REGISTRATION OF WL 504 ALFALFA¹
and WL 508 Alfalfa
(Reg. No. 51)
I. I. Kawaguchi and D. F. Beard

'WL 504' (Medicago sativa L.) is a nondormant, synthetic cultivar developed by the Waterman-Loomis Company. It is resistant to the spotted alfalfa aphid (Therioaphis maculata Buckton) and adapted to areas of the southwestern U. S. where 'Moapa' and 'Sonora' have been grown. Phenotypic recurrent selection was employed at Bakersfield, California, beginning in 1960 on spotted aphid and pea aphid screened nondormant selections and/or progenies of the following nondormant varieties: 'Sirsa No. 9,' 'Cal Common 49,' Moapa and 'African;' and from the dormant varieties: 'Atlantic,' 'Buffalo,' 'Vernal,' 'Ranger,' 'Williamsburg,' and 'Lahontan,' and from PI Numbers: 182502, 189209, 210184, 215035, 220518, and 231768. Screened seedlings were planted annually and rogued for type, seed production, and susceptibility to insects and diseases. WL 504 resulted from 92 selections made during the fifth cycle.

WL504 is similar to Moapa in winter dormancy, but was superior in forage production in several California tests. It is tolerant to downy mildew (Peronospora trifoliorum de Bary) and the pea aphid (Macrosiphum pisi Harris). The growth habit is upright and the flowers are purple to light purple.

WL504, tested experimentally as CX 54, was favorably reviewed by the National Certified Alfalfa Variety Review Board at its December 1970 meeting and subsequently approved for certification.

Equal quantities of seed of each of the 92 selected plants were composted and planted in isolation to produce breeder seed in Kern County, Calif. The reserve breeder seed is maintained in temperature-humidity controlled storage to meet future needs. Foundation seed is the first generation seed produced from fields planted with breeder seed in the San Joaquin Valley of California. Certified seed will be produced from fields planted with either foundation or breeder seed. No other class or generation will qualify for certified seed.

¹ Registered by the Crop Science Society of America. Received April 16, 1971.
² Research Agronomist and Vice President-Research, respectively, Waterman-Loomis Company, 1015 Chester Avenue, Bakersfield, Calif. 93301.

REGISTRATION OF WL 508 ALFALFA¹
(Reg. No. 52)
I. I. Kawaguchi and D. F. Beard

'WL 508' (Medicago sativa L.), developed by Waterman-Loomis Company, is a nondormant, synthetic cultivar resistant to the pea aphid (Macrosiphum pisi Harris) and the spotted alfalfa aphid (Therioaphis maculata Buckton). Phenotypic recurrent selection with the same population as described for cultivar 'WL 504' was continued for an additional three (3) cycles. Following a serious pea aphid and spotted alfalfa aphid attack in the fall of 1967, 95 plants highly resistant to both insects were selected. Selection was based also on freedom of symptoms of downy mildew (Peronospora trifoliorum de Bary) and other foliage diseases. WL 508 is equal to WL 504 in forage production, winter growth, and adaptation in the southwestern U. S., but superior to WL 504 in resistance to the pea aphid and spotted alfalfa aphid. WL 508 has flowers purple to light purple in color, the growth habit is upright, and it manifests frequent axillary branching.

WL 508, tested experimentally as CX 58, was favorably reviewed by the National Certified Alfalfa Variety Review Board during its December 1970 meeting and subsequently accepted for certification.

Equal quantities of seed of each selection were composited and planted in Kern County, Calif., to produce breeder seed which is maintained in temperature-humidity controlled storage to meet future needs. Foundation seed is the first generation seed produced from fields planted with breeder seed in the San Joaquin Valley of California. Certified seed will be produced from fields planted with either foundation or breeder seed. No other class or generation will qualify for certified seed.

REGISTRATION OF VICTORIA ALFALFA¹
(Reg. No. 53)
M. S. Offutt

'Victoria' alfalfa (Medicago sativa L.) was developed by the Arkansas Agricultural Experiment Station and released in 1969. Victoria is a synthetic made by recombinating nine parental clones. Source nurseries of about 500 creeping-rooted or rhizomatous plants were established in the fall of 1954 at Marie and Oseola, Ark. Fifty clones were selected and established in a polycross nursery in 1957 at Fayetteville. A test of their polycross progenies was conducted at Fayetteville and Keiser, Ark., from 1958 to 1960. This test also included S, progenies, parental clones, and cultivar checks. The nine parental clones (two from Can. Ma 5110, two from Can. Sc 3513, one from Can. Sc Ma 531, one from Neh. A 224 Syn. 3, two from 'Rhizoma,' and one of unknown origin) were selected on the basis of their polycross and S progeny performance during this 3-year period. Final testing was done under the experimental designation Ark. Syn. P-3.

Victoria has been included in performance trials at Fayetteville and Keiser, Ark., and Urbana and Carbondale, III. In these tests, forage yields of Victoria have been similar to those of 'Buffalo,' 'Cody,' and 'Vernal.' Victoria is resistant to the spotted alfalfa aphid (similar to Cody); it also has moderate levels of resistance to common leafspot, downy mildew, and Phytophthora root rot, and measurable levels of resistance to bacterial wilt, potato leafhoppers, and thrips.

Victoria is approximately equal to Vernal in winter dormancy scores. Flower color is quite variable, ranging from white through shades of yellow, green, and purple. Victoria produces wide, low crowns, a much-branched taproot with an inherent capacity to spread by means of creeping roots or rhizomes, a large number of relatively small stems per crown, and a semi-decumbent growth habit. In dense stands the creeping habit is seldom expressed and plants tend to grow more erect.

Area of probable adaptation includes northern Arkansas, northeastern Oklahoma, eastern Kansas, Missouri, southern Illinois, southern Indiana, western Kentucky, and western Tennessee.

Breeder seed is a compositive of equal amounts of seed from each of the nine parental clones grown in an isolated space-planted polycross nursery at Fayetteville, Ark. Seed classes are breeder, foundation, and certified. Foundation seed is the first generation seed increase of breeder seed from fields planted in the Central Alfalfa Region. Certified seed is the production from fields planted with either foundation or breeder seed. Parental clones and breeder seed will be maintained by the Arkansas Agricultural Experiment Station.


¹ Registered by the Crop Science Society of America. Published with the approval of the Director, Arkansas Agricultural Experiment Station, Fayetteville, Arkansas 72701. Received May 1, 1971.
² Professor of Agronomy, University of Arkansas.