



Increase Farmers Income by Scientific Farming of Spine Gourd

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Momordica dioica, commonly known as spiny gourd or spine gourd and also known as bristly balsam pear, prickly carolaho, teasel gourd or kantola, is a dioecious species of flowering plant family cucurbitaceae grown widely in different parts of India and some parts in South Asia. The fruits are used as a vegetable, cooked with spices, or fried and sometimes eaten with meat or fish. Young leaves, flower and tuberous roots are also eaten. It contains high amount of carotene and protein. It has commercial importance and is exported and used locally. Spine gourd is a perennial climber with tuberous root, almost 4 m long vine bearing simple tendrils. It is propagated by underground tubers. It has small leaves, small yellow flowers, it has small, dark green, round or oval fruits. It is dioecious, which means that it has distinct male and female individual organisms, hence its name.

Some health Benefits of Spine Gourd:

1. Helps in anti-aging
2. Reduces excess sweating (Hyperhidrosis)
3. Spine gourd is one of the best home remedies to cure piles
4. Great source of phytonutrients and low in calories
5. Use of it is also helpful in Improving the eyesight
6. Reduces the chances of cancer
7. Spine gourd also eliminates kidney stones from a body.
8. Lactating mothers can eat this veggie to decrease the problem of vomiting in infants.
9. Lower the level of blood sugar in diabetic patients
10. Using it in your diet is helpful in reducing the cough problem
11. High in fiber and anti-oxidants and thus very useful for easy digestion

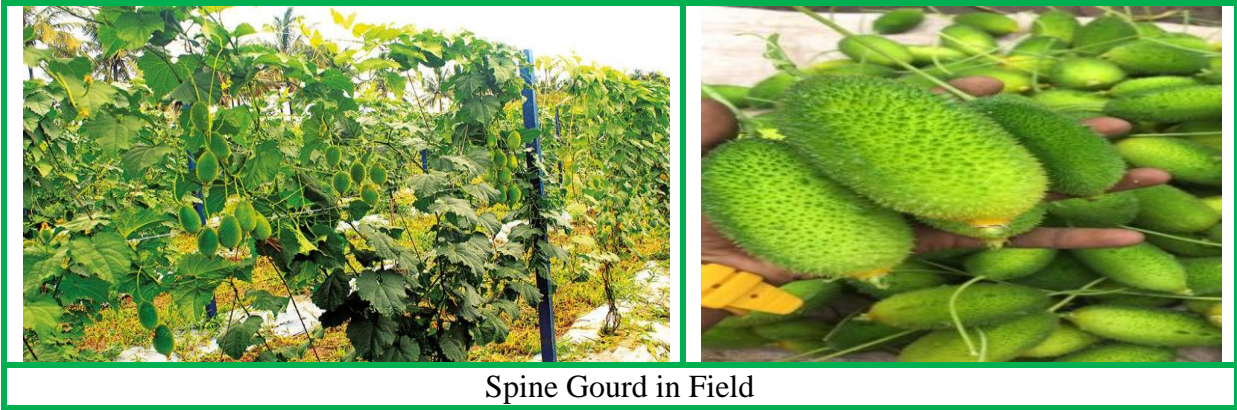
Types of Spine Gourd

In the market, there is two type of spine gourd available; small size and big size. They are similar in appearance but have different size. Usually, the small size Kantola has more demand than the big size.

Varieties:

Indira Kankoda I (RMF 37): This is a new commercial variety of Kantola developed by Indira Gandhi Agricultural University. This improved variety is resistant to all major pests and insects.

Arka Bharath: It is a high yielding selection teasel gourd variety.



Spine Gourd in Field

Climate and Soil:

It is a crop of warm and moist climate. 1500-2500 ml of rainfall and 20-35°C temperature are suitable for its production. This crop is sensitive to acidic soil, for its production suitable pH of the soil is 6-7. Sandy land in which there is sufficient amount of organic matter and proper management of drainage is very suitable.

Seed Rate, Sowing and spacing:

An average seed rate in spine gourd cultivation is about 1.5 to 2 kg/acre or 3000 to 5000 tubers/ha. Spine gourd/Kantola can be cultivated as summer as well as rainy season crop in India. Usually, this crop is sown in tropical (plain) regions in the month of Jan to Feb as a summer crop and July to Aug as a rainy season crop. For tropical hills regions, sowing would be in April month. The best season of planting tubers is Feb - March months. Sow 2 to 3 seeds in the prepared beds @ 2 cm depth, Ridge-to-Ridge distance should be about 2 meters and Plant-to-Plant distance should be about 70 to 80 cm.

Propagation:

The process of production of this fruit is completely natural, but in some places production has also been started by cultivating this fruit. Propagation of Kikoda is the main point of the cultivation, because when it is produced by seed, male and female plants are found in the ratio of 1: 1. Therefore, the best way to produce is transplanting by root or knot. 8-10 kg seed per hectare with at least 70-80% germination capacity is suitable for production.

Irrigation:

Irrigation should be carried out immediately after sowing the seeds on the raised beds in the end. Thereafter, carry the irrigations on need basis. Irrigations are not needed in case of rainy season and soil has enough moisture. In dry spell weather conditions, 1 or 2 irrigations should be given in weekly interval.

Manure and Fertilizer:

The dose of fertilizer depends upon soil, climate and system of cultivation. Well rotten FYM @ 15-20 t/ha is applied at the time of land preparation. NPK @ 120:80:80 kg/ha is added with full dose of P and K before sowing and half dose of N at the time of vining and remaining half dose of N before flowering.

Training:

The crop is climbing in nature, provision of supporting structure encourage proper vegetative growth and thereby contribute to good yield of quality fruits. Different system of training viz. single stake system, bower and kniffin system are followed as per availability of training materials.

Pests and Diseases:

Major Insect-pests found in spine gourd farming are fruit flies & nematodes. To control fruit flies, any mechanical method of catching flies (insect traps and baits) and to destroy them used. Organic pesticides are also available in the market to control this. To control nematodes, incorporate neem cake in the soil at the time of land preparation. Intercrops like marigold may also helpful in preventing this.

Major diseases found in spine gourd farming are powdery mildew, anthracnose, downy mildew, angular leaf spot and mosaic. Using appropriate fungicides can control these diseases. Viral disease like mosaic can be prevented further by destroying impacted plants. Seed treatment before sowing can control any seed borne diseases

Harvesting and Yield:

Fruits are ready for harvest within 75-80 days in first year and 35-40 days from second year. Fruits should be harvested at mature green stage. Under optimum crop management condition fruit yield is 75-100 q/ha.

References:

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