



Tepary Bean 'USDA Fortuna' - High Yielding, Disease Resistant

USDA Tropical Agriculture Research Station and collaborators across the world

Tepary beans are well-adapted to high heat, low water conditions. A collaborative breeding effort was established to take advantage of the natural resilience of tepary beans while improving certain agronomic qualities. This collaboration resulted in the release of 'USDA Fortuna', a high yielding tepary bean with enhanced seed size, seed quality, and reduced cooking time. USDA Fortuna benefits from multiple pest and disease resistance genes inherited from its parents.



Photo by Timothy Porch, USDA

Dry beans from G40029, parent of 'USDA Fortuna'.

PROJECT GOALS

- ✓ Develop a cultivar with high yield, high quality seeds, and resistance to key pests and diseases

Problems Addressed

Common beans, the most important pulse crop worldwide, are grown in climatic zones that are becoming hotter and drier. An alternative plant protein source with resistance to critical pests and diseases that thrive under these conditions is needed. Tepary beans are naturally adapted to hot and semi-arid regions of the Southwestern U.S. and Mexico. Although this crop does not receive as much attention as the related common bean, new high-quality tepary cultivars could help to increase its popularity with producers and consumers.

Solutions Developed

'USDA Fortuna' was developed at the Tropical Agriculture Research Station in Mayagüez, Puerto Rico through a multinational collaborative breeding effort. This improved tepary bean cultivar is high yielding with an attractive black speckled seed color and quick cooking time. Its seeds are high quality and enhanced in size, it has tolerance to Bean golden yellow mosaic virus (BGYMV), and it has resistance to leafhoppers, common bacterial blight, and powdery mildew. 'USDA Fortuna' has been publicly released and is available for research and breeding purposes through the NPGS as PI 698459.



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