

# SWEET SORGHUM

Sugar Sorghum, Sorgo, Cane

*Sorghum bicolor*

Gramineae

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## ECHO® PLANT INFORMATION SHEET

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### Origin

This variety of sorghum is distinguished by the sweet juice contained in the soft pith of the stalk. It was brought to the northern hemisphere by the slave trade from Africa. In temperate areas of the world it is grown as an annual and is susceptible to frost. In tropical locations, a second cutting could take place. According to the varieties, Sweet Sorghum can be grown for its extracted juice or as fodder for livestock. There has been experimentation with burning sorghum stalks to produce ethanol but at this time it is more advantageous to return the stalks to the soil to build up beneficial organic matter. Sorghums were brought to the western hemisphere from Africa via the slave trade. Many varieties have also been developed in China over the centuries. Most are tropical or semi tropical with a few varieties developed in highland areas with cool nights. This "sweet" variety is distinguished by the sugar content (16%+) of the juice contained in the soft pith of the stalk.

### Uses

Fifty to sixty percent of the weight of the stalks is extracted in juice form by pressing or milling. Evaporated at slightly above the boiling point, over a wood, coal or gas fire to a moisture level of less than 35 %, the juice becomes a thick, light, amber colored syrup with a sweet, mild taste with little crystallization. Farmers may refer to their syrup as "molasses" but it is not made from sugar or beet cane and therefore is a completely different product. Fifty to sixty percent of the weight of the stalk is extracted in juice form by pressing or milling. The juice can then be concentrated to sweet syrup for food. The juice is also a source of fuel ethanol after fermentation and distillation. In either case, the spent stalks can be left in the field as a biomass mulch/fertilizer. The roots ooze sugars which, as they break down, are said to react in the soil to form an acid that causes insoluble alkalis to be washed away, thereby increasing soil porosity.

### Common Names

### Cultivation

Sweet Sorghum has a deep, effective root system allowing it to survive in dryer soil than corn. Sandy, loamy soil that is close to 18°C (65 ° F) at planting time, good moisture during the growing period and decomposed organic matter added to the soil will increase growth. Planting seeds 3-4 cm (1-1½ in") deep in a raised bed allows good air and water circulation to the roots so tillers will form along with the main stalk. At first weeding, plants should be thinned to stand 15-20 cm. (6-8 in) apart. The first crop may be harvested 120 days after planting. Soil temperatures at planting may be close to 18.5° C (65° F). Plant seeds 3-4 cm (1-1.5 in) deep. Good moisture and decomposed organic matter in the soil will increase yield. In flood prone areas, raised beds allow good water and air circulation, increasing the number of tillers on the main stalk. At first weeding, thin plants to a final in-row spacing of 15- 20 cm (6-8 in) with 60 cm (24 in) between rows.

### Harvesting and Seed Production

Harvesting and processing Sweet Sorghum is quite different than grain sorghum. Stalks should be cut at ground level with a cane knife or sharpened hoe and the leaves allowed to wilt before crushing the whole plant in a roller mill preferably in the cane field. Juice should be evaporated with as little stirring as possible and left to settle for 2 hours before skimming, filtering, cooling and storing in clean, covered pans or jugs. To harvest seeds, leave the plants in the field and collect the seeds when they are firm, hard and cannot be cut with the thumbnail. Spread heads thinly in a dry place with good air movement. Thresh and store seeds in tight containers.

### Pests and Diseases

Choose varieties of Sweet Sorghum that have been bred for resistance to downy mildew, anthracnose and mosaic virus. Rotate this crop yearly with a legume like soybeans, or cowpeas to enrich the soil and prevent buildup of undesirable seeds and spores.

### Cooking and Nutrition

Syrup made from Sweet Sorghum is used as a sweetener in baking or as table syrup. Demand usually exceeds supply on the retail market.

### References

<http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=1982>