REGISTRATION OF 'JASPER' OAT

'JASPER' spring oat (Avena sativa L.) (Reg. no. 317) (PI 495868) was developed at the Agriculture Canada Research Station, Lacombe, Alberta, Canada, from a cross made in 1975 between 'Cavell(1)' and 'Gemini(2)'. The F₂ and F₃ generations of this cross were grown in the field. The F₃ through F₅ generations were advanced in growth cabinets by single seed descent. Jasper was selected in 1979 from approximately 650 F₃ lines grown in a panicle-row nursery at Lacombe, Alberta. Jasper was tested as selection no. LA-393-29 in the Preliminary Yield Test in 1980, and in the Project Oat Test in 1981. Jasper was advanced to the Western Co-operative Oat Test in 1982 and tested for 3 yr under the experimental designation OT740. License no. 2551 for this cultivar was issued by the Plant Health and Plant Products Directorate, Agriculture Canada, on 30 Sept. 1985.

Juvenile plants of Jasper are erect. Adult plants are medium tall with medium thick and medium strong culms. Culm internodes are glabrous. The flag leaf is relatively erect. The penultimate leaf blade is generally drooping. Leaf blades are medium in width and leaf margins and sheaths are glabrous. A ligule is present at the base of the flag leaf.

The panicles are equilateral, erect, medium wide, medium long, ovate, and intermediate in density. The rachis is straight to slightly flexuous. The rachillas are mid-long and glabrous. The spikelets are drooping and produce one or two florets. The lemmas are pointed, medium in length, and produce a few awns. Spikelet separation is by fracture, and floret separation is by disarticulation. The kernels are mid-wide, mid-long, yellow in color, and most fluoresce light blue under ultraviolet light.

In Alberta, Jasper has yielded more than any cultivar in its maturity group. In 2 yr of province-wide testing in Alberta (48 station yr), Jasper yielded 6% more than 'Athabasca' and matured in about the same number of days as Athabasca. Athabasca is the earliest maturing cultivar currently available to producers in Alberta. In comparison to other cultivars commonly grown in the province, Jasper yielded equal to or better than 'Grizzly', 'Harmon', and 'Random', and produced about 8% less grain than 'Calibre' or 'Cascade'. The latter two cultivars matured 3 to 5 days later than Jasper, which may have contributed to their yield advantage.

Jasper is intermediate in plant height and averages about 6 cm taller than 'Dumont'. Jasper is equal to Dumont and 'Rodney' and slightly lower than Cascade in lodging resistance. It has good sprouting tolerance, high test weight, low hull content, and relatively high protein and fat contents. While Jasper is superior to Calibre and Cascade in respect to these characteristics, it is not equal to either cultivar in kernel plumpness. Jasper is recommended for production in central and northern Alberta, where early maturity, high yield, and sprouting tolerance are important considerations.

Jasper is resistant to Victoria blight [caused by Bipolaris victoriae (Meehan and Murphy) Shoem.], but susceptible to smut [caused by Ustilago avenae (Pers.) Rostr.], oat crown rust [caused by Puccinia coronata Cda. fsp. avenae (Eriks and Henn.) Eriks], oat stem rust [caused by Puccinia graminis Pers. f. sp. avenae Eriks and Henn.], and barley yellow dwarf virus. None of these diseases are a major problem in the area where the new cultivar is intended for production.

Breeder seed of Jasper was developed by bulking approximately 200 F₄-derived F₅ panicle rows that were uniform in appearance. It will be maintained by the Experiment Farm, Agriculture Canada, Indian Head, Saskatchewan. The right to increase and distribute other classes of pedigreed seed of Jasper has been contracted to SeCan Association, Suite 512, 885 Meadowlands Drive, Ottawa, Ontario K2C 3N2, Canada.

References and Notes
3. Research scientist, seed head (revised, 1984), and research scientist (revised, 1982), respectively, Lacombe Res. Stn., Agric. Canada, Box 1420, Lacombe, Alberta, Canada T0C 1S0. Contribution no. 551. Registration by the Crop Sci. Soc. of Am. Accepted 30 Mar. 1987.

REGISTRATION OF 'ALASKA 81' AND 'UMATILLA'

'DRY PEA

'Alaska 81' (Reg. no. 13) (PI 508092) and 'Umatilla' (Reg. no. 14) (PI 508093) dry pea (Pisum sativum L.) were developed cooperatively by the USDA-ARS and the College of Agriculture Research Center, Washington State University. They were released in 1984 and 1986, respectively.

Alaska 81 (PS 810034) is an F₃ derived line from the fourth backcross of 'Campbells Scotch' (2) with Wis 7105 (1). Wis 7105 is immune to pea seedborne mosaic virus and was developed by the Wisconsin Agricultural Experiment Station. Campbells Scotch, the recurrent parent, is an early flowering (ninth node), smooth green-seeded cultivar used extensively for dry pea production in eastern Washington and northern Idaho.

Alaska 81 was tested as PS 810034 in eastern Washington and northern Idaho beginning in 1981 and in Pacific Northwest Regional Nurseries beginning in 1983. When all trials were combined, Alaska 81 was 33% higher yielding than 'Alaska'.

Alaska 81 is a field pea type that grows about 7 cm taller than Alaska. The vine habit of Alaska 81 is indeterminate and nonbranching with straight internodes. Leaflets are dark green and slightly marbled with medium wax. The leaves have two leaflet pairs. The stipules are normal, nonclasping, and slightly marbled. The flowers are white and usually borne singly or doubly on the peduncles. Pods are straight, blunt ended, and medium green with six to seven seeds. Seeds are dark green, round, and smooth with green cotyledons. Similar to Alaska, Alaska 81 flowers in the 10th node. One hundred seeds have averaged 20.2 g for Alaska 81 compared to 17.2 g for Alaska. Alaska 81 is immune to pea seedborne mosaic virus and is resistant to Fusarium wilt [caused by Fusarium oxysporum Schlecht. f. sp. pisi (Linn.) Synd. & Hans.] race 1, a potentially destructive disease of pea plants in the Palouse, WA region. Alaska 81 did not differ from Alaska in resistance to powdery mildew (Erysiphe polygoni DC), or susceptibility to mechanical damage.

Alaska 81 is resistant to seed bleaching and has excellent canning qualities after rehydration, as determined by canning tests conducted by Dr. Steve Drake, Prosser, WA. Alaska 81 provides excellent quality green split peas.

Umatilla (WA 910431) originated as an F₃ selection from a cross (XB75GM027) between JI 34, a breeding line from the