

Impact of KVK Training on Development of the Vegetable Growers

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ABSTRACT

Jajpur district in Odisha has the potentiality in vegetable cultivation. The farmers had also affinity for vegetable cultivation for better income. Krishi Vigyan Kendra, Jajpur is also organizing training regularly on vegetable cultivation. A study conducted with 40 trained and 40 untrained vegetable growers revealed that there were better developments of both the trained and untrained respondents on economical, social, technological, material possession and farm activities in comparison to infrastructural and input use. However; KVK has to strengthen its training programmes on processing and value addition of vegetables, establishing good marketing networks, sensitizing for the use of soil test based fertilizer, competency in producing own seeds, capacity building on use of proper dose, time and method of application of fertilizers along with permanently in information flow for the betterment of the vegetable growers.

Key words *Impact, KVK Training, Development, Vegetable Growers*

Krishi Vigyan Kendra has been designed to impart need based and skill oriented vocational training to various categories of farming communities to increase farm production as well as to give social justice for the deserving weaker section of the society. It has been observed that there has been a significant change in the context of technological adoption, income generation and regular expertise to the trainees undertaken training at KVKs (Kanungo and Sangram Singh, 1993, Dimple *et al*, 1996). The training has also enriched skill competency, decision making capabilities enabling the trainees to adopt the recommended practices (Shiva, 2001). Since KVKs are imparting training on the essential needs of the clientele considering the resources, ecosystem and constraints, the farmers could able to use the technologies effectively and increase productivity, production and income resulting development of the farmers. Attempt was therefore made to assess the extent of development made to the farmers through vegetable cultivation after taking training at KVKs.

MATERIALS AND METHODS

The study was undertaken in Jajpur district of Odisha being considered as one of the potential district on vegetable cultivation. A sample of 40 vegetable growers from four Gram Panchayats of two blocks of the district

undergone training at KVK, Jajpur on vegetable cultivation were randomly selected as the respondents for the study. Similarly, 40 vegetable growers not undertaking training at KVKs were also randomly selected as the respondents for comparison.

The data was collected personally through a semi-structured schedule pre tested earlier. Information collected on scale point of strongly agree, agree and disagree were analysed with score value of 3, 2, 1 respectively. The statistical tools such as mean score, Z test and multiple regressions were employed to reveal the results.

RESULTS AND DISCUSSION

The trainees are usually adopting the technologies at optimum level being equipped with sufficient knowledge and skills on vegetable cultivation to increase the production and productivity. It is observed from Table-1, there were significant differences on technological developments among trained and untrained respondents on all aspects of the technological developments covered under study except greater exposure to sources of information and permanency in information flow which indicate the impact of KVK training. However the mean score value revealed that there was better developments on increase in production and productivity, occupational competency, better use of resources, management of adverse situation, adoption of recommended practices and greater exposure to source of information both by trained and untrained respondents. It indicates that the farmers undertaking training at KVK on vegetable cultivation not only use the knowledge and skills gained but also disseminate the same to other vegetable growers at their locality. However; KVK has to organise training on processing and value addition of the produce and suitable measures for regular flow of technological information for the betterment of the vegetable growers.

Improvement on economic status is one of the important indicators of the developments. As observed from the Table-2, there was significant developments on increase in family income, generation of employment, access to credit and capability for investment, increase in savings as well as self sustain employment leading to improvement on living condition. Though significant developments of the trained respondents observed on increase in access to credit, self sustain employment, improvement in living condition and increase in savings in comparison to untrained respondents, but the mean score value indicated for better developments on all economical aspects.

Table 1. Extent of technological developments

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Increase in production and productivity	2.80	2.55	2.68	10.67	0.0451	2.0031*
2	Greater expose to source of information	2.35	2.08	2.22	26.00	0.0775	1.7649NS
3	Adoption of recommended practice	2.60	2.15	2.38	20.67	0.0043	2.8571**
4	Increase in occupational competency	2.65	2.30	2.48	17.33	0.0017	3.1305**
5	Better use of resources	2.65	2.18	2.42	19.33	0.00004	4.1062**
6	Permanency in information flow	1.88	1.63	1.76	41.33	0.1265	1.5282NS
7	Management of adverse situation	2.53	2.25	2.39	20.33	0.0191	2.3438*
8	Processing and value addition of produce	1.90	1.55	1.73	42.33	0.0043	2.8517**

(Maximum obtainable score-3)

** Significant at 0.01 level *Significant at 0.05 level NS -Not Significant

The scientists of KVKs are also sensitising people on various social aspects such as community organisation, group approach, team work, conflict resolution etc which facilitate cluster approach to minimize the cost and better return. There was a significant differential development between trained and untrained respondents on all the social aspects mentioned in Table-3 except more attention of developmental departments and consciousness in farming. The data in the table as a whole revealed that there was a better social development of the trained respondents in comparison to untrained respondents.

