

**THE QUALITY OF THE HOPS AS PART OF ITS  
COMPETITIVENESS.**

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*The results of the study the concept of quality as part of product competitiveness were presented. Deals with theoretical and methodological study design methodology for determining the competitiveness of hops depend on its quality was illuminated.*

**Key words:** *hops, product quality, competitiveness, variety, indexes quality, alpha acid.*

The problem of quality in the XXI century is of particular importance. This century as in all its forms – as products and services, labor, environment and overall quality of life. In a globalized market quality problem is relevant for all countries, so that only high quality products can be competitive. This problem is multifaceted and has political, social, economic, technological and organizational aspects.

Agricultural output has different consumer properties depending on the destination. Quality of agricultural products determined by a combination of useful properties that meet specific customer needs. Social required level of quality agricultural products, which would match the requirements of producers and consumers are achieved systemic regulation of consumer characteristics and product characteristics of assessment at each design stage of production, storage, transport and processing.

In literature there is different definition of "quality products". By this definition, different approaches commodity, engineers, agronomists, economists, lawyers, philosophers. Each one highlights some one or more, in their opinion, the main characteristics of products.

Quality of products means a series of properties that contribute to its ability to meet the specific needs of the customers according to their destination. Each product type has specific properties that reflect its usefulness and ability to meet human needs. The usefulness of a particular type of product reflects its use value, that should be evaluated for its quality indicators. Thus, the use value and product quality are closely related. Improving the quality of products, as well as other economic categories – improving the efficiency of human labor, the development of science and technology, is a reflection of the historical process.

The scientific approach to the study of any category or phenomenon involves first determining the meaning of his nature, place and role in aggregate categories and other phenomena. Scientific interpretation of quality is quite diverse, but united by some common definitions of philosophy. Thus, based on the subjective position, F. Crosby defines quality as compliance. Y. Deming said that does not mean quality management excellence, and get this level of quality, which calculates market. D. Juran defines quality as matching purpose. A. Fehenbaum call quality set of difficult market, technical and operational characteristics of the product, whereby the latter meets the expectations of the consumer. According to D. Harrington quality is satisfying or exceeding customer requirements at a reasonable price for it [5].

Quality of products and understand a set of properties and characteristics of the product, which give it the ability to meet the needs caused or alleged. This definition is given in the standard ISO and is most common in the advanced economies. In 1986 within ISO formulated terms on quality for all sectors of business and industry, and in 1994 this terminology clarified. In this latter approach is the definition of standardized quality for which this category is a set of characteristics of an object belonging to its ability to meet established and

anticipated needs [1]. Therefore, the standard notion of quality is given in general terms.

At this stage, quality products – a concept that describes the parametric performance, consumer, technology, design features of the product, the level of standardization and unification, reliability and durability. As an economic category reflects the quality of the product set of properties that determine the extent of its suitability to meet human needs.

The aim – theoretically and methodologically justify the development of methods for determining the competitiveness of hops for its quality.

**Material and methods research.** The technique is based on research systematization and integrated evaluation of information materials received from the scientific literature, data state testing, research institutions and research.

**Formation purpose of the article.** Since it is the quality of products is a major factor that shapes the level of prices for products, and therefore greatly affects the competitiveness of a particular type of product purpose of this work is theoretical and methodical study design methodology for determining the competitiveness of hops for its quality.

**Results.** An integral part of the evaluation is to determine the quality of hops competitiveness, economic advantages or shortcomings of certain botanical varieties which are shown from the very beginning of the formation of consumer characteristics, determine the quality of processed products and finished product, determine the possibility of long-term storage and processing.

According [2, 3] assess the quality of products have elected those indicators that, firstly, captured by consumers (important and obvious to them), and secondly, the importance of which affect the quality or which may change contribute to its significant increase. In addition, these figures do not always coincide with the indicated in the specifications and technical documentation for products or may be such that it is not stipulated standards or specifications, but significant impact on the overall quality of the product. They may appear in the trade and greatly affect the changes that will lead to deterioration in quality. No matter how high the

quality was of a sort, the manufacturer will not grow it if it is low yield, disease resistance, keeping quality and high cost of cultivation. Nor need variety, if it has a high yield but low nutrient content, bad taste and preservation properties. Consequently, competitiveness – integral indicator and this concept should be considered in the light of additivity.

We believe that the competitive process is the study and analysis of quality indicators as a combination of consumer properties, comparing the results obtained for different varieties investigated with regard to their cost characteristics.

For example, biochemical composition of hop cones depends on weather conditions, soil conditions, farming, harvesting times, post harvest handling, etc., but mainly determined by the genotype of hops. Depending on the type of hop cones contained in 8,0–32,0 % of bitter substances 0,5–18,0 % alpha acids 1,0–14,0 % beta acids, 0,2–1,6 % xanthohumol, 0,05–3,8 % essential oils 1,6–11,7 % polyphenolic substances [4].

In our view, the competitiveness of hops – integral factor which must be determined within varieties. Each Quality should be divided into ranks, but in this case it may be an objective assessment. Product quality can not be defined by one year and for one party. Assess the need for competitiveness varietal areas long-term data located in different soil and climatic zones of Ukraine. In evaluating varieties of hops taken only potential yield that can be obtained in terms varietal testing stations. Quality as far as possible should be assessed comprehensively. For example, a composite index content of nutrients hops may include a large number of biologically active substances in the brewing equivalent. Grinding parameters lead to complications objective assessment grade.

The main parameter that determines the competitiveness of sorts, is the total yield grade, because the similar costs growing more profit and will produce, which collect 1 hectare higher than others. Second in importance indicator might be the number of accumulated energy in production and output of the main nutrients (for example, alpha acids – for hops).

The competitive advantage of one over the other sample products can be installed through the development of methods based on the main provisions of pattern recognition theory and based on the ranking of possible values of competitiveness and calculation of generalizing on the basis of assessment of the data. The essence of the theory of pattern recognition is the recognition of a particular index (in our case – competitiveness) and held successively by each of the attributes for which the standard model is developed, which is a set of intervals. If you choose to measure intervals of rank scale, the competitiveness can be described as a set of values of these ranks. The intervals determined as follows: given a constant decrease in the interval; best interval is assigned the highest score of comparable rank; each successive interval smaller than the first, given the corresponding value in points.

### **Conclusions**

Given the economic and useful indicators of quality varieties of hops for each indicator as necessary to develop a set of intervals of rank scale of quality, by which competitiveness can be described as a set of values of these ranks.

**Prospects for further research.** Further research will focus on assessing hop varieties zoned in Ukraine and the development of methods for determining their competitiveness.

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## **ЯКІСТЬ ХМЕЛЮ ЯК СКЛАДОВА ЙОГО КОНКУРЕНТОСПРОМОЖНОСТІ**

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Наведено результати дослідження поняття якості, як складової конкурентоспроможності продукції. Висвітлено теоретичне і методичне обґрунтування розробки методики визначення конкурентоспроможності хмелю за його якістю.

**Ключові слова:** *хмель, якість продукції, конкурентоспроможність, сорт, показники якості, альфа-кислоти.*

## **КАЧЕСТВО ХМЕЛЯ – ОСНОВНАЯ СОСТАВЛЯЮЩАЯ ЕГО КОНКУРЕНТОСПОСОБНОСТИ.**

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Представлены результаты исследования понятия качества, как составной конкурентоспособности продукции. Освещено теоретическое и методическое обоснование разработки методики определения конкурентоспособности хмеля по его качеству.

**Ключевые слова:** *хмель, качество продукции, конкурентоспособность, сорт, показатели качества, альфа-кислоты.*