Registration of ‘Idlib-3’ Lentil

‘Idlib-3’ lentil (Lens culinaris Medik.) (Reg. no. CV-20, PI 634542) was developed at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, and released in 2002 by the General Commission for Scientific Agricultural Research (GCSAR), Ministry of Agriculture and Agrarian Reform, Syria. It is a high-yielding, red-cotyledon lentil cultivar with lodging resistance and resistance to lentil vascular wilt disease [caused by Fusarium oxysporum f. sp. lentis (Vasudeva & Srinavasan) Gordon.]. The cultivar is tolerant to drought, which is mainly achieved through its rapid grain filling capacity and early maturity and has been recommended for cultivation in low rainfall (<350 mm) areas in Syria.

The Food Legume Improvement Program of GCSAR, Syria, received the line ILL 6994 from ICARDA in 1990. It is a breeding line developed at ICARDA from a cross between ILL 99 and ILL 5588 commissioned in 1983. The female parent, ILL 99, is a Moroccan landrace, and the male parent, ILL 5588, is an elite line developed through pure line selection from a Jordanian landrace population. The line was developed following a bulk-pedigree method and included in the national testing program as FLIP 90-25L. The line was later designated as ILL 6994 in the ICARDA’s Lentil Germplasm Catalog and released for commercial production with its popular name Idlib-3.

Idlib-3 was identified as a promising line from Lentil International Yield Trial (small seed) in the 1990–1991 cropping season. After seed increase in the 1991–1992 season, it was evaluated over the 3-yr period at six research stations of GCSAR (representing lentil-growing environments in Syria) under the national yield testing program from 1992–1993 to 1994–1995. It produced an average yield of 1010 kg ha⁻¹ compared with 893 kg ha⁻¹ for check, ‘Hurani’ (ILL 2130), an increase of 13.1%. Results of on-farm trials from 1995–1996 to 1997–1998 across 14 locations (six research stations and eight farmers’ fields) revealed that Idlib-3 gave a mean yield of 1296 kg ha⁻¹ compared with 1123 kg ha⁻¹ for Hurani, an increase of 15.4%. Under large-scale production in farmers’ fields, Idlib-3 out-yielded the check by 47.1%. Comparing zone-wise yielding ability, Idlib-3 gave an average yield increase of 29.9% in zone B (rainfall, 250-350 mm) and 8.2% in zone A (rainfall, >350 mm) over the local check, Hurani. Lentil straw is a valuable animal feed in Syria, and the variety produced an average straw yield of 3716 kg ha⁻¹.

Lentil Fusarium wilt disease is the major impediment of lentil production in the region. Yield losses up to 72% have been reported in Syria (Bayaa et al., 1986). Idlib-3 is a wilt resistant cultivar as evidenced from its performance in plastic house evaluations and under field-testing. In a wilt-sick plot Idlib-3 out-yielded the check by 47.1%. Idlib-3 out-yielded the check by 47.1%. Idlib-3 out-yielded the check by 47.1%.

Idlib-3 plants have erect and strong stems with upright branching and lodging resistance and are suitable for mechanical harvest. Idlib-3 plants have erect and strong stems with upright branching and lodging resistance and are suitable for mechanical harvest. It forms its lowest pod at about 15 cm above ground. Idlib-3 reduces harvest losses. Plants of Idlib-3 are 70–75 cm tall, another advantage for mechanical harvest. Idlib-3 flowers 121 d after planting and matures in 153 d. Protein concentration for dehulled seed is 25.7% and the straw has 6.8% protein. Seeds of Idlib-3 are well suited to cook.

Seeds of Idlib-3 are maintained by the Gene Bank of ICARDA at Aleppo, Syria, and are available in quantities on written request. Plant variety protection will not be sought for Idlib-3.

References


F. El-Ashkar, General Commission for Scientific Agricultural Research (GCSAR) Douma, Damascus, Syria; A. Sarker, F. El-Ashkar, B. Bayaa, H. El-Hassan, N. Kadah, and B.A. Karim, Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria. Registration by CSSA. Accepted 30 April 2004. *Corresponding author (A.Sarker@cgiar.org).

