culturvar is mildly tolerant to Fusarium wilt caused by Fusarium oxysporum f. sp. vasinfectum (Atk.) Snyd. and Hans.

Bolls of Acala 1517-SR1 are ovate, averaging 6.05 g seed-cotton compared to Acala 1517-E1 with 5.85 g. Seeds are fuzzy and medium-large with a fuzzy seed index of 13.0 g compared with 12.9 g for Acala 1517-E1. Lint percentage of Acala 1517-SR1 is slightly higher than for Acala 1517-E1, averaging 36.1 over a 3-year period for hand picked bolls. Storm resistance ratings have averaged 4.8 compared with a rating of 2.4 for Acala 1517-E1 on a scale of 1 to 9, where 9 represents most storm resistant. Bolls of Acala 1517-SR1 fluff slightly, but keep their shape unless adverse weather occurs.


Fiber of Acala 1517-SR1 is slightly longer than for Acala 1517-E1, averaging 30.2 mm in 2.5% span length, generally classing as a 1/8 inch staple. Fiber uniformity averages about 49. Fiber of Acala 1517-E1 averages 29.7 mm 2.5% span length and 50 uniformity index. Micronaire averages 0.2 units less than for Acala 1517-E1. Fiber strength as measured on the 3.18 mm gauge stelometer averages 238 kN m kg\(^{-1}\) (mN/tex) compared with 235 for Acala 1517-E1.

N. R. MALM, C. E. BARNES, D. D. DAVIS, AND C. L. ROBERTS (1)

Breeder seed will be maintained by the New Mexico Agricultural Experiment Station, Las Cruces.

References and Notes

REGISTRATION OF PRESTON OATS

‘Preston’ spring oats (Avena sativa L.), (Reg. No. 507) Mn 76161, CI 9422, was developed cooperatively by the Minnesota Agricultural Experiment Station and USDA-ARS, and released in 1982. It originated from a selected F\(_3\) plant in an ‘Otee’/‘Dal’ population. Seed from selected F\(_3\) plants was planted in the greenhouse, and seed from individual F\(_3\) plants produced F\(_4\) rows which were bulk harvested. In evaluating the F\(_3\), F\(_4\), and advanced generations, the traits groat protein percent and protein yield were of particular interest.

Replicated yield evaluations of Preston were begun in 1975, and statewide performance testing was initiated in 1977. Preston was included in the Uniform Midseason Oat Performance Nursery from 1978 through 1980. In Minnesota tests, it has consistently excelled for protein yield, bushel weight, and groat percentage. It has lodging resistance, grain yield, and maturity about equal to ‘Noble’.

Preston has intermediate levels of resistance to loose smut [caused by Ustilago avenae (Pers.) Rostr] and some field resistance to crown rust [caused by Puccinia coronata Cda. F. sp. avenae Erichs & E. Henri]. It also has some tolerance to barley yellow dwarf virus.

The seed of Preston is light ivory in color and fluoresces under ultraviolet light. Its lemmas are medium length and without awns. Spikelet separation is by semilabscission and floret separation is by disarticulation. The stems are medium sized, yellow, and have fine hairs at the upper culm nodes. The leaf margins are glabrous and the leaf sheaths are hairless. A ligule is present. The panicle is equilateral, medium sized and has spreading branches.

Preston is best adapted to the central portion of the Midwest oat growing region. It should be valuable as a companion crop in forage establishment because of its earliness, short height and lodging resistance.

Seed of Preston was released to certified growers in Minnesota and South Dakota in 1982.

Breeder seed will be maintained by the Minnesota Crop Improvement Assoc., 1900 Hendon Ave., St. Paul, MN 55108.


References and Notes

REGISTRATION OF RISE PROSO MILLET

‘Rise’ proso millet (Panicum miliaceum L.) (Reg. No. 89) was developed at the University of Nebraska, Panhandle Station. The cultivar was released on 1 Mar. 1983.

Rise has a white seed coat (lemma and palea) and a compactum (closed) type panicle. It was tested under the experimental number 76004-3-8. Rise was derived from a cross of ‘Dawn’ X Minn. 402 made at the Nebraska Agricultural Experiment Station in 1976. Dawn is a release of the Nebraska Agricultural Experiment Station and Minn. 402 is an experimental line developed by the Minnesota Agricultural Experiment Station. A single plant selection was made in the F\(_2\) generation for simply inherited traits such as panicle type, height, and seed color. The head row planted from the F\(_2\) selection was again selected in the F\(_3\) generation for lodging resistance and to more precisely determine height, seed color, and panicle type. The seed produced in the F\(_3\) generation was bulked to obtain enough seed to begin testing the F\(_4\) generation in 1980.

Rise was tested for 3 years in six yield trials per year in western Nebraska. Rise is about 12 to 15 cm taller than Dawn and about 5 to 8 cm shorter than ‘Panhandle’. It has a heading date midway between ‘Cope’ and Dawn, similar to ‘Minco’. It had grain yields that exceeded Cope, Dawn, and Minco during all three years of testing. It has a compactum panicle type similar to Dawn, although the seed is smaller than Dawn. It has lodging resistance similar to Dawn.

Planting rates and dates for Rise will be similar to other cultivars of medium maturity.

Seed classes of Rise designated by the Nebraska Agricultural Experiment Station will be breeder, foundation, registered, and certified. Breeders seed will be maintained by the Nebraska Agric. Exp. Stn.

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