



PLANT FACT SHEET

Zea mays L.

GENUS *Zea* FAMILY Poaceae

COMMON NAMES Corn, Maize

EDIBLE PARTS AND USES

Edible parts: Seeds, Leaves, Cereal, Flowers, Vegetable

The cobs are eaten cooked. The dried grains can be crushed and used. The meal can be used for breads, cake, soups, stews etc. Pancake like Tortillas from corn have been a staple food in Central America.

Maize is cooked and prepared in many different ways. They are boiled, roasted, dried, steamed and other ways.

Corn oil is used in salads and cooking.

Young tassels are cooked and eaten. The pollen is used in soups. The fresh silks are used in tortillas.

The pith of the stem can be chewed or made into syrup. Sprouted seeds are eaten.

DESCRIPTION

A grass. It is an annual plant 2-3 m high. It has a single stem. The stem is solid. It can be 2-3 cm across. Usually there are 14 internodes but this can vary from 8-21. It is a large grass family plant with prop roots near the base. Some forms produce tillers near the base. Seed roots feed the plant initially then casual side roots develop from the lowest node on the plant and continue supplying the plants nutrients. Roots can go sideways for 1 m or downwards for 2-3 m. It is a very variable plant and due to cross pollination variation continues and all forms hybridize. Leaves are produce one after another along opposite sides of the stem and there are between 8 and 21 leaves. The leaf sheath wraps around the stem but opens towards the top of the sheath. The leaf blade is 30-150 cm long and 5-15 cm wide. The leaf blade has a pronounced midrib and is often wavy along the edge. The male flower or tassel is at the top. The female flower is called the ear. It is on a short stalk in the axils of one of the largest leaves about half way down the stem. In the axils of the leaves it produces a large cob wrapped in leaves. The kernels develop in an even number of rows carrying 4-30 grains along the length of the cob. Cobs commonly have 300-1,000 grains. Normally only one or two cobs develop per plant. The seed endosperm is soft in dent types, hard in flint and popcorn types and have more sugar in sweet types.

HABITAT

A warm temperate plant. Seeds need a soil temperature more than 10°C to germinate. The best temperature is 21-26°C. It grows best at less than 1800 m altitude in the equatorial tropics. It is grown in most areas of Asia.

Plants have been grown from sea level to 3,300 m in the Americas. It tends to be in areas too dry for rice but wetter than for millets. Maize must have over 120 days frost free. In Nepal it grows up to 3000 m altitude. It suits hardiness zones 8-10. In Yunnan.

PRODUCTION

Cultivation

It is grown from seeds. It is normal to plant one seed per hole at 1-2 cm depth. A spacing of about 30 cm between plants is suitable. For saving seed, it should be from gardens of over 200 plants and the seed from several cobs mixed to avoid inbreeding depression.

Harvesting and Seed Production

In warm moist soil seeds germinate in 2-3 days after planting. Cobs are harvested when the grains are full and the tassel is just starting to turn brown. This is normally about 50 days after fertilisation. It is sweetest eaten soon after harvesting. Drought and unfavourable weather can result in the silks of the female flowers emerging after the pollen has been shed. This results in poorly pollinated cobs.

NOTES

There are 4 Zea species. They are annual grasses from Central America.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



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