

Cucurbits

(Cucumber, Bottlegourd, Bittergourd, Snakegourd, Ashgourd, Pumpkin)

CLIMATE SEASON

S.no	Crop	Season	Soil
1	Pumpkin	June- July and December- January are suitable seasons.	Sandy loam rich in organic matter with good drainage and pH range from 6.5-7.5
2	Snake Gourd	July and January are highly suitable for cultivation	
3	Ridge Gourd	Planting spreads during July and January	
4	Bottle Gourd	July and January are suitable for sowing	
5	Bitter Gourd	Planting is done on July and January	
6	Ash Gourd	Planting is done during July and January	
7	Cucumber	Sow the seeds during June or January to April	

SEED VARIETIES

S.no	Crop	Seed Rate (Per acre)	Spacing	Sowing
1	Pumpkin	400 gm	Pits of 30cm x 30cm x 30cm size are dug at a spacing of 2mx2m.	Sow the seeds (five seeds/pit) and thin the seedlings to two/pit after 15 days of planting.
	Snake Gourd	600 gm	Dig pits of 30cmx30cm x30 cm size, at 2.5x2m spacing and form basins	Sow the seeds (5seeds/pit) and thin the seedlings to two/pit after 15 days of sowing.
3	Ridge Gourd	600 gm	Dig pits of 30cmx30cmx30cm size at 2.5x2m spacing and form basins.	Sow the seeds (5seeds/pit) and thin the seedlings to two/pit after 15 days.
4	Bottle Gourd	600 gm	Dig pits of 30cmx30cmx30 cm size at 2.5x2m spacing.	Sow the seeds @ three seeds/pit and thin the seedlings to two/pit after 15 days
5	Bitter Gourd	700 gm	Dig pits of 30cmx30cmx30cm size at 2x1.5m spacing and form basins	Sow the seeds (5seeds/pit) and thin the seedlings to two/pit after 15 days

6	Ash Gourd	1 KG	Dig pits of 30cmx30cmx30cm at a spacing of 2x1.5m and form basins	Five to six seeds are sown in each pit. After germination, the seedlings are thinned to two/pit.
7	Cucumber	1 Kg	Plough the field four times and form long channels at 1.5m apart.	Sow the seeds on one side of channel giving a spacing of 0.6m between hills. Thin the seedlings to two/hill at 15days after planting.

SEED TREATMENT

- Treat the seeds with Beejamrutham and shade dry for 30 minutes
- Treat seeds with *Trichoderma viride* 4g/kg or *Pseudomonas fluorescens* 10g/kg.

NURSERY MANAGEMENT

Sow the seeds in protrays containing well decomposed cocopeat medium. Sow only one seed per cell. Keep the trays under shade net house .Water regularly with the help of rose can. Transplant about 12 days old seedlings to main field.

SOIL FERTILITY MANAGEMENT

- Apply 400 kg of Ghana jeevamrutham 2500 KG of NADEP compost (if available) and 125 kg of Ghanajeevamrutham per acre and fill it in the pits
- Apply 200 liters of Dhrava jeevamrutham per acre at every 15 days interval
- Spray Panchagavya from flowering time till harvesting at 20 days interval

PEST AND DISEASEMANAGEMENT

CUCURBIT FRUIT FLY: *BACTROCERA CUCURBITAE*:

Common names

Melon fruit fly ,melon fly



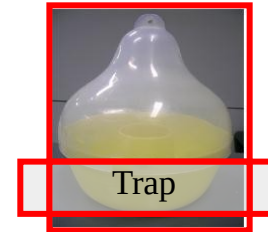
Fruit Fly



Habitat / Crop(s) damaged

Cucurbits

The pest attacks flowers and fruits and some times stem and root tissue also. Infested fruits smaller, showing yellow patches around the sites of oviposition and prematurely drop; decaying fruits in the soil with creamy maggots inside; presence of galls (rarely) on the stem.



