SYSTEMS AND QUALITY STANDARDS IN THE POULTRY PRODUCTION WITH THE AIM OF OBTAINING A HEALTHY PRODUCT

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Abstract: Quality assurance in poultry production, as well as the safety of the final product, cannot be achieved without the application of standards and compliance rules that arise from them. This refers, above all, to the rules of GMP and SSOP and the good agricultural practices (Good Agricultural Practices - GAP), risk analysis and critical control points (Hazard Analysis and Critical Control Point - HACCP). The significant place have the standards of the International Organization for Standardization (ISO). The paper describes the requirements of standards related to food quality and safety in order to easier implementation in poultry production.

Key words: poultry production, food safety, quality, standards

Introduction

New challenges in the protection of animal health, food production chain of animal origin, animal welfare and environmental protection require that developing countries accept the international plan adopted regulations, standards and procedures as a basis for gaining competitiveness, inclusion and survival in the global market (Ušćebrika et al., 2006a). The criteria for safe food, as well as elements of producer standards are generally in accordance with the legislation. Standards that apply to the finished product is usually defined as a series of internationally recognized standards for product and/or as a consumer/commercial specifications (Oakland, 1993; BSI, 2000; Baines, 2001). Recognized three types of standards:

♦ Minimum quality standards, for example. product specifications;
♦ Reference standards, for example: Codex Alimentarius Commission (CAC) or the United Nations Economic Commission for Europe (UNECE) standards are internationally recognized;
♦ Standards of compatibility, for example. ISO standards or QA schemes.
In this last type, the current QA standards focused on the external and internal quality attributes, and to external factors include the criteria that determine production standards, standards of animal welfare, environmental protection, health and security and ethical content. Internal quality attributes are those that are directly related to the same products, such as poultry meat weight, color, size, coverage of the skin. However, the provision of quality in poultry production, as well as the safety of the final product, can not be achieved without the implementation of the first two types of standards and compliance rules that arise from them (Andersen and Pettersen, 1994). This is, above all, think of the rules good manufacturer practice (GMP) standards and sanitary operating procedures (SSOP) and the good agricultural practice (GAP), risk analysis and critical control point (HACCP) (Ušćebeka et al., 2007).

The aim of this paper is based on the experience gained in the implementation of these standards requires, in order to close easier and more efficient implementation in poultry production.

**Good manufacture and agriculture practice (GMP & GAP)**

Good producer and Agriculture practice good practice producer was determined the Commission directive 91/412/EEC of 23 July 1991. and contains principles and guidelines for good production practice as part of quality assurance which ensures that the appropriate products manufactured and controlled according to quality standards that apply to the use of these products. Institute of Food Science and Technology (IFST) brought in London in 1998. the guidelines for good production practice food and beverages in this guide describe the previously requested programs that need to be carried out in order to be well designed GMP. For the principles of GMP in the poultry farms, it is necessary to adequately implement and apply the principles of good agricultural practice (GAP), which provide quality primary production, for example the production of the one day old chickens, as the initial link in the chain of poultry production (Ušćebeka et al., 2008a).

GAP (Good Agriculture Practice Agriculture-good practice) is a system of rules and principles, which covers all aspects of agricultural activities and provides environmental protection from all negative agricultural impact. (Ušćebeka et al., 2008b). The GAP is essential to reduce risks in agricultural production directly and objective verification of the best production practices. Introduction of protocol standards developed by experts in certain areas. GAP is composed of three groups of regulatory documents (basic provisions, the control points and compliance criteria, the control list), where each of the groups covered by certain elements. A significant part of the gap and is dedicated to the protection of the environment issues that are related to poultry production. Poultry farming is characterized by the
production of large amounts of waste material. Accumulation of waste products from poultry production can be a serious problem for the maintenance of ecosystems, and requires the implementation of the system of managing the environment (Šević et al., 2009). GAP standards in the practice reduced the possible negative impacts on the environment and increase the quality and the transience of products on the market (Ušćebeka et al., 2009).

GLOBALGAP is the organization that determines the applicable standards for certification of agricultural products. GLOBALGAP based its action on the gap-a (Good Agriculture Practice - Good Agriculture practices) that are primarily aimed at reducing the negative impact on the environment due to the negative of Farm production, reducing use of chemical additives in the products, maintaining the health of workers and compliance provisions of the welfare animals (Ušćebeka et al., 2001; Ušćebeka et al., 2004). Today, GLOBALGAP current version is a version 3.0, which, in the production of domestic animals has 4 modules as follows: cattle and sheep, dairy, pigs, poultry / turkey. The essence of each module from the point of view met the standards are documents that define the control points and compliance criteria. Control points and compliance criteria in the sector of poultry production (Poultry Module) are defined in a separate document, which is composed of 16 unit and contains 307 control points. Of which 144 primary obligation, which must be met; 119 secondary commitments, the allowed 5% unfulfilled points, and 44 recommendations are not mandatory but is recommended that the manufacturer of the application (Ušćebeka et al., 2008c).

