

INFLUENCE OF THE WETTING PROCESS IN THE CONVENTIONAL SYSTEM ON THE QUALITATIVE INDICES OF WHEAT FOR MILLING

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Abstract

The wheat conditioning determines a series of transformations of the mechano-structural and biochemical properties of the grains. Proper wetting of the wheat grain on the outside succeeds in the peeling process in removing the upper layers of its coating without water entering the endosperm, so that in the end high quality flours will be obtained. In this study, two influencing factors were followed: the temperature in the grain mass and the rest time of grains after wetting, finally obtaining a multifactorial experience with 72 experimental variants. The experiments, performed in the present paper, revealed a close connection between the rest time of grains and their humidity after the hydrothermal treatment. Also, the three temperature ranges (10°C - 15°C, 15°C - 20°C and 20°C - 25°C) of the cereal mass for which the study was performed, had a direct influence on the water speed penetration from the outside of the grains to the inside. By establishing individually, the optimal conditioning recipe for each batch of wheat with different characteristics, the wetting period is significantly reduced in the technological process of preparing wheat grains for milling.

Key words: conditioning, wetting, wheat, peeling, flour
