REGISTRATION OF CROP CULTIVARS

REGISTRATION OF BATES OATS
(Reg. No. 286)
Dale Sechler and J. M. Pochman

'BATES', CI 9211, is a spring oat (Avena sativa L.) selected in Missouri and released jointly by the Missouri and Nebraska Agricultural Experiment Stations. It originated from a single F₂ plant selection made in a space planted population of the cross 'Pettis' × 'Florida 500'. Bates was tested in state and regional trials as Missouri Selection 06072. It was grown in the Uniform Early Oat Nursery from 1973 through 1975.

Bates tillers well and has medium green, relatively drooping leaves. The panicle is medium sized, equilateral in shape, and light green in color at heading. When ripe, both the panicle and straw turn to a deep yellow color. Bates is slightly variable in plant height and in color change in the ripening process.

Genetic characters not considered in the selection process may be variable when Bates is grown in another environment.

Compared with Pettis, in Missouri over the past 3 years, Bates has averaged 2 days later in maturity, 10 cm shorter in height, 7% less in lodging, 1 kg/ha heavier in test weight, and 445 kg/ha higher in grain yield. Bates is more resistant than Pettis to the barley yellow dwarf virus (BYDV) disease, crown rust (Puccinia coronata f. sp. avenae (Cda.) Fraser and Led.), and smut (Ustilago avenae (Pers.) Rostr.). Kernel type of Bates is similar to that of Pettis, but it is slightly lighter in color and higher in oil.

Bates should be well adapted in the southern part of the spring oat region and is recommended in those areas where Pettis has been grown successfully.

Seed classes of Bates will include breeder, foundation, registered, and certified. Foundation seed was distributed in 1977. Breeder seed will be maintained by the Missouri Agricultural Experiment Station, Columbia, MO 65201.

REGISTRATION OF CEAL OATS
(Reg. No. 287)
R. L. Taylor

'CEAL', (Avena sativa L.), CI 9162, is a spring oat developed cooperatively by the Alaska Agricultural Experiment Station and the SEA-USDA. Ceal was selected from the cross 'Climax' × 'Eaton', made at the Matanuska Research Farm in 1951. Climax, CI 9161, probably of Swedish origin, has been grown in Alaska for many years. Ceal has been tested in Alaska as 551-51-7-185 since it was selected as a progeny row in 1955.

An early-maturing, mid-tall, white-glummed oat, Ceal's principal performance comparisons have been in the Matanuska Valley in southcentral Alaska. Here, in 15 seasons, it has produced an average grain yield of 2,692 kg/ha, 8% below that of 'Golden Rain', a longtime recommended oat cultivar for this area. Compared to Golden Rain, Ceal has averaged 5.8 days earlier in maturity, 1.14 cm shorter in height, and is superior in resistance to lodging. It was, however, 4% lower in test weight than Golden Rain. Yield component characteristics of Ceal include the production of 7% more culms and 20% fewer kernels per culm than Golden Rain. Kernel weight of the two cultivars has been equal. Crude protein content of Ceal grain has averaged 12.9%, about 16% above that of Golden Rain. Average forage dry matter yield, at 5,141 kg/ha, was 12% below that of Golden Rain.

Ceal is recommended for grain production in areas of Alaska where early maturity is required. It should become a successful cultivar in areas now marginal for maturity of this crop. Ceal is not recommended as a component in oat-pea forage mixtures.

Ceal was released to seed producers in 1972. Breeder, foundation, and certified seed are recognized. Breeder seed is maintained at the Alaska Agricultural Experiment Station, Palmer, AK 99645.

REGISTRATION OF LANG OATS
(Reg. No. 288)

C. M. Brown and H. Jedliński

'LANG' spring oats (Avena sativa L.), III. 67-1514, CI 9257, was developed cooperatively by the Illinois Agricultural Experiment Station and the SEA-USDA. Foundation seed was distributed to certified seed growers in Illinois and other North Central states for planting in the spring of 1977.

Lang resulted from a single plant selected in the F₂ generation of a cross of 'Tyler' × 'Orbit'. Lang has been tested as Sel. 67-1514 in Illinois since 1976, in the Uniform Early Oat Performance Nursery since 1972, and in the Uniform Midsenon Nursery since 1974. It is high yielding, early maturing, short, and lodging resistant. To date, Lang has a higher yield potential than other cultivars of similar maturity. Compared with 'Ote' and 'Jaycee', it is higher yielding, more lodging resistant, similar in height and maturity, and lower in test weight and grain protein percentage. Lang has good tolerance to barley yellow dwarf virus in the field under both controlled and natural conditions. It is susceptible to several races of crown (Puccinia coronata Cda. var. avenae Fraser & Led.) and stem rust (Puccinia graminis Pers. f. sp. avenae Eriks. & E. Henn.), but its early maturity should provide considerable protection. Lang is susceptible to at least one of the newer races of loose smut (Ustilago avenae (Pers.) Rostr.)

Based on performance in national tests, Lang has wide adaptation and will perform well in both northern and southern areas of spring oat production.

Most Lang kernels are yellow, non-fluorescent, slender, prominently veined, and finely tapered at the tip. The original breeder seed of Lang contained up to 1% of white seed that fluoresced. The primary kernel has a prominent, 1- to 3-cm long awn which usually separates from the kernel during threshing, but the point of attachment remains visible. The original increase contained some off-type plants (less than 0.5%) that were 8 to 12 cm taller and somewhat later in maturity than typical plants.

Breeder seed will be maintained by the Illinois Agricultural Experiment Station, Urbana, Ill.

REGISTRATION OF CHINOOK ORCHARD GRASS
(Reg. No. 8)

M. R. Hanna, S. Smoliak, and D. B. Wilson

'CHINOOK' orchard grass (Dactylis glomerata L.) was developed by the late R. W. Peake at the Agriculture Canada Research Station, Lethbridge, Alberta. It received License No. 766 in Canada on 8 July 1969, but a complete description of this cultivar has only recently been published.

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