

GREENGRAM

I. Selection of suitable varieties

varieties suitable for all seasons viz., kharif, rabi & summer: LGG-407, LGG-460, LGG-450, MGG-295, MGG-348, WGG-2, WGG-37, PS-16, ML-267 & PUSA-105.



varieties suitable for rabi/rabi rice fallows: LGG-410, TM-96-2, LGG-460 & MGG-348, LGG-407.



varieties suitable for synchronus maturity: PDM-54, LGG-407, PUSA-105, WGG-37, LGG-460 & MGG-348.

varieties tolerant to pre harvest sprouting:

LGG-450, K-851, PS-16

varieties tolerant to drought :

K-851, PDM-54, LGG- 407, MGG-348.

varieties tolerant to YMV :

LGG-407, ML-267, LGG-460 & WGG-37.

varieties tolerant to ABLs:

MGG-295, WGG-2, LGG-407 & LGG-450.

varieties suitable for preceding paddy:

LGG-460 ,LGG-407,ML-267.

Soils and field preparation

Greengram can be grown in moisture retentive, well-drained (preferably black/alluvial) soil with a P^H of 6 to 7. Saline/alkali soils are not suitable. Greengram should not be grown on light soils. Prepare the land well for sowing.

Seed treatment : Captan/ Thiram / Mancozeb / Carbendazim @ 2.5 g per kg seed; Carbosulfan @ 30g or Imidacloprid 600 FS @ 5 ml or Thiamethoxam 70 WS @ 5g /kg seed to protect the crop from sucking pests and diseases upto 15-20 days after sowing. First treat the seed with fungicide and allow to dry for 30 – 60 min, then treat the seed with insecticide and dry them in shade. Later treat the seed with Rhizobium @ 2 g/kg seed before sowing.

Sowing time

Optimum sowing time limits for different seasons:

Kharif : June 15th – July 15th.

Rabi (ID) : 15th October to 15th November

Rabi rice fallows : 15th November to 15th
December

Summer rice fallows : Upto March.15th.

Summer (ID) : February – March 15th

Seed rate & spacing:

Kharif - 15-20 kg/ha; 30 x 10 cm.

Rabi (ID) - 15-20 kg/ha; 30 x 10 cm.

Rabi (Rice Fallows) - 30-35 kg/ha; Broadcasting
(40 Plants /m²)

Summer (Rice fallows-30-35 kg/ha; Broadcasting
(40 Plants /m²)

Summer (ID)-15-20 kg/ha; 22.5 x 10 cm.

A 25% higher than the normal population
(3.3 lakhs/ha should be maintained under late
sown conditions

Fertilizer management

- Treat the seed with biofertilizers viz. Rhizobium and Phosphorous solubilizing bacteria (PSB) @ 500 g each/ha just before sowing.
- Apply 20 kg N, 50 kg P₂O₅/ha basally and incorporate it with gorru.
- No need to apply fertilizers in rice fallows. But spray 2% Urea at flowering and pod formation stages.

Water management

- Greengram need life saving irrigation when there is a long dry spell.
- Light irrigations are always beneficial.
- Each irrigation should be followed by hoeing for promoting aeration.
- In rice fallows give 1 or 2 irrigations at 30 and 50 days after sowing for better yields.

Intercultivation and other management practices, if any: Keep fields weed free by giving 2-3 hoeings within 25-30 DAS. Pre-emergence application of Pendimethalin @ 1.5 kg /ha at 24 hrs after sowing or Fluchloralin @ 2.5l/ha as pre-sowing incorporation checks weed growth.

Pest management

Stemfly : Seed treatment as above. Spray acephate 1.0 g/lit or monocrotophos 1.6 ml/lit or dimethoate 2.0 ml/lit twice at weekly intervals from 10 days after sowing

Flea beetles : Seed treatment as above. Spray quinalphos 2 ml/lit or acephate 1.0 g/lit if the incidence is more severe

Thrips : Spray either acephate 1.0 g/lit or fipronil 1.0 ml/lit



Whitefly : Foliar application of 5 % NSKE at 20 DAS as prophylactic spray against whitefly that transmits YMV.

Spray monocrotophos 1.6 ml/lit or triazophos 1.5 ml/lit or acetamiprid @ 0.2 g/lit.

