

**Clientele Satisfaction of extension services provided
by KVKs of Meghalaya**

.Abstract

The Krishi Vigyan Kendras (KVKs) are very important organisations for promoting agricultural development at the district level through the various trainings and other development programmes they offer. One way of knowing how effective these KVKs are in catalysing district agricultural development is to study the clienteles' satisfaction of the farmers involved with those KVKs. In this study, 150 farmers across five districts of Meghalaya were interviewed to study the clienteles' satisfaction, it was found that the client farmers of the KVKs were highly satisfied with the outputs and services of the KVKs since the overall clienteles' satisfaction index was found to be 76.49. The farmers however did express a few problems such as non-timely delivery of relevant inputs/services, lack of innovative need based technologies and the lack of relevant market information. There should be more initiatives from the KVKs to provide regular market information to the farmers through the use of ICTs. Development programmes should be delivered timely so that farmers can plan their farming activities accordingly and more effort should be given by the KVKs to increase participation of farmers in programme planning and execution to help develop innovative need based solutions in accordance to the farmers' problems.

Keywords: KVK, Clienteles' Satisfaction, Agricultural Organisations.

1. INTRODUCTION

The Krishi Vigyan Kendras (KVKs) are organisations at the district level with the main aim of addressing the importance of translational research for effective technology dissemination with regards to the changing agricultural scenario. The first KVK was set up in 1974 on pilot basis, under the administrative control of Tamil Nadu Agricultural University, Coimbatore and following that the Planning Committee approved the setting up of 18 KVKs during the Fifth Five Year Plan [1]. Today there are around 694 KVKs in the country.

KVK is the only institution at the district level in India for technological backstopping in agriculture and allied sectors. All KVKs are envisaged to reduce the time lag between generation of technology at the research institution and its application to the location specific farmer fields for increasing production, productivity and net farm income on a sustainable basis. To achieve this, KVKs mandated to perform i) On-Farm Testing (OFT) to assess the location specificity of agricultural technologies under various farming systems; ii) Frontline Demonstration (FLD) to showcase the specific benefits/worth of technologies on farmers' fields and develop the capacity of farmers and extension personnel to update their knowledge and skills in modern agricultural technologies and enterprises and iii) to work as Knowledge and Resource Centre for improving overall agricultural economy in the operational area by using Information Communication Technology (ICT) to conduct frontline extension programmes and provide farm advisories and other media on varied subjects of interest to farmers.

Like other extension service providers, Krishi Vigyan Kendras (KVKs) should have an increased emphasis on measuring quality of programmes and activities through client satisfaction survey because client's satisfaction is said to be a key indicator in determining the performance level of the organization. Customer satisfaction is important because it is a process which starts with the formation of customers' expectations and ends with communication of the obtained experience which may help in overall effectiveness in delivery of products and services by the organization [2]. Measuring customer satisfaction is also a way to

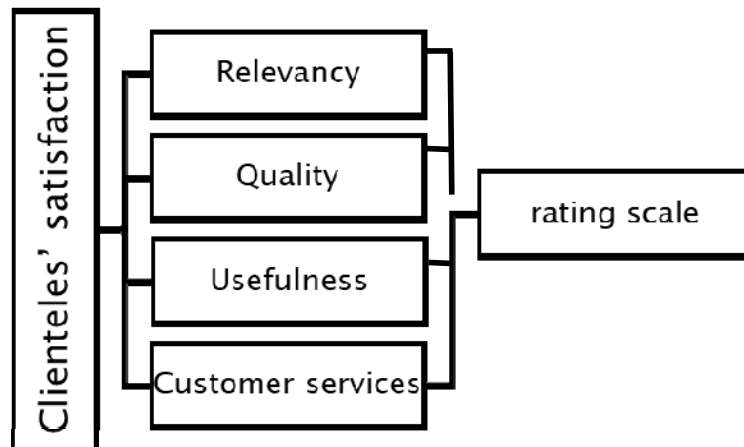
51 assess the quality of the outputs delivered by the organization as higher satisfaction of its
 52 acquisition and use depends on the perceived quality of the product or service [3].

