'Brevor', 14/6*'Centana.' Selection 14, C.L. 13258, from O. A. Vogel's Norin 10/Brevor was crossed with Centana at Bozeman in 1955. Backcrosses to Centana were made routinely and Montana number MT 6723 was assigned early in 1967 after the selection had performed well in a 1966 single row yield nursery. It has been tested at all Montana Experiment Stations since 1967. Approximately 4,000 kg (150 bu) of foundation seed was released to Montana certified seed growers in the spring of 1971.

Brevor can be classified as a semidwarf. It has white straw and is midseason to late in maturity. The spike is awned, fusiform, and medium, and similar in appearance to the spike of Centana. Awns are white and the glumes are glabrous. Kernels are red, short, hard, and ovate; the brush is mid-sized. Shortana is susceptible to leaf rust, moderately resistant to stem and stripe rust, and resistant to loose smut. The milling trade. The baking characteristics of Shortana are slightly below that of Centana, probably because of its small kernels. However, the cultivar has been accepted by the milling trade. The baking characteristics of Shortana are equal to those of Centana and superior to those of most other commercially available hard red spring semidwarfs. Shortana is more productive than Centana and most standard height cultivars in high moisture-high fertility areas. Producers in the irrigated valleys and the higher moisture areas of western Montana should benefit most from the yield potential of this cultivar. The small kernels of Shortana are sensitive to drought and for this reason test weights may vary widely, depending on available moisture.

Breed seed of Shortana will be maintained by the Plant and Seed Science Department, Montana Agricultural Experiment Station.

REGISTRATION OF GERMPLASM

A pure autotetraploid clone, Fuggle T (Accession No. 21600), was isolated from the hop (Humulus lupulus L.) cultivar Fuggle (Accession No. 19209) in 1966, following treatment of axillary buds with an aqueous solution of colchicine (0.5%) and three cycles of vegetative propagation and root tip chromosome counts. The chromosome number of Fuggle T has remained stable at 2n = 4x = 40. The genotype has been increased from a single clone and has been grown in one experimental field for 3 years.

Fuggle T is practically indistinguishable from diploid Fuggle with respect to leaf shape, size, lobing, sidearm length, shoot morphology, clustering, flowering date, and maturity. Tetraploid cones are slightly larger than those of diploid Fuggle. The genotype can be propagated by layering or by rooting softwood cuttings in a suitable mist bed, but Fuggle T is somewhat more difficult to root than diploid Fuggle. It also grows less vigorously than diploid Fuggle, but readily sets seed under open pollination. However, it produces a higher proportion of empty seeds. Among 778 seedlings from crosses between Fuggle T × selected diploid males, 76% were triploids (2n=30). The remainder were aneuploids with a few missing or a few extra chromosomes. From these crosses, two high-yielding triploid lines have been selected and are now at an advanced stage of field testing.

Fuggle T, like its diploid parent Fuggle, is early maturing, resistant to downy mildew, Pseudoperonospora humuli (Miy. & Tak.) G. W. Wils., and susceptible to Verticillium wilt. Its quality is virtually indistinguishable from diploid Fuggle, including the essential oil composition with its characteristic farnesene content.

Fuggle T yields less than diploid Fuggle and is not expected to be useful for commercial production. It is recommended as a female parent for crosses to produce triploid genotypes with Fuggle-like quality characteristics.

Planting stock of Fuggle T will be maintained at the Oregon Agricultural Experiment Station, Corvallis, Oregon 97331. A limited number of rhizomes is available to persons interested in hop breeding or other investigations.

REGISTRATION OF WISCONSIN 709, 711, 715, AND 716 PEA GERMPLASM

Wisconsin 709 (Reg. No. GP 1) has been derived from a backcross of a fasciated hybrid to a commercial processing cultivar and was in the 15th generation following the last backcross when released. The exact lines involved are unknown. It possesses a pronounced level of fasciation. Blossom date is about 1 week later than the 'Alsweet' cultivar, susceptible to Near-wilt, and number of nodes is 17; and the first pod is borne at node 11. There are 12 pods per plant with 5 or 4 peas per pod. Seeds are wrinkled, mostly green with some cream colored. This germplasm has demonstrated wilt (Fusarium oxysporum f. pisi race 1) and near-wilt resistance.

Wisconsin 711 (Reg. No. GP 2) is also a fasciated pea but is slightly taller and a few days later in maturity than Wisconsin 709. Its exact parentage is unknown but involves a fasciated selection and the cultivar 'Dark Skin Perfection', among others. It was in the F1 generation when released. It blossoms about two weeks later than Alsweet. Its plant height is about 60 cm; number of nodes 22; and first pod node 18 or 19. It bears about 10 pods per plant with 5 peas per pod. Seeds are round to dimpled, light or dark green. This germplasm has demonstrated wilt and near-wilt resistance.

Wisconsin 715 (Reg. No. GP 3) is a non-fasciated, small sieve pea, derived from a cross of 'New Era' with the European cultivar Finette. It was in the F2 generation when released. Blossom date is about 5 days later than Alsweet. Its vines are about 64 cm long and it has 17 nodes, with the first pod borne at node 12. It has about seven pods per plant with five peas per pod. Seeds are small, round to dimpled, light green to cream. This germplasm has demonstrated a high degree of wilt and near-wilt resistance.

Wisconsin 716 (Reg. No. GP 4) was derived from the same cross as Wisconsin 715, but differs from Wisconsin 715 in several ways. It was in the F3 generation when released. It is shorter, earlier, and wrinkled-seeded. Blossom date is about 4 days later than Alsweet. Its plant height is 50 cm, with 13 nodes. The first pod is borne at node 9 or 10. There are approximately six pods per plant, each with about five peas. Seeds are small, wrinkled, light green to cream. This pea has demonstrated wilt and near-wilt resistance.

Small amounts of seed of these germplasms are available from either the Department of Agronomy or Department of Plant Pathology, University of Wisconsin, Madison, 53706.


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