

Proso Millet (Package of practices)

"Proso millet (*Panicum miliaceum* L.) is one of the oldest and most important minor millets in India. It is widely grown in various parts of India, Asia, Middle Eastern countries, and Western Europe. Being drought-resistant, it thrives in areas with limited rainfall. Proso millet can be cultivated in both nutrient-rich and poor soils."

Agronomic Practices

Land Preparation: Prepare the field by performing 3 or 4 ploughings followed by one laddering to obtain fine tilth.

Sowing Time: July- Aug is suitable for planting proso millet. It can also be planted in January-February.

Planting method:

Variety: PMV 442 (GPUP 25) is a suitable variety for planting in Assam.

Direct-sowing: Generally, tractor-drawn, or bullock-drawn seed drills, as well as bullock ploughs, are employed for sowing.

Seed Rate: A seed rate of 8-10 kg ha⁻¹ and 15 kg/ha for broadcast sowing.

Seed treatment: Treat the seed with Propiconazole @1ml/kg .

Sowing/Planting/Spacing:

Sowing is manually carried out at the centre of ridges where small furrows have been created by a tractor for sowing. These furrows are then covered with soil (sowing depth of 2 to 3 cm). Subsequently, laddering should be conducted along the furrows to ensure proper soil coverage over the seeds. This practice enhances germination, tillering, and minimizes crop lodging. The recommended spacing is 25 cm between rows and 8-10 cm between plants.

Fertilizer Application

Depending upon the soil test values, apply the following fertilizer doses for Proso millet cultivation:

Apply Farmyard Manure (FYM) or Compost at a rate of 5 tons per hectare or 6 quintals per bigha. This will contribute to a successful crop outcome and facilitate improved root growth development.

Nutrient	Requirement (kg/ha)	Form	Fertilizer requirement	
			kg/ha	kg/bigha
N	40	Urea	88	12.00
P2O5	20	SSP	125	16.50
K2O	20	MOP	32	4.25

Apply 50% of the full doses of FYM, P2O5, and K2O as basal fertilizer, and the remaining 50% of nitrogen (N) should be top-dressed 30 days after transplanting.

Irrigation and Drainage

The number of required irrigations varies based on factors such as soil type, weather conditions, and the duration of the variety. Typically, 2-4 irrigations are necessary.

Weed control.

For line sowing, conduct two intercultivations and one round of hand weeding. In the case of broadcasted crops, perform two rounds of hand weeding.

Diseases

Head smut (*Sphacelorrhca destruens*) is a prevalent disease of Proso millet although it is not common in Assam. Infected panicles exhibit elongation and thickening. Prior to harvest, the smut masses rupture. This ailment is transmitted through seeds and can be managed by treating seeds with organo-mercurial compounds like Ceresan, using a rate of 3g per kg of seed. Alternatively, hot water treatment can also be employed—soak the seeds in hot water at 55°C for 7-12 minutes.

Pest

Shootfly can be an important pest for Proso millet, resulting in substantial yield reduction.

Control

Early sowing with the onset of monsoon is an effective and cost-efficient method of control. To address this issue, apply 15 kg of Thimet granules per hectare into the soil during field preparation.

Crop harvesting: Proso millet is typically ready for harvest within 65-75 days from sowing, across most varieties. It's best to harvest the crop as it approaches maturity. In the upper heads, the seeds at the tip tend to ripen and shatter earlier than the lower seeds and later panicles. As a result, it's advisable to harvest the crop when approximately two-thirds of the seeds have ripened. Threshing can be done manually or with the assistance of bullocks.

Yield or Expected Yield: 14-16 q/ha

Reviewed by:

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