

THE CHILLI PEPPER COMPANY

BASIC CHILLI GROWING GUIDE 2015

1. CALENDAR

Mid May to mid-July: Seedbed preparation and sowing.

Mid July to 1st September: Seedbed management, clipping, hardening and land preparation.

September to January: Transplanting and field management.

January to June: Harvesting (fresh into mash).

July: Removing and destroying all chilli stalks.

2. SITE SELECTION

Well drained loam soils in frost free areas. Avoid planting close to tomatoes, eggplants, potatoes and tobacco.

Avoid clay soils for both seedbeds and field areas.

3. SEEDBED PREPARATION.

Irrigate site prior to bed making.

Soil treatment with a recommended soil sterilizer might be required.

Make beds 1,2metres wide by any convenient length.

Broadcast compound S at the rate of 1kg per 7-11m² and incorporate with the soil. (Use lower rate for rich soils and higher rate for light soils).

Mark some lines 15cm apart across the bed.

4. SOWING

Evenly place 200 to 250seeds per line.

Cover the seed with fine soil, avoiding crumbs.

Spray acephate after covering.

Cover beds with mulch and spray acephate, then water.

5. SEEDBED MANAGEMENT

Water daily in the morning and afternoon, keeping close monitoring to avoid over watering.

Keep scouting for pests before germination.

Remove mulch soon after germination.

Keep close check for pests and diseases after germination.

Spray a weekly pesticide (acephate) before and after germination.

Spray a fortnightly fungicide (copper oxychloride or dithane) once 4-6 leaves have established.

Yellowing seedlings can be top dressed using calcium nitrate by drenching a mixture of 100grams in 10litres water avoiding spillage onto leaves to avoid burning.

Clip seedlings when they reach 150mm height, three weeks before transplanting. Use sterilized clippers.

Spray copper oxychloride after clipping.

Hardening seedlings commences soon after clipping, three weeks before transplanting.

Only apply water to the critically wilting ones to avoid total drying.

6. LAND PREPARATION

Make ridges 1,2m apart for rain fed crop and 1,5m apart for irrigated crop. Make the ridge 30cm to 40cm high depending on the soil type. (Make higher ridges on badly drained soils and lower ridges on well-drained soils).

Space plant holes 50cm apart.

7. TRANSPLANTING

Pre-irrigate field if facility allows.

Required chemicals are Confidor (imidacloprid) and fenvelarate or Karate(Lambda Cyhalothrin).

Confidor is for the control of termites and is placed in the planting water. (30mls confidor/20litres of water)

Fenvelarate is for the control of cutworms and is drenched on the stem soon after covering the planting. (30mls fenvelarate/ 20litres of water).

Fill plant hole with water, apply the 30mls confidor mixture and plant before the water seeps.

Avoid turning the roots as you plant. Too long tap roots can be cut to a reasonable size.

Cover the hole once all water has seeped and drench 30mls fenvelarate mixture on the stem.

Total plant population per hectare at 1.2m by 0.5m spacing is 16,660 plants and at 1.5m by 0.5m spacing is 13,330plants.

8. FIELD MANAGEMENT

Irrigate daily for the first week after transplanting.

Reduce amount of water as plants establish and keep close monitoring of moisture content and irrigate as required.

Gap fill (replace) any weak or dead plants two weeks after planting.

9. FERTILIZER APPLICATION.

BASAL (COMPOUND D) FERTILIZER: Apply as per analysis recommendation or where no analysis was done, between 25-35grams per plant depending on soil fertility, 4weeks after planting.

TOP DRESSING FERTILIZER:

LAN or Ammonium nitrate, apply 5grams per plant 9weeks after planting and monthly thereafter depending on the soil type, fertility and rainfall pattern.

Calcium Nitrate: Mix 1kgs of calcium nitrate with 100litres of water and spray from the first flower and after every two weeks.

Potassium nitrate: Mix 1kgs of calcium nitrate with 100litres of water and spray from the first fruiting and after every two weeks.

Avoid concentration on leaves by using fine nozzles as both Calcium and potassium nitrates have a burning effect on tender leaves.

Avoid spraying calcium and potassium nitrate at the same time, space by a week.

10. PESTS, DISEASES CONTROL AND CHEMICAL APPLICATION.

CAUTION: All chemicals are poisonous and dangerous, therefore should be handled with great care. Always read the label for proper usage (dosage) and handling.

Pests and Control

Pest	Damage	Possible Chemical
Termites	Roots	Imidacloprid
Cutworms	Roots and stems	Fenvelarate
Aphids	Leaves	Dimethote/acephate

Grasshoppers	Leaves and stems	Lamba cyhlothrin
Sink bugs	Pods	Methomyl
Red spider mite	Leaves and stems	Capture
White fly	Leaves	Admire
Thrips	Leaves	Acephate
Mice	Leaves and stems	Baits and traps.

