

TRENDS IN GRAIN STORAGE IN WAREHOUSES AND SILOS

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Abstract

Cereals are grown in a relatively short period of time and consumed in approximately constant quantities throughout the year. Cereal seeds, after harvesting, represent complex ecosystems with a rich enzymatic activity, mainly located in the germ, contaminated with micro-organisms and possibly infested with insects. To ensure a continuous and homogeneous production, but also for a constant quality of the finished product, the grains must be stored. For this, a warehouse must have a storage capacity of at least 30 days, be equipped with receiving facilities, internal transport, be equipped with dosing devices and be compartmentalized in such a way that there is the possibility for the grains to be stored in batches with similar qualitative indices. The storage of cereal seeds is necessary for the creation of stocks that ensure the continuous operation of the mills, over a longer period of time, and for the formation of mixtures (lots) of raw material, homogeneous in quality, with a constant technological regime of processing, in order to obtain uniform and high quality finished products. This requires its storage in such a way as to ensure the necessary from one harvest to another. Grain preservation is a set of technical measures applied to control the physico-chemical and biological processes in the grain mass in order to preserve it in good conditions and with minimum losses. The main objective of preservation is to maintain the quantitative integrity and qualitative properties of the stored products with low energy and fuel consumption. The purpose of the work is to highlight the main constructive types of warehouses used for grain preservation.

Key words: cereals, storage, constructive types