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DYNAMICS STARCH CONTENT IN GRAIN OF SPRING BARLEY GROWN WITH DIFFERENT SYSTEMS OF FARMING AND DIFFERENT SYSTEMS OF SOIL TILLAGE DURING STORAGE

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The need for preservation of grain, its quantity and quality in the short and long period due to seasonal production of cereals and perennial needs of consumers. However, grain cereal undergoes inevitable physiological development that may have useful properties, but that leads to aging and later to harmful changes in the nature and intensity of which depends on the storage conditions

It is known that starch is part of the endosperm grain, which goes after hydrolysis in aqueous solution. Breweries varieties contain it from 60 to 64 %, which corresponds to 78–82 % barley extract. Thus the more starch, the less protein. During the period of storage starch consumed for respiration to support vital seed. From the size of its losses significantly dependent duration of grain storage and the ability to use it for certain purposes.

Therefore, the goal of the research was to establish the influence of various factors on the growing changes in the content of starch in the grain during storage.

The study was conducted at the laboratories of the Department storage, processing and standardization of plant products by name prof. B.V. Lesika of National University of Life and Environmental Sciences of Ukraine. We investigated grain of spring barley variety Scarlett harvest 2010-2011 which grown under different farming systems (industrial (control), environmental and biological) systems and tillage (conventional+minimum+harrowing, minimum tillage, conventional+ minimum tillage, harrowing) on experimental plots of the Department of Agriculture experiment stations and herbology in VP NUBiP Ukraine "Agronomic Experiment Station".

Research has established that for the storage of grain barley grown under different farming systems and different systems of soil tillage starch evolved differently. Storage of grain of spring barley variety Scarlett within one year there is no deterioration of its quality – negative increase or decrease in starch content. Fluctuations relative to the initial quality starch were at 1 – 2 %, these fluctuations are not significant and therefore we can say that the starch during storage of grain barley grown by different farming systems and different tillage systems not changes in protein content.

Significant differences in the change of starch content in grain of barley variety Scarlett grown by different farming systems and different systems of tillage during storage is not installed. However, the highest starch content during storage characterized grain of barley grown by biological and ecological farming systems and harrowing and minimum tillage. Lower rates of starch content during storage characterized grain grown by industrial farming systems and conventional+minimum+harrowing and conventional+ minimum tillage.