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Knowledge gain among the beneficiaries of Krishi Vigyan Kendra through its technology transfer through Demonstrations compared to non beneficiaries – A case study of Krishi Vigyan Kendra, Visakhapatnam district.

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Abstract: Krishi Vigyan Kendras proved to be one of the knowledge hub for farming community of Rural India through Trainings, On Farm trials, frontline Demonstrations and Extension Activities as a mandate benefiting farmers in improving the knowledge. Knowledge level of Demo & Non demo farmers of KVK on Paddy cultivation: It was observed that 97.33% of KVK demo farmers are having good knowledge of paddy cultivation compared to 87% among the non demo farmers. Gap in knowledge level Percentage is 10.33% between KVK demo and non demo farmers. Knowledge level of demo & Non demo farmers of KVK on Sugarcane is 38% of KVK demo farmers are having good knowledge of Sugarcane cultivation and 20% of other farmers are having good knowledge without conducting demo by KVK. The Gap Percentage is 18% between demo and control farmers in knowledge level. Knowledge level of demo & Non demo farmers of KVK on Groundnut, Sunflower, Sesame& Black gram.It was observed that 46.7% of KVK demo farmers are having good knowledge of Groundnut, Sunflower, Sesame& Black gram cultivation and 21.13% of farmers are having good knowledge without taking demonstration from KVK. Gap Percentage is 25.57% between demo and control farmers in knowledge level. With regard to Knowledge level of Demo & Non demo farmers of KVK on Poultry Rearing, It was observed that 90.67% of farmers are having good knowledge of Poultry Rearing and among other farmers knowledge level is 43% .Gap Percentage is 47.67% between demo and control farmers in knowledge level. Knowledge level of Members & Non members of KVK on Dairy management: It was observed that 96% of KVK demo farmers are having good knowledge of Dairy Management compared to 86% among other farmers, Gap Percentage is 10% between demo and control farmers in knowledge level.

Key words: Krishi Vigyan Kendra, Poultry, Dairy, Demonstrations.

• INTRODUCTION

Krishi Vigyan Kendra (KVK) is an Institutional Project of the Indian Council of Agricultural Research (ICAR) to demonstrate the “Application” of Science and Technology input of agricultural research and education on the farmers field and in the rural area with the help of a multi-disciplinary team of scientists. It is, therefore, also called as a front-line transfer of technology or extension system in the country. The agricultural technology is transferred through imparting vocational training programs conducted to the farmers, farm-women, rural youths and grass-root level extension workers in broad-based agricultural production. The emphasis is given to provide critical skills so that the participants may confidently use on their farms to increase agricultural productivity and also become economically self-reliant through gainful self-employment.

The other important activity, the KVK is to plan and carry out is on-farm testing/ research to verify, test, validate and refine location specific technologies developed by the Zonal Agricultural Research Station (ZARS) of State Agricultural Universities (SAUs). The objective is to have an appropriate technology which may be economically profitable, ecologically sustainable, technically feasible and culturally compatible. This many times, calls for synthesizing or blending of the indigenous technology knowledge (ITK) of local farmers with the package of technology evolved by the Scientists.

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The front line demonstrations of major cereal crops, oilseeds, pulses and other related commodities constitute another potent activity of the KVK to disseminate the agricultural technology.

Objective of KVK

1. Planning and conducting surveys of the operational area to identify and characterize physical and human resources with special reference to identifying the technological gaps and training needs of the farming community.
2. Compiling all relevant recommendations/package of practices for the district to be meaningfully utilized in the training courses and the follow-up extension programmes.
3. Planning and conducting production-oriented need-based short and long duration training courses both on the campus as well as in the villages for various target groups with priority on the weaker and the poorer sections.
4. Organizing Farm science clubs, both in rural schools and in villages to inculcate in the younger generation a liking for and an interest in agricultural and allied sciences and for scientific farming through supervised projects.
5. Developing and maintaining the campus farms and demonstration units on scientific lines and the facilities for providing work experience to the trainees as also dissemination of the latest technical knowhow.
6. Providing practical training facilities at Kendra to the teachers and the students of vocational agriculture of the higher secondary schools.
7. Imparting some general education to rural illiterates and school dropouts in order to make them not only good farmers but also better citizens.
8. Providing added training facilities in the areas for home making and nutrition education for rural community. Gradually enlarging the training facilities to encompass other important areas such as home crafts and cottage industries consistent with the requirements of the integrated rural development in collaboration with the concerned organizations.
9. Implementing all such schemes of the ICAR and other related organizations which intend to strengthen the training and transfer of technology programmes as well as follow-up extension activities of the Kendra.
10. To train young men and women (including school dropouts, farmers and farm women) in agriculture and allied aspects relating to their needs identified based on their farming situations and farming systems. The training is designed and imparted on the principles of "Learning by doing" and "Training by doing".
11. To undertake on-farm testing of the technologies developed by the State Agricultural Universities and ICAR Research Institutes on their experimental stations in agriculture and allied aspects for their local suitability and identifying the constraints, if any, so that appropriate action could be taken to remove these constraints through further research or adaptive research and application.
12. To demonstrate the technologies tested and recommended for location-specific situations to find out their potentialities in maximizing the yields/incomes per unit of time and area keeping in view the optimum returns to the inputs and technologies under different resource conditions of different categories of farmers.

