REGISTRATIONS OF CULTIVARS

Registration of ‘Dahab Elgoz’ Cowpea

‘Dahab Elgoz’ cowpea [Vigna unguiculata (L.) Walp.] (Reg. no. CV-208, PI 632419, originally designated as IT84-S-2163) was developed by the International Institute of Tropical Agriculture (IITA) as well as at Elobied Research Station. Small samples for registration of ‘Dahab Elgoz’ were released in 1991, when the total rainfall in the season was only 230 mm. In 28 tests from 1998 to 2000, OLin averaged ≈ 10% lower yield than Tamspan 90 in Central Texas, West Texas, and southeastern Texas. In the 2000 season, OLin yielded 182 kg/ha more than Tamspan 90 in south Texas (E. Harz.) cultivar with a high oleic (O) and low linoleic (L) fatty acid ratio and good yield potential. The new variety was tested as Tx962120 and was released by the Texas Agricultural Experiment Station in January 2002. A joint release has been approved by the Oklahoma Agricultural Experiment Station and approval of the joint release by the USDA-ARS is expected.

OLin was developed as a single plant selection from a backcross with ‘Tamspan 90’ (Smith et al., 1991) as the recurrent parent and UF435-1 (Norden et al., 1987), the donor of the high O/L genes. The first cross was made in 1991 and the subsequent backcross in 1992. Individual plant selections were made in 1995 from the BC1F6 population based on plant and pod type, selections were planted in the greenhouse in early 1996 (BC1F6), and progeny rows were field planted later in 1996. This increase was used to conduct the first O/L analysis and the first yield test in 1997. From the 1999 yield test (BC1F6), 820 seed were tested for O/L ratio, 239 high O/L individual plants were harvested and progeny rows were grown in the 1999-2000 Puerto Rico winter increase nursery. The increase resulted in 240 kg of Breeder seed (BC2F3) which were later planted near Vernon, TX, during the summer of 2000 as Foundation seed production.

OLin has plant size equal to Tamspan 90. The main stem is semiaparent at most locations and seedling rates. The lateral branching is sparse, similar to Tamspan 90, and the branching pattern is mostly sequential. Leaf color is light green, also similar to Tamspan 90 (RHS 146A). Pods of OLin are similar in size and shape to Tamspan 90, mostly two-seeded (up to 1% three-seeded pods). Pod constriction between the seeds is slight, similar to Tamspan 90.

In 28 tests from 1998 to 2000, OLin averaged ~10% lower yield than Tamspan 90 in Central Texas, West Texas, and Southwest Oklahoma. Total sound mature kernels (TSMK) were equal between OLin and Tamspan 90 in these tests (68.7 vs. 68.4 %) as were 100-seed weights (43.7 vs. 43.6 g). In shelling tests, OLin was not significantly different (P > 0.05) from Tamspan 90 in jumbo or no. 1 seed size distribution. Splits, other kernels, damage kernels, and oil stocks were equal to Tamspan 90.

Quality analyses indicated no significant difference between OLin and Tamspan 90 except in O/L ratio (22.4:1 vs. 11.5:1) and iodine number (77.5 vs. 102). Other traits found to be equal were oil content (44.16%), protein content (29.49%), and iodine number (77.5 vs. 102). Other traits found to be equal were oil content (44.16%), protein content (29.49%), and iodine number (77.5 vs. 102). The first cross was made in 1991 and the subsequent backcross in 1992. Individual plant selections were made in 1995 from the BC1F6 population based on plant and pod type, selections were planted in the greenhouse in early 1996 (BC1F6), and progeny rows were field planted later in 1996. This increase was used to conduct the first O/L analysis and the first yield test in 1997. From the 1999 yield test (BC1F6), 820 seed were tested for O/L ratio, 239 high O/L individual plants were harvested and progeny rows were grown in the 1999-2000 Puerto Rico winter increase nursery. The increase resulted in 240 kg of Breeder seed (BC2F3) which were later planted near Vernon, TX, during the summer of 2000 as Foundation seed production.

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