Role of Krishi Vigyan Kendras in the National Agricultural Extension System

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Introduction

Krishi Vigyan Kendra (KVK) is an organizational concept developed and promoted by the Indian Council of Agricultural Research (ICAR) during the 1970s to provide skill-oriented vocational training support to farmers and rural youth. Over the years the concept has been developed considering the field experiences and expectations in the rural areas. The major mandate of KVKs are to focus on (a) technology assessment and refinement, (b) conducting front line demonstrations on lead technologies for the benefit of extension personnel and farmers, (c) capacity building through training and skill development on various technologies for the farmers, extension personnel and rural youth, (d) providing technical assistance and advisory services to the farmers and the extension personnel on various sectoral aspects. The ICAR as a national body has been operationalizing the KVK mechanism through various organizations by providing budgetary allocations and guidelines for operation.

Since the Government of India has been promoting the expansion of KVK concept across the country to cover all the districts, the present study was undertaken to have an insight in the operationalization of the concept based on the following objectives.

Objectives

1. To understand the type of agencies involved in operationalizing the KVK concept.
2. To examine the present level of infrastructure facilities apart from the faculty position in the KVKs.
3. To study the types of activities being undertaken by the different types of KVKs.
4. To understand the budget received by the KVKs and the efforts towards fund generation by the KVKs.
5. To suggest strategies for mainstreaming of KVKs for agricultural development under the national agricultural extension systems.

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2. Methodology

The study was conducted in the year 2006-07. The data was collected through a structured pre-tested mailed questionnaire specially prepared for the purpose. The questionnaires were sent to 500 KVKs of different states. The responses were received from 70 of them which works out to 14 %. The analysis has been done using simple percentages.

3. Results and Discussion

The results of the study highlighting various aspects of operationalization of the KVKs are presented as follows.

1. Agency wise operationalization of KVKs

It can be observed from Table 1 , that the maximum number of the KVKs were operated by the SAUs (65.3 %) followed by NGOs (18.2 %), others (9.1 %) and the ICAR with 7.4 %.

Table 1. Agency wise Operationalization of KVKs

Sl.No.	Category	KVKs	
		(No)	Percentage
1.	ICAR	39	7.4
2.	SAU	346	65.3
3.	NGO	96	18.2
4.	Others	48	9.1
	Total	**529**	**100**

It is interesting to note that though ICAR is the promoter of the concept it is allowing the implementation through various agencies leading to large scale coverage. It is also interesting to note that some of the ICAR institutes are operating the KVKs thereby providing direct feedback of experiences to the policy planners.

2. Status of Faculty and Technical Staff

The pattern of KVK operation has provided specified number and types of positions in each of the KVKs. However, in recent years, these positions have been limited to 10. Accordingly, it can be seen from Table 2 that the maximum number of positions filled in (9) were in the NGO and other KVKs, followed by 8 in ICAR KVKs and 6 in SAU KVKs. The vacancies were found irrespective of the type of KVK. Most of these KVKs are in rural areas focusing on Technology Assessment and Refinement (TAR) activities. The

researchers are not keen to move into rural areas due to the limited facilities. Moreover their priority is on research and teaching than field extension.

Table 2. Status of faculty and technical staff

Sl. No.	Category	No. of filled positions
1.	ICAR	8
2.	SAU	6
3.	NGO	9
4.	Others	9
	Total Average	**8**

Since the number of positions themselves are limited, on the contrary, there is an increased expectation from KVKs , not only to undertake the regular activities but also for supporting the ATMAs in all the districts of the country. Hence, efforts should be stepped up to fill up all the vacant positions immediately. For effectively motivating the research staff to move into rural areas, priority should be given in scoring for those working in field extension as compared to others.

3. Availability of infrastructure facilities

The package of support to KVKs includes the basic requirements and also infrastructure facilities. As may be seen in Table 3, the ICAR and other KVKs have an office facility in contrast to 90 percent of SAU KVKs and 70 percent of NGO KVKs. Since KVKs are an institutional mechanism, there is need for setting up an office for providing an identity within the community. Since some of the KVKs have been initiated recently it is likely that their office buildings are yet to be constructed.

