



International Journal of Research in Agronomy

E-ISSN: 2618-0618
P-ISSN: 2618-060X
© Agronomy
NAAS Rating (2026): 5.20
www.agronomyjournals.com
2026; SP-9(9): 194-198
Received: 02-06-2026
Accepted: 08-07-2026

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Marketing behavior of pepper growers

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DOI: <https://www.doi.org/10.33545/2618060X.2026.v9.i9Sc.6538>

Abstract

Black pepper (*Piper nigrum* L.) is an important commercial spice crop cultivated widely in the humid and high-rainfall regions of India, providing a significant source of income to small and medium-scale growers. The marketing behaviour of pepper growers is influenced by several personal, socio-economic and psychological factors, as well as by access to market information, marketing knowledge, market infrastructure and prevailing price conditions. The present study was undertaken to assess the marketing behaviour of pepper growers. Primary data were collected from selected pepper growers using a structured interview schedule with suitable modifications. Appropriate statistical tools such as frequency, percentage, mean and other relevant measures were employed for analysing the data. The study revealed that pepper growers obtained market information from various sources, including newspaper, television, market agents and other information sources. A considerable proportion of the respondents revealed reasons for selling at particular period due to lack of storage. Sale to the local traders about 80.83 per cent, and majority of respondents sold at village, and 55.83 per cent of the respondent sold there produce after a month of harvesting. Further the findings indicated that characteristics such as education, market orientation, annual income, farming experience, economic motivation were associated with marketing behaviour with significance at 5 percent. In contrast, variables such as extension participation, cosmopolitaness, mass media exposure showed significant associations at 1 percent with marketing behaviour of pepper growers. Therefore, strengthening direct marketing and farmer-oriented market linkages for improving the efficiency of pepper marketing.

Keywords: Pepper growers, marketing behaviour, marketing knowledge, market information, market channels, black pepper

Introduction

Black pepper (*Piper nigrum* L.) has earned the title “King of Spices” for good reason: few crops match its combination of economic weight, cultural history and sheer reach across domestic and export markets. India continues to be one of the world’s leading producers and exporters of the crop, and the bulk of that production still rests in the hands of small and medium growers concentrated in the humid, high-rainfall belt of the Western Ghats. Karnataka, Kerala and Tamil Nadu together account for most of the country’s pepper output, with Karnataka having grown into a particularly important producer in recent years (Spices Board, 2021) ^[16]. Within the state, cultivation is centred in Kodagu and Chikkamagaluru districts, where pepper vines are typically trained up standards alongside coffee, arecanut and other plantation crops. The agro-climatic advantages and long-standing plantation systems of these two districts have allowed pepper cultivation, and the marketing activity built around it, to develop into a mainstay of household income and rural livelihood.

Yet growing a good crop is only half the battle. How much a grower actually earns from pepper depends as much on marketing decisions as on yield. Marketing behaviour, in this sense, covers a fairly wide territory: which market a grower chooses, which channel they sell through, when and where they decide to sell, how much they know about prevailing prices, whether they grade and store their produce properly, how they handle transport, and how they negotiate with the traders and agents who stand between farm and final buyer (Chengappa, 2017; Indhumathi *et al.*, 2021) ^[4, 6]. Get these decisions right and a grower can trim avoidable costs and pocket a noticeably better price; get them wrong, and even a good harvest can turn into a disappointing

return. In practice, pepper moves off the farm through several overlapping channels, village-level traders, commission agents, wholesalers, processors, regulated markets, and, more recently, farmer producer organisations. Ganpathy *et al.* (2014) ^[5], studying the pepper value chain across Kodagu, Hassan and Chikkamagaluru, found that produce typically passes through multiple layers of intermediaries before it reaches a processor or final market, and that the margins along the way tend to favour traders and wholesalers far more than the growers themselves. Yogesh *et al.* (2017) ^[18], looking specifically at the pepper economy of Kodagu district, arrived at a similar conclusion: better post-harvest handling, more value addition, and stronger institutional backing for small and medium growers are needed if growers are to hold their own in this chain.

