According to the authors of the book Datta N., Tomasula P.M. Emerging Dairy Processing Technologies: Opportunities for the Dairy Industry can be technologies of pulsed electric fields, high hydrostatic pressure, high-pressure homogenization, microwave heating, microfiltration, and others. [6, 7, 8] Discussion of the possibilities of using new technologies brings the issue of increasing the social responsibility of workers in the process of their application in the food and processing industry back to the foreground.

The authors of the book De Renobales M., Escajedo L., Martínez De Pancorbo M. "Transgenic foods: Science, safety, law, and ethics" share their experience in teaching the discipline "Transgenic Products" at the master's program "Quality and Food Safety". [9, 10, 11] The experience of their teaching work showed that most experts in the food industry have no specific knowledge and have relatively transgenic products. The authors emphasise that, along with proper theoretical training in transgenic products and the skills to determine transgenic elements in foods by cellular analytical methods, students learn to examine critically the ethical issues related to safety, environmental and legal aspects that often is raised in society. Thus, the role of social responsibility in the needed competence of a future technologist specialist is increasing.

Corporate social responsibility has a comprehensive social impact and, according to the authors of Castro-González S., Bande B., Fernández-Ferrín P., Kimura T. has a positive educational effect on the moral qualities of consumers. [12, 13, 14] Thus, in this sector of the economy, a bar is being set which helps in determining the boundaries of safe consumption. Furthermore it is a guarantee of the introduction of quality products of food and processing enterprises into the market. The research results of Kim Y., Ferguson M.A., are an evidence of the mutual influence of corporate social responsibility and the consumer community [15, 16, 17]. The consumers positively perceive the high quality of the products and provided services. This process has an educational effect on them.
The relevance of establishing and maintaining ethical standards in the agri-food industry is considered in the study by the authors Tisenkopfs T., Kilis E., Grivins M., Adamsone-Fiskovica A. [18, 19, 20, 21, 22]. In their opinion, ethics in the agri-food industry should be established at the level of collective goals of producers, such as sustainability and social justice. Discussion questions - who is responsible and how to solve various problems that arise in the production, distribution and consumption of food products, confirm the importance and relevance of social responsibility and professional competence of workers in the food and processing industries and establish specific ethical requirements at the level of training of technologists.

Thus, the review of scientific publications shows the relevance of the research topic and the focus of the scientific and professional community to issues of social responsibility and professional competence of technologists to ensure the quality and safety of food products.

The purpose of work is to study the opinions of technologists in processing enterprises of the Stavropol Territory on the importance of social responsibility and professional competence of workers in the current list of competencies of the Federal State Educational Standard for graduates of higher education programs.

3. Study of social responsibility and professional competence of specialists

The ranking by the expert community of the competencies represented in the current Federal State Educational Standard of the “Food products of animal origin”. In terms of importance, training direction shows that the next competencies occupy the first three places. The highest important fact is the ability to work in a team, tolerantly perceiving social, ethnic, religious and cultural differences; the ability to carry out technological quality control of finished products (71.4% participants noted this as the most important aspect). The second one is the ability to self-organisation and self-education; the ability to develop measures to improve the technological processes of food production for various purposes (57.1% the respondents noted this respectively). The 3rd place is the readiness to operate various types of technological equipment in accordance with the requirements of safety measures at food enterprises; the ability to use regulatory and technical documentation, regulations, veterinary norms and rules in the production process; the ability to carry out necessary safety measures in case of emergency in the heat, power equipment and other life support facilities of the enterprise; the ability to organize incoming quality control of raw materials and auxiliary materials, production control of semi-finished products, process parameters and quality control of finished products; the ability to draw up production documentation (work schedules, instructions, requests for materials, equipment) as well as established reporting according to the approved forms (42.9% respondents noted this respectively).

The expert community assessed the competencies of the Federal State Educational Standard on the degree to which the graduates of the “Food products of animal origin” training direction were developed, which shows that the following competencies remain substandardly: the 1st place - the ability to develop measures to improve technological processes for the production of food products for various purposes; the ability to study the scientific and technical information of domestic and foreign experience on the research topic; the ability to organize the work of a small team of performers, to plan the work of personnel and payroll, to analyze the costs and results of the activities of production units (42.9% of respondents noted respectively). The 2nd place - the ability to analyze the main stages and patterns of the historical development of society in the formation of a civic position; the ability to use the basics of legal knowledge in various fields of activity; the ability to work in a team, tolerantly perceiving social, ethnic, religious and cultural differences; the ability to carry out technological quality control of finished products; willingness to operate various types of technological equipment in accordance with the safety requirements of food enterprises; the ability to organize incoming quality control of raw materials and auxiliary materials, production control of semi-finished products, process parameters and quality control of finished products; the ability to process current production information, analyze the data obtained and use them in product quality management; knowledge of modern information technologies, willingness to use network computer technologies and databases in their subject area, application software packages for performing the necessary calculations; the ability
to develop operational work plans for primary production units; ability to organize the work of a structural unit; the ability to measure, observe and write descriptions of ongoing research, summarize data for the preparation of reviews, reports and scientific publications, participate in the implementation of research and development results; the ability to organize the protection of intellectual property, the results of research and development as a commercial secret of the enterprise; willingness to perform work in the field of scientific and technical design activities; the ability to develop work execution procedures, plans for equipment placement, technical equipment and organization of workplaces, calculate production capacities and equipment loading, participate in the development of technically sound time standards (production), calculate material costs standards (technical norms for the consumption of raw materials, semi-finished products, materials) (28.6% survey participants noted this respectively).

