Registration of ‘Hytest’ Oat

‘Hytest’ oat (Avena sativa L.) (Reg. no. CV-348, PI 501525) is a spring oat cultivar developed by the South Dakota Agricultural Experiment Station. It was tested experimentally as SD 810095 and released in 1986.

Hytest was derived from a ‘Moore’/‘Dal’/‘Nodaway 70’ cross made in 1977 (1). This is the same cross from which ‘Trucker’ was selected. Hytest was derived from a single F₃ panicle and selected as an F₄ head row. Bulked seed was used for testing and increase, and there was no further selection.


At the time of release, Hytest was classified as moderately susceptible to crown rust (caused by Puccinia coronata Corda var. avenae W.P. Fraser & Ledingham) because it was susceptible to races 264A and 264B in greenhouse tests. Field observations during testing indicated that adult plant resistance is better than that of juvenile plants, because field plots consistently had less crown rust than expected if fully susceptible to races 264A and 264B. Hytest is moderately susceptible to barley yellow dwarf virus (BYDV). Regional tests indicate that Hytest is moderately resistant to loose smut [caused by Ustilago avenae (Pers.) Rostr.] when inoculated; however, no natural infections of loose smut have been observed on Hytest in South Dakota.

Hytest is of midseason maturity and has good yield potential when planted early. It is tall, has very limited tillering, and straw strength is moderately good.

Panicles are large and equilateral, with spreading branches. Most panicles have a few primary kernels with awns. These awns are usually short, thin, and light-colored, although midsized awns with a dark base are occasionally present. Kernels are light cream in color and fluoresce under ultraviolet light.

Hytest has excellent grain quality. When averaged across 12 South Dakota locations in 1985, Hytest had a 1000-kernel weight of 30.3 g, compared with 25.2 for Moore. Hytest ranked first for test weight in the 1984 and 1985 Uniform Midseason Oat Performance nurseries. Hytest had an average test weight of 513.5 kg m⁻³, compared with 462.0 kg m⁻³ for Moore averaged over 23 tests planted in South Dakota in 1984 and 1985. In 18 statewide tests in 1984 and 1985, the average groat percentage for Hytest was 75.7%, compared with 71.0 and 75.3 for Moore and Nodaway 70, respectively. Milling evaluations were very good. Groat protein is high; the oil level is medium. Hytest averaged 15.5 and 7.4%, respectively, for protein and oil in 18 statewide tests (1984 and 1985). This compares with 14.17% protein and 9.7% oil for Moore.

Hytest is not protected under the U.S. Plant Variety Protection Act. Breeder seed is maintained by the South Dakota Foundation Seed Stocks division of South Dakota State University, Brookings, SD 57007. Limited quantities of seed for research are available upon request from the corresponding author for at least 5 yr. Recipients of seed are asked to make appropriate recognition of the

Registration of ‘KS5292’ Soybean

‘KS5292’ soybean [Glycine max (L.) Merr. (Reg. no. CV-375, PI 559934) was developed by the Kansas Agricultural Experiment Station. It was released because of its high yield potential and pest resistance. Prior to release, KS5292 was evaluated in the Southern States (Group V test), from 1988 through 1990 (3). KS5292 was classified as Group V maturity (relative maturity index 5.2), about the same as Essex. It is best adapted to latitudes 35° to 37° N for full-season production. In comparison with Essex, KS5292 exhibited a yield advantage of 4% in tests planted early. KS5292 has a determinate growth habit, low pubescence, and tan pods at maturity. Seeds are yellow, with buff hila and a dull seed coat luster; however, the hilum color may vary from nearly clear to brown. Seed peroxidase activity is low. Seed quality score is similar to that of Essex; seed weight is 12 mg less, oil content is 1 g kg⁻¹ more, and protein content is 1.4 g kg⁻¹ less than Essex. Plant height is 2.5 cm shorter than Essex, and lodging score for KS5292 is 1.5 compared with 1.8 for Essex. KS5292 is resistant to Races 1 and 3 of the soybean cyst nematode (Heterodera glycines Ichinohe) and susceptible to brown stem rot [caused by Phialophora gregaria (Chamberlain) W. Gams], phytophthora root rot [caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann].

The Kentucky Agricultural Experiment Station, Oklahoma Agricultural Experiment Station, and the Kansas Agricultural Experiment Station participated in the release of KS5292. Cultivar protection of KS5292 was obtained upon request from the corresponding author for at least 5 yr. Recipients of seed are asked to make appropriate recognition of the

References and Notes

5. W.T. Schapaugh, Jr., Dep. of Agronomy, and J.W. Gerdemann, Dep. of Agronomy, Kansas State Univ., Manhattan, Kansas. This manuscript was prepared in part by grants from the Kansas Soybean Association and the Crop Improvement Association. Contribution no. 234, Kansas Agric. Exp. Stn. Registration by CSSA. Corresponding author (schap0035@ksu.edu).