Table 3. Availability of infrastructure facilities

(% of institutions)

Sl. No.	Institutions	Office	Class room	Hostel	AV Aids	Library	ICT	Quarters	Health	Recre-ation
1	ICAR	100	92	88	64	96	84	40	-	-
2	SAU	90	80	60	80	80	90	30	10	10
3	NGO	70	70	70	50	70	70	60	70	10
4	Others	100	100	100	100	100	100	100	12	12

The class room facility is available in a majority of the other KVKs, such as 92 percent of the ICAR KVKs, 80 percent of SAU KVKs and 70 percent of NGO KVKs. Since the classroom is a requirement for undertaking the basic activity of training and teaching,

it should be ensured that all the KVKs have the facility. Since some of the KVKs have just been operationalized, it is likely that the infrastructure is yet to be developed.

All the KVKs in other category have indicated having hostel facility as compared to 88 percent among ICAR KVKs, 70 percent of NGO KVKs and 60 percent of the SAUs. Since the KVKs have to undertake on campus training of farmers and youth, it is necessary that these facilities are developed in all the institutions. The results reveal that the SAU and NGO KVKs have comparatively less hostel facilities which is likely to be due to their recent implementation of the scheme, thereby taking time for undertaking activities. Since hostel facility is a requirement for effective training, it is necessary that this should be monitored.

All the KVKs in other category have AV aids, library and ICT facilities. A large percentage of the NGO KVKs are lacking in these facilities. Almost 80 percent of the SAU KVKs have developed these facilities so also the ICAR KVKs. Since the above facilities are a requirement for effective training, it is necessary to develop them as per the provisions allotted. As regards housing, health and recreation, these facilities are important for providing the ambience of interaction between the faculty and the trainees. Hence it is necessary to improve these facilities in most of the KVKs, since the ICAR, SAU and NGO KVKs have indicated lack of quarters/residential facility in a majority of the cases. So also, a high majority of the KVKs do not have recreation and health facilities.

Since the academic activities in the KVKs need to be stabilized, it is necessary to build in residential health and recreational facilities to attract faculty to stay on the campus. Apart from this, there is need to strengthen library, ICT and AV aids. NGO KVKs need to strengthen the physical building infrastructure. If necessary, capacity building of master trainers in these areas could be taken up.

4. Technology Assessment and Refinement (TAR)

Among the key activities of the KVKs, the first position goes to TAR. It can be seen from Table 4 that 84 percent of NGO KVKs and around 70 percent of the SAU and other KVKs are undertaking this function. However, among the ICAR KVKs only 50 percent of them are undertaking the function as indicated by them.

Since TAR is a major responsibility, all the KVKs must be involved in this function, which is a prime requirement. With the ATMA mechanism in operation, KVKs will have to take up this function effectively. As regards the number of activities in TAR, each of the KVKs is undertaking three, six or nine activities depending upon their requirement. The minimum activities are in ICAR KVK and the maximum in SAU KVKs. Since SAUs have the major mandate to recommend the package of practices in their states, the focus of

Table 4. Technology Assessment and Refinement (TAR)

Sl. No.	Category	% of institutions undertaking TAR	No. of activities (Av)
1	ICAR	50	3
2	SAU	72	9
3	NGO	84	6
4	Others	70	6

activities is large. Since, there is only one KVK in each of the districts, it is necessary to accord highest priority for the TAR function in each district in collaboration with the ATMAs and the research organizations in all the types of KVKs.

5. Training Need Assessment and Design

The first step in conducting the training programme is the need assessment followed by developing a training design to deliver. The data in Table 5 indicates that all the SAUs, NGOs and other KVKs apart from 80 percent of the ICAR KVKs are undertaking need assessment and also design the programme accordingly.

