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Constraints and suggestions of black pepper growers in Karnataka: An empirical study

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Abstract

The present study was conducted in the major pepper-growing areas of Karnataka. Taluks with predominant pepper cultivation were purposively selected for the study, and a total of 120 pepper growers were selected as respondents. Primary data were collected through personal interviews using an ex-post facto structured interview schedule, and were analysed using frequency, percentage, mean and standard deviation. The major constraints reported by the respondents were non-availability of pest- and disease-resistant varieties (76.66%), fluctuations in prices (72.50%), increased labour wages (64.16%), high cost of inputs (59.16%), lack of timely advisory services (56.66%), poor transport and storage facilities (53.33%), and erratic weather conditions (45.83%). The major suggestions offered by the respondents to overcome these constraints were development and supply of disease-resistant varieties (72.50%), price control by the Spice Board (71.66%), improvement of storage and transport facilities (60.00%), and timely advisory services (56.66%).

Keywords: Pepper growers, constraints, suggestions, extension services, pepper cultivation

Introduction

Black pepper (*Piper nigrum* L.) is one of the most important and ancient spice crops belonging to the family Piperaceae. It is popularly known as the “King of Spices” because of its widespread use, distinctive flavour and economic importance. The dried berries are extensively used as a condiment and spice in food preparations, pickles, sauces and various processed food products. Pepper also possesses several bioactive compounds, particularly piperine, which has contributed to its importance in the pharmaceutical, nutraceutical and food-processing industries.

Black pepper has been cultivated in India since ancient times and has played an important role in the country's spice trade. India is one of the major producers of black pepper and is also an important exporter in the international spice market. Pepper is predominantly cultivated in the humid tropical regions of India, particularly along the Western Ghats, where the climatic conditions are favourable for its growth. The major pepper-producing states include Karnataka, Kerala, Tamil Nadu, Andhra Pradesh and Maharashtra, besides the North-Eastern region.

Karnataka is one of the leading pepper-producing states in India, with cultivation concentrated mainly in the hilly and high-rainfall regions. In Karnataka, black pepper is predominantly grown in districts such as Kodagu, Chikkamagaluru, often as an intercrop in arecanut and coconut gardens. The crop provides an important source of income and livelihood to small and marginal farmers as well

as plantation growers.

India produces pepper for both domestic consumption and export. Indian black pepper is marketed in several forms, including whole dried pepper, powdered pepper, pepper oil and oleoresin. Indian pepper is exported to several countries, including the United States, Germany, the United Kingdom, Vietnam, the Netherlands, the United Arab Emirates and other international markets. The crop therefore has considerable significance in terms of farmers' income, employment generation, value addition and foreign exchange earnings.

Among the plantation and spice crops, black pepper occupies an important position in India's agricultural economy. However, pepper growers face several production and marketing-related problems, including high cost of labour and inputs, incidence of pests and diseases, climatic variability, fluctuations in market prices, inadequate availability of quality planting material, and difficulties in obtaining timely technical information (Rakshitha, 2022) [3]. Understanding the constraints faced by pepper growers and the suggestions provided by them is therefore essential for developing appropriate extension strategies, improving productivity and strengthening the overall sustainability and profitability of pepper cultivation.

Materials and Methods

The study was based on primary data collected from the selected major pepper-growing areas of the study area. The

study was purposively conducted in selected taluks where pepper cultivation is predominant of Chikkamagaluru and Kodagu districts. A list of pepper growers was prepared for each selected taluk, from which a final sample of 120 pepper growers was drawn using a simple random sampling procedure.

An interview schedule was prepared based on the specific objectives of the study. It was pre-tested and suitably modified before being administered for final data collection. Primary data were collected through the personal interview method, and were systematically tabulated and analysed

using appropriate statistical tools, particularly frequency and percentage, to assess the constraints faced by pepper growers and the suggestions offered by them for overcoming these constraints.

Results and Discussion Constraints faced by the pepper growers

The information regarding the constraints faced by the respondents was collected, tabulated, analyzed and presented in the Table. 1

Table 1: Constraints faced by pepper growers n=120

Sl. No.	Constraints	Frequency	Percentage	Rank
1	Non availability of pest and diseases resistant varieties	92	76.66	I
2	Fluctuations of prices	87	72.50	II
3	Increased labour wages	77	64.16	III
4	High cost of inputs	71	59.16	IV
5	Lack of timely advisory services	68	56.66	V
6	Poor transport and storage facilities	64	53.33	VI
7	Erratic weather conditions	55	45.83	VII

A constraint refers to a situation or circumstance that impedes or restricts the activities of an individual. In this study, constraints were operationalised as the difficulties experienced by the respondents in carrying out their day-to-day operations related to pepper cultivation. As shown in Table 1, non-availability of pest- and disease-resistant varieties was the foremost constraint, reported by 76.66 per cent of the respondents and ranked first. This finding is supported by Kandiannan *et al.* (2020) ^[2], who identified the non-availability of quality planting material, particularly improved varieties, as an important production constraint in spice crops. The importance of disease management in black pepper cultivation is further supported by Shivakumar *et al.* (2022) ^[5], who reported foot rot disease as a significant constraint in Karnataka.

Fluctuations in prices, reported by 72.50 per cent of the respondents, was ranked second; similar price-related constraints in black pepper cultivation have been reported by Ganapathy *et al.* (2014) ^[1]. Increased labour wages, reported

by 64.16 per cent of the respondents, was ranked third, followed by the high cost of inputs (59.16%, rank IV). Lack of timely advisory services was reported by 56.66 per cent of the respondents and ranked fifth; a similar production problem among black pepper growers has been reported by Rejula *et al.* (2016) ^[4]. Poor transport and storage facilities was ranked sixth (53.33%); comparable constraints in the black pepper value chain have been reported by Ganapathy *et al.* (2014) ^[1] in Karnataka. Erratic weather conditions, reported by 45.83 per cent of the respondents, was ranked seventh.

Suggestions given by the pepper growers to overcome constraints

The pepper growers identified several measure for addressing the major constraints faced in pepper cultivation and they are sought to render to the government for the development of their pepper production enterprises.

Table 2: Suggestions given by the pepper growers to overcome constraints

Sl. No.	Suggestions	Frequency	Percentage	Rank
1	Development and supply of disease resistant varieties	87	72.50	I
2	Price control by spice board	86	71.66	II
3	Improvement of storage and transport	72	60.00	III
4	Timely advisory services	68	56.66	IV

As shown in Table 2, development and supply of disease-resistant varieties was the foremost suggestion, offered by 72.50 per cent of the respondents and ranked first. Price control by the Spice Board was recommended by 71.66 per cent of the respondents and ranked second. Improvement of storage and transport facilities was suggested by 60.00 per cent of the respondents and ranked third, while timely advisory services from government institutions was suggested by 56.66 per cent of the respondents and ranked fourth.

Conclusion

The study revealed that the majority of the respondents faced

difficulties in the control and management of pests and diseases. Extension agencies such as Krishi Vigyan Kendras, non-governmental organisations and the Agricultural Technology Management Agency should therefore take the lead in organising training programmes, promoting the development of resistant varieties, facilitating price-related interventions, improving storage and transport facilities, and providing timely advisory services. Targeted training programmes for rural youth and farmers would further help build capacity for better pepper-growing practices, thereby strengthening India's position as one of the leading spice hubs of the world.

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