and was entered in the National Cooperative Dry Bean Nurseries (NCDBN) in 1984 (1). It has also been tested in Michigan dry bean trials in 1989, 1990, and 1993, and in New York trials in 1989 and 1990 (2,3). UI 228 yielded about 560 kg ha$^{-1}$ less than check cultivars in Idaho, but was 3 to 5 d earlier in maturity. At locations in the Midwest and East, UI 228 produced better yields in most years than small red bean cultivars with more prostrate growth habit.

UI 228 has uniform, large, and lustrous dark red seed. Seed size is 30.0 g 100 seed$^{-1}$, compared with 29.9 g 100 seed$^{-1}$ for 'NW 63'. UI 228 was tested for canning quality by American Fine Foods (Payette, ID) in 1992 and in trials at Kimberly, by Cornell University, and by Michigan State University in 1993. UI 228 had consistently better canning quality of any small red bean cultivar to which it was compared. Color remained uniform, beans did not clump or split, and the canning liquor remained relatively starch-free compared to NW 63.

Tests performed at Kimberly in 1992 indicated that UI 228 had resistance to some, but not all pathogroups of bean common mosaic virus (BCMV) and bean common mosaics necrosis virus (BCMNV) (4,5). UI 228 was resistant to BCMV isolate NY-15 and BCMNV isolate NL-8, but susceptible to BCMNV isolate NL-3 and BCMV isolate Mexican, indicating that this cultivar has bc-1$^T$ resistance. No symptoms of beet curly top virus (BCTV) have been observed in field trials in Idaho and Washington.

Rust nursery tests from 1993 at Beltsville, MD, North Platte, NE, and Saginaw, MI, showed UI 228 to be very susceptible to rust [caused by Uromyces appendiculatus (Pers.:Pers.) Unger] at Beltsville. UI 228 suffered moderate injury from air pollution. These results are similar to those for other small red bean cultivars.

Breeder and foundation seed are available from the Idaho Agricultural Experiment Station Foundation Seed Program, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. U.S. plant variety protection (Title V option) is pending. The cultivar will be maintained as a public cultivar with a research tag fee assessed on the sale of foundation seed.


References and Notes


Registration of 'UI 239' Small Red Bean

'UI 239' small red bean (Phaseolus vulgaris L.) (Reg. no. CV-137, PI 594323) was developed by the Idaho Agricultural Experiment Station at Kimberly, ID. It is a high-yielding cultivar, similar to 'NW 63', but with shorter vine, slightly earlier maturity, and superior canning quality.

UI 239 was selected in the F$_6$ by John Kolar in 1984 from the cross of 'NW 63'/'23UI 36'/'Viva' made in 1978. UI 36 is a medium-season small red cultivar released in 1964 (1). Viva is a high-yielding small-seeded pink cultivar released by the USDA-ARS dry bean breeding program at Prosser, WA, in 1974 (2). NW 63 was also released by the USDA-ARS program in 1979, and is at present the most widely grown small red cultivar (3).

UI 239 was tested under the experimental numbers 52039 and 6202. It has been in advanced trials at Kimberly and Parma, ID, since 1986. It was grown at 15 and 25 and 21 locations, respectively, in the 1993, 1994, and 1995 National Cooperative Dry Bean Nurseries (4,5,6). UI 239 is similar to NW 63 and the check cultivar 'NW 59' for yield and seed size. It matures 2 to 3 d earlier than NW 63 and 1 to 2 d earlier than NW 59. Seed fill duration is shorter than that of NW 63 or NW 59, and the rate of seed fill is higher.

UI 239 has a floppy short-vine growth habit (CIAT classification Type III A). It is similar to most other small red bean cultivars in this regard, except that vine length tends to be shorter than NW 63 and NW 59. Lodging, leaf shape, size, and color are similar to NW 59 and NW 63.

UI 239 has uniform dark-red seed. Seed size of UI 239 was 29.2 g 100 seed$^{-1}$, compared with 29.9 g 100 seed$^{-1}$ for NW 63 and NW 59. UI 239 had acceptable canning quality according to tests conducted by American Fine Foods (Payette, ID) in 1992, and in tests conducted at Kimberly and by Cornell University in 1993 (7). UI 239 had fewer splits than NW 63 in the trials conducted at Kimberly and by American Fine Foods, and also more uniform seed appearance and good canning ability in Cornell trials.

Tests performed at Kimberly in 1992 indicated that UI 239 had resistance to some, but not all, pathogroups of bean common mosaic virus (BCMV) and bean common mosaic necrosis virus (BCMNV) (8,9). UI 239 was resistant to BCMNV isolate NL-8 and BCMV isolate NY-15, but susceptible to BCMNV isolate NL-3 and BCMV isolate Mexican. Thus, UI 239 probably has the genotype bc-u bc-u bc-l$^2$ bc-l$^2$. No symptoms of beet curly top virus were observed in field trials in Idaho and Washington (5).

In 1991 and 1993 Uniform Dry Bean Rust Nursery tests, UI 239 was moderately susceptible to rust [caused by Uromyces appendiculatus (Pers.:Pers.) Unger] at Beltsville, MD; Saginaw, MI; Fargo, ND; and North Platte, NE. UI 239 was also susceptible to common bacterial blight [caused by Xanthomonas campestris pv. phaseoli (Smith) Dye] at North Platte, and moderately to highly susceptible at Fargo. UI 239 had severe air pollution injury at Beltsville. This cultivar is adapted primarily to Western environments, where aridity prevents fungal and bacterial disease infection and ozone levels are low.

Breeder and foundation seed are available from the Idaho Agricultural Experiment Station Foundation Seed Program, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. U.S. plant variety protection (Title V option) is pending. The cultivar will be maintained as a public cultivar with a research tag fee assessed on the sale of foundation seed.