Registration of Crop Cultivars

REGISTRATION OF KANZA ALFALFA
(Reg. No. 41)

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'KANZA' alfalfa (Medicago sativa L.) was developed cooperatively by the Crops Research Division of the U. S. Department of Agriculture and the Kansas Agricultural Experiment Station. It was named and released jointly by the Crops Research Division, USDA, and the Kansas, Nebraska, and Oklahoma Agricultural Experiment Stations in February, 1960.

Kanza is a 7-clone, synthetic variety tested experimentally as KS12. Parentage traces to 'Codl', 'Culver', 'Kansas Common', and 'Turkistan'. Elite bacterial wilt-resistant plants selected from polycross progenies of clones that trace to Kansas Common and Turkistan × Kansas Common derivatives were crossed with spotted alfalfa aphid resistant clones selected from Culver. The progenies were screened for resistance to the pea aphid, spotted alfalfa aphid and bacterial wilt. Plants selected from the survivors on bases of agronomic characteristics and disease resistance were crossed with plants derived from Codl through the same selection program. The seven parental clones of Kanza were the result of selection from the progenies for the same traits. Kanza has high resistance to the pea aphid, spotted alfalfa aphid, and bacterial wilt. It is more tolerant to potato leafhopper yellowing than Buffalo or Codl but is similar to those cultivars in reaction to downy mildew, summer blackstem, Leptosphaeria maculans leaf spot and bacterial leaf spot.

The winter hardiness and area of adaptation of Kanza appear to be similar to those of Buffalo and Codl. Forage yields were equal or superior to those of Buffalo or Codl in areas where the cultivars were compared. Kanza ranked high in a seed-production trial in California. Its foliage is dark green; flower color ranges from purple to blue.

Seed classes are breeder, foundation, registered, and certified. Breeder seed is a composite of equal amounts from each of the seven parent clones, which are intercrossed under isolation. Foundation seed is the first generation grown from breeder seed. Breeder and foundation seed will be produced under the direction of the Kansas Agricultural Experiment Station. Registered seed is the first generation grown from foundation seed in the Central Alfalfa Region. Certified seed may be grown only from foundation or registered seed. The National Certified Alfalfa Variety Review Board issued a favorable report in December, 1968, on the application for certification of Kanza.

1 Registered by the Crop Science Society of America. Received August 25, 1969. Contribution No. 1099, Department of Agronomy; No. 997, Department of Entomology; No. 240, Ft. Hays Branch, Kansas Agricultural Experiment Station, and the Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, Manhattan, Kansas.

2 Research Agronomist, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, Manhattan, Kansas. Entomologist, Kansas Agricultural Experiment Station (now deceased); Associate Agronomist and Associate Entomologist, Ft. Hays Branch Experiment Station, Hays, Kansas, respectively.

REGISTRATION OF WL 215 ALFALFA
(Reg. No. 42)

D. F. Beard

'WL 215' (Medicago sativa L.) is a hardy, persistent cultivar developed by the Waterman-Loomis Company and released in 1968. It is a 25-clone synthetic comprised of 16 selections from 'Vernal', 3 from 'Ranger', 3 from 'Atlantic' and 1 from 'Buffalo'. The parent clones survived 3 or more years of uncontrolled alfalfa weevil populations in Maryland during 1960-1963. Concurrently, most of these clones were progeny tested for forage yield and persistence in the Midwest.

In forage performance trials WL 215 has persisted better than either Vernal or 'WL 202' when harvested four times each year in northern Ohio and northern Illinois. Forage yields have been equal to or slightly higher than those cultivars in the first- and second-harvest years and significantly superior the third-harvest year. It has been more resistant to leafhopper yellowing and less fall-dormant than Vernal. The flowers of WL 215 are highly variegated with about 50% purple or blue. WL 215 was favorably reviewed by the National Certified Alfalfa Variety Review Board at its December 1968 meeting, and subsequently approved for certification.

Breeder seed is produced by honeybee pollination under cage or in isolated fields. Foundation seed is grown only by planting breeder seed in the northern area of adaptation. Certified seed will be produced only from fields established with foundation (or breeder) seed. No other seed generation or class of seed is to be used.

1 Registered by the Crop Science Society of America. Received August 25, 1969.
2 Vice President — Research, Waterman-Loomis Company, Bakersfield, California.

REGISTRATION OF WL 305 ALFALFA
(Reg. No. 43)

D. F. Beard

'WL 305' alfalfa (Medicago sativa L.) is an 8-clone wilt resistant synthetic cultivar developed by the Waterman-Loomis Company and first made available for trial plantings in 1967. Four of the parent clones were selected from 'WL 215' three from 'Vernal' and one from 'Atlantic'. Selection was based upon seed yielding capacity and resistance to leafhopper yellowing. The area to which WL 305 is adapted is similar to that of Buffalo and 'WL 305', where it exhibits only slightly more fall dormancy than those cultivars. In addition to its resistance to leafhopper yellowing, WL 305 has a significant level of resistance also to the pea and spotted alfalfa aphids, being superior in these characteristics to the cultivars Buffalo, 'Ranger' and Vernal. The forage yield of WL 305 has been comparable to that of WL 303 and superior to that of Buffalo. The flower color of WL 305 is predominantly purple with about 30% variegated, white and yellow.

WL 305 was favorably reviewed by the National Certified Alfalfa Variety Review Board at its December 1968 meeting, and subsequently approved for certification.

Breeder seed is produced by growing the eight parent clones in isolated open pollinations. Foundation or registered seed is produced from fields planted with breeder seed between the 35° and 43° parallels. Certified seed will be produced only from breeder seed or the first increase of breeder seed, whether it is foundation or registered.

1 Registered by the Crop Science Society of America. Received August 25, 1969.
2 Vice President — Research, Waterman-Loomis Company, Bakersfield, California.

REGISTRATION OF '520' ALFALFA
(Reg. No. 44)

Howard L. Garnahan, Jonas W. Miller, and Michael H. Yama

'520' alfalfa (Medicago sativa L.) is an 8-clonal wilt resistant, winter-hardy synthetic cultivar adapted to the Northern and Central areas where 'Vernal' and 'Ranger' are grown. It was developed cooperatively by the Arnold-Thomas Seed Service and Pioneer Hi-Bred Corn Co. Seed of this cultivar will be available for 1970 plantings. The parent clones were selected from 'Vernal' (two), 'Narragansett' (one), 'Arnim' (one), 'Culver' (two),"