PLANT FACT SHEET

Use with caution

This plant can be harmful if it is eaten raw, in large amounts or without the right preparation. Read the whole fact sheet before use.

Solanum tuberosum L.

GENUS *Solanum* **FAMILY** Solanaceae

COMMON NAMES Potato

EDIBLE PARTS AND USES

Edible parts: Tubers, Root, Vegetable

The tubers are cooked and eaten. They are also fried, canned and made into starch. The tubers are boiled, baked, roasted, mashed and used in soups, stews, dumplings, pancakes and potato salads.
Potatoes are also use for alcoholic drinks. Caution: Alcohol is a cause of cancer.
The tender leaves are also occasionally eaten. They are used in soup. The leaves are used for sarma in Turkey. They are rolled around a filling of rice or minced meat.
CAUTION The green tubers and leaves are poisonous. They contain a poisonous alkaloid solanine. Tubers need to be cooked.

DESCRIPTION

A branched annual plant up to 50 cm high. The stems are soft and 4 angled with compound leaves. The leaves are irregular shape and have 6-8 pairs of leaflets as well as small irregular leaflets between the others. It has swollen stem tubers under the ground. The tubers can vary in colour from white to red and purple. The tuber shape can also vary greatly. The flowers are white pink or purple. The fruit is a berry. It is smooth, round and green but often striped.

HABITAT

It is a temperate plant. In the tropics they mostly grow at high altitude above 1500 m, but plants are grown between 900 and 2800 m. Tubers form best when soil temperatures are 15.5°C. Tuber formation stops with a soil temperature of 30°C and decreases with temperatures above 20°C. Potatoes should have a mean temperature below 18°C. They are damaged by frost but slightly more frost tolerant than sweet potato. Short daylength helps tuber production. They can grow with a pH of 5.2-6.6. In the Himalayas it grows up to 4,400 m altitude as a summer crop. In the Andes it grows between 1,000-3,900 m above sea level. It suits hardiness zones 7-11.

PRODUCTION

Cultivation

Plants are grown from tubers. Due to virus diseases it is necessary to get fresh seed tubers each few years. Large tubers can be cut to include a bud or "eye". A seed piece of 40-50 g is suitable. It is best to inter-crop as this stops bacterial wilt spreading. The plant is surrounded by dirt when 20-25 cm tall. Later the tubers need to be kept covered with dirt. Providing extra light (4-5 hours) allows plants to form flowers and true seed to be collected.

Harvesting and Seed Production

The time to maturity is between 17 and 24 weeks. Yields of 5 to 12 tons/ha can be expected. Higher yields can be obtained with good care.

NOTES

There are about 1400 Solanum species.
A C3 crop so will produce better with higher CO2 with climate change.

PICTURES

Credit: Food Plants International (Bruce French)

Credit: Food Plants International (Bruce French)

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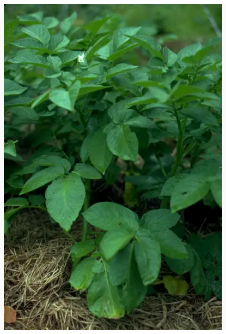

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French, B.R. & Maynard, A.R. Food Plants International Database. Food Plants International

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