

Scientific cultivation of very remunerative kharif Cucumber

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Introduction

The botanical name of cucumber is *Cucumis sativus*, the original place of cucumbers is India. It is a vine plant which is used as a salad or vegetables in summer all over India. Cucumber seeds are used to extract oil which is very beneficial for the body and brain. Cucumber seed oil is used to treat fever. Cucumbers contain 96% water which is good during the summer season. The leaves of this plant are large in size and triangular size. Cucumber flowers are yellow in colour. It is a good source of protein, carbohydrates and vitamin C. Cucumbers are used as a treatment for skin, kidney and heart problems. Cucumber is cultivated after watermelon in the world. India is considered as a house of cucumber. It is used as vegetable, salad and pickle, its leaves are also used as vegetables, the fruit of the cucumber is good for those who are suffering from diseases like jaundice and indigestion.

Soil and climate: Cucumber is grown in large quantities in different varieties of soil such as sandy loam and loamy, which has a high number of organic elements and a good drainage of water. The soil pH = 6-7 should be for cultivation of cucumber, medium 25-30 °C temperature is required to grow cucumber. During seed sowing temperature should be 22-30 °C.

Preparation of land: Cucumber cultivation requires a well-prepared and weed-free field. For that the soil should be well ploughed 3-4 times before planting. Organic manure like cow dung,

vermicompost can be used in the soil so that the fertility of the field can increase. Nursery beds are prepared of 2.5 m wide and 60 cm length.

Sowing: done in the month of February-March.

Distance: Two seeds should be sown everywhere on 2.5 m wide beds and a distance of 60 cm between the seeds.

Seed Depth: Sow the seed at a depth of 2-3 cm.

Sowing time: May -June to be transplanted.

Seeds: Sow at 2.5-3.5 kg per hectare.

Treatment of seed: Treat the crop with a favorable chemical to protect the crop from diseases and pests before sowing and to increase the life span.

Before sowing, treat the cucumber seed at 4 grams per kilo or treat the carbendazim at 2 grams per kilo grams.

Improved Varieties and yields:

Punjab Khira 1- The varieties were released in 2018. The fruit is dark green in colour with a bitter taste and average weight of 125 gram. The average length of the cucumber of this variety is 13-15 centimeters. It is in the month of September. The average yield is 304 quintals per acre.

Pusa Sanyog- This is the first F1 hybrid variety of cucumber. It is a multiple disease resistant variety.

Puna Khira- This variety is a small and light green fruit.

Balam Khira- This variety is used to create pickle.

Pant Parthenocarpic Khira 2

Pant Parthenocarpic 3

Fertilizer: During the land preparation Nitrogen 40 kg, Phosphorus 20 kg and potassium 20 kg initially as fertilizer have to be applied.

Weed control: Hand weeding or control with chemical herbicides. Spray glyphosate 1.6 lit per 150 lit water. Spray the glyphosate only on weeds, do not use it on the main crop.

Irrigation: In the summer season, cucumber needs more water, it requires a total of 10-12 irrigation. Give water at intervals of 4-5 days after planting in the field. After 45 -50 days of sowing,

the plant starts giving fruit and no of fruits can be 10-12. Cucumbers are mainly used when the fruit is green and small. The average yield is 30-40 qtl. /acre.

Seed production: Brown fruit is considered to be the best for seed production. First fruit pulp is kept in fresh water for 1-2 days to extract seeds so that the seeds can be easily separated. Then they are rubbed with hands and heavy seeds settle down in water and the heavy seed is removed from the water and dried at room temperature.

How to prevent major pests and diseases of cucumber crop

Pest

Red Pumpkin Beetle-This pest is found inside the ground and both the grub and the adult damage the crop. Adult causes more damage. The grub remains in the ground, which causes damage by attacking the root of the plant. These pests are most active in the months of January to March, adult pests prefer especially the soft leaves of the Khira crop.

Preventive measures: In the morning dew, the ash is not even on the adult plant, which reduces the damage. In the event of a high outbreak of this pest, spray pesticides such as Dichlorophos 76 EC, 1.25 ml per Liter water in 1 ha. This disease will be repeated after 10 days.

Diseases

Powdery Mildew- This disease is especially found on the kharif crop of cucumber. The first symptom appears to be white or dusty on the surface of the leaves and the stems. These white powdered substances finally cover the surface of the plant. Due to which the size of the fruits becomes smaller.

Causal Organism- *Erysiphe cichoracearum*

Preventive measures- To prevent this, the disease-ridden plant is collected and burned in the field. Spray fungicide such as Flusilazole 40 EC with 1 g per litre of water at intervals of 7 to 10 days in 1 ha.

Anthracoze- Symptoms are seen in all above the ground parts of plants. First yellowish circular spots are seen in older leaves. In stems and petioles brown and black colour streaks develop. Circular

water-soaked spots are seen on the fruits. In warm and humid weather all the leaves may be attacked and give a burn out appearance.

Causal Organism- *Colletotrichum orbiculare*

Preventive measures- Good quality, disease free seeds should be used. Crop rotation is applied to control the disease. When the first sign is seen on the plant apply Benomyl and Chlorothalonil fungicides at the rate of 1.5-2 gm. in 1 L water in 1 ha area.

