Registration of ‘Ejere’, a Kabuli Chickpea

R.S. Malhotra,* Geletu Bejiga, Yadeta Anbessa, Million Eshete, Negussie Tadesse, Ketama Daba, Asnak Fikre, Seid Ahmed, and Gaby Khalaf

‘Ejere’ (Reg. No. CV-276, PI 643436) is a Kabuli chickpea (Cicer arietinum L.) cultivar developed by the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, and released by the National Chickpea Research Project, Debre Zeit Agricultural Research Center in Ethiopia in 2005. Ejere, tested as ICARDA accession number FLIP 97-263C, is high yielding, resistant to Fusarium wilt [caused by Fusarium oxysporum Schlechtend.: Fr. f. sp. ciceris (Padwick)], semi-erect in growth habit, large-seeded, and recommended for general cultivation in mid- to high-altitude areas of semimost agro-ecological zones in Ethiopia.

Ejere is a breeding line developed from the cross FLIP 87-59C/UC15 made in 1994 at ICARDA’s headquarters in Tel Hadya, near Aleppo, Syria (36°01´ N, 36°56´ E, 284 masl). One of the parents, FLIP 87-59C, was also developed at ICARDA, following pedigree selection from the cross ILC 3843/FLIP 82-130C made in 1985. Similarly, FLIP 82-130C was developed at ICARDA from the cross ILC 262/ILC 783 made in 1979.

The F1 between FLIP 87-59C and UC15 was advanced during the 1994 off-season (June–Oct.) at ICARDA’s research station in Terbol, in the Beqaa’s Valley in Lebanon (33°49´ N, 35°59´ E, 890 m above sea level). F2 seeds were planted in a Fusarium wilt-infected plot at Tel Hadya in February 1995. Resistant F1 plants were selected and grown at Terbol in the 1995 off-season in progeny rows. Selected individual F1 plants from each progeny were harvested and their seeds planted in progeny rows on wilt-infected plots in Tel Hadya. The pedigree method of breeding was followed through F5. Finally, agronomically uniform, wilt-resistant progenies were bulked in 1997. Seed yield and other agronomic traits were evaluated in a preliminary yield trial at Tel Hadya during the winter season of 1997–1998. Elite lines from this trial were assigned FLIP 97 (Food Legume Improvement Program 1997) numbers by ICARDA and shared with national research programs in southerly latitudes. One of these lines was FLIP 97-263C, later named Ejere.

Ejere was distributed to the Ethiopian Agricultural Research Organization (EARO) in 1998, as part of the Chickpea International Elite Screening Nursery-Southerly Latitudes 2-1999 (CIEN-SL2-1999). It was evaluated (along with other lines) for six seasons in Ethiopia: initial and final evaluation trials in 1999, 2000, and 2001, and multilocational national variety trials from 2001–2002 to 2003–2004 seasons at Arsi Robe, Debre Zeit, Akaki, Chefe Donsa, Pave, Adet, Enewari, and Ambo. In the national trials, it gave yields similar to the standard check ‘Arerti’ and was 25% higher than the local check ‘DZ-10-4’.

Ejere is resistant to Fusarium wilt (rating of 3 on 1–9 scale, where 1 = no disease, 9 = killed by disease), is semi-erect in growth habit (34.2 cm tall), has compound leaves, and takes about 59 d to flower. It has large seeds (100-seed weight 37.2 g) that are the typical kabuli type (ram-head shaped) and beige colored. Traders, and especially exporters, expressed a preference for this variety because of its large seed size and typical Kabuli nature.

Ejere was released by the variety release committee in 2005 for general cultivation in mid- to high-altitude areas in Ethiopia’s semimost agro-ecological zones.

Seed of Ejere is maintained by the National Chickpea Research Project, Debre Zeit Agricultural Research Center, Debre Zeit, Ethiopia, and by ICARDA. Small quantities of seed can be obtained from Ethiopian Institute of Agricultural Research (EIAR) or ICARDA on written request. After five years from the date of publication of this registration article, seed can also be obtained from the USDA National Plant Germplasm System. Recipients are requested to acknowledge the source of the material whenever it is used for any research purposes.