# Challenges Faced in the Utilization of FAQs in Agriculture among Farmers in Kerala, India

## Joe Shiney [a++*], Allan T [a#] and Blesson B V [b++]

[a] Department of Agricultural Extension Education, College of Agriculture, Vellayani, Thiruvananthapuram, Kerala-695522, India.
[b] Department of Agricultural Statistics, College of Agriculture, Vellayani, Thiruvananthapuram, Kerala- 695522, India.

***Authors' contributions***

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

**Short Research Article**

## ABSTRACT

The study aimed to identify and rank the challenges faced by farmers in South Kerala in utilizing Frequently Asked Questions (FAQ) and Frequently Asked Question Solution (FAQ-S) for agricultural information. The research was carried out across five districts*, viz.,* Thiruvananthapuram, Kollam, Alappuzha, Pathanamthitta, and Kottayam, representing diverse agricultural practices. A total of 150 progressive farmers were randomly selected, with 30 participants from each district, based on their active involvement in agricultural programs and knowledge-sharing activities. Primary data were collected through in-person interviews using a pre-tested semi-structured schedule. Challenges were ranked using Garrett's ranking technique, which

[++] *PG Scholar;*
[#] *Professor and Head;*
*Corresponding author: E-mail: joeshiney3@gmail.com;*

provided a comprehensive evaluation of their significance based on both mean scores and Garrett values. The findings revealed that the lack of awareness (mean=72.01 and Garrett value= 80) about FAQ-S ranked as the most critical challenge, followed by time constraints (mean=69.65 and Garrett value= 33 and insufficient trust (mean=54.56 and Garrett value= 40 in the information provided. Other significant barriers included limited content relevance, technical difficulties, language barriers, and access issues. However, despite the agricultural sector's potential, farmers in Kerala, particularly smallholders, face barriers in accessing updated and reliable information essential for improving agricultural productivity. The study concluded that targeted interventions, such as awareness campaigns, trust-building initiatives, localized content development, and improved digital literacy, are essential to enhance the effectiveness of FAQ-S. Based on the findings, it is therefore recommended that if these challenges are properly addressed, it will improve information dissemination, empower farmers, and support sustainable agricultural development in Kerala.

## 1. INTRODUCTION

Agriculture plays a pivotal role in India's economy, supporting the livelihoods of millions, with Kerala renowned for its diverse agricultural practices. Kerala, located in India's southwestern region, spans an area of approximately 38,863 square kilometers, with a population density of 860 persons per square kilometer as per the latest census. The state boasts a remarkable literacy rate of 96.2%, the highest in India, reflecting a well-informed populace. Agriculture in Kerala is characterized by fragmented landholdings, with over 96% of farmers classified as marginal or small holders, cultivating less than 2 hectares of land. This results in an average operational holding size of just 0.10 hectares, significantly below the national average.

A predominant feature of Kerala's agriculture is the homestead farming system, where small-scale, integrated farming combines food crops, cash crops, and livestock within the household premises. This subsistence system supports sustainable livelihoods but also poses challenges in adopting modern, large-scale agricultural practices. However, despite the agricultural sector's potential, farmers in Kerala, particularly smallholders, face barriers in accessing updated and reliable information essential for improving productivity. These unique demographic, information and agricultural characteristics form the basis for examining the challenges faced in the effective utilization of FAQs among farmers in the state. Information dissemination becomes even more critical due to the evolving nature of agricultural technologies and practices, leading to significant knowledge gaps among farmers (Galadima, 2014).

In the modern context, Frequently Asked Questions (FAQs) have emerged as practical tools for delivering crucial agricultural information. FAQs offer straightforward, concise answers to recurring farmer inquiries, providing solutions for remote users who may lack direct access to advisory services (Zhang et al., 2021). Despite their potential, these platforms are not without limitations. Farmers encounter multiple barriers in accessing, understanding, and trusting the information provided through FAQs, hampering their ability to make informed agricultural decisions (Boniface & Jose, 2020). This study aims to identify and analyze the challenges hindering farmers from effectively utilizing FAQs, providing insights to improve information dissemination frameworks in agriculture.

