REGISTRATION OF PENNWIN
WINTER OATS
(Reg. No. 253)

H. G. Marshall

‘PENNWIN’ winter oats (Avena byzantina K. Koch), C.I. 8312, Pa. 418-1099, was developed and released cooperatively by The Pennsylvania Agricultural Experiment Station and the Agricultural Research Service, U.S. Department of Agriculture.

Pennwin was derived from the cross ‘Dubois’ × Pa. 5037 2x ‘Ballard’. Pa. 5037 was a ‘Hairy Culberson’ × ‘Nyssel’ selection. The initial cross, Dubois × Pa. 5037 was made in 1958, and the F₁ hybrid was crossed to Ballard (XM59G23) in the greenhouse during 1959. The F₂ hybrid from the final cross was grown in the greenhouse during 1960, and the F₃ through F₄ bulks were grown near University Park, Pa., in subsequent years. Pennwin traces to a single panicle selection made in a severely winterkilled F₄ plot during 1964. The cultivar was outstanding for winterhardiness in preliminary tests during 1965, and was entered in Pennsylvania advanced tests in 1965.

Pennwin is a medium maturity winter oat. Juvenile plants are very decumbent, with numerous tillers. The leaves are medium in width and color, with some marginal pubescence. Culms are medium in height, midstout, and pubescent above and below the nodes. The panicle is equilateral, midlong, and midwide. The rachis is straight, with midlong branches that droop slightly at maturity. A false node is absent. The glumes are midlong, fine textured, and white. The lemma is of medium length and width, and the palea is grayish white. Each spikelet has two florets and floret separation is by imperfect disarticulation. Kernels are awnless, midplump, and white, but have a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.

Pennwin is suited for production in south central and southeastern Pennsylvania and in areas with similar climatic conditions. The cultivar was grown in advanced tests in Pennsylvania from 1966 through 1971 and in the Uniform Northern Winter Oat Performance Nursery from 1968 through 1971. The outstanding characteristic of Pennwin under Pennsylvania conditions is high yield. Pennwin averaged 2,518 kg/ha compared with 1,990 kg/ha for ‘Norline’. The two varieties are not significantly different for other characteristics. Results were similar over all stations in the nationally grown Uniform Winter Oat Performance Nursery where Pennwin averaged 2,511 kg/ha compared with 2,296 kg/ha for Norline. When only data from Pennsylvania and states with similar climatic conditions (Illinois, Kentucky, Missouri, New Jersey, Ohio, and Virginia) were considered, Pennwin had a significant survival advantage of 5.4% over Norline, and a highly significant yield advantage of 455 kg/ha.

The Pennsylvania Agricultural Experiment Station, University Park, Pa. 16802, will maintain breeder seed.

REGISTRATION OF WINDSOR
WINTER OATS
(Reg. No. 254)

T. M. Starling, C. W. Roane, H. M. Carter, and F. A. Coffman

‘WINDSOR’ winter oats (Avena sativa L.), C.I. 2107, was released in August, 1971 by the Research Division, Virginia Polytechnic Institute and State University, from the cross ‘Victor’ × ‘Cimarron’. Early-generation material was obtained from Seed Co., Hartsville, South Carolina. Selections that led to Windsor were made at generations at Virginia Polytechnic Institute and State University.

In Virginia, Windsor is expected to replace Roanoke. Compared with Roanoke, Windsor is not as hardy, approximately 25 cm shorter, stiffer-strawed, and has a lower volume weight, and is higher in yield, and matures 5 to 10 days earlier. In 24 tests grown in Virginia from 1968 through 1971 and in 23 tests grown in North Carolina over a 3-year period, Windsor yielded approximately 20 and 40%, respectively, more than Roanoke.

Windsor is described as having mid-decumbent juvenile growth, a rachilla that is long and midwide. The panicle is equilateral, midlong, and midwide. The rachis is straight, slightly flexuous. There are 6 to 7 nodes above and 1 to 2 nodes below the nodes. The leaf is midwide and midlong, and the false node is absent. It has 16 to 20 spikelets and 17 to 20 spikelets. The glumes are reddish to reddish-yellow, and the palea is midlong and midwide. The awns are subgeniculate. The kernels are yellow and medium dark green. The adult plant is early in maturity, and is heterogeneous for the A stem rust genes and homogeneous for the B and D genes. It is highly resistant to brown spot, and is susceptible to smut. It has some resistance to barley yellow dwarf virus.

Trio has an upright juvenile growth; the rachilla is short and wide. Trio has slightly more winterkilling than Windsor. Trio has a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.

Windsor is described as having mid-decumbent juvenile growth, a rachilla that is long and midwide. The panicle is equilateral, midlong, and midwide. The rachis is straight, slightly flexuous. There are 6 to 7 nodes above and 1 to 2 nodes below the nodes. The leaf is midwide and midlong, and the false node is absent. It has 16 to 20 spikelets and 17 to 20 spikelets. The glumes are reddish to reddish-yellow, and the palea is midlong and midwide. The awns are subgeniculate. The kernels are yellow and medium dark green. The adult plant is early in maturity, and is heterogeneous for the A stem rust genes and homogeneous for the B and D genes. It is highly resistant to brown spot, and is susceptible to smut. It has some resistance to barley yellow dwarf virus.

