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Information seeking behaviour of pepper growers with respect to information acquisition

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Abstract

Information plays pivotal in agricultural development. This study investigated the nature and extent of available agricultural information sources and information seeking behaviour of pepper growers. To conduct this study, questionnaire method was used and the population of the study was the pepper growers. The sample of 120 farmers was selected during the year 2021-22 by using convenient sampling technique. Furthermore, these farmers were selected from Chikkamagaluru and Kodagu districts to ensure the representation from parts of the pepper growing province. The responses of the farmers were collected in the form of questionnaire and researcher used adopted statistic tool. Results revealed that majority 49.17 per cent of the pepper growers belonged to medium information seeking behaviour category. Among interpersonal sources, friends were the most frequently consulted source, with 65.84 per cent of respondents reporting regular consultation. Among institutional sources, Assistant Agriculture Officer or Assistant Horticulture Officer was the most frequently consulted source (64.17%). Further, the study assessed the relationship between selected characteristics of the growers and information seeking behavior and the findings indicated that characteristics such as education, age, extension participation, market orientation, economic motivation and cosmopolitanism was found significant with information seeking behaviour at 5 percent level variables such as farming experience, mass media exposure showed significant associations at 1 percent level with information seeking behaviour, whereas land holding and annual income were not significantly associated. It was also found that numerous types of information sources such as mass media and ICT sources were available to disseminate information related to farmer's needs.

Keywords: Farmers, agriculture, communication, information, media, pepper growers

Introduction

The present-day agricultural scenario is undergoing continuous changes with technological advancement, globalization and increasing emphasis on food security and sustainable agricultural development. In this context, timely and relevant information plays a vital role in agricultural development. Information is considered an important resource, much like land, labour and capital, as it enhances knowledge, reduces uncertainty and supports decision-making. Access to appropriate information and effective communication is therefore crucial for the success of developmental efforts in agriculture (Abraham and Arunachalam, 2021) ^[1].

Indian farmers need to be competitive and quality-oriented to respond effectively to changing production and market conditions. Timely agricultural information can help farmers take appropriate decisions, adopt improved technologies, plan future farm activities, anticipate market changes and minimize unfavourable circumstances (Nikam *et al.*, 2022) ^[7]. However, traditional methods of information dissemination may involve delays in reaching farmers and obtaining feedback. Therefore, efficient information-seeking and dissemination mechanisms are essential for improving agricultural decision-making.

Information-seeking behaviour refers to the process through which individuals recognize an information need, identify appropriate sources, seek and evaluate information, and use the information for decision-making or problem-solving (Kumar *et al.*, 2022) ^[6]. In agriculture, farmers require information on various aspects of production and marketing, including improved varieties, planting material, nutrient management, pest and disease management, weather, harvesting, post-harvest practices, market prices and government programmes. The information

needs and information-seeking behaviour of farmers may vary according to the crop, stage of cultivation, farming conditions and socio-economic characteristics (Abraham and Arunachalam, 2021; Bora *et al.*, 2021; Kumar *et al.*, 2022) ^[1, 2, 6].

For pepper growers, information-seeking behaviour assumes special significance because black pepper (*Piper nigrum* L.) is a high-value commercial spice crop requiring knowledge-intensive management. Pepper growers require timely information on selection of varieties and planting material, propagation, nutrient management, irrigation, shade regulation, pest and disease management, harvesting, post-harvest practices, quality standards, market prices and government support programmes. Timely access to reliable information can help growers take appropriate production and marketing decisions.

Information and communication play an indispensable role in agricultural development. The availability of relevant and adequate information at the right time enables farmers to take timely action, prepare strategies for subsequent seasons, respond to market changes and avoid unfavourable situations. Recent studies have also shown that farmers seek information through a range of personal, extension and mass-media sources, with the credibility and accessibility of these sources influencing their information-seeking behaviour (Jeevapriya *et al.*, 2021; Shukla *et al.*, 2021) ^[3, 10].

The focus of agricultural research and extension has increasingly shifted towards sustainable agricultural production and efficient management of agricultural resources. Consequently, information services need to respond to the changing requirements of farmers by supporting the generation, transfer, assessment and refinement of agricultural technologies. Effective information-seeking behaviour is therefore important for connecting farmers with relevant agricultural knowledge and technologies (Joshi, 2022) ^[4].

Information and communication are particularly important in pepper cultivation because production conditions, pest and disease incidence, weather conditions, input availability and market situations may change over time. The ICAR–Indian Institute of Spices Research has emphasized scientific production practices and improved technologies for sustainable black pepper production.

Kodagu and Chikkamagaluru are important plantation-crop-growing regions of Karnataka where agro-climatic conditions favour black pepper cultivation along with crops such as coffee and arecanut. The importance of these districts in pepper cultivation provides a suitable context for studying the information-seeking behaviour of pepper growers. With the availability of multiple agricultural information sources, farmers can obtain information through fellow farmers, extension personnel, agricultural universities, research institutions, input agencies and mass media (Panda *et al.*, 2022; Valamannavar and Barman, 2022) ^[8, 11]. Recent studies have also reported the use of mobile phones as an important means of obtaining agricultural information (Shukla *et al.*, 2021; Patel and Mallappa, 2022) ^[10, 9]. However, the availability of information does not necessarily ensure that farmers obtain the required information at the appropriate time or from the most suitable source.

