

Role of Knowledge Management Methods in Agriculture- Need and Approaches

A. Krishna Murthy¹, L. S. R. C. V. Ramesh² and A. V. S. S. Naga Raju³

Abstract

Knowledge Management is the process of collecting, creating, organizing, using and sharing collective knowledge. Knowledge Management mostly refers to tacit or implicit knowledge which is difficult to share in a tangible form. The role of knowledge management in agriculture is critical in addressing the knowledge-intensive farming practices. This paper reviews different knowledge management methods and tools used in agriculture.

Keywords: Knowledge Management, Agricultural Knowledge Management

Introduction

Knowledge is regarded as an important resource in agricultural development. Agriculture organizations realized the importance of managing explicit and implicit knowledge to disseminate right information to the right user at the right time. Adopting suitable knowledge management approach in agriculture is imperative to address the challenges of information explosion on one hand and growing needs of farmers on the other. The innovations in agriculture, food systems and markets demand new information for taking better decisions by farmers.

Challenges to Knowledge Management in Agriculture

The first challenge is the poor mechanisms and infrastructure for sharing and exchanging agriculture knowledge generated from research at national

¹ Documentation Assistant, MANAGE, Rajendranagar, Hyderabad

² Superintendent, Admn. Office, Prof. Jaya Shankar Telangana State Agricultural University, Rajendranagar, Hyderabad

³ Technical Assistant, Knowledge Management Center, Prof. Jaya Shankar Telangana State Agricultural University, Rajendranagar, Hyderabad

and regional levels. Many research activities are repeated due to the lack of such mechanisms and infrastructure at the national level. Researchers can find research papers published in international journals and conferences more quickly than finding research papers published nationally in local journals, conferences, theses, and technical reports. The second challenge is the inefficient mechanisms and infrastructure for transferring technologies produced by research to farmers either directly or through extension system. Although many extension documents are produced by national agricultural research and extension systems to inform farmers about the latest recommendations concerning different agricultural practices, these documents are not disseminated, updated, or managed to respond to the needs of extension workers, advisers and farmers. This is also true for technical reports, books, and research papers related to production. Knowledge is available through experienced farmers and specialists in different commodities. These inherited agricultural knowledge is rarely documented, but they embody a wealth of knowledge that researchers need to examine thoroughly.

Knowledge Management Processes and Tools

Knowledge is a fluid mix of framed experiences. This knowledge should be managed for the better and efficient dissemination of information to the right user at the right time. Various knowledge management tools have been used to help sharing of agricultural knowledge. Some of them are given below.

Word press

The word press is publishing software for easy, speed, and more fabulous user-based community software. It is a blogging tool around the world and is seen by millions of people worldwide. It is licensed under the GPL. It is the official successor of the b2/cafe log. The word press is an open-source project, and there are hundreds of people all over the world working on it. It was started in 2003 with a single bit of code. Since then, it has grown

to be the most comprehensive blogging tool globally. It is built on PHP and MySQL and licensed under GPL.

Media-Wiki

A wiki is a type of website that allows the users to add, remove, edit and change the content of the Web Pages. Wiki is regarded as an effective tool to co-create content and share. It is an effective way for share crop-specific knowledge by scientists and innovative farmers.

Videoconferencing

Videoconferencing is two-way synchronous video and audio transmission over the network. It is a valuable tool for applications of many collaborating efforts. It saves time and costs and allows for face to face between individuals and groups. It helps to establish linkage between farmers, extension workers and scientists.

Desktop Videoconferencing

Desktop videoconferencing is a method for individuals to communicate between single users. It is the most basic form that involves two-way voice and video contact. It involves many other activities like screen sharing, media display, chatting, and remote login.

Webcasts

A webcast is a method of broadcasting information via the Web. It is a one-way communication process. Sometimes, in webcasts, the end-user may not have the ability to interact with the presenter. Single users can see it on one computer screen or multiple users through a projector.

Webinars

Webinars are also a method of broadcasting over the web. It requires advanced registration for access to the content, which allows the two ways of communication in text messages. Both single users and multiple users

can see it by connecting to the computer. It is a web-based seminar method for information dissemination.

Podcasting

Podcasting is the method for delivering media content. Podcasts allow users to subscribe and automatically receive new content. Podcasts use RSS or XML-based feeds to bring content to users automatically. It is used to subscribe to web-based news, and information feeds. XML code is short, and once it is created once, it does not need to be created again. Podcasts can be played directly on users' computers. Podcasting permit student/trainees to listen to the lecture without attending classes.

Classroom Capture

Classroom capture technologies allow a presenter to record lectures and make them available via media content such as iTunes U and Management system. Classroom capture is the recordings of classroom-based activities made available for review. Thanks to the improvement in technology and the use of smart classes

Role of Directorate of Knowledge Management in Agriculture

The National Agricultural Research System, and the Indian Council of Agricultural Research (ICAR) have taken a leadership role in promoting of ICTs by developing knowledge management portals on crops, commodities and agrarian practices.

The Directorate of Knowledge Management in Agriculture of ICAR is an ICT-driven technology and information dissemination system for a quick, efficient, and cost-effective delivery system to all the users in agriculture. Keeping in view the current knowledge explosion trends, the Directorate delivers and provides platform to ICAR technologies, policies, and other activities through print, electronic and web approaches. The Directorate is the apex center for planning, preservation, and updating of facilitation of network connectivity across ICAR institutes and KVKs. Moreover, the

Directorate provides public relations and publicity support to the council and its component across the country.

The main areas of knowledge Management in Agriculture are regarded as follows.

1. Dissemination and sharing of agricultural knowledge through value-added information products in print, electronic, and web approach
2. Expansion of e-resources on agricultural knowledge and information for global coverage.
3. Strengthening e-connectivity among ICAR institutes State Agricultural Universities and KVKs.
4. Capacity building for agricultural knowledge management.

Conclusion

Agriculture heavily depends on knowledge to address ever growing challenges. For this there is a need for individuals and institutions in agriculture to adopt better knowledge management approaches and tools.

References

- Luen, T. W., & Al-Hawamdeh, S. (2001). Knowledge management in the public sector. *Journal of Information Science*, 27, 311-318.
- Manjunath (ed), L. (2016). *ICT for Agriculture and Rural Development*. Agri- biovet Press.
- Meera, S. N., Jhamtani, A., & Rao, D. U. M. (2004). *Information and communication technology in agricultural development: A comparative analysis of three projects from India* (p. 14). London: Overseas Development Institute.
- Ray, A. C. (n.d.). *Knowledge Management in Agriculture and its methods: A study*. *International Journal of Next Generation Library and Technologies*, 3(2), 1-8.