

## 1. Introduction:

Chilli is one of the most valuable spice crop. India is the largest producer consumer and exporter of Chilli cultivating in the area of 775 thousand hectares with 1492 metric tons production (2014-15 estimates) contributing about 40 % of the World's chilli production. In India Andhra Pradesh is the leading state in Chilli production followed by Karnataka, West Bengal and Odisha.

Chilli belongs to the genus Capsicum under the Solanaceae family. Five species of Capsicum are under cultivation, though a number of wild species have been identified recently. In India, only two species viz. Capsicum annum and Capsicum frutescens are known and most of the cultivated varieties belong to the species Capsicum annum.

## 2. Season & Field Preparation :

### *Season of sowing :*

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

### **Field preparation :**

#### *Stage 1:*

**Nursery Management** Prepare 15 raised seed beds (6 per acre with 22.5 feet long x 3.5 feet breadth and 4 inches height). Apply 30 kg (3-4 baskets) well decomposed FYM to each bed along with 1/2 kg 15:15:15 compound fertilized and mix them well in the soil.

- ❖ Sow the seeds in 3 inch rows or broadcast thinly on the beds.
- ❖ Cover the beds with FYM or soil.
- ❖ Provide shade during summer till germination.
- ❖ Water beds regularly in the evening. Gradually reduce the supply of the water during the last 10 days before transplanting to harden the seedlings.
- ❖ Seeds will germinate in a week and will be ready for transplanting in about 6 weeks.

## Stage2:

**Transplantation** Prepare the field by ploughing and harrowing and 8-10 tons /acre of FYM or compost is applied at the time of field preparation. Add 120-150 kg of [Bio organic Manure](#) (Multiplex Annapurna or Anshul compact or Mangala Biogold plus or MBF Brown Gold or JK Compost), 3 to 5 kg [BioJodi](#) (PSEUDOMONAS FLUORESCENS + BACILLUS SUBTILIS), 1 kg [Safe Root](#) (consortium of PAECILOMYCES LILACINUS + TRICHODERMA HARZIANUM) and [Bio-activator mixture](#) (Navajeevan -G) 10 kg/acre. Biofertilizers Azab (*Azospirillum*) and [Durga](#) (*Phosphobacteria*) 1 to 2 kg of each per acre at the time of planting. Bio-fertilizers are to be mixed with 100 – 120 kg of Bio organic Manure and Mixed all these thoroughly with the soil. Sow the seedlings at the recommended rate per acre.

Grubs & termite pests can be controlled by application of 5 kg Cartap Hydrochloride 4G (Nagtap or KRI-TAP 4G or Cartox G or Boregan G). When seedlings attain the age of one month or height of 10 -15 cm, seedlings are transplanted.

### 3. Season & Field Preparation :

- **Seed rate**

Varieties: 1.0 kg / ha.

Hybrids: 200 - 250 g / ha.

Nursery area: 100 sq.m / ha.

- **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.

- **Spacing**

Varieties : 60 x 45 cm

Hybrids : 75 x 60 cm

### 4. Popular Varieties / Hybrids

- [Syngenta HPH - 5531 Seeds](#)
- [Sarpan 102 Byadgi seeds](#)
- [FITO Hot King seeds](#)
- [Syngenta HPH - 2043 Seeds](#)
- [Nunhems Armour F1 Hybrid](#)
- [East West Hakone Chilli Seeds](#)
- [VNR 145 Chilli Seeds](#)
- [VNR 109 Chilli - 10 GM](#)
- [Sarpan Super Chilli - Byadgi Chilli Seeds](#)
- [Sarpan Jwala Gold Chilli Seeds](#)
- [Sarpan Hybrid Mahakali Chilli Seeds](#)
- [Sarpan F1 – Sona 63 Chilli Seeds](#)
- [Sarpan F1 Chilli -132 Seeds](#)

- [Sarpan F1 92 Chilli Seeds](#)
- [Sarpan Chilli Seeds F1 291](#)
- [Sarpan Avinash Chilli Seeds](#)
- [Sarpan 531 Chilli Seeds](#)
- [Sarpan Chilli Bajji Kai Seeds](#)
- [Mahyco Chilli Vaishnavi Seeds](#)
- [Mahyco Chilli Sierra Seeds](#)
- NCH-1544 (SUPER DELUX) - Nirmal
- Ojaswi - Syngenta
- Bullet - Syngenta
- Pragathi - Namdhari

## 5. Nutrient Management( Fertilizer Dosage )

Recommended dose of Fertilizer Application: NPK – 60:35:50 kg/acre.

