

## Farmers' Preferences for Animal Husbandry Advisory Services of Public and Private Extension Service Organizations in Meghalaya

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### ABSTRACT

A study was conducted during 2020-21 in Ri-Bhoi district of Meghalaya involving two types of extension organizations i.e., public; Krishi Vigyan Kendra (KVK), Ri-Bhoi, and private; Rural Resource and Training Centre (RRTC) to assess the farmers' preferences for animal husbandry advisory services provided by them. The data were collected from randomly chosen 120 beneficiary-farmers through structured interview schedule. Preferences of farmers for various animal husbandry advisory services were assessed on the basis of various dimensions, viz., adequacy, relevancy, timeliness, accessibility and need fulfillment. The scores assigned on a scale of 0 to 3 for each of the five parameters of preferences, i.e., no preference (0), low preference (1), moderate preference (2), and high preference (3). To analyze the perceived degree of preferences of farmers about farm advisory services, and the mean scores for each advisory were calculated. The mean differences of KVK, Ri-Bhoi and RRTC beneficiary farmers' perceived preference for services were found to be significantly different for accessibility at 0.01 level of significant. The study revealed that KVK and RRTC were almost similar with regard to farmers' preference for the animal husbandry service provided by them.

Key words: Farmers' preferences, advisory services, extension organizations, Animal Husbandry.

### INTRODUCTION

Rearing animals is an integral part of the Indian agriculture. Since the beginning of the civilization farmers in different agro climatic regions domesticated various animals for many purposes. It not only helps in the agriculture work and production of manure but also for production of meat and milk (Khan *et al.*, 2010). To meet the requirement of the farmers and meeting the increasing population demands of the livestock products, various organizations sectors are responsible to provide the farm advisory services. Extension organizations are responsible for providing advisory services to the farmers (Singh *et al.*, 2016). Animal husbandry extension services referred to the entire set of organizations that support and facilitate farmers engaged in livestock production to solve problems and to obtain information, skills, and technologies to improve livelihoods and well being (Mc Cullough, 2015). The demand for livestock products is increasing day by day all over world, especially in the developing and less developed countries and which is expected to

double by 2020 (Delgado *et al.*, 1999). Cattle and buffalo in selected areas have been reared and used for mainly to work in agriculture as draught animals (Rangnekar, 2006). Farm advisory services is a term used as an alternate for extension services. Farm advisory services provide knowledge and technology to improve agricultural productivity; agricultural advisory services also fulfill a variety of new functions, such as linking smallholder farmers to high-value and export markets and also promoting environmentally sustainable production techniques. Kantner (1982) pointed out that in order to measure the effectiveness of the extension services we have to assess the attitude of the farmers about the information they have received from the extension organizations. We also have to assess the effectiveness of the agents who delivered the extension information, the appropriateness on the use of the extension method and the programmes' relevancies catering to needs of the farmers.

Extension services both public and private play significant role in improving the livelihood of the farmers. It is necessary to consider how both

extension services can complement and improve the existing efforts in the area of extension. The objectives of the commercial firms' extension activities are not the same as those of the public or government funded extension services. Therefore, there is need to complementing government funded extension by involvement of cooperatives, farmers and other community-based organizations, NGOs and commercial firms in doing the extension work. Extension organizations provide various types of farm advisory services. However, farmers may prefer only a few of them more than the other services. The farmers' acceptance for the farm advisory services depends upon their preferences of varied aspects of the services provided by the extension organizations. In this regard, present study was undertaken to understand the different aspects of the livestock advisory services based on their appropriateness to fulfilling the farmers' needs. A farmer's preference refers to his attitude towards a set of farm advisory services provided by the extension organizations. Animal husbandry services included all activities including cows/ buffaloes, piggery, fishery, poultry/ duckery and bee keeping.

#### METHODOLOGY

The study was conducted in Ri-Bhoi district of Meghalaya including two organizations, viz., Krishi Vigyan Kendra (KVK), Ri-Bhoi, as public extension organization and Rural Resource and Training Centre (RRTC) as private extension organization. The data were collected from randomly selected 120 beneficiary-farmers through structured interview schedule for assessing the preferences of the farmers to various farm advisory services provided by the two organizations *i.e.*, KVK and RRTC.

To measure the preference of farmers for various farm advisory services was assessed by asking the farmers to give their rating for each of the farm advisory services on the response categories such as 'adequacy' (adequate (3) or moderately adequate (2), and inadequate (1)), 'relevancy' (more relevant (3) or moderately relevant (2) or not at all relevant (1)), and 'timeliness' (always timely (3) or sometimes timely (2) or very late/untimely),

'accessibility' (easily accessible (3) or accessible with some degree of difficult (2), or not at all accessible (1)) and 'need fulfillment' (needs fulfilled completely (3) or moderately fulfilled (2) or not at all fulfilled (1)). The scores assigned will be 3 or 2 or 1 for each of the five parameters of preferences. The farmers were asked to score the advisory services on a scale of 0 to 3. In this scoring method, a score of 0 indicated no preference, 1 low preference, 2 moderate preferences, and 3 high preferences.

