

REGISTRATION OF 'BURKE' PINTO BEAN

'BURKE' pinto bean (Reg. no. CV-000, PI 000000) (*Phaseolus vulgaris*) was developed cooperatively by the Washington Agriculture Research Center and the USDA-ARS. Burke is a high-yielding, semi-upright, mid-season maturity, disease-resistant pinto adapted to the Pacific Northwest that was released in 1997.

BURKE was derived from the 1988 cross 'Othello'/'Sierra' made by Dr. M.J. Silbernagel. Othello is a widely adapted, early season pinto cultivar which possesses resistance to bean common mosaic virus (BCMV), curly top virus (CTV), and fusarium root rot [caused by *Fusarium solani* (Mart.) Sacc. f. sp. *phaseoli* (Burkholder) W.C. Snyder & H.N. Hans.] (1). Sierra is a late-season pinto cultivar which possesses resistance to rust and an upright architecture (CIAT Type II classification) (2). This cross was designed to combine resistances to CTV, BCMV and rust. Currently, Burke is an F₆ derived F₁₂ bulk which was single-plant selected by A. N. Hang, WSU- IAREC Agronomist in early generations for individual plants possessing desirable disease, seed quality, early maturing and architectural traits. Depending upon environment BURKE varies from a semi-upright to prostrate growth habit (CIAT Type IIA to IIIA).

BURKE was tested across 40 location years from 1994 to 1996 (3,4). In 1995, BURKE had the highest average yield of eight pinto lines included in the National Cooperative Nursery (CDBN)(3). BURKE averaged 11.1% higher seed yield in the Northwest and Northern Great Plains of the United States than Othello pinto bean. In 1996, BURKE had the second highest average yield of 8 pinto lines included in the CDBN (4). BURKE matures in 89 to 95 days which is 3 to 5 days later than Othello. In Burlington and Yuma, Colorado, BURKE was the first and the second highest yielding pinto, respectively, among 17 lines tested, and outyielded UI-114 by 12.6%.

BURKE has a semi-upright growth habit with pods well distributed over the length of the plant. BURKE is more upright architecture and is less susceptible to lodging than Othello. BURKE has tan, cuboid, dark brown mottled seed with pinkish orange hilar ring (corona). Seed size is slightly larger than Othello, 39 vs. 36 g per 100 seeds. BURKE was an acceptable canning cultivar in tests performed by W. Larry Hymes at Cornell University and George L. Hosfield and M.A. Uebersax at Michigan State University and the USDA-ARS. Burke canned better than its parental lines Othello and Sierra for uniformity, color, appearance and overall canning quality.

BURKE combines complete resistance to CTV and the recessive *i bc-2²* resistance to BCMV from Othello, with the *Ur-3* rust resistance from Sierra. Rust resistance was confirmed by J.R. Stavely (USDA-ARS Beltsville, MD). The *bc-2²* gene gives resistance to all strains of BCMV and BCMNV except those strains from Pathogroup VII, like NL-4. The *Ur-3* combats rust races prevalent in the production regions of Michigan, North Dakota, Nebraska and Eastern Colorado.

BURKE is released as a WSU variety. Variety protection has been applied for under the Plant Variety protection Act, Public Law 91-577, 84 Stat 1542-1559 with the option that BURKE may be sold for seed by name only under the certified class. Breeder and Foundation Seed will be maintained by Washington State Crop Improvement Association, Inc. 414 South 46th Avenue, Yakima WA 98908-3232. Phone: (800) 338-8010 or (509) 966-2234, Fax: (509) 966-2494. A research fee will be assessed on each unit of Foundation Seed sold.

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