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Constraints Experienced by the Trainees of Krishi Vigyan Kendra in the Adoption of Recommended Practices

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A B S T R A C T

Agriculture is the mainstay sector of the country's economy. Now a day's various technologies, innovative ideas have ensured the development of agriculture. The farmers are not following the newer as well as innovative practices because of the lack of interest, lack of awareness and lack of training on the particular technology. Every agricultural Extension Scientists try to reduce the farmer's problem, even though lacks are there, to transfer the technology from the lab to land. Krishi Vigyan Kendra is India's innovative institution to transfer the technology at the grass root level. The study was taken up in Sivagangai district of Tamil Nadu. A total of 120 trainees were selected as respondent using proportionate random sampling technique. Keeping in this view, the study was focused and finally, an attempt has been made to identify the constraints faced by the trainees in adopting the recommended practices. The specific objectives of this study are to delineate the constraints to the Programme coordinators for the effective functioning of KVKs. Constraints were categorized under various components viz. general constraints, biophysical constraints, technological constraints, and other constraints. Among the general constraints, the non-availability of skilled labor and high cost of herbicides were expressed by the majority of the respondents. Among the biophysical constraints, drought and monsoon failure was reported by most of the respondents. Among the technological constraints, non-availability of bio-fertilizer at the time of sowing was considered as the major constraint. Among the institutional constraints, lack of transport facilities was considered as an important constraint faced by most of the respondents.

Introduction

Krishi Vigyan Kendra's (KVKs) in India play an important role in the transfer of Agricultural technologies (Jiyawan *et al.*, 2012). Presently, the *Krishi Vigyan Kendra's* (KVKs) has been recognized as an effective link between agricultural research and extension systems in the country. Training is a fundamental concept in human resource development and it refers to the teaching, learning activities which are carried out to help members of an organization to attain knowledge and skills. An agricultural invention and innovation continuum in all facets of agriculture and allied activities with its effective diffusion is the key to sustainably increase the production and productivity with environmental sustainability. The lab to land transfer of technology is very much important in the fruitfulness of every innovation; hence *Krishi Vigyan Kendra* (KVK) was launched in our country to impart knowledge to the grass root level. The KVK is an educational institution of the farmers, it offers a real opportunity by organising trainings to work

closely with trainees in developing the skill. The specific objectives of this study are to identify the various constraints faced by the trainees in adopting the recommended practices. It will very essential for the effective functioning of KVKs.

Materials and Methods

The study was taken up in Sivagangai district of Tamil Nadu. The trainees were selected based on the trainee's list obtained from the KVK. The Integrated Crop Management topic was purposely selected as the study focused on Agriculture. To know the impact of training programs organised by KVK a sample size of 120 respondents were selected purposively for the study. The numbers of respondents for each village were selected using a proportionate random sampling technique. In this study, the interviewer directly discusses with all the farmers and list out what are the constraints faced by farmers and after it should be discussed with an expert with the following details. Major constraints were listed out and then classified into general constraints, institutional constraints, technological constraints, and other constraints. The respondents were asked to indicate the constraints faced by them in adopting the recommended practices received during the training program and also some other constraints were list out by the farmers. The frequency of respondents indicating each of the problems was worked out separately and expressed in percentage and suitable statistical tools were used to analyse the data. The ex-post facto research design was used for the study. The statistical tool percentage analysis method used for this study.

Results and Discussion

This area deals with the constraints as experienced by the respondents in the adoption of recommended ICM practices in paddy. In accordance with the objectives, the constraints experienced by the respondents under five heads namely, (A) General constraints, (B) Bio-physical constraints, (C) Technological constraints, (D) Institutional constraints, (E) Other constraints.

The constraints are ranked according to the frequency of farmers who respond towards each of the constraints. This result was present in Table 1 and Figure 1.

General constraints

A cursory look at the table clearly indicates that ‘non-availability of skilled labours in time’ was revealed as the constraint by most (85.00 percent) of the respondents. The availability of the agricultural labourer is drastically declining in the study area as most of the labourers were absorbed by the ‘100 days employment program’ implemented by the Government under the National Rural Employment Guarantee Act. Under this employment scheme, the whole family gets employed. The labourers are enjoying a lot of leisure time and they are paid with more wages for less work. Hence they would prefer to go to work under this scheme. Hence, the labourers demand higher wages irrespective of the nature of work. Most of the respondents expressed that the skilled labourers were not available in the study area. The finding is in line with the findings of Balakrishnan (2010).

The high cost of herbicides was considered to be the second constraint faced by 67.50 percent of the respondents. The respondents stated that the cost of herbicides was high. As the cost of herbicides is high, the farmers were not afforded to buy. Moreover, they are going for only one season and the remaining season the land was kept fallow. So the occurrence of weeds is more which needs more herbicides to apply. Hence, majority of the farmer felt that it is a major constraint.