The state Agriculture Department has extended subsidy facility and credit availability for infrastructure

developments particularly through National Horticultural Mission. Vegetable cultivation usually requires irrigation and farm mechanisation to maximize production and productivity. No significant differences were observed on various aspects of infrastructure developments (Table-4) among trained and untrained respondents. However; the mean score value indicated that the trained farmers had better developments on purchasing implements and machineries, installing own irrigation facilities and efficient use of resources in comparison to untrained farmers. But, the untrained farmers had covered more area under vegetable cultivation than trained farmers may be due to non-adoption of all the recommended practices. Both the

Table 2. Extent of economic development

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Employment generated	2.65	2.60	2.63	12.33	0.7374	0.3352 NS
2	Family income increased	2.90	2.65	2.78	7.33	0.1588	1.4092 NS
3	Access to credit increased	2.90	2.58	2.74	8.67	0.0021	3.0795**
4	Increase in capability for farm investment	2.73	2.55	2.64	12	0.1572	1.4146NS
5	Self sustain employment	2.85	2.55	2.70	10	0.0066	2.7184**
6	Savings increased	2.85	2.58	2.72	9.33	0.0124	2.5001*
7	Improvement in living condition	2.88	2.48	2.68	10.67	0.0002	3.7079**

(Maximum obtainable score-3)

** Significant at 0.01 level *Significant at 0.05 level NS -Not Significant

Table 3. Extent of social development

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Better access to technical personnel	2.45	2.10	2.28	24.00	0.0029	2.9813**
2	Increase in team work and team spirit	2.58	2.15	2.37	21.00	0.0004	3.5098**
3	Cluster approach	2.53	2.13	2.33	22.33	0.0008	3.3418**
4	Optimum use of common resource	2.48	2.13	2.31	23.00	0.0051	2.8014**
5	More attention of the developmental departments	2.38	2.25	2.32	22.67	0.3743	0.8885 NS
6	Increase in decision making capability	2.65	2.35	2.50	16.67	0.0084	2.6364**
7	Develop consciousness in farming	2.55	2.35	2.45	18.33	0.0699	1.8122 NS

(Maximum obtainable score-3)

** Significant at 0.01 level *Significant at 0.05 level NS -Not Significant

trained and untrained respondents had not expressed satisfactory developments on marketing network. However; the mean score value being at lower side, satisfactory developments were not made both by trained and untrained respondents in establishing infrastructures on vegetable cultivation.

Use of recommended and quality inputs regulates production and productivity for which KVK scientists always emphasizing for the use of recommended inputs. There was significant improvement (table-5) on use of good variety, quality seeds, skill competency in proper use of inputs although significant differential opinions observed among trained and untrained respondents on various aspects of input use. But the KVK has to organise adequate training programmes for producing own seeds, adopting

soil test based fertilizer as well as using proper dose of fertilizers and chemicals in time.

The farmers are usually purchased essential household articles with the additional income generated. The data in Table-6 revealed that the trained respondents had better developments on all the aspects of material possession although significant differential opinions were not observed on better housing and fulfilling family requirement. Much development not observed on fulfilling family requirements, better education to children and managing social function properly indicated that insufficient economic status for which KVK has to further intensify the training programmes enriching knowledge and skill competency in vegetable cultivation for more income generation.

Table 4. Extent of infrastructure development

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Develop own irrigation facility	2.33	2.03	2.18	27.33	0.1677	1.3798 NS
2	Purchase implements and machineries	2.38	2.03	2.21	26.33	0.0656	1.8415 NS
3	Purchasing additional land	1.98	1.60	1.79	40.33	0.0821	1.7386 NS
4	Increase area under vegetable	2.30	2.40	2.35	21.67	0.6368	-0.4721NS
5	Efficient use of resources	2.30	2.10	2.20	26.67	0.0773	1.7664 NS
6	Good marketing network established	1.50	1.18	1.34	55.33	0.0059	2.7508**

(Maximum obtainable score-3)

** Significant at 0.01 level *Significant at 0.05 level NS -Not Significant

Table 5. Extent of development on input use

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Use of good variety	2.70	2.60	2.65	11.67	0.4201	0.8062 NS
2	Use of quality seeds	2.63	2.43	2.53	15.67	0.1434	1.4631 NS
3	Use of fertilizers and chemicals at proper dose and time	1.98	1.78	1.88	37.33	0.1065	1.6141 NS
4	Skill competency in use of inputs	2.45	2.33	2.39	20.33	0.3727	0.8914 NS
5	Adopting soil test based fertilizer	1.20	1.08	1.14	62.00	0.2335	1.1913 NS
6	Producing own seeds	1.20	1.13	1.17	61.00	0.4695	0.7233 NS

(Maximum obtainable score-3)

