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Registration of Crop Cultivars

REGISTRATION OF 'WRANGLER' ALFALFA

'WRANGLER' alfalfa (*Medicago sativa* L.) (Reg. no. 142) was developed cooperatively by the USDA-ARS and the Nebraska and Minnesota Agricultural Experiment Stations. It was tested as N.S. 79 P2 and released jointly with the Colorado, Kansas, Minnesota, and Wyoming Agricultural Experiment Stations in March 1985.

Wrangler was developed by conducting two cycles of recurrent phenotypic selection for phytophthora root rot resistance at St. Paul, MN, in the population N.S. 79. Approximately 100 plants were recombined at Lincoln, NE, after each cycle of selection. The N.S. 79 population resulted from combining 112 plants selected for pest resistance and vigor in winterhardy germplasm from the Nebraska USDA and Agricultural Experiment Station breeding program. The estimated genetic constitution of Wrangler is: 5% *M. falcata*, 5% 'Ladak', 20% *M. varia*, 65% Turkistan, and 5% Chilean. Four plant introductions (PI's 197298, 206278, 207494, and 234205) were included in the parentage.

Wrangler has high resistance to phytophthora root rot (caused by *Phytophthora megasperma* Drechs. f. sp. *medicaginis* Kuan and Erwin) compared with resistance in 'Agate'. It has high resistance to pea aphid [*Acyrthosiphon pisum* (Harris)], similar to that of 'Dawson' and 'Kanza'. It has high resistance to biotypes of the spotted alfalfa aphid [*Therioaphis maculata* (Buckton)] collected in Nebraska, compared with resistance in Dawson and Kanza. Wrangler has resistance to bacterial wilt [caused by *Corynebacterium insidiosum* (McCull.) H.L. Jens.], similar to that of 'Vernal'. It has resistance to fusarium wilt (caused by *Fusarium oxysporum* Schlecht f. sp. *medicaginis* (Weimer) Synd. and Hans.), compared with high resistance in 'Agate'. It has moderate resistance to downy mildew, (caused by *Peronospora trifoliorum* d By.), and to potato leafhopper yellowing [*Empoasca fabae* (Harris)], similar to that of Vernal. It has low resistance to verticillium wilt (caused by *Verticillium alboatrum* Reinke and Berth). Wrangler has low resistance to anthracnose (caused by *Colletotrichum trifolii* Bain), under field conditions, similar to that of 'Baker' and 'Riley'. Reaction to stem nematode [Ditylenchus dipsaci (Kuhn) Filipjev] is unknown.

Wrangler is a winterhardy cultivar adapted and intended for use in the North Central states and adjacent area. It was tested for forage yields in eight North Central states, Colorado, and Wyoming, and for seed yields in California and Idaho.

Seed increase is limited to one generation each of breeder, foundation, and certified seed. Certified seed (syn-3 or -4) may be grown only from breeder (syn-2) or foundation (syn-3) seed. The length of stand in years is breeder 2; foundation 3 (with a 4th yr optional depending on breeder approval); and certified 6. Enough breeder seed for the anticipated life of the cultivar is in cold storage at the Nebraska Agricultural Experiment Station. Foundation seed is available from the Nebraska Foundation Seed Division, 3115 N. 70th, Lincoln, NE 68507. Certified seed was available in the spring of 1985.

Wrangler was favorably reviewed by the National Certified Alfalfa Variety Review Board at the December 1984 meeting. Application was made for plant variety protection under the certification provision.

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References and Notes

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REGISTRATION OF 'DES 119' COTTON

'DES' 119' cotton (*Gossypium hirsutum* L.) (Reg. no. 88), was developed at the Delta Branch, Mississippi Agricultural and Forestry Experiment Station, Stoneville, MS, and released in 1985. DES 119 originated from a cross between 'DES 24' (Reg. no. 69 and P.V. no. 7800040) and DES 2134-047. DES 2134-047 is a sister line of 'DES 56' (Reg. no. 70 and P.V. no. 7800041). DES 119 is from a single plant selection in the F_2 generation and a subsequent reselection in the F_8 generation. DES 119 was previously evaluated as a strain designated as DES 11913.

DES 119 is an early maturing, rapid fruiting cotton that possesses a semicluster or short-fruiting branch plant structure. The fruiting branches of DES 119 are shorter and the plants are more compact than those of 'DES 422' (Reg. no. 80 and P.V. no. 81000170). DES 119 has a significantly higher lint percentage, longer and stronger fiber, and a higher fiber elongation and micronaire value than DES 422. The boll and seed size of DES 119 are approximately the same as those of DES 422. In 27 Mississippi tests (1982 to 1984), DES 119 has averaged 8% higher lint yields than DES 422 and was consistently higher in all 27 tests. It has also shown less fusarium wilt symptoms [caused by *Fusarium oxysporum* Schlect. f. vasinfectum (Atk.) Synd. and Hans.] than DES 422 in the Regional Fusarium Wilt Nursery at Tallassee, AL, and more resistance to *Heliothis* spp. than DES 422 at Stoneville, MS. DES 119 has also shown the ability to produce higher yields than DES 422 in the presence of the tarnished plant bug [*Lygus lineolaris* (Palisot de Beauvois)] at Stoneville.

DES 119 is adapted primarily to conditions of the Mississippi Delta, but data from other states (Arkansas, Louisiana, Tennessee, and Texas) shows it has wide adaptability.

Mississippi Foundation Seed Stocks will produce foundation seed for sale to breeding firms and individuals meeting all requirements of the Mississippi Agricultural and Forestry Experiment Station and the Mississippi Seed Improvement Association.

Breeder seed will be maintained by the Delta Branch, Mis-

sissippi Agricultural and Forestry Experiment Station. Variety protection has been applied for under the Variety Protection Act, Public Law 91-557.

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References and Notes

1. Plant Breeder, Delta Branch, Mississippi Agric. and Forestry Exp. Stn., Stoneville, MS. Published as Journal Paper no. 6212 of the Mississippi Agric. and Forestry Exp. Stn. Registration by Crop Sci. Soc. of Am. Accepted 29 Nov. 1985.

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 ICIPE 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 [*Ootheca mutabilis* (Sahlberg)] leafhoppers (*Empoasca* spp.) legume bud thrips [*Megalurothrips sjostedti* (Trybom)] and legume pod borer [*Maruca testulalis* (Geyer)]; 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 botanic and agronomic characteristics are similiar to those of ICV1. This cultivar, however, is slightly superior to ICV1 in grain yield and tolerance to pod sucking bugs, particularly several coreids in the genera *Acanthomia*, *Anaplocnemis*, *Riptortus*, the green stink bug, *Nazara 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 1300 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 botanic and agronomic characteristics are similiar 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 bugs, legume pod borer, and aphids.

ICV7 (Reg. no. 58) was developed from the cross between ICV5 and Makueni 1/5/B. 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 to 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. ICV 8, 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.