REGISTRATION OF CROSBY DURUM WHEAT
(Reg. No. 559)
J. S. Quick, D. E. Walsh, K. L. Lebock, and J. D. Miller

'Crosby' (Triticum turgidum L. var. durum), CI 17282, is a spring durum wheat developed cooperatively by the North Dakota Agric. Exp. Stn. and ARS, USDA. It was selected from the cross 'Langston' × 'Tule Creek' × 'Osten'. Langston and Leeds were important North Dakota durum cultivars and St 464 (CI 13160) is a source of stem rust resistance from Ethiopia. The final cross was made in 1963 to combine stem rust resistance with early maturity, reduced height, and excellent spaghetti quality. Crosby was bulked in the F₂ generation as a single F₂ derived line and first entered in preliminary yield trials in 1968 as selection D6715. It has been tested in the Uniform Regional Durum Nursery (URDN) since 1970, and in North Dakota drill trips since 1971.

Crosby has midstalk, strong, white culms that may show purplish coloration under some conditions. The spike is awned (dehisce at maturity), oblong, dense, and erect. The glumes are amber, hard, midlong, and elliptical; the awn midlaid: the crest midwide and shallow: the cheeks angular to rounded: and the brush very short (essentially none). Up to 6 g seed will be sent to alfalfa scientists on request.

'Crosby' was named and released by the North Dakota Agric. Exp. Stn., Fargo, N.D., as Paper No. 529A. Received 10 Nov. 1975. Variety Review Board has approved Crosby for certification. Seed stocks of Nevada Synthetic XX, Syn 2, are maintained by the ARS, USDA, P.O. Box 8858, Univ. Station, Reno, NV 89507. Up to 6 g seed will be sent to alfalfa scientists on request.

REGISTRATION OF A MULTI-PEST RESISTANT ALFALFA GERMPLASM
(Reg. No. GP 51)

'NEVADA Synthetic XX': Alfalfa (Medicago sativa L.) was developed cooperatively by the ARS, USDA, and the Nevada, California, Oregon, Utah, and Washington Agric. Exp. Stns. The Syn 2 generation was released as germplasm to scientists in January 1975.

This experimental germplasm was released for source material for development of multiple pest-resistant cultivars, for materials useful in studies of effects of root-knot nematodes on alfalfa production, and for use in testing the feasibility of using a completely resistant crop in a rotation to reduce root-knot nematode populations.

Nevada Synthetic XX was developed by backcrossing Northern root-knot nematode (Meloidogyne hapla) resistant clones M-7 and 1-167 (selected from Vernal) to clones C952, C949, C951, C954, C953 (all parents of 'Washoe'), Co89507; head, Dep. of Plant Pathology, Kansas State Univ., Manhattan, KS 66504 (formerly plant pathologist, Washington State Univ. Prosser); research plant pathologist, ARS, Logan, UT 84322; professor of nematology, Oregon State Univ., Corvallis, OR 97331; and professor of agronomy, Univ. of California, Davis, CA 95616, respectively.

Forage yield of Nevada Syn XX at Reno, Nevada, the year after establishment was similar to that of the recurrent parent Washoe and higher than that of Vernal. Forage yield of repeated populations has also been very high, especially in nematode-infested soils.

Seed stocks of Nevada Synthetic XX, Syn 2, are maintained by the ARS, P.O. Box 8858, Univ. Station, Reno, NV 89507. Up to 6 g seed will be sent to alfalfa scientists on request.
REGISTRATION OF 74SN3, 74SN4, AND 74SN5 PEA GERMPLASM
(Reg. No. GP 15 to GP 17)
J. M. Kraft and R. A. Giles

Three small-sieved canner breeding lines of peas (Pisum sativum L.) were released by ARS and the College of Agric., Washington State Univ., Pullman, in 1975. Each line combines resistance to races 1, 2, and 5 of Fusarium oxysporum Schlecht f. sp. pisi (van Hall) Snyd. & Hans.; and all three lines are resistant to a new strain of wilt capable of destroying pea varieties resistant to race 5.

The parentage of '74SN3' (Reg. No. GP 15) is \((691005 \times (\text{Small Sieve Freezer} \times C-165) F_2 \times (\text{Early Perfection 3040} \times C-165) F_2) F_7\). The parent, 691005, is a selection of PI 210568 and is resistant to race 5. Small Sieve Freezer is a variety of Rogers Brothers Seed Company, C-165 is a Univ. of Wisconsin breeding line, and Early Perfection 3040 is a variety of Canners Seed Corporation. 74SN3 has a mixture of dimpled and smooth green seed. It will bloom at the 12th to 14th nodes and sets single and double pods. This line is segregating for resistance to race 2. In addition, in repeated greenhouse and field trials, this line has shown more resistance to the pea root rot complex of eastern Washington than has 'Dark Skin Perfection'.

The parentage of '74SN4' (Reg. No. GP 16) is \((691004 \times (\text{Small Sieve Freezer} \times C-165) F_2 \times (\text{Early Perfection 3040} \times C-165) F_2) F_7\). The parent, 691004, is a selection of PI 203066 and is resistant to race 5. 74SN4 has smooth green seeds. It blooms at the 12th to 14th nodes and sets single and double pods. This line is less resistant to the root rot complex than 74SN3 or 74SN5.

The parentage of '74SN5' (Reg. No. GP 17) is \((691005 \times (\text{Small Sieve Freezer} \times C-165) F_2 \times (\text{Early Perfection 3040} \times C-165) F_2) F_7\). The parent, 691005, is a selection of PI 203066 and is resistant to race 5. 74SN5 has smooth green seeds. It blooms at the 12th to 14th nodes and sets single and double pods. This line is more resistant to the root rot complex of eastern Washington than is Dark Skin Perfection.

Small amounts of seed of these selections can be obtained from J. M. Kraft, USDA Vegetable Crops Production Investigations, Irrigated Agric. Res. and Ext. Center, Prosser, WA 99350.

REGISTRATION OF VIRGINIA SYNTHETIC NUMBER 10 BIRDSFOOT TREFOIL GERMPLASM
(Reg. No. GP 4)
John D. Miller

'VIRGINIA Synthetic Number 10' germplasm pool of birdsfoot trefoil (Lotus corniculatus L.) was constituted when five clones were intercrossed, four of which were selected in Virginia. One clone was selected from PI 157531 (Italy), 'PI 188556' (Yugoslavia), and 'PI 230190' (Denmark). Clones were intercrossed and seed were composited to produce the synthetic.

Virginia Synthetic Number 10 is early and semi-erect, with disease tolerance equal or superior to that of Viking and 'Dawn'. Organisms associated with this disease complex were Rhizoctonia solani, Fusarium spp., Leptodiscus terrestris, and Mycoleptodiscus spp. This synthetic has yielded and persisted well under hay and pasture management when grown with several grasses in Virginia, but has not been extensively tested in other states.

The parental clones and seed production nurseries will be maintained by ARS at Blacksburg, Virginia. Up to 10 g of seed will be provided to forage-crop breeders on written request to the author at the Agronomy Department, Virginia Polytechnic Institute and State Univ., Blacksburg, VA 24061.

REFERENCES