



Registration of "Harman 22" Bread Wheat (*Triticum aestivum* L.) Variety

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Harman 22 is winter bread wheat (*Triticum aestivum* L.) variety developed by Trakya Agricultural Research Institute and registered in 2022. Harman 22 is developed by crossing Tekirdağ//GK Kalasz/Beabourg with TE6748-0T-0T-9T-2T-2T-0T through pedigree method. Crossing was made in 2008 and yield test were began in 2016-2017 growing year.

The spike of the Harman 22 cultivar is moderately long, white, smooth, with awn and medium compact. The flag leaf is medium dark-green and with medium-low glaucosity. Grain is oval, hard and red colour. Harman 22 is a medium-tall cultivar, similar to Eylül, Abide and Saban. Plant height is between 70 and 85 cm depending on the growing conditions. It is medium early and as it has good adaptation ability; it has been grown throughout the Trakya-Marmara region and some other transitional-zone parts of Turkey. It gives high yield both on fertile and less fertile soils. It has resistance to winterkilling and is tolerant to medium drought conditions. Harman 22 is highly tolerant to stripe rust (*Puccinia striiformis* f. sp. *tritici*) and leaf rust (*Puccinia triticina*). It has tolerant to powdery mildew (*Blumeria graminis* f. sp. *tritici*), and it has susceptible to septoria leaf disease.

Its yield potential is high however, high yield can be obtained if environmental conditions are favorable and applied good agronomic practices. The highest grain yield obtained was 8985 kg ha⁻¹ in variety testing experiment (Edirne location in 2020-2021 cycle). Mean yield of the variety testing experiment was 7750 kg ha⁻¹ in Trakya growing conditions. Suggested planting rate is between 450-500 seeds/m².

Its grain quality is extremely good. The mean values of some bread-making qualities of the variety testing experiment (2020 and 2021) are; test weight 73.2-75.1 kg hl, thousand kernel weight 35.7-37.3 g, protein content 14.5-18.4%, absorption 55.5-57.9%, sedimentation (Zel) 61-73 ml, gluten index 93.2-99.6%, gluten value 25.7-34.8%, alveograph energy value (W) 267-385 and flour yield 60-71%. The highest quality values in 2018-2019 growing seasons application of the variety testing experiment were; thousand kernel weight 44.7 g, test weight 82.4 kg, protein content 13.8%, gluten value 35.7%, gluten index 91.2% and sedimentation (Zel) 56 ml.

Pre-Basic and Basic seeds of the Harman 22 cultivar have been produced by Trakya Agricultural Research Institute. Certified seed of the Harman 22 are produced by both private companies and state farms.



Figure 1. Spike and grain of the Harman 22 cultivar. (Original)

References and Notes

- Anonymous, (2022). Trakya Region bread wheat registration report-1. Ankara, 2022. (in Turkish, unpublished)