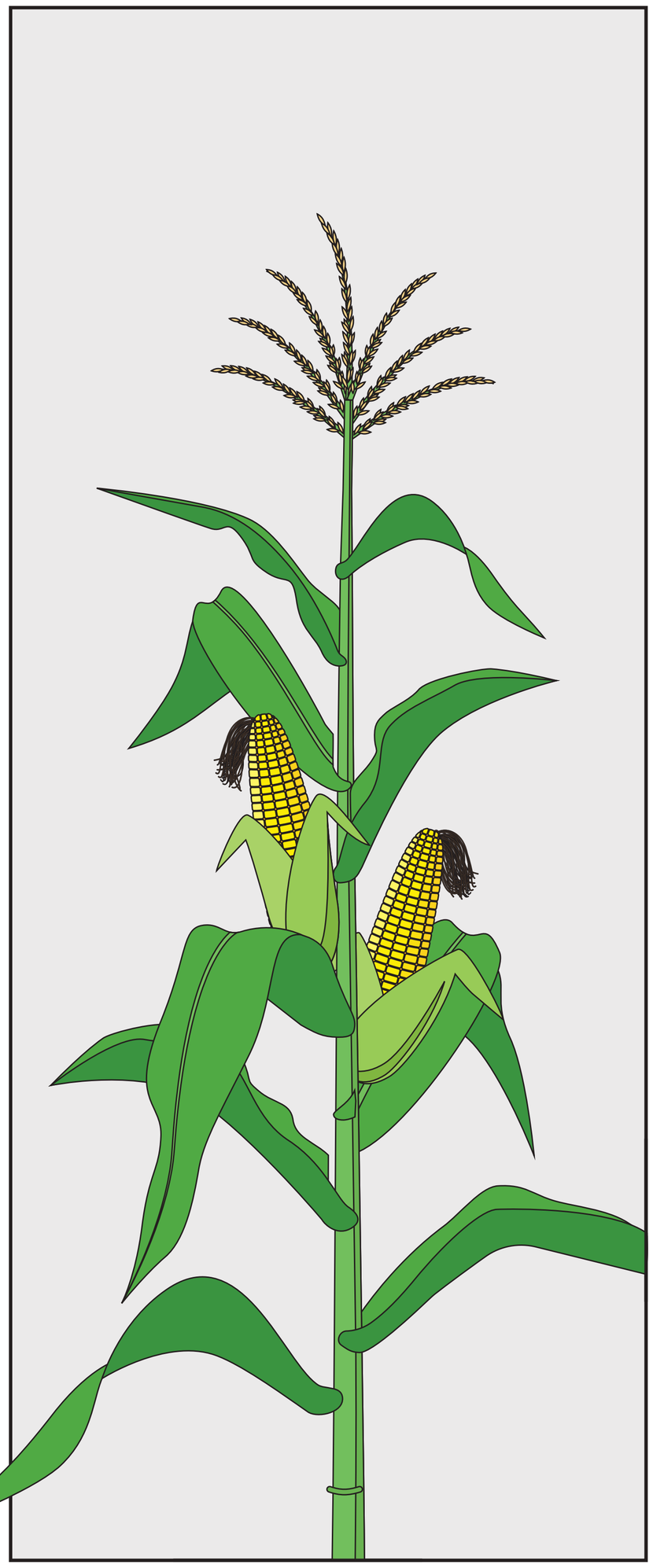
Maize

Maize, (Zea mays L. (corn)), is the most abundantly produced cereal in the world and it has become a staple food in many parts of the world, including Ethiopia. In Ethiopia the majority of the produced maize is used for human consumption (for example in injera and other traditional foods), especially in the rural areas. The nutritional value of common maize is quite similar to other cereal grains characterized with low protein quality and high carbohydrate content. Maize is not considered to be drought tolerant, though this depends on the variety planted and in the past years drought tolerant varieties have been developed.



LAND PREPARATION

- Start with the preparation of the farmland before the rainy season starts, so that the seeds can be sown at the start of the rainy season.
- The soil should be covered with crop residues before planting the seeds to avoid soil erosion due to wind or rain. Also, this adds nutrients to the soil and increases the soil water balance.
- Another option is to soak the seeds in the dry season before planting.

WATER MANAGEMENT

In (semi-)arid areas, rainfall occurs unevenly of the year. It is vital to use moisture retention techniques such as tie-ridges and mulching.

VARIETIES

In areas with low humidity and rainfall, it is important to use fast-growing and drought-tolerant maize in combination with other moisture retention measures.

SEED MANAGEMENT

- Maize should be sown at the start of a rainy season.
- Maize should be sown in rows, 25 kg seeds/ha. Spacing of the row is 75cm between rows and 25-30 between

CROP PROTECTION

- Weeding by hand is best: first weeding should take place around 18 to 25 days; second weeding between 35 to 40 days; and third weeding between 50 to 55 days.
- The removal of plant residues from the field will reduce pest infestation by 90%.
- Use legumes, potatoes, onions or other vegetables for intercropping.
- Biological, Mechanical Integrated Pest Management (IPM) is encouraged, as alternative to use of chemicals.
- In the case of Striga, intercropping with a trap-crop can be used, such as sunflower, ground nut and soybean. Also crop rotation is recommended.
- If maize has a disease, collect and burn the maize.

CROP PLANNING

- To increase crop production, apply crop rotation so that soil fertility is enhanced and pests and weeds are avoided.
- Alternating cereals with maize increases the nitrogen in the soil.
- Intercropping is carried to avoid pests and diseases and to produce two or more crops at the same time in the same field.
- Maize can be intercropped with beans, pigeon peas, nuts, lentils and sesame seeds.

USE OF CHEMICAL FERTILIZER

- Use of chemical fertilizer is not encouraged, taking into account the nutrients in the deposited sediments.
- Compost and manure can be used as natural fertilizer up to 8 to 10 tons per hectare.

HARVEST & POSTHARVEST PRACTICE

- Timing of maize harvest varies per species and the environment.
- In semi-arid and arid regions, the average time is usually 90 to 120 days after sowing, depending on the type of seeds used.
- Maize can be harvested after it has blackened or dried on the top of the fruit.
- The moisture content of the corn must be lowered by 12 to 14% before it can be stored for a longer time.
- To avoid crop damages by pests, three-layer plastic bags can be used (hermetic bags) or if stored in a barn, the barn should be clean and dry.

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