Registration of ‘Saliana’ Lentil

M. Kharrat, A. Sarker,* and W. Erskine

‘Saliana’ lentil (Lens culinaris Medikus subsp. culinaris) (Reg. No. CV-25, PI 643453) was developed at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, and released in 2003 by the Institute of Agronomy Research in Tunisia (INRAT), Tunis, Tunisia. Saliana is a large-seeded, high-yielding green lentil cultivar with lodging resistance. It is adapted to the long winter season and has been recommended for cultivation at high elevations and in the Kef zone.

The Food Legume Improvement Program of INRAT, Tunisia, introduced the line ILL 6982 from ICARDA in 1993 through the Lentil International Screening Nursery (large-seed). ILL 6982 is a breeding line derived from the cross ILL 4400/ILL S582 performed at ICARDA. The female parent, ILL 4400, is known as Syrian local large, an improved landrace from Syria. The male parent, ILL S582, is a selection from a Jordanian landrace ILL 8. The line was developed following a bulk-pedigree method, where single-plant selection was practiced in the F1 generation. It was then tested as a nonreplicated F1 progeny-row and in the preliminary screening nursery in the F2 generation. Subsequently, it was evaluated in two contrasting locations of medium rainfall (348 mm; Tel Hadya, Syria) and high rainfall area (540 mm; Terbol, Lebanon) in replicated yield trials before being included into the international nursery as an elite line designated as FLIP 90-13L. It was then later designated in ICARDA’s Lentil Germplasm Catalog as ILL 6982 and released under the cultivar name Saliana.

ILL 6982 was identified as a promising line at Beja research station, Tunisia, one of the main grain legume testing sites of INRAT in 1994. It was subsequently evaluated in national yield trials at Kef and Beja from 1995–1996 to 2001–2002. The line was superior for yield and other agronomic traits compared to a number of test entries, including the improved checks ‘Nefza’ and ‘Nsir’. Over the 7 yr and across two locations, Saliana produced an average yield of 1754 kg ha⁻¹ compared with 1680 kg ha⁻¹ for ‘Nefza’ and 1536 kg ha⁻¹ for ‘Nsir’, an increase of about 14%. It also showed a potential yield of 2435 kg ha⁻¹ at Beja. Saliana is moderately resistant to Fusarium wilt [caused by Fusarium oxysporum f. sp. lentis (Vasudeva & Srinavasan) Gordon], a yield-reducing factor for lentil in Tunisia. The cultivar is resistant to cold injury compared with the local checks Nefza and Nsir.

Saliana is an erect and medium-stature cultivar with a mean plant height of 35 cm. The first pod-bearing node is about 14 cm above the ground level, which reduces harvest losses. Its leaves are lightly pubescent with medium-size leaflet and ending in a long tendril. Stems are green, flowers are white, and pods are nonpigmented. It bears an average of 56 pods per plant, with an average 1.6 seeds per pod. Seed weight is 6 to 7 g per 100 seeds, testa color is cream without a pattern, and the cotyledon is yellow. Saliana matures in 162 d, equal to Nsir but slightly later than Nefza. Protein content in its dehulled seed is 23.8% compared with 23.34% for Nefza and 25.36% for Nsir, measured by the macro-Kjeldahl method.

Seed of Saliana is maintained by the Food Legume Improvement Program of INRAT, Tunisia, and at the Germplasm 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 cultivar developed by the national programs from ICARDA-supplied genetic materials. Therefore, plant variety protection will not be sought for Saliana.