

In central Washington Rufus Red Mexican matures in about 100 days (planting to cutting). Roza and Gloria require about 95 days, and Viva, a very short-vined, runnerless bean, requires only 85-90 days, like Sutter Pink. These beans have performed outstandingly in both Fusarium-infested and noninfested fields. Regional tests indicate the pinks are widely adapted.

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GREAT NORTHERN VALLEY DRY BEAN  
TOLERANT TO COMMON BLIGHT

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Common blight, caused by the bacterium Xanthomonas phaseoli (E. F. Smith) Dowson, is one of the most serious seed-borne bacterial diseases of beans. Serious losses have occurred in Nebraska due to this disease in the past. We developed the high yielding varieties Great Northern (GN) TARA and GN JULES that are tolerant to common blight. However, they combine the disadvantages of late maturity and vigorous vines. They have performed well on light soils, sloped fields when planted early. On heavy soils the heavy foliage canopy creates a microclimate favorable for white mold disease. We found linkage between the genes controlling late maturity ( a delayed flowering response under the interaction of long photoperiod and high temperature). The early maturing, common-blight-tolerant GN Valley was developed by transferring the genes controlling early maturity (early flowering response) of GN 1140, using six backcrosses, to the late maturing, common-blight-tolerant GN Nebraska #1, sel. 27. Earliness and a high level of common blight tolerance were recombined using this breeding procedure. The reaction to the bacterium was found to be inherited quantitatively. Common blight tolerance of GN Valley is similar to GN TARA and yield is superior to GN UI #59 and GN 1140 under conditions favorable for common blight. Yield of GN Valley is comparable to standard GN varieties in the absence or in the presence of a moderate level of this disease. GN Valley is similar to the standard GN UI #59 in plant habit, seed size, seed shape and in oven-baking quality.

Small quantities of seed of GN Valley may be obtained from Richard Mills, Manager Nebraska Foundation Seed Division, University of Nebraska, Lincoln, Nebraska, USA.

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