**HACCP**

Can a classical HACCP plan be put in place in a poultry unit? Answer is Yes, because as a system, poultry production is no different from any other food manufacturing process. Raw materials are sourced, purchased, accepted at delivery, prepared, processed, packaged and dispatched. Flow diagrams and all the other accepted mechanisms of a classical HACCP plan are relatively easy to put in place and implement. However, proper CCPs are few in relation to microbial hazards. In practice, there is much evidence that Salmonella, at least, is controllable on poultry farms, when controlled-environment housing is used. The CCPs are the acceptance at delivery of the day-old chicks and feedstuffs, and the supply of drinking water. If the chicks are free from Salmonella on delivery, then good housekeeping, good husbandry, good manufacturing practice, good hygiene practice - call it what you will - will help to keep them free until the day of dispatch. If the feed and water are pathogen-free, then these sources cannot introduce pathogens into the premises or the birds. If, on the other hand contaminated chicks, feed or water are accepted into the premises, then there is no later CCP on the farm that will either eliminate or reduce to an acceptable level the Salmonella contamination (MacDonald, 2005).
In order to prevent pollution during the production of defined steps in the cleaning and sanitation, with the aim to achieve sanitary conditions of production. Therefore, the SSOP, in general, documented the steps that must follow in order to ensure adequate cleaning of surfaces and objects that come in contact with the product, as well as other surfaces. These procedures must be sufficiently detailed and specific. All HACCP plans require SSOP to be documented and review in certain intervals and customized if needed. This reassessment may be regular (e.g. annual), or extraordinary, but in both cases must be done responsibly and in the scientific basis (Turner et al., 2002). SSOP can be very simple or very demanding, depending on their final goal. There are two types of SSOP to: preoperative SSOP that are routinely carried out, a day before the start of production and other type of SSOP are operational or working SSOP that describe routine sanitary procedures are performed during the work process (Kanački et al., 2008). SSOP in poultry production are unique because of the nature of production. It is precisely define the microbiological testing of products which are periodically subject to. All bills arising from the SSOP must be on the spot at least 48 hours, and are stored in a minimum of six months.

ISO standards in the poultry production

The ISO 9000 family of standards is generic in nature and has been developed to assist organizations of all types and sizes that wish to implement and operate a Quality Management System (QMS). There are no restrictions on its implementation by any sector of industry, including the food and beverage industry (Naresh et al., 2006).

However, as a consequence of obligation of the implementation of HACCP and the optional application of quality system standards (ISO 9000 series), as well as attempts to regulate different systems in the area of food production developed joint system called ISO 22000:2005. Implementation of this system is based on the recognition of, above all, the implementation of GMP, as well as documentation that will provide continuity throughout the process (Ušćebka et al., 2005). Implementation of ISO 22000 establishes a unique system that aims to ensure that sufficient management tools and to provide a safe product at the end of the process (Ušćebka et al., 2006b).

Conclusion

Many different quality systems exist all over the world. Most of these systems contain as basis elements GMP and HACCP. One reason for the importance of the
HACCP concept is the legal requirement for a self-checking under the HACCP principles. The ISO 9000 is also important. Another point is the documentation.

For our conditions, it is necessary to test the applicability of the modules is primarily a GAP for poultry production in accordance with that certification of HACCP system. As for the large farms, most useful standard is ISO 22000.

Sistemi i standardi kvaliteta u živinarskoj proizvodnji sa ciljem dobijanja zdravstveno bezbednog proizvoda

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Rezime

Obezbeđenje kvaliteta u živinarskoj proizvodnji, kao i bezbednost finalnog proizvoda, ne mogu se postići bez primene standarda, odnosno poštovanja pravila koja iz njih proističu. Ovde se, pre svega, misli na pravila GMP i SSOP ali i na dobru poljoprivrednu praksu (Good Agricultural Practices - GAP), analize rizika i kritičnih kontrolnih tačaka (Hazard Analysis and Critical Control Point - HACCP). Značajno mesto zauzimaju i standardi doneti od strane Međunarodne organizacije za standarde (ISO). U radu je dat prikaz različitih standarda vezanih za kvalitet i bezbednost hrane a u cilju lakše implementacije u živinarskoj proizvodnji.

References


