

Bush Pepper

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SUMMARY

Black pepper scientifically known as *Piper nigrum* (L.) coming under the Piperaceae family is one of the most important and earliest known spices produced and exported from India. The spice is commonly known as Kurumulaku, Nallamulaku, Kaali Mirch, Peppercorn etc. With its captivating flavour and multifaceted utility, it occupies a dominant position in international commodity market. The economic part is the dried mature berries. Its unparalleled demand and versatility have made it one among the largest commodities exported from India and earns highest amount of foreign exchange than any other spice crop. Because of all these black pepper is known as “King of spices” and “Black gold”.

INTRODUCTION

Black pepper is a stout and woody climbing plant which requires a standard or support for its cultivation. The plant can grow upto a height of about 8-10 m or more in natural habit which makes it difficult for management in a household condition especially in urban and semi urban areas. Moreover, the cultural practices and harvesting makes it more difficult to handle in a limited space. Thus a miniature form of black pepper was introduced known as bush pepper. From a climbing plant it was converted to a bushy plant, which is easy to handle. Growing of black pepper plant in the form of a bush is bush pepper. It does not consume much space and does not require long standards. This make it suitable to grow anywhere even in terraces, flats or in kitchen gardens where space is a constraint. Thus, irrespective of season or location we can grow bush pepper. Moreover, being a costly spice, the domestic requirement of each household can also be easily fulfilled.



Source: <https://ciari.icar.gov.in>

Propagating material

In black pepper, we use the rooted cuttings from runners shoots whereas, in bush pepper production we use the lateral branches which are also known as the fruiting branches. These will produce more fruiting branches which will give pepper throughout the year. The advantage of using the lateral branch is that it will help to maintain a bushy stature. But the disadvantage is that, since it does not have adventitious roots, rooting of these cuttings is a major problem. Indian Institute of Spices Research, Kozhikode has developed an easy method of bush pepper production. Sreekara, Subhakar, IISR-Thevam, Panniyur 1 to 9, Karimunda, Kuthiravally are some of the varieties suggested by IISR which is suitable for bush pepper production.

Planting material production

Select a high yielding, disease resistance, vigorously growing motherplant with good number of fruiting branches. Healthy one year old lateral branches or fruiting branches are selected for propagation. Select two to four node semi hard wood lateral branches. All the leaves except the flag leaf are removed. These laterals are dipped in 0.2% copper oxy chloride solution for 20-30 minutes. These are given a slanting cut at about 2 cm below the nodal region and are dipped in 1000 ppm IBA for 45 seconds for easy rooting. These treated cuttings are planted in nursery bed or polythene bags filled with potting mixture. 3-4 cuttings can be planted in a bag of potting mixture containing coirpith. Make sure that atleast one node should be inside the potting mixture. The mouth of the bags is to be tightly tied with a thread to avoid moisture loss from the bag and should be hanged in shade. This bag acts as a humid chamber for better rooting and survival. In 35-50 days these laterals produce 5-6 healthy roots. When the cuttings have rooted, the mouths of the polybags need to be kept open for three to four days. Then the cutting may be carefully taken out and planted in poly bags with nursery mixture containing soil, sand and FYM in equal proportion. The transplanted cuttings may be kept in partial shade for one to two months in order to obtain well established plants (IISR, 2019).

Planting and manuring

Well rooted plants are used for field planting. The rooted cuttings can be planted in pits (if land space available) or in pots of size 30 cm diameter or in polybags, *i.e.* it can be raised as potted bushes or field grown bushes. Fill the pots or bags with soil, sand and FYM in equal proportion and plant the rooted cuttings. Irrigate the plants and it has to be kept preferably under partial shade. Usually, organic manuring is done for bush pepper. Cowdung slurry can be applied at fortnightly intervals. Vermicompost or FYM can be given @ 100 g per pot at six month interval. Groundnut cake (15g) or neem cake (30 g) can be given at bimonthly intervals. For enhancing growth of bush pepper, 2% solution of vermi wash or 0.5% solution of micro nutrient mixture can be given as foliar spray at monthly intervals. If needed, inorganic fertilizers like urea (3 g), super phosphate (3 g) and muriate of potash (3g) or 5g of NPK mixture (18:18:18) can be given at bimonthly intervals.

Maintenance and after care of cuttings

These cuttings grow like a bush. It will produce more number of fruiting branches. We have to maintain the bushy stature of the plant by regular pruning of the hanging shoots. Sometimes they produce vertical or orthotropic shoots which also have to be pruned. As quoted by Bhattachayra *et al.* (2018), controlling the spike behaviour by pruning off the spikes will help to revitalize bush pepper and also speed up the vigour. The potted plants are to be kept preferably under partial shade. Proper irrigation is very essential which enhances yield and quality in bush pepper. But excess irrigation should be avoided as it favours fungal growth. In order to ensure proper growth of the bush, re-potting has to be carried out after every two years.



Source : Keralakarshakan

Plant protection

Fungal disease like Foot Rot caused by *Phytophthora* is a common disease in bush pepper. Timely organic plant protection practises itself will help in controlling these diseases. Basal application of *Trichoderma* enriched with cowdung can be given as a preventive measure. *Pseudomonas* (2g/l) can also be sprayed for preventing the outbreak of this disease. Its better to give 25-50 g of *Trichoderma* or *Pseudomonas* as soil

application along with the FYM or compost at six monthly intervals. If needed, bordeaux mixture 1% can be sprayed or copper oxy chloride 0.2% can be drenched against fungal diseases. Neem based pesticides can be applied against sucking pests.

Harvesting and yield

Unlike pepper, harvesting is very easy in bush pepper. The plant start flowering in the same year of planting and continue to flower around the year. If properly managed we can maintain a bush pepper for about 8-10 years. Flowering is not bound to season. So, we get continuous yield all throughout the year. On an average, a bush pepper plant will yield 1 kg fresh green pepper per year during the second year. Yield increases considerably during the subsequent years and around 2-3 kg can be harvested during 4th year of planting. The day-to-day requirement of a household can be easily met from well grown bush pepper plants.

CONCLUSION

Bush pepper is a miniature form of black pepper vine that can be grown as a potted plant. The compact growing nature, continuous bearing capacity and minimal management practises of bush pepper make it suitable as a perfect crop for growing in urban areas where space is a constraint. Besides it offers a chemical free and luxuriant harvest of flavourful black pepper all throughout the year.

REFERENCES

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