None of this happens in a stable environment. Pepper prices swing sharply from season to season, quality and demand vary, and growers remain heavily dependent on middlemen for both market access and information, a combination that leaves many of them with limited leverage at the point of sale (Indhumathi *et al.*, 2021; Kumar *et al.*, 2018; Phukan *et al.*, 2018) ^[6, 9, 12]. Add to this the familiar list of on-ground constraints, patchy market information, high transport costs, inadequate storage and grading infrastructure, and few real opportunities to sell directly, and it becomes clear why bargaining power so often tilts away from the grower. These are not problems unique to pepper. Similar patterns of middlemen dependence, distant markets and thin information flows show up across other commercial and horticultural crops grown in India, from pomegranate to paddy to garden pea (Monika *et al.*, 2022; Thakur *et al.*, 2023; Naik and Mohan, 2024) ^[10, 17, 11], which suggests the difficulties pepper growers face are really a local instance of a much wider problem in Indian agricultural marketing. The COVID-19 pandemic made this fragility especially visible. Saju and Ramadevi (2023) ^[14], studying black pepper growers in Kerala through the pandemic years, documented how labour shortages, restricted market access and disrupted channel functioning made it genuinely difficult for growers to sell their produce at a reasonable price, a reminder of how thin the margin for error really is in this system.

A good deal of this comes down to information. Knowing where, when and to whom to sell is only possible if a grower has timely, reliable market information in the first place (Abraham and Arunachalam, 2021; Phukan *et al.*, 2018; Chengappa, 2017) ^[1, 12, 4]. Beyond prices, awareness of grading and quality norms, available market channels, storage options, value-addition possibilities and government marketing schemes all shape how a grower ultimately behaves in the market. Digital platforms, market portals and institutional information sources have expanded considerably in recent years and, in principle, should have narrowed this information gap. Whether growers are actually able to make use of these resources, however, depends heavily on their own socio-economic circumstances, the resources at their disposal, and how proactively they seek out information in the first place. Strengthening market infrastructure, widening access to reliable market information, encouraging farmer producer organisations, and supporting both direct and collective marketing all seem like reasonable places to start if the goal is a more efficient pepper market and better returns for the people actually growing the crop.

Kodagu and Chikkamagaluru, as two of the country's most significant pepper-growing districts, offer a natural setting in which to look at these questions closely. Understanding how growers there actually market their produce, which channels they lean on, where they get their market information, and what

drives their choices, can point towards practical ways of improving market access, sharpening extension support, and ultimately raising the returns growers see from their crop (Indhumathi *et al.*, 2021; Phukan *et al.*, 2018) ^[6, 12]. Given how important black pepper remains as a commercial crop, and given how persistent its marketing problems have proven to be, there is a real case for studying grower marketing behaviour in a systematic way, not just describing it, but also examining how it relates to the personal, socio-economic and psychological characteristics of the growers themselves. That is the gap this study sets out to address. With this background in mind, the present study was designed around the following objectives to study the marketing behaviour of black pepper growers and examine the relationship between the profile characteristics of black pepper growers and their marketing behaviour.

Materials and Methods

The study was conducted during 2021-22 in two major pepper-growing districts of Karnataka state, namely, Chikkamagaluru and Kodagu. These two districts were purposively selected based on maximum area and production of black pepper in Karnataka state. Out of which 4 taluks were selected (*viz.*, Mudigere, Chikkamagaluru, Virajpet, Ponnampet) and a sample size of 120 farmers in afore-mentioned taluks were the population of this study. The data were collected by contacting pepper growers personally with the help of structured interview schedule.

A "Ex-post-facto research design" interview schedule for marketing behaviour dimensions were developed in consultation with the social scientists with modifications suggested by experts. The statements used to analyze marketing behaviour of farmers were as follows: when do you sell the produce, reasons for selling at a particular period/ time, whom do you sell the produce, where do you sell the produce, reasons for selling at a particular place. The above statement responses were recorded from the respondents. The collected data were tabulated and analysed using suitable statistical tools to understand marketing behavior and to assess the association between selected independent variables on the marketing behaviour of pepper grower.

Results and Discussion

Source of marketing information

The market information is an important facilitating function in a marketing system which can manage timely delivery of product, reduce marketing costs, increase production and productivity and make the market healthy. Table 1 revealed that most of the farmers acquired market information from Television (60.83%) followed by mobile phone call (59.16%) (Shukla *et al.*, 2021) ^[15] and personal visit to market (58.33%). However, farmer also collected market related information from other sources like newspaper (34.16%), marketing agency (31.66%) (Jeevapriya *et al.*, 2021) ^[7], (Bindu, 1997) ^[3] and (Kumar, 1992) ^[8].

