

Package of practices of Paddy (Rice)

Paddy is a major crop of Mathura occupies around 50000ha area having an average production and productivity of 108360mt and 29.57q/ha respectively as reported by agriculture department. The average productivity is comparatively low as compare to other districts which can be augmented by adopting scientific management and production technologies.

1. **Selection of soil** : Paddy can be grown in wide variety of soils ranging from loam to sandy loam to clay loam, but clay loam soils with good water retention capacity are considered as the best.
2. **Field preparation**: After summer ploughing, 2-3 ploughing are required to prepare the soil. Do proper bunding of field to conserve and retain water. If daincha for green manuring is taken as previous crop it should be incorporated with phosphorous. Irrigate the field at least one week prior of transplanting to allow to grow weeds. Then plough the field by filling water and do puddling before transplanting
3. **Important varieties** : The varieties released within last 10 years and suitable for the district are mentioned here : NDR 2064, NDR 2065,,NDR-2101,Ballabh Basmati-22, 23, 24, IR-64, DRT-1, Basmati-564, PB-1&6, Pusa sugandh 2,3,4 (1121), & 5, Pusa Basmati 1509, Pusa 1612 PRH-10, PR 1160 Proagro-6444 & 6111 etc.
4. **Seed Rate** : Use 20-25kg seed per hectare of fine ,30-35kg seed for medium and 35-40kg seed for coarse paddy in nursery to transplant it in one hectare land.
5. **Nursery Raising and Its Management** : Prepare 80-100 plots of 1.25m x 8.0m (10sqm) with 4 inch height to raise nursery. Use 100kg nitrogen and 50kg phosphorus i.e 220gm urea and 312.50gm single super phosphate per plot in nursery. Nursery in 800-1000 sqm is enough for transplanting in 1 hectare land.
Spray trichoderma within 10 days after sowing of nursery.
Use as protective measure 5kg zinc sulphate with 20kg urea or in 1000 litre filter water of 2.5 kg calcium carbonate per hectare.
To control whitening use 4kg ferrous sulphate with 20kg urea per hectare.
Use 500gm Carbendazim 50% WP per hectare to control paddy blast.
Use 2kg zinc magnese carbamate per hectare to control brown spot disease.
To protect the crop from various insects pests spray 1lt Fenitrothion 50EC or 1.25lt Quinolphos 25EC or 1.5lt Chloropyriphos 20EC per hectare.
- 6 .**Seed Treatment** : Before sowing seed in nursery treat the seed with 4gm streptocycline sulphate per 25kg seed or use 40gm plantomycine. Make solution in 45lt water and dip the seed in it for night, dry it in shade and sow it in nursery **to control Bacterial blight**. Generally it is done by making solution of 75gm thiram or 50gm carbendazim in 8-10lt water to treat 25kg seed. Dip the seed in it for few minutes and allow it to germinate before sowing in nursery. Tricoderma @ 125gm per 25kg seed can also be used to treat the seed.

7. Fertilizer Management : (i) High Yielding Early Maturing NPK @ 120:60:60

(ii) High Yielding Medium Maturity NPK @ 150:60:60

(iii) Scented paddy (dwarf) NPK @ 120:60:60

Apply half the dose of nitrogen and full dose of phosphorus and potash before transplanting as basal dressing and the remaining dose of nitrogen should be used in two instalments 1st at the time of tillering and the 2nd at the time of emergence of ears as top dressing.

8. Time of Transplanting : For Early and medium maturing varieties 3rd week of June to mid of July while long duration and scented can be transplanted upto last week of July. Generally 20-22 days old nursery is consider good for transplanting.

Spacing : 20x15cm or 20x10cm **Depth :** 3-4cm **Transplant 2-3 plant per hill** for better yield.

Gap filling : Fill the gap by replacing the dead plant with a new plant to maintain pproper plant population.

Weed Management : Mix Pretilachlore 30.7% EC 1.25lt with 15-20kg sand and broadcast it per hectare within 48 hours of sowing in nursery at proper moisture.

Use Nominee Gold (bipyribeg sodium) @ 200gm per hectare after 10 days of transplanting at field moisture condition.

9. Water Management : In absence of rains irrigate the crop at tillering , ear emergence, flowering and grain filling stage.

Plant Protection : Major insects and pests of paddy are : Root weevil, leaf roller, husk insect, hispa , bunka insect, stem borer, green, brown , white hoppers, Gandhi bug, and army worm.

Use recommended , effective and safe insecticides and pesticides.

Major diseases of paddy are: Sheath blight, Bacterial blight, false smut etc.....

Use recommended good quality fungicides, and bactericides in tine to control these diseases.

Thrust Points : Select appropriate and suitable variety for sowing.

Sow the seed after seed treatment.

Use balance fertilizers on soil test basis. Spray of zn and fe is essential.

Maintain proper plant population per sqm (50*70 hills)

Control weeds, insects pests and diseases properly in time.