Hence, understanding the information-seeking behaviour of pepper growers is important for identifying their information needs, preferred information sources and constraints in accessing agricultural information. Such an assessment can help extension agencies and other stakeholders provide relevant information in a timely and effective manner.

Therefore, the present study was undertaken to assess the information-seeking behaviour of pepper growers and identify

the major information sources, access to agricultural information. The findings of the study are expected to provide useful inputs for strengthening need-based agricultural extension and improving the delivery of timely and relevant information to pepper growers. Hence, the objectives of this paper is to assess information seeking behaviour and to find the relationship between the independent and dependent variables.

Materials and Methods

The study was conducted in two major pepper-growing districts of Karnataka state, namely, Chikkamagaluru and Kodagu during 2021-22. These two districts were purposively selected based on maximum area and production of black pepper in Karnataka state.

Population: This research was based on the behaviour of farmers and intends to find out information seeking behaviour of the pepper growers. Chikkamagaluru and Kodagu was selected as the study area. Out of which 4 taluks were selected (*viz*, Mudigere, Chikkamagaluru, Virajpet, Ponnampet) and all farmers in afore-mentioned taluks were the population of this study.

Sampling frame and sample: In the present study, an “*Ex-post-facto research design*”, was applied. This design was considered appropriate because the phenomenon had already occurred. It is a systematic inquiry in which the researcher does not directly control independent and dependent variables with sample size of 120.

Instrument: A drafted interview schedule has been constructed after the detailed review of relevant literature and with extension experts and modifications suggested by experts. All items of questionnaire were written to investigate different aspects of information seeking behaviour.

Results and Discussion

Information seeking behaviour of pepper growers

The results presented in Table 1 revealed that most of the respondents (49.17%) belonged to medium overall information seeking behaviour category followed by high (25.83%) and low (25.00%) overall information seeking behaviour category. The probable reason for having medium and high-level overall information seeking behaviour of the respondents due to the fact that respondents had high desire to seek new information regarding crop and new technology which also might have motivated the farmers to have good contact towards the information sources like Institutional and non-institutional sources availing in the local area, and also due to timely and updated information available from the ZARHS, KVKs, ARS, Horticulture departments, input dealers and other private or non-governmental organizations as these institutional and non-institutional sources serve as catalyst for effective information delivery to the recipients of information, which resulted in better seeking of ‘time and need’ based information (Bora *et al.*, 2021) ^[2]. It was also noticed that respondents had better knowledge about how to, what to, which to, seek information regarding improved cultivation practices and technologies which may help them in farms, as farmers having good education level backgrounds had realized the importance of time and need based information play an important role in cultivation of spice (pepper) crops. The other probable reasons for higher information seeking would be due to their education level, farming experience, cosmopolitaness, social participation,

knowledge and contact with the Institutional departments, Non-institutional departments, Interpersonal sources, ICT/ mass media sources. These factors may have contributed to the absorbed level of information seeking behaviour, regarding improved cultivation practices. The findings of the study are in consonance with Keerty Kumar (1992) [6].

Table 1: Overall information seeking behaviour of pepper growers, n=120

Sl. No	Category	Frequency	Percentage
1	low	30	25.00
2	Medium	59	49.17
3	High	31	25.83
Mean= 31.42 SD=3.31			

Interpersonal sources

The results presented in the Table 2 that indicate that, majority of the respondents regularly consulted several interpersonal sources regularly like friends (65.84%), neighbours (54.17%), family members (45.84%), relatives (28.33%), input dealers (27.50%) and local leaders (13.33%) for acquisition of information with regard to improved cultivation practices of pepper (Jeevapriya *et al.*, 2021; Joshi, 2022) [3, 4].

Further, 45.83 per cent of the respondents acquired information occasionally from input dealers, family members (38.33%), relatives (38.34%), neighbours (37.50%), local leaders (31.67%), friends (30.83%). Whereas, local leaders were never consulted by 55.00 per cent by the respondents, relatives (33.33%), input dealers (26.67%), family members (15.83%), neighbours (8.33%), friends (3.33%).

Institutional sources

The result in the Table 2 with respect to institutional sources where considerable percentage of the respondents acquired the required information regularly from Assistant Agriculture Officer / Assistant Horticulture Officer (64.17%) followed by Assistant Director of Agriculture/ Assistant Director of Horticulture (41.67%). Whereas, 25.83 per cent of the respondents contacted the Agriculture Officer / Horticulture Officer, Deputy director of Agriculture/ Deputy director of Horticulture (19.17%) and Joint director of Agriculture (8.33%). From Krishi Vigyan Kendra (47.50%), Agriculture Research Station (45.00%) and Private company/ non- government organizations (20.83%). Whereas, 32.50 per cent of the respondents consulted ARS as source for information occasionally followed by (27.50%) KVK. Farmers seeking information from private company was usually seen / non-government organizations (32.50%). The findings indicate the continued importance of formal extension and institutional sources in providing agricultural information to farmers (Jeevapriya *et al.*, 2021; Joshi, 2022; Valamannavar and Barman, 2022) [3, 4, 11].