53 Assessment of the clientele's satisfaction will provide an insight to the
 54 effectiveness of the KVKs in fulfilling the agricultural needs of the farmers of their respective
 55 operational districts. Studying clientele's satisfaction may not only help uncover any constraints
 56 in the delivery of outputs and services of the KVKs to the clients but also help document and
 57 publish any recommendations made by the farmers which may help increase the organisational
 58 efficiency of the KVKs with regards to agricultural development.

59 2. METHODOLOGY

60 In this study the clientele's satisfaction is operationalised as the degree to
 61 which the clientele are satisfied or not satisfied with the services of the KVKs. Clientele
 62 considered in this study are the farmers, rural youths and agripreneurs who have availed one or
 63 the other services and inputs from the KVKs. For measuring clientele satisfaction, a scale
 64 developed by [4] was adopted for the study. The scale studies clientele satisfaction in four
 65 dimensions which are relevancy, quality, usefulness and customer service.
 66

67 **Figure 1 Clienteles' satisfaction**
 68 **framework.**



69

70 At present 7 out of the 11 districts of Meghalaya have established KVKs, 5 of
 71 which are well established and 2 have rolled out recently. The study was conducted in five
 72 districts having fully functional KVKs were selected. A village cluster adopted by the KVKs from
 73 each district was selected to understand the perception of the respondents. From each village
 74 cluster 30 respondents were interviewed making a total sample size of 150. Table 1 shows the
 75 sampled districts, blocks and village clusters. Data were collected using pre-tested structured
 76 interview schedule during 2017-18

77 **Table 1 Selection of villages**

| S. No | District | Block | Villages |
|-------|--------------------------|--------------|--|
| 1 | East Khasi Hills (EKH) | Mawryngkneng | Tynring, Mawpdang & Diengpash |
| 2 | West Khasi Hills (WKH) | Mairangbah | Mairangbah, Pyndeng Umiong & Mairang Mission |
| 3 | Ri Bhoi | BhoiRymbong | BhoiRymbong, Kyrdem & Nongthymmai |
| 4 | West Jaintia Hills (WJH) | Thadlaskien | Wahijer, Nialar & Liarnai |
| 5 | West Garo Hills (WGH) | Gembegre | Allabagre, Mengkagre & Gildinggre |

78

79 3. RESULTS AND DISCUSSION

80 3.1 Personal and Social Characteristics of the Client Farmers

81 3.1.1 Age

82 The average age of the sampled client farmers of KVKs Meghalaya was 43.76
 83 years with standard deviation of 10.05 years, meaning that majority of the farmers were middle
 84 aged. The district with the oldest age group farmers was West Jaintia Hills at 47.47 years old,
 85 whereas the youngest farmers belonged to West Garo Hills (39.13 years old).

86 **3.1.2 Sex**

87 There were more number of male respondents (55.50 %) than female
 88 respondents (44.70 %) in the study, although by a very small difference.

89 **3.1.3 Education**

90 No farmers in the study were illiterate and only few farmers (4.60 %) had
 91 University level education and another 8.00 per cent had higher secondary education. Majority
 92 of the clientele farmers were having secondary education (39.33%) followed by primary
 93 education (37.33 %) (Table 2). East Khasi Hills district had the highest percentage of farmers
 94 with secondary education (50.00 %) and West Garo Hills district had the maximum number of
 95 farmers with primary education (56.66 %).It was also found in a similar study that majority of
 96 the trainees of KVKs had similar educational status[5].

