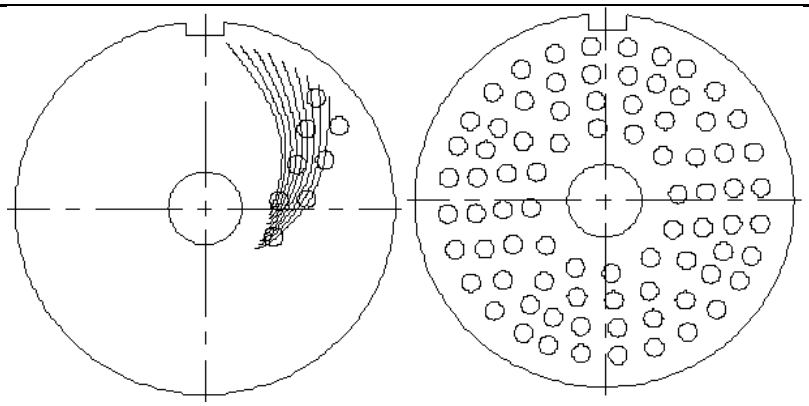

Рисунок 1– Расположение отверстий в решётке

Такое расположение отверстий перфорации снижает количество одновременно осуществляемых резов и, соответственно, максимальный момент от усилий резания. Тем самым снижается пульсация режущих усилий и, как следствие, уменьшается максимальная потребляемая мощность и вибрация оборудования.

Заключение

Применение решеток новой конструкции позволяет снизить эксплуатационные затраты за счет уменьшения энергопотребления и повышает выход и качество готовой продукции. Использование разработанной конструкции позволяет снизить себестоимость измельчительного оборудования за счет использования электродвигателей меньшей установленной мощности.

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MANAGMENT SYSTEM SHAPING GOOD QUALITY AND SAFETY OF RAW MATERIALS PROCESSING PLANT IN POLAND (ФОРМИРОВАНИЕ СИСТЕМ УПРАВЛЕНИЯ КАЧЕСТВОМ И БЕЗОПАСНОСТЬ ЗАВОДСКОЙ ПЕРЕРАБОТКИ СЫРЬЯ В ПОЛЬШЕ)

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Аннотация

Производителям растительного сырья приходится иметь дело с постоянно растущими требованиями, которые касаются качества, безопасности продукции и технологического процесса. Из-за ряда рисков безопасность пищевых продуктов может быть под угрозой на любой стадии производства, поэтому соответствующий контроль за всем процессом необходим от начального этапа производства продукции, которым является производство сырья. Сырье и материалы, которые предназначены для обработки, обязаны иметь высокое качество, они должны быть проверены на предмет их безопасности для того, чтобы быть свободным от биологических, химических и физических опасностей. В современных правовых нормах основная ответственность за безопасность пищевых продуктов лежит на предприятиях пищевой промышленности. Это стало возможным благодаря системе управления качеством растительного сырья в производственной фазе. Эти системы включают, среди прочего: Good Agricultural Practice (надлежащую сельскохозяйственную практику), code of the Good Hygienic Practice (надлежащую гигиеническую практику), комплексное производство или GLOBALGAB системы. Они, в основном, определяют минимальные стандарты, чтобы получить продукцию высокого качества.

Introduction

Producers of plant raw materials have to deal with constantly growing requirements, which concern a quality, a safety of product and production systems. Because the hazard of food safety can occur at any stage of the food chain, therefore, an appropriate supervising of all area is necessary, from a primary production that is a production of raw materials [Gębczyński, Słupski 2012]. Raw materials, which are destined for a processing can have a high quality and they must be checked for their safety in order to be free from biological, chemical and physical hazards. In current legal regulations, the main responsibility for the food safety is placed on food sector enterprises. An assurance of the quality and food safety is a complex problem because of many factors, which determine these attributes. In the plant production, a main risk comes from pesticides, heavy metals, residues of fertilizers or harmful microorganisms [Gębczyński, Słupski 2012].. In order to limit these hazards and their disadvantageous impact of food, it tends to the obligatory introduction of safety production rules. Even the Codex Alimantarius from 1969 talks about the primary production. According to this code, it should be carried out in a way, which ensures an obtaining of the safety food. The Codex indicates that it can be obtained by: avoiding the use of areas, where an environment creates a risk for the food safety, a control of contamination, pests, animal and plant diseases in a way, which is not dangerous for the food