Mass Media / ICT sources

It was seen from the results in the Table 2 that, 65.84 per cent of the respondents acquired the required information from television followed by newspaper (53.33%), mobile phone (48.34%), Internet (24.17%), radio (8.33%) and farm magazines (6.66%) regularly. The use of mobile phones and other digital platforms indicates the growing importance of ICT-based sources in facilitating access to agricultural information among farmers (Shukla *et al.*, 2021; Patel and Mallappa, 2022) [10, 9].

Table 2: Information acquisition sources of pepper growers n=120

Sl. No.	Means of acquisition	Regularly		Occasionally		Never	
		F	%	F	%	F	%
Interpersonal sources							
1	Family members	55	45.84	46	38.33	19	15.83
2	Friends	79	65.84	37	30.83	04	3.33
3	Relatives	34	28.33	46	38.34	40	33.33
4	Local leaders	16	13.33	38	31.67	66	55.00
5	Neighbours	65	54.17	45	37.50	10	8.33
6	Input dealers	33	27.50	55	45.83	32	26.67
Institutional sources							
1	Department of Agriculture/ Horticulture						
	AA/HA	31	25.83	38	31.67	51	42.50
	AAO/AHO	77	64.17	38	31.67	5	4.16
	ADA/ADH	50	41.67	56	46.67	14	11.66
	DDA/DDH	23	19.17	31	25.83	66	55.00
	JD of Agriculture	10	8.33	17	14.17	93	77.50
2	Agricultural University						
	KVK	57	47.50	33	27.50	30	25.00
	ARS	54	45.00	39	32.50	27	22.50
3	Private company / NGO	25	20.83	39	32.50	56	46.67
Mass media/ ICT sources							
1	T.V.	79	65.84	34	28.33	7	5.83
2	Radio	10	8.33	15	12.50	95	79.17
3	News paper	64	53.33	42	35.00	14	11.67
4	Farm magazine/ publications	8	6.66	26	21.67	86	71.67
5	Internet	29	24.17	42	35.00	49	40.83
6	Mobile phone	58	48.34	43	35.83	19	15.83

Relationship between personal, socio-economic, social and psychological characteristics with information seeking 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 information seeking behaviour of pepper growers furnished in Table 3.

Table 3: Relationship between personal, socio-economic, social and psychological characteristics with information seeking behaviour of pepper growers (n=120)

Sl. No.	Attributes	p-value	Chi square statistic
1.	Age	0.027	10.979*
2.	Education	0.031	19.819*
3.	Land holding	0.847	1.382 ^{NS}
4.	Farming experience	0.009	13.471**
5.	Annual income	0.299	4.892 ^{NS}
6.	Economic motivation	0.042	9.888*
7.	Market orientation	0.049	9.550*
8.	Extension participation	0.029	10.803*
9.	Cosmopolitaness	0.017	12.017*
10.	Mass media exposure	0.009	13.481**

(* significant at 5%, ** significant at 1% probability, NS- non significant)

Therefore, it can be interpreted from the table 5 that, the annual income and land holding had non significance association with information seeking behaviour. Similarly, characteristics like education, economic motivation, Extension participation, cosmopolitaness and market orientation had 5 percent significant association with information seeking behaviour (Bora *et al.*, 2021) [2] and mass media exposure and farming experience have significance at 1 percent significant association with information seeking behaviour.

Conclusion

This study makes it clear that pepper growers don't all seek information the same way. Their needs vary, and so do their habits, about half fell into the medium category for overall information-seeking behaviour, while roughly a quarter each fell into the high and low categories. When it came to sources, television stood out as the go-to mass media channel, and friends were clearly the most trusted interpersonal source. Radio, on the other hand, barely got used. What this tells us is that if extension agencies want their messages to actually reach and resonate with pepper growers, television and word-of-mouth through friends are the channels to lean on. Getting this right isn't just a communication exercise, it has real potential to boost agricultural productivity and, by extension, benefit the broader farming economy.

The study also found that how actively a farmer seeks out information is tied to certain personal, psychological, and socio-economic traits, though interestingly, land holding size and annual income didn't seem to matter much. This is a useful insight for policymakers and extension workers: rather than treating all farmers the same, efforts to improve information access should be shaped around these specific traits. Practically speaking, that means more training programmes on the ground, village-level information centers backed by the State Government and Spice Board, and regular visits from agricultural experts. Making success stories and practical literature more accessible would also go a long way in helping farmers stay informed and make better decisions for their pepper crops.

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