97 **Table 2 Personal profile of the respondents**

| Variable | Particulars | Frequency (Percentage) | | | | | |
|--|------------------|------------------------|---------------|----------------------|---------------|---------------|------------------------|
| | | EKH (n=30) | WKH (n=30) | Ri Bhoi (n=30) | WJH (n=30) | WGH (n=30) | Overall (N=150) |
| Age (Years) | Mean | 43.76 | 45.63 | 41.80 | 47.47 | 39.13 | 43.56 |
| | SD | 10.87 | 11.12 | 10.10 | 9.25 | 8.34 | 9.94 |
| | Range | 22-74 | 25-68 | 29-63 | 18-65 | 26-53 | 18-74 |
| Sex | Male | 16 (60.00) | 19 (56.67) | 17 (56.70) | 21 (70.00) | 20 (67.30) | 83 (55.30) |
| | Female | 14 (40.00) | 11 (43.33) | 13 (43.30) | 9 (30.00) | 10 (33.30) | 67 (44.70) |
| Education | Illiterate | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| | Read and Write | 3 (10.00) | 1 (3.33) | 7 (23.33) | 3 (10.00) | 2 (6.67) | 16 (10.67) |
| | Primary | 8 (26.67) | 14 (46.67) | 5 (16.67) | 13 (43.34) | 17 (56.66) | 56 (37.33) |
| | Secondary | 15 (50.00) | 8 (26.67) | 13 (43.33) | 12 (40.00) | 9 (30.00) | 59 (39.33) |
| | Higher Secondary | 3 (10.00) | 4 (13.33) | 5 (16.17) | 1 (3.33) | 0 (0.00) | 12 (8.00) |
| | University | 1 (3.33) | 3 (10.00) | 0 (0.00) | 1 (3.33) | 2 (6.67) | 7 (4.67) |
| Trainings received from the KVK | Mean | 8.06 | 8.70 | 24.83 | 6.43 | 5.43 | 10.69 |
| | SD | 3.61 | 5.05 | 9.09 | 2.67 | 3.45 | 8.88 |
| | Range | 2-18 | 3-25 | 10-40 | 2-10 | 2-15 | 2-40 |
| Overall Trainings Received | Mean | 11.20 | 11.43 | 31.43 | 8.50 | 7.07 | 13.92 |
| | SD | 4.81 | 6.03 | 10.84 | 3.93 | 4.04 | 10.98 |
| | Range | 3-20 | 5-30 | 12-50 | 3-15 | 3-18 | 3-50 |
| Social Participation Index | Mean Index | 35.24 | 37.62 | 38.17 | 34.52 | 31.34 | 35.38 |
| | SD | 4.07 | 5.40 | 4.70 | 4.37 | 6.09 | 5.05 |
| | Range | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 |
| Information Seeking Behaviour Index | Mean Index | 53.67 | 62.56 | 65.00 | 56.89 | 54.77 | 58.58 |
| | SD | 3.11 | 4.03 | 3.73 | 2.72 | 5.34 | 4.07 |
| | Range | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 |
| Farm Infrastructure Index | Mean Index | 62.50 | 67.91 | 66.52 | 66.45 | 66.95 | 52.87 |
| | SD | 1.39 | 2.23 | 2.11 | 1.73 | 2.33 | 1.99 |
| | Range | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 | 0-100 |

99 **3.1.4 Trainings received from the KVKs**

100 From Table 2 the average number of trainings received from the KVKs by the
101 clients in the last 3 years was 10.69 per person. Trainings were provided regularly to the
102 farmers, because it was one of the important mandates of the KVKs and it is a predictable
103 variable for the development of entrepreneurship of the trained farmer [6]. Highest number of
104 trainings was recorded in Ri Bhoi with an average number of trainings at 24.83, while the
105 lowest was West Garo Hills at 5.43.

106 **3.1.5 Total Trainings Attended**

107 The average number of overall training attended by the respondents was
108 relatively was 13.92 (Table 2). Clients of Ri Bhoi KVK had attended the highest number of
109 trainings with an average of 31.43 trainings per person from various organisations. The high
110 number of trained farmers in this district was due to the fact that there were many farmers'
111 training and development organisations apart from the KVK viz., ICAR research Complex, State
112 Institute for Rural Development (SIRD), The College of Post Graduate Studies in Agricultural
113 Sciences (CPGS-AS), Regional Rural Training Centre (RRTC), etc. close to the vicinity of the
114 sample villages of RiBhoi District. These farmers of Ri Bhoi were also trained in other central
115 schemes of the ICAR including NICRA (National Initiative for Climate Resilient Agriculture) and
116 some of the farmers were also part of the governing body in various schemes of the KVK and
117 ICAR. On the other hand the farmers of the district of WGH (7.07) were having least number of
118 overall trainings from various organisations.

