

ABSTRACT

EFFECT OF DIFFERENT ZINC DOSES ON YIELD AND GRAIN QUALITY OF CORN (*Zea mays L.*) VARIETIES

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Master thesis, Department of Field Crops

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2015, 65 pages

This study was conducted on research and experimental fields at Adnan Menderes University Agriculture Faculty Research Farm, during corn production period in 2014. The research is based on completely randomized split block design. Competo, P31D24, 3167, DKC 6876 hybrid corn varieties used as research material. Besides, on 3-4 leaves period of corn varieties, different zinc ($ZnSO_4$) doses (control (0 ppm), 1000 ppm, 2000 ppm, 4000 ppm) applied by spraying on the leaves. To determine effects of different zinc doses on the varieties cob length, grain yield, thousand grain weight, number of grains per cob, crude protein, starch, fat, fiber and ash contents were analyzed as yield and quality components.

As a consequence of trials carried out in field conditions, grain yields varied between 0.783-1.500 t/ha, cob length varied between 16.4-20.9 cm, number of grains per cob varied between 441.9-677.5 and thousand grain weight varied between 311.6-410.7 g. In addition to yield components, quality parameters grain protein content ranged between 6.1-7.9 %, starch content ranged between 60.8-64.2%, fat content ranged between 2.7-3.3%, fibre content ranged between 1.3-2.1% and ash content ranged between 1.07-1.16%. When corn varieties were analyzed, the variety of P31D24 gave the best results in all parameters. Zinc foliar applications have no effect to yield parameters while create positive impact on the quality parameters. Especially, 1000 ppm zinc dose take the highest value and has positive effect on crude protein and fat content

Anahtar sözcükler: Corn, yield, variety, zinc, protein, quality