Registration of 'AC Juniper' Oat

'AC Juniper' spring oat (Avena sativa L.) (Reg. no. CV-351, PI 598081) was developed by Agriculture and Agri-Food Canada, Lacombe Research Centre, Lacombe, AB, Canada, and released in 1995. AC Juniper was released because of its early maturity, high grain yield and superior lodging resistance. It was derived from a 'Dula'/‘Cavell’ cross made in 1980. Dula is a high-yielding oat cultivar that was introduced to Canada from Holland and tested in the 1980 and 1981 Western Cooperative Oat Test under the experimental designation OT524. Cavell is an early-maturing oat cultivar developed at the Lacombe Research Centre and released in 1975 (1). The F1 generation from the Dula/Cavell cross was grown in a greenhouse at the Lacombe Research Centre, and the F2 though F6 generations were advanced in growth chambers using single-seed descent. F7 panicle-rows were grown in 1989, selected for earliness, lodging resistance, high test weight, and morphological uniformity, and harvested in bulk. AC Juniper was yield-tested as LAO-443-027 at three central Alberta locations in 1990, and at five locations in Alberta and Saskatchewan in 1991. It was advanced to the Western Cooperative Oat Test in 1992, and tested for 3 yr under the designation OT772.

Coleoptiles of AC Juniper are green and the hypocotyl is medium long. Juvenile plants are erect and have medium green to dark green leaves. The lower leaf sheaths and the lower leaf blades are glabrous. Adult plants are short, and have thin culms. The flag leaf is medium green to dark green, medium wide, short, glossy, and slightly drooping. A ligule is present at the base of the flag leaf. The upper culm nodes and internodes are glabrous. The penultimate leaves are medium green to dark green, and glossy. The sheath, blade, and margins of the penultimate leaves are glabrous.

AC Juniper’s panicles are ovate, medium wide, medium long, and equilateral. The panicle branches are short, semierect, and intermediate in density. There are four or five whorls of branches per panicle. The bottom whorl of panicle branches is attached to the first node. The lower panicle nodes are hairless. The rachis is straight, and the rachilla is medium long, and glabrous. The glumes are glabrous, medium wide, medium long, pointed, and boat-shaped. The spikelets are nodding and have three or four florets. Spikelet separation is by fracture, and floret separation is by hetero-fracture. The lemma is glabrous, medium wide, medium long, and pointed. The palea is about the same size as the lemma. The lemma awns are twisted at the base. The kernels are medium wide, medium long, and cream colored; they have very few basal hairs and fluoresce light blue under ultraviolet light. The Caryopsis is pubescent, and has a pointed scutellum and long brush hairs.

AC Juniper was evaluated in 51 trials across western Canada from 1992 to 1994. Its average yield in these trials (5.14 t ha⁻¹) was similar to ‘Derby’, and 1.4, 5.5, and 8.0% more than ‘Cascade’, ‘Dumont’, and ‘Jasper’, respectively. AC Juniper is best adapted to Alberta and the rust-free areas of Saskatchewan. Aver-

References and Notes


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