Registration of ‘Hamria’ Lentil

‘Hamria’ lentil (Lens culinaris Medik.) (Reg. no. CV-16, PI 633422) was developed at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, and released by the National Institute for Agronomic Research (INRA), Settat, Morocco, for commercial cultivation. The cultivar was released in Morocco in 1999 for stable and higher yield and for combined resistance to rust [caused by Uromyces viciae-fabae (Pers.) Schroet] and Ascochyta blight (caused by Ascochyta fabae Speg. f. sp. lentis Gossen, Shear, Beauchamp & Morrall). Because of its wide adaptation, Hamria is recommended for cultivation in all lentil-growing areas in the country. The Food Legume Improvement Program of INRA, Settat, Morocco, introduced line ILL 6238 from ICARDA in 1989 as a part of the Lentil International Screening Nursery. ILL 6238 is a breeding line derived from a cross between ILL 4354 and ILL 922. The female parent, ILL 4354, is a landrace from Jordan, and the male parent, ILL 922, is a germplasm accession from Turkey. The line was developed following a bulk-pedigree method. Single plant selection was done in the F2 on the basis of higher podding intensity, medium maturity, and nonlodging habit. It was entered in the international testing program as FLIP 87-48L and later designated in ICARDA’s Lentil Germplasm Catalog as ILL 6238. ILL 6238 was initially identified as a promising line in 1990 at Sidi El Aidi research station of INRA, a relatively dry site with an annual average rainfall of 300 mm. In 1991-1992, the line was tested in a replicated preliminary yield trial at Marchouch, a more favorable station with seasonal rainfall of about 400 mm. The line performed very well with respect to agronomic traits and produced >2 Mg ha⁻¹. In 1993-1994, it was tested in advanced yield trials at two sites, Jemat Shaim (rainfall, 330 mm) and Marchouch (rainfall, 290 mm), and was found superior to other test entries including the check L 24. From 1995 to 1997, line ILL 6238 was evaluated at four sites, three of which are located in the plains (Sidi El Aidi, Jemat Shaim, Marchouch) and at Annoceur (rainfall, 450 mm), a high altitude site located in the mid-Atlas mountains. Over the years and across locations, ILL 6238 produced an average yield of 1211 kg ha⁻¹ as compared with 1070 kg ha⁻¹ for the check, L 24, an increase of about 13% (Sakr, 2000). In farmers’ field demonstrations during 1996-1997 and 1997-1998 cropping seasons, it produced an average yield of 910 kg ha⁻¹ as compared with 520 kg ha⁻¹ obtained from the local cultivars, an average increase of 75%. On the basis of the above results, ILL 6238 was tested under National Catalogue Trials for its eventual registration. Because of its good performance and farmers’ preference, ILL 6238 was released in 1999 and was given the popular name Hamria.

Hamria is an erect and tall cultivar with an average height of 45 cm. It develops 2 to 3 primary branches per plant. The first pod-bearing node is about 16 cm above ground level, which allows machine harvest with minimum loss. Its leaves are light green with pubescence and comprised of 10 to 14 narrow leaflets. The stem is green and flowers are white. Plants bear an average of 35 pods, each of which contains one seed with beige testa color, but with bright red cotyledons. Pods of Hamria are nonpigmented and are borne two per peduncle. Seeds are small and average with about 3 g 100⁻² seeds.

Hamria flowers in 90 d and matures in 130 d. Seed of Hamria is maintained at INRA, Settat, Morocco, and also at the Germplasm Program, ICARDA, Aleppo, Syria, and is available in small quantities on written request. Plant variety protection will not be sought for Hamria.

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References


B. Sakr, INRA, Settat, Morocco; A. Sarker, H. El Hassan, N. Kadah, B.A. Karim, and W. Erskine, International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria. Registration by CSSA. Accepted 31 July 2003. *Corresponding author (A.Sarker@cgiar.org).

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Registration of ‘Bichette’ Lentil

‘Bichette’ lentil (Lens culinaris Medik.) (Reg. no. CV-17, PI 633421) was released in Morocco by the National Institute for Agronomic Research (INRA), Settat in 1999. Bichette is a medium large-seeded high-yielding lentil with wide adaptation, and hence is recommended for cultivation in all lentil-production areas in Morocco.

Bichette was introduced to Morocco in 1987 from the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, through the Food Legume International Nursery Program. It is a selection from a landrace originating from Jordan (76TA 66005) and has been registered in the Lentil Germplasm Catalog of the Genetic Resources Unit of ICARDA as ILL 5562.

Bichette (ILL 5562) was initially identified as a promising line at Sidi El Aidi, an INRA experimental station in the semi dry areas of Morocco, which receives an annual average rainfall of 300 mm. The line was subsequently tested in 1991 in a replicated preliminary yield trial conducted at Marchouch station (rainfall, 400 mm), where it showed a very high yield potential of 2840 kg ha⁻¹. In 1993-1994 and 1994-1995, the line was evaluated in advanced yield trials at two sites; Jemat Shaim (rainfall, 330 mm) and Marchouch. The line again showed superiority in yield at both sites over a number of test entries, including the improved check, L 24.

From 1995-1996 to 1998-1999, Bichette was evaluated at four sites representing the major production zones of lentil in Morocco. Three of these sites (Sidi El Aidi, Jemat Shaim, and Marchouch) are located in the plains, while Annoceur (rainfall, 450 mm) is located in the mid-Atlas Mountains. Over this period and across four locations, ILL 5562 produced an average yield of 1321 kg ha⁻¹ compared with 955 kg ha⁻¹ for the check L 24, an increase of 38%. No significant genotype × environment interaction was observed, indicating that Bichette is widely adapted.

Good performance of Bichette has also been observed at farmers’ fields. During 1996-1997 and 1997-1998 cropping seasons, two farmers located in the areas of Sidi El Aidi and Jemat Shaim conducted four on-farm demonstration trials. In those trials, Bichette produced twice the yield when compared