### Major Nutrients:

Combination 1	kg	
Urea (46 % N)	100.7	Mangala Urea or GROMOR Urea or FACT Urea or IFFCO Urea or VIJAY Urea or Nagarjuna Urea or Ujjwal Neem coated Urea or SPIC Urea or KRIBHCO Urea or Jai kisan Urea
DAP (18 % N; 46 % P <sub>2</sub> O <sub>5</sub> )	76.1	Mangala DAP or Gromor DAP or IFFCO DAP or Vijay DAP or SPIC DAP or

# Package of Practices (POP)

# CHILLI

		Jaikisaan samrat (DAP) or Mahadhan chetak(DAP)
MOP (60 % K <sub>2</sub> O)	83.3	Mangala MOP or GROMOR MOP or FACT MOP or VIJAY MOP or JAIKISAN Suraksha (MOP) or Mahadha Potash (MOP)
<b>Combination 2</b>	<b>kg</b>	
10:26:26	134.6	MANGALA 10:26:26 or GROMOR 10:26:26 or IFFCO Grade I - 10:26:26 or Jai Kisaan Samar (10 :26 :26)
Urea (46 % N)	101.2	Mangala Urea or GROMOR Urea or FACT Urea or IFFCO Urea or VIJAY Urea or Nagarjuna Urea or Ujjwal Neem coated Urea or SPIC Urea or KRIBHCO Urea or Jai kisan Urea
MOP (60 % K <sub>2</sub> O)	25.0	Mangala MOP or GROMOR MOP or FACT MOP or VIJAY MOP or JAIKISAN Suraksha (MOP) or Mahadha Potash (MOP)

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# CHILLI

Combination 3	kg	
20:20:00 <sup>1</sup>	175.0	SPIC 20:20:0:13 or VIJAY complexes 20:20:0:13 or IFFCO 20:20:0:13 or FACT 20:20:0:13 or MANGALA 20:20:00:13 or Jai Kisaan Sampanna (0 :20 :00:13)
Urea (46 % N)	54.3	Mangala Urea or GROMOR Urea or FACT Urea or IFFCO Urea or VIJAY Urea or Nagarjuna Urea or Ujjwal Neem coated Urea or SPIC Urea or KRIBHCO Urea or Jai kisan Urea
MOP (60 % K <sub>2</sub> O)	83.3	Mangala MOP or GROMOR MOP or FACT MOP or VIJAY MOP or JAIKISAN Suraksha (MOP) or Mahadha Potash (MOP)

### *Micronutrient spray:*

Foliar spray of Zn SO<sub>4</sub> @ 0.5 per cent thrice at 10 days interval from 40 days after planting.

Spray 19:19:19 + Mn @ 1 % at 60 days after planting.

## *Growth regulators*

Spray [Triaccontanol](#) @ 1.25 ml/l on 20, 40, 60 and 80th day of planting. Spray NAA 10 ppm (10 mg/l of water) on 60 and 90 days after planting to increase fruit set.

## **6. Weed Control**

Spray Fluchloralin @ 1 lit a.i./ha or [Pendimethalin](#) @ 1 kg a.i./ ha. or Oxyflourfen @ 0.15 kg a.i./ha as pre-emergence herbicide and may be combined with hand weeding once and earthing up 45 days after planting. Raise intercrop of onion in paired row system to get additional income.

## **7. Pest Management:**

### *Sucking pests:*

[Quinolphos](#) (Nagin or Ekalux or flash) 2 ml/litre OR [Acephate](#) (Nagace or Tamaron ® Gold or Hunk or Acefex or Tremer or acemain or Asataf) 2 g/litre OR [Acetamipride](#) 20 % SP 0.5g/liter (Ekka or Nagtamiprid or Harrier or Rekord or Manik or Acetacel) OR [Imidacloprid 30 %](#) (Brightstar or Confidor Super) 0.3 mL/L OR [Imidacloprid 70 %](#) (Hotstar or Cohigan WG or Admire) [Imidacloprid](#) 17.8 % (Nagmida or Imidacel or Confidor or Cohigan) 0.5 ml /litre OR [Neem oil](#) 1500 ppm (Multineem or Vijay neem or Neem Baan) 3ml/L OR Spinosad 480 SC (Tracer or Spintor or Taffin) 0.375 mL/L .

### *Leaf Flower feeder and Fruit borer:*

[Monocrotophos](#) (Nagphos or Monomain or Crotocel) 2 ml/litre OR [Chlorpyrifos](#) (Nagpyrifos or Border -50 or Tricel or Anth-50) 2 ml/litre. OR [Plant extract](#) (Biostrike) 3 ml/litre.

## *Red Spider mites:*

When mites are more at earlier stages when there is no initiation of flower. Then, spray [Sulphur](#) (Nagsulp or Wokovit or Mainsul) 2 gm/litre OR Multiplex Liquid [Sulphur](#) 2 ml/litre OR [Ethion](#) (Nagethion or Tafethion or Nagata) 2 ml/litre OR New Ecomite 3 ml/litre can be sprayed in evening hours twice at 10 days interval.

## *Nematodes:*

[Multiplex Safe Root](#) (Consortium of PACILOMYCES LILASINUS + TRICHODERMA HARZIANUM) 2 kg/acre.

## **7.Disease Management:**

### *Leaf spot, stem rot, fruit rot, die back and Downy mildew:*

New Ecomite 3 ml/litre. OR [Copper Oxy Chloride](#) (Nagcoper or Maincop or Blue Copper or TRUCOP or Blitox) 2 gm/litre with [Multiplex Multilaxin](#) 4 ml/litre OR [Mancozeb](#) (Speed or Dupont Manzate 200 or Eurofil-Nt or Dhanuka M-45) 2gm/L OR Copper hydroxide (Kocide or Hi-Dice) 2 g/litre + [Bactinash](#) 0.4 g/litre.

