REGISTRATION OF CULTIVARS

dominantly medium-size yellow seeds. They may contain as much as 2.0% white seeds. Their panicles are semi-compact, and the cultivars are lodging resistant. They produce short, upright, dark green leaves. All three carry the \( Pg2 \) and \( Pg4 \) genes for reaction to stem rust. They are susceptible to the Clinton race of *Ustilago avenae* (Pers.) Rostr. and to barley yellow dwarf virus. By definition, Multiline M68, Multiline M69, and Multiline M70 cultivars are heterogeneous for crown rust reaction. Each is a cultivated unit with population resistance to *P. coronata avenae*.

*Multiline* denotes the cultivar is a composite of near-isogenic lines; *M* denotes midseason maturity; 68, 69, or 70 denotes the year in which foundation seed lots of specific cultivars were released. As additional near-isogenic lines with new crown rust resistance genes become available and (or) race structure of the crown rust population changes, composition of the Multiline M oat cultivars will be changed to provide the best possible protection from the crown rust fungus. Future cultivars will be named in accordance with the naming system outlined herein.

Breeder seed of near-isogenic lines used in the development of Multiline M cultivars of oats is maintained by the Iowa Agriculture and Home Economics Experiment Station, Iowa State University, Ames, Iowa.

REGISTRATION OF WISCONSIN PEA CULTIVARS
(Reg. Nos. 2 to 6)

Earl T. Gritton and D. J. Hagedorn

The University of Wisconsin Agricultural Experiment Station has released five processing pea (*Pisum sativum* L.) cultivars. Four of these, 'WISCONSIN 7101,' 'WISCONSIN 7102,' 'WISCONSIN 7103,' and 'WISCONSIN 7104,' are resistant to the powdery mildew disease (*Erysiphe polygoni* DC) which has been of increased concern in the midwest in recent years. The fifth cultivar, 'WISCONSIN 7107,' exhibits modified foliage characteristics due to reduced stipule size.

Powdery mildew resistance was obtained from a selection originating in the cross ‘Oregon State University 42’ × ‘New York 59-29.’ The reduced stipule character, due to the gene \( s t \) and carried on chromosome III, was transferred from two lines, numbers 565 and 1493, developed at the Weibullsholm Plant Breeding Institution, Landskrona, Sweden.

Wisconsin 7107 (Reg. No. 2) is a freezer type developed by backcrossing the Wisconsin powdery mildew resistant selection to the recurrent parent, 'Sprite.' Progeny of the fourth backcross mating were advanced to the \( F_2 \) generation, where resistant plants with desirable type were selected. Seed harvested from these plants has been increased for distribution. Wisconsin 7101 closely resembles the recurrent parent, 'Sprite', but differs from other cultivars of this type in possessing good resistance to the powdery mildew disease. It is a determinate-vined pea of about 40 to 50 cm height, has 11 or 12 nodes, and produces the first pod on node 9. There are 1 or 2 pods per node, 5 or 6 peas per pod, and 4 pods per plant. Wisconsin 7101 reaches the processing stage at about 60 days. The foliage is dark green in color, as are the pods and the shelled peas. The seeds are wrinkled and green.

Wisconsin 2102 (Reg. No. 3) is a freezing pea. It was derived from backcrossing the Wisconsin powdery mildew resistant selection to the recurrent parent, 'Dark Skin Perfection.' Progeny of the fourth backcross mating were advanced to the \( F_2 \) generation, and then making five backcrosses using New Era as the female recurrent parent. Thus, Wisconsin 7103 closely resembles New Era in type. The determinate vines are 68 cm tall and have 15 or 16 pods. The first pod is borne on node 9. There are 2 pods per node, 6 or 7 peas per pod, and 5 pods per plant. The foliage, pods, and shelled peas are green in color. Seventy days are usually required to reach pea to canning stage. Its distinction from other types is that it has good resistance to the powdery mildew disease.

The canning type pea, Wisconsin 7104 (Reg. No. 6) is derived from a cross between the Wisconsin powdery mildew resistant selection and the cultivar 'New Line Early Perfection.' New Line Early Perfection was then used as the female parent in five backcrosses. The determinate vines are up to 74 cm tall, and have 16 or 17 nodes. The first pod is formed on node 13. There are 2 pods per node, 6 or 7 peas per pod, and 5 pods per plant. The peas mature to the canning stage in 70 days. The foliage is medium green in color, as are the pods and shelled peas. Powdery mildew resistance is the characteristic associated with Wisconsin 7104.

Wisconsin 7107 (Reg. No. 6) is an Early perfection pea derived from crosses between 'New Season' and genetic lines obtained from Sweden. Progeny of the cross mating, using New Season as the recurrent parent in the \( F_2 \) generation, advanced to the \( F_3 \) generation, where plants of desirable type having reduced stipules were selected. Seed of the \( F_3 \) was increased for distribution. This cultivar has a height of about 60 cm with 15 or 16 nodes. The first pod is formed on the 11th node and there are general 10 pods and at least 5 pods per plant. There are 5 peas per pod. The vines, pods, and shelled peas are medium green. Processing stage is reached at about 63 days. This cultivar resembles New Season except for its reduced stipules. Reduced stipules may permit greater light penetration in the canopy and allow better aeration, resulting in the reduction of disease and pathological problems now encountered in other cultivars. Wisconsin lines 7101, 7102, 7103, 7104, and 7107 are now available as public cultivars.

Small samples of seed of each of the released cultivars are available upon request to either the Department of Agronomy or Department of Plant Pathology, University of Wisconsin, Madison, 53706.

REGISTRATION OF CUTLER 71 SOYBEAN
(Reg. No. 89)


'Cutler 71' soybean (*Glycine max.* (L.) Merr.) is a derivative of six \( F_2 \) lines from the cross Cutler* × Kent-RLs' hybridization, selection, and development of Cutler 71 was done at the Purdue University Agricultural Experiment Station with the cooperation of the Plant Science Research Division of the U. S. Department of Agriculture. Cutler 71 was designated C1481.

Cutler 71 was grown in the Uniform Regional Test by research workers of the U. S. Regional Soybean Laboratory and released after testing at soybean research stations in Illinois, Indiana, Kansas, Kentucky, Missouri, and Nevada. Cutler 71 was also tested in California, Maryland, New York, and Texas.

Cutler 71 was released because of its resistance to *Phytophthora sojae*.