Table 5. Training Need Assessment and Design

Sl.No.	Institutions	Need assessment (%)	Design (%)
1	ICAR	80	80
2	SAU	100	100
3	NGO	100	100
4	Others	100	100

The reasons for few of the ICAR KVKs yet to undertake this activity is mainly because some of them are recently established and need time to adjust. Since the initial steps are important, this should be ensured in all the KVKs.

6. Capacity building in different KVKs

The second major activity of the KVKs is to build the capacity of the farmers, rural youth and extension personnel. As such, it could be observed that 71 programmes were organized by other KVKs covering 1402 farmers followed by 56 by NGO KVKs covering 1781 farmers, 46 by ICAR KVKs covering 1188 farmers and 33 programmes by SAU KVKs covering 1063 farmers (Table 6). The coverage of a large number of farmers in NGO and other KVKs was mainly due to the fact that these KVKs focused their attention on farmers training since they have been working in the rural areas for implementing various programmes for the same clientele. On the other hand, for the ICAR and SAU

KVKs, this was a specific item of work to be undertaken in relation to supporting their research activity. Apart from this, there are other institutional mechanisms for farmers' training in some of the states.

Table 6. Capacity Building in different KVKs

Sl. No.	Category	Farmers		Rural youth		Extension officials		Total	Total
		No. of progs.	No. bene-fitted	No. of progs.	No. bene-fitted	No. of progs.	No. bene-fitted	No. of progs.	No. bene-fitted
1	ICAR	46	1188	9	248	4	92	59	1528
2	SAU	33	1063	5	113	4	85	42	1261
3	NGO	56	1781	14	312	9	224	79	2317
4	Others	71	1402	13	281	18	432	102	2115

Similarly in the capacity building of rural youth also, the NGO and other KVKs have undertaken comparatively more programmes with larger coverage than the SAU and ICAR KVKs. The SAU KVKs were found to conduct the least number of programmes for the rural youth.

In the case of capacity building of extension officials, other KVKs have taken the lead by conducting 18 programmes covering 432 personnel which is almost equivalent to the combined efforts of the rest three categories. This was mainly so because the KVKs with the line departments have been able to gather larger participation of their officials.

Overall, it could be observed that other KVKs have topped the capacity building activities followed by NGO KVKs and the others. Similar observation could be made in terms of coverage of trainees also. Since capacity building is one of the major focal points there is need to emphasize this activity in all the KVKs since funds are provided for the same.

7. Duration of the training programme

The general duration of training programmes undertaken by the KVKs for the farmers was found to be different for each organization. The ICAR KVKs had a duration ranging from 1-7 days, the SAUs from 1-15 days, among NGOs it was 1-45 days and others 1-3 days (Table 7). Though the duration depends on the content of the programme, the variations indicated are too large. Moreover, farmers will not be in a position to participate in the large duration programmes. Hence, there is a need to work out a specific duration frame for the farmers.

Table 7. Duration of the training programme

Sl. No.	Institutions	Av duration for different categories of trainers (days)		
		Farmers	Officials	Rural youth
1	ICAR	1-7	1-6	2-6
2	SAU	1-15	1-4	1-90
3	NGO	1-45	1-120	1-180
4	Others	1-3	1-6	1-21

In the case of officials, the duration was found to vary from 1- 4 or 1-6 days among most of the KVKs except NGO type where it ranged from 1-120 days. No government officials would be available for 120 days of training. Hence, a week's training could be set up as a norm for the duration of each training.

Among the rural youth, the duration ranged from 2-6 days among ICAR KVKs to 1-21 among others, 1-90 among SAUs and 1-180 among NGOs. Since the focus of training the rural youth is specifically on promoting skills in a sectoral area for setting up small scale enterprises on self employment basis, it would be helpful to provide a longer duration. Hence, it is necessary to set up a frame work for the duration of youth depending on the enterprise on which training is provided.