119 In the study it was found that majority of the trainings were conducted by the
120 KVKs, State Department of Agriculture, ICAR and CAU to some extent. ATMA have also been
121 giving more trainings in the past few years. Very few farmers received training from other
122 organisations apart from these mentioned above except for the case of Ri Bhoi. Trainings were
123 received mainly in the following domains viz., agricultural production, conservation agriculture,
124 rural livelihood generation, organic agriculture, family health and cleanliness, etc.

125
126 **3.1.6 Social Participation**

127 The overall social participation index was only 34.52 out of 100 (Table 2) which
128 was similar to another study where the researcher reported that majority of the respondents
129 had low social participation [7]. The low social participation score was due to the fact that
130 majority of these farmers were only participants in the various events of social events. Except
131 for the categories of local administration and farmers' group, majority of the farmers were only
132 spectators in the events and had no part in the decision making because they did not hold any
133 special posts in those events. The responding farmers were most socially active with respect
134 to the local administration and their corresponding farmer group meetings

135 **3.1.7 Information seeking behaviour**

136 The information seeking behaviour index was 56.58 out of 100 which was
137 similar to the findings of another research [5]. The district with the highest information seeking
138 behaviour index was Ri Bhoi at 56.69 (Table 2).The most popular sources for seeking
139 information by the respondents are from farmer groups, farmer colleagues and local leaders
140 (progressive farmers) followed by KVK scientists. In the case of personal choices with respect
141 to information seeking behaviour other Universities (apart from CAU) and NGOs had the lowest
142 score index. The respondents also opined that radio and newspaper were the two most popular
143 sources of information from impersonal sources.

144 **3.1.8 Farm Infrastructure**

145 For farm infrastructure, the district of WKH was having highest farm
146 infrastructure index of 67.91 (Table 2). The overall farm infrastructure index for Meghalaya was
147 52.87 showing they had medium farm infrastructure. Similarly, it was also found that the
148 respondents of a similar study of the KVKs of Mizoram, were also having medium level of farm
149 infrastructure [8].

150
151 **3.2 Clients' satisfaction regarding the outputs and services of the KVKs**

152
153 The clientele's satisfaction index was calculated as the percentage of the cumulative clientele
154 score to the maximum obtainable score. The KVK results are presented in Figure 2. It can be
155 observed that overall clientele's satisfaction index for clientele farmers of KVKs in Meghalaya
156 was found to be 76.49, indicating high satisfaction with the outputs and services of the KVKs
157 (figure 2) which were similar to other studies of similar nature [4, 9]. It was also seen that WKH

158 clientele had the highest satisfaction index (80.33) while WJH has the lowest index (74.60).
 159 When grouping the clienteles into four categories (highly dissatisfied; not satisfied; satisfied and
 160 highly satisfied) base on their satisfaction it was observed that in all the districts there were no
 161 respondent who were below the satisfied category (Table 3). It was seen for the whole state
 162 62.70 per cent of the respondents were highly satisfied with the outputs and services of the
 163 KVKs. It was also noted that the KVK of East Khasi Hills district has the highest percentage of
 164 highly satisfied farmers (73.30 per cent). A study in Ethiopia similarly showed that about 55% of
 165 the farmers were satisfied with the extension services [10].