The increasing use of FAQ-S (Frequently Asked Questions Systems) aims to provide quick, accessible, and self-guided information for users, enhancing service delivery efficiency. However, the effectiveness of these platforms depends on their ability to overcome various user-centric challenges. Across districts, users experience barriers such as lack of awareness about the platform's existence, technical issues, limited relevance of content, time constraints, and language difficulties. Identifying and prioritizing these challenges is crucial for understanding regional differences and improving FAQ-S systems. While mean scores reflect the overall user sentiment, Garrett ranking values offer a standardized way of identifying the most pressing concerns by ranking them based on frequency and severity. A comparison of these metrics provides deeper insights into the variations across districts and helps decision-makers address the most critical challenges effectively. The main objective is to identify and rank the challenges faced by farmers in the utilization of FAQ-S platforms across districts using both mean scores and Garrett values, with the aim of

providing a comprehensive understanding of the most critical barriers and their relative importance across different regions.

## 2. METHODOLOGY

The study was conducted in urban and semi-urban areas across five districts in South Kerala *viz.,* Thiruvananthapuram, Kollam, Alappuzha, Pathanamthitta, and Kottayam known for their varied agricultural practices. This geographical diversity offers an ideal context to explore the usage patterns and barriers faced in accessing agricultural information through FAQs.

The sample consisted of 150 farmers, with 30 progressive farmers selected randomly from each district, following consultations with local agricultural offices. The selection was based on the following criteria:

1. Active participation in agricultural programs.
2. Adoption of innovative agricultural practices.
3. Engagement in knowledge-sharing activities.

Primary data were collected through in-person interviews, using a pre-tested semi-structured interview schedule. The interview schedule was designed based on expert consultations and a comprehensive literature review. The identified challenges were evaluated using Garrett's ranking technique. This method assigns ranks to constraints based on their perceived significance. The rank given by each respondent to a constraint is converted into a percent position using the following equation:

$$\text{Percent position} = \frac{100(R_{ij} - 0.5)}{N_j}$$

Where,

$R_{ij}$ - is the rank for $i^{th}$ constraint experienced by the $j^{th}$ individual
$N_j$ - is the number of constraints ranked by the $j^{th}$ individual

The percent positions were converted into scores using Garrett's table (Garrett & Woodworth, 1969). The mean score for each constraint was calculated by dividing the sum of individual scores by the total number of respondents, and the constraints were ranked in descending order based on the mean scores.

## 3. RESULTS AND DISCUSSION

The study identified eight major challenges affecting farmers' ability to utilize FAQs effectively in agriculture. The results are presented below in Tables 1 and 2, along with Fig. 1, highlighting the constraints and their significance based on Garrett's mean scores.

### 3.1 Lack of Awareness about FAQ-S Existence

This challenge ranks highest by both mean score and Garrett value, suggesting that awareness about the existence of FAQ-S platforms is not only a severe issue but also one that is consistently identified across all districts. The high mean score of 72.01 reflects that respondents perceive the lack of awareness as a major obstacle to utilizing the FAQ-S system. The Garrett value of 80 confirms that this issue was uniformly ranked high by respondents across the districts. This dual alignment indicates that creating awareness should be the top priority, as it affects the system's effectiveness at all levels. Anoop et al. (2015), in their study on ICT-based market information services in Kerala determinants and barriers of adoption, reported a lack of awareness about the information services. They were aware but did not have a full understanding of what it is and how it works. Lack of awareness about the technology and complexity of adoption is one of the major challenges faced by the farmers (Mishra et al., 2024).

### 3.2 Time Constraints

Time constraints rank second overall based on the mean score, showing that many respondents across districts experience difficulty in finding time to access and engage with FAQ-S platforms. The mean score of 69.65 highlights the significance of this challenge, especially in busy or resource-strapped regions. However, the Garrett value of 33 suggests that while this issue is severe, it is not as consistently ranked across all districts. Some regions might experience time limitations more acutely than others. This implies that while addressing time-related issues (e.g., offering flexible access hours or easier access points) is important, it may not be the same priority for all regions. Improving access to timely information and advisory services is essential to support farmer decision making throughout the year (Godara et al., 2024).