8. Training Methodologies used by different Institutions

To build up the capacity of the participants on various spheres of technology management, it is necessary to use a combination of training methodologies. It can be observed from the data in Table 8 that lecture method was used by more than 80 percent of the KVKs including the NGO KVKs. Group discussion method was used by all SAUs, more than 90 percent of NGO and other KVKs and 70 percent of the ICAR KVKs.

Table 8. Training methodologies used by different institutions

Sl. No.	Institutions	Usage of training methods (%)						
		Lectures	Group Discussions	Case Studies	Exposure visit / Field visits	Exercises & Games	Practice sessions	Any(*) other
1	ICAR	80	70	40	70	40	40	50
2	SAU	84	100	88	80	52	68	0
3	NGO	100	96	84	100	72	84	100
4	Others	90	90	70	90	30	50	90

(*) Any other = Video films, T.V. shows

Case studies were used by only 40 per cent of the ICAR KVKs and 70-88 percent of other three types of KVKs. Exposure visits were used by more than 70 per cent of the KVKs with the highest being NGOs and least in ICAR KVKs. The NGO KVKs used games in 72 per cent of the cases whereas it was less in other types. Practice sessions for the trainees were provided in NGO KVKs (84 percent) and the least was in ICAR KVKs. Video films and TV were used among NGO and others, and limited in ICAR KVKs. A perusal of the data reveals a need for integrating participatory methodology in training apart from providing greater focus on exercises, games, practice sessions and use of other methodologies in all the KVKs. There is need for skill upgradation of the master trainers in the training methodologies across the country.

9. Involvement of External Resource Persons in Training Programmes

Involvement of external resource persons for the training activity is a requirement since all the skills needed are not available in one organization or few persons. Accordingly, it could be seen that more than 80 percent of the KVKs except ICAR do involve external resource persons (Table 9). In the ICAR category only 40 percent of external resources are used. Since these KVKs are generally linked to one of the lead research stations, most of the faculty from the research institute is also involved in KVK trainings.

Table 9. Involvement of External Resource Persons in Training Programmes

Sl. No.	Institutions	Status	Duration (days)	% of involvement	Payment (%) Only for sponsored courses
1	ICAR	40	1/2 – 2	50	30
2	SAU	88	1/2 – 2	20	20
3	NGO	84	1/2 – 3	14	20
4	Others	90	1/2 – 4	12	60

The involvement duration of the resource persons across all the KVKs ranged from 1/2 day to 4 days depending on the programmes. The maximum duration of involvement was found among other KVKs, wherein they depend upon resource persons from the research organizations.

10. Evaluation of the training programmes

Evaluation of the training programmes is a necessary step to get a feed back for the organization. As such, 70 percent of the ICAR KVKs conduct the evaluation as may be seen in Table 10.

Table 10. Evaluation of the training programmes

Sl. No.	Institutions	Status of evaluation (%)
1.	ICAR	70
2.	SAU	100
3.	NGO	100
4.	Others	100

In contrast to this all the SAU, NGO and other KVKs undertake the evaluation. It is necessary that the evaluation as a step is promoted in all the KVKs. A common methodology could be worked out and provided which would be easy to compare the KVKs.

11. Technical Advice and Support Services

The third important function of the KVKs is to provide technical advice and support to the farmers and field staff. Accordingly, it could be observed from table-11, that more than 80 percent of the ICAR KVKs provided advice on agriculture, horticulture and animal husbandry and below 40 percent on fisheries, sericulture and agro processing. Among the SAU KVKs, more than 80 percent provided advice on agriculture and horticulture, 60-80 percent on animal husbandry and agro processing less than 40 percent on fisheries and sericulture. Among the NGO KVKs, the major focus of advice was on agriculture, horticulture, animal husbandry and agro processing and less than 60 percent on sericulture and fisheries. The KVKs in other group have focused on agriculture, horticulture and animal husbandry, followed by others.

Perusal of the data reveals that agriculture, horticulture and animal husbandry form the core technical components for technical advice. However, since the other activities such as fisheries and sericulture are limited to specific areas, there is a limitation in coverage. There is a greater need to focus on agro processing in all areas in the present context.