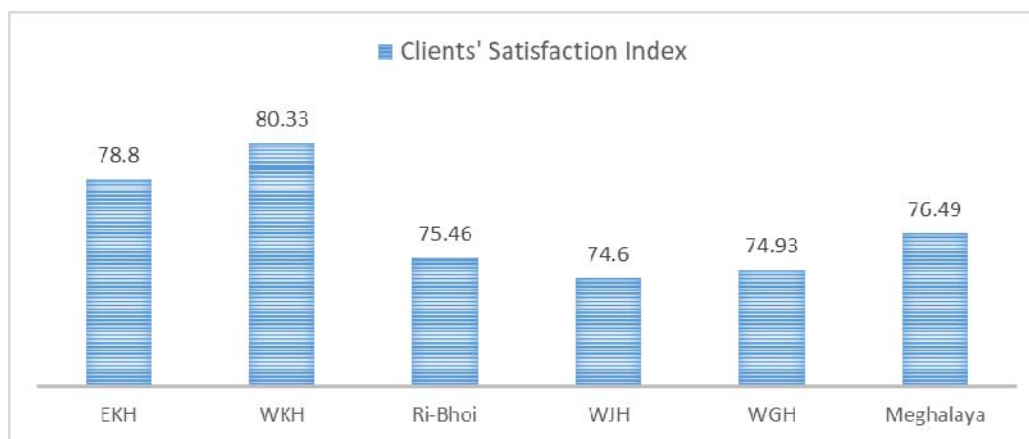
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167 **Table 3 Distribution of respondents according to their level of clientele satisfaction**
 168 **Index (N=150)**

| Clienteles' Satisfaction Categories | EKH (n=30) | WKH (n=30) | Ri Bhoi (n=30) | WJH (n=30) | WGH (n=30) | Overall (N=150) |
|-------------------------------------|------------------------|------------|----------------|------------|------------|-----------------|
| | Frequency (Percentage) | | | | | |
| Highly dissatisfied (<25) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| Dissatisfied (25-49) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| Satisfied (50-75) | 8 (26.70) | 10 (33.30) | 14 (46.70) | 11 (36.70) | 13 (43.30) | 56 (37.30) |
| Highly satisfied (>75) | 22 (73.30) | 20 (66.70) | 16 (53.30) | 19 (63.30) | 17 (56.70) | 94 (62.70) |
| Mean CSI | 78.80 | 80.33 | 75.46 | 74.60 | 74.93 | 76.49 |

169

170 **Figure 2 Clients' satisfaction regarding the outputs and services of the KVKs**



171

172

173 The dimension and item wise clientele satisfaction score are provided for each KVK in
 174 Table 5 and is discussed comprehensively in the following section.

175 **Table 4 Dimension and item wise clientele satisfaction of the different KVKs (n=50)**

| S. No | Particulars | EKH | WKH | Ri Bhoi | WJH | WGH | Meghalaya |
|---------------------|---|----------------------------|-------|---------|-------|-------|-----------|
| | | Clients Satisfaction Index | | | | | |
| A. Relevancy | | | | | | | |
| 1 | Distributes relevant literature | 93.33 | 98.33 | 90.00 | 91.00 | 99.50 | 95.00 |
| 2 | Services are compatible with the overall farming system | 78.33 | 83.33 | 78.33 | 81.00 | 80.00 | 79.67 |
| 3 | Services exhibit more | 90.00 | 88.33 | 88.33 | 90.00 | 79.00 | 87.33 |

