

GRAIN SORGHUM

Milo, Guinea Corn, Shattercane, Durra, Karrir Corn, Broomcorn

Sorghum bicolor

Gramineae

ECHO® PLANT INFORMATION SHEET

Origin

Grain Sorghum was first found growing in Ethiopia. It is now a staple grain crop for 300 million people in Africa, India, China and other areas of the tropics that are hot and dry. Grain Sorghum is the fourth most important cereal grain grown in the world especially in areas where the amount of rainfall and high temperatures will not produce a reliable corn crop. Even in dry soils, Grain Sorghum manufactures starch efficiently making it a good energy crop for livestock.

Uses

It is important to plant varieties that are specific to their uses. Some varieties are bred for fodder, others for human consumption of the seed. The grains are pounded to make gluten-free flour; the leaves and stalks are fed to cattle or used as fuel as are the roots. The stalks are also used to construct fences and walls. The leaves and stalks when used as a mulch are a deterrent to some weeds. Cyanogenic compounds and tannins are present in all the foliage parts of the plant. Sorghum should never be the primary ingredient in livestock feed.

Common Names

- Spanish
 - Sorgo De Grano

Cultivation

Most varieties will produce a crop of seed or forage in moderately dry, unfertilized soil though loose, fertile, slightly acid soil and 200 mm - 1250 mm (8 in - 50 in) rainfall are preferred. Nitrogen, available in mineral fertilizers (35-45 kg/h; 35-45 lbs/acre) will only be usable by the plant if accompanied by phosphorus (20-30kg/h; 20-30 lbs/acre). Over a two year period of time, if 5-10 t/h of animal manure are added instead, not only will the yield of Grain Sorghum increase but so will the fertility of the soil for future crops.

In the tropics Grain Sorghum can be planted at any time during the year when temperatures are 20°- 30° C (68°- 86° F) and the rains have begun. In the subtropics, the crop is better planted in late summer and early fall.

A 1.5cm - 5cm (0.6 in - 2 in) planting depth is recommended depending on texture and moisture of soil. Higher yields can result from rows planted close together but spacing far enough apart in the row to cause plants to tiller and produce large heads and grain. We have been able to get a second harvest from our crop at ECHO after cutting and allowing it to grow and set seed.

Harvesting and Seed Production

If this crop is grown to be used for forage, the greatest dry matter is attained at maturity when stems are 80-120 cm (32 in - 47 in) in height. It should not be grazed before it has reached 20-30 cm (8 in - 12 in). To harvest seeds, watch for seed heads to dry but not shatter. Cut the stalks by hand and allow to dry in the field or in loose piles under cover. Thresh to separate seeds from chaff. Store seed below 12-13% moisture and mix with sand, wood ashes, dried cow dung, lime or sunnhemp to discourage insects. Seeds may need to be scarified to improve germination.

Pests and Diseases

In areas where Grain Sorghum would be expected to yield a good crop, weed competition for water and nutrients can limit growth. Look for varieties that are resistant to drought and Striga, a parasitic weed. High amounts of lysine and low amounts of tannins are also desirable. Birds can be a problem when heads are ready for harvest.

Cooking and Nutrition

Grain Sorghum varieties with higher tannin content in the seed heads are more resistant to being eaten by birds but are less palatable to humans. Consumption of sprouted sorghum seeds is not recommended because the cyanide content in sprouts could be fatal when added to a diet high in cassava, another major dryland crop. Grain Sorghum can replace wheat or corn in cereals, flatbread, porridge, brewed drinks or popping corn. Sorghum is higher in protein than maize but lower than wheat. It is a good source of vitamin B.

References

Heuzé V., Tran G., Lebas F., 2015. *Sorghum grain*. Feedipedia, a programme by INRA, CIRAD, AFZ and FAO.
<https://www.feedipedia.org/node/224> Last updated on October 8, 2015, 13:47

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