TRIBAL FARMERS INFORMATION NEEDS AND ICT PREFERENCE ASSESSMENT

R. SARAVANAN

Assistant Professor and Principal Investigator, e-Arik
Department of Extension Education and Rural Sociology
College of Horticulture and Forestry
Central Agricultural University (CAU)
Pasighat, Arunachal Pradesh

Access to the appropriate information for agriculture and rural development is a difficult task for the farmers of North-East India. To increase the farm production, the tribal farmers need to be informed on recent scientific farm innovations. In this connection, ICTs hold lot of promise to deliver agricultural knowledge to the tribal farmers. Hence, the Department of Scientific and Industrial Research (DSIR) sponsored research project "e-Arik (e-Agriculture): ICTs for Agricultural Extension" is implemented by the Central Agricultural University at Yagrung village of East Siang district of Arunachal Pradesh state. In order to provide agricultural extension services through Information and Communication Technologies (ICTs), it is necessary to assess the information needs of the farmers so as to prepare and deliver specific messages or technologies and also to develop ICT based training modules as per farmers' requirements. Hence, a PRA exercise was carried out with the following objectives;

Fig. 1 Village Resource Map (Yagrung-Tekang & Kongkang Villages)

Village Resource Map

- To analyze the tribal farmers resource availability and constraints
- To know the farm seasonal activities and crop wise information needs
- To understand the tribal farmers household ICT availability and preference.

METHODOLOGY

The study was conducted in the selected three villages namely, Yagrung, Tekang and Kangkong of Pasighat circle in East Siang district of Arunachal Pradesh. Sixty tribal farmers were randomly selected to conduct the Participatory Rural Appraisal (PRA).

Table. 1 Farm Seasonal Calendar of Yagrung, Tekang and Kangkong Villages

Month	January	February	March	April	May	June	July	August	September	October	November	December
Crops	Colocasia Maize	Pear Pumpkin Brinjal	Bamboo Plant Banana Planting	Orange Pineapple Chilli Cucumber	Paddy Seeding / Nursery	Seasonal Ploughing and Paddy Transplanting	Seasonal Ploughing and Paddy Transplanting	Soya bean Upland (Dry field) paddy	Maize Mustard	Cabbage Coriander Tomato Potato	Potato Radish Chilli	Chilli, Bitter Brinjal
Intercultural Operations	Cleaning of dry field	Weeding of year old dry field	Festival season	Weeding of young plant in orchard or field	Making Fencing around the seeding growing field	-------	-------	Weeding in paddy field	Weeding in paddy field	Mandarin Orchard weeding	Bean and Soya bean Field weeding	Weeding of banana and Toko plantation
Pest and Diseases	Colocasia insect and pest including grass hopper	Cricket insects and grass hopper	Banana insect and pest	Chilli shoot borer	Maize insects and pest	Paddy, banana insect and pest	Pest and insect of paddy	Cricket in paddy field	Cricket in paddy field	Insect and bug of seasonal crops	Mustard pest	Insect and pest of cabbage and potato
Harvest	Mustard Turmeric Yam Colocasia Owin (Pakkom leaf)	Fern leaf Mustard Owin (Pakkom leaf)	Pumpkin and Bottle guard	Wild Bamboo Seeding harvest	Arecanut Bamboo sucker	Wild Mustard Ginger	Pine apple Lemon	Pear Pine apple	Banana Guava Papaya and cucumber	Sugarcane Yam	Paddy Bhindi / Okra Brinjal Chilli	Paddy Mandarin Orange

While selecting the farmers, care was taken to provide proportionate representation to the gender, education levels, and land holding size of the farmers. The selected farmers were divided into groups. Each group was assisted with two PRA facilitators in local dialect.

PRA METHODS AND FINDINGS

Village Resource Map

A group of farmers were involved in village resource map drawing and during the process resource base (water, fertility, crops and constraints and opportunities were discussed). The main irrigation source is the rivers Maye, Kime and Tolem. The predominant cropping system is wet rice cultivation, mandarin orange orchards and upland rice cultivation in Jhum lands.

Farm Seasonal Calendar

In farm seasonal calendar (Table 1), farmers described seasonal variations in crop cultivation, intercultural operations, pest and diseases occurrence and harvesting of farm produce.

Crop Specific Information Needs-Preference and Ranking Method

A group of 18 farmers expressed information needs on the following crops, including market information needs. Based on their preference, percentage and ranks were worked out.

Table. 2 Crop wise Information Preference and Ranking N=18

Sl. No.	Crop	No. of Farmers	per-centage	Rank
1.	Khasi Mandarin	15	83	1
2.	Assam Lemon	12	67	2
3.	Mango	11	61	3
4.	Pepper	11	61	3
5.	Paddy	10	56	5
6.	Bamboo	8	44	6
7.	Market information	8	44	6
8.	Litchi	6	33	8
9.	Guava	4	22	9
10.	Jackfruit	2	11	10

Table. 3 Household ICT Availability *N=20*

Sl. No	ICTs	N0. of Households	%	Rank
1.	Radio	20	100	1
2.	Telephone	12	60	2
3.	Television	6	30	3
4.	Computer	0	0	4

Household ICT Availability – Bar diagram Method

ICT availability among farmers was assessed using ICT pictures and stones for depicting bar diagram. Among 20 farmers, all farmers possessed radio, 12 farmers had telephone and 6 farmers had television.

A group of 25 farmers were asked to express their preference for ICT for getting farm information. Almost equal number of farmers preferred computer with internet (88 per cent), radio (84 per cent) and television (76 percent). In contrast to this, only four farmers (16 percent) preferred information through telephone.

ICT Preference of Farmers- Bar Diagram Method

Table. 4 ICT Preferences of Farmers *N=25*

Sl. No	ICTs	No. of Farmers	%	Rank
1.	Computer with Internet	22	88	1
2.	Radio	21	84	2
3.	Television	19	76	3
4.	Telephone	4	16	4

CONCLUSION

Through Participatory Rural Appraisal, farmers analysed their resource availability, constraints and opportunities for farming. Further, they diagrammatically depicted the seasonal variations in crop cultivation, intercultural operations, pest and diseases occurrence and farm produce harvesting. Further, the PRA exercise indicated that cent percent of farmers possessed radio. A majority of farmers need the information on Khasi Mandarin, Assam Lemon, Mango, Pepper and Paddy. Most of the farmers preferred internet, radio, and television for getting agricultural information in the "e-Arik: ICTs for Agricultural Extension Services"- village knowledge centre, Yagrung Village, Arunachal Pradesh.

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government and non-government organisations personnel and media people from New Delhi and Jhansi visited his field and received relevant information. After visiting the field, a number of farmers from the same village and distant villages started agroforestry practices at their fields. In his community Tijju is being referred to as rich man now by villagers.

FARMER'S OPINION

The farmer's opinions are presented in Table-5. The farmer indicated his preference for agrihorti landuse system over sole cropping. He preferred aonla as associate tree species in crop lands on account of its sparse canopy, least bird damage, least theft of fruits, no crop rampage due to fruit harvesting as fruits are harvested in November i.e. before sowing of wheat crop, high returns and very high market demand for fruits.

The farmer indicated that in near future he is planning to remove his ber and guava plants and replace them by planting aonla.

Raferences

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