| | | | | | | | |
|----------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|
| | practicability | | | | | | |
| 4 | Timely availability of relevant inputs is difficult | 56.67 | 61.67 | 56.67 | 36.67 | 55.00 | 53.33 |
| 5 | Provides relevant market information | 16.67 | 23.33 | 16.67 | 18.50 | 15.00 | 17.67 |
| 6 | Services are farmers need based | 78.33 | 85.00 | 73.33 | 79.50 | 66.67 | 76.33 |
| 7 | Overall Relevancy (Max 12) | 68.89 | 70.00 | 67.25 | 65.55 | 65.83 | 67.50 |
| B. Quality | | | | | | | |
| 8 | Information provided is up to date | 78.33 | 80.00 | 78.33 | 76.50 | 81.67 | 79.33 |
| 9 | Ensure unbiased information | 91.67 | 95.00 | 91.67 | 93.50 | 86.67 | 91.33 |
| 10 | Employs appropriate teaching methods | 78.33 | 81.67 | 80.00 | 75.00 | 70.00 | 77.67 |
| 11 | Training and communication support | 81.67 | 81.67 | 78.33 | 85.00 | 73.33 | 79.33 |
| 12 | Subject matter presented is well organized | 80.00 | 76.67 | 80.00 | 84.00 | 78.33 | 79.00 |
| 13 | Ensure timely services | 58.33 | 65.00 | 36.67 | 17.50 | 61.67 | 47.00 |
| 14 | Overall Quality (Max 12) | 78.05 | 80.00 | 74.16 | 76.55 | 75.27 | 75.60 |
| C. Usefulness | | | | | | | |
| 15 | Creates general agricultural development awareness | 88.33 | 91.67 | 90.00 | 92.00 | 85.00 | 88.67 |
| 16 | Impart information on routine old technologies | 48.33 | 53.33 | 48.33 | 45.00 | 46.67 | 49.00 |
| 17 | Provide help to make timely decision | 61.67 | 71.67 | 63.33 | 60.00 | 65.00 | 64.67 |
| 18 | Help to solve farming problems | 95.00 | 90.00 | 95.00 | 96.50 | 81.67 | 91.33 |
| 19 | Promotes eco-friendly and sustainable technology transfer | 48.33 | 56.67 | 46.67 | 47.00 | 50.00 | 50.00 |
| 20 | Develops vocational efficiency | 86.67 | 88.33 | 86.67 | 88.00 | 78.33 | 85.33 |
| 21 | Develops new form of clientele groups | 86.67 | 81.67 | 81.67 | 46.67 | 80.00 | 75.33 |
| 22 | Overall Usefulness (Max 14) | 73.57 | 76.19 | 73.09 | 67.86 | 69.52 | 71.66 |
| D. Customer Service | | | | | | | |
| 23 | Friendly and courteous scientific and technical staff | 93.33 | 90.00 | 96.67 | 89.50 | 90.00 | 92.67 |
| 24 | Farm visits are convenient for farmers | 63.33 | 61.67 | 66.67 | 61.67 | 68.33 | 64.67 |
| 25 | KVK staff take care on farmers | 95.00 | 86.67 | 98.33 | 94.50 | 80.00 | 91.00 |
| 26 | KVK scientific and technical staff are motivated to serve | 96.67 | 93.33 | 90.00 | 95.00 | 78.33 | 91.00 |
| 27 | Ensure regular training and continuous farm visits | 81.67 | 85.00 | 85.00 | 81.67 | 76.67 | 82.00 |
| 28 | Services are flexible in nature | 63.33 | 78.33 | 65.00 | 68.33 | 70.00 | 68.00 |

| | | | | | | | |
|----|--|--------------|--------------|--------------|--------------|--------------|--------------|
| 29 | KVK scientific and technical staff are less accountable to the farmers | 80.00 | 80.00 | 75.00 | 78.33 | 76.67 | 78.33 |
| 30 | Overall Customer Service (Max 12) | 95.56 | 95.83 | 96.11 | 95.55 | 90.00 | 92.95 |
| 31 | Total Satisfaction (Max 50) | 78.80 | 80.33 | 75.46 | 74.60 | 74.93 | 76.49 |

176 *Clients Satisfaction Index* <25=highly dissatisfied; 25-49=not satisfied; 50-75=satisfied;*
177 *>75=highly satisfied*

178 **3.2.1 Relevancy**

179 With respect to relevancy category the clientele's satisfaction index (CSI) for
180 Meghalaya was 67.50 showing that the clients were satisfied with this category. But even so,
181 the respondents were opining their problems of not timely receiving relevant inputs (55.33) and
182 the lack of relevant market information (17.67). The farmers wish for more innovative initiatives
183 to provide market information to them, so that they can plan their farming accordingly (table 5).
184 Not just KVKs, but cooperatives, NGOs, panchayats and the media must join hands in the
185 transmission of knowledge and information to provide better market connectivity. Other
186 marketing initiatives of the State Government such as the 1917 iTEAMS which links buyers and
187 sellers of agricultural goods and Meghalaya Agricultural Marketing portal can also be
188 introduced to the farmers of the KVKs to help connect the farmers with potential buyers and also
189 to keep the farmers updated with the latest price trends.

