

Tepary Beans and the Reawakened 25

TEPARY BEANS ARE ANNUAL LEGUMES. Wild forms still exist in North America and grow as twining or weakly trailing intermediate vines that climb shrubs or trees. The domesticated varieties are bushier and grow up to one foot tall and 20 inches in diameter. The leaves are trifoliate and have narrow, pointed leaflets. The flowers vary from white to light colored. The fruits grow in small pods, from 1.25 to 3 inches long, and contain 2 to 7 seeds. Domesticated beans are ⅓ of an inch long and can vary in color from brown to beige to black to white, whereas wild seeds are smaller, dark, and mottled. Tepary bean roots are associated with nitrogen fixing bacteria (USDA).



TEPARY BEAN

Phaseolus Acutifolius

Origin: North America
Grown across desert regions of North and Central America
A drought tolerant legume rich in protein and fiber

Teparies are indigenous to North America and grown in desert and semi-desert conditions from Arizona to Costa Rica. This family of beans was selected by Native Americans to be drought tolerant and a companion plant for their two other staple crops: corn and squash. They have a very high content of protein and fiber and a meaty, dense texture that holds very well when cooked. This makes Tepary beans a great alternative to protein that could play a great role in a world moving towards plant forward diets. That's why researchers are studying their genetics and adaptability skills, forecasting that in their genome lies the solution to the effects of climate change on agriculture.

CULINARY USE

There are two major types of tepary beans: white tepary beans and brown tepary beans. The two varieties have similar uses, but white tepary beans are sweeter than the more earthy tepary beans. Although tepary beans can be ground into meal, like most common beans, they are most prepared as a whole, dried shell (USDA). Drying the beans is beneficial because it increases shelf life. Prior to cooking the beans, they should be soaked (preferably overnight) as soaking greatly decreases cooking time. To prepare the beans, boil them for several hours or until tender (Ramona Farms). Once cooked, the beans can be used in salads, stews, chilis, and other classic bean dishes. However, it must be noted that tepary beans are toxic when raw, so it is crucial to ensure the beans are tender before consuming them (NUS).

NUTRITION AND MEDICINAL USE

Tepary beans are a more nutritious alternative to more common beans, like pinto and navy beans. They are high in protein and dietary fiber, nutrients which combat diabetes (Native Seeds). Further, tepary beans contain lysine, an essential amino acid that aids in protein development and lowers cholesterol. Tepary beans are also iron-rich, and have the potential to combat widespread iron deficiency – up to 30% of the world is iron deficient (Bhardwaj and Hamama). High levels of unsaturated fats in legumes like tepary beans also reduce the risk of colon and breast cancer and cardiovascular disease (Jiri and Mafongoya).

AGRICULTURE

Traditionally, tepary beans are grown at the start of the heavy rain season (mid-June to mid-July). They can be grown using modern irrigation techniques, but excessive irrigation or rainfall will lead to poor establishment and can cause more vegetative growth rather than high seed production. Soil tests should be done before planting to know if any nutrient amendments are necessary, but nitrogen fertilizers should be limited so as to not inhibit root nodulation and nitrogen fixation. The first harvest can be from 60-120 days after planting. The beans can be harvested by hand or mechanically. Tepary bean is at risk of common bean diseases like common mosaic virus (USDA).

HISTORY

Tepary beans originated in North America and have been cultivated for thousands of years. Although their archeological record does not show their first domestication's exact location, one record discovered domesticated tepary beans in the Tehuacán Valley, Mexico dating back approximately 2500 years. In Arizona, the beans were found in Hohokam sites dating back around 1000 years. The Tohono O'odham tribe in the Sonoran Desert of Arizona has one of the strongest cultural ties to tepary bean cultivation. One of the group's myths teaches that white tepary beans were scattered across the sky to form the Milky Way. Teparies were widely grown in the Tohono O'odham Nation until World War II, when many farmers joined the military or began working on large-scale cotton farms. The Tohono O'odham people are now working to incorporate the tepary bean, among other traditional foods, back into their diet including in school lunches (USDA).

RESEARCH

After recognizing tepary beans' capacity to fight malnutrition and food insecurity, Bioversity International launched a series of surveys in Guatemala with hopes of integrating tepary beans into the common bean value chain. Stakeholders, like manufacturers and distributors, in Guatemala's bean value chain showed interest in tepary beans. Further, food industry actors stated that they were willing to undergo trials to determine whether value added tepary bean products can meet industry quality and nutritional standards (Bioversity International). Existing research affirms tepary beans' nutritional profile and high resistance to drought, but in order to determine if tepary beans can serve as an alternative to common beans, additional, locally-driven research must be conducted.

CUISINE

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- [Several Tepary Bean Recipes](#)
- [Tepary Bean and Roasted Red Pepper Hummus \(Vegan\)](#)
- [Tepary Bean and Prickly Pear Casserole](#)

SOURCING

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- [Brown Dried Beans](#)

COMMUNITY RESOURCES

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- [NUS](#)

RESOURCES

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- [Native Seeds](#)
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