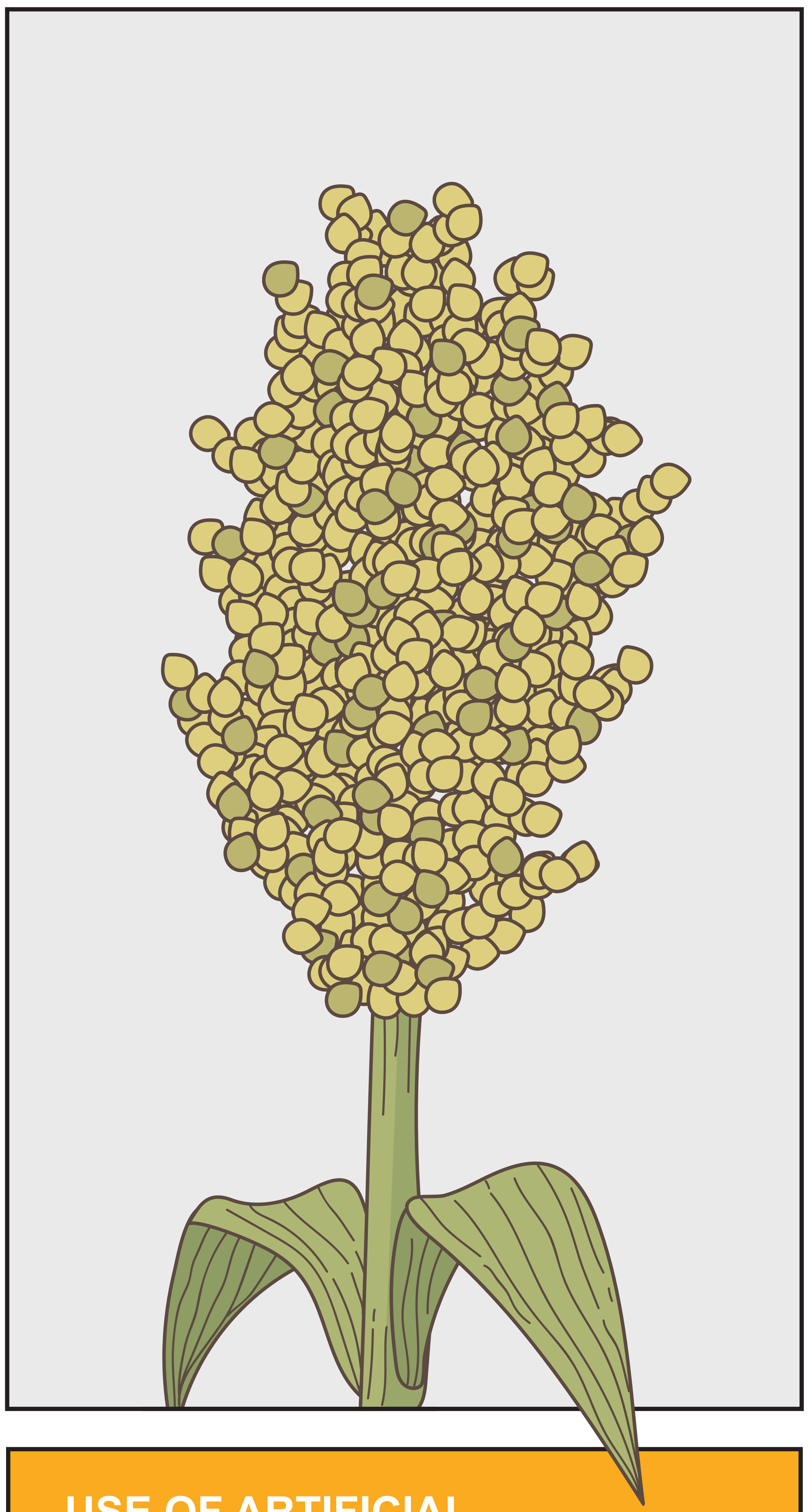
Sorghum

Sorghum is a coarse cereal. In Ethiopia sorghum is used as one of the important indigenous food crops and is only second to tef basis for as injera. It is mainly grown for human consumption and as feed grain. Sorghum grows in a wide range of agro ecologies most importantly in the drought-prone parts where other crops can least survive.



