

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

WASHINGTON AGRICULTURAL EXPERIMENT STATION
WASHINGTON STATE UNIVERSITY
PULLMAN, WASHINGTON

and

IDAHO AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF IDAHO
MOSCOW, IDAHO

NAMING AND RELEASE OF LIGHT RED KIDNEY BEAN CULTIVARS
'KARDINAL' AND 'KAMIAKIN'

The Agricultural Research Service, U.S. Department of Agriculture, and the Agricultural Experiment Stations of Washington State University and University of Idaho, jointly announce the naming and release of two Light Red Kidney bean cultivars, KARDINAL and KAMIAKIN. Both are resistant to the curly top virus, the first of their class with resistance to this virus. They are also resistant to strains of the bean common mosaic virus known to occur in the Pacific Northwest, and to most other known strains of the virus. This resistance is based on the dominant 'I' gene which has protected the nation's green bean industry from bean common mosaic for the past 50 years. Both KARDINAL AND KAMIAKIN have a vigorous, fairly typical upright, determinate Red Kidney bush habit. They mature in 90 to 100 days, depending upon location. KAMIAKIN is usually a few days later than KARDINAL. They supply a need for virus-resistant Light Red Kidney beans adapted to production in the Pacific Northwest, where curly top and mosaic are hazards to susceptible cultivars.

KARDINAL and KAMIAKIN were developed by USDA/ARS at the Irrigated Agriculture Research and Extension Center, Prosser, WA, in cooperation with the Washington Agricultural Experiment Station.

KARDINAL was tested under the experimental numbers K-333 and 6RK-333. A nearly equal sister line, NW-341 (6RK-341), was tested more widely for several years. KARDINAL is an F₁₀ selection (now in the F₁₅ generation) from the parentage Manitou/5/UI-114)/3/Pinto UI-112/2/UI-112/PI 203958/4/Jacob's Cattle.

KAMIAKIN was tested under the experimental numbers K-83 and K-279. It is an F₁₁ selection (now in the F₁₅ generation) from the cross Royal Red x Redkote. The crosses, disease tests, and pedigreed selections were conducted by D. W. Burke with assistance of A. W. Barker and E. F. Lambert. John Kolar tested KARDINAL and KAMIAKIN in Idaho and directed their evaluation in the inter-regional Cooperative Dry Bean Nurseries. The new cultivars will be in the inter-regional nursery in 1986 for the first time together.

Yield of the new cultivars have been comparable to those of other commercial cultivars when grown in Idaho and other locations across the country. In Washington, when grown under favorable conditions, they have equalled or exceeded in yield other commercial cultivars. Where Fusarium root rot is a constraint on yield, KARDINAL and KAMIAKIN have usually proved to be superior, but like most bush-type beans they are sensitive to root rot.

The seeds of KARDINAL and KAMIAKIN are similar in size and color to other commercial light red kidney cultivars, except in certain locations where seeds of the new cultivars are somewhat smaller than those of other Red Kidney cultivars. KARDINAL produces some seeds with blocky ends. Both of the new cultivars produced a canned product equal or superior to that of commercial cultivars from California and New York in cooking tests conducted by Dr. S. R. Drake, USDA/ARS Research Food Technologist, at the Irrigated Agriculture Research and Extension Center.

Breeder seed was produced in 1985 and both breeder seed and foundation seed will be produced in 1986. In Washington, production and distribution of breeder and foundation seed will be under the supervision of Mr. T. D. Wagner, Foundation Seed Service Manager, Washington State Crop Improvement Assoc., Inc., Dept. of Agronomy, WSU Seed House, Pullman, WA 99164.

In Idaho, production and distribution of foundation seed will be under the direction of the Director, Idaho Crop Improvement Assoc., Inc., 5284 Overland Road, Boise, ID 83705. Breeder seed will be maintained at the University of Idaho Branch Experiment Station, Route 1, Kimberly, ID 83341. Small quantities of seed for breeding and experimental purposes may be obtained from the latter agency and from the Irrigated Agriculture Research and Extension Center, Prosser, WA 99350.

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8-8-86
Date

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8-14-86
Date

T. B. Kenney/
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SEP 8 1986
Date