

Bidhan Supreme and Bidhan Super: New brinjal varieties

Bidhan Supreme and Bidhan Super have been developed through selection from indigenous collections obtained from Dhenkanal district of Odisha and Murshidabad district of West Bengal, respectively, by Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal. These two varieties have been released by the State Variety Release Committee, West Bengal and notified by the Central Variety Release Committee for State release during 2019. Varieties are early maturing, soft textured, less seeded, spineless, and high yielding. These can be fitted well in multiple cropping system. These two varieties performed well in eastern parts of India apart from West Bengal.

Bidhan Supreme (BCB-11)

The variety has been developed through individual plant selection from an indigenous collection obtained from Dhenkanal district of Odisha. It is an early maturing, semi prostrate, and spineless variety, and grows up to 130 cm height. This long-fruited variety is light green in colour with purple tinge. Fruiting pattern is solitary. The average fruit length, fruit diameter and fruit weight is 19 cm, 8 cm and 320 g, respectively. It possesses good cooking quality. It is moderately field resistant against bacterial wilt disease, field resistant against little leaf disease and field tolerant against fruit and shoot borer. This variety is recommended for early-autumn season (July/August-February/March) in irrigated condition. Fruits become ready for first harvest within 70 days after transplanting and the periodic harvesting can be continued up to 140-150 days. The average yield of this variety is 289.27 q/ha.

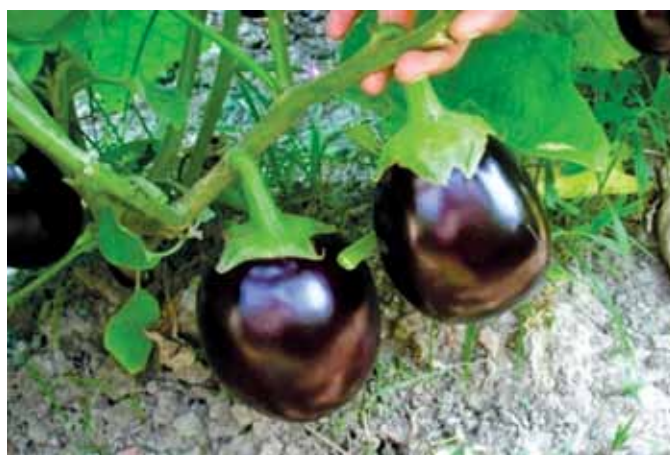
Bidhan Super (BCB-30)

The variety has been developed from individual plant selection from an indigenous collection obtained from Murshidabad district of West Bengal. It is an early maturing, semi-prostrate, spineless variety, grows up to 120 cm height. It possesses round fruit with glossy blackish purple colour having green calyx which are the most appealing traits for the export trade and can easily be fitted well in intensive cropping system. Fruiting pattern is solitary. The average fruit length, fruit diameter and fruit weight is 15 cm, 12.30 cm and 240 g, respectively. The variety is field tolerant against bacterial

wilt, moderately field resistant against little leaf disease and fruit and shoot borer. This variety is recommended for early-autumn season (July/August- February/March) in irrigated condition. The fruits mature within 75 days from the date of transplanting and the periodic harvesting can be continued up to 140-150 days. The average yield of this variety is 285.18 q/ha.

Cultivation

These two varieties grow under all soil types but well drained sandy loam soil rich in organic matter is the ideal for their cultivation. The land should be prepared well in advance with repeated ploughing to a fine tilth. Add well rotten organic manure preferably farmyard manure or compost @10-15 t/ha during final land preparation and level the land properly. These two varieties are generally transplanted in the main field from July to 1st week of August as irrigated crop. About 500 g seeds are sufficient for 1 ha planting. Before sowing, the seeds are to be treated with captan or thiram @3 g/kg of seeds. Four weeks old seedlings are to be transplanted in the main field at 75 cm spacing.



Fruits of Bidhan Super

Fertilizer application

Brinjal is a long duration crop and is a good feeder of macronutrients. The optimum fertilizer dose is 150:75:75 kg N: P₂O₅:K₂O/ha. 1/3rd of N, full dose of P₂O₅ and K₂O are to be applied as basal and 1/3rd of N is to be applied one month after transplanting followed by earthing up. Rest of the N is to be top dressed at 55-60 days after

Table 1. Average reaction against diseases and insect pest at different agro-climatic conditions of West Bengal

Variety	Bacterial wilt incidence (%)	Little leaf incidence (%)	Fruit and shoot borer infestation (%)
Bidhan Supreme	13.96 (MR)	6.98 (R)	21.20 (T)
Bidhan Super	22.46 (T)	13.40 (MR)	19.70 (MR)

R, Resistant; MR, Moderately resistant; T, Tolerant; Varieties were categorized as per standard rating scales.

Mean fruit yield (q/ha) of Bidhan Supreme over State and National trials

Mean fruit yield (q/ha) of State trials at three agro-climatic conditions (2008-09 to 2010-11)	Fruit yield (q/ha) of National trials			Mean fruit yield (q/ha) of National trials	Average fruit yield (q/ha)
	IET (2008-09)	AVT-I (2009-10)	AVT-II (2010-11)		
306.87	326.90	255.74	262.84	271.68	289.27

Mean fruit yield (q/ha) of Bidhan Super over State and National trials

Mean fruit yield (q/ha) of State trials at three agro-climatic conditions (2008-09 to 2010-11)	Fruit yield (q/ha) of National trials			Mean fruit yield (q/ha) of National trials	Average fruit yield (q/ha)
	IET (2011-12)	AVT-I (2012-13)	AVT-II (2013-14)		
294.75	311.04	279.86	267.61	275.62	285.18



Fruits of Bidhan Supreme

transplanting. Two foliar sprays of 0.5% ZnSO₄ and single spray of 0.15% CuSO₄ during flowering increase yield and quality of fruits.

Aftercare

Practice shallow inter cultivation after a few days of every irrigation to remove weeds and conserve soil moisture. About 3-4 hoeing and weeding are normally needed to check the weeds. A pre-planting treatment of pendimethalin @1.0 kg a.i./ha is effective. Brinjal being a shallow rooted crop needs irrigation at frequent interval. The crop requires sufficient amount of water throughout the season. During summer, apply irrigation at 4-5 days

interval and during winter at 20-25 days interval. About 100 to 110 cm of total water are needed for getting higher yield.

Plant protection measures

Brinjal is attacked by different diseases and insect pests. Although these two varieties, Bidhan Supreme and Bidhan Super, are somewhat field resistant/tolerant to different insect pests and diseases, some control measures are to be taken for getting higher yield and quality product. Spray the young seedlings with 0.2% chlorothalonil + 0.1% carbendazim/l to control damping off in the seed bed. Alternate spray with imidachloprid @ 3 ml/10 l and acetamiprid @ 0.15% is effective to control the vector population of little leaf disease and jassids. Spray the crop with copper oxychloride @ 0.3% to control *Phomopsis* blight disease. Nipping off of the withering shoots and picking up the bored fruits twice or thrice in a week and burying them deep into the soil, installation of pheromone trap in the field, and need based alternate spray with spinosad (0.15 ml/l) or flubendiamide @ 0.05% are effective to manage fruit and shoot borer.

Harvesting

Harvest the fruits when the fruits develop good colour, marketable size, still immature and tender. Generally, 20-25 days fruits after anthesis are optimally mature for harvest. Fruits are harvested with stalk at joint. Based on State and National trials over three years, the average yield of Bidhan Supreme is 289.27 q/ha and of Bidhan Super is 285.18 q/ha.

For further interaction please write to:

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