

Senna (Sanai)

CASSIA ANGUSTIFOLIA VAHL. FAMILY - CAESALPINACEAE

Senna is a small perennial shrub of less than a metre in height ascending branches. The leaves are compound pinnate, petiolate about 10 cm long and bear 5-8 pairs of leaflets each on a small stalk.

COMMON NAMES: Sanai, Marknadi, Sonmukhi.

DISTRIBUTION:

The plant is found growing in a wild state in certain coastal parts of Gujarat especially in the Bhuj region of India.

PART USED: Leaves and Pods.

CULTIVATION:

SOIL AND CLIMATE

The crop can thrive on a variety of soils, but is largely grown on red loams, on alluvial loams. The texture of the soil which account for the major hectareage under senna crop varies from sandy loam to loam, while the black cotton soils are heavier and more fertile. The average pH ranges from 7 to 8.5. It is very sensitive to water logging. Hence, grown only on well-drained soils.

Senna is a warmth loving crop and require bright sunshine for its successful growth. It can be grown as an early summer (February - March) or a winter (October - November) crop. Whereas under North Indian conditions like Delhi and Gujarat, where the rainy season is short, it is reported to be the ideal time as the plants put on luxuriant growth and give the maximum growth. Heavy rains and cloudy weather during growth are harmful to the crop. An average rainfall of 25-40 cm. distributed from June to October is sufficient to produce good crop.

LAND PREPARATION

The land is ploughed deep and the soil is exposed to sun for 110-115 days to dryout roots of perennial weeds followed by two cross ploughing harrowing and levelling. FYM is incorporated into the soil at the time of final cross ploughing. Then the land is laid out into plots of convenient size with irrigation channels.

NURSERY RAISING AND PLANTING

The crop is raised by seeds. The seeds have hard and tough seed coat. Soaking seeds for 10-12 hours before sowing was reported not only to give 100 percent germination. About 20 kg of seeds are required to cover a hectare of land.

The seeds are broadcasted or preferably sown at 30 cm lines to 30 cm apart and 1.5 to 2.5 cm depth in a well prepared land. Germination commences on third day and completed within a fortnight. Before sowing the seeds, the field should be perfectly levelled otherwise it hampers the uniform seed germination. It is found that the seed treatment with Thiram, Captain or Agrosan G. N. at 2.5 g/kg protect the seedlings from damping off and seedling blight diseases which are very common.

THINNING AND WEEDING

The first weeding cum hoeing is done at 25-30 days of sowing, a second at 75-80 days and a third at 110 days to keep the crop free from weeds. Use of Teeflan herbicide as pre-emergent spray at the rate of 4 kg/ha has been reported to increase the yield and anthraquinone content.

MANURES, FERTILISERS AND PESTICIDES

The medicinal plants have to be grown without chemical fertilizers and use of pesticides. Organic manures like, Farm Yard Manure (FYM), Vermi-Compost, Green Manure etc. may be used as per requirement of the species. To prevent diseases, bio-pesticides could be prepared (either single or mixture) from Neem (kernel, seeds & leaves), Chitrakmool, Dhatura, Cow's urine etc.

IRRIGATION

Senna could be economically grown under rainfed conditions. In most years, the crop needs no irrigations except under the conditions of prolonged drought. However, when it is grown as a semi-irrigated crop, the yield increased considerably. About 5-8 light irrigations are enough to raise a good crop of Senna, however, heavy irrigations are injurious to the crop.

HARVESTING/POST HARVESTING OPERATION

Senna plant produces foliage containing higher sennosides between 5-90 days age, depending upon the total plant growth. The picking of leaves is done by hand so that most of the growing tops are removed at harvest this also induces the plants to produce more of branching which otherwise reduce foliage growth considerably. A second picking is taken at 90-100 days and the third picking between 130-150 days when the entire plants are removed so that the harvested material includes both leaves and pods together.

The harvested crop should be spread in a thin layer in an open field to reduce its moisture. Further drying of produce is done in well-ventilated drying sheds. It takes 10-12 days to dry completely in well-ventilated drying sheds. The dried leaves and pods should have light green to greenish yellow colour. A rapid mechanical drying at 40⁰ C could also be attempted. The produce is baled under hydraulic pressure and wrapped in gunny bags, for export.

YIELD

A good average crop of Senna can give 15 quintals of dry leaves and 7 quintals of pods per hectare under irrigated and good management conditions. The yield under rainfed conditions is about 10 quintals of leaves and 4 quintals of pods.

ECONOMICS

Expenditure per ha. Rs.7000/-

Return per ha. Rs.37,500/-

Net income Rs.30,500/- (YEAR-2001)

Note: Market for medicinal plants is volatile and the economics may vary.