USE OF ARTIFICIAL FERTILIZER

- Use of artificial fertilizer is not recommended, taking into account the nutrients available in the deposited sediments.

USE OF NATURAL FERTILIZER

- Mulching is vital to protect the soil from cracking, soil moisture from being wasted and improve soil temperature, soil structure, biological activity and make it for water easier to infiltrate into the soil.
- Manure and compost use increases the sorghum and soil productivity. Should be broadcasted in the field and ploughed in or spread in bands along the planting furrows and mixed with soil before sowing. Recommended rate; 5-10 ton ha-1. Best if applied 1 month before sowing.

  Recommended to plant pigeon pea as inter-cropping in the sorghum field as an additional source of fodder (2 to 3 tons per hectare), but also as a source of fertilizer to improve soil fertility, reducing erosion, helps controlling weeds and maintains soil moisture.

LAND PREPARATION

- The soil needs to be well-drained so that there is enough moisture in contact with the soil to allow the seeds to germinate.
- Land preparation should be started just before the start of the rainy season.
  It is generally sufficient to plow 2 to 3 times.
- Once the first crop has been harvested and the field has not lost its moisture, a second crop can be sown. The third growing cycle is sown in the dry season.

WATER MANAGEMENT

- In (semi-)arid areas rainfall is often not sufficient for the sorghum production, so adequate water management is required for a good productivity.
- Tie-ridging causes the rain to accumulate in the soil and capture moisture.
- Mulching can be done with plant residues such as from sesame seeds, pigeon pea bushes, and teff straw to reduce soil evaporation and increase the soil moisture.
- Drought can be addressed though early planting and use of early maturing drought tolerant cultivars and water conservation.

VARIETIES

- High yields can be achieved with ESH-1, ESH-2, ESH-3, ESH-4 and ESH-5 varieties.
- Sorghum cultivated together with moisture retention methods and soil fertility technologies can increase the sorghum productivity by 145%.
- For the agro-pastoralist context, early maturing varieties are recommended.

SEED MANAGEMENT

- In wet areas, sorghum should be sown from the last week of June to the first week of July.
- About 10 to 12 kg sorghum seeds per hectare
- Between each plant, a distance of 15 cm is good and between rows 75 cm.
- An appropriate sowing depth is 4 to 5 cm deep for dry planting and 2,.5 – 4 cm for wet planting.

CROP PROTECTION & PEST CONTROL

- Sorghum crops grow slowly from the beginning, so weed control is important to avoid competition for water, light and nutrients. If possible, sorghum is always weed-free.
- Weed control should be done within the first 18-20 days, and a second time around 35-40 days.
- Use of weed-resistant sorghum cultivars is very effective, also against pests.
- Some weeds, like Striga, have to be removed by hand and burned, in order to control.
- Crop rotation can be done with legumes. Also field sanitation helps to avoid pests.
- Integrated Pest Management (IPM) is recommended, including early planting.
- To avoid rats: no barn area on the field and use traps and cats to catch rats

CROP PLANNING

- Sorghum can be rotated with maize, other grain types, sesame seed, cowpea and peanut to increase soil fertility, to avoid spreading of pests and disease and to keep the soil moist.
- Sorghum can be intercropped with legumes.

HARVEST & POST HARVEST PRACTICE

- It takes 110 to 120 days for fast and drought-tolerant varieties in humid areas to fully develop and be physiologically mature.
- Sorghum can be harvested after it has blackened or dried on the top of the fruit/the base of the grain.
- Sorghum can be dried in the field when it is harvested. If it is harvested with a threshing machine, the grains should be dried in the sun. Humidity must be reduced to 12.5% before it is ready to be stored in a barn.
- The barn should be clean, dry, well ventilated and free of pests and debris.

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