

SOURCES OF INFORMATION ON CULTIVATION PRACTICES TO FARMERS IN KERALA

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ABSTRACT

A plethora of information on cultivation practices are available to the farming community which helps in increasing the agricultural production. This study analyses the depth of the different media which provide meaningful information to the farmers in Kerala. While print media provides information to farmers through newspaper, farm leaflets and farm magazine, mass media provides information through via Radio and TV programmes. Among the different Information communication technology media initiatives at the farmer's level, print media plays a vital role in the information dissemination in agriculture and rural development in Kerala. As far as the media is concerned, it is the newspapers which provide great importance in farm related news. They provide information about seeds, farming, harvest, cropping, implements, weather and various government development programs to the farming community. The purpose of the radio programmes in agricultural activities is to inform the local market prices, weather information, and day to day information about agriculture. Agri. Portal are the specially designed web sites that brings information and knowledge from diverse sources like emails, online forums and search engines together in an uniform way which disseminate information to the farmers which in turn leads to agricultural development.

Key words: ICT, Agri portals, farmers, Krishi Vigyan Kendra

Introduction

Information and communication in Agriculture is not a new phenomenon. Various studies (NSSO, 2005, Mittal *et al.*, 2010 and Saravana, 2012) have shown that most farmers have access to the traditional information sources such as news papers, magazines, TV, radio, traders, input dealers, seed companies, extension services, etc. This information has a vital role to disseminate the scientific and technical agriculture knowledge to farmers during the green revolution (Kameswari *et al.*, 2012). Gradually the traditional information technology started transmitting

dissemination of knowledge to the interactive model with the help of internet revolution. Therefore, the information massively spread over various districts and villages through local languages and the institutions in this field provide new innovation and technologies to the farming community. The research paper focuses the media which are involved in various information dissemination technologies which gather information to farmers. The methodology of this paper is descriptive. Data collected from various secondary sources of information which is related to the dissemination of information to the farmers is used for the analysis in the present study.

Print Media

Print media plays a very important role in the information dissemination in agriculture and rural development in Kerala. Print media as a traditional media is closest to the people because it is participatory and effective. As far as the print media is concerned, it is the newspapers which provide great importance in farm related news and farm magazines which is published on weekly and monthly basis. Leaflets/pamphlets contain information on single subject which maybe crops, cultivation practices and others. They provide information about seeds, farming, harvest, cropping, implements, weather and various government development programs to the farming community.

News Paper

Purushothaman (2003) suggested newspaper as the important media through which the farmers in rural villages come to know about the use of modern technology. Choudhury and Payel (2011) stated that regional news papers gave more importance to agriculture and rural issues and these papers provide more space to agriculture and rural development issues. The ability of agriculture sector in uplifting the socio economic status of the community and reducing the problems of poverty cannot be argued. Printed media and agriculture sector are pertinent to each other. Print media has disseminated a number of agricultural programmes and information to the community (Bauman, 2006).

As far as Kerala is concerned all news papers provides information regarding all the activities in agriculture, viz., market price, cultivation practices, insurances, availability of tools and equipments etc. once in a week.

Agri Tech is a monthly Hindi/English news paper on modern agriculture. The regular content of the news paper will have latest news regarding technical articles, information on agriculture

machinery and equipment, agriculture seeds, fertilizer, green house technology, irrigation technology, fertilizer information, etc.

Farm Magazine

The farm magazines in Malayalam are mentioned in the Table 1 Karshakasree (MalayalaManorama), Kerala Karshakan (Farm Information bureau), *Karshakan* (Deepika), *Kalpadenu* (Kerala Agricultural University), *KrishiJagaran* (online Malyalam Magazine), etc. Many news papers have been publishing *varshikapathippu* (yearly magazine) such as *VishuPatthippu* and *Ona pathippu* about agriculture. Agriculture magazines are one of the important sources of information among farmers. *Kerala Karshakan*, magazine of FIB, is the largest circulated journal (monthly basis) in Kerala being published since 1954.