To analyze the perceived degree of preferences of farmers about farm advisory services, the mean scores of each advisory were calculated.

To study the farmers' preferences of services on animal husbandry following advisory services were taken:

- Advisories on cows/ buffaloes included areas of health management, fodder production, nutrition, disease management and breed improvement.
- Advisories on piggery included areas of health management, nutrition, disease management, breed improvement
- Fishery advisories included provision of fingerlings, nutrition, integrated farming,
- Poultry/ duckery included advisories related to housing, nutrition/ feed, disease management.
- Bee keeping included advisories related to bee rearing, hone extraction technique

#### RESULTS AND DISCUSSION

The animal husbandry advisory services provided by two types of extension organizations *i.e.*, public; Krishi Vigyan Kendra (KVK), Ri-Bhoi, and private; Rural Resource and Training Centre (RRTC) considered in present study were: cows / buffaloes (5), piggery (4), fishery (3), poultry / ducker (3), and bee-keeping (2). A total of 17 advisories related to advisory services were taken into consideration. Accordingly, the farm services related to cows / buffaloes and piggery are presented in one table and the rest of farm services in another table. The beneficiary-farmers' preference mean scores were computed on all the five parameters of preference for livestock services related to five advisories on cows/buffaloes and

Table 1  
Perceived preferences of farmers with respect to livestock services (cows/ buffaloes and piggery) from KVK, Ri-Bhoi

Sl. No.	Livestock advisory services	Mean Perception Score					
		Adequacy	Relevancy	Timeliness	Accessibility	Need Fulfillment	Mean preference score
Cows / Buffaloes							
1	Health management	0.6	0.6	0.6	0.6	0.6	0.6
2	Fodder production	0.7	0.7	0.7	0.7	0.7	0.7
3	Nutrition	0.7	0.7	0.7	0.7	0.7	0.7
4	Disease management	0.6	0.6	0.6	0.6	0.6	0.6
5	Breed improvement	0.6	0.6	0.6	0.6	0.6	0.6
Piggery							
1	Health management	0.9	0.9	0.9	0.9	0.9	0.9
2	Nutrition	1.0	1.0	1.0	1.0	1.0	1.0
3	Disease management	1.0	1.0	1.0	1.0	1.0	1.0
4	Breed improvement	0.6	0.6	0.6	0.6	0.6	0.6

From the results given in Table 1, it was found that respondents of KVK beneficiary farmers perceived low preference for livestock services related to *cows and buffaloes*. For piggery, interventions related to *nutrition and disease management* was moderately preferred while *health management and breed improvement* related services were perceived as less preferred.

All the nine components of livestock

services related cow, buffaloes and pigs were rated poor on all the five parameters of degree of perceived preference: adequacy, relevancy, timeliness, accessibility and need fulfillment.

The RRTC beneficiary farmer respondents' preference mean scores were computed on all the five parameters of preference for livestock services related to five advisories of cows/buffaloes and four advisories of piggery (Table 2).

Table 2  
Perceived preferences of farmers regarding livestock services (cows/ buffaloes and piggery) from Rural Resources Training Centre (RRTC)

Sl. No.	Livestock advisory services	Mean perception score					
		Adequacy	Relevancy	Timeliness	Accessibility	Need fulfillment	mean preference Score
Cows/ Buffaloes							
1	Health management	1.6	1.6	1.6	1.6	1.6	1.60
2	Fodder production	0.6	0.6	0.6	0.6	0.5	0.58
3	Nutrition	0.5	0.5	0.5	0.5	0.5	0.50
4	Disease management	0.6	0.6	0.6	0.6	0.6	0.60

5	Breed improvement	0.4	0.4	0.4	0.4	0.4	0.40
Piggery							
1	Health management	1.6	1.7	1.8	1.8	1.9	1.76
2	Nutrition	1.5	1.7	1.5	1.6	1.5	1.56
3	Disease management	1.5	1.6	1.6	1.6	1.5	1.56
4	Breed improvement	1.	1.3	1.3	1.4	1.4	1.36

As can be seen from the results given in Table 2, it was found that respondents of RRTC beneficiary farmers perceived moderate preference for livestock services related to health management of cows and buffaloes. RRTC beneficiary farmers perceived health related services as moderately preferred while in their perception other services related to cows and buffaloes were observed as less preferred. For piggery, interventions related to health management, nutrition and disease management and breed improvement related services were perceived as moderately preferred by RRTC beneficiary farmer respondents. All the piggery related services provided by RRTC were moderately preferred by the RRTC beneficiary farmers

The KVK beneficiary farmers appeared to be showing low degree of perceived preference for animal husbandry services related to cows, buffaloes and pigs. But the RRTC beneficiary farmers had preferred moderately the services

related to piggery advisory services.

Farm advisory services related to fisheries, poultry/duckery and bee-keeping

Here the KVK beneficiary farmer respondents' preference mean scores were computed on all the five parameters of preference for advisories of fisheries, poultry / duckery, and bee-keeping are given in Table 3. Perceived degree of preferences of farmers was presented on three related farm services, fisheries, poultry / duckery, and bee-keeping.

