

## Land

Soil heavier than loam is suitable for its cultivation. Masoor is especially sown in the field lying vacant after harvesting paddy.

## Preparation of Land

First plough should be done by disc harrow and subsequent 2 - 3 plough by local plough followed by leveler.

## Recommended Variety

SN	Variety	Productivity (qtl/htr)	Duration of Ripening(Days)	Suitable Area	Remarks
1	IPL-81	18-20	120-125	Bundelkhand	Small kernel, Prone to Ratua Disease.
2	Narendra Massor-1	20-22	135-140	Whole UP	Ratua resistant, medium size kernel
3	D.P.L-62	18-20	130-135	Whole UP	Medium, big size kernel
4	Pant Masoor-5	18-20	130-135	Whole UP	Medium size kernel, Ratua resistant
5	Pant Masoor-4	18-20	135-140	Plains	Small size kernel, Ratua resistant
6	D.P.L-15	18-20	130-135	Plains	Medium, big size kernel, prone to Ratua disease.
7	L-4076	18-20	135-140	Whole UP	Plant is dark green in color, less spread.
8	Pusa Vaibhav	18-22	135-140	Plains	--Surplus--
9	K.-75	14-16	120-125	Whole UP	Medium size plant, big kernel,

<b>10</b>	HUL-57 (Kashi Vishwanath)	18-22	125-135	Whole UP	Ratua infested. Small kernel and Ratua resistant
<b>11</b>	K.L.S.-218	18-20	125-130	Eastern UP	Small kernel and Ratua resistant
<b>12</b>	I.P.L-406	15-18	125-130	Western UP	Big kernel and Ratua resistant.
<b>13</b>	Shekhar-3	20-22	125-130	Whole UP	Ratua and Ukatha Resistant.
<b>14</b>	Shekhar-2	20-22	125-130	Whole UP	Ratua and Ukatha Resistant.
<b>15</b>	I.P.L-316	18-22	115-120	Bundelkhand	Ukatha Resistant

### **Time of Sowing**

For timely sowing mid October to mid November and in case of late sowing December first week is suitable time. Sowing of Masoor by Pant Nagar Zero Till Seed Drill is more beneficial.

### **Seed Rate**

For timely sowing 30-40 kg and late sowing 40-50 kg seed is sufficient.

### **Seed Treatment**

Sow 10 kg seed of masoor after treatment with 1 packet of rhizobium leguminosorum culture especially in those field in which masoor has not been sown earlier. Treat the seed after chemical treatment.PSB must be used.

### **Fertilizer**

Use 20 kg nitrogen, 60 kg phosphorous,20 kg potash and 20 kg sulphur per hectare in normal sowing. In Uttera method of sowing, top dress with 20 kg nitrogen after harvesting of paddy and spray 30 kg phosphorous twice at the time of flowering and pod formation.

### **Irrigation**

Apply first irrigation before flowering. If there is no rain in the crop sown in paddy field, apply second irrigation at the time of pod formation.

## Crop Protection

### (A) Main Insect

- **Mahu**

The infant and adults of this insect sucks the juice of leaves, stems and pods and weaken them. The insect secretes honey on which black mould grows which hinders the photosynthesis.

- **Semilooper Insect**

The maggot of this insect is green in color which moves in loop. The maggots eat leaves, soft twigs, buds, flowers and pod and harm it.

- **Pod Borer Insect**

The maggots of this insect enter the pod by boring it and eat the grain inside. In case of intense menace, the pods become hollow and production falls.

#### Economic Loss level

SN	Insect Name	Stage of Crop	Economic Loss level
1	Shoot Fly (Mahu)	At vegetative growth stage	5% Infested plants
2	Semilooper Insect	At the time flowering and pod formation.	2 maggot per 10 plant
3	Pod Borer insect	At the time of pod formation.	5% Infested plants

### Control Measures

- Sow in time.
- If the insect menace has crossed economic loss level, use any one of the following insecticides:-
- For control of mahu insect in standing crop, spray dimethoate 30% EC or methyl-O- dematon 25% EC 1.0 liter or monochrotofos 36% solution 750 ml per hectare dissolved in 500-600 liter water. Azadirectin (Neem Oil) 0.15% EC, 2.5 liter per hectare can also be used.
- For control of pod borer insect and semilooper insect, spray any one of the following bio/chemical insecticides or dissolved it in 500-600 liter water and spray it:-
- Bacillus thuringiensis(BT)- Kirstkey variety 1.0 kg
- Fenvalrate 20% EC 1 liter.
- Quinolfos 25% EC 2.0 liter.
- Monochrotofos 36% solution 1.0 liter

Keep watch on the field. Spray at an interval of 15 days if needed. Do not repeat an insecticide.

### (B) Critical Disease

- **Root Rot**

The plant starts drying after 15-20 days of sowing. If the plant is uprooted and seen, fungus like cotton is found stick around the stem.

- **Ukatha**

The plants slowly start wilting and dry. The bark becomes brown in color

and if the root is cut vertically, brown colored veins are seen. Ukatha can infest the plant at any stage.

- **Gerui**

In this disease, orange colored blister is formed on leaves and stem as a result the leaves turn yellow and start drying

### **Control Measures**

- **Cultivation Activities**

- In summers, plough by disc harrow helps in control of soil borne diseases.
- Do not take the masoor crop in the field for 3-4 years which is often infested by Ukatha.
- For protection from Ukatha disease, sow disease resistant variety such as Narendra Masoor-1, Pant Masoor-4, Masoor-5, Priya, Vaibhav etc.

- In summers, plough by disc harrow helps in control of soil borne diseases.
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- **Seed Treatment**

For control of seed borne diseases, sow the seed after treatment with thiram 75%+carbendasim 50% (2:1) 3.0 gm or trichoderma 4.0 gm per kg seed.

- **Soil Treatment**

For control of seed and soil borne diseases, mix the bio pesticides trichoderma viridi 1% WP or trichoderma harzianum 2% WP at the rate of 2.5 kg per hectare with 60-75 kg decomposed dung manure, sprinkle light water on it and keep it for 8-10 days in the shade. Spread the mixture at the time of last plough before sowing. This controls the seed/soil borne diseases in peas.

- **Foliar Treatment**

For control Of Gerui disease, spray mancozeb 75% WP 2.0 kg or propiconazole 25% EC at the rate of 500 ml per hectare dissolved in approximately 500-600 liter water.

### **(C) Important Weeds**

Bathua, Santhi, Krishna neel, Hiran khuri, chatri-matri, Akra, forest carrot, gajri, pyaji, khartua, satyanaashi etc

### **Control Measure**

- For weed control by weed herbicide chemicals, spread in the soil fluchloralin 45% EC, 2.2 liter per hectare dissolved in approximately 800-1000 liter water before sowing or spray pendimethylene 30%, 3.30 liter or alochlor 50% EC uniformly at the rate of 4.0 liter per hectare dissolved in water as above through flat fan/nozzle within 2-3 days of sowing.
- If weed herbicides has not been used, hoe by hand hoe to control the weeds.

### **Harvesting and Storage**

Harvest the crop when it is fully ripened. Thresh it in a clean field and take out the grains. Use aluminium phosphide at the rate of 3 tablets per ton for protection from storage insects.

### **Important Points**

- Sow the certified seed timely the recommended for that specific area.
- Seed treatment is essential.
- Use single super phosphate for phosphorous and sulphur.
- Decide the quantity of seed according to the size of kernel and time of sowing.
- Disease control in time is essential.
- If the germinated seed is sown before 15 days of harvesting of paddy, the yield may increase up to 30%.