

Annotation

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Study of economic-price and morphological characters of roots of breeding materials chicory root *Cichorium intybus* L.

The article presents the results of studies of economically valuable and morphological features of root crops of the initial forms of chicory root. In recent years, the volume of raw material production and demand for chicory processing products in Ukraine has declined somewhat while in Europe, Russia, the USA, China and many other countries it is increasing. Chicory root is a unique culture. Complex mechanisms of inheritance of useful features, biology of flowering (stretching in the period), biological and physiological processes of accumulation of inulin and monosugars and many other problems have not been studied enough.

In Ukraine, the Institute of Bioenergetic Crops and Sugar Beet, Kiev, and also at the Uman Experimental and Selection Station of the National Academy of Sciences of Ukraine, are engaged in the selection of root chicory. Over the period of almost 30 years of selection of root chicory in Ukraine, five varieties of chicory root crops Umansky-90, Umansky-95, Umansky-96, Umansk-97, Umansky-99 have been created and introduced into the State register of plant varieties suitable for distribution in Ukraine. In selection of varieties Chicory of the Uman experimental-selection station used 3 lines, genetically differ from each other.

All of them have a difference in the shape of the leaf blade, the type of leaf rosette, the shape of the root crop, the content of solids and inulin. Analysis of the biomorphology of varieties indicates that the varieties under study have many differences in characteristics. Color, type of sheet and smoothness of the surface are important biomorphological signs that can influence the accumulation of organic substances, the accumulation of chlorophyll, the synthesis of plastic substances, which can affect the value of economic-valuable characteristics of varieties. It is important to support biomorphological features, since each variety has its own distinctive features, it can affect the genotype of the plant as a whole. No less important problem in the selection of chicory is the form of root crop. Due to the selection according to the morphological features, the rooting of the chicory is accompanied by an improvement in technological qualities (root form, suitability for mechanized harvesting).

Selection based on these characteristics is important and is carried out in parallel with selection for other economically valuable indicators. The conical form of the root crop is better excavated from the ground and is the most optimal for mechanized harvesting. Using the hypothesis of the dominant inheritance of the sign, the conicity of roots and the elucidation of the nature of inheritance, a cycle of crosses of selection materials was carried out. Based on the hybrid generations obtained, the analysis of hybrids was carried out and the quantitative component of each selection number was determined according to the shape of the root crops. For the purpose of qualitative evaluation of the shape of root crops, an improved method was used, which is based on the expression of the form using linear parameters of root crops.

As a result of the carried out researches and the hybridologic analysis genotypes with the cone-shaped form of a root crop have been isolated, thereby the hypothesis about dominant inheritance of a sign is confirmed.

Key words: *breeding materials, chicory of the root, cone of root crops, breeding number, hybrid analysis.*