Trio has an upright juvenile growth; the rachilla is short and wide. Trio has slightly more winterkilling than Windsor. Trio has a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.

Windsor is described as having mid-decumbent juvenile growth, a rachilla that is long and midwide. The panicle is equilateral, midlong, and midwide. The rachis is straight, slightly flexuous. There are 6 to 7 nodes above and 1 to 2 nodes below the nodes. The leaf is midwide and midlong, and the false node is absent. It has 16 to 20 spikelets and 17 to 20 spikelets. The glumes are reddish to reddish-yellow, and the palea is midlong and midwide. The awns are subgeniculate. The kernels are yellow and medium dark green. The adult plant is early in maturity, and is heterogeneous for the A stem rust genes and homogeneous for the B and D genes. It is highly resistant to brown spot, and is susceptible to smut. It has some resistance to barley yellow dwarf virus.

Trio has an upright juvenile growth; the rachilla is short and wide. Trio has slightly more winterkilling than Windsor. Trio has a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.

REGISTRATION OF WINDSOR
WINTER OATS
(Reg. No. 254)

T. M. Starling, C. W. Roane, H. M. Carter, and F. A. Coffman

‘WINDSOR’ winter oats (Avena sativa L.), C.I. 2107, was released in August, 1971 by the Research Division, Virginia Polytechnic Institute and State University, from the cross ‘Victor’ × ‘Cimarron’. Early-generation material was obtained from Seed Co., Hartsville, South Carolina. Selections that led to Windsor were made at generations at Virginia Polytechnic Institute and State University.

In Virginia, Windsor is expected to replace Roanoke. Compared with Roanoke, Windsor is not as hardy, approximately 25 cm shorter, stiffer-strawed, and has a lower volume weight, and is higher in yield, and matures 5 to 10 days earlier. In 24 tests grown in Virginia from 1968 through 1971 and in 23 tests grown in North Carolina over a 3-year period, Windsor yielded approximately 20 and 40%, respectively, more than Roanoke.

Windsor is described as having mid-decumbent juvenile growth, a rachilla that is long and midwide. The panicle is equilateral, midlong, and midwide. The rachis is straight, slightly flexuous. There are 6 to 7 nodes above and 1 to 2 nodes below the nodes. The leaf is midwide and midlong, and the false node is absent. It has 16 to 20 spikelets and 17 to 20 spikelets. The glumes are reddish to reddish-yellow, and the palea is midlong and midwide. The awns are subgeniculate. The kernels are yellow and medium dark green. The adult plant is early in maturity, and is heterogeneous for the A stem rust genes and homogeneous for the B and D genes. It is highly resistant to brown spot, and is susceptible to smut. It has some resistance to barley yellow dwarf virus.

Trio has an upright juvenile growth; the rachilla is short and wide. Trio has slightly more winterkilling than Windsor. Trio has a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.

Windsor is described as having mid-decumbent juvenile growth, a rachilla that is long and midwide. The panicle is equilateral, midlong, and midwide. The rachis is straight, slightly flexuous. There are 6 to 7 nodes above and 1 to 2 nodes below the nodes. The leaf is midwide and midlong, and the false node is absent. It has 16 to 20 spikelets and 17 to 20 spikelets. The glumes are reddish to reddish-yellow, and the palea is midlong and midwide. The awns are subgeniculate. The kernels are yellow and medium dark green. The adult plant is early in maturity, and is heterogeneous for the A stem rust genes and homogeneous for the B and D genes. It is highly resistant to brown spot, and is susceptible to smut. It has some resistance to barley yellow dwarf virus.

Trio has an upright juvenile growth; the rachilla is short and wide. Trio has slightly more winterkilling than Windsor. Trio has a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.

Windsor is described as having mid-decumbent juvenile growth, a rachilla that is long and midwide. The panicle is equilateral, midlong, and midwide. The rachis is straight, slightly flexuous. There are 6 to 7 nodes above and 1 to 2 nodes below the nodes. The leaf is midwide and midlong, and the false node is absent. It has 16 to 20 spikelets and 17 to 20 spikelets. The glumes are reddish to reddish-yellow, and the palea is midlong and midwide. The awns are subgeniculate. The kernels are yellow and medium dark green. The adult plant is early in maturity, and is heterogeneous for the A stem rust genes and homogeneous for the B and D genes. It is highly resistant to brown spot, and is susceptible to smut. It has some resistance to barley yellow dwarf virus.

Trio has an upright juvenile growth; the rachilla is short and wide. Trio has slightly more winterkilling than Windsor. Trio has a tendency toward gray streaking on the tip ends. The kernel usually has an obscure basal scar, and pubescence is absent. The rachilla is long and midwide.