deen in 1979. CC XXXVII-B is the harvested seed of this mixture and predominantly has the spring growth habit.

CC XXXVII-C (GP57). Developed by mechanically mixing the seed harvested from all of the plants (shattering and nonshattering) grown in the greenhouse in 1979. The progeny of each male H. spontaneum was equally represented in the population. This mixture was grown in the winter nursery at Warsaw, Va. in 1979-1980. CC XXXVII-C is the harvested seed of this mixture and predominantly has the winter growth habit.

The composite cross populations will segregate for a wide range of characters. They contain a broad spectrum of disease resistance genes and should be a useful source of germplasm for spring and winter barley breeders. Many of the genes in these populations probably are not presently being utilized in cultivar development and these populations should provide better access to those genes than would H. spontaneum directly. Although these populations are agronomically superior to the H. spontaneum lines, many of the deleterious traits associated with H. spontaneum will be found in them. The populations probably contain resistance to diseases other than those tested since in preliminary tests some of the male H. spontaneum lines have been resistant to Pyrenophora teres Drechs, which incites net blotch. Genetic male sterility was incorporated into the population to facilitate recombination of the resistance genes and the use of recurrent selection methods.

A list of male parents and seed in 500 g quantities can be obtained from the authors, AR-SEA-USDA, Field Corps Laboratory, Plant Genetics and Germplasm Institute, Beltsville Agricultural Research Center, Beltsville, MD 20705, U.S.A., who maintain the composite cross populations, or from Dr. D. H. Smith, Jr., World Collection of Small Grains, AR-SEA-USDA, also at the Beltsville Agricultural Research Center.

REGISTRATION OF NORTH DAKOTA 497 AND 586 BARLEY GERMPLASM

(REG. No. GP53 and GP54)†

A. B. Schooler and J. D. Franckowiak‡

North Dakota 497 (CI 15858) and North Dakota 586 (CI 15859) are spring barley (Hordeum sp.) lines developed at the North Dakota Agric. Exp. Stn. and released as germplasm for breeding purposes because of their tolerance to barley yellow dwarf virus (BYDV). Both lines were more resistant to BYDV in greenhouse tests than their H. vulgare parents and check cultivars.†

ND497 (GP No. 53) has the following parentage: Hordeum vulgare L. var. 'Ono' (4x)/H. bulbosum L. (4x)/Elymus mollis Trin. (4x). The Ono/H. bulbosum tetraploid parent, FR221-68, is a two-rowed line similar to autotetraploid Ono but has better self-fertility. The E. mollis clone used in this cross is immune to BYDV (Schooler and Timian, unpubl). Pollen mother cells of the F1 plants indicated a chromosome complement of 2n = 2x = 14. Final selection for BYDV and leaf spot resistance was made in the F2 generation. Identifying characteristics of ND497 are long, rough awns; long rachilla hairs; colorless aleurone; relatively short, plump kernels which thresh clean from the rachis; medium short, erect, two-rowed spikes which may have lateral male fertility; and medium tall, early maturing plants. ND497 is susceptible to P. grarainis f. sp. tritici, and is partially resistant to BYDV. ND497 has been equally represented in the populations to facilitate recombination of the resistance genes and should be a useful source of germplasm for spring and winter barley breeders. Many of the genes in these populations probably are not presently being utilized in cultivar development and these populations should provide better access to those genes than would H. spontaneum directly. Although these populations are agronomically superior to the H. spontaneum lines, many of the deleterious traits associated with H. spontaneum will be found in them. The populations probably contain resistance to diseases other than those tested since in preliminary tests some of the male H. spontaneum lines have been resistant to Pyrenophora teres Drechs, which incites net blotch. Genetic male sterility was incorporated into the population to facilitate recombination of the resistance genes and the use of recurrent selection methods.

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REGISTRATION OF 792022 AND 792024 PEA GERMPLASM

(REG. Nos. GP21 and GP22)†

J. M. Kraft‡

Two F4 peas (Pisum sativum L.) breeding lines were released by AR-SEA-USDA and the Agricultural Research Center of Washington State Univ. in 1980. These lines were the first to be released combining the modified tendril gene (hypertendril) with dominant genes for resistance to Races 1 and 2 of Fusarium oxysporum Schlecht f. sp. pisi (van Hall) Synd., and Hans., and resistance to root rot caused by F. solani f. sp. pisi and Pythium ultimum.‡ Both lines are about 70 cm tall at maturity under ideal growing conditions. Because of the strong tendril habit and reduced foliage, both lines should resist lodging and vine


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