REGISTRATION OF CROP CULTIVARS

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References and Notes


REGISTRATION OF 14 COWPEA CULTIVARS

Research on genetics of host plant resistance to insect pests in cowpea [Vigna unguiculata (L.) Walp.] was initiated at the International Centre of Insect Physiology and Ecology (ICIPE) in late 1980. During the past 4 yrs, a number of local cowpea cultivars were developed from different sources, their names created identification difficulties. They were being referred to by various names and descriptions. The Ad-hoc committee of the ICIPE for naming crop cultivars recommended that all cowpea cultivars developed or improved at ICIPE be described and registered under the name of ICV (IC = ICIPE, V = Vigna genus). A brief description of parentage, origin, pest resistance, and botanic and agronomic characteristics for 14 new ICPIE cowpea cultivars is as follows.

ICV1 (Reg. no. 52), a single-plant selection from landraces of eastern Kenya, was formerly known as Katuli 107. It has a spreading, indeterminate growth habit with small leaves, dark purplish-blue flowers, and green stems and pods. Mean pod length is 16 cm with 14 seeds/pod. Seed color is creamy white and a 100-seed weight of 12 g. Canopy height is about 25 cm. Length of peduncle is about 25 cm, with most of them appearing above the canopy. ICV1, an early maturing cultivar (60 days), is well-adapted to semi-arid areas. Grain yields are about 1800 kg/ha under normal management practices. It has good tolerance to common diseases and pests, particularly foliage beetle (Ototeca mutabilis (Sahilberg)) leafhoppers (Empoasca spp.) legume bud thrips (Megatrichos gossidu (Trybom)) and legume pod borer (Maruca testulalis (Geyler)), but is susceptible to powdery mildew (caused by Erysiphe polygoni (= Oidium sp.) and cowpea aphids (Aphis craccivora Koch) under high infestation.

Formerly known as Katuli 108, ICV2 (Reg. no. 53) is a single-plant selection from landraces of eastern Kenya. Its botanical and agronomic characteristics are similar to those of ICV1. This cultivar, however, is slightly superior to ICV1 in grain yield and tolerance to pod sucking bugs, particularly several species in the genera Acanthomia, Anaplocnemis, Riptortus, the green stink bug, Nasara viridula (L.), and legume pod borer. Grain yields are about 2000 kg/ha. It has a good potential for large scale cultivation, both under monocrop and intercrop in the marginal to medium rainfall areas of Kenya.

ICV3 (Reg. no. 54), a single-plant selection from landraces of eastern Kenya, was formerly known as Machakos 66. It is characterized by a semi-erect, indeterminate-growth habit, large leaflets, light purplish-blue flowers, green stems, and purplish-red pods with a green pod ridge. Mean pod length is 20 cm with 18 brown seeds/pod, and a 100-seed weight of 15 g. Canopy height is about 40 cm. ICV3, a late-maturing cultivar (70 days) is adapted to medium rainfall areas. Grain yields are about 1500 kg/ha, but yields are higher under good management conditions. It has good tolerance to foliar pests, moderate tolerance to legume pod borer, but is susceptible to cowpea aphids under high infestation. It has good resistance to common cowpea diseases, except target spot (caused by Corynespora cassiicola = Cercospora vignicola).

Formerly known as Machakos 68, ICV4 (Reg. no. 55), is a single-plant selection from landraces of eastern Kenya. Its botanical and agronomic characteristics are similar to those of ICV3. This cultivar, however, is slightly higher yielding (1500 kg/ha) than ICV3. Mean pod length is 20 cm with 18 brown seeds/pod, and a 100-seed weight of 16 g. It has a light purplish-red pod with a green-pod ridge. It has a canopy height of 42 cm.

ICV5 (Reg. no. 56), a single-plant selection from landraces of eastern Uganda, was formerly known as Emma 60. It is distinguished from other cultivars by purplish-red stems, leaf veins and stalks, light purple-blue flowers, dark purple pods, and pinkish-brown seeds. It has a spreading growth habit with peduncles appearing at canopy level. It is well adapted to medium rainfall areas. Mean pod length is about 16 cm with 15 seeds/pod and a 100-seed weight of 14 g. Canopy height is 26 cm. It is a medium maturity cultivar (65 days). Its grain yield is about 1500 kg/ha under normal management practices. ICV5 has fair tolerance to common diseases and pests, except target spot.

Formerly known as Ex-Luanda, ICV6 (Reg. no. 57) is a mixture of pure lines selected from landraces of western Kenya. It is a dual-purpose cultivar capable of producing good foliage and grain yields, with a semi-erect, indeterminate growth habit within a canopy height of 50 cm. It has dark bluish-purple flowers and green stems and pods. Mean pod length is 15 cm having 14 seeds/pod. Seed color is purplish-black and a 100 seed weight of 13 g. The pods are formed within the canopy. It is a medium maturity cultivar (65 days). Its grain yield is about 1500 kg/ha under normal management practices. Also, it is capable of producing leaf yields of 8.00 t/ha over the season, if all edible leaves are picked. Comparatively, this cultivar is susceptible to common pests, particularly, leafhoppers, thrips, pod sucking bug, legume pod borer, and aphids.

ICV7 (Reg. no. 58) was developed from the cross between ICV5 and Makueni 1/5/8. It has a semi-erect growth habit with light bluish-purple flowers and green stems and pods. Mean pod length is 14 cm with 13 pinkish-brown seeds/pod, and a 100-seed weight of 11 g. Canopy height is 28 cm. It is adapted to low and medium rainfall areas and takes 65 days to mature. Its grain yield is about 1500 kg/ha. This cultivar has good tolerance to common diseases and pests.

ICV8 (Reg. no. 59) was developed from the cross between TVu 1509 and Katuli 102. It has a semi-erect, determinate growth habit with creamy-white flowers and green stems and pods. Mean pod length is 14 cm with 13 seeds/pod. Seed color is creamy-white with brown pigmentation around the hilum and a 100-seed weight of 10 g. Canopy height is 27 cm and long peduncles appear above the canopy. ICV8, a grain-type cultivar, is adapted to low to medium rainfall areas and takes about 66 days to mature. Its grain yield is about 1700 kg/ha under normal management conditions. It has good resistance to common diseases and pests, particularly, legume bud thrips and pod borer.

ICV9 (Reg. no. 60) was developed from the cross between ICV3 and ICV5. It has a semi-erect to spreading growth habit with dark purple-blue flowers, and purple-red stems, dark purple lanceolate leaves and pods with green patches. Mean pod length is 15 cm with 14 purple-brown seeds/pod and a 100-seed weight of 12 g. Canopy height is about 37 cm. It is a grain-type cultivar with medium maturity (65 days). Its grain yield is about 1300 kg/ha. This cultivar has good resistance to common diseases and pests.