Registration of ‘Vuli-1’ Cowpea

‘Vuli-1’ cowpea [Vigna unguiculata (L.) Walp.] (Reg.no.Cv-270, PI 532803) originally designated as IT82D-889 was developed by the International Institute of Tropical Agriculture (IITA) and distributed to various national programs in 1984 as a part of the early maturing cowpea international trial for evaluation and selection of suitable cultivars adapted to local conditions. Based on its superior performance and earliness, it was named as Vuli-1 (Vuli means short rains in Kiswahili) and formally released for cultivation in Tanzania by the National Variety Release Sub-Committee in 1989 and endorsed for large scale seed multiplication by the Seed Production Committee of the Ministry of Agriculture and Livestock Development of the United Republic of Tanzania (Mligo, 1989).

Vuli-1 is an F6 plant progeny selected from the cross TKx133–16D-2/[TVu 1190/1247]/TVu 2616, TKx 133–16D-2 is derived from the cross P33–1C/[TVu 410/SVS-3//SVS-3]/TVu 625. P33–1C is a germplasm line from India, TVu 410 is ‘Texas Purple Hull’ cowpea from the USA. TVu 625 is selection number A 10 from Nigeria. SVS-3 is a popular variety from Tanzania. TVu 1190 is V.U.5 from Kenya. TVu 2616 is FC 31660 from the USA, and 1247 is a line from India. Thus, Vuli-1 is derived from a mixed gene pool from different continents.

Vuli-1 was initially evaluated at Ilonga, and later tested for 3 yr in the national multi-location cowpea variety trials from 1985 to 1987. Locations included Ilonga, Hombolo, Ukiriguru, Tumbi and Milingano which cover the major cowpea growing region in Tanzania. Vuli-1 is an early maturing (60–65 d) variety with erect growth habit, medium size broad leaves, purple flowers and upright peduncles with pods over the canopy. It has long pods (24–27 cm) with 15 to 18 seeds per pod and small-medium size red seeds (13 g 100 seeds) with smooth testa. It has about 27% protein with fast cooking quality. The mean grain yield of Vuli-1 was 1481 kg ha−1 with 53 d to maturity compared to 1343 kg ha−1 of the best check variety, ‘Tumaini’ with 65 d to maturity. Its red seed color is an advantage in Tanzania as it is consumed similarly to red kidney beans. This variety is also resistant to pod shattering and lodging and does not require multiple harvest. It is resistant to major diseases including anthracnose (caused by Colletotrichum lindemuthianum Sacc. & Magn.), web blight (caused by Rhizoctonia solani Kuhn), brown blotch (caused by Colletotrichum capsici Syd.), Cercospora leaf spots (caused by Cercospora cruenta Latham and Cercospora canescens) and Septoria leaf spot (caused by Septoria vignae) as well as all the major viruses such as cowpea yellow mosaic, southern bean mosaic and cowpea mosaic (van Boxtel et al., 2000). This has become a popular cultivar in many parts of Tanzania. This cultivar has been tested and released for general cultivation in many other countries such as Belize, Bolivia, Guinea Bissau, Nepal (as ‘Prakash’ meaning light), Somalia, Sri Lanka (as ‘Waruni’), Swaziland (‘Umtilane’), and Zimbabwe.

Breeder seed of this variety is being maintained by the International Institute of Tropical Agriculture and Ilonga Agricultural Research Institute (IARI), Kilosa. Small quantities of seed are available on request for research purposes by the developers for the first 5 yr, and thereafter, by the USDA National Plant Germplasm System. Recipients of seeds are asked to make appropriate recognition of the germplasm if it is used in the development of a new cultivar, germplasm, parental line, or genetic stock. Plant variety protection will not be sought for Vuli-1.

J.K. Mligo

References
