

WASHINGTON AGRICULTURAL RESEARCH CENTER
PULLMAN, WASHINGTON, 99164

and

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WASHINGTON, D.C. 20250

RELEASE OF 'ROJO CHIQUITO' SMALL RED DRY BEAN

The Agricultural Research Center of Washington State University, and the Agricultural Research Service, U.S. Department of Agriculture announce the release of 'Rojo Chiquito', a Central American type small red dry bean (*Phaseolus vulgaris* L.) cultivar. Rojo Chiquito is small seeded, upright, mid to late season maturity, and resistant to bean common mosaic virus (BCMV). This will be the first small red cultivar release to possess *I* gene resistance to seed borne BCMV, which has plagued seed production of most small red cultivars in the Pacific Northwest. Scientists participating in the development of this variety were A. N. Hang (Washington State University), P.N. Miklas, USDA-ARS, M.J. Silbernagel (retired, USDA-ARS), and G.L. Hosfield (USDA-ARS).

Rojo Chiquito seed lot number 95-2101, is an F₁₂ bulk derived from a single plant in the F₇ generation from the cross K42/Pompadour. K42 is a light red kidney bush germplasm developed by D.W. Burke. It has a dominant *I* resistance to bean common mosaic virus (BCMV) and complete resistance to curly top virus (CTV). Pompadour is an upright bush tropical bean landrace cultivar from the Dominican Republic (J. Beaver, personal communication), susceptible to BCMV and CTV. Although neither parent has a small red seed type, Rojo Chiquito is closer to a small red than any commercial dry bean class, but is very different in several respects. First, the plant has a more upright growth habit (IIA) than typical commercial small reds. Pods are borne high enough (mid to top of plant) to be directly harvested. With an upright plant habit, a narrower row spacing may increase bean yield. Secondly, it has a much small seed size than typical small red cultivars. This smaller seed size is characteristic of the 'Central America' small red market class. Thirdly, Rojo Chiquito will be the first small red cultivar release to possess dominant *I* gene resistance to seed borne BCMV.

Rojo Chiquito was tested as IS-4931 in the National Cooperative Dry Bean Nurseries in 1995. Average yield was 2296 kg ha⁻¹ compared to 2416 and 2634 kg ha⁻¹, respectively for 'LeBaron' and 'NW-63'. Rojo Chiquito matured at 100 d after planting and was 11 and 5 d later than LeBaron and NW-63, respectively. Rojo Chiquito has a small shiny dark red seed when mature. Seed size of Rojo Chiquito is 19.3 to 21.4 g compared to 30.3 to 32.7 g 100 seeds⁻¹ for NW-63. Rojo Chiquito yield ranged from 2720 to 3100 kg ha⁻¹ when grown in Othello, WA and was lower than LeBaron and NW-63, but with the upright growth habit, a narrower row spacing may be used to increase bean yield. Rojo Chiquito exhibits excellent quality in canning tests as it retains firmness and a very extractive bright red color after cooking.

Rojo Chiquito has been released as an exclusive variety with the option that Rojo Chiquito 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, Foundation Seed Service - WSU Seed House, Pullman, WA 99164-6420. Phone: (509) 335-4365, Fax (509) 335-7007, or email Greg Vollmer <wscia@wsu.edu>. A research fee will be assessed on each unit of foundation seed sold. Plant variety protection will be applied at a later day.

Ralph P. Caval
Director, Washington Agricultural Research Center
Washington State University

4/24/01
Date

Edward B. Kuyper
Administrator, Agricultural Research Service
U.S. Department of Agriculture

8/28/01
Date