Among the difficulties faced by specialists, half of which graduates of the Stavropol State Agrarian University last year, mention the lack of skills in interacting with colleagues, superiors, subordinates (28.6% respondents noted); the difficulty of getting used to the routine of the working day, working conditions and workloads (noted by 28.6% of the number of participants in the survey). The intensity of the labour rhythm of technological processes at food and processing enterprises is a risk factor that negatively affects the level of social responsibility of workers.

According to experts, the average salary of specialists in the direction of preparation of "Food products of animal origin" in the Stavropol Territory is about 26.3 thousand rubles. Based on real labour efforts, participants in an expert survey believe that wages should average about 59.3 thousand rubles. Thus, in the labour market of the studied professional field, the actual wage lag seriously behind the desired level. This lag is more than 100% and also contribute to the risk factors in reducing the social responsibility of employees.

During the survey, experts explained that the allowances and bonuses that they receive at work are related to the results of the work of the enterprise as a whole and as a separate unit (57.1% of the number of respondents noted); overtime pay, work during weekends and holidays; individual achievements in work and rationalization proposals (noted by 28.6% of the number of respondents). Among the competencies of graduates, a vital role is the focus of the employee's activities on the final result and understanding of the production needs for overtime work, weekends and holidays, as well as a creative approach to business.

The ranking of qualities that, in the opinion of the survey participants, are necessary for the successful performance of labour functions, showed that in the first place sociability and communication skills quality are crucial (100.0% participants noted); in the second place - the ability to independently set tasks, make decisions independently, leadership qualities and the ability to manage others (42.9% respondents noted respectively); on a third place - the ability to work in a team (28.6% participants noted). Less essential qualities for successful work, according to experts, are creative qualities, accuracy, diligence, the ability to do analytical work, the ability to solve non-standard tasks and the ability to concentrate.

The competitive situation in the regional labour market among specialists in the field of food products of animal origin is very high. According to estimates of 14.3% of experts, it is easy to find work in the field of preparation in the Stavropol Territory. 42.9% of experts say that it is very well possible to find work if they try. The answer "it is almost impossible to find work" was noted by 42.9% of the survey participants.

The professional community of specialists working in the field of food products of animal origin, considers the high priority factor which could influence changing jobs, are the hope to increase earnings.

According to the survey participants, in order to improve the quality of training of graduates of agricultural education, it is necessary to involve employees of the industry in practical trainings (noted by 57.1% of respondents), improve the base of practice (noted by 42.9% of respondents), improve the quality of practical training and provide educational institutions of agricultural profile modern equipment (noted by 14.3% of respondents respectively).
71.4% of the survey participants need to receive additional education and advanced training in the direction of preparation "Food products of animal origin".

4. Conclusion

The analysis of the information in the publications of scientists representing different areas of professional knowledge (chemists, technologists, specialists in the field of transgenic products, ecologists, economists and others) shows the relevance of social responsibility and professional competence of food and processing enterprises technologists. Based on the logic of the authors, the social responsibility of the enterprise or corporate social responsibility cannot be achieved if the employees of the enterprise are not involved in this process.

The degree of professional competence is characterized by the business and personal qualities of the specialist, and is/which is reflected in the level of knowledge, skills, experience sufficient to achieve the goal in a particular type of professional activity, as well as the moral position of the specialist. In this connection, the social responsibility of a specialist-technologist of processing enterprises is an internal guarantee of the quality and safety of food products. The views of the professional community confirm this priority.

According to the results of the survey, social responsibility of food processors and food processing specialists currently play a vital role in the structure of professional competencies along with the skills of technological control of the quality of finished products and the development of measures to improve technological processes for the production of food products for various purposes.

There are internal and external risk factors that affect negatively the level of social responsibility of technologists. These include low wages, high workloads of production processes, the complexity of relationships in production teams, and the constant demand for renewal.

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