The KVKs have also provided information support to the farmers, officials and rural youth on various schemes of the government along with modalities so that they can take advantage of the same. It could be seen from the data that more than 70 percent of all the KVKs have provided various types of information except marketing and prices. Since the marketing and pricing information is most crucial for the farmers, efforts should be made to dovetail this support to KVKs through ICT channels.

Table 11. Technical Advice and Support Services

Sl. No	Type of service	Avg. number							
		ICAR		SAU		NGO		Others	
		Status	No. of farmers benefitted	Status	No. of farmers benefitted	Status	No. of farmers benefitted	Status	No. of farmers benefitted
1	**Technical advice relating to**								
a	Agriculture	80	609	92	314	100	1917	100	589
b	Horticulture	90	586	88	205	100	1278	100	272
c	Animal Husbandry	80	722	60	175	100	1105	90	213
d	Fisheries	40	65	44	83	56	792	30	53
e	Sericulture	30	113	20	22	48	197	10	0
f	Agro processing	40	80	68	68	84	212	60	129
2	**Information support on**								
a	Schemes & programmes of the Govt.	70	691	76	110	100	457	70	292
b	Sources of supply for quality inputs	70	757	76	269	96	618	70	268
c	Sources & modalities of credit facilities	60	797	56	376	64	1066	70	120
d	Markets and prices	30	99	52	822	48	527	70	139
3	**Production & supply of inputs**								
a	Seeds	80	200	68	233	96	671	100	211
b	Plant materials	90	187	48	87	80	4027	70	227
c	Bio-fertilisers like blue green algae	40	80	28	84	40	548	50	60
d	Bio-pesticides like neem oil etc.	50	63	28	92	60	283	40	88

The KVKs are providing supply of inputs for the farming community. The seed and plant material was supplied by a large percentage of KVKs. However, some of the KVKs have initiated supply of bio-fertilizers and bio-pesticides. There is need to examine the farmers requirement and dovetail the quality support from KVKs.

12. Extension Activities undertaken during 2005-06

Various types of extension activities have been undertaken by the KVKs. More than 70 percent of the KVKs conducted demonstrations (Table 12). The ICAR KVKs focused more on demonstrations, farmers' meetings, agricultural exhibitions and TV talks.

Table 12. Extension Activities undertaken during 2005-06

Sl. No	Type of service	Avg. number							
		ICAR		SAU		NGO		Others	
		No. of progs. conducted	No. of farmers benefitted	No. of progs. conducted	No. of farmers benefitted	No. of progs. conducted	No. of farmers benefitted	No. of progs. conducted	No. of farmers benefitted
1	Demonstrations	70	489	88	231	88	298	80	184
2	Kisan melas	20	1600	72	1682	88	5023	30	142
3	Agrl.exhibition	50	2244	68	3900	80	27184	30	1313
4	Farmer's fair	30	339	40	3086	60	3029	20	190
5	Radio talk	30	0	72	131	72	6	20	295
6	TV show	50	21	52	46	88	13	10	144
7	Film show	40	165	44	473	72	281	20	616
8	Pamphlets	40	343	68	1511	96	4428	40	3652
9	Video cassette	10	200	24	64	52	252	10	650
10	Slides	10	250	24	12	40	106	10	225
11	Farmers science club / farmers groups women groups organised	20	425	56	120	88	1040	60	270
12	Farmers meetings	60	315	64	255	96	954	60	597

The SAU KVKs focused more on demonstrations, kisan melas, agricultural exhibitions, radio talks, farmers meetings and publications. In the case of NGO KVKs, major activities included were demonstrations, kisan melas, exhibitions, radio talk, TV shows, film shows, farmers clubs, publications and farmers meetings. Other KVKs focused more on demonstrations, farmer groups and farmers meetings. The NGO KVKs seem to be undertaking more activities than the others. However, the variety of activities being taken up by the KVKs highlight their farmer focused approach. This needs to be strengthened. Since KVKs are emerging as major capacity building centers in technical

areas to support the ATMA activities, it is necessary that the requirements of ATMAs are reflected in the activities of the KVK. Accordingly, the KVKs in consultation with ATMAs need to identify innovative activities to support the farmer groups.