Table 1. Farm Magazines in Kerala

Name of Magazines	Type	Published by
Karshakasree	Print/online	Malayalamanorama
Kerala Karshakan	Print/online	Farm information Bureau
KarshikaVarshikapathippu	Print	Mathrubhoomi
Karshakan	Print	Deepika
Karshikarangam	Print	Jayanth Bangalore
Kalpadenu	Print	Kerala Agricultural University
Krishijagaran	Print/online	M.C Domenic
Nalikera Journal	Print/online	Coconut Development board
Rubber Magazine	Print	Rubber board
Spices	Print	Spices Board

Pamphlet/ Leaflet

Pamphlet and leaflet are the two common types of publications in agriculture and rural development which are used to provide valuable information in a nutshell. Pamphlet typically

have five small pages which include information about crop, modern farm practices, modern technology, government rural development programmes, farmers benefit schemes, insurance, etc. Leaflet also contains such type of information but it has one or two pages only. Farmers are getting these pamphlet or leaflet from various agencies like agriculture and rural development.

Radio and Television

Radio can play a crucial role and which is the most important and cheapest mass media in advancing rural development. A series of radio programmes can convey messages quickly irrespective of distance and literacy level (Geetha 2007). It has a great variety of content about farm, home, community development and entertainment. Mass media like radio and TV have disseminated a number of agriculture programmes and information for rural development (Bauman 2006). *Vayalumveedum* (farm and home) radio programme has played a key role in this regard and has started broadcasting in Malayalam language in 1966 from Aakasavani, Kerala. This programme is about the dissemination of information of agriculture and rural development which was begun under the 'Grow more Food' campaign launched by the central government.

All India Radio (AIR) launched an exclusive project which supports agriculture entitled "Kissanvani" from February 2004. This programme is in collaboration with Dept. of Agriculture & Co-operation, Ministry of Agriculture. The purpose of the programme is to inform the local market prices, weather information, and day to day information about agriculture. Presently Kissanvani is being broadcasted by 96 AIR stations across the country.

Krishi Darshan is a Malayalam television broadcasting commenced in 2005. It is a weekly broadcast programme from Monday to Friday and which includes information regarding research inputs, field expertise, features, success stories of farmer, field based quiz programme, crop seminar and live question answer sessions. Other important subjects are taken up for discussion includes organic farming, water harvesting, along with important crops cultivated in the region.

KissanKrishiDeepam is agriculture based informative television programme produced by the Indian Institute of Management in Kerala (IIIM-K), which targeted the entire farming community in Kerala. This programme is backed by a toll-free telephone number and interaction with farmers (viewers) and to get feedback from the viewers. It is a satellite channel programme broadcasting three times per week. Besides this, the DVD's and CD's are also available for the farmers to view the programme as part of the continuous programme. Krishi darshan was the first TV programme for farmers which started in 1960's on dooradarshan channel. The farm related programme in Kerala through television and radio is shown in Table 2.

Table 2. Farm Related Programmes in Kerala through Television and Radio

Sl. No.	Media	Programme	Day	Time
1.	All India radio	Vayalumveedum (Farm and Home)	Monday to Friday	6.50 PM
		Agricultural news	Everyday	7.05 AM
		Kuttanad Radio	Monday Tuesday, Thursday, Friday	7.05 AM
2.	Doordarshan	Krishi darshan	Monday to friday	7.05 AM
		Noorumeni	Sunday	
3.	Asianet	Kissankrishideepam	Saturday	7.30AM
			sunday	7.30 AM
4.	Asianet news	Kissankrishideepam	Monday	4.30 PM
5.	Jaihind	Mannummanushyanum	Sunday	4.30 PM
6.	Jeevan	Haritha keralam	Friday	6 PM 12 PM
7.	Kairali	Bhoomigeetham	Saturday	10 AM
8.	Mathrubhumi	Krishibhoomi	Wednesday, Thursday, Friday	3.30 PM & 6.30 PM
9.	Media one	Njattuvela	Wednesday, Friday	4.00 PM
10.	Kaumidi TV	Haritha sundaram	Monday, Wednesday, Friday	3.35PM
				4.35 PM
				8.00PM

Source: Compiled from Various Sources

The Extension Services and Information Dissemination

There are a number of institutions that help the extension services for farmers and providing information from different agricultural practices. The institutions that exist in Kerala to help the farmers are Farm Information Bureau, Krishi Vigyan Kendra, Krishi Bhavan and Agricultural Universities.

Farm Information Bureau (FIB)

Farm information bureau is a nodal agency in the field of agriculture extension which provide services, active and complete information services to farmers for agriculture such as prices of inputs, farm management, weather, marketing, precision farming, scientific knowledge, etc. This also helps the farming community in availing various benefits offered by government in time. FIB works as an effective link between the farming community and research stations by disseminating right knowledge to the right person and providing feed back to research community. FIB has been publishing English journal of *Kerala Karshakan* since 2013.

