

Grass pea (*Khesari*)
(*Lathyrus sativus* L.)

Variety:

Variety	Year of release	Duration (days)	Seed yield (q./ha)	Agro-climatic zone	Special features
Ratan (BioL 212)	1997	110-120	10-12	All zones (except Hills Zone & Barak Valley Zone)	Negligible ODAP content (<0.1%), suitable for utera cultivation
Newly recommended varieties					
Prateek	2006	115-120	10	CBVZ, LBVZ, NBPZ	Low ODAP (0.109%) and tolerant to wilt and powdery mildew, aphid, pod borer & bruchid
Mahateora	2008	115-120	10	CBVZ, LBVZ, NBPZ	Low ODAP (0.074%) and tolerant to wilt and powdery mildew, aphid, pod borer & bruchid

Soil type: Sandy loam and clay loam soils are suitable.

Sowing time: Mid October to mid November

Land preparation: The field is to be ploughed 3-4 times to obtain a good tilth.

Seed rate: 40 kg/ha or 5.3 kg/bigha for sole crop

Spacing: A spacing of 30cm between rows and 10cm between plants should be maintained.

Fertilizer: Compost @ 1 t/ha (1.33 q/bigha) should be applied.

Nutrient	Requirement (kg/ha)	Form	Fertilizer requirement	
			kg/ha	kg/bigha
A. Without Rhizobium culture				
N	15	Urea	33	4.5
P ₂ O ₅	35	SSP	220	30
K ₂ O	15	MOP	25	3.3
B. With Rhizobium culture				
N	10	Urea	22	3
P ₂ O ₅	35	SSP	220	30
K ₂ O	15	MOP	25	3.3

Diammonium phosphate (DAP) @ 75 kg/ha or 10 kg/bigha is to be applied in lieu of

urea and SSP in non-inoculated crop. NPK may also be applied in the form of mixed fertilizer.

Seed inoculation:

Seeds may be inoculated with suitable Rhizobium culture @ 50 g/kg of seed. Inoculation method is same as in the case of lentil.

Interculture:

Hoeing in inter-row spaces and weeding at 20-25 days after sowing.

Relay cropping of grass pea (*Khesari*) with winter rice:

Land situation: Medium land

Sowing time: 15-20 days before the harvest of winter rice, when the soil is in moist condition

Method of sowing: Broadcast

Seed rate: 50-60 kg/ha or 6.7-8 kg/bigha

Seed priming: Soaking of seeds in water for 6 hrs.

Fertilizers:

Without rhizobium and PSP inoculation:

- Application of 7.5 kg N and 17.5 kg P₂O₅/ha at the time of sowing before rice harvest
- Application of second dose @ 7.5 - 17.5 - 15 kg N, P₂O₅, K₂O/ ha at the time of rice harvest.[The fertilizers are to be incubated for 48 hours with compost/ moist soil in 1 : 10 ratio before applying]
- Apply two foliar sprays of 2% urea at branching and pod initiation stages

With Rhizobium and PSB inoculation (50 g/kg seed each):

- Apply 5.0 kg N and 13.0 kg P₂O₅/ha at the time of sowing before rice harvest
- Apply second dose @ 5 - 13 - 15 kg N, P₂O₅, K₂O/ ha at the time of rice harvest. [The fertilizers are to be incubated for 48 hours with compost/ moist soil in 1 : 10 ratio before applying]
- Apply two foliar sprays of 2% urea at branching and pod initiation stages

Plant protection:

A. Diseases

Disease	Fungicide	Dose (g/kg of seed)	Mode of application
Wilt	Carboxin	2.0	Seed treatment

B. Protection against storage pests:

Properly dried seeds of pea 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.

Harvesting:

Harvesting should be done when 75-80% of the pods turn yellow or brown.