

# Seed production technology of Chilli

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# Chillies

## Floral Biology

- Cross pollinated
- Flower is protogynous
- Anther dehisces only half to 5½ hr after stigma becomes receptive
- Anthesis in chilli occurs between 6.00 and 9.00 AM
- Flower remains open for 2 - 3 days, receptivity of stigma was the highest at the day of flower anthesis

## Method of seed production

**Varieties:** Open pollination,

Breeder seed → Foundation seed → Certified seed

**Hybrids** : Emasculation and dusting

Chemical male sterilants also be employed

**Season**

June-July, February-March, September- October

**Land requirement**

Land should be free from volunteer plants

**Isolation requirement**

**Foundation seed** - 400 M

**Certified seed** - 200 M

**Seed rate (/ ha)**

**varieties** - 500 g -1 kg

**Hybrids** - Female -200 g and male - 50 g

**Main field manuring**

Apply FYM 50 t/ha for irrigated crop

Basal 100:70:70 kg of NPK and

Top 50 kg of N at 15 DAT and 50 kg N at 45<sup>th</sup> DAT

## **Nursery**

- Sow the seeds in raised nursery bed of 20 cm height, in rows of 5 cm gap and covered with sand
- 8- 10 nursery beds will be sufficient to transplant one acre
- Apply 2 kg of DAP 10days before pulling out of seedling.

## **Transplanting**

- Seedlings of 30-35 days old are ready for transplanting
- Transplanting may be done on the ridges in the evening.

## **Micronutrient spray**

- To arrest the flower drop, NAA (planofix) can be sprayed.

## **Roguing**

- Field inspection and roguing should be done both for varieties and hybrid plant, pod characters
- The plants affected -leaf blight, anthracnose and viral diseases - removed from the seed field

## **Pest and disease management**

- Thrips and aphids - dimecron systemic, Pod borer - nuvacron and the mites – kelthane
- Diseases - die back or fruit rot, powdery mildew and bacterial leaf spot.
- Spray dithane M-45 - die back, karathane-powdery mildew agromycin -leaf spot disease control.

## Harvesting and processing

- Harvesting should be done in different pickings
- First and last one or two pickings - vegetable purpose
- Well ripened fruits with deep, red colour alone collected
- Pods selected for true to type and graded for seed extraction
- Harvested pods dried under shade for one (or) two days and then under sun for another 2 or 3 days

# Seed extraction methods

## 1. Dry extraction

### a) Manual methods

Hand Peeling & Beating with Pliable sticks.

### b) Mechanical method

Using Curry Powder grinder

Using Chilli Seed Extractor

## • 2. Wet extraction-using Chilli Seed extractor

## Dry extraction

### Hand Peeling

Dried fruits are cut/ Broken and the seeds are liberated

## **Merits**

- No damage to the seeds.
- All the seeds can be liberated from the fruit.
- Pulp / fruit can be used for culinary purpose after extraction.

## **Demerits**

- Time consuming
- Required more labour
- Cause irritation to the labours, so continuous working is not possible.

## **Beating with pliable stick**

- Well dried fruits are fed into a small gunny/ cloth bag and beaten with pliable stick to break the pod and to liberate the seeds.
- Then it is winnowed to remove the seed & cleaned



## **Merits**

- Fruits after seed extraction can be used

## **Demerits**

- It takes long time to separate the seeds.
- It cause irritation and inconvenience to the labours.
- There is a possibility for mechanical damage of the seeds due to beating

## **Chilli seed extractor**

- Well dried fruits are fed into a ordinary curry powder grinder and macerated for short time to liberate the fruit.
- Then the seeds are separated by using the 6x6 BSS sieve.

# Wet seed extraction

- Well ripened fruits are fed into chilli seed extractor with small quantity of water.
- Pulp and seed mixture is collected in a plastic bucket.
- Pulp is removed manually and the seeds are collected from the bottom of the container and dried.

## Merits

- Cheap and quick method.
- Does not cause any irritation to the labour.
- Recovery is more.
- The mechanical damage is less

## Demerits

- The fruit after seed extraction cannot be used.

**Chilli seed extractor**

