SUMMARY

Title: **The suitability of selected spring wheat cultivars for autumn sowing.**

Key words: spring wheat, sowing date, cultivars, yielding, grain quality, yield components

The aim of the study was to evaluate the suitability of selected spring wheat cultivars for autumn sowing. Field trials were conducted in three experimental sites and laboratory analyzes of grain were carried out. The scope of the study included an evaluation of sowing date and wheat cultivar influence on the occurrence of individual wheat development phases, number of shoots per plant, accumulation of dry matter at the tillering and stem elongation (jointing) stages, yielding, yield components and grain quality. Three sowing dates (two autumn and one spring) and five spring wheat cultivars (Tybalt, Cytra, Bombona, Monsun, Parabola) were investigated.

Studies show that the length of the vegetation period and the individual development phases of wheat depends on the sowing date and location of field experiments. Delay in sowing date resulted in a shortening of the vegetation period as well as individual subperiods.

The influence of the sowing date on the number of shoots per plant in the tillering and stem elongation stages was found. Plants from the first autumn sowing date, in the tillering at all the sites, were characterized by more shoots. While, in the stem elongation stage, both in Bezek and Czesławice, a higher number of shoots per plant, at wheat spring-sown sites, was stated. Sowing date significantly differentiated yield of dry matter per plant and per unit area. Higher values of these traits were found at sites with autumn sowing dates.

Wheat cultivars responded with yield increase in the autumn sowing date conditions comparing to spring sowing date conditions. Tybalt and Monsun were the highest yielding cultivars in these dates.

Yield components of wheat varied in years of experiments. The number of plants and ears per the surface unit and tiller production depend significantly on both experiment factors (wheat cultivar, sowing date) and conditions of experimental sites.

Experimental factors influence the technological value of wheat grain. The most variable quality parameter, under the influence of experimental factors, was the quantity and quality of gluten.