The Mohan Singh Mehta Committee (1974) enunciated the following three basic concepts of Krishi Vigyan Kendra:

1. The Kendra will impart learning through work experience and hence will be concerned with technical literacy, the acquisition of which does not necessarily require as a pre-condition for the ability to read and write.
2. The Kendra will impart training to only those extension workers who are already employed or to the practicing farmers and fisherman. In other words, the Kendra will cater to the needs of those who are already employed or those who wish to be self-employed.
3. There will be no uniform syllabus for a Kendra. The syllabus and programme of each Kendra will be tailored to the felt needs, natural resources and the potential for agricultural growth in that particular area.

The Committee further suggested that the success of Kendras will depend upon adherence to the following three basic principles.

1. Accelerating agricultural and allied productions in the operational area of the Kendra should be the prime goal.
2. Experiential learning i.e., "teaching by doing" and "learning by doing" should be the principal methods of imparting skill training.
3. Training efforts should not be made to make economically good people better but the poor ones good so as to raise the living conditions of the poorest of the poor.

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The Mandate of the KVK

The mandate of KVK encapsulates following functions:

1. Collaborate with the subject matter specialists of the State Agricultural Universities/ Scientists of the Regional Research Station (NARP and the State Extension Personnel) in “on-farm” testing, refining and documenting technologies for developing region-specific sustainable land use systems.
2. Organise long-term vocational training courses in agriculture and allied vocations for the rural youths with emphasis on “learning by doing” for generating self-employment through institutional financing.
3. Organise front-line demonstrations in various crops to generate production data and feedback information.
4. Organise training to update the extension personnel within the area of operation with emerging advances in agricultural research on regular basis.

Major Thrust Areas of KVKs

- Assessment, refinement and demonstration of technology/products.
- Training of farmers.
- Training of extension personnel areas of technology.
- Single window delivery system for technology products, diagnostic services and information through Agricultural Technology Information Centers.
- Development of gender-specific technologies.
- Creating awareness of improved agricultural technologies among the farmers.

• REVIEW OF LITERATURE

Bala bhskar (1991) stated that majority (60.66 per cent) of the respondents had medium knowledge about recommended rainfed Groundnut practices followed by high (20.68 per cent) and low (18.66 per cent) knowledge.

Narwal.R.S. and Dixit.V.B. (1991) found that the farmers to the tune of 20, 60 and 20 percent possessed low, medium and high knowledge on feeding practices respectively in the adopted village. Surprisingly none of the respondents had high knowledge of feeding practices of buffaloes in the non adopted villages.

Rao (1991) reported that majority (52.40 per cent) of the beneficiaries of OPTP had medium knowledge on improved package of practices of Groundnut followed by high(39.70 per cent) and low (7.9 per cent) knowledge. In case of non-beneficiaries majority (49.20 per cent) had low knowledge followed by medium(47.60 per cent) and high(3.20 per cent) knowledge.

Veeraiah (1991) revealed that majority (61.33 per cent) of the farmers had medium knowledge about recommended critical skills in rain fed groundnut cultivation followed by low (20.00 per cent) and high(18.67 per cent) knowledge.

Angadi et al(1992) revealed that majority of the farmers possessed medium knowledge of cultivation practices of Groundnut. Only 13.00 per cent of the farmers had high knowledge.

Sakharkar et al. (1992) reported that the overall knowledge index of the farmers on recommended package of practices of Soyabean was found to be 87.03%.

Ramkumar,et al (1994-95) in their study on technology gap on scientific dairy farming in different states found that 46 percent of member farmers had knowledge level of 60 to 80 percent however in case o non member farmers only 42 percent had knowledge to the level of 40 to 60 percent. Nearly 38 percent of member farmers had knowledge gap more than 60 percent where as that of nonmembers this figure worked out to be 60 percent.

Nagabhusanam and Prasad (1994) concluded that majority of the respondents (53.68%) of the coconut growers had medium knowledge followed by low (29.30%) and high knowledge (17.02%).

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• **OBJECTIVE OF THE STUDY**

To study the Knowledge gap among the Demo farmers of KVK and Non demo farmers regarding KVK demonstrations.

• **LOCALE OF THE STUDY**

The study conducted in Visakhapatnam district of Andhrapradesh. Visakhