

POTATO BEAN

Apios, Indian potato, Virginia potato, wild bean, bog potato, wild potato, ground nut

Apios americana

Fabaceae

ECHO® PLANT INFORMATION SHEET

Description

Apios americana is a climbing, perennial vine and a member of the legume (Fabaceae) family.

Origin

It is native to eastern parts of North America and was widely cultivated by Native Americans for its edible tubers and beans.

Uses

A. americana is primarily cultivated for its starchy tubers that are an excellent source of carbohydrates and protein. Additionally, the vines may be used for forage by grazing animals, although hairs on the vines limit their palatability.

Cultivation

- Elevation: Sea level to 1000m
- Rainfall: at least 700 mm rainfall annually with high tolerance for flooding
- Soil Types: Not salt tolerant. Grows best in moderate to fertile soils that are well-drained.
- Temperature Range: Freezing temperatures will kill young plants so plant after last frost
- Day Length Sensitivity:
- Light: Full sun and has moderate tolerance for shade

Once the danger of frost has passed, or at the beginning of the rainy season, plant tubers 5 to 7.5 cm deep. If planting from seed, space seeds 30 cm apart and 2 cm deep in a single row with access to a trellis. For tuber production, vines can be cultivated with or without trellises. As plants grow, mulch the bases of the plants to retain soil moisture and reduce weed competition. Its preference for trellis support makes it more difficult to grow on a field scale than a root crop like cassava; however, *A. americana* is well-suited for small plantings around the home.

Harvest the roots when the plants turn yellow and die back. Tubers become sweeter in cooler weather. Tuber production has been shown to respond well to added fertility. For long term storage, place tubers in sand and store in 7-15C (45-60°F) conditions.

Harvesting and Seed Production

Harvest seeds from brown, dry bean pods. Propagating plants from tubers will result in plants with traits identical to the parent plants. Plants grown from seed, on the other hand, will not have the exact same characteristics as the parent plants, due to the mixing of pollen--and, thus, genetic information--between plants. Planting *A. americana* from seed presents an opportunity to select for plants that grow and produce well under local conditions.

Cooking and Nutrition

The roots have more protein than cassava, potato, and sweet potato. The protein in the roots contains all the amino acids essential to human health. *A. americana* tubers contain antinutritional factors and should be cooked before eating. You can boil, fry, or steam the tubers, or cook them other ways that potatoes are typically prepared. The mature beans are also edible; these can be cooked like split peas. Note that some people have reported allergic reactions to consuming *A. americana* tubers and beans.

References

Boutell, M. 2021. *Apios Americana*. ECHO Development Notes no. 151.