

Bush pepper cultivation – A remunerative hobby for rural women

ICAR-KVK, Mitraniketan has been promoting bush pepper cultivation in homesteads as a remunerative hobby for rural women since 2018. Trivandrum is an urban district in the state of Kerala, where cultivable land is fast getting converted for construction purposes and the labour charges are soaring. Against this back drop, bush pepper was introduced as a new generation spice crop which requires neither much space nor much labour for its successful cultivation.

DRIED black pepper commonly known as black gold is a spice which is used widely in Indian, Chinese and continental cuisines. It is very much preferred in culinary preparations for its typical hot flavour and is always in demand. Bush pepper cultivation makes possible the creative utilization of leisure time and family labour for supplementing the family income.

Interventions of ICAR-KVK, Mitraniketan

Over a period of 4 years, KVK has been able to provide 12,905 bush pepper plants from our nursery to 363 farmers. Pullampara *panchayat* of Trivandrum district can be cited as a noteworthy example for this. In its People's Plan Programme, bush pepper plants were made available to 100 rural women by the *panchayat*. KVK has been able to supply planting materials, trainings, bio-inputs and technical support for the project. Biocontrol agents such as *Trichoderma*, *Pseudomonas* and cassava based biopesticides such as NANMA, SREYA, etc are made available for ensuring good agriculture practices in the homestead production of bush pepper. Bush pepper cultivation has created a silent, but hot and spicy revolution in the homesteads of Trivandrum district.

Table 1. Year-wise distribution of bush pepper plants by KVK

Year	No. of plants	Farmers benefitted
2018-19	717	62
2019-20	5481	188
2020-21	1663	69
2021-22	5044	164
Total	12905	363

Planting material production

Bush pepper is a miniature form of black pepper vine that can be grown as a potted plant. Unlike black pepper



Bush pepper vine in pots

vines, bush pepper does not consume much space. Bush pepper can be grown anywhere, irrespective of the season and location. The planting material production of bush pepper is quite easy and does not require much skill.

Bush pepper is raised from the lateral branches of high yielding mother vines. One-year-old lateral branches with 3-5 nodes are collected and planted in the nursery. Prior to planting, all the leaves except the flag leaf are removed from the branches. The cuttings are treated with 0.2%



Copper Oxychloride (2 g/L water) solution for 30 minutes. A sharp slanting cut is made at the basal portion of the vine and the cut end is dipped in commercial formulations of rooting hormone to promote rooting. Alternatively, the cut ends are treated with 1000 ppm IBA solution (1 g IBA/L water) for 45 seconds. The cuttings are planted either in trenches or in polythene bags of 45 cm × 30 cm size and 200 gauge thickness, containing moist coir pith as rooting media. Three or four cuttings are planted in a polybag. While planting, make sure that the lower node of the cutting is inside the rooting media.

The trenches are covered with polythene sheet to maintain humid condition which would promote rooting. Polythene bag planted with the cuttings are kept in a mist chamber for rooting. In the absence of a mist chamber, the mouth of the polybag is to be secured tightly with a gunny rope to prevent the loss of moisture and kept in a shaded area in the nursery.

It takes about 40 to 50 days for the laterals to root. After the initiation of rooting, the mouth of the polybags is kept open for 3 to 4 days. The cuttings are then transplanted in smaller poly bags of 15 cm × 10 cm size filled with potting mixture. The transplanted cuttings are kept in partial shade for 1 to 2 months so as to obtain well-established plants.

Cultivation method

Bush pepper plants are grown in pots of 30-35 cm diameter or in grow bags filled with potting mixture and kept preferably under partial shade. Its bushy growth, shade tolerance, early and year round bearing habit, offers great scope for growing in terrace gardens, kitchen gardens and homesteads. Application of chemical fertilizers and plant protection chemicals is not at all recommended for bush pepper grown on terrace gardens or homestead gardens. Application of cow dung slurry or diluted slurry of a fermented mixture of fresh cow dung with neem cake and groundnut cake at fortnightly intervals would take care of the nutrient requirement of the plants.

Bush pepper starts yielding from the very first year onwards and continues to yield for 8-10 years. The berries are harvested when two or three berries in the stalk turn bright red. Yield can be obtained throughout the year since the flowering is not season bound. On an average 1 kg of pepper can be harvested annually from a bush pepper plant of 2 to 3 years old. Harvested black pepper berries are dried in sun for 3-5 days during which the weight is reduced to one third of its fresh weight.

Pest and disease management

Foot rot disease commonly known as quick wilt of pepper sometimes become a problem in bush pepper cultivation. *Trichoderma* multiplied in neem cake cow dung mixture is applied to the soil or to the potting mixture towards the prophylactic management of the disease. Sucking pests like thrips are found to feed on the tender leaves of bush pepper plants. The typical symptom of thrips infestation is the curling of leaf margins and formation of leaf galls along the leaf margin. Thrips attack is managed effectively by spraying with neem-based bio-pesticides right from the initial stages of infestation.

Economics

Dried black pepper fetches not less than ₹ 350/kg in the markets of Kerala. A rural woman who is able to maintain at least 50 bush pepper plants in her homestead, can harvest a minimum quantity of 40 kg black pepper. The recovery of dried black pepper is about 12 kg, which fetches an income of approximately ₹ 4000. Bush pepper cultivation has proved to be a remunerative hobby for the rural women of Trivandrum district.

For further interaction, please write to :

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