Fisheries: Provision of fingerlings, providing nutrition and integrated fish farming were the three components under fisheries, on which KVK beneficiary farmers' perceived preferences on five rating parameters. As can be seen from the results, these farmers had low perceived degree of preference on all the three components. Their scores on all five parameters were also observed to be low.

Table 3  
Perceived preferences of KVK beneficiary farmers on fisheries, poultry/duckery and bee-keeping related services

Sl. No.	Farm advisory Services	Mean Perception Score					
		Adequacy	Relevancy	Timeliness	Accessibility	Need fulfillment	Mean preference score
Fishery							
1	Provision of fingerlings	0.3	0.3	0.3	0.3	0.4	0.32
2	Nutrition	0.3	0.3	0.3	0.3	0.3	0.30
3	Integrated farming	0.3	0.3	0.3	0.3	0.4	0.32
Poultry/ Duckery							
1	Housing	1.6	1.6	1.6	1.6	1.6	1.60
2	Nutrition/ feed	1.5	1.5	1.5	1.5	1.6	1.52
3	Disease management	1.5	1.4	1.4	1.4	1.4	1.42
Bee keeping							
1	Bee rearing	3	2	2	2	3	2.4
2	Honey extraction technique	2	2	2	3	2	2.2

Poultry / Duckery: For poultry, and duckery, three components, viz., housing, nutrition or feed management, and disease management were taken to measure the perceived degree of preference of KVK beneficiary farmer respondents. Their preferences were recorded as moderate as can be seen from the results in the table.

Bee-keeping: This is one enterprise that can be easily managed by farmers. The advisory service of bee-keeping has two components: bee rearing and honey extraction technique. Both these components

were moderately preferred by KVK beneficiary farmers.

RRTC beneficiary farmer respondents' preference mean scores were computed on all the five parameters of preference for services related to fisheries, poultry / duckery, and bee-keeping are given in Table 4.

Fisheries: As can be seen from the results in Table 4, the perceived preference of RRTC beneficiary farmers was low on all the three components of fisheries.

**Table 4**  
*Perceived preferences of RRTC beneficiary farmers on fishery, poultry/duckery and beekeeping related services*

Sl. No.	Farm advisory Services	Mean Perception Score					
		Adequacy	Relevancy	Timeliness	Accessibility	Need Fulfillment	Mean preference Score
<b>Fishery</b>							
1	Provision of fingerlings	0.5	0.5	0.5	0.4	0.5	0.48
2	Nutrition	0.4	0.5	0.4	0.4	0.4	0.42
3	Integrated farming	0.4	0.5	0.4	0.5	0.5	0.46
<b>Poultry/ Duckery</b>							
1	Housing	1.8	1.9	1.8	1.8	1.9	1.84
2	Nutrition/ feed	1.7	1.7	1.7	1.7	1.8	1.72
3	Disease management	1.6	1.6	1.6	1.7	1.7	1.64
<b>Bee Keeping</b>							
1	Bee rearing	2	2	1.5	2.5	1.2	1.84
2	Honey extraction technique	3	2.5	2	2	2	2.3

Poultry / Duckery: RRTC beneficiary farmers had shown moderate preference for all the three components of poultry / duckery. RRTC staffs were providing the vaccination services for poultry.

Beekeeping: RRTC beneficiary farmers appeared to

moderately preferring bee- keeping activities.

The t-test was conducted to compare the mean preference scores of KVK and RRTC beneficiary farmers' on perceived preference for farm advisory services are presented in Table 5.

**Table 5**  
*Comparison of KVK and RRTC in terms of perceived preferences of farm advisory services (n=30)*

Sl. No.	Variables	KVK (Mean)	RRTC (Mean)	t-test	p-value
1	Adequacy	0.755	1.0331	1.88	0.064
2	Relevancy	0.752	1.0169	1.90	0.62
3	Timeliness	0.752	1.0169	1.06	0.29
4	Accessibility	0.912	1.0920	3.58	0.01
5	Need fulfillment	0.593	1.1275	1.90	0.062

The results of *t-test* are presented in Table 5 that revealed that the mean differences of KVK, Ri-Bhoi and RRTC beneficiary farmers' perceived preference for services were found to be significantly different for accessibility at 0.01 level of significant. This clearly showed that KVK and RRTC were almost similar with regard to farmers' preference for the advisory services provided by them.

#### CONCLUSION

The KVK beneficiary farmers appeared to be showing low degree of perceived preference for services related to cows, buffaloes and pigs. But the

RRTC beneficiary farmers had preferred moderately the services of livestock related to piggery advisory services. In case of poultry and beekeeping advisory services both the KVK and RRTC farmers perceived moderately for the poultry and beekeeping advisory services. From the results of *t-test* we can conclude that KVK and RRTC were almost similar with regard to farmers' preference for the advisory services provided by them. With the mean differences of KVK, Ri-Bhoi and RRTC beneficiary farmers' perceived preference for services were found to be significantly different for accessibility at 0.01 level of significant.

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