

## International Journal of Agriculture Extension and Social Development

Volume 8; Issue 2; February 2025; Page No. 256-259

Received: 02-12-2024  
Accepted: 12-01-2025

Indexed Journal  
Peer Reviewed Journal

### Spice growers in the digital age: An exploration of information seeking behavior in Kalimpong district

<sup>1</sup>Birat Rai, <sup>2</sup>Sabita Mondal, <sup>3</sup>Sanjay VC, <sup>4</sup>Titiksha Sarkar and <sup>5</sup>Saumyadip Chakraborty

<sup>1</sup>Ph.D. Research Scholar, Department of Agricultural Extension, Faculty of Agriculture, Uttar Banga Krishi Viswavidyalaya, Cooch Behar, Pundibari, West Bengal, India

<sup>2</sup>Assistant Professor, Department of Agricultural Extension, Faculty of Agriculture, Uttar Banga Krishi Viswavidyalaya, Cooch Behar, Pundibari, West Bengal, India

<sup>3</sup>Ph.D. Scholar, Department of Agricultural Extension and Communication, Navsari Agricultural University, Navsari, Gujarat, India

<sup>4</sup>Ph.D. Research Scholar, Department of Agricultural Extension, Faculty of Agriculture, Uttar Banga Krishi Viswavidyalaya, Cooch Behar, Pundibari, West Bengal, India

<sup>5</sup>Ph.D. Research Scholar, Department of Agricultural Extension, Faculty of Agriculture, Uttar Banga Krishi Viswavidyalaya, Cooch Behar, Pundibari, West Bengal, India

DOI: <https://doi.org/10.33545/26180723.2025.v8.i2d.1641>

Corresponding Author: Birat Rai

#### Abstract

In Kalimpong, over 80% of the population relies on farming for their livelihood. However, area and production for spices have decreased compared to 2017-18 or before that. Despite the increasing use of technology in agriculture, lack of access to real-time data on soil health, weather conditions, and crop requirements hinders farmers' ability to optimize inputs and maximize yields. To address these challenges, it is crucial to prioritize research on availability and access of information to spice growers. Thus, a study has been conducted to find out sources and channels of information to explore the Information Seeking Behavior (ISB) of Spice Growers in Kalimpong District. The present study was conducted in Kalimpong district in West Bengal. The blocks and district were selected purposively. Simple random sampling technique was followed for selecting the respondents. A total of two hundred (200) spices growers were selected for the study. The data was collected with the help of structured interview schedule through physical interview method. Frequency, percentage, mean, range, ranking, weighted mean score methods were extensively used to analyse the collected data. The study suggests a potential challenge related to the aging workforce in spice cultivation and relatively low levels of education among the spice growers. They heavily rely on localite sources (fellow farmers, relatives, friends, neighbours) for information. Cosmopolite sources (ADA, KVK personnel, extension functionaries) are the least preferred. Crop protection and production technologies are the most pressing concerns, while weather/market forecasts and government policies/schemes are of less immediate interest.

**Keywords:** Spice cultivation, spice growers, sources of information, types of information

#### Introduction

India as a country has a glorious past, pleasant present, and a bright future as far as the production and export of spices are concerned. Some of the main spices produced in India include pepper, cardamom, chilies, turmeric, and ginger. It is called the "home of the spices" because it is the largest producer, consumer, and exporter of spices in the world. India produces, consumes, and exports the largest quantum of spices in the world; the country produces about 75 out of the 109 varieties listed by the International Organization for Standardization and accounts for half of the global trading in spices. The diversified climate of India is conducive to variety of spice cultivation. India has the world's highest number of varieties of spices. Spices are grown over a million hectares, with an annual production of 7 lakh MT. The global market for Indian agricultural products is

projected to expand in 2025, especially for rice, spices, and horticultural crops. In 2023-24, India exported spices worth \$4.46 billion. In volume terms, the spices shipments rose by 9% to over 1.53 MT.