safety. Simultaneously, the Codex Alimantarius defines requirements areas, which are responsible for the safety of primary production, i.e.: environmental hygiene, hygienic production of raw materials, appropriate procedure, storage and transport of a raw material and hygiene of personnel and means of production. You can find the expansion of requirements of this code in others more specific systems. These systems include: the Good Agricultural Practice, code of the Good Hygienic Practice, the Integrated Production or GLOBALGAB systems. They mainly define minimum standards to get primary products of a high quality [Wierzbicka 2007].

Code of good agricultural practice

Good Agricultural Practice is a system of organization and technology in production used on the farm. It reduces to a minimum the negative impact of agriculture on the environment and provides a suitable economical effectiveness of production. According to assumptions of this statement, the use of industrial means of production (mineral fertilizers and chemical plant protection products) is necessary, however, their usage in wrong terms and excessive doses can be dangerous for the environment, health of people and animals, and furthermore, it will be less profitable for a former [Wojnarowicz –Szyperko 2012]. The code of Good Agricultural Practice shows in a short form the general recommendations for farms about a certain direction of production and the major requirements about farms, which must be or should be fulfilled by a farmer in accordance with legal regulations adjusted with EU regulations. Usual Good Agriculture Practice means standards of farming, which will be observed by a reasonable farmer in a certain country. These standards are basically related to requirements connected with the rational management of fertilizers, water and soil protection, conservation of valuable habitats and species occurring in agricultural areas, protection of landscape values [Wojnarowicz –Szyperko 2012].

GOOD HYGIENIC PRACTICE (GHP) – this system must mainly take actions, which must be taken and hygienic conditions, which must be realized and controlled at all stages of production and marketing to ensure the food safety. This system is based on the following principles:

- Current or periodical estimation of health quality in raw materials, intermediate products, allowed additional substances and, materials and articles intended to the contact with food using in a production process, including the identification of products;
- Evaluation of correctness and compatibility of used technological processes with agreed assumptions;
- Monitoring of parameters in processes, which have an effect on the food safety;
- Control of an identification method and a rule of finished products traceability;
- Periodic estimation of health quality in finished products. Another very important system connected with the quality and safety of food is the Globalgab system [Wierzbicka, Sochaczewski 2007].

Globalgab

This is a voluntary system of a food safety assurance for the primary agricultural production. The GLOBALGAB standard was established in 1997, under the name of EUREPGAP as an initiative of a retail chains working group associated in the EUREP organization. The aim of this system was to work out unitary procedures and common standard for the Good Agricultural Practice (GAP) and ensure the security of food. The main target of the standard is to minimize the use of fertilizers and protection measures in order to restrict an unfavorable influence of the agriculture on the environment, and also to ensure possibly the longest utilization of agricultural areas. These implementations can be realized amongst producers of fruits and vegetables in individual farms and in groups of producers. The Globalgab standard includes a whole production chain, from sowing or planting plant into the ground, through the cultivation, harvest of farm produces, to the service of finished product (for example: storage, packaging, confectioning). This system also regulates areas of activity in farm, which concern:

- Ensuring of product safety (fruits and vegetables) in terms of health
- Health and security of working personnel
- Natural environment and biodiversity

In Poland, this system is quite general, especially amongst producers of vegetables under casings, mushrooms and apples. Producers, which are interested in the cooperation with supermarkets (which are members of the GLOBAL), must prove that during the production, they will:

- Take care about the quality and the safety of fruits and vegetables for consumers' health
- Try to interfere on the environment as little as it is possible and take care about the its security
- Use only necessary and authorized plant protection products and fertilizers, in accordance with rules of the integrated production [Wierzbicka 2007].

Integrated production

The integrated production (IP) is a modern system of the food quality, which uses in a balanced way the technical and biological progress in cultivation, plant protection, fertilization and pays a special attention on the environment security and health of people. Participation in the IP system allows to obtain a health plant protection, which is certificated and marked by an IP logo. Obtained certificate is an official attestation that the production was carried out on the basis of IP methodologies. The use of IP methodologies ensures that in produced agricultural crops were not exceed permitted levels of plant protection residues, heavy metals, nitrates and other chemical elements or harmful substances [Fornal, Błaszczak 2003]The assumption of the integrated system is a production ensuring a long-term economic balance with maintaining of full environmental protection and a high quality crops. The implementation of integrated methods of production requires complex changes in a whole farm, not only in its particular elements (for example: plant protection), regardless of an assortment and a size of production. One of the most important case in the

implementation of integrated agricultural production is a necessity to register of all works and operations made on the crop. Production within a framework of the IP system is a subject of the certification. The IP certificate is an attestation that agricultural crops, which are indicated in it, were produced on the basis of specific IP methodologies confirmed by the Chief Inspector of Plant and Seed Production Protection, and their production process was supervised. It guarantees that produced agricultural products are safe for consumer, and especially they do not contain plant protection residues, heavy metals, nitrates and other chemical elements or harmful substances in quantities exceeding valid standards [Wierzbicka 2007].

Conclusion

Safe and good quality food is an appreciated commodity in the European Union, both by consumers and food industry. The knowledge of international qualitative requirements and frequent quality control give reasons to success in the competitive market of agricultural products, and the official supervision of food, which is realized in an appropriate way, serves to realize political goals in the field of a raw material's quality and the food security.

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QUALITY MANAGEMENT SYSTEMS IN MEAT PROCESSING PLANTS (СИСТЕМЫ МЕНЕДЖМЕНТА КАЧЕСТВА НА МЯСОКОМБИНАТАХ)

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Аннотация

Развитие и внедрение систем менеджмента качества на мясоперерабатывающих предприятиях является длительным процессом за который ответственны все работники предприятия, начиная с техниеского персонала линии и заканчивая лицами, которые занимают руководящие должности. Дополнительным преимуществом систем менеджмента качества является повышение осведомленности персонала на заводе и повышение квалификации работников, в частности на стадиях производства. Следует подчеркнуть, что реализация этих требований включает в себя большие финансовые затраты, в частности на подготовку процедуры, обучение сотрудников, приобретение новых технологических линий, которые соответствуют качественным требованиям, приобретение оборудования рабочих станций.

Внедрение системы HACCP подтверждает высокое качество производимой продукции, а также гарантирует безопасность ее потребления. Комплексный подход менеджеров, которые работают на мясокомбинате к проблеме управления качеством, подтверждает, что для всей команды наиболее важным является качество. Особенно сильный акцент делается на контроль санитарно-гигиенических требований в производственных процессах и качество готовой продукции, поступающей в продажу. Несомненно, что эти действия оказывают влияние на укрепление рыночных позиций предприятия и позитивное восприятие производителя в глазах потребителей.

Introduction

Food quality in a modern thinking is understood as whole features and characteristics, which decide about it capability to meet various consumer's needs. This quality includes a health security and functional features of products, which often decide about their choice by the consumer. Safe food should be characterized by both a suitable nutritive value and the lowest possible content of substances, which presence can be a risk for health. Provision of appropriate parameters of health safety and quality during the food production is possible only with maintaining a proper level of hygiene in production, the assurance of a suitable sanitary standard of plant and its surroundings, and also satisfy this standard in all stages of production process and the application of appropriate quality assurance systems [Kryński, Ruda 2007].

The main aim of this study is a characterization of obligatory and voluntary quality management systems, and also showing a procedure of HACCP system introduction in meat processing plants.