### 3.3 Insufficient Trust in the Information Provided

This challenge ranks third in both mean score and Garrett value, indicating that trust in the content provided by FAQ-S is a moderately significant issue across districts. The mean score of 54.56 shows that many users feel uncertain about the reliability or credibility of the information offered. The Garrett value of 40 further highlights that this issue, while present, is not consistently ranked as highly as other challenges across all regions. This points to variability in trust levels—in some places, trust may be a more critical barrier than in others. Addressing this issue might involve enhancing the credibility of information sources, providing verifiable data, or offering expert-reviewed answers. According to Singh et al. (2015), lack of updated information as perceived by farmers reduces the trust in information sources.

### 3.4 Limited Relevance of FAQ-S Content

The challenge of limited relevance ranks fourth in both mean score and Garrett value. The mean score of 53.81 reflects that some users feel the content provided by the FAQ-S platform is not sufficiently aligned with their specific needs or contexts. The Garrett value of 60 indicates that this issue is consistently acknowledged across districts as a moderate concern. This alignment suggests that the content needs to be more localized, specific, and user-focused to address the diverse needs of users across different regions. Customizing content for specific agricultural practices, social settings, or language needs might improve the platform's relevance. According to Balakrishnan et al. (2014), a lack of relevant information on websites is affecting farmers' access to resources.

### 3.5 Technical Difficulties in Navigating FAQ-S

Technical difficulties, such as problems navigating the FAQ-S platform, rank fifth based on both mean score and Garrett value. The mean score of 44.19 reflects that while these difficulties are not the most severe issue, they do present a notable barrier to platform use. The Garrett value of 47 confirms that this challenge is consistently ranked as a concern across districts. This suggests that technical improvements like simplifying the user interface, improving load times, or offering technical support could enhance the platform's usability. Koshy et al. (2015) found that farmers experienced problems

accessing this kind of information dissemination platform. Chouhan et al. (2013) also revealed that farmers lack technical knowledge about the technology.

### 3.6 Language Barriers in FAQ-S

Language barriers rank sixth both by mean score and Garrett value. The mean score of 43.03 shows that some respondents experience difficulties due to language limitations on the platform, possibly because content is not available in a user-friendly or familiar language. The Garrett value of 53 indicates that this issue is consistently noted across districts, though it is not as severe as other challenges. This suggests that introducing multi-language support, regional language translations, or simplified content could improve the accessibility of the FAQ-S system. Bhawariya and Jukariya (2024) made a similar observation, stating that language barriers are Constraints farmers face in accessing agricultural information. Raviya et al. (2020) found that most farmers have inadequate literacy skills to use ICTs.

### 3.7 Difficulty in Accessing FAQ-S Platforms

This challenge ranks seventh by both mean score and Garrett value. The mean score of 42.75 indicates that access issues—such as poor internet connectivity or lack of devices—are a problem, though not a top concern across districts. However, the Garrett value of 67 shows that this issue is consistently identified across districts as a moderate challenge. This suggests that infrastructure improvements, such as better internet connectivity or offline access options, could benefit users across multiple regions. Lack of access to women farmers was found to be the most limiting factor for using portal information (Kumar et al., 2017). According to Anand et al. (2020), lack of training programs was also identified as a key constraint in accessing and using information and communication technologies (ICTs).

### 3.8 Others (Miscellaneous Challenges)

The category for miscellaneous or other challenges ranks the lowest by both mean score and Garrett value. With a mean score of 20 and a Garrett value of 20, this category suggests that no significant additional challenges were consistently reported across districts. This low ranking highlights that most of the key issues have already been captured in the previously mentioned challenges.

**Table 1. Ranking of challenges faced in utilization of FAQs**

| Challenges / Districts | Tvm | Klm | Alp Mean | Pta | Ktm | Mean Total | GV* | OR* |
|---|---|---|---|---|---|---|---|---|
| Lack of awareness about FAQ-S existence | 72.57 | 72.03 | 73.23 | 72.57 | 69.63 | 72.01 | 80 | 1 |
| Difficulty in accessing FAQ-S Platforms | 45.40 | 42.00 | 43.57 | 40.60 | 42.17 | 42.75 | 67 | 7 |
| Limited relevance of FAQ-S content | 53.93 | 55.50 | 54.83 | 53.07 | 51.73 | 53.81 | 60 | 4 |
| Language barriers in FAQ-S | 36.90 | 41.23 | 41.60 | 44.57 | 50.87 | 43.03 | 53 | 6 |
| Technical difficulties in navigating FAQ-S | 41.53 | 42.37 | 48.43 | 44.70 | 43.93 | 44.19 | 47 | 5 |
| Insufficient trust in information provided | 58.67 | 60.77 | 50.17 | 52.80 | 50.40 | 54.56 | 40 | 3 |
| Time constraints | 71.00 | 66.10 | 68.17 | 71.70 | 71.27 | 69.65 | 33 | 2 |
| Others | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20 | 8 |

