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Pusa Krishna – A new round fruited brinjal variety for higher yield and income

***Pusa Krishna* (DBR-03) is a newly developed round-fruited brinjal variety, derived from the hybridization of *Pusa Bindu x Pusa Uttam*, and released for cultivation in Zone VII (Madhya Pradesh and Maharashtra). The variety produces oval-round, shiny purple fruits with light purple stripes, ready for harvest in 55–60 days after transplanting. It demonstrates high yield, averaging 395 q/ha, with superior culinary qualities suitable for *Bharta*. Optimized cultivation practices, including proper nutrient management, pest and disease control, and seed production techniques, ensure consistent performance. *Pusa Krishna* offers enhanced profitability, making it a valuable addition for farmers seeking high-yielding, market-preferred brinjal varieties.**

Keywords: Brinjal variety, Cultivation techniques, Horticultural yield, Hybridization, Pest and disease management

PUSA *Krishna* is a newly released oval round brinjal variety developed by hybridization followed by selection (*Pusa Bindu* × *Pusa Uttam*) at Division of Vegetable Science, ICAR-Indian Agricultural Research Institute, Pusa, New Delhi, India. This was identified for release in XXXVIII AICRP (VC) Group Meeting held on 27 September 2020, for cultivation in zone VII (Madhya Pradesh, Maharasthra). Fruits are oval round, shiny purple colour. Average yield of the variety is 395 q/ha. It has good culinary attributes and is suitable for *Bharta* dish making.

Cultivation practices of brinjal cv. *Pusa Krishna* (DBR-03)

Brinjal is one of the most important commonly grown vegetable through-out the country. It gives very high return to the farmers due to its high yield, easy growing and high market demand. It is cultivated both as commercial crop as well as in the kitchen garden. *Pusa Krishna* (DBR-03) was developed at Division of Vegetable Science, ICAR-IARI, New Delhi and suitable at growing for zone VII (Madhya Pradesh and Maharashtra). Fruits are oval round, shiny purple colour with light purple stripes towards calyx end. Fruits borne in solitary and ready for harvesting at 55-60 days after transplanting.

Selection of field and land preparation

Sandy loam to clay loam soil with a pH range of 6.6 to 7.5 is suitable for this variety. For good growth and yield, the optimum temperature should be 25–30°C. Seeds are sown from mid-June to the end of June. Approximately 300 g of seed is sufficient for one hectare. Raised nursery beds are prepared, and seeds are sown in line at 1 cm depth and 5 cm apart within each line. Immediately after sowing, the beds should be covered with dry grass or straw, and water should be sprinkled for early germination. During moist weather, nursery beds should be treated with Captan at 2 g/l of water to prevent damping-off disease.

Transplanting and nutrient management

At the time of field preparation, FYM (25–30 tonnes) along with 75 kg urea, 300–350 kg SSP, and 100–120 kg MOP should be applied per hectare. To keep the field free from weeds during the initial growth phase, spraying of pre-emergence herbicide Pendimethalin 30% EC (2.5–3 l in 500 l/ha) is beneficial. Seedlings are transplanted when they are 30 days old and planted at a spacing of 75 cm (row to row) × 75 cm (plant to plant). Immediately after planting, irrigation should be applied. Top dressing with urea at 50 kg is done 4 weeks after transplanting and again after one month. Depending on weather conditions, irrigation should be applied. Frequent shallow cultivation at regular intervals keeps the field weed-free and facilitates good soil aeration for proper root development.

Plant protection

The fruit and shoot borer can be managed by fixing pheromone traps at 12 traps per hectare. Infested shoots should be cut half an inch below the hole and buried in the soil. Spraying nursery seedlings with Spinosad 44.03% SC at 3.5 ml per 10 l of water just before transplanting and flowering helps manage insect attacks at later stages. Mites can be controlled by spraying Propargite 57% EC at 1 ml/l of water. Phomopsis blight disease can be managed by spraying affected plants with Dithane-M-45 at 3 g/l of water during the fruiting stage.

Fruiting in brinjal variety *Pusa Krishna* (DBR-03)

Seed production of variety *Pusa Krishna* (DBR-03)

Table 1. Average yield (q/ha) of *Pusa Krishna* at different locations under All India Coordinated Research Projects (Vegetable Crops)

Variety	Code	Jabalpur, MP	Rahuri, Maharastra	Parvani, Maharashtra	AVG	% increase over best check
Pusa Krishna (DBR-03)	2016/BRRVAR-5	418.80	413.71	352.59	395.03	17.37
Swarna Mani (C)	2016/BRRVAR-2	339.62	383.66	286.39	336.56	
KS-224 (C)	2016/BRRVAR-3	371.35	357.15	250.29	326.26	

Harvesting and yield

Fruits are ready for harvesting when they become shiny purple, immature, and tender, with marketable size. The average yield is 395 q/ha.

Seed production

Seed production of *Pusa Krishna* can be carried out from June to March, ensuring that fruit ripening does not coincide with the rainy season. As brinjal is a cross-pollinated crop, isolation distances of 400 m for foundation seeds and 200 m for certified seeds are required. The flowers are light purple and medium in size. To rogue out off-type plants, three field inspections are necessary – before flowering (vegetative stage), during flowering or fruit-setting stage, and at fruit maturity. Diseased or infected plants should be removed from the seed production plot. Fruits are harvested when their colour turns brownish. The harvested fruits are kept in the shade for 4–5 days and beaten with a bamboo stick. Seeds are then separated from the pulp, washed in clean water, and sun-dried until their moisture content reaches 8% or below. The average seed yield is 150–200 kg/ha.

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