Aphids: Spray either acephate 1.0 g/lit or monocrotophos 1.6 ml/lit

Maruca Pod borer

- Monitor the occurrence of adult moths at flower bud initiation stage of blackgram/greengram (i.e at 35-40 DAS).



- Application of 5% NSKE or neem oil @ 5 ml/lt should be taken up before flower bud initiation to avoid egg laying by Maruca adults.
- Spray acephate 1.0 g or quinalphos 2.5 ml or thiodicarb 1.5 g at the time of flowering initiation. Add Dichlorovos 1.0 ml/lt to the above chemicals if more number of webbings were observed in the crop.
- In case of severe incidence spray either novaluron 1.0 ml or spinosad 0.3 g or emamectin benzoate 0.4 g or flubendiamide @ 0.2 ml/lt



- First spray should be given one week before flowering initiation as and when the adult population is noticed in the crop.
- Use 500 litres of spray fluid per hectare with hand compression sprayer
- Use 150-170 liters of spray fluid per hectare and increase the insecticide dose three times while using power or Taiwan sprayer

- Repeat the spray twice at 7 days interval by changing the insecticide depending on the intensity of the pest.
- Do not spray the crop during early morning hours until the dew on leaf surface dries off

Tobacco caterpillar

Adoption of IPM practices such as

- Erection of Pheromone traps @ 10/hectare
- Growing of castor as trap crop to monitor egg laying and hatching
- Collection and destruction of skeletonised leaves along with first instar larvae
- Spraying of SNPV @ 500 LE/ha.



- Spray either chlorpyrifos 2.5 ml/lt or acephate 1g/lt or quinolphos 2 ml/lt against early instars
- Apply poison bait containing rice bran, jaggery and insecticide (Carbaryl /Chlorpyrifos / Monocrotophos) @ 10:1:1 ratio against grown up caterpillars at the evening hours.

Disease management:

Collar rot: Seed treatment as above

Anthraxnose, Cercospora leaf spot: Seed treatment as above. Spray carbendazim 0.1% or mancozeb (0.25%) twice at 10 days interval.

Powdery mildew: Spray carbendazim (0.1%) or Thiophanate methyl (0.1%) twice at 10 days interval soon after noticing the disease.



Angular black leaf spot : Grow resistant varieties Viz. LGG 407, LGG 450, WGG 2 and MGG 295. Spray carbendazim (0.1%) twice at 10 days interval.

Bacterial leaf spot : Soak the seed in Paushamycin suspension (0.1 g in 1 lt.) water per 1 kg seed for 30 minutes. Spray twice with Plantomycin 1.0 g + Copper oxychloride 30 g/ 10 lt water at 12 days interval.

Yellow mosaic virus :

1. Growing of resistant/tolerant varieties viz. LGG 460, LGG 407 , ML 267 PDM54, Pusa 105.
2. Seed treatment with Imidacloprid @ 5 ml/kg or Thiomethoxam @ 5g/kg or Carbosulfon @ 30g/kg seed at the time of sowing.



3. Removal of infected weeds on field bunds and roadsides
4. Roughing out the infected plants at the time of first appearance and destroy them.

5. Spray systemic insecticide like Monocrotophos @ 1.6 ml/lit or Trizophos @ 1.5 ml/lit or Acephate @ 1g/lt or Metasystox @ 2 ml/lit or Dimethoate @ 2 ml/lt to control whitefly insects which acts as a vector for transmission of YMV

Leaf curl virus: Seed treatment with Carbosulphon 30g/ Imidacloprid 5 ml/ Thiomethoxam 5g per kg seed. Spray systemic insecticide like Monocrotophos @ 1.6 ml/lit or Acephate @ 1g/lt or fipronil @ 2 ml/lit or Dimethoate @ 2 ml/lt to control the thrips which acts as a vector for transmission of leaf curl



Post harvest technology

Store properly dried seed in nylon bag or polythene bag or compactly knitted gunny bags.

II. CRITICAL INTERVENTIONS

1. Adoption of line sowing and maintenance of optimum plant population @ 30-35 plants/ sq.m and optimum time of sowing.
2. Seed treatment imidacloprid @ 5 ml/kg or thiomethoxam @ 5g/kg or carbosulfon @ 30g/ kg seed at the time of sowing
3. Pre emergence application of herbicides for suppression of weeds upto 20-30 days
4. Timely pest and disease management Plant protection measures should be taken up at flower bud initiation stage for effective management of Maruca pod borer.