13. Institutional Linkages

Linkages between different institutions working for the farmers are a requirement in the present context. As such it could be seen that a majority of ICAR KVKs have institutional linkages with SAUs, ICAR research institutes, line departments, farmers' organizations, NGOs apart from others (Table 13). The SAU- KVKs had links with ICAR, SAU, line departments, NGOs, credit institutions, farmers' organizations apart from others. The NGO KVKs exhibited linkages with ICAR, SAUs, line departments, private companies, input dealers, other NGOs, credit institutions and farmers organizations. The other group of KVKs indicated linkages with all the institutions.

Table 13. Institutional Linkages

(per cent)

Sl. No	Name of the Institute	ICAR	SAU	NGO	Others
1	ICAR Research Institutes	90	80	96	100
2	State Agricultural Universities	80	80	100	80
3	Agriculture & allied departments	80	96	100	80
4	Private companies	20	60	88	80
5	Input dealers	20	68	84	80
6	NGOs	60	88	92	100
7	Credit institutions	50	72	76	80

Though majority of the NGO, others and SAU KVKs had linkages, there is need to strengthen these linkages effectively through specific mechanisms. ATMAs as an institutional innovation could help in bringing in all the above together along with a role for each one. This needs to be promoted effectively in the true sense.

14. Documentation and Publication

Documentation and publication is another mandated activity of the KVKs. It is evident from table 14, that 80 percent of the ICAR KVKs are effectively documenting and publishing for the benefit of clients. Similarly 96 percent of SAU and NGO KVKs and 80 percent of others are involved in documentation and publication. In majority of the

cases, the documentation relates to the number of activities conducted along with the level of participation.

Table 14. Documentation and Publication

Sl.No.	Name of the Institute	Status of documen-tation	Status of payment	Type of clients
1	ICAR	80	10	- Farmers -Extension workers - Researchers - Bankers -Private personnel - Input dealers - NGOs - Other KVKs - SHGs
2	SAU	96	8	- do -
3	NGO	96	28	- do -
4	Others	80	10	- do -

The focus of documentation is only limited to the task activity achieved rather than the process of achieving the task. This is mainly because the faculty among the KVKs lacks an orientation on the skills in process documentation. Since process documentation helps in understanding factors relating to success or failure of an intervention, based on which, lessons could be drawn for future activity, it is necessary that all the faculty of all the KVKs are oriented to the skills in process documentation.

15. Budget Operated and Source of Funding

Since KVKs are the brainchild of the ICAR, the key funding is coming from the ICAR followed by State Governments apart from other organizations supporting the programmes. It could be seen that KVKs in general seem to operate a budget around 50 lakhs per year except for SAUs, wherein it is 31 lakhs (Table 15). Apart from the ICAR and state governments, the KVKs are also receiving funding from other agencies to a small extent.

Table 15. Budget Operated and Source of Funding

Sl.No.	Name of the Institute	Amount (Av. Rs. in lakhs)	Sources of funding
1	ICAR	49	- ICAR
2	SAU	31	- ICAR
			- State Govt.
			- GOI
			- Banks
			- WALAMTARI
			- NGOs
3	NGO	51	- ICAR
			- State Govt.
			- GOI
			- Banks
4	Others	52	- ICAR
			- State Govt.

Considering the role and responsibility of KVKs, especially in the present context of major reforms in agriculture, it is necessary that larger funding needs to be provided to meet both the establishment and programme costs to ensure that the mechanism operates effectively.

16. Generation of Funds

Generation of funds is an upcoming necessity for all the organizations. As such, since KVKs provide increased services to the farmers, it is possible to initiate the fund generation process. There are various activities like seeds, seedlings, soil testing, sale of products etc. by which income could be generated. However, the results in table 16 indicate that a moderate attempt has already been made among 70-90 percent of the KVKs.