** Significant at 0.01 level

*Significant at 0.05 level

NS -Not Significant

Table 6. Extent of development on material possession

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Purchase of household articles	2.83	2.63	2.73	9.00	0.0424	2.0295*
2	Better housing	2.60	2.63	2.62	12.67	0.8434	-0.1976 NS
3	Family requirement fulfilled	2.03	1.83	1.93	35.67	0.0829	1.7341NS
4	Better education to children	2.08	1.95	2.02	32.67	0.3203	0.9940 NS
5	Increase in living standard	2.70	2.33	2.52	16.00	0.0021	3.0767 **
6	Managing social functions properly	2.23	1.95	2.09	30.33	0.0025	3.0271 **

(Maximum obtainable score-3)

** Significant at 0.01 level

*Significant at 0.05 level

NS -Not Significant

Table 7. Extent of development on farm activities

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained (n=40)	Untrained (n=40)				
1	Growing remunerative enterprise	2.33	2.00	2.17	27.67	0.0131	2.4807*
2	Cropping pattern and intensive increased	2.23	2.03	2.13	29.00	0.1752	1.3557 NS
3	Growing crops round the year	2.48	2.28	2.38	20.67	0.2731	1.0960 NS
4	Diversification to better enterprise	2.40	2.05	2.23	25.67	0.0240	2.2574*
5	Fully utilization of family labours	2.48	2.55	2.52	16.00	0.6108	-0.5090NS
6	Growing suitable combination of enterprise	2.25	1.95	2.10	30	0.0527	1.9375 NS

(Maximum obtainable score-3)

** Significant at 0.01 level

*Significant at 0.05 level

NS -Not Significant

Table 8. Comparative analysis of developments

Sl. No.	Development	Mean Score		Average Mean Score (n=80)	Gap (%)	P value	Z value
		Trained	Untrained				
1	Technological Development	2.42	2.09	2.26	24.67	0.0016	3.1544**
2	Economical Development	2.82	2.57	2.70	10.00	0.0100	2.5764**
3	Social Development	2.52	2.21	2.37	21.00	0.0011	3.2529**
4	Infrastructural Development	2.13	1.89	2.01	33.00	0.0665	1.8353 NS
5	Input use	2.03	1.89	1.96	34.67	0.1075	1.6095 NS
6	Material Possession	2.41	2.22	2.32	22.67	0.0158	2.4132*
7	Farm activities	2.36	2.14	2.25	25.00	0.0490	1.9687*

(Maximum obtainable score-3)

** Significant at 0.01 level *Significant at 0.05 level NS -Not Significant

Table 9. Multiple regression analysis of socio economic variables on developments**(n=80)**

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Probability
	B	Std. Error	Beta		
Age	-.317	2.817	-.009	-.113	.911
Caste	-.007	2.018	.000	-.003	.997
Education	-.926	1.666	-.054	-.556	.580
Type of family	3.214	3.338	.075	.963	.339
Family size	-3.747	3.237	-.092	-1.158	.251
Social participation	1.362	.830	.254	1.641	.106
Extension contact	.926	.491	.256	1.888	.063
Cosmopolitness	.052	1.122	.006	.046	.963
Sources of information	.963	.418	.262	2.305**	.024
House type	2.549	2.254	.090	1.131	.262
Holding size	-2.710	2.310	-.118	-1.173	.245
Occupation	2.970	1.900	.107	1.563	.123
Income	4.351	1.988	.257	2.188	.032

Training usually empowered the farmers with knowledge and skill competency along with consciousness development which in turn expands their farm activities. The findings revealed that (Table-7) there was significant developments on fully utilisation of family labours, growing crops round the year, diversification to better enterprise, growing remunerative crops, increased in cropping pattern and cropping intensity as well as growing suitable combination of enterprise both by trained and untrained respondents. However significant differences observed on growing remunerative enterprise, diversification to better enterprise may be considered as the benefit of the KVK training programmes.

Comparison of the various aspects of developments analysed with pooled mean score value (Table-8) indicated that the trained respondents had better developments on all the aspects than the untrained respondents except developments on infrastructure and input use. Though the trained respondents had expressed better developments on all aspects, but much development were not on infrastructure and input use as observed with lower mean score value.

Multiple regression analysis reveals that (Table-9) the best fitted regression equation could exhibit 72.80% of the total variance in influencing various aspects of

developments. Among the thirteen variables, extension contact, sources of information and annual income could exhibit significant influence on various aspects of developments.

SUMMARY AND CONCLUSION

The study conducted with 40 respondents each of trained and untrained respondents of KVK on developments of vegetable growers has arrived at the following results.

- i. Better developments were observed with trained vegetable growers.
- ii. More developments were on economical, social, technological, material possession and farm activities in comparison to infrastructural and input use.
- iii. Extension contact, sources of information and annual income of the both trained and untrained respondents had exhibited significant influence on various aspects of developments.

It is therefore concluded that KVK training has positive impact on the development of the vegetable

growers. However; KVK has to strengthen further its training programmes on processing and value addition of vegetables, establishing good marketing networks, sensitizing for use of soil test based fertilizers, competency development on producing own seeds, capacity building on use of proper dose, time and method of application of fertilizers along with permanency in information flow for the betterment of the vegetable growers.

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