

Registration of “Helke” Barley

Helke is six rowed barley (*Hordeum vulgare* L.) variety (Figure 1) developed by Trakya Agricultural Research Institute (TARI) and registered in 2019. Helke cross is Slad/5/Yrm/4/Yky387/3/Api/cm 67//Manch/6/Slad/7/Yky387/3/Api/Cm67//Manch/5/Yky387/3/Api/Cm67//Manch/4/Dmn/Rhod”S” with TEA1980-0T-0T-0T-3T-0T pedigree. Crossing was made in 2003 and yield test began in 2011-2012 growing year.

Helke cultivar is six rowed cultivar and its spike is moderately long, and compact. It resembles with cultivars Hazar and Martı. Helke is a medium-tall cultivar, similar to Martı. Its plant height is between 79 and 102 cm depending on the growing conditions. It is medium early and it has good adaptation ability, it has been grown throughout Trakya-Marmara region of Turkey. It gives high yield both on fertile and less fertile soils. It has resistance to winter killing and is tolerant to medium drought conditions. Helke is highly tolerant to powdery mildew (*Blumeria graminis* f. sp. *hordei*), net blotch (*Pyrenophora teres*) and scald (*Rhynchosporium commune* (formerly known as *R. secalis*) disease.

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 8006 kg ha⁻¹ in Edirne location in 2016-2017 growing years. Mean yield of the variety testing experiment was 6545 kg ha⁻¹ in Trakya growing conditions. Suggested planting rate is between 450-500 seeds/m².

Grain feeding quality is good. The mean values of some qualities of the variety testing experiment (2016 and 2018) are; test weight 64.2 kg, thousand kernel weight 31.1 g, protein content 14.5%, sieve value 47.0%, grain uniformity 12.2. The highest quality values in 2016-2018 growing seasons were; 1000-kernel weight 49.9 g, test weight 70.1 kg, protein content 15.1%, sieve value 96.8%

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

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



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References and Notes

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