190 **3.2.2 Quality**

191 For the category of Quality, the clientele's satisfaction index for Meghalaya was
192 observed to be 75.60, showing high satisfaction which was similar to another study of [11]
193 regarding quality of extension services. In this category the farmers only complained that
194 services should be timelier according to their cropping schedule showing a CSI of 47.00
195 indicating that the clients were not satisfied with this aspect of quality (Table 5). For example,
196 the trainings and other capacity building programmes on particular crops should be given
197 before the start of the cropping season. The reason why some programmes of the KVKs were
198 delayed was mainly due to the reason of untimely release of funds and lack of man power.
199 Therefore this aspect of clientele's satisfaction can be addresses only with the help of the
200 parent institutions by incorporating policies which will help the KVKs receive timely funds and
201 sufficient man power.

202 **3.2.3 Usefulness**

203 In case of the category Usefulness, the clientele's satisfaction index for
204 Meghalaya was 71.66 and overall farmers were satisfied with the services and outputs relating
205 to this (table 5). They were happy with the agricultural development awareness and how the
206 KVKs helped them develop vocational efficiency. The satisfaction of the contents and quality of
207 trainings resulted on how useful the trainings were in providing significant gain of knowledge
208 [12, 13]. However there were aspects of usefulness that the farmers wished there were
209 improvements. The KVKs sometimes tend to teach routine old technologies (CSI, 49.00) which
210 were already taught by other organisations like the ICAR of State Agricultural department.
211 Proper pre training assessment of the participants should be incorporated to prevent duplicity of
212 trainings. It was also revealed that sometimes farmers found it difficult to get help from KVKs to
213 make timely decisions (CSI, 64.67) due to the fact that the KVKs were far from the villages for
214 farmers to visit regularly and also due to the sheer number of grievances by farmers which
215 cannot be covered by the low number of man power in the KVKs. The promotion of eco-friendly
216 and sustainable technology(CSI, 50.00) got mixed rating from the farmers, because on one
217 hand some of them felt that there should be training to increase the knowledge of
218 fertilizer/pesticides and their effects while others felt that production aspects were more
219 important than eco-friendliness of technologies.

220 **3.2.4 Customer Service**

221 Lastly, for the category of customer services of the clientele's satisfaction index
222 for Meghalaya was highest amongst all the categories at 92.95 (table 5). The farmers were very

223 satisfied with the costumer services the KVKs offer. They felt that amongst all the agricultural
 224 development organisation, the KVKs were the easiest to approach and seek assistance for any
 225 farming problems. The farmers only opined that there can be improvement in the aspects of
 226 convenience of farm visits for farmers and more flexibility in the services of the KVK, which
 227 were having a CSI of 64.67 and 68.00 respectively. A study on KVKs of Mizoram also
 228 communicated that the results were evidence that the clients were satisfied regarding KVK
 229 outputs and services [8]. The farmers knew almost all the employees personally making
 230 communication intimately more engaging and thus gives them more confidence and assurance
 231 in trying and adopting new technologies.

232 **3.3Relation between Clienteles' satisfaction and independent variables**

233 The relationship between the Clientele Satisfaction and selected clientele
 234 variables were assessed using Spearman's correlation. It was found that clienteles' satisfaction
 235 was positively related only to the variables number of trainings (provided by the KVKs and
 236 overall training attended), social participation and information seeking behaviour (table 5). The
 237 number of trainings (provided by the KVKs and overall training attended), had a positive
 238 relationship with clienteles' satisfaction indicating that the more training the respondents
 239 received the more they were satisfied with the services of the KVKs. In a similar study it was
 240 found that majority of the farmer clients were satisfied and perceived trainings by the KVKs as
 241 very effective [14]. The effectiveness of trainings may not only develop the capacity of the
 242 farmers but can also open them up to understanding the contribution of those KVKs toward
 243 their agricultural development as farmers will view trainings as essential for personal and
 244 economic development due to increased adoption of improved agricultural technology [15].

