REGISTRATION OF GRUNDY OATS¹
(Reg. No. 249)

K. J. Frey and J. A. Browning²

'Grundy' (Avena sativa L.), C.I. 8445, is a short, stiff-strawed oat cultivar adapted to the central and northern Corn Belt. It was named for Grundy County, Iowa, which is in a major oat producing area. Grundy is an early cultivar that produces medium-sized kernels, predominately light yellow. Hulls of 2.5% of the seeds fluoresce under ultraviolet light. This cultivar has short, upright, dark green leaves and semi-compact panicles.

Grundy was developed by the Iowa Agricultural Experiment Station and the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture from the cross 'Clintland' × 'Garry-5.' This cross was made in 1954, and the F₁ and F₂ generations were grown at Aberdeen, Idaho and Ames, Iowa respectively. From a large number of F₂ panicle rows grown in 1958, one that seemed promising (C 237-93) was selected for further pedigree selection. F₃ panicle rows were grown in 1959, and especially promising ones, including C 257-50-2, were advanced to four-row plots in 1960 and 1961. Since 1962, Grundy has been tested extensively in Iowa, and it was tested in the Uniform Early Oat Performance Nurseries in 1969 and 1970.

In Iowa tests (3 to 8 locations for each of 4 years), Grundy has outyielded other early cultivars, such as 'Multiline E 68,' 'Jaycee,' and 'Clintford,' by 5 to 8%. It produces grain medium to heavy in test-weight per bushel. Lodging resistance is equal to that of Clintford and 'Tippecanoe.' Grain quality is satisfactory for commercial milling.

Grundy has genes Pg₂ and Pg₄ conditioning resistance to Puccinia graminis avenae races 6, 7, 7A, and 8, but it is susceptible to the now prevalent races 6AF and 6AFH. This cultivar has field tolerance to many of the prevalent crown rust races, such as 294, 321 and 325. In Iowa tests in 1970 when there was heavy crown rust infection in central Iowa, Grundy grain yields were not depressed by the disease. It is susceptible to yellow dwarf virus and the Clintland race of Ustilago avenae.

Grundy was released in 1971. Breeder seed is available from the Iowa Agricultural Experiment Station.


²Professors of Plant Breeding and Plant Pathology, respectively.

REGISTRATION OF LANE OATS¹
(Reg. No. 250)

Wilson H. Foote and Warren E. Kronstad²

'Lane,' a grey winter oat (Avena sativa L.) C.I. 8435, was selected from a cross between 'Grey Winter'/'Lettoria' made in 1952 by workers at the Oregon Agricultural Experiment Station. Individual plant selections were made in F₁ rows on the basis of straw strength and kernel color. After extensive testing, head selections were made and increased for Breeder seed in 1967. The Oregon selection number was 59-289. Lane was released to growers in 1969.

Lane is a tall, mid to late winter oat with grey plump kernels. Culms are yellow and mid-sized. Panicles are unilaterial, erect, and spreading. Spikelets are two-flowered, separation is by fracture. The glumes are 18 to 20 mm long, 5 to 7 mm wide, boat shaped and colorless at maturity. Awns are numerous, twisted, and geniculate.

Lane is adapted to the winter oat growing area of western Oregon and is expected to replace the variety Grey Winter. It is higher in yield, has stronger straw, and is more winterhardy than Grey Winter.

Breeder seed is available from Agronomic Crop Science Department, Oregon State University, Corvallis, Oregon 97331.

¹Registered by the Crop Science Society of America. Received Jan. 17, 1972. Oregon Agricultural Experiment Station. Technical Paper Number 3214.

²Associate Director, Agricultural Experiment Station, and Associate Professor of Agronomy, Agronomic Crop Science Department, Oregon State University.

REGISTRATION OF NEW MEXICO VALENCIA A PEANUT¹
(Reg. No. 14)

D. C. Hsi and R. E. Finkner²

'New Mexico Valencia A' is a Valencia-type peanut (Arachis hypogaea L.) with bunch growth habit. It was developed from an individual plant selection of the 'New Mexico Valencia' cultivar which is a descendant of the 'Tennessee Red' cultivar that was introduced into New Mexico some 50 years ago. The new cultivar, designated experimentally as A 200, was released by the New Mexico State University Agricultural Experiment Station in 1971 as N.M. Valencia A.

New Mexico Valencia A was first selected from approximately 1,600 individual peanut plants in 1967. The plants were selected from the local Valencia-type peanuts grown in New Mexico and were progeny of four-kernel pods. N.M. Valencia A averaged 2,098 kg/ha, 19% more than the local check cultivar, in 3 years of progeny testing. This increase was significant at the 10% level of probability. N.M. Valencia is the locally accepted and competitive commercial cultivar and had a 3-year test average of 2,608 kg/ha. N.M. Valencia A also produced a higher proportion of three-kernel pods and significantly more four-kernel pods than the local check cultivar. Valencia-type peanuts are marketed almost exclusively for sale as roasted peanuts in the hull. Therefore, it is highly desirable to have pods which contain a high proportion of three and four kernels per pod. No significant difference between N.M. Valencia A and check were found in their reaction to black hull disease (Thielaviopsis basicola). Both were susceptible.

New Mexico Valencia A has the same plant and pod morphological features and the red testa color as the New Mexico Valencia cultivar.

Breeder seed of N.M. Valencia A will be maintained by the Plains Branch Station, NMSU, Agricultural Experiment Station, Clovis, New Mexico 88101.

¹Registered by the Crop Science Society of America. Approved for publication as Journal Article No. 404 by the Director, Agricultural Experiment Station, New Mexico State University, Las Cruces, New Mexico 88001. Received Jan. 3, 1972.

²Professor of Plant Pathology and Professor of Agronomy and Superintendent, Plains Branch Station, New Mexico State University, Clovis, New Mexico 88101.

REGISTRATION OF CS-S4 RICE¹
(Reg. No. 35)

C. Roy Adair¹, J. R. Thysell², J. J. Mastenbroek³, and H. L. Carnahan¹

'CS-S4' rice (Oryza sativa L.), C.I. 9835 was developed jointly by the Plant Science Research Division, Agricultural Research Service, U.S. Department of Agriculture, the California Cooperative Rice Research Foundation, Inc., and the California Agricultural Experiment Station. It was a pure line selection from the cross 487A1-12 × 'Caloro' made in 1957 at the Rice Experiment Station, Biggs, California. The parent, 487A1-12 was a glabrous (smooth-hull) selection from the cross C 1-1-1-2 × 'Caloro.' C 1-1-1-2 was selected from the cross Caloro × Smooth No. 3 (unrecorded origin). Selection and purification were carried out at the Biggs Station. During evaluation CS-S4 was designated 573465-1-4. The cultivar was released in 1971.

CS-S4 is a short-grown (pearl) cultivar which has a glabrous leaf blade, lemma and palea except some hairs are found on the margins of the leaf blades and on the lemma keel. None of the plant organs of CS-S4 contain anthocyanin pigment. The lack

¹Registered by the Crop Science Society of America. Received Nov. 27, 1971.


³Plant Breeder and Director of Plant Breeding, respectively, California Cooperative Rice Research Foundation, Inc., Biggs, Calif.