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
of

Agriculture and Forestry

**Effect of Upper Plant Parts on Yield and Quality in Turkish Durum Wheat
Landraces from Different Regions, Altitudes, and Provinces**

Nusret ZENCİRCİ

Central Research Institute for Field Crops, P.O. Box: 226 Ulus, Ankara - TURKEY

 [Keywords](#)
 [Authors](#)



agric@tubitak.gov.tr

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Abstract: The aim was to explore 117 durum wheat (*T. turgidum* L. conv. durum (Desf.) MacKey) landraces from 2 regions, 5 altitude intervals, and 12 provinces for flag leaf length, width, angle, sheath length, fertile spikes, spike length and width, plant yield, percent vitreous kernel, pearling index, percent grain protein, and 1000 kernel weight. The field experiment consisted of 566 single plant selections from 117 populations with Kunduru 1149 and Kızıltan 91 controls, analyzed via descriptive and multivariate statistical methods. Plant yield with the highest variation was positively correlated with flag leaf length, flag leaf sheath length, and spike width. While Southeastern Anatolia was more diverse for all traits except pearling index and 1000 kernel weight, Central Anatolia had more upright flag leaves and longer and wider and fertile spikes. The altitude interval of 400-599 m had larger variation for flag leaf length, width, sheath length, and plant yield, and 600-799 m for spike length, width, pearling index, percent grain protein, and 1000 kernel weight. Kahramanmaraş province had longer flag leaves, fertile spikes, and higher yield; Sivas had wider flag leaves; Yozgat had longer spikes; Gaziantep had wider spikes; Mardin had vitreous kernels; Konya had a higher pearling index; Çorum had a higher grain protein percent; and Adıyaman had a higher 1000 kernel weight. In other words, durum wheat breeders, when needed, could decide feasibly where, the region, the province, or the altitude, to search first for the traits of interest.

Key Words: Durum wheat, landrace, Turkey, spike, flag leaf, quality

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