245 **Table 5 Relationship between clienteles' satisfaction and independent variables**

| S. No. | Variables | Clienteles' Satisfaction Spearman's Correlation Coefficient |
|--------|-------------------------------|---|
| 1. | Age | -0.048 |
| 2. | Sex | 0.052 |
| 3. | Education | 1.36 |
| 4. | Trainings received from KVK | .221** |
| 5. | Overall Trainings received | 0.241** |
| 6. | Social participation | 0.399** |
| 7. | Information Seeking Behaviour | 0.358** |
| 8. | Farm Infrastructure | .158 |

246 ****1 percent level of significance**

247 The positive relationship between social participation and clienteles'
 248 satisfaction may be due to the reason that the farmers with higher social participation are more
 249 involved with the KVKs in different agricultural development activities and hence received more
 250 benefit than those who are seldom participative in the said activities. Farmers participating with
 251 development agencies had better impact through training, which resulted in relatively more
 252 adoption than non-participative farmer [16]. It was also reported in a similar study that the
 253 number of contacts of farmers with development agencies had a significant relationship with
 254 impact of training [5].

255 Similarly a higher information seeking behaviour with the KVKs and similar
 256 organisations may help them seek solutions to problems therefore making them more
 257 mitigating in terms of their difficulties Positive and significant relationship of clientele
 258 satisfaction with information seeking behaviour was also reported in another study regarding
 259 KVKs of Mizoram [8]. Those farmers which are seeking information tend to be more innovative
 260 than the ones who do not seek professional assistance and rely only on luck and chance for

261 good agricultural production. The former become more satisfied with the KVKs advisory when
262 they observe they can solve some of their problems. Therefore this may be the reason that
263 there was a positive relationship between information seeking behaviour and clientele's
264 satisfaction which was also reported in another study that sources of information also had a
265 significant relationship with impact of trainings and solving agricultural problems [5].
266

267 Other variables such as age, education, sex and farm infrastructure had no relationship with
268 clientele's satisfaction. It was also revealed in a similar study that in case of public extension
269 clientele education had a significant relationship with clientele satisfaction [17] while another
270 study done by [9] found no such relation.

271 Also contrary to the study [18] found farmers' gender to be linked with
272 Extension service satisfaction and outcomes and [18] revealed that farmers' age, gender and
273 education level significantly influenced farmers' level of satisfaction.

274 It was found in the research that the KVKs did not choose farmers as clients for
275 their services and outputs based on these variables. Farmers from various socio-economic
276 backgrounds attend trainings and receive outputs and services relatively similar, hence making
277 the assumptions that one type of farmers (with respect to these variables) getting more from
278 the development activities of the KVK was not valid in this research.

279 **4. CONCLUSION**

280 Clientele's satisfaction assessment of the KVKs in this study has not only
281 showed the areas where the farmers were satisfied but also uncovered several constraints
282 regarding delivery of services and outputs by the KVKs. The need of sound market information
283 and assistance was shown to be imperative and provision of the same can be done through
284 use of ICTs and linkages with other organisations such as the iTEAMs. Parent Institutions
285 should fill up the vacant posts of the KVKs and release funds sooner to the KVKs so that they
286 can timely and effectively provide their output and services to the farmers. Pre-training
287 assessment should be of utmost importance so that duplicity of effort is avoided. These
288 problems uncovered should be addresses so that the KVKs can increase its effectiveness in
289 agricultural development. Clientele's, satisfaction study is very important not only because it
290 uncovers the performance of the organisations and where they needed to improve but also
291 because it is a platform where farmers can voice their needs to the development organisation.
292

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