**REGISTRATION OF HOUSTON OATS**

(Reg. No. 219)

I. M. Atkins, M. J. Norris, and P. E. Pawlisch

'Houston' oats, *Avena byzantina* L. C. I. 7912, Texas Selection 57C1716, was developed from a complex cross of 'Fulvin' 2 x 'Lee' x 'Victoria' 3 x 'Red Rustproof' 4 x 'Victoria' x 'Richland' 5 x 'Bond' x 'Rainbow' 2 x 'Hajira' x 'Joannette' 3 x 'Landhafer.' The cross was made in 1954 by I. M. Atkins. From advanced lines of the cross in yield trials, the final selection was made by P. E. Pawlisch in 1961. The basis of final selection was good agronomic type, excellent kernel type, and resistance to crown rust races 202, 203, 216, 290, and 294, then pressure in Illinois and susceptible to stem rust. It has good resistance to Victoria blight and cymal rot.

Exact classification of Houston as to species may be questioned as it has some characteristics of each. Plants are near spring habit, and the variety is very susceptible to cold injury, which limits its adaptation for fall seeding in Texas. The straw is short and strong, so the variety stands well for combine harvesting. The quality of grain is excellent. Kernels are medium large, light red to near white, with very light or no awns.

Houston has performed well in south Texas from fall seeding and is well adapted to spring seeding in northwest Texas. When fall seeded in the central Texas oat grain producing area, it is frequently damaged by low temperatures. Forage production of Houston was excellent, especially for the early fall season. It does not resist livestock trampling as well as the more protate types. Where the rust resistance of Houston is effective, the variety has performed well as a forage oat. Foundation seed of Houston oats was released in 1964.

1 Registered by the Crop Science Society of America. Received July 5, 1967. Cooperative investigation of the Texas Agricultural Experiment Station and the Crops Research Division, ARS, USDA. Approved for publication as Technical Article No. 5928 by the Director of the Texas Agricultural Experiment Station, College Station, Texas.

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3 Houston - A new grain and forage oat for south Texas. Texas Agricultural Experiment Station Release Leaflet L-674, 1964.

**REGISTRATION OF O'BRIEN OATS**

(Reg. No. 220)


'O'Brien,' *Avena sativa* L., C. I. 8174, is a tall, stiff-strawed oat that is well adapted to the northern two-thirds of Iowa and similar areas. It excels in northwestern Iowa and was named for O'Brien County (1). O'Brien is an early to midseason variety that produces plump, yellow seed on semi-loose panicles. Its leaves are droopy, yellow green, and borne on strong, wiry straw. O'Brien's most outstanding characteristic is that it is a tall oat that nevertheless is lodging resistant.

O'Brien was developed from the cross R.L. 2105 x 'Clintland' at Ames, Iowa, in 1953. R. L. 2105 is a Canadian selection from the cross 'Victoria' 2 x 'Hajira' x 'Banner' 3 x 'Victoria' x 'Hajira' 4 x 'Roxton,' the F7 plants were grown at Aberdeen, Idaho, in 1954. An F2 plant was selected in 1955 and accessioned as C177-45. The bulk progeny of this plant was tested until 1957 when 100 families were made. These were grown in panicle rows in 1958 when seed from 50 similar rows was bulked and assigned the number C177-45-1, which became O'Brien.

In Iowa tests (4 locations for 4 years), O'Brien had a higher test weight than any other variety except 'Goodfield' and gave yields of 100 bu./A or more in all tests in northern Iowa. Straw yields of the varieties in these tests were not taken, but presumably, because of its tallness, O'Brien would excel in that category. This is important in sections of Iowa where straw is in demand. O'Brien was tested in the Cooperative Uniform Midseason Oat Performance Nurseries for 1965 and 1966 (2.3) and the Cooperative Uniform Early Oat Performance Nursery for 1966 (4).

O'Brien has gene P. g. 2 and P. g. 4 conditioning resistance to prevalent oat stem rust race 6F, as well as to races 7, 7A, and 8. It cannot, however, offer protection against other "A" races, including race 6AF. O'Brien is resistant or has excellent field tolerance to crown rust races 202, 203, 216, 290, and 294, and probably other prevalent races of crown rust, but, like most commercial varieties, is susceptible to 264. O'Brien is susceptible to the Clintland race of loose smut but resistant to the Victoria race. It is resistant to Victoria blight and susceptible to yellow dwarf.

About 1,800 bushels of foundation seed of O'Brien were distributed in Iowa and other interested North Central States for growing in 1967.

**Literature Cited**


**REGISTRATION OF PENNMead ORCHARDGRASS**

(Reg. No. 6)

James L. Starling

'Pennmead' orchardgrass (*Dactylis glomerata* L.) is a high yielding variety in the intermediate maturity class developed by the Pennsylvania Agricultural Experiment Station and the U.S. Regional Pasture Laboratory. The variety is a 4-clone synthetic made up of clones from a group of selections originally made at the Pasture Laboratory. These selections were used as parental clones in a series of experimental synthetics widely tested in the Northeastern States. Based upon performance data from regional evaluation, parents from the Pasture Laboratory clones were selected for a new group of 4-clone synthetics, one of which is the variety Pennmead. One parental clone in the variety trace back to the Danish variety 'Rosaende.' The remaining three clones were from domestic collections made in New York, Pennsylvania and Maryland.

Pennmead is intermediate in maturity to early varieties such as 'Potomac' and late varieties such as 'Pennlake.' In Pennsylvania, it flowers approximately 5 days later than Potomac and 4 days earlier than Pennlake. It has been the highest yielding variety in tests in Pennsylvania in both total annual yield as well as in aftermath production. Superior aftermath growth has been most evident in early fall. In both maturity and

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