

Summer green gram (*Vigna radiata* L.)

Varieties:

Varieties	Year of release	Duration (days)	Grain yield(q/ha)	Days of 1 st picking	Reaction to diseases
K 851	-	70-75	10-12	60-65	Tolerant to YMV and <i>Cercospora</i> leaf spot
Pratap (SG-1)	1999	65-75	10-14	-do-	Tolerant to <i>Cercospora</i> leaf spot & susceptible to YMV

Soil:

Well drained sandy loam soil is preferable.

Field Preparation:

Field is to be ploughed 2-3 times followed by leveling. Surface drains are to be provided to facilitate quick removal of excess water from the field.

Time of Sowing:

The optimum time of sowing is from mid February to mid March.

Fertility Management: Same as in black gram

FERTILIZER RECOMMENDATIONS AS PER FERTILIZER PRESCRIPTION EQUATIONS (FPE)

Fertilizer prescription equations can be used to find out the amount of NPK fertilizers required to obtain a certain yield target of the crop based on soil test values for NPK. The FPEs can be used under cultivation practices where only chemical fertilizers are used and where chemical fertilizers + FYM/Vermicompost/Enriched compost etc. are applied. The FPEs are valid for different varieties of the same crop having not more than 15% variations in yield. The amount of NPK fertilizers will vary according to yield target and soil test values. Yield target must not cross the potential yield of a particular crop.

Only Chemical Fertilizers

$$FN = 11.37 \times T - 0.62 \times STVN$$

$$FP = 3.82 \times T - 0.22 \times STVP$$

$$FK = 12.81 \times T - 1.29 \times STVK$$

Chemical Fertilizers + FYM

$$FN = 11.37 \times T - 0.62 \times STVN - 0.13 \times OM$$

$$FP = 3.82 \times T - 0.22 \times STVP - 0.17 \times OM$$

$$FK = 12.81 \times T - 1.29 \times STVK - 0.2 \times OM$$

where, FN, FP, FK-Fertilizer N, P₂O₅, K₂O; STVN, STVP, STVK-Soil Test Values for N, P₂O₅, K₂O, T-Targeted yield, OM- Organic component (FYM, Vermicompost, Enriched Compost etc).

*Seeds should be inoculated with 150 g of Rhizobium culture/3-4 kg of seeds.

Ready Reckoners for two yield targets for this equation are given in Appendix-IIIa & IIIb.

Application of Lime:

CaCO₃ in the form of dolomitic lime @ 65.5 kg/bigha should be applied 15 days before seeding and incorporate in the soil in areas where multiple cropping is practiced.

Seed inoculation:

For inoculation with Rhizobium culture, either Majuli 19 or any other suitable strains may be used. Seeds are inoculated @ 50 g/kg kg of seeds. Detailed instructions are available in each packet of culture (for details of procedure for seed inoculation, refer to black gram). Also inoculate seeds with PSB @ 50g/kg seed.

Seed rate: 22.5 kg/ha or 3 kg/bigha

Spacing:

Row to row: 30 cm

Plant to plant: 10 cm

Interculture:

One weeding is to be done at 20-25 days after sowing.

Plant Protection: Same as in black gram

Harvesting:

Harvesting is to be done when 75% of the pods turn darkish in colour and splits on pressure. Harvesting should be completed in 2-3 pickings.

Protection against storage pests:

Properly dried seeds of green gram should be mixed thoroughly with black pepper seed powder @ 3g/kg of seed for protection against bruchid infestation during storage. Treated seeds should be kept in polybags with outer covering of gunny bags.