Disease and Control

Disease	Damage	Possible Chemical
Damping off	Seedlings	Use treated seeds/Thiram.
Powdery Mildew	Leaves	Wettable Sulphur
Anthrachnose	Pods	Dithane/Captain
Fusarium wilt	Leaves	Use health seedlings/Captain
Phytophthora blight	Roots, stems,leaves and pods.	Use health seedlings/Propamocarb 722/Benomyl
Bacterial spot	Leaves, stems pods.	Copper oxychloride.
Bacterial spot rot	Pods	Bravo
Cucumber Mosaic Virus (CMV)	Leaves and pods.	No chemical. Destroy affected plants.
Tomato spotted Wilt Virus	Leaves and pods.	No chemical. Destroy affected plants.
Potato Virus Y (PVY)	Plant veins.	No chemical. Destroy affected plants.

11. GENERAL BACTERIAL AND FUNGAL PREVENTATIVE SPRAY REGIME

Week 1 after planting	Fenvelarate + Copperr oxychloride
Week 2	Wettable Sulphur (200g/100ltrs of water)
Week 3	Dithane(200g/100ltrs of water)
Week 4	Copper oxychloride (200g/100ltrs of water).
Week 5	Wettable Sulphur
Week 6	Dithane
Week 7	Copper oxychloride
Week 8	Wettable Sulphur
Week 9	Dithane
Week 10	Bayfidan (500ml/ha)
Week 11	Dithane + Copper oxychloride
Week 12	Wettable Sulphur
Week 13	Bayfidan
Week 14	Dithane + copper oxychloride
Week 15	Wettable Sulphur
Week 16	Continue from week 16 upwards as outlined in week 14 and 15.

12. PHYSIOLOGICAL DISORDERS

Disorder	Damage	Control
Blossom end rot	Pods	Proper application of Calcium nitrate.
Purpling	Pods	This disappears as the pods turns red.
Sun scald	Pods	Avoid defoliation by controlling diseases.
Fruit split	Pods	Establish good drainage and promptly pick red chillies.

13. REQUIREMENTS PRIOR TO HARVESTING (No harvesting will commence prior to training and meeting the below requirements). No metal buckets to be used for picking or storing.

- Roofed and concreted open space for grinding. (5x5)m. (With a good drainage and soak away).
- Warehouse. (A minimum of 18mx10m).
- Running water.
- 3 phase power.
- S4 or S6 Stainless grinder.
- A minimum of 50 plastic drums (210ltrs).
- A minimum of 40 bulk bags. (1.1MT net each).
- A minimum of 40 liners. (1.1 MT net each).
- A minimum of 160 cardboard inserts.
- A minimum of 40 pallets.
- Strapping kit comprising of tensioner, sealer, metal seals and strapping tape.
- Non iodized salt. (A minimum of 6,600kgs per 5 hectares).
- Ablution system.
- Sufficient protective clothing for grinding team.
- Accessible by a 30MT truck.

14. HARVESTING. (Only red chillies should be picked). (No fresh chilli should be kept overnight without grinding, so only pick when all requirements are in place).

Provide clean sanitized water for the pickers to clean hands before and after handling chillies, and also after using the toilets.

Use smaller plastic buckets for field picking.

Ripe chillies come off the calyx easily.

Remove any calyxes, leaves and blemished chillies during picking.

Orange mash resulting from picking and grinding orange chillies will be rejected.

15. GRINDING

All sanitary measures to be put into practice prior to grinding.

Check all chillies for any debris.

Weigh 10kgs of chillies and thoroughly mix with 1kg of uniodized salt. (The salt quantity per 10kgs chillies might change based on the salt analysis results).

Empty the mixture into the grinder hopper.

The 210ltr plastic drum placed under the grinder chute will take between 16 to 18 buckets of the mixture of 10kgs chillies and 1kg salt.

Clean the full barrel once in its final position in the warehouse.

Place a clean clear plastic onto the mash.

Put the lid and spread salt on top.

The barrel will stand for a minimum of 3weeks for fermentation, (Thus if there are enough drums) or will be emptied into a bulk bag. (CPC personnel carry out the bulk bagging training).

Any mash that will not meet CPC Quality Control Measures will be rejected.

NEW SITE ASSESSMENT NOTES				
Name of the farm:				
	Tick here			
ITEM AVAILABILITY	YES	NO	COMMENTS	
Accessibility				
Soil type (good=yes and bad=no) (under comment)				
Water availability				
Is the water dam sourced				
Is the water river sourced				
3 Phase electricity				
Over head irrigation				
Drip irrigation				
Flood irrigation				
Planting on a new field				
Planting on an old field				
Was previous crop a solonaceae family				
Existing production (name them on comments)				
Warehouse				
Ablution system				
Clean borehole water				
Labour availability				
Is the are prone to frost				
Is the area prone to water logging				
Is the area prone to hail storm				
Is the area prone to strong winds				
Is the area prone to any known diseases				
Is the area prone to any known pests				
Is the farm fully owned				
Is farm close to a port				
What is the distance to the port (under comment)				
How many hectares to grow (under comment)				
Assessed by.....				
On:...../...../.....				

