Technical Information

How to grow Tropical Sugar Beet

1. Soil preparation & sowing

• Sugar beet can be cultivated on a wide range of soils but a deep soil (> 1 m) is better adapted to its long tap root. The crop grows well between pH 4 to 9 and tolerates saline soils better than sugar cane.

• Soil preparation is similar to other crops. But extra care should be taken to have a thin seedbed: one or several harrowing is needed after plowing in order to break the clods. The ideal sowing depth is 2.5 cm (maximum 3 cm). Soil structure should be maintained in order to avoid water clogging and the lack of oxygen in the soil.

• The optimum population is ±100,000 plants/ha (42,000 plants/a). This can generally be achieved with an initial sowing density of ±1.2 unit/ha (considering a 80-85% germination rate and knowing that each unit contains 100,000 seeds). But, if difficult conditions are expected at emergence, it may be useful to sow at a higher density and to have a light thinning once the crop is well established.

• Sugar beet can be sown by hand or mechanically, 1 seed per hole, either on a flat bed (50 cm between rows and 16-17 cm between plants for a sowing density of 1.2 unit/ha) or on ridges, which can be very practical for irrigation.

• Tropical sugar beet is monogerm: a single plant comes out of each seed and therefore thinning is not needed.

• The ideal sowing period will depend on the region where sugar beet is grown (climate and crop rotation); an appropriate sowing window would have to combine warm temperatures on a well drained soil, and will have to be followed by mild rainfalls.

2. Fertilization

• A single application of mineral NPK (default rate: 120-75-75 kg/ha) 1 or 2 weeks before sowing is needed. N can also be applied as organic manure earlier in the season. There is no point to give N after canopy closure: the tap root of sugar beet is very efficient and can pump N deep in the ground until late in the season. There is no point to give too much N: it will lower the sugar content and sugar extractability in the root and it will not improve the final white sugar yield.

3. Weed control

• Weed control is very important from sowing until canopy closure (± 1 or 2 months after sowing). It can be done by hand, mechanically or chemically.
6. Harvest

- Sugar beet has no ripening stage. If well managed (no damage due to root rots and leaf diseases), the crop can continue to grow almost indefinitely. In practice, harvest is often done after 4, 5 or 6 months.
- Sugar beet can be harvested by hand or mechanically. The leaves usually stay in the field where they are used as green manure. The amount of soil on the root at harvest should be limited as much as possible.

5. Pests & diseases management

- Our seeds can be coated with plant protection products that will protect the crop against most early attacks of insects and fungi.
- The type of pests and diseases occurring later in the season will often depend on the region where sugar beet is cultivated. Nevertheless:
  - Powdery mildew and cercospora are two leaf diseases that are found almost everywhere; a foliar spray with an appropriate fungicide is strongly advised when first symptoms appear.
  - Some insects (e.g. leaf eating caterpillars) might also from time to time attack the crop later in the season; the use of an insecticide must then be evaluated on a case by case basis.

4. Irrigation

- At sowing: If soil temperature is > 35°C, irrigate directly after or even before sowing; to cool down the soil.
- Until emergence is completed: it is essential to maintain good soil moisture.
- After emergence: irrigation will be needed ± every 10-15 days, depending on the evolution of soil moisture and on rainfalls. In any case irrigation should be stopped 1 week before harvest.

Who is SESVANDERHAVE?

SESVanderHave is the global market leader in the sugar beet seed industry.

Each year, SESVanderHave processes and sells one and a half million units of sugar beet seed all over the world. Each unit containing one hundred thousand seeds, in the recognised blue colour of SESVanderHave. These seeds are sold and sown in over fifty countries worldwide.

www.sesvanderhave.com
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