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CELERY CULTIVATION

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Introduction:

Celery (Apium graveolens L.) is primarily consumed as a salad because of its thick leaf stalk. After lettuce, it is a crucial crop for salads. It is mostly grown as a salad crop in Punjab and Uttar Pradesh and on a small scale in Kerala, Tamil Nadu, and Karnataka. Leaf petioles and stalks are used to make sauces, juices, soups, and purees in addition to being eaten raw in salads. In India and Europe, celery seeds are primarily utilized as spices and condiments. Additionally, it has certain medical benefits and is used to flavor food.

Although planted as an annual, apium graveolens has three different botanical variations.

- **Apium graveolens L. var. secalinum:** Leaf type.
- **graveolens L. var. dulce (Mill.):** Blanched celery.
- **graveolens L. var. rapaceum:** Swollen edible rooted or celeraic

Varieties

Florida Giant, Supreme Golden. Cornell-19, Cornell-619, Golden self-blanching and Wright's Grove Giant,Fordhook Emperor

Climate

Celery needs a chilly, humid environment. Especially during the early vegetative phase, better growth is encouraged by the moderate and evenly distributed rain. It can be cultivated successfully in dry environments if irrigation facilities are available. For seed crops, a dry climate at maturity is desirable. 15 to 21 °C is the ideal temperature for growth. The seeds enter a state of dormancy known as thermo-dormancy when the soil temperature rises above 25°C. Bolting is caused by temperatures below 15°C for 10 days, whereas bitterness in the leaves is

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caused by high temperatures.

Soil and Field Preparation

Celery requires a soil that is deep, loamy, and has enough humus. Acidic soils cause it a little bit of sensitivity. The ideal pH value is 6.5.To make the soil friable, the field should be properly ploughed three to four times. Planking should be used to adequately pulverize and level the top soil.

Nursery Raising-

Between plains and lower slopes, seeding takes place between August and September. The crop is sown in temperate zones in March–April and August–September. For one hectare of land, 200–250 g of seed must be used to raise seedlings. More seed is needed for direct sowing. To make nursery soil friable, it should be well tilled. Create a 5 to 10 m length.

Transplanting

When seedlings reach a height of 8–10 cm, they are prepared for transplanting after 40–60 days. They are planted at a spacing of 60 x 10-20 cm in a carefully prepared field. Thinning is used to preserve proper spacing in crops that are directly seeded.

Manure and Fertilizers

Incorporate 250-300 q FYM, 150 kg N, 80 kg P_2O, and 60 kg K,O/ha. Apply full doses of PO, and K,O and half of N as basal before transplanting. The remaining half dose of N should be given in two or three splits at 40, 80 and 120 days after transplanting

Irrigation

Being a crop with shallow roots and a preference for wetness, it needs frequent irrigation. Light irrigation needs to be done every 7–10 days, depending on the weather. To prevent water stagnation, appropriate drainage should be provided.

Inter-Culture and Weed Control -

Hoeing and weeding must be done on schedule in order to grow a healthy crop. It only takes two to three mild hoeings. Lateral shoots should also be pulled out when they appear while hoeing. The weeds can be efficiently controlled by two hand weedings and the pre-planting application of fluchloralin (1.25–1.25 kg/ha) or linuron (2 kg/ha).

Blanching

Blanching is the process of excluding light from leaf stalk which checks the development of chlorophyll. The main objectives of blanching are to make the crop crisp, reduce acrid flavour improve flavour, tenderness and quality of crop.

Earthing-

Earthing activities because planting plants deeply in one operation could result in rotting. Growing self-blanched types of celery is preferable because blanching lowers the vegetable's vitamin A concentration.

Harvesting and Yield

Celery is harvested at several phases of the plant's development. When the plants reach a height of 40 cm, the side suckers are cut off. Tender leaves and stalks are typically removed 80 to 90 days after transplanting. Tender leaf yield varies from 300 to 400 q/ha on average.

Insect-Pests and Diseases

Carrot rust fly

The maggots eat on small leaves and burrow into the edible roots. Control. Apply Phorate 10 G @ 20-25 kg/ha in soil, before sowing.

Celery fly

Control. Spray Thiomethoxam 70 WS @ 0.5-0.6 ml/litre water.

Tarnished plant bug

Control. Spray the crop with Imidacloprid 17.8 SL @ 0.5-0.6 ml/litre water.

Diseases

Damping off (Rhizoctonia solani, Pythium ultimum) -It causes pre- and post-emergence death of plants. Pre-emergence attack results in

Control

1. Adopt long term crop rotation.
2. Seed treatment with Ceresan @ 2 g/kg seed.
3. Drench the nursery soil with Captan (0.2%). Iv. Avoid waterlogging conditions.
4. Spray Captan or Bavistin (0.2%).

Botrytis rot (Botrytis cinerea)

Brown necrotic lesions are formed on the stem near ground level. The leaves touching the soil are also infected.

Control

1. Follow clean cultivation.
2. Avoid over watering.
3. Store the produce at low temperature.

Downy mildew (Bremia lactucae)

The afflicted leaves include sections that are light green to yellow and eventually brown. Cultivars of the Cos and Butter head types are more prone to the illness.

Control- Seed treatment with Thiram @ 2 g/kg seed.