'High cost of plant protection chemicals' was considered to be the third constraint faced by 60.83 percent of the respondents.

They reported that the escalation of cost of plant protection chemicals had deterred them from adopting the technologies. As most of the respondents belong to small and marginal farmers category they are not able to spend more money on pesticide application. Hence, they felt it as the major constraint.

Lack of availability of inputs was considered to be the fourth constraint was faced by 52.50 percent of the respondents. Planning and estimation of demand for inputs in next season were not done properly and also non-availability of agricultural depots within easy reach may also be a problem.

Around fifty percent of the respondents (48.33 percent) faced 'lack of reasonable support price' as a constraint. Some of the respondents felt that the cost of crop production is increased every year. This is due to the increasing labour charges and input cost. It is quite understandable that farmers would have anticipated increase price for their produce so as to meet out the production cost and can get more net profit. This finding is in line with the findings of Teramic Oinam (2014)

Lack of credit facilities was reported by 41.66 percent of the respondents. This may due to the fact of the respondents depend on private money lenders, fertilizer shop owners and co-operative societies to borrow money for the cultivation. They do not have adequate savings. The poor annual income of the farmers made them do depend on credit institutions for financial assistance to pursue agricultural operations. But the farmers could not avail adequate credit due to the tedious procedure involved in getting loans and the unfair treatment of bank officials. This situation would have enabled the respondents to report this constraint. A similar finding was reported by Natarajan (2016).

Bio-physical constraints

It could be observed from table 1 that altogether four bio-physical constraints were expressed by the respondents with regard to the adoption of recommended practices. Among the four bio-physical constraints, drought was the most important constraint mentioned by most (70.83 percent) of the respondents. During the season the farmers used to face uncertainty like severe drought which would cause lack of rain and heavy shortage of water in the fields. This condition would have prevented the farmers to maintain the condition of build water basins and conserve the water at monsoon time. Moreover, it may be due to the climate and location of the study area. These may be the reasons for the above-mentioned constraint.

Monsoon failure as an important constraint was reported by 62.50 percent of the respondents. The farmers cultivating paddy crop under rain-fed condition entirely depend upon the north-east monsoon during critical stages of crop growth. Further, most of the respondents reported there is no assured irrigation facility like bore wells, tank, canal irrigation or river irrigation to irrigate the fields in their area. In some areas wells are present but the available water was sufficient only to meet the domestic demand and it was not sufficient to irrigate the crop and water salinity was also a major problem prevailing in the area. Due to the above facts, the respondents would have considered it as an important constraint.

Improper maintenance of irrigation channels was the third constraint reported by the around sixty percent (59.16 percent) of the respondents. Most of the respondents reported that the flow of water has been blocked in

several places due to improper maintenance of irrigation channels. Restoration and proper maintenance of irrigation channels were the only way to conserve the water in their areas. Government attention and concern authorities should take care of water management and maintenance of channels in the study area. Due to the above facts, the respondents would have considered this as an important constraint.

The salinity of irrigation water was reported by 33.33 percent of the respondents. It was found out that in some of the study areas farmer mainly depend on bore well for irrigating their crops. Salinity water affects plant growth and yield. These may be the reasons for the above-mentioned constraint.

Technological constraints

Among the five technological constraints, the constraint non-availability of bio-fertilizer at the time of sowing was reported by 62.50 percent of the respondents. A majority of the respondents applied bio-fertilizers at the same time, which resulted with a heavy demand for bio-fertilizers and irregular supply of bio-fertilizers by the government depots and private input dealers might be the reason for reporting this constraint.

Lack of knowledge to identify beneficial insects was reported by 51.66 percent of the respondents. Due to the lack of knowledge on identifying the beneficial insects and half of the respondents have less awareness of knowing the value of the beneficial insects. This may be the probable reason for the above constraint.

Less than half the proportion of the respondents (45.83 percent) faced the problem of 'lack of knowledge in identifying pest and diseases'. Due to the lack of knowledge of pest and diseases, farmers could not take up the necessary control measures. Further, the extension workers who were entrusted with dissemination work could not have concerned their efforts to the satisfaction of the facing community due to the shortage of staffs. Hence, there is a need for providing training to farmers on a large scale. At the same time, sufficient technical staffs need to be recruited to guide the farmers at field level. Steps should be taken by the government to provide sufficient, timely and easily available plant protection chemicals to needy paddy farmers through co-operative societies since the availability of inputs is a critical factor for adoption. This may be the probable reason for the above constraint.

