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The impact of cultivation intensity for productivity on hybrid and population cultivars of winter wheat

The field experiment with winter wheat was conducted in the years 2016-2019 at the Experimental Station of Cultivar Assessment in Przecław. The experimental factors were: I – cultivation technologies with different intensity levels (medium-intensive A1 and high-intensive A2), II – hybrid cultivars and population cultivars of winter wheat.

Arrangement of weather conditions had a significant impact on most of the studied parameters, including the quantity and quality of winter wheat yield. Technology A2 extended the period of plant entry into subsequent development phases, resulted in less cultivars disease infestation and limited plant lodging. Grain yield was higher on objects with technology A2 compared to technology A1. Hybrid cv. Hypocamp had the highest yield-forming potential, while population cv. Belissa the lowest.

Technology A2 was conducive to obtaining more favorable LAI, MTA, chlorophyll content in the flag leaf, increasing the efficiency of photosynthesis and gas exchange parameters. The cultivation of wheat in technology A2 guaranteed obtaining a grain with better quality characteristics.

Hybrid cultivars of winter wheat can be recommended for cultivation in soil and climatic conditions of Podkarpackie Region, especially due to the high yield potential of the cv. Hypocamp and due to favorable grain technological parameters of the Hyfi and Hyking.

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