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PEPPER



Pepper (*Capsicum annuum L.*) belongs to family Solanaceae. It is a tender, warm-season vegetable that contains vitamin K, C, A, E B6, Folate, Thiamin, Riboflavin, Potassium, Manganese, and Niacin.

SITE SELECTION AND SOIL TYPE

Choose an area with good irrigation and drainage. The soil texture should be clay loam or sandy loam and the pH should range from 5.5 to 6.5.

SEEDLING PRODUCTION

There are two methods that can be used to produce seedlings - the seedbed method and seedling tray method. In both methods, use a rain shelter to protect the seedlings.

A. Seedbed Method

1. Remove weeds and cultivate the proposed area for seedling production using a hoe or shovel.
2. Make 5 plots where beds are 6 inches high and 10 meters long. Thoroughly mix compost, humus and carbonized rice hull ash at a ratio of 1:1:1. Level the beds to prevent oversoaking of seeds during watering.
3. Sow 300-400 grams/ha of seeds in a horizontal rows with a distance of 5 centimeter apart. Cover the seeds with a thin layer of soil.
4. Water the seedbeds after sowing the seeds until seeds emerge. Drench the seedbeds with Vitigran blue at a rate of 1 tablespoon per gallon of water once damping-off is observed.

5. Regulate watering as soon as the seed germinates. Apply Urea at a rate of 1 tablespoon per gallon of water at 7-14 days after emergence. Sprinkle water on the seedling immediately after applying the fertilizer to avoid burning effect of leaves.
6. Harden the seedlings by watering the seedbeds only when plants show temporary wilting. This should be done regularly at 14 days after emergence until the seedlings are ready for transplanting. Water the seedbeds thoroughly before pulling the seedlings.
7. Seedlings are ready for transplanting 30 days after seed emergence.

B. Seedling Tray Method

1. Using this method, a hectare needs 200 grams of seeds and 200-250 pieces of plastic seedling tray with 100-104 cells or holes.
2. Prepare the soil medium by mixing garden soil, organic fertilizer, and rice hull ash at a ratio of 1:1:1, then fill the holes of tray with the prepared soil medium.
3. Sow 2-3 seeds per hole and cover them with the prepared soil medium. Water the seeds to trigger germination.
4. Five days after emergence, drench the seedlings with Urea at a rate of 1 tablespoon per gallon of water then sprinkle water on the seedlings immediately after applying fertilizer. Apply fungicide when damping off is observed.
5. Seven days after seed emergence, prick the extra seedlings from a hole into another tray. Maintain only one seedling per hole.
6. One week before transplanting, reduce watering and gradually expose seedlings to direct sunlight. This will harden the seedlings.
7. Three weeks after emergence, seedlings are ready for transplanting.
8. Using this method, transplanting shock is avoided.



LAND PREPARATION

Plow the field once and harrow twice. Construct the furrows at a row spacing of 1 meter.

TRANSPLANTING

Irrigate the furrows during transplanting. Transplant the seedlings at the sides of the furrows with a distance of 50 centimeter between hills. Depth of planting should be 4-6 centimeter depending on the height of the seedlings. Replant missing hills five days after transplanting.

WEEDING AND CULTIVATION

Off-bar or re-plow at 14-21 days after transplanting and hill-up at 28-42 days after transplanting to suppress growth of weeds. Spot weeds as the need arises.

FERTILIZER APPLICATION

Type of Fertilizer	Rate of Application	Time of Application	Method of Application
Organic Fertilizer	50 bags	At furrowing	Basal
14-14-14	4 bags	During planting	Basal
46-0-0 + 0-0-60	2 bags + 2 bags	28 days after planting	Sidedressing
46-0-0 + 0-0-60	2 bags + 2 bags	45 days after planting	Sidedressing
46-0-0 + 0-0-60	2 bags + 2 bags	60 days after planting	Sidedressing
Foliar Fertilizer	Follow the manufacturer's recommendation	Follow the manufacturer's recommendation	Foliar Spraying

IRRIGATION

Four to five irrigations are needed from transplanting to first harvest scheduled as follows:

First: during transplanting (flooding)

Second: 14 days after transplanting

Third: at vegetative stage (21 days after transplanting), water half the furrows only

Fourth: at flowering and early fruiting (30 days after transplanting), water half the furrows only

Fifth: optional, depending on the appearance of the plants at harvesting stage

(Note: Irrigate the plants as need arises)

INSECT PESTS AND DISEASE CONTROL

Insect	Control
Thrips	Methomyl
Aphids	Deltamethrin
Leafworm fruit	Carbaryl
Whiteflies	Thiamethoxan

Disease	Control
Anthracoze	Captan Mancozeb
Bacterial wilt	Copper hydroxide

If the disease is caused by virus, pull out and burn the whole plant to prevent spread of the disease.

Biological Control

Farmers are encouraged to use botanical pesticides like garlic bulb extract, neem leaf extract, and hot pepper extract to control pests in the field. Some traps like yellow sticky trap can also be used to control insect pests like whiteflies, beetles, etc.

HARVESTING

For sweet pepper, harvest the fruits at breaker stage and at matured green stage. Do not wait for the fruits to ripen. For hot pepper, harvest the fruit at green stage or according to consumers preference.

For more information, write, visit, or call:
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