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РОЗДІЛ 7

**ТОВАРОЗНАВСТВО Й ЕКСПЕРТИЗА ТОВАРІВ**

НТБ ОНАХТ

## A COMPARISON OF REQUIREMENTS FOR SAFETY AND QUALITY OF HONEY IN UKRAINE AND IN THE EU

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There are about 400,000 beekeepers in Ukraine, which together produce an average of 70 thousand tons of natural honey per year. Since 2008, according to the FAO, Ukraine has been ranked first in the production of honey among the European countries. In 2011, Ukraine had exported honey to 39 countries, in 2016 – to 53. According to World's Top Exports Ukraine had ranked 7<sup>th</sup> among 15 countries that exported the highest dollar value worth of natural honey during 2016 [1]. Exports of natural honey grows each year at a high pace: in 2015 the total value had amounted 36 thousand tons, then in 2016 it had reached 57 thousand tons. In 2017, Ukraine increased exports of honey to 67,8 thousand tons, which is in 19% more than in the previous year. The European Union is the main market for Ukrainian honey (nearly 80% of Ukrainian honey is exported to the EU). Demand for honey is so large that EU quotas for its supply (5000 tons in 2016 and 5200 tons in 2017) are exhausted in a few days [2]. Favorable geographic location, developed transport infrastructure, as well as a competitive price / quality ratio of the product supports the development of Ukrainian honey exports.

Nowadays the Ukrainian honey is mainly exported in large quantities as raw materials – products with the lowest cost. In Europe the wholesale price of honey is much higher than domestic beekeepers sell to exporters. Thus, Ukrainian high quality honey is imported as raw material, which is then mixed and packed in branded packaging in Europe. Therefore, one of the most promising directions is to enter the EU markets with product with significantly higher value added. This requires a systemic foreign economic strategy aimed at branding Ukraine as a supplier of quality honey products. Honey producers should be able to independently enter the export markets and sell packaged honey under the Ukrainian brand. To do this, Ukrainian honey production must fully comply with European standards. Ukraine has a great market and production potential, however, a stumbling block, is the lack of mandatory requirements for the quality of honey. The current national standard is voluntary. At the same time, in the framework of the Association Agreement, Ukraine has committed to implement the European requirements for honey for the end of 2019.

The requirements for safety and quality of honey in Ukraine and in the EU were compared. Materials for research: COUNCIL DIRECTIVE 2001/110/EC of 20 December 2001 relating to honey [3] and ДСТУ 4497:2005 “Мед натуральний. Технічні вимоги”.

The requirements were analyzed and differences in national and international guidelines were found. Firstly, there are differences in the definition of honey terms and classification. In Directive the main types of honey are as follows: comb honey, chunk honey or cut comb in honey, drained honey, extracted honey, pressed honey, filtered honey and baker's honey (honey which is suitable for industrial uses or as an ingredient in other foodstuffs which are then processed). According to national standard, honey is divided only into extracted, pressed and comb honey. Secondly, there are differences in composition criteria. The national standard, unlike the Directive, divides honey into the top grade quality and the first grade quality. There are different parameters that are controlled: the Directive has requirements for the content of water-insoluble contents, and the national standard has number of other indicators (the result of pollen analysis, the species composition of pollen grains, the content of proline).

Significant differences in composition criteria include the following:

1) According to the national standard, fructose and glucose content (sum of both) – not less than 70-80%, according to the Directive – not less than 60%.

2) According to the national standard, sucrose content – not more than 6%. According to the Directive, sucrose content depends on the type of honey and may not be more than 15%.

3) According to national standard, the electrical conductivity of honey has significant fluctuations (0.2-1.0 mS/cm), according to the Directive – not more than 0.8 mS/cm.

4) According to national standard, hydroxymethylfurfural (HMF) content – not more than 25 mg/kg. According to the Directive – in general no more than 40 mg/kg, and honeys of declared origin from regions with tropical climate – not more than 80 mg/kg.

5) According to the national standard, diastase activity (Shade scale) – not less than 10, according to the Directive – not less 8.

Thus, it is concluded that the implementation of EU requirements will contribute to:

- creation of an effective system of controlling the safety and quality of honey;
- increase of confidence in honey, which is realized in the domestic market due to mandatory labeling requirements;
- simplification of exports to the EU

Compliance with European requirements will help Ukraine to create conditions for trade facilitation and export growth to promising markets. It will be accompanied by greater use of production potential, by the opening new opportunities for cooperation in trade between the parties, and will increase the growth of foreign direct investment and facilitate the opening of new production capacities.

Thesis advisor – PhD in Engineering, Associate Professor Pambuk S.A.

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## SAFETY OF FOOD PRODUCTS

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Every day we eat variety of food, but do not even think how safe it is. The consequences of using low-quality and dangerous food are harm to health. The aim of the research is to study the influence of various factors on the safety of products. Food poisoning not only harms the health of consumers, but also damages the economy and the image of manufacturing enterprises. Food safety should be based on the absence of toxic, carcinogenic and mutagenic effects of the constituents of the product.

Pollution of products occurs under the influence of environmental factors, industrial chemical and radioactive emissions into the environment, the use of pesticides, harmful compounds that are formed during storage of raw materials or processing.

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