Table 1: Source of marketing information (n=120)

Sl. No	Information source	Frequency	Percentage
1	Newspapers	41	34.16
2	Television	73	60.83
3	Mobile phone call	71	59.16
4	Market agents	38	31.66
5	Personally visited to market	70	58.33

Marketing Behaviour of Pepper Growers

Table 2 indicated that reasons for selling of pepper at a

particular time or period, financial needs were the most frequently reported reason for selling the produce at particular period (75.83%). This clearly reflects the existence of immediate financial demands may have led to sale on particular time. This factor might forces them to sell at a particular period / time. Lack of storage facility was also expressed as another reason for immediate sale (54.16%).

The results also indicated that, 80.83 per cent of the respondents sold their produce to local traders, the reason might be due to meet out immediate cash requirements and also the probable reason might be due to the relationship with village merchants and convenience to sell their produce (Anusha and Padma, 2022) [2]. And it can be seen that majority (75.00%) of respondents expressed that they sold their produce with in the village as the farmers had a good relationship with the merchants and could easily attain the financial requirements with in the village itself which might also be a probable reason followed by (59.16%) sell their produce in city.

Table 2: Distribution of respondents according to the marketing behaviour (n=120)

Sl. No.	Category	Response	
		F	%
A	Reasons for selling at a particular period /time		
1	Lack of storage facility	65	54.16
2	Quality deterioration	36	30.00
3	Financial needs	91	75.83
B	Whom do you sale the produce		
1	Local traders	97	80.83
2	Middle men	45	37.50
C	Place of sale		
1	At village	90	75.00
2	City	71	59.16
3	Other than district place	47	39.16
D	Reasons for selling at a particular place		
1	Market was very near to place	43	35.83
2	The better transport facilities available to the market	41	34.15
3	Better prices were available in the market	25	20.83
E	Time of scale		
1	Immediately after harvest	43	35.83
2	After month of harvesting	67	55.83
3	When in need of cash	56	46.66
4	When in convenient	73	60.83

The data in Table 2 also reveals that proximity of the market was the most frequently reported reason for selecting the place of sale (35.83%), followed by better transport facilities available to the market (34.15%), and better prices available in the market (20.83%) which also might be due to the relationship between the merchants and the convenience to sell their produce. And the results in Table 2 depicts that 60.83 per cent of the growers' sale their produce when in convenient for sale of produce or requirement. About 55.83 per cent of the growers reported that, they sell the produce after month of harvesting, because of pepper needs to be dried before sale (Phukan *et al.*, 2018) [13]. A total of 46.66 per cent of the respondents reported selling there produce when they were in need of cash. A total of 35.83 per cent sell their produce immediately after harvest to the merchants.

Personal characteristics of pepper growers

The personal characteristics of pepper growers were studied with reference to age, education, farming experience and Cosmopoliteness. The results have been presented in Table 3.

Table 3: Distribution of pepper growers according to their personal characteristics (n=120)

Sl. No.	Personal characteristics of pepper growers	Frequency	Percentage
1.	Age (years)		
a.	Young (less than 35 years)	9	7.50
b.	Middle (35 to 55 years)	91	75.83
c.	High (more than 55 years)	20	16.67
2.	Education		
a.	Illiterate	2	1.67
b.	Primary (upto 4 th standard)	11	9.17
c.	Middle school (5 th to 7 th standard)	40	33.33
d.	High school (8 th to 10 th standard)	64	53.33
e.	P.U.C/ Diploma (11 th to 12 th standard)	2	1.67
f.	Graduation (degree)	1	0.83
3.	Farming experience (years)		
a.	Low	30	25.00
b.	Medium	47	39.17
c.	High	43	35.83
Mean – 2.10 SD – 0.77			
4.	Cosmopoliteness		
a.	Low	30	25
b.	Medium	62	51.67
c.	High	28	23.33
Mean – 1.90 SD – 0.69			

The data presented in Table 3 revealed that majority (75.83%) of the pepper growers were belong to the middle age group (35 to 55 years) in line with Navyashree (2016), more than one half (53.33%) of pepper growers had high school education, in line with Srikant (2018) and majority (39.17%) pepper growers had medium farming experience and more than half (51.67%) of pepper growers had medium level of cosmopoliteness.

Socio economic characteristics of pepper growers

The socio-economic characteristics of pepper growers were studied with reference to annual income, land holding. The results have been presented in Table 4.

