



## The influence of long-term fertilization on wheat yield in the Moldavian Plain

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Investigations conducted in long-term stationary experiments, under unirrigated, followed the influence of different fertilizer rates on the evolution of soil agrochemical characteristics and yield obtained in main crops, placed in a 5 year rotations (beans-wheat-sunflower-wheat-maize). The soil used for experiments was a cambic chernozem with clay-loam texture, neuter reaction ( $\text{pH} = 6.9$ ) and a humus content of 3.3-3.6%. Average rainfall amounts registered in the last 78 years in the Moldavian Plain were of 544 mm. In the last 25 years, annual average amounts of registered rainfall were close to the multiannual mean in 15 years and lower by 48-206 mm in the other 10 years. Mean yields obtained in wheat, placed after bean and sunflower, in a 5 year rotation, and fertilized with 120 kg nitrogen + 80 kg  $\text{P}_2\text{O}_5$ /ha were of 4320-3580 kg/ha. Annual application of rates of 80 kg  $\text{P}_2\text{O}_5$ /ha determined the accumulation of a reserve of mobile phosphates in soil, comprised, according to applied nitrogen, between 33 and 68 ppm.