### *Anthracnose:*

[Carbendazim + Mancozeb](#) combi (Jodi or Bendaco or Macoban C) 2 gm/L OR PSEUDOMONAS FLUORESCENS + BACILUS SUBTILIS (Multiplex Biojodi) 5 gm/L for spray and 10 gm per litres for drenching.

## *Powdery mildew:*

[Sulphur](#) (Nagsulp or Wokovit or Mainsul) 2 gm/litre OR Multiplex Liquid [Sulphur](#) 2 ml/litre OR [Hexaconazole](#) (Contaf plus, Nagzol or Sergent).

## *Damping off:*

Drench Metalaxyl @ 1 g/litre + [Bactinash](#) 0.4 g/litre or Krocin Ag 6 gm/ 50 L or Biomycin 2 mL/L or Kasugmycin 2 mL/L. + [Jivras](#) @ 3 ml/litre (100 – 150 ml/plant drenching).

## *Bacterial Leaf Spot:*

PSEUDOMONAS FLUORESCENS + BACILUS SUBTILIS (Multiplex Biojodi) 5 gm/L per litres. OR [Copper Oxy Chloride](#) (Nagcoper or Maincop or Blue Copper or TRUCOP or Blitox) 2 g/litre OR [Copper EDTA](#) (Neel Cu) 0.5 g/litre + [Bactinash](#) 0.4 g/litre or Krocin Ag 6 gm/ 50 L or Biomycin 2 mL/L or Kasugamycin 2 mL/L.

## *Early and late blight:*

Disease is severe in winter months. Spray [copper EDTA](#) (Neel Cu) 0.5 g/litre OR [Copper Oxy Chloride](#) (Nagcoper or Maincop or Blue Copper or TRUCOP or Blitox) 2 g/litre with [Multiplex Multilaxin](#) 4 ml/litre also controls the late blight effectively and downy mildew.

## **8.Spray Schedule For Crop Protection:**

*1st Spray:* 10 to 15 days after transplantation.

*Insects:* Thrips, plant hoppers.

*Diseases:* leaf spot, damping off.

[Mancozeb](#) (Speed or Dupont Manzate 200 or Eurofil-Nt or Dhanuka M-45) 2 g/litre OR [Carbendazim](#) (Nagcarzim or Benmain or Bavistin) 2 gm/litre + Thiomethaxom (Navtara or Actara or Suckgan or Maxima) 0.5 g/litre + All nutrient mixture (Kranti or Mangala Bio 20 or Mangala 3X) 1.5 mL/litre + [Wetting agent](#) (Maxiwet, Stickmax or Mangala super spreader) 1 mL/litre.

**2<sup>rd</sup> spray:** 35 to 40 days after transplantation

**Insects:** Thrips, plant hoppers, Serpentine leaf miner, leaf eating caterpillars, aphids, fruit, Borers, white flies, root knot nematodes.

**Diseases:** leaf spot, damping off, early blight, powdery mildew, black mould, late blight, yellow mosaic, leaf curl, TOSPOW Virus.

[Amino acid mixture](#) (Samaras or camistrong or SPIC Max Liquid or SPIC EM power) 2 mL /litre + [boron 20 %](#) (Albor or Boron-20 or Folibor or 20% B or Mangala Boron Plus) 1 g/litre + [Metalaxyl + Mancozeb](#) (Ridomil gold 80 WP or Syscon or Master or Krilaxyl Gold) - 2 g/litre + [Monocrotophos](#) (Nagphos or Monomain or Crotocele) 2 mL/litre + [Wetting agent](#) (Maxiwet, stick max or Mangala super spreader) 1 mL/litre.

**3<sup>rd</sup> spray:** 65 to 70 days after transplantation

**Insects:** Thrips, plant hoppers, Serpentine leaf miner, leaf eating caterpillars, aphids, fruit Borers, white flies, mites, root knot nematodes.

**Diseases:** leaf spot, damping off, early blight, powdery mildew, black mould, late blight.

Potassium Borate (Madura) 1 gm/litre + Thiamethoxam + Lambda cyhalothrin 1 mL/litre + [Wetting agent](#) (Maxiwet or Mangala super spreader or Nagastha) 1 mL/litre.

## 9. Harvesting.

Chillies which are used for vegetable purposes are generally harvested while they are still green but full grown.

Chillies are harvested at red stage for caning purpose. Chillies used for drying are harvested at full ripe-stage.

## 10. Yield:

The yield of dry chillies of rain fed crop is 200 - 400 kg and that of irrigated crop is 600 - 1000 kg per acre. The proportion of dry to fresh chillies varies from 25- to 40 per cent.

Estimated Expenditure per acre for Chilli cultivation: ₹ 57000/-

Estimated income per acre from Chilli Cultivation: ₹ 65000 /-