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UNITED STATES DEPARTMENT OF AGRICULTURE  
Science and Education Administration  
and  
Agricultural Experiment Station of the  
University of Puerto Rico

ANNOUNCE

THE RELEASE OF THREE WHITE BEAN CULTIVARS: W-117, W-142 and 2W-33-2

The Science and Education Administration, Agricultural Research, United States Department of Agriculture, and the Agricultural Experiment Station of the University of Puerto Rico (UPR) announce the release of three improved white bean cultivars: W-117, W-142 and 2W-33-2. These improved cultivars have been developed by a cooperative research program between Mayaguez Institute of Tropical Agriculture (MITA), AR, SR, SEA and the University of Puerto Rico (Project C-457 entitled "Improvement of Tropical Production of Beans and Cowpeas Through Disease and Insect Control") supported in part by the Agency for International Development, Contract AID/ta-C-1296.

These three white beans have "Bonita", a Puerto Rican standard white bean variety, as one of their parents, and closely resemble it in desirable characteristics of: ability to establish and maintain plant stand, general disease tolerance, adaptability to environments, and a good yield. The new cultivars were developed by crossing "Bonita" with the black beans 15R-55, 50600 and La Vega. These black beans provide the new cultivars with an increase in tolerance and resistance to disease. They have a shorter and more erect plant habit when compared with their parents.

A summary of each cultivar's pedigree and improved characteristics is as follows:

W-117 From a cross between Bonita x 15R-55 (15R-55 is a semi-vine black line released by Dr. N. Vakili in 1974, USDA, Mayaguez), a single plant selection in  $F_2$ , reselected by single plant in  $F_4$  and increased for 2 generations. It is resistant to systemic mosaic strain of BCMV, and has a short, erect semi-vine habit. In trials with no disease control the yield average for three locations 1977 to 1979 inclusive in P. R. was 1,500 Kg/Ha at one meter row spacing. A row spacing trial for two seasons indicated maximum yield could be obtained with narrow (35-40 cm) rows in P.R. Seed weight is 21.4 g/100 seed.

W-142 From a cross between Bonita x 50600 (50600 is a semi-vine black bean from Costa Rica), a single plant selection in  $F_2$ , reselected by single plant in  $F_4$  and increased for 2 generations. It is resistant to systemic mosaic strain of BCMV. It has a low rusting (Uromyces appendiculatus) characteristic in Puerto Rico, retaining foliage through maturity and is resistant to three virulent races endemic in the U. S. It has a short, erect semi-vine habit. In trials with no disease control the yield average for three locations 1977 to 1978 inclusive in P. R. was 1,100 Kg/Ha at one meter row spacing. A row spacing trial for two seasons indicated maximum yields could be obtained with narrow (35-40 cm) rows in P. R. Seed weight is 20.6 g/100 seed.

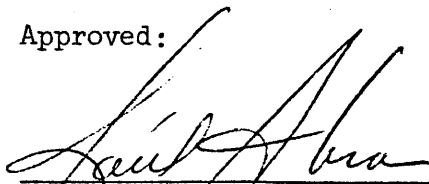
*Released in the Dominican Republic as 'Arroyo Loro'*

2W-33-2 From a cross between Bonita x La Vega (La Vega is a multiple disease resistant, medium-seeded black bean of very good yield potential at nearly all locations, released by N. G. Vakili in 1973, USDA, Mayaguez) and backcrossed to Bonita, a single plant selection in F<sub>2</sub>, rogued and bulked through F<sub>6</sub>. It has field resistance to virus but is slightly susceptible to CpMV; it has a low rusting (Uromyces appendiculatus) characteristic in Puerto Rico retaining foliage through maturity and is resistant to three virulent races endemic in the U. S. In trials with no disease control the yield average for three locations 1978 to 1979 inclusive in P. R. was 1,800 Kg/Ha at one meter row spacing. The short compact plant habit should give maximum yield at narrow row spacings. Seed weight is 22.4 g/100 seed.

The parental black beans were the sources of field tolerance to a number of diseases in these white hybrids that have the general Bonita characteristics. These three white bean cultivars are suggested for cultivation in the tropics.

Limited amounts of seed are available on a pro-rata basis to qualified persons who request it in writing from Mayaguez Institute of Tropical Agriculture, AR, SR, SEA, P. O. Box 70, Mayaguez, Puerto Rico 00708.


Approved:



Director

Agricultural Experiment Station  
University of Puerto Rico

8/1/79  
Date



Deputy Director, Agricultural Research  
Science and Education Administration  
United States Department of Agriculture

8/13/79  
Date