Registration of ‘Kef’ Lentil

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‘Kef’ lentil (Lens culinaris Medikus subsp. culinaris) (Reg. No. CV-26, PI 643448) was developed at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, and released in 2003 by the Institute Agronomy Research of Tunisia, Ministry of Agriculture, Tunisia, for commercial cultivation in Tunisia. It is a high-yielding, yellow cotyledon lentil cultivar with larger seed size. The variety performs well in medium to high rainfall areas; therefore, Kef has been recommended for cultivation in north and central regions of Tunisia.

Kef was developed through single-plant selection from a Jordanian landrace, ILL 8, collected in 1972. Considerable heterogeneity was observed among plants, and a single-plant selection (78S26002) was made at ICARDA in 1978. After testing in a nonreplicated preliminary screening nursery and replicated preliminary and advanced yield trials between 1983 and 1985, it was entered into the international testing program in 1986 as promising line in the large-seeded lentil nursery. The line was entered into the Lentil Germplasm Catalog as accession ILL 5582.

The Food Legume Improvement Program of INRAT identified ILL 5582 as a high-yielding line from the Lentil International Nursery (large-seed) supplied by ICARDA in 1990. It was selected from the international nursery on the basis of good phenological adaptation, attractive seed characters, better standing ability, and higher seed yield. The line was tested in two contrasting locations in Tunisia (Kef and Beja) over six cropping seasons from 1992–1993 to 1997–1998. On average, ILL 5582 produced 1664 kg ha⁻¹ seed yield compared with 1492 kg ha⁻¹ for the local check ‘Nsir’, an average increase of 11.5%.

Hand harvest is a major constraint for lentil production in Tunisia due to the high cost of manual labor. Local lentil cultivars are generally susceptible to lodging and are unsuitable for machine harvest. ILL 5582 has a semi-erect growth habit with strong stem, providing lodging resistance, and is suitable for mechanical harvest. Lowest pods grow at about 15 cm above soil level, which reduces harvest losses. Plants of ILL 5582 are medium stature (36 cm) and produce more primary branches. Leaves are light green with broad leaflets and long tendrils. Tendrils intermingle with each other and keep the canopy upright at maturity, thus facilitating mechanical harvesting. ILL 5582 flowers in 108 to 116 d in Beja and in 110 to 120 d in Kef. The cultivar matures in 155 d, up to 5 d earlier than ‘Nefza’ and ‘Nsir’. It has yellow cotyledons and shiny cream testa color without pattern. It has a 100-seed weight of 4.5 to 5.5 g, which is greater than Nefza (4.1 g) but smaller than Nsir (6.2 g). Its dehulled seed has a protein content of 23.9% compared with 23.3% in Nefza and 25.4% in Nsir, measured by the macro-Kjeldhal method. The cultivar is resistant to frost damage at any vegetative stage compared with the local types and previously released varieties.

Seed of Kef is maintained by the Food legume Improvement Program of INRAT, Tunisia, and at the Integrated Gene Management Program of ICARDA at Aleppo, Syria, and is available in small quantities on written request. ICARDA does research on lentil improvement for the whole world, and all genetic materials under its possession are considered an International Public Good. No intellectual property rights will be sought for any variety developed by the national programs. Therefore, plant variety protection will not be sought for Kef lentil.

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