Kerala Agricultural University (KAU)

The history of agricultural education in Kerala was traced back to the year of 1896 through a scheme evolved in the Travancore State with the purpose of training a few young men in scientific agriculture at the demonstration farm in Trivandrum district. Various land stones were laid in the field of scientific knowledge since 1896 through agriculture education. Government of Kerala established Kerala Agricultural University in 1971 which is one of the pioneering institutions in Kerala providing human resources, skill and scientific technology for agriculture development in Kerala. KAU has seven colleges and six Regional Agricultural Research Stations (RARS), 15 research stations, 16 research and extension units for the development of agriculture in the state.

Krishi Vigyan Kendra

For creating awareness among farmers about the latest scientific technology and to provide timely information, KVKs plays a different extension programme. ICAR has established 42 KVKs across the country with an aim to conduct advisory services, diagnostic and clinical services, exhibitions, trainees workshop, field days, seminars, group meeting, lectures delivered as resource persons, plant animal health camps, soil test campaigns workshop and others. KVK also organized extension programme through information technology to have wider coverage in rural area. KVK produced a variety of technological products like seed and planting materials

which benefitted 58.81 lakh of farmers in the country (Annual Report of ICAR, 2016). 38,941 training courses were conducted by KVKs for various technologies which benefitted 11.31 lakh farmers. These training were on enhancement of productivity of field crops, capacity building and group dynamics, soil health and fertility management, farm machinery tools and implements etc. In Kerala, 14 KVKs are established for the objectives of the link between farmers and scientific community in agriculture.

The zone wise distribution of KVKs is shown in Table 3. There are eight agricultural zones headed by zonal agricultural units which are responsible for co-ordination and guidance to the KVKs under different administrative level.

Table 3. Table Zone wise Distribution of KVK

Zone	States	Number of KVK
Zone I Ludhiyana (80)	Delhi	01
	Haryana	18
	Himachal Pradesh	12
	Jammu & Kashmir	19
	Punjab	20
Zone II Kolkata (83)	Andaman Nicobar Islands	03
	Bihar	38
	Jharkhand	24
	West Bengal	18
Bharapani Mekhalaya Zone III (81)	Assam	25
	Arunachal Pradesh	14
	Manipur	09
	Mizoram	08
	Meghalaya	05
	Nagaland	09
	Sikkim	04
	Tripura	04
Zone IV Kanpur	Uttar Pradesh	68
	Uttarakhand	13

(78)		
Zone V Andhra Pradesh (71)	Andhra Pradesh	21
	Telangana	13
	Maharashtra	44
Zone VI Jodhpur (42)	Rajasthan	42
	Gujarat	29
Zone VII Jabalpur (100)	Chhattisgarh	20
	Madhya Pradesh	47
	Odisha	33
Zone VIII Bangalore (81)	Goa	02
	Lakshadweep	01
	Karnataka	31
	Kerala	14
	Pudhucheri	03
	Tamil Nadu	30
National level		642

Source: ICAR (2018)

Krishi Bhavan

Krishi Bhavan, an undertaking by the Department of Agriculture in various states deals with the formulation and implementation of various programme to increase the production and productivity of various food and cash crops in Kerala. It undertakes activities among different cultivators to promote scientific methods of cultivation and plant protection etc. Agriculture, education and extension are three important functions of Krishi Bhavan. It also arrange the supply of high yielding variety seeds, planting materials, plant protection chemicals to farmers and formulate programme and policies relating to credit to farmers. This department provides subsidies and provision of insurance to reduce risk in the cultivation. There are 1062 Krishi Bhavan in Kerala among which Malappuram (108) and Thrissur (105) has the highest number of Krishi Bhavan. The district wise list of Krishi Bhavan in Kerala is given in Table 4.

Table 4. District wise Distribution of Krishi Bhavan in Kerala

Districts	Krishi Bhavan (Numbers)
Thiruvananthapuram	89
Kollam	76
Pathanamthitta	59
Alappuzha	77
Kottayam	79
Idukki	53
Eranakulam	89
Thrissur	105
Palakkad	92
Malappuram	108
Kozhikode	80
Wayanad	26
Kannur	88
Kasaragod	41
Total	1062

Source: Farm Guide, FIB

Advanced Practice of Agriculture Knowledge Portals (APAKP)

Portals are the specially designed web sites that bring information and knowledge from diverse sources like emails, online forums and search engines together in a uniform way. There are too many portals in agriculture and rural development. Some portals are discussed below:

Farmer's portal

Farmers get all relevant information on specific subjects around his village, block, district and State. This information is disseminated in the form of SMS, text, email and audio/video in the English and regional languages. Farmers are able to ask questions and they will be given valuable feedback regarding the practices which they are undergoing.

