REGISTRATION OF GERMPLASMS

REGISTRATION OF VR74-410-2 AND VR1492-1 PEA GERMPLASM1
(Reg. Nos. GP 19 to 20)

J. M. Kraft and R. A. Giles

Two canner pea (Pisum sativum L.) breeding lines, VR74-410-2 (Reg. No. GP 19) and VR1492-1 (Reg. No. GP 20), were released jointly by the SEA-USDA and the Washington State Univ. Agric. Res. Center in 1979. Both lines have white flowers and are unique in being immune to pea seedborne mosaic virus (PbMv) and also resistant to Fusarium oxysporum f. sp. pisi race 1 (common wilt) and race 2 (near wilt). They are both more resistant to the pea root-rot complex of eastern Washington than 'Dark Skin Perfection.'

The parentage of VR74-410-2 is Wisconsin 7105 × ('Wasatch' × PI 140165). Wisconsin 7105, released by the Univ. of Wisconsin, is resistant to PbMv and is a selection from a cross between 'New Season' × PI 199896. Wasatch is a large-seeded, 'Early Perfection' type cultivar from Rogers Brothers Seed Company. Plant Introduction No. 140165 is a purple-flowered line with seedling resistance to Fusarium root rot.

VR74-410-2 is double-podded, blooms at the 12th node, and has wrinkled seeds.

The parentage of VR1492-1 is Wisconsin 7105 × Geneva 059-81. Geneva 059-81, a release from the Geneva Exp. Stn., Cornell Univ., has purple flowers, yellow cotyledons, and reduced stipules. It is resistant to races 1, 2, and 5 of F. oxysporum f. sp. pisi and is tolerant to root rot. VR741492-1 is double-podded, blooms at the 14th node, and has reduced stipules. Its seed is a mixture of wrinkled and smooth types.

Small amounts of seed of these selections can be obtained from J. M. Kraft, SEA-USDA, Irrigated Agriculture Research and Extension Center, Prosser, WA 99350.

REGISTRATION OF THREE SUGARBEET GERMPLASM LINES3
(Reg. Nos. GP 17 to GP 19)

R. T. Lewellen, I. O. Skoyen, and J. S. McFarlane

Three self-fertile, random-mating sugarbeet populations were developed by AR-SEA-USDA with the Sugar Beet Development Foundation and the Beet Growers Association, Ltd. They were released in 1977. These populations have been tested at Salinas, CA, both as lines and as components of experimental hybrids. Bona fide sugarbeet breeders and geneticists may obtain small quantities of seed upon written request to R. T. Lewellen, U. S. Agricultural Research Station, P. O. Box 5098, Salinas, CA 93915.

C773 (Reg. No. GP 17) is a self-fertile, mating population that segregates at about male sterility (a, a). It has mixed red and purple striped hull with high oil percentage. VFR-1 is a selection of the AR-SEA-USDA, the Beet Sugar Development Foundation, and the Beet Growers Association, Ltd. They were released in June 1977. These populations have been tested at Salinas and Brawley, CA, both as lines and as components of experimental hybrids.

REGISTRATION OF LMVF-1 SAFFLOWER GERMPLASM1
(Reg. GP No. 14)

C. A. Thomas, L. H. Zimmerman, and A. L. Urie

'LMVF-1' safflower (Carthamus tinctorius L.) was released in 1978 by USDA-SEA. It is resistant to lettuce mosaic, verticillium wilt, and phytophthora root and hypocotyl rot, incited by Verticillium dahliae Kleb., fusarium wilt, P. F. Knowles. 1976. Registration of VFstp-1 safflower to phytophthora root rot and its inheritance. Phytopathology 66:1007-1011.

'LMVF-1' arose from crosses of the breeding lines N 4051 (N 4051), VR 14154, and VFR-1. N 4051 is male sterile (at a,b). It has red striped hull with 20 to 30% oil. VFR-1 was developed as N 4051 × VFR-1. N 4051 has high yield and is tolerant to root rot. VR 14154 has verticillium wilt resistance, which is conditioned by a single factor pair. Plants with a mild necrotic reaction to lettuce mosaic were selected in subsequent generations.

In greenhouse tests at Beltsville, Md., artificial inoculation of LMVF-1 with lettuce mosaic incites a mild necrotic reaction. In field tests at Yuma, Ariz., and Del. Cali., under conditions of natural infection, LMVF-1 has a higher level of resistance to lettuce mosaic, pea root rot, and verticillium and fusarium wilt.

LMVF-1, closely related to VFstp-1 germplasm, combined resistance to four diseases, the vigorous growth habit of N 4051, and striped hull seeds. Seed can be obtained from the Applied Plant Pathology Laboratory, Plant Pathologist, USDA-SEA, Beltsville, Md.; agronomist, USDA-SEA, Beltsville, Md.; agronomist, USDA-SEA, Davis, Calif.; agronomist, USDA-SEA, Prosser.

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