NW-410 (Reg. No. 28)
NW-410 was tested under the experimental number, 6R-410. It is an F6 selection from the cross 'Sutter Pink' × 'Pinto UI-114'.

The rate of maturity of NW-410 is similar to that of Sutter Pink, 'Pinto UI-111', and 'Wyoming Pinto 166' (about 90 days) in western state plantings. It has more resistance than any other pinto bean to fusarium root rot caused by Fusarium solani (Mart.) Appel & Wr. f. sp. phaseoli (Burk.) Snyd. & Hans. In fact, its resistance to this disease equals or exceeds that of any other commercial bean cultivar, in spite of the fact that traditional sources of resistance to this disease were not included in its parentage.

In each of the 4 years, 1975-1978, NW-410 equaled or exceeded the yields of the best 12 to 18 cultivars tested at each of 14 to 18 locations throughout the country. In commercial, field-scale production, NW-410 has been grown successfully in Washington, Idaho, Colorado, Nebraska, and Minnesota.

The seeds of NW-410 are similar in size and appearance and cooking quality to those of Pinto UI-111.

Breeder and foundation seed of NW-410 are maintained by the Washington State Crop Improvement Association, Inc., 513 N. Front Street, Yakima, WA 98901; Idaho Crop Improvement Assoc., Inc., 3284 Overland Road, Boise ID 83705; and Dep. of Agronomy, Colorado State Univ. Fort Collins, CO 80521.

NW-590 (Reg. No. 29)
NW-590 was tested under the experimental designation 6R-590 and 6R-565. NW-590 is an F3 selection from the parentage [(P. 203958 × Red Mexican UI-35)] × Pinto UI-114. This cultivar was tested inter-regionally and has been grown successfully in commercial fields in Washington, Idaho, Nebraska, Minnesota, and Michigan.

The rate of maturity of NW-590 is similar to that of NW-410. It is less resistant to fusarium root rot than NW-410, but more resistant than other pinto beans. Like NW-410, it is immune to the Type strain and has the same high level of tolerance to the New York 15 strain of bean common mosaic virus as Pinto UI-114. Plants of NW-590 have long pods and are more erect than NW-410 or UI-114. In inter-regional plantings, 1975-1978, it equaled or exceeded the yields of the best of 12 to 18 cultivars at each of 14 to 18 locations in 12 states throughout the country.

The seeds of NW-590 are uniform in size and color. They are slightly smaller than seeds of the Idaho pinto, UI-111 and UI-114, and more plump, with high contrast in color between the dark and light portions of the seeds. Cooking quality equals that of the Idaho pinto.

Breeder and foundation seed will be maintained by the same agencies in Washington and Idaho who maintain seed stocks of NW-410 and other bean seed stocks.

REGISTRATION OF RED MEXICAN BEANS
RUFUS, NW-59, AND NW-63
(Reg. Nos. 30, 31, and 32)
D. W. Burke

'Rufus', 'NW-59', and 'NW-63' Red Mexican (Small Red) beans (Phaseolus vulgaris L.) were developed by ARS-USDA in cooperation with Washington State Univ. at the Irrigated Agriculture Research and Extension Center, Prosser, Washington. They were tested extensively for 3 years in Idaho and in the inter-regional dry bean nursery. They are the first Red Mexican beans developed with very effective levels of resistance to fusarium root rot caused by Fusarium solani (Mart.) Appel & Wr. f. sp. phaseoli (Burk.) Snyd. & Hans. They yield 15 to 50% more seed than other Red Mexican cultivars under stress of fusarium root rot. They are also resistant to the prevalent Type and New York 15 strains of the bean common mosaic virus, and to the curly top virus; but NW-59 and NW-63 are susceptible to the, as yet, infrequently-occurring and usually mild western strain of bean common mosaic virus.

Rufus

Rufus (Reg. No. 30) was tested as AR58-4 and released in 1974 jointly by ARS-USDA and the Washington Agric. Exp. Stn. It is an F6 selection from the parentage [Fusarium-resistant P.I. 203958 × Red Mexican UI-35] × P.I. 203958. Disease testing and pedigreed selection with stress of natural and artificial epiphytoses of the virus diseases and fusarium root rot were conducted in both field and greenhouse.

Rufus was the first common bean cultivar to be released carrying genes for resistance to fusarium root rot from the then recognized principal world source of such resistance, P.I. 203958, which originated in the private bean collection of Oliver W. Norvell. Rufus is less resistant to root rot than P.I. 203958. It is also less resistant to fusarium root rot than the pink bean cultivars also released in 1974 and the earlier-maturing NW-59 and NW-63 Red Mexican cultivars described below.

Rufus is more upright and less viny than other late-maturing Red Mexican beans. It sets white blossoms profusely, high on the plant. Pods fill uniformly and carry four to six seeds. The seeds are excellent in quality, uniformity of color, and size (1,400 to 1,450 per pound). Also, the seeds stain less noticeably when the pods get wet than those of other Red Mexican cultivars.

Maturity of Rufus is 95 to 100 days from planting to cutting. It is earlier than other late-maturing Red Mexican beans and 5 to 10 days later than the popular Red Mexican cultivar 'UI-36', which is root rot-sensitive, or the new Fusarium-resistant cultivars, NW-59 and NW-63. Since 1974, Rufus has largely replaced all other Red Mexican cultivars in Washington State, the principal producer of Red Mexican beans, and in Idaho areas where fusarium root rot is also a hazard. Rufus is adapted to production in areas of the United States where the growing season is long enough to permit it maturation.

NW-59 and NW-63
NW-59 (Reg. No. 31) and NW-63 (Reg. No. 32) were released jointly in 1980 by ARS-USDA and the Agricultural Experiment Stations of Washington State Univ., the Univ. of Idaho, and Oregon State Univ. They were tested as RS-59 or RM-59, and RS-63 or RM-63, respectively. The parentage of the two cultivars is the same [(P.I. 203958 × Red Mexican UI-35) × a curly top-resistant early short bush Dark Red Kidney type breeding line, 'DRK 801'] × 'Sutter Pink'. NW-59 and NW-63 performed outstandingly in the Red Mexican class during 3 years' testing in inter-regional nurseries.

Plants of NW-59 and NW-63 are much like their early-maturing parent, Sutter Pink, but have darker green leaves with pods set somewhat higher in the plant. NW-59 is slightly more vigorous and less erect than NW-63. The seeds of both cultivars are uniform in typical Red Mexican color, but in shape they resemble the pink bean.

NW-59 matures in 90 to 95 days from planting. NW-63 usually matures slightly earlier.