*GV-Garrett Value *OR-Overall Rank*

**Table 2. Overall ranking of challenges faced in the utilization of FAQs by farmers in Kerala**

| Challenges | Mean Score (Overall) | Garrett Value | Overall Rank |
|---|---|---|---|
| Lack of Awareness about FAQ-S Existence | 72.01 | 80 | 1 |
| Time Constraints | 69.65 | 33 | 2 |
| Insufficient Trust in Information Provided | 54.56 | 40 | 3 |
| Limited Relevance of FAQ-S Content | 53.81 | 60 | 4 |
| Technical Difficulties in Navigating FAQ-S | 44.19 | 47 | 5 |
| Language Barriers in FAQ-S | 43.03 | 53 | 6 |
| Difficulty in Accessing FAQ-S Platforms | 42.75 | 67 | 7 |
| Others | 20 | 20 | 8 |
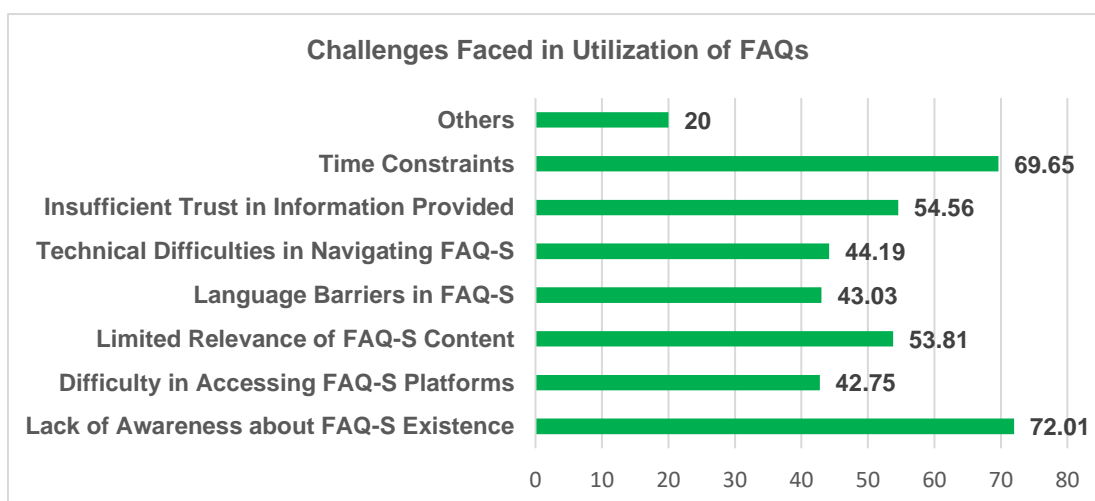


**Fig. 1. Summary table for challenges faced in the utilization of FAQs**

## 4. CONCLUSION AND RECOMMENDATIONS

This analysis reveals that while the mean score highlights the severity of challenges faced by users across districts, the Garrett value indicates the uniformity of recognition of these challenges. High mean scores with low Garrett values (e.g., Time Constraints) suggest region-specific issues, while challenges like Lack of Awareness show

both severity and widespread impact. The findings pinpoint key challenges limiting FAQ utilization among farmers in Kerala, particularly the lack of awareness, time constraints, and insufficient trust in information. To enhance engagement with the FAQ-S platform, targeted interventions such as awareness campaigns, trust-building initiatives, and tailored content are essential. Additionally, simplifying navigation, providing multilingual resources, and improving digital literacy through training are crucial. A collaborative approach involving agricultural extension services and local institutions will ensure that all farmers, especially those in remote areas, can benefit from these resources. By addressing these constraints, the FAQ system can transform into a more effective tool for informed decision-making, ultimately boosting agricultural productivity and sustainability in Kerala. However, the study's limitations include potential sampling biases, as findings may not fully represent Kerala's diverse agricultural practices, a wide array of crops, unique agro eco systems and the influence of the digital divide, which affects farmers' access to FAQ platforms.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