'Lack of adequate information on IWM technologies' was considered to be the fifth constraint reported by the forty percent of the respondents. In general, it is the tendency of trained farmers to get more information about the trained subject matter. This may be the reason for the reported lack of adequate information on IWM technology. Lack of technical guidance was the fifth constraint experienced by twenty-five percent of the respondents. Some of the respondent villages are a long distance to contact the extension personnel and KVK scientists. They felt that the extension personnel not taking adequate efforts to provide the latest technical information to the recommended practices. They might have felt it as the major constraints in those areas.

Institutional constraints

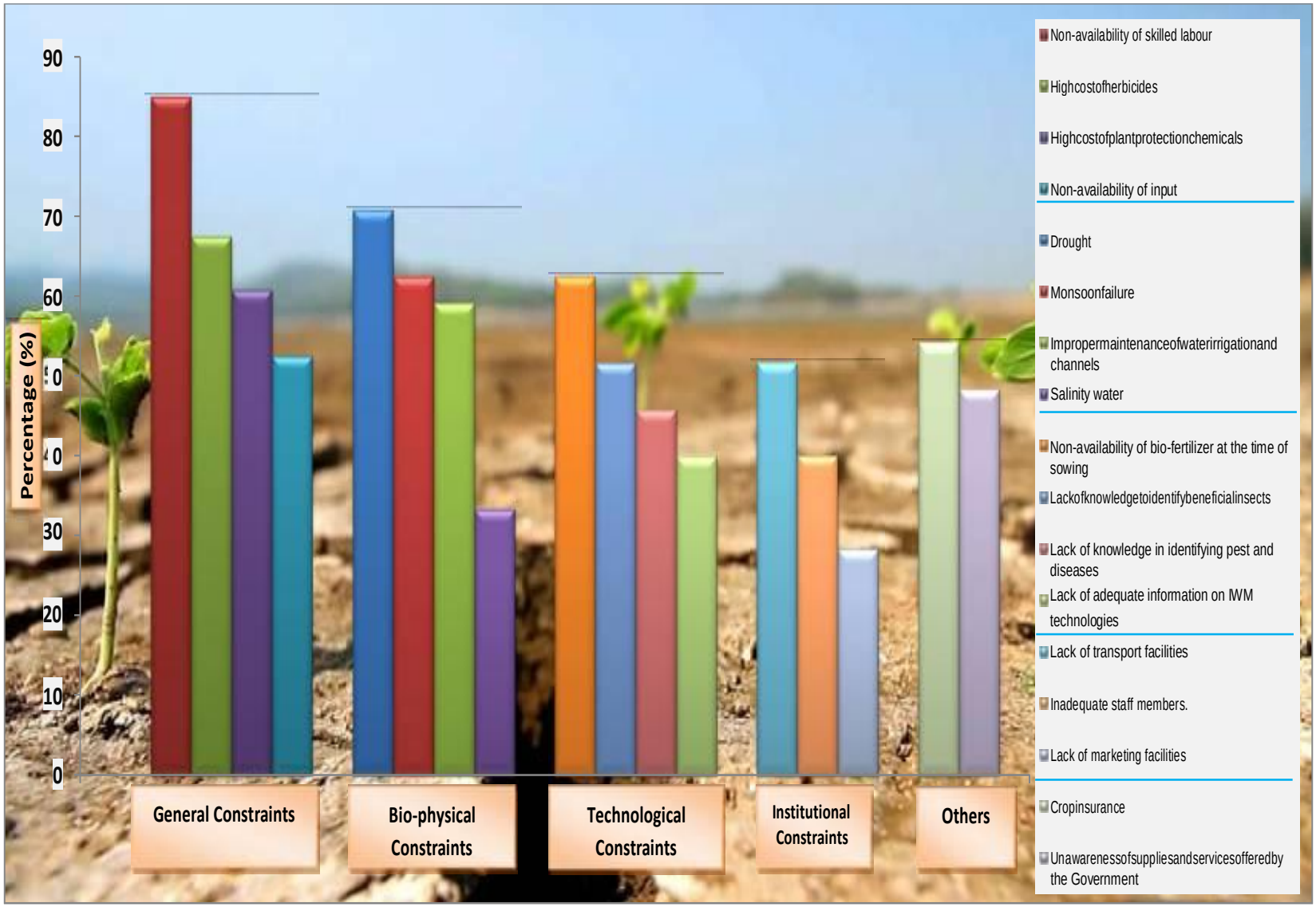
As for as institutional constraints are concerned, inadequate transport facility was the constraint reported by 51.66 percent of the respondents. The respondents who were in interior places had to spend more money to secure transport facilities to reach agricultural depots and for the purchase of inputs from towns.