Control Measures:

- Early maturing varieties are less affected than later ones.
- Changing of sowing dates.
- Collection and destruction of infested fruits
- Slight raking of soil during fruiting time and after the harvest to expose pupae from the soil.
- Melon fly (Pheromone) traps 5 per acre
- Spray Neemasthram
- Spray Brahmasthram

PUMPKIN BEETLES: *RAPHIDOPALPA FOVEICOLLIS*

Common names

Red pumpkin beetle, hamra beetle, red melon beetle, red leaf beetle

Habitat / Crop (s) damaged

Pumpkin, bottlegourd, cucumber, muskmelon, watermelon, beans and other cucurbits.

Adult beetles are mainly responsible for the damage of the plant above ground, attacking on the leaves, flowers and fruits. Making holes and causing death or retardation of growth. In case of heavy infestation, re-sowing is required to be done. Larvae live in the soil and feed on the roots and stem of the plant. Fruits and leaves are also damaged when they come in contact with soil.



Pest status

A common and occasionally serious pest of a wide range of cucurbitaceous vegetables.

Control Measures

- Spray NSKE 5%
- Spray garlic chilli extract



EPILACHNA BEETLES: *EPILACHNA VIGINTIOCTOPUNCTATA*

Symptom of damage

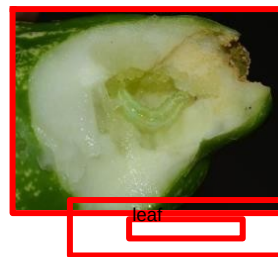
- Grubs and adults feed by scrapping chlorophyll from epidermal layers of leaves
- Skeletonized and gradually dry away.

Control Measure's

- Cow dung+Urine extract to repel pest
- Spray garlic chilli extract



PUMPKIN LEAF CATERPILLAR: *DIAPHANIA INDICA*



Symptoms

The caterpillars do the damage. After hatching, they roll the leaves with silken threads and eat the leaves between the veins (Photo 3). They also attack the flowers and reduce the number of fruits set. Young fruits are also attacked the caterpillars damage the skin and cause the fruits to rot.

Control Measures

- Cow dung +Urine extract to repel pest
- Spray Neemasthram during early stage of pest attack
- Spray Brahmasthram

POWDERY MILDEW: *ERYSIPHE CICHORACEARUM* DC

Symptoms:

Look for white, powdery fungal spots on upper leaf surfaces, and on petioles and stems. Look for the fungus on the shaded older leaves.



Effectuated leaves



Control Measures:

- Plant resistant varieties Increasing air movement inside the canopy
- Spray sour buttermilk 6 L in mixing in 100 L of water and spray
- Spray dry ginger milk kashayam

APHIDS & CUCUMBER MOSAIC: CUCUMBER MOSAIC VIRUS



Aphids



Mosaic caused by Aphids

The damage is caused when aphids feed. Aphids have fine ,needle-like mouth parts and they use them to suck sap from plants .When they are numerous, young leaves become curled, wrinkled ,cup-shaped and smaller than normal (Photo1). Leaves may wilt, dry up and die early. When populations are high, plants, especially seedlings, become stunted.

Control Measures:

- Raise 4 rows of barrier crops such as sorghum
- Avoid planting tomatoes next to cucurbits, spinach, or other vegetables and flowers susceptible to these diseases
- Control of aphids (*A. gossypii*) will help reduce the likelihood of cucumber mosaic.

- Spray Neemastram,
- Spray Datura leaf extract

FUSARIUM WILT: *FUSARIUM OXYSPORUM* SCHLECHT.

- Plants infected early in the season often produce not marketable fruits.
- Plants that begin to show wilt symptoms at or near maturity Produce fewer and lower quality fruits.
- The first symptoms of Fusarium wilt are wilting and chlorosis (yellowing) of older leaves. The wilt is most evident during the heat of the day
- Fusarium wilt also causes vascular browning that is visible in stem cross-sections.



Control Measures:

- Use pathogen free seeds
 - Remove and destroy the infected plants and plant debris
 - Adopt crop rotation
 - Avoid water stagnation and maintain proper drainage
 - Use resistant varieties
- Mix 2kg of *Trichoderma viridi* in 200 litres of water and drench the roots.

Extracted from:

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