Kissan portal

Karshaka Information Systems Services and Networking (KISSAN) is an integrated multi model information technology enabled agriculture extension system which is established by the Department of Agriculture, Govt. of Kerala. KISSAN, the project was conceived, developed and managed by the Indian Institute of Information Technology and Management (IITM-K). KISSAN portal provides an online platform for the farmers to interact with expert group, scientist and agriculture extension officer in an interactive way. The portal also provide several services like weather and crop advisory, market information, expert system on fertilizer recommendation, etc. The basic objective of the project is to provide right information to the right person at the right time in the right place and in the right context (Sravanan, 2011).

KAU Agri-Infotech Portal

Kerala Agricultural University indigenously designed a bi-lingual (English and Malayalam) Agri.-Infotech portal based on the project of Rashtriya Krishi Vikas Yojana (RKVY) in 2013. This portal is a highly user friendly platform and has been loaded with several unique advisory and transfer of technology software's for the use in Krishi Bhavans, Krishi VingyanKendras (KVKs), commodity boards, Akshaya kendras, farmers consortium or even in farmers house.

Agri e-Experts portal

This portal has an agriculture advisory digital package and the crops section of the portal contains more than 140 crops. In addition to that there are different segments providing information such as crop management, crop protection, farm mechanization, etc. which give detailed explanation with illustrations. Some of the segments in the portal are discussed below:

KAU Fertualtor and Fertiliser Decision support system portal

It is a decision support calculator that helps the farmer in the easy and precise calculation of fertilizer doses for crops grown in Kerala according to their variety, farming situation, growth phase, weather and other practices. The exact doses of fertilizers for unit area and number of plants can be calculated with a tool. Also, soil testing results and targeted yield are also available in this portal.

KAU- Crop Doctor Portal

Plant protection is important for getting valuable crop yield. There are different pages to describe the management practices of crops pests, diseases and weeds. Environment friendly, sustainable and organic crop protection methods are also explained in this link.

Market Intelligence Portal

This portal provide links to market intelligence service, agriculture price information and forecast system provided by Vegetables and Fruits promotion council of Kerala (VFPCCK).

Agri -Inputs and Services Data Base portal

This software gives information regarding the various agencies and institutes who provides planting materials, manures and fertilizers and other agricultural inputs and materials needed for crop production. Central and State government agencies, KAU Station, and other private and non- government agencies information are also available with this portal. District wise and item wise information are available. In addition to the these, Agri portal provides information such as digital library for farm implements and machinery, weather information and weather based farm operations, Agri almanac(dynamic and interactive digital calendar), Farm Knowledge bank, E-Library and Farmers corner, Radio and TV channels, Photo and Video Gallery, success stories, experience sharing.

KarshikavVivaraSanketham (Farmers Information Centre)

Agricultural information at finger tip is a digitally empowered information technology enabled small farmers agri Business Consortium (SFAC) in Kerala. This is a single window system to get all the information on agriculture, animal husbandry, dairy sector by integrating social media. This project provides call centre facility for the farmers through web portal, mobile app, Whatsapp, etc. Three mobile app such as karshikakeralam, e-marketing and web portal in Google play store are also available in the karshikavivarasanketham. National and state programmes on agriculture and allied sector, the information about query and content, information about availability of all inputs including skilled labour, weather and knowledge updates, etc are the important feature of the system.

Conclusion

The foregoing analysis discussed the role of IT initiatives for the overall development of rural areas along with various media initiatives implemented at national and state level. Most of the

projects in India are agriculture and allied services oriented such as kisan call centers, rural radio and TV programmes and information kiosks and tele centers which provide information to the rural people. The various aspects which accelerates the rural development particularly agriculture is promoted through different types of information communication technology devices such as print, mass media, extension services. The moto of all these media initiatives in the state of Kerala is 'Knowledge society with sustainable development'. Some projects in the states are concentrated in village knowledge centers which provide various information to the rural community. These initiatives, various policies and projects created a new information society which has been transforming the rural economy of the states in India. Though there has been a boom in various media projects in agriculture and infrastructure development in rural areas, the extent of real impact of these innovative practices on the avowed objectives of rural development is still an unsettled one.

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