

Chilli Cultivation

Chilli (*Capsicum annuum* L.)

Varieties:

K 1, K 2, CO 2, CO 4 (vegetable type), PKM 1, PMK 1 (for semi-dry conditions in Southern Districts), PLR1 (for coastal regions of North - East Tamil Nadu) and KKM (Ch) 1.

CO.1 (1979): Reselection from Sattur samba. Fruits are long, bright red in colour. Yields about 2.10tonnes/ha of dry pod in a crop duration of 210 days. Fruits have high capsaicin content (0.72mg/g).

CO.2 (1982): Selection from Nambiyur local 'Gundu type'. Fruits are thick and red in colour with high seed content and pungency. Harvested for both green and red ripe pods Yields about 2.20tonnes/ha of dry pod in a crop duration of 210 days.

CO.3 (1991): Selection from OP type introduced from Sri Lanka. Suitable for close planting (30 x 15 cm) and less affected by heavy wind. Yields about 3.00 – 3.50 tonnes/ha of dry pod and 15-18 t/ha of green chilli in a crop duration of 165 days. Fruits have high oleoresin content (13%)

CO.4 (2000): It is a pureline selection made from an OP type introduced from Sri Lanka. Suitable for making chutney, curry and pickles, low pungency (0.29% Capsaicin Yields about 23 tonnes/ha of green chilli in a crop duration of 165 days

K2: It was a cross of K 1 and Sattur samba. Yields about 2.1 t of dry pods/ha in a crop duration of 210 days
KI: It is a pure line selection from an Assam type B 72 A. Plants are tall and spreading fruits are with pointed tip. Yields about 1.8 t of dry pods/ha in a crop duration of 210 days .Suitable for rainfed cultivation.

KKM(Ch1): High yield – 3.03 t/ha of dry fruits with high capsaicin content (0.54%).Early maturity - first harvest 92 days after planting. Suitable for export because of non shrivelling nature even after drying

PMK 1: It is a hybrid derivative of the cross CO2 X Ramanad mundu. Suitable for rainfed cultivation. Yields about 2.3 tonnes/ha of dry pods under rainfed condition. Capsaicin content is 0.36 percent

Soil for Chilli

Well drained loamy soils rich in organic matter with pH range 6.5-7.5.

Season of sowing

1. January - February
2. June - July
3. September- October

Seed treatment

Treat the seeds with *Trichoderma viride* @ 4 g / kg or *Pseudomonas fluorescens* @ 10 g/ kg and sow in lines spaced at 10 cm in raised nursery beds and cover with sand. Watering with rose can has to be done daily. Drench the nursery with Copper oxychloride @ 2.5 g/l of water at 15 days interval against damping off disease. Apply Carbofuran 3 G at 10 g/sq.m. at sowing.

Protected nursery

- Prepare the nursery area of 3 cents with slanting slope of 2 % for the seedling production to cover 1 ha.
- Cover the nursery area with 50 % shade net and cover the sides using 40 / 50 mesh insect proof nylon net.
- Form raised beds of 1 m width and convenient length and place HDPV pipes at 2m interval for further protection with polythene sheets during rainy months. - Mix sterilized cocopeat @ 300 kg with 5 kg neem cake along with *Azospirillum* and phosphobacteria each @ 1 kg. Approximately 1.2 kg of cocopeat is required for filling one protay. 300 portrays (98 cells) are required for the production of 29,000 seedlings, which are required for one hectare adopting a spacing of 90 x 60 x 45 cm in a paired row system.
- Sow the treated seed in protrays @ 1 seed per cell.
- Cover the seed with cocopeat and keep the trays one above the other and cover with a polythene sheet till germination starts.
- After 6 days place the protrays with germinated seedlings individually on the raised beds inside the shade net.
- Water with rose can everyday upto seed germination. Drench with 19:19:19 @ 0.5% (5g/l) at 18 days after sowing.

Field preparation

Thoroughly prepare the field with the addition of FYM @ 25 t/ ha and form ridges and furrows at a spacing of 60 cm. Apply 2 kg/ha of *Azospirillum* and 2 kg / ha of Phosphobacteria by mixing with 20 kg of FYM. Irrigate the furrows and transplant 40-45 days old seedlings, with the ball of earth on the ridges.

Spacing

Varieties: 60 x 45 cm

Hybrids: 75 x 60 cm

Weed control

Apply Pendimethalin 1.0 kg a.i. / ha or Fluchloralin 1.0 kg a.i. / ha as pre-emergece herbicide followed by hand weeding once 30 days after planting.

Irrigation

Irrigate is done at weekly intervals.

Layout and planting for drip irrigation and fertigation-

- Apply FYM @ 25 t / ha as basal before last ploughing.
- Apply 2 kg / ha of Azospirillum and 2 kg/ha Phosphobacteria by mixing with 20 kg of FYM.
- Apply 75 % total recommended dose of superphosphate i.e. 375 kg / ha as basal.
- Install the drip irrigation with main and sub main pipes and place lateral tubes at an interval of 1.5 m.
- Place the drippers in lateral tubes at an interval of 60 cm and 50 cm spacing with 4 LPH and 3.5 LPH capacities respectively.
- Form raised beds of 120 cm width at an interval of 30 cm and place the laterals at the centre of the each bed.
- Before planting wet the beds using drip system for 8-12 hrs.
- Planting to be done at a spacing of 90 x 60 x 45 cm in the paired row system, using ropes marked at 60 cm spacing.
- Spray Pendimethalin 1.0 kg a.i. / ha or Fluchloralin 1.0 kg a.i / ha as pre-emergence herbicide at 3rd day after planting.
- Gap filling to be done at 7th day after transplanting.

Manuring Varieties

Basal dose:

FYM 25 t/ha, NPK 30:60:30 kg/ ha. Potassium as K₂SO₄ for quality improvement. Application of potassium in the form of potassium sulphate will increase quality of chilli

Top dressing: 30 kg N/ha in equal splits on 30, 60 and 90 days after planting.

Hybrids

Basal dose: FYM 30 t / ha, NPK 30:80:80 kg / ha.

Top dressing: 30 kg N / ha in equal splits on 30, 60 and 90 days after planting.

Harvest

Harvesting can be done 75 days after transplanting. First two picking yield green chilli and subsequently yield red ripe fruits.