

BOTANICAL DESCRIPTION

Hot pepper belongs to the family Solanacea. A small erect shrub indigenous to tropical America and cultivated in South America, Asia and Africa. Capsicum contains a crystalline pungent principle capsaicin, traces of a liquid alkaloid, red coloring matter and a fatty oil.

IMPORTANCE AND USES

Red chilies are very rich in Vit. C and Provit. A. These are also good source of B vitamins and high in potassium, magnesium, and iron. The green leaves are excellent source of calcium. Hot pepper in particular is a favorite mix in “pinakbet” and “sinigang” because of its aroma. It is also being grown for its medicinal and pharmaceutical properties. It alleviates pain in arthritic patients. It helps lower risk of diabetes.

SOIL AND CLIMATIC REQUIREMENTS

Hot pepper is a sun loving crop. It can be planted from May to September in the wet season and October to February in the dry season.

Hot pepper can be grown in any type of soil however, for optimum yield, plant hot pepper in sandy loam to clay loam with plenty of organic matter and with sufficient moisture and good drainage.

SUGGESTED CULTURAL PRACTICES

Selection of Varieties

For better yield and profit, select varieties that are adaptable to local conditions, resistant to insect pests and diseases and market preference.

Land Preparation

The field alternately plowed and harrowed 2 to 3 times to make a soil to a fine tilth. Prepare furrows 80 cm apart just before transplanting. The distance between rows, however, depends upon the locality, variety and soil fertility. Double-row method (spaced 35 cm between 2 rows and 75 cm to 1 m between the double rows) is also practiced to provide developing fruits adequate protection against sun scalding.

Raising Seedlings

Approximately 150 to 200 g may be needed to transplant 1 ha at a density of 30,000 plants/ ha, assuming 90% germination and 90% of seedlings are of good quality.

There are two methods of seedling establishment in pepper namely, the seedbed method and the box, tray or potlets methods.

Seedling Tray/Potlets Methods

Raising seedlings in a tray or potlets requires less seeds, promote uniform growth of superior seedlings, minimize transplanting shock, and lessen seedling mortality. It also saves labor for thinning, weeding, watering, and pest management.

Prepare the sowing medium by mixing thoroughly one part compost, one part carbonized rice hull, and one part garden soil. Sterilize the garden soil by roasting or drenching with boiling water before mixing with the other medium.

Fill holes of the tray or potlets with the medium and slightly compact it using your palm. Use a seedling tray with 100 or 104 holes. The volume of medium in each hole contains enough nutrients to sustain the seedling until transplanting time.

Sow 1 to 2 seeds per hole and cover thinly with the medium. The seeds will germinate 7 to 10 days after sowing (DAS). Maintain 1 seedling per hole. Thin out and prick excess seedlings into another seedling tray.

Water the seedlings everyday preferably in the morning or if needed, water again in the early afternoon. Avoid watering in late afternoon to prevent growth of fungus.

Apply starter solution when necessary 10 DAS by drenching 2 TBSP complete fertilizer dissolved in 4 liters of water.

Harden the seedlings one week before transplanting by gradually withholding water and exposing them to direct sunlight.

TRANSPLANTING

Transplant seedlings 28 to 42 days after sowing. Prior to transplanting, water the seedlings to facilitate pulling of seedlings and to minimize root damage. Do not remove the soil adhering to the roots.

Plant in furrows during dry season and on ridges during the rainy season at a distance of 30 cm between hills.

IRRIGATION

Irrigate the field during the dry months to produce good quality fruits. Depending on the soil moisture, irrigate 4 to 5 times from transplanting to first harvest as follows:

- 1st – at transplanting
- 2nd – 14 days after transplanting (DAT)
- 3rd – 30 DAT
- 4th – 50 DAT

Final irrigation should be done before the last week of harvesting.

FERTILIZATION

To achieve optimum yield, apply the right kind and amount of fertilizer at the right time. To determine this, have your soil analyzed at the Soil laboratory nearest you. In the absence of soil analysis, follow this general recommendation for one hectare farm.

Time of Application	Kind of Fertilizer	Quantity	Stage of Crop
Basal	Complete (14-14-14)	4 bags/ha	
	Ammonium Phosphate (16-20-0)	4 bags/ha	
Side dress	Ammonium Sulfate (21-0-0)	2 bags/ha	10 DAT
	Urea (46-0-0)	2 bags/ha	
	Muriate of Potash (0-0-60)	2/bags/ha	30 DAT
	Urea (46-0-0)	2 bags/ha	
	Muriate of Potash (0-0-60)	4 bags/ha	50 DAT

As pepper plants develop, they need higher levels of Phosphorous and Potassium. Too much nitrogen can result to great looking, bushy green plants but few fruits.

WEEDING AND CULTIVATION

Control weeds to attain maximum crop yield. Off-bar at 10 DAT, and hill-up at 30 DAT. Hilling-up minimizes cultivation and weeding and facilitates irrigation. It also provides soil support for the plant when they became laden with fruits. Avoid deep cultivation in order not to cause root injury to the plants. Hand weeding between hills.

CROP PROTECTION

Most prevalent pests of pepper are aphids, spider mites and leaf hoppers. Common diseases include bacterial wilt and anthracnose. Use botanicals to control pests. Use synthetic pesticides only when necessary.

HARVESTING

Harvesting of pepper starts from 60 to 75 DAT. Harvest pepper at the mature green stage when fruits have attained full size and appear waxy and shiny. Fruits for harvesting must be in good shape and color, have thick flesh and fresh in appearance. Pick the fruit by breaking the pedicel with an upward twist or by cutting the peduncle with a pruning shear. Classify fruits and discard damaged or rotten ones before packing. Pack in polyethylene plastic bags or boxes before marketing.

Source: DA-ATI Brochure 2008 (*Hot Pepper Production Guide*)

For more information, please contact:

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Los Baños National Crop Research, Development and Production Support Center

HOT PEPPER

Siling Maanghang

(*Capsicum annum L.*)