The amount of funds generated ranged from 4 to 24 percent of the existing budget operated. However, a pattern of fund generation and collection mechanism has to be provided to the KVKs by the ICAR with the understanding that the funds could be used in needy crucial requirements to sustain the organization.

Table 16. Generation of Funds

Sl. No	Name of the Institute	Status (%)	Amount generated (Av. Rs. in lakhs	Activities
1	ICAR	70	1.82	- Sale of seedlings and plant material - Sale of fire wood - Income from poultry and rabbit units - Income from custom hiring of farm machinery
2	SAU	76	3.43	- Revolving fund - Sale of seed and plant material - Vermicompost - Soil testing
3	NGO	92	12.00	- Sale of seed and planting material, vermi- compost, bio-fertilizers - Soil and water analysis - Sale of chicks, goat, sheep - Bakery production - Sale of honey
4	Others	80	7.00	- Sale of seed, vermi-compost, bio-fertilizers, bio-pesticides - Sale of fruit and vegetables, planting material - Sale of piglets - Sale of fish seed - Training

Conclusion

The concept of Krishi Vigyan Kendras (KVKs) as centers of development in agriculture at the district level has been established and even expanded to cover the entire country. The ICAR which has promoted the concept is aptly implementing the mechanism in a decentralized manner through various agencies to cover all districts. However, to make the investments under the KVKs more meaningful and focused for achieving the desired results, the following suggestions have emerged from the study.

(i) There is a need to provide greater emphasis on the TAR function for all the KVKs irrespective of the sponsoring agency, so that, they are linked to the ATMA and effectively undertake the needed Technology Assessment and Refinement as per the feed back received from the farmers interest groups and the extension personnel in the ATMAs. The technical programme of the KVKs should have a linkage with the emerging requirements from the ATMAs.

(ii) For effective implementation of capacity building and training activities, it is necessary that the trainers in all the KVKs should be oriented to integrated methodology of training including need identification, training design and delivery.

(ii) Though the KVKs are undertaking technical advice and services for the farmers on different aspects, it could be observed that the information on marketing and prices is lacking on their advisory services. Since these areas are important from the point of view of farmers in the present context, it is necessary to enhance the capacities of the KVKs for accessing and supporting marketing and pricing information through ICT interventions.

(iv) Supply of quality inputs like seeds, plant material, bio-fertilizer, bio-pesticides, vermi composts etc. should be promoted through the KVKs as a strategy, so as to enable farmers get better inputs apart from enabling KVKs to improve their fund generation activity. If necessary, a provision of seed money for establishing these units for the KVKs needs to be provided.

(v) Over the years, there is a tendency for the KVKs to become routine in their extension activities. Hence, to improve their performance and provide active support for farmers groups, it is necessary that innovative extension activities such as farmers field schools, farm schools, exposure visits, farmer to farmer extension etc. are developed by the KVKs in consultation with the ATMAs

(vi) Though most of the KVKs are undertaking documentation of their activities, the need to introduce process documentation as a major strategy across the country should be undertaken by the ICAR, so as to not only assess the progress but also to draw lessons from success or failure of different approaches to improve policies and programmes at the national level. It is necessary to build the capacity of faculty in all the KVKs for undertaking process documentation across the country.

(vii) Since KVKs are a district level institution with expertise available in various sectors, they can take up the documentation of existing farming system models at the farmers' field level alongwith the economics of operation on a priority basis. Further, it also suggested that improved farming system models for increasing the economic situation of various types of farmers needs to be worked out on an action research

basis at the farm level. This can help to improve the delivery of extension services in an integrated manner for the farmers.

(viii) To make effective use of the KVK resources and investments made across the country, it is necessary to increase the budget allocations for each of the KVKs from the present level so as to meet the increasing establishment and programme cost. Further, it is necessary to strategically allow KVKs by setting up a mechanism for generation of funds at each one of the KVKs building on its own strength and help build up the corpus to be used in case of need.

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