Table 4: Distribution of pepper growers according to their Socio economic characteristics of pepper growers (n=120)

Sl. No.	Socio economic characteristics	Frequency	Percentage
1.	Annual Income		
a.	Low	34	28.33
b.	Medium	68	56.67
c.	High	18	15.00
2.	Land holding		
a.	Marginal	16	13.33
b.	Small	43	35.83
c.	Medium	51	42.50
d.	big	10	8.34

The data presented in Table 4 revealed that 56.67% of pepper growers fall under annual income category and 42.50 percent of pepper growers fall under medium size land holding category.

Psychological characteristics of pepper growers

The Psychological characteristics of pepper growers were studied with reference to economic motivation and market orientation. The results have been presented in Table 5.

Table 5: Distribution of pepper growers according to their psychological characteristics (n=120)

Sl. No.	Socio economic characteristics	Frequency	Percentage
1.	Economic motivation		
a.	Low	22	18.33
b.	Medium	43	35.83
c.	High	55	45.84
Mean – 2.27 SD – 0.75			
2.	Market orientation		
a.	Low	39	32.50
b.	Medium	33	27.50
c.	High	48	40.00
Mean – 2.07 SD – 0.85			

The data presented in Table 5 revealed that 45.84 percent of pepper growers fall under high economic motivation and 40 percent of pepper growers fall under high market orientation category.

Social characteristics of pepper growers

The Social characteristics of pepper growers were studied with reference to mass media exposure and extension participation. The results have been presented in Table 6.

Table 6: Distribution of pepper growers according to their social characteristics (n=120)

Sl. No.	Social characteristics	Frequency	Percentage
1.	Mass media exposure		
a.	Low	26	21.67
b.	Medium	57	47.50
c.	High	37	30.83
Mean – 2.09 SD – 0.72			
2.	Extension participation		
a.	Low	30	25.00
b.	Medium	57	47.50
c.	High	33	27.50
Mean – 2.02 SD – 0.72			

The data presented in Table 6 revealed that 47.50 percent of pepper growers had medium level of mass media exposure and extension participation category respectively.

Relationship between personal, socio-economic, social and psychological characteristics with marketing behaviour of pepper growers

Chi square statistic gives an idea of significance relationship between two variables. The relationship between personal, socio-economic, social and psychological characteristics and marketing behaviour of pepper growers was assessed and furnished in Table 7.

Table 7: Relationship between personal, socio-economic, social and psychological characteristics with marketing behaviour of pepper growers (n=120)

Sl. No.	Attributes	p-value	Chi square statistic
1.	Age	0.099	7.796 ^{NS}
2.	Education	0.047	18.530*
3.	Land holding	0.642	2.515 ^{NS}
4.	Farming experience	0.013	12.660*
5.	Annual income	0.048	9.603*
6.	Economic motivation	0.044	9.801*
7.	Market orientation	0.037	10.186*
8.	Extension participation	0.007	14.181**
9.	Cosmopoliteness	0.005	14.995**
10.	Mass media exposure	0.003	15.863**

(* significant at 5% level of significance, ** significant at 1% level of significance, NS- non significant)

Therefore, it can be interpreted from the table 7 that, the age and land holding had non-significant association with marketing behaviour. Similarly, characteristics, viz. education, annual income, farming experience, economic motivation, and market orientation had 5 percent significant association with marketing behaviour. Extension participation, cosmopoliteness and mass media exposure had significance at 1 percent significant association with marketing behaviour (Chengappa, 2017; Maratha *et al.*, 2018; Phukan *et al.*, 2018) [4, 13].

Conclusion

The study revealed that the marketing behaviour observed among the respondents were characterized mainly by convenience and accessibility of markets. A majority of the respondents (75.83%) sold pepper during a particular period mainly due to financial needs, followed by lack of storage facilities (54.16%) and quality deterioration (30.00%). Regarding the buyers, most of the growers (80.83%) sold their produce to local traders, while 37.50 per cent sold to middlemen. The village was the most preferred place of sale (75.00%), followed by the city (59.16%). The main reasons for selecting a particular place were proximity of the market (35.83%) and better transport facilities (34.15%), while 20.83 per cent preferred markets offering better prices.

With respect to the time of sale, 60.83 per cent of the growers sold their produce when it was convenient, followed by 55.83 per cent who sold after one month of harvesting and 46.66 per cent who sold when they were in need of cash. Television (60.83%) and mobile phone calls (59.16%) were the major sources of market information, followed by personal visits to the market (58.33%). Thus, improving access to timely market information, storage and transportation facilities, and strengthening direct marketing linkages with better-paying buyers can help pepper growers to make better marketing decisions and improve their returns.

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