Table.1 Constraint experienced by the respondents in the adoption of recommended technologies (n =120)

S. No	Constraints	Number	Percent	Rank
A	**General constraints**			
1.	Non-availability of input	63	52.50	**IV**
2.	Non-availability of skilled labour	102	85.00	**I**
3.	Lack of credit facilities	50	41.66	**VI**
4.	High cost of herbicides	81	67.50	**II**
5.	High cost of plant protection chemicals	73	60.83	**III**
6.	Lack of reasonable support price	58	48.33	**V**
B	**Bio-physical constraints**			
1.	Improper maintenance of water irrigation and channels	71	59.16	**III**
2.	Monsoon failure	75	62.50	**II**
3.	Salinity water	40	33.33	**IV**
4.	Drought	85	70.83	**I**
C	**Technological constraints**			
1.	Lack of knowledge in identifying pest and diseases	55	45.83	**III**
2.	Lack of adequate information on IWM technologies	48	40.00	**IV**
3.	Lack of knowledge to identify beneficial insects	62	51.66	**II**
4.	Non-availability of bio-fertilizer at the time of sowing	75	62.50	**I**
5.	Lack of technical guidance	30	25.00	**V**
D.	**Institutional constraints**			
1.	Lack of transport facilities	62	51.66	**I**
2.	Lack of marketing facilities	34	28.33	**III**
3.	Exploitation by middleman	12	10.00	**V**
4.	Inadequate field visit during training	29	24.16	**IV**
5.	Inadequate staff members.	48	40.00	**II**
E.	**Others**			
1.	Crop insurance	65	54.16	**I**
2.	**Unawareness of supplies and services offered by the Government**	**58**	**48.33**	**II**

Int.J.Curr.Microbiol.App.Sci (2019) *8*(8): 1728-1735

Fig.1 Constraints Experienced By the Respondents in Adoption of Recommended Practices



In addition, the farmers experienced the difficulty of transporting their agricultural produce to concern marketing places due to the inadequate modes of transport like tractors, tempos, heavy vehicles, etc., limited bus service and long distance also one of the reasons for lack of transport facilities. This may be the reason for the constraint in their areas. The finding is in line with findings of Suresh Kumar (2015).

Existing staff facilities are inadequate was an important constraint reported by 40.00 percent of the respondents. This may be due to the inadequate placement of KVK staff in different KVK. Financial help is also inadequate and most of the staff engaged with other work. There are many schemes working in KVK. The staffs were diverted to many schemes and hence workload increased.

This may be the reason for the above constraint. The finding is in line with findings of Swagatika Si (2011).

Inability to attend the training program was another constraint reported by 36.66 percent of the respondents. Most of the respondents have own commitment during the training programs. Further, only little training was conducted in the village itself, a majority of the programs were held at distant places the respondents would not have attended the training programs. This finding is in line with the findings of Siddhardhan (2011).

Lack of marketing constraints was an important constraint reported by 28.33 percent of the respondents. The harvested produce is procured from the fields directly by the commission agents. The farmers could not get reasonable support prices for their produce. The farmers could not able to sell their produce in a regulated market. This may be the probable reason for the above-said constraint.

Around twenty-five percent of the respondents (24.16 percent) faced the problem of 'Lack of field visit during training'. The farmers felt that the field level training programs were not sufficient. The farmers need more field level exposure in the training programs so as to enrich their knowledge and adopt the practices without any distortion. This may be the reason for the above-reported constraint.

The exploitation of the middlemen was the constraint expressed by 10.00 percent of the respondents. The middlemen have by and large rendered the system of agriculture into a non- profitable and stagnant venture. In the entire, study, the input dealers are playing as a middleman in order to recover credit given to respondents as inputs, etc. In this situation, the respondents have to depend upon the middleman to sell their produce as they have to get inputs on a credit basis for the next season thereby reducing considerable profit for their produce. This may be the reason for the reported constraint in paddy cultivation.

Other constraints

Crop insurance scheme was the most important constraint reported by 79.16 percent of the respondents. The farmers used to face many uncertain situations like heavy drought and monsoon failure, etc., which would lead to heavy loss for the farmers. In order to compensate for the loss, they need some alternate schemes. As the farmers were unaware of the crop insurance scheme implemented by the Government, they might have expressed this constraint. Most of the farmers reported that at the time of the survey, sometimes the crop insurance amount was not given by the insurance officials and otherwise only a few amounts were settled to the particular respondents. In some survey areas, the farmers are highly opposed to the insurance officials due to non-credit of the

insurance amount. This may be the reason for the above-reported constraint.

The constraint, Unawareness of supplies and service offered by the Government was reported by 48.33 percent of the respondents. A lot of schemes and subsidies are available for enhancing the farmer's growth. Most of the respondents are not aware of the supplies and services offered by the State Department of Agriculture. This may be the reason for the above constraint. The finding is in line with findings of Suresh Kumar (2015).

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