with the determinate growth habit (dttdt). Duocrop has white flowers, grey pubescence, and tan pod walls. Seeds are yellow with buff hila and average 16 g/100 seeds. It is resistant to powdery mildew, bacterial pustule [caused by Xanthomonas phaseoli (E. F. Smith) Dows. var. sojensis (Hedges)] Starr & Burkh., wildfire [caused by Pseudomonas tabarii (Wolf & Foster)] F. L. Stevens, and Irgoyene leaf spot [caused by Cercosporella sojae Har.]. Duocrop has field resistance to phytophthora rot [caused by Phytophthora megasperma Drechs. var. sojae] A. A. Hildebr. It is susceptible to root-knot nematode [Meloidogyne incognita (Kofoid & White) Chitwood] and soybean cyst nematode [Heterodera glycines Ichinohe]. It is also susceptible to peanut mottle virus and cowpea chlorotic mottle virus (soybean strain).

When planted after 25 June in 16 experiments in Georgia and South Carolina, Duocrop averaged 23, 17, and 29% greater plant height than Davis, Bragg, and 'Hutton', respectively. It also averaged at least 4% higher in seed yield than the same three cultivars. Protein content of the seed is slightly lower and oil content slightly higher than 'Hutton'. Duocrop has similar shatter resistance and seed quality to Bragg and 'Hutton'. When planted prior to 20 June, it will produce excessive vegetative growth which can result in severe lodging and yield reduction. Thus, it is specifically adapted to planting after 20 June.

Breeder seed of Duocrop was distributed to seed producing organizations in Georgia and South Carolina in 1982. Breeder seed will be maintained by the Georgia Agric. Exp. Stns. by scientists.

**REGISTRATION OF CROP CULTIVARS**

REGISTRATION OF MEAD SOYBEAN¹

J. H. Williams, J. E. Specht, A. F. Dreier, and R. S. Moomaw

`Mead` soybean [Glycine max (L.) Merr.] originated as a F₁ plant selection from the cross 'Bonus' × 'Wayne' in the cooperative program of the Nebraska Agric. Exp. Stn. and USDA-ARS. The cross was made at the Purdue Agric. Exp. Stn. The F₂ and subsequent generations were advanced at the Univ. of Nebraska Mead Field Laboratory. A single pod was taken from each F₂ plant and composited for growing the bulk F₃ population. This was harvested in bulk for growing the F₄ population from which single plants were taken. Prior to its release, Mead was designated U36376 and evaluated in Nebraska nurseries from 1974 to 1980 and in cooperative Uniform Soybean Tests III, Northern States from 1978 to 1980.

Mead is in the Group III maturity and matures 1 day earlier than 'Woodworth'. It is best adapted to approximately 40° to 42° N Lat. In Nebraska irrigated and nonirrigated tests, Mead consistently yielded 5 to 8% higher and had better lodging resistance than Woodworth or 'Hutton'. Mead has an indeterminate stem growth habit. It has shorter internodes and averages two less nodes than Woodworth or 'Hutton' and as a result averages 15 cm shorter. Mead has purple flowers, tawny pubescence, and tan pod walls. Seeds of Mead, in comparison to Woodworth, are about 0.6 g/100 seeds heavier, contain about 5% more protein and 4% less oil. In high lime soils, it shows moderate chlorosis similar to 'Williams 79'. Mead has a similar heat-tolerance rating as Williams determined by the cellular membrane thermostability test.³ In greenhouse and field tests it has shown moderate resistance to metribuzin injury.

Mead is heterogeneous for resistance to races 1 and 2 of Phytophthora megasperma (Drechs.) var. sojae A. A. Hildebrand, and shows moderate resistance to phytophthora rot in field tests. Mead was released in March 1981 by the Nebraska Agric. Exp. Stn., which has designated the seed classes of Mead as breeder, foundation, registered and certified and will maintain breeder seed. Protection under U.S. Plant Variety Protection Act, Public Law 91-577 has been applied for by the Nebraska Agric. Exp. Stn. and seed of Mead may be sold only as a class of certified seed. Other information is published in Performance of Soybean Varieties in Nebraska 1980, EC 80-104 Coop. Ext. Serv., Univ. of Nebraska, Lincoln, NE 68583.

²Professor, associate professor and professor, Dep. of Agronomy, Lincoln; and professor of Agronomy, Northeast Station, Concord, respectively, Univ. of Nebraska, Lincoln, NE 68583.

REGISTRATION OF NMP-8 CLS₃

NOMDORMANT COMMON LEAF SPOT RESISTANT ALFALFA GERMPLASM¹

B. D. Thyr, O. J. Hunt, B. J. Hartman, T. J. McCoy, and T. R. Know³

NMP-8 CLS₃ alfalfa (Medicago sativa L.) was developed cooperatively by USDA-ARS and the Nevada Agricultural Experiment Station and released in 1981. The selection and evaluation of NMP-8 CLS₃ was carried out at Salinas, Calif. with the cooperation of I.O. Skoyen and R. T. Lewellen. It was selected for resistance to common leaf spot caused by Pseudopeziza medicaginis (Linh.) Sacc.

NMP-8 CLS₃ was developed through five cycles of phenotypic recurrent selection from NMP-8. Selection was conducted under natural field epiphytotics of common leaf spot. The evaluation procedure was similar to those described by Barnes et al., but it deviated in that both defoliation and leaf spot severity were used as criteria for discriminating among classes 2 through 5. Plants were rated on a 1 to 5 scale where 1 = plants without leaf spots, and 5 = plants with severe defoliation extending into the upper canopy.

The first three cycles of selection were made from fall evaluation of spring seedings. Each cycle contained approximately 1,000 plants from which to select. Selections were intercrossed by hand in the greenhouse at Reno, Nev. Cycles 4 and 5 were evaluated in the spring from fall seedings and involved approximately 1,100 and 700 plants, respectively. Selections were intercrossed in field isolation cages using honeybees and leafcutter bees. The number of plants intercrossed per selection cycle was approximately 180, 100, 200, 150, and 100, respectively.

²Research plant pathologist, USDA-ARS, College of Agriculture, Reno, NV 89557; research agronomist, USDA-ARS (retired); research agronomist, USDA-ARS (presently alfalfa breeder, Pioneer Hi-Bred Int., Inc., Kirman, Calif.); research geneticist, USDA-ARS, Reno, Nev.; and assistant professor of Plant Pathology, Univ. of Nevada, Reno, NV 89557, respectively.