Registration of ‘Elissavet’ Wheat

‘Elissavet’ spring wheat (Triticum aestivum L. em Thell) (Reg. no. CV-1003, PI 641961) (C.I. 01946 of the Variety Research Institute of Cultivated Plants, Greece) was developed by the National Agricultural Research Foundation—Cereal Institute, Greece, and released in fall of 2000. Elissavet was released because of its broad adaptation, high yielding ability, high protein concentration, and good-end use quality in central and northern Greece.

Elissavet was derived as a single plant selection, from an F7 bulk population of the cross ‘Joss Cambier’/‘Emu’//’Chiroca’4/Ias 20//’Willet Enano’*3/’Narino 59’/’Kavko’, of the 17th International Bread Wheat Screening Nursery of CIMMYT. CIMMYT recorded the cross number as CM66246-C-1M-1Y-1M-2Y-OM. The nursery was established the fall of 1983 in experimental fields at the Cereal Institute, located at Thermi-Thessaloniki.

Single plant selections were made on the basis of short stem, lodging and disease resistance, early maturity, and fertile heads in the summer of 1984. Single heads from each selected plant were used to establish F7:8 head rows of low density during the fall of the same year. On the basis of the same selection criteria, F7 plants were selected from the visually best F7:8 head rows of the summer of 1985, and F7:9 head rows of low density were sown during the fall of the same year.

At harvest, seeds of nonselected plants were bulked from each group of selected F7:8 head rows and were used to establish microtrials the autumn of 1985. Microtrials were composed of two row plots, 1.5 m long, and were established at two locations. The three national checks (‘Vergina’, ‘Dio’, and ‘Yecora-S’) were included in these trials as randomly repeated checks. On the basis of uniformity and the selection criteria described and supported by the microtrials, the best F7:9 head rows were selected the summer of 1986. Single plant selections were repeated in F7:9 selected head rows, and F7:10 head rows of low density and microtrials were established the fall of 1986.

Elissavet was derived from a F10 head row, selected the summer of 1987, that was multiplied in F11 and F12 head rows to give the first breeder seeds the summer of 1989. Elissavet was evaluated for yielding ability, quality, and stability at numerous locations in Greece during 1990 to 1996. Elissavet has been cultivated successfully in Greece since 2001.

Elissavet is an awned, white-chaffed, short spring bread wheat with red kernels and parallel, symmetric, compact heads. Seeds of Elissavet are ovate, red, and medium hard. The 1000-kernel weight of Elissavet is 33 g compared with 32, 33, and 35 g for Vergina, Dio, and Yecora-S, respectively. Elissavet has a height of nearly 100 cm compared with 110, 100, and 80 cm for Vergina, Dio, and Yecora-S, respectively. Elissavet is resistant to lodging (1 on the scale of 0–9, where 0 is no lodging and 9 is complete lodging compared with 4, 1, and 1 for Vergina, Dio, and Yecora-S, respectively). Elissavet needs 176 d to reach maturity, compared with 180, 190, and 162 d for Vergina, Dio, and Yecora-S, respectively.

On the basis of field evaluations conducted by the Cereal Research Institute of Cultivated Plants during 1997 to 1999, show that Elissavet has a mean grain yield of 4680 kg ha−1 for Vergina and Yecora-S, respectively. Comparable laboratory estimations for grain volume concentration of 149 g kg−1 compared with 176 g kg−1 for the mean of Vergina and Yecora-S.

Breeders seed and basic seed of Elissavet are maintained by the National Agricultural Research Foundation, Greece. Large quantities of seed are available for commercial, cultural, and industrial purposes by contacting the National Agricultural Research Foundation, Cereal Institute, Greece. Large quantities of seed may be obtained by contacting the author. In the USA, small quantities of seed are available from the National Plant Germplasm System.

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References

