Registration of ‘NGVU-05-25’ Cowpea Cultivar

‘NGVU-05-25’ cowpea [Vigna unguiculata (L.) Walp.] (Reg. no. CV-261, PI 632848), originally tested as IT90K-277-2 was developed by the International Institute of Tropical Agriculture (IITA) and distributed to various national programs in 1993 as a part of the medium-maturing cowpea international trial for evaluation and selection of suitable cultivars adapted to local conditions. This variety was included in the medium-maturing cowpea variety trial under the Nationally Coordinated Cowpea Research Project in 1996 and tested at several locations from 1996 to 2001. The test locations included Ibadan, Ikene, Abeokuta, and Il-Ife in the humid forest zone, Samaru and Bauchi in the subhumid zone, and Maiduguri and Kano in the dry Savanna. The average yield of IT90K-277-2 over all the locations and years was 1172 kg ha\(^{-1}\) compared with 942 kg ha\(^{-1}\) for the improved check variety IAR 48. On the basis of its consistently high yield, wide adaptation, and resistance to major insects and diseases, IT90K-277-2 was recommended for release and large scale on-farm testing in 1999. The on-farm trials at many farmers’ fields from 1999 to 2001 in Kano, Jigawa, and Bauchi states showed consistent superiority of IT90K-277-2. On the basis of the average of 3 yr and several locations, IT90K-277-2 showed about 34% superiority in grain yield over the farmers’ varieties. Farmers saved seed from the on-farm trials and began cultivating IT90K-277-2 before formal release. Considering its consistent superior performance and popularity among farmers, the National Variety Release Committee gave it the national code name of ‘NGVU-05-25’ and released it formally in 2005 for cultivation in Nigeria (NCGRB 2005). The committee gives the national code number NGVU (Nigerian Vigna unguiculata) for each released cowpea variety with the year of release, but the varieties are often referred to by their original numbers in which they were tested by farmers in mandatory on-farm tests before the release.

NGVU-05–25 is a pure line derived from an F6 plant progeny from a three-way cross, IT87F-1777-2/TVx3236 at the International Institute of Tropical Agriculture (IITA), Kano Station. IT87F-1777-2 is a single plant selection from a local land race ‘Kananado’ in Kano State, Nigeria that has straight pods and is resistant to viruses while the source population has curled pods and is susceptible to these viruses. IT90K-2246-4 is derived from the cross IT82D-716/TVx3236. TVx3236 is derived from a three-way cross, TVx1193-9F/TVu2027//TVu625. TVx1193-9F came from the cross TVu1190/TVu76. TVu1190 is a land race, V.U.5, from Kenya and TVu76 is variety Prima (improved West bred from Nigeria). IT81D-1020 is derived from the cross TVx1193-9F/TVu2027. TVu2027 is a local land race ‘Kano-8’ from northern Nigeria. TVx3236 is derived from the cross TVu1509/Ife Brown. Of these, TVu1509 is selection No. H 27-1-1 and Ife Brown is an improved variety both from Nigeria. Thus, IT90K-277-2 also has diverse pedigree and a broad-based genetic background.

NGVU-05–25 has semi-erect plant type with some late growth habit. The leaves are broad and the variety is photoperiod-insensitive. The pods are borne on green, nonbranching peduncles with seeds reaching harvest maturity in 75 d. The pods are usually carried slightly over the canopy and are 20 cm in length. An average of 15 to 25 nonshelled seeds per pod are white with a rough texture and are medium sized (100 seeds\(^{-1}\)). The hilum is light brown. The grain contains 25% protein.

NGVU-05-25 is resistant to major diseases: mosaic virus [caused by *Colletotrichum lindemuthianum* (Lam.)] and black spot (caused by *Cercospora pecifolii* Ellis & Martin). It is also resistant to aphid (*Aphis craccivora*) and bruchid (*Callosobruchus maculatus* Koch) and bruchid (*Callosobruchus maculatus*) is a well-adapted variety in all parts of Nigeria but is especially popular in the northern states of Nigeria. This variety has also been released in Cameroon as GLM-93 (Singh et al., 2002).

Breeder seeds of this variety is being mailed as well as at the Institute for Agricultural Research and Development, Bello University (IAR/ABU). Small quantities of breeder seeds are also being provided for research purposes on request. The authors do not wish to file for patent or intellectual property rights for this variety.

B.B. Singh,* O.O. Olufajo, M.F. Ishiyaku, H.A. Ajeigbe, AND S.G. Mohammed

References


B.B. Singh, R.A. Adeleke, and H.A. Ajeigbe, International Institute of Tropical Agriculture (IITA) Kano Station, PMB 1044, Ahmed Bello Univ. (IAR/ABU), PMB 1044, Zaria, Nigeria. Received 15 Apr. 2006. *Corresponding author (b.singh@cgiar.org).

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