The author(s) hereby declare that generative AI technologies, specifically Grammarly, were consciously used for language correction purposes only during the writing or editing of this manuscript. All content, including research, analysis, and conclusions, is the original work of the author(s). The AI was utilized solely to improve clarity, grammar, and sentence structure without influencing the substance or originality of the research.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

Anand, S., Prakash, S., Yedida, S., & Singh, A. K. (2020). Constraints faced by farmers in access and use of information and communication technologies (ICTs) in Bihar. *Journal of Pharmacognosy and Phytochemistry*, *9*(2S), 80–85.

Anoop, M., Ajjan, N., & Ashok, K. R. (2015). ICT based market information services in Kerala–determinants and barriers of adoption. *Economic Affairs*, *60*(1), 117–121.

Balakrishnan, R., Wason, M., Padaria, R. N., Singh, P., & Varghese, E. (2014). An analysis of constraints in e-learning and strategies for promoting e-learning among farmers. *Economic Affairs*, *59*, 727.

Bhawariya, A., & Jukariya, T. (2024). Constraints faced by the farmers in accessing information regarding agriculture. *International Journal of Research in Agronomy*, *7*(2S), 13–15.

Boniface, P. J., & Jose, A. M. (2020). Utilization of selected information technology enabled systems (ITES) by agricultural extensionists of Kerala. *Journal of Extension Education*, *32*(2), 6476–6484.

Chouhan, N., Henry, C., & Solanki, D. K. (2013). Constraints faced by the farmers in getting agriculture technology information under ATMA in western region of Rajasthan. *Indian Journal of Extension Education*, *49*(3&4), 102–106.

Galadima, M. (2014). Constraints on farmers' access to agricultural information delivery: A survey of rural farmers in Yobe state, Nigeria. *IOSR Journal of Agriculture and Veterinary Science*, *7*(9), 18–22.

Garrett, H. E., & Woodworth, R. S. (1969). *Statistics in psychology and education*. Vakils, Feffer and Simons Pvt. Ltd. 329p.

Godara, S., Bana, R. S., Bishnoi, S., Nain, M. S., Parsad, R., & Marwaha, S. (2024). Data-driven insights for agricultural extension services in Rajasthan: A study of Kisan Call Center queries. *Indian Journal of Extension Education*, *60*(1), 53–58.

Koshy, S., Husain, S., & Kumar, K. (2015, November). Agricultural information delivery mechanism using ICT: A case study from Kerala, India. In *2015 IEEE International Symposium on Technology and Society (ISTAS)*. IEEE, 1–3.

Kumar, S., Sangeetha, V., Singh, P., Burman, R. R., Bhowmik, A., & Kumar, S. A. (2017). Constraints faced by farmers in utilizing rice-related information through Rice Knowledge Management Portal (RKMP). *Indian Journal of Extension Education*, *53*(1), 84–89.

Mishra, A., Malik, J. S., & Bhavesh. (2024). Constraints faced by paddy farmers in adoption of climate-smart agricultural practices: A comparative study. *Indian Journal of Extension Education*, *60*(2), 95–99.

Raviya, P. B., Savaliya, V. J., & Tavethiya, B. H. (2020). Constraints in accessing

agricultural information through ICT services. *Journal of Pharmacognosy and Phytochemistry*, *9*(4S), 368–369.

Singh, M., Burman, R. R., Sharma, J. P., Sangeetha, V., & Iquebal, M. A. (2015). Constraints faced in mobile-based agro-advisory services and strategy for enhancing the effectiveness of mKRISHI®. *Indian Research Journal of Extension Education*, *15*(2), 119–122.

Zhang, D., Chen, X., Zhang, Y., & Qin, S. (2021). Template-based chatbot for agriculture-related FAQs. *arXiv preprint arXiv:2107.12595*.

---

*Peer-review history:*
*The peer review history for this paper can be accessed here:*
*https://www.sdiarticle5.com/review-history/128304*

---