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Lakshmana
Associate Director of Research, Department of Horticulture, ZAHRS, Brahmavra, UAHS, Shivamogga UAHS, Shivamogga, Karnataka, India

Sandesh HJ
Department of Horticulture, ZAHRS, Brahmavra, UAHS, Shivamogga UAHS, Shivamogga, Karnataka, India

Seema M
Department of Plant Pathology, ZAHRS, Brahmavra, UAHS, Shivamogga UAHS, Shivamogga, Karnataka, India

Shankar M
Department of Agricultural Engineering ZAHRS, Brahmavra, UAHS, Shivamogga UAHS, Shivamogga, Karnataka, India

Corresponding Author:
Lakshmana
Associate Director of Research, Department of Horticulture, ZAHRS, Brahmavra, UAHS, Shivamogga UAHS, Shivamogga, Karnataka, India

Impact of different verities of black pepper monoculture using Glyricidia as standard

Lakshmana, Sandesh HJ, Seema M and Shankar M

Abstract
Black pepper (*Piper nigrum*) is a flowering vine in the family Piperaceae, cultivated for its fruit. Black pepper is native to Kerala in South India, and is extensively cultivated there and elsewhere and Vietnam is the world's largest producer and exporter of pepper. Overall production and productivity of black pepper is comparatively low in India as it is not grown as a pure crop in tropical regions. From the above study it is inferred that the black pepper variety Shubhakara performs comparatively better than the other variety selected in terms of growth parameters like Plant height, Number of branches, Number of shoots and survivability percentage. It can be concluded that the variety Shubhakra can be selected in monoculture of Black pepper in coastal region of Karnataka using Glyricidia as a standard.

Keywords: Berries, piperine, monoculture, Standard

Introduction
India is known as land of spices, major producer and consumer of spices in the world. More than seventy five species of spices are known to be grown in India. Among the spices black pepper is most important spice crop know as King of spices and Black gold. Black pepper botanically known as *Piper nigrum* belongs to Piperaceae family grown for its berries since the time immemorial.

Mainly Indian black pepper is preferred in the international market due to its proper combination of pleasant flavour, taste, piperine content and essential oil (Sastry, 1982 and Dutta, 1984) [6, 4]. Black pepper is not only used as a condiment but also, widely used in culinary preparations, food processing, and perfumery and as an important ingredient in most of the Ayurvedic medicine preparations (Okaisabor, 1971) [5].

In India black pepper is being cultivated in Kerala, Karnataka and to a lesser extent, in Maharashtra, Andhra Pradesh, Tamil Nadu and North Eastern regions (Anonymous, 2005) [3]. In Karnataka, black pepper is cultivated mainly cultivated in Kodagu, Uttara Kannada, Dakshina Kannada, Shimoga and Chikmagalore districts as mixed crop.

Overall production and productivity of black pepper is comparatively low in India as it is not grown as a pure crop and majority of black pepper plantations were intercropped with Arecanut, Coconut, Coffee plantation using Silver oak, Casurina, Jack fruit, Erythrina etc. as standards. Keeping above points in view the current study has been conducted to know the Impact of different verities of black pepper monoculture using Glyricidia as Standard at ZAHRS, Brahmavara.

Materials and Methods
The research has been conducted at ZAHRS, Brahmvara, Udupi. to k now the Impact of different verities of black pepper on monocultutre. Land is prepared by removing weeds, stone, pebbles and clods are broken then raised bed of 75 cm width and 15 cm height were constructed. On this bed Glyricidia cuttings of length 8 to 10 ft tall was planted at a spacing of 1.8 x 1.8 m and nourished.

Once after the establishment of Glyricidia different verities of black pepper which *viz*., Tekkan, Paniyur 1, Shubhakara, Shakti, Tevum were planted about 45 cm away and trained to standard Glyricidia. Intercultural operations were carried out on regular basis as per the package of practises and the standards were pruned to manage shade.

Observations like Plant height, Number of branches, number of runners and survivability percentage were recorded analysed statistically.

Table 1: Observations of monoculture black pepper trained to Glyricidia.

Treatments	Plant height (cm)	No. Of Branches	No. Of runner shoots	Per cent survivability (%)
T1	126.4	2	2.8	43
T2	265.2	5.8	5.2	70
T3	331.6	7.6	8.6	87
T4	190.4	4.8	2.6	61
T5	179.8	2.4	3.2	79
SE(m)	3.3	0.32	0.37	1.50
CD	10.2	0.98	1.12	4.53

T1. Tekkan, T2. Paniyur 1, T3. Shubhakara, T4. Shakti, T5. Tevum

Results and Discussion

From the above Table it is seen that the variety Shubhakar is found to perform better in all the terms of growth parameters. it is found that plant height 331.6 cm, and number of branches (7.6), Number of Runner shoots (8.6) and maximum survivability percentage of (87%) is recorded in Shubhakara variety followed by Paniyur 2 were plant height (265.2 cm) Number of lateral branches (5.8), Number of runner shoots (5.2), but second highest survivability percentage is recorded in Tevum variety 78 per cent. Low growth parameter and survivability percentage is recorded in Tekkan variety.

Conclusion

From the above study it is infered that the black pepper variety Shubhakara performs comparatively better than the other variety selected in terms of growth parameters like Plant height, Number of branches, Number of shoots and survivability percentage. It can be concluded that the variety Shubhakra can be selected in monoculture of Black pepper in coastal region of Karnataka using Glyricidia as a standard.

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