RESEARCHES CONCERNING THE WINTER WHEAT BEHAVIOR AT DIFFERENT SEEDING RATES UNDER CONDITIONS FROM CENTRAL PART OF OLTENIA

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SUMMARY

Many studies in the world showed that nitrogen fertilization, seeding rate, planting data and planting depth affect the yield and its components (Jonhson et. al., 1988, Blue et al., 1990).

The studies were performed at Agricultural Research and Development Station-Şimnic, on a brown-reddish soil. During three years (2004-2006) was performed an experiment with two factors and fifth graduations: like A factor was the variety with the graduations: a₁=Şimnic 30, a₂=Dropia, a₃=Flamura85, a₄=Alex, a₅=Rapid and like B factor was seeding rate with: b₁=100 g.k/m², b₂=200 g.k/m², b₃=300 g.k/m², b₄=400 g.k/m², b₅=550 g.k/m². The yield was determinate in the field and 1000 kernel weight value in laboratory. On average, in three years, 300 g.k/m² and 400 g.k/m² assured yields at the same level with check variety suggesting that the losses (234 kg/ha, respectively 286 kg/ha) are not significant. Şimnic30, Dropia, Flamura85 and Alex varieties had a similarly behavior. Significant diminishes of the yield were recorded at 100 g.k/m² comparative with 550 g.k/m² as follow: 21%, 17%, 23% respectively 19%. The only variety that, on three years average, presented significant yield diminishes at 100 g.k/m² (25%) as well as at 200 g.k/m² (20%) was Rapid variety.

An hypothetic calculation for seeding rate at varieties with 1000 kernel weight by 40 g and cultural value by 9800 (G=98%, P=100%) show us that, practically, the amount of seeds for initiate a crop is half at 300 g.k/m² comparatively with 550 g.k/m². Under ARDS-Simnic conditions, tested varieties presented the highest yields at 550 g.k/m² but these were statistically assured only against 100 g.k/m².

The only exception was recorded by Rapid variety than recorded yield gain at 550 g.k/m² was superior against all others densities. Subsequently, we recommend for this variety only 550 g.k/m² seeding rate. Following obtained results we can recommend for Şimnic30, Dropia, Flamura85 and Alex to be planting at less than 550 g.k/m² this involving lower amount of seed and consequently lower price for initiate a crop.

BIBLIOGRAPHY