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Registration of ‘Idlib-4’ Lentil

‘Idlib-4’ lentil (Lens culinaris Medikus sp.) (Reg. no. CV-21, PI 634543) was developed at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, and released in 2002 by the General Commission for Scientific Agricultural Research (GCSAR), Ministry of Agriculture and Agrarian Reform, Syria. It is a red-cotyledon lentil cultivar with lodging resistance and has been recommended for cultivation in low rainfall (<350 mm) areas in Syria. It has been estimated that about 47% of the total cost of production is required for harvest by manual labor. Farmers’ cultivars and landraces are semi- to fully lodging resistant. ‘Idlib-4’ lentil is a breeding line developed at ICARDA from a cross between ILL 5879 (Syria) and ILL 479 (Lebanon). The male parent, ILL 5714, was derived from a cross, ILL 500 (Mexico). ILL 99, is a Moroccan landrace, and the male parent, ILL 5588, is an elite breeding line developed at ICARDA from a cross between ILL 39 (Syria) and ILL 479 (Lebanon). The male parent, ILL 500 (Mexico). ILL 5879, is a breeding line developed at ICARDA from a cross between ILL 7201 (ICARDA) and ILL 1719 (Ethiopia). The line was developed following a bulk-pedigree method and included in the international testing program as FLIP 90-25L. The line was later designated as ILL 6994 in the ICARDA’s Lentil Germplasm Catalog and released for commercial production with its popular name Idlib-3.

Idlib-3 was identified as a promising line from Lentil International Yield Trial (small seed) in the 1990–1991 cropping season. After seed increase in the 1991–1992 season, it was evaluated over the 3-yr period at six research stations of GCSAR (representing lentil-growing environments in Syria) under the national yield testing program from 1992–1993 to 1994–1995. It produced an average yield of 1010 kg ha⁻¹ compared with 893 kg ha⁻¹ for check, ‘Hurani’ (ILL 2130), an increase of 13.1%. Results of on-farm trials from 1995–1996 to 1997–1998 across 14 locations (six research stations and eight farmers’ fields) revealed that Idlib-3 gave a mean yield of 1296 kg ha⁻¹ compared with 1123 kg ha⁻¹ for Hurani, an increase of 15.4%. Under large-scale production in farmers’ fields, Idlib-3 out-yielded the check by 47.1%. Comparing zone-wise yielding ability, Idlib-3 gave an average yield increase of 29.9% in zone B (rainfall, 250-350 mm) and 8.2% in zone A (rainfall, >350 mm) over the local check, Hurani. Lentil straw is a valuable animal feed in Syria, and the variety produced an average straw yield of 3716 kg ha⁻¹.

Lentil Fusarium wilt disease is the major impediment of lentil production in the region. Yield losses up to 72% have been reported in Syria (Bayaa et al., 1986). Idlib-3 is a wilt resistant cultivar as evidenced from its performance in plastic house evaluations and under field-testing. In a wilt-sick plot Idlib-3 out-yielded the check by 47.1%. Idlib-3 out-yielded the check by 47.1%. Idlib-3 out-yielded the check by 47.1%.

Idlib-3 plants have erect and strong stems with upright branching and lodging resistance and are suitable for mechanical harvest. Idlib-3 plants have erect and strong stems with upright branching and lodging resistance and are suitable for mechanical harvest. It forms its lowest pod at about 15 cm above ground. Idlib-3 reduces harvest losses. Plants of Idlib-3 are 70–75 cm tall, another advantage for mechanical harvest. Idlib-3 flowers 121 d after planting and matures in 153 d. Protein concentration for dehulled seed is 25.7% and the straw has 6.8% protein. Seeds of Idlib-3 are well suited to cook.

Seeds of Idlib-3 are maintained by the Gene Bank of ICARDA at Aleppo, Syria, and are available in quantities on written request. Plant variety protection will not be sought for Idlib-3.

References


F. El-Ashkar, General Commission for Scientific Agricultural Research (GCSAR) Douma, Damascus, Syria; A. Sarker, F. El-Ashkar, B. Bayaa, H. El-Hassan, N. Kadah, and B.A. Karim, Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria. Registration by CSSA. Accepted 30 April 2004. *Corresponding author (A.Sarker@cgiar.org).

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