

## Weed Control

Keep the field weed-free at all stages in the growth and development of the crop. Corn belongs to the grass family, therefore, be cautious when choosing weedicides. Recommended rates of pre-emergent herbicide and post-emergent herbicide can be applied.

## Post Harvest and Processing

A common method involves spreading the crop on bare ground. It takes a week to dry late harvested cobs but over three weeks to dry timely harvested crops. It also depends upon weather conditions and the initial moisture content.

1

De-husked cobs take a shorter time to dry than in sheaths. Some farmers shell late harvested crops (16-20%) for drying in grain form, but still on bare ground.




2

Shelling/threshing is the removal of maize grains from the cob or winnowing cleaning which involves separating the shaft in broken bits of cob from the grain. Maize shelling is difficult at a moisture level content above 25%. With this moisture content, grain stripping efficiency is very poor with high operational energy and causing mechanical damage to the kernels.

The maize kernel is transformed into valuable foods and industrial products by two processes, dry milling and wet milling.

## Major Producers

The three largest producers of corn in the world are:

-  Unites States (31.52%)
-  China (22.38%), and
-  Brazil (9.52%).

The largest importer of corn for the stock-feed industry in Guyana is Bounty Farm Ltd.



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## NATIONAL AGRICULTURAL RESEARCH AND EXTENSION INSTITUTE



# GROWING CORN IN GUYANA





## Description of Corn

Maize, *Zea mays*, is an annual grass in the Poaceae family that is produced as a major food crop. Maize kernels are wrapped in husks, and can be white, yellow, red, purple, or black in colour.

### Varieties

It is recommended to cultivate open-pollinated varieties with the option to the farmer of producing his own seed supply. The result of open-pollination is that every plant grown from saved seeds were genetically unique and shared certain characteristics desirable to the farmer.

### Fertilizer Rate

At planting or two (2) weeks after planting, broadcast approximately 140 kg/ ha of Triple Super Phosphate. Three (3) weeks after the plants have emerged, broadcast a mixture of Urea (140 kg/ha) and Triple Super Phosphate (140 kg/ ha). Seven (7) weeks after plants have emerged, broadcast approximately 140 kg/ha of Muriate of Potash.

### Soil Requirement

A growing plant needs an adequate, balanced supply of over a dozen nutrients, mostly coming from the soil.

In a living, well-aerated, fertile soil, the minerals, humus, and microorganisms should supply all of the plant's needs if there are no stresses from the weather. Corn grows best in loose, well-worked, well-drained soil with a pH of 5.8 to 6.8.

## Water Requirement

Water is required for seed germination and must be provided throughout the life of the crop. Excessive watering or water-logged soils may cause the seeds to rot or plants to die.

### Land Preparation

The following land preparation practices are recommended for optimum production:

- ✓ Clear the land of all vegetation
- ✓ Deep plough
- ✓ Add limestone, if needed
- ✓ Add cured (well-rotted) manure to improve soil structure and fertility, if needed
- ✓ Rotavate
- ✓ Establish drains.

### How to Propagate

Corn can be propagated by seeds sown 2 inches deep into the soil, at a rate of 2 to 3 seeds in each hole at a planting distance of 30 cm between plants and 76 cm between rows. Water thoroughly after planting and keep the soil moist until germination.

### Insect Management

The most common insect affecting the corn crop is fall armyworm which can be controlled using a fast acting broad-spectrum insecticide.

## Disease Management

Two common diseases affecting corn are susceptible to smut, a fungal disease, and Stewart's wilt, a bacterial disease.

### Maturity, Harvesting, Yield

One corn plant produces two cobs, but only one will be marketable. Young green corn is ready for harvesting at 10 - 12 weeks after the seeds were planted. At this stage, the silk turns brown and the corn grains (kernels) are at the "milk" stage, good for boiling. The semi-mature green stage will be ready for harvesting at 12 - 14 weeks after planting. At this stage, the husk changes colour from green to light yellow. The mature dried corn will be ready for harvesting 14 - 16 weeks after planting. At this stage the husk is cream.

At harvesting, hold the corn ear firmly and pull it downwards briskly for it to snap away from the plant.

For large-scale harvesting, a combine harvester should be used.

### Climatic Requirement

Corn is grown well in warm, long sun-filled days with acceptable temperatures ranging between (23 - 30°C), well-distributed intermittent moderate rains, or irrigation (400mm during the growing season).