In West Bengal, ginger, large cardamom, and turmeric cultivation are mainly confined to the Hill zone and Terai region of North Bengal. The production of ginger, turmeric, and large cardamom in '000 tons in West Bengal is 136.740, 45.698, and 0.835 respectively. In Kalimpong, over 80% of the population relies on farming for their livelihood. The region is known for cash crops like ginger, cardamom, betel-nut, and oranges, as well as the Dalle Khursani chilli. Kalimpong is also the second largest producer of cardamom. Some farmers in the Kalimpong are looking to reduce cardamom cultivation due to unprofitability. Farmers need timely technical guidance and early warning systems.

However, area and production for spices have decreased compared to 2017-18 or before that. Despite the increasing use of technology in agriculture, lack of access to real-time data on soil health, weather conditions, and crop requirements hinders farmers' ability to optimize inputs and maximize yields. A lack of knowledge about climate-resilient crop varieties, sustainable agricultural practices, market trends, export opportunities, pest and disease outbreaks, as well as effective management systems, could lead to crop losses. Access to information is a critical factor which can influence the productivity and prosperity of spice growers

To address these challenges, it is crucial to prioritize research on availability and access of information to spice growers. Thus, a study has been conducted to find out types, sources and channels of information to explore the Information Seeking Behavior (ISB) of Spice Growers in Kalimpong District. ISB refers to the activities performed by an individual farmer in relation to acquisition of scientific information with regards to the improved cultivation practices from various information sources.

**Methodology**

The present study was conducted in Kalimpong-I, Kalimpong-II, Pedong and Gorubathan blocks of Kalimpong district in West Bengal. The blocks and district were selected purposively as the presence of spice growers is mostly found in the villages of block Kalimpong-I, Pedong and Gorubathan. Out of eighteen-gram panchayats in Kalimpong-I, Kaffer Kankebung, Samalbong and Pudung were selected, out of eleven-gram panchayats in Gorubathan block, Todey Tangta and Gorubathan-I were selected and out of six-gram panchayats in Pedong block, Kagay and Syakiyong were selected with the help of simple random sampling procedure. The respondents from each gram panchayats were selected randomly to achieve the delineated purpose of the study.

A total of two hundred (200) spices growers constituted the sample of the study. The data was collected with the help of structured interview schedule through physical interview method. The data obtained were processed, tabulated,

classified, analysed in light of objectives for drawing conclusions. Frequency, percentage, mean, range, ranking, weighted mean score methods were extensively used to analyse the collected data.

**Results and Discussion**

**Table 1:** Distribution of respondents based on their Age, Education and Farming Experience. n=200

Sl. No	Categories	Frequency	Percent (%)	SD	Mean
<b>A. Age</b>					
1	Young (>35)	12	6	13.27	53.63
2	Middle age (35-55)	109	54.5		
3	Old (<55)	79	39.5		
<b>B. Education</b>					
1	Illiterate	2	1	3.10	5.59
2	Primary	127	63.5		
3	Secondary	55	27.5		
4	Higher Secondary	13	6.50		
5	Graduate	3	1.5		
6	Post Graduate	0	0.00		
<b>C. Farming Experience</b>					
1	5-15 years	14	7	13.56	29.7
2	16-25 years	56	28		
3	26-35 years	59	29.5		
4	>35 years	71	35.5		

The table reveals that the spice cultivators in the study area is dominated by middle-aged individuals. There are very few young people in this field. This points to a lack of interest among the younger generation, potentially posing a threat to the future of spice cultivation if not addressed. The data also indicates a relatively low level of formal education among the spice growers in this sample. This could be a barrier to adopting new technologies and practices, accessing information, and adapting to changing market conditions. There's a good mix of experience levels among the spice growers, which could be a valuable asset for knowledge sharing and mentoring within the community. A large number of growers have substantial experience (over 26 years).

**Table 2:** Sources and Channels of information preferred by the spice growers n=200

Source of Information	Always	Sometimes	Never	Weighted score	Weighted mean score	Rank
Localite Sources Fellow farmer, Relatives, friend, neighbors	142	38	0	502	2.51	I
Cosmopolite Sources ADA, KVK personnel, extension functionaries	58	86	56	402	2.01	IV
Mass Media TV, newspaper, farm publications,	94	94	12	482	2.41	II
New Media social media, blogs, online forums, YouTube channels, podcasts, Streaming services and websites	71	108	21	450	2.25	III

Spice growers in the Kalimpong district heavily rely on localite sources (fellow farmers, relatives, friends, neighbors) for information. This is evident from their top ranking (I) and the highest weighted mean score (2.51). Cosmopolite sources (ADA, KVK personnel, extension

functionaries) are the least preferred, indicated by their lowest ranking (IV) and weighted mean score (2.01). Mass media and new media are moderately preferred. They occupy the middle ground in terms of preference, with rankings of II and III, respectively.

**Table 3:** Types of information sought by the spice growers n=200

Type of Information	Never	Rarely	Sometimes	Mostly	Weighted score	Weighted mean score	Rank
Crop Production technologies	17	28	89	66	404	2.02	II
Crop Protection	0	21	62	117	496	2.48	I
Post harvest and storage	43	36	95	26	304	1.52	III
Weather and Market forecast	76	54	58	12	206	1.03	V
Government Policies and schemes	46	89	57	8	227	1.14	IV

With a weighted mean score of 2.48, crop protection is the most sought-after information by spice growers. This suggests that growers face significant challenges in protecting their crops from pests, diseases, or other threats, making this information critical for their livelihoods. Crop Production Technologies ranked second with a weighted mean score of 2.02, information on crop production technologies is also highly valued. This indicates a strong interest in improving farming practices and yields through the adoption of new or improved technologies.

Post-Harvest and Storage ranked third, post-harvest and storage information has a weighted mean score of 1.52. This suggests a moderate need for information related to reducing post-harvest losses and extending the shelf life of spices. Weather and Market Forecast with the lowest weighted mean score of 1.03, are the least sought-after information. This could be because growers have alternative sources for this information or do not perceive it as critical as other types of information. Government Policies and Schemes ranked second to last, weighted mean score of 1.14, indicating that spice growers may not be well-informed about relevant government support or view it as particularly useful.

### Conclusion

- The study suggests a potential challenge related to the aging workforce in spice cultivation. The relatively low levels of education highlight the need for accessible and tailored information and training programs to improve farming practices and market knowledge. The range of farming experience represents a valuable resource that can be leveraged for knowledge transfer and community development.
- Spice growers in the Kalimpong district heavily rely on localite sources (fellow farmers, relatives, friends, neighbors) for information. Cosmopolite sources (ADA, KVK personnel, extension functionaries) are the least preferred.
- Crop protection and production technologies are the most pressing concerns, while weather/market forecasts and government policies/schemes are of less immediate interest.

### Recommendation

Study recommends to implement initiatives to attract and engage younger people in spice cultivation, such as providing access to land, technology, and financial resources. Create platforms for experienced farmers to share their knowledge and mentor younger farmers as well as develop information materials in local languages and formats that are easily accessible to farmers with limited education.

Further it suggests to recognize and utilize the strong influence of localite sources. Agricultural extension programs could benefit from identifying and training key farmers or community leaders to act as information disseminators. Create platforms for farmer-to-farmer learning, such as organized discussion groups or field visits to successful farms. Extension officers and KVK personnel need to enhance their engagement with spice growers. This could involve more frequent field visits, demonstrations, or workshops tailored to the specific needs of the farmers.

Focus on building trust and rapport between extension agents and farmers. This may require training extension staff in communication and interpersonal skills. Ensure that information disseminated through mass media channels is relevant, timely, and easily understandable for spice growers. Develop targeted content for new media platforms, addressing specific issues or interests of the farmers. Encourage interaction and feedback through these platforms. Promote digital literacy among farmers to increase their access to and effective use of new media resources and adopt a blended approach that integrates localite knowledge with scientific information from cosmopolite sources and the broader reach of mass and new media. This can create a more robust and effective information ecosystem for spice growers.

Extension services and agricultural information providers should focus on delivering timely and relevant information on crop protection strategies, pest and disease management, and improved production technologies. Efforts should be made to disseminate information on best practices for post-harvest handling, storage, and value addition to reduce losses and improve the quality of spice products. Explore ways to make weather and market forecasts more accessible and relevant to spice growers, potentially through mobile-based services or community radio programs. Conduct outreach activities to educate spice growers about available government policies, schemes, and support programs, and facilitate their access to these resources. Adopt a multi-channel approach to information delivery, using a combination of traditional extension methods, digital technologies, and farmer-to-farmer knowledge sharing to reach a wider audience and cater to diverse learning preferences.

By implementing these recommendations, stakeholders can empower spice growers with the knowledge and tools they need to improve their productivity, profitability, and livelihoods.

### References

1. Ansari MA, Sunetha S. Agriculture information needs of farm women: A study in State of north India. *Afr J Agric Res.* 2014;9(19):1454-1460.
2. Arunkumar R, Balamurugan V, Kalirajan V. Information acquisition behaviour of turmeric farmers in Pappireddipatti Taluk of Dharmapuri District in Tamil Nadu. *Asian J Agric Ext Econ Sociol.* 2022;40(10):885-892.
3. Bora S, *et al.* Farmers' information seeking behavior in relation to organic vegetable production in Assam. *Biol Forum An Int J.* 2021;13(3a):517-522.
4. Chen Y, Lu Y. Factors influencing the information needs and information access channels of farmers: An empirical study in Guangdong, China. *J Inf Sci.* 2020;46(1):3-22.
5. Dinpanah GR, Lashgarara F. Factors influencing the information seeking knowledge of wheat farmers in Iran. *Afr J Agric Res.* 2011;6(14):3419-3427.
6. Gangwar S, Suman. Information seeking behavior of the livestock farmers in Banda District of Uttar Pradesh. *Rev J Philos Soc Sci.* 2022;48(1):90-95.
7. Goli I, *et al.* Training needs assessment: The case of female rice farmers in Northern Iran. *MDPI Agric.*

- 2022;12:1-18.
8. Gopi R, *et al.* Information management behaviour of dairy farmers in Cuddalore District of Tamil Nadu. *Int J Livest Res.* 2018;8(11):119-124.
  9. Hariom, Singh MP. Information needs and gathering habits among farmers in rural areas of Mahoba District, Uttar Pradesh: A study. *Int J Res Lib Sci.* 2017;3(1):50-58.
  10. Murlidhar M, Vishal MK, Meena RD. Sources of information and use of mobile phones in major seed spices growing states. *Gujarat J Ext Educ.* 2022;33(2):43-50.
  11. Singh M. Use of communication sources and level of knowledge of chilli growers in Abhanpur block of Raipur district of Chhattisgarh. *J Pharmacogn Phytochem.* 2020;9(2):115-118.
  12. Singh N, Malhotra P, Singh J. Information needs and seeking behaviour of dairy farmers of Punjab. *Indian J Dairy Sci.* 2015;69(1):98-104.
  13. Wann T, Khongtim J. Agricultural information literacy skills of turmeric farmers in Shangpung Village of Meghalaya. *Lib Philos Pract (e-journal).* 2021;6543.
  14. Widanapathirana CU, Kopiyawattage KPP. Awareness and behavior on agrochemical use among farmers: A case study of ginger (*Zingiber officinale*) farmers in Ratnapura District, Sri Lanka. *ASEAC.* 2018;1-12.
  15. Wikipedia contributors. Kalimpong. Wikipedia, The Free Encyclopedia. Available from: [https://www.wikipedia.org/wikikalimpong\\_1](https://www.wikipedia.org/wikikalimpong_1).
  16. Wikipedia contributors. Kalimpong. Wikipedia, The Free Encyclopedia. Available from: [https://www.wikipedia.org/wikikalimpong\\_2](https://www.wikipedia.org/wikikalimpong_2).