This research was conducted at the Research farm of the Faculty of Agriculture, University of Süleyman Demirel (Isparta, Turkey) during a period of two years (2009-2011) to determine effects of different zinc application on yield and some agronomic characters of bread wheat (Triticum aestivum L.) and durum wheat (Triticum durum L.). The study was carried out on 4 wheat genotypes (bread wheat: Altay 200, Gün 91; durum wheat: Kızıltan 91, Kunduru 1149) on split-plot design in a Randomized Complete Block with 3 replications. The cultivars took place in the main plots whereas the zinc application doses (0, 9, 18, 27 and 36 kg ha\(^{-1}\) Zn) were in the sub-plots. Sowing was done by plot sowing machine providing 500 seeds per m\(^2\). Phosphorus and nitrogenous fertilizers providing 40 kg ha\(^{-1}\)P\(_2\)O\(_5\) and 80 kg ha\(^{-1}\)N were applied in the plots. According to the results including two years averages, zinc application had significant effect on properties examined and effect of wheat varieties had varying effects. Zinc application had positive effect on plant height, number of spike per square meter, biological yield, grain yield, harvest index, thousand kernel weights, crude protein content and zinc content in grain. The highest doses of zinc application negatively affected the examined agricultural properties and statistically, the mean values of studied trait decreased significantly.

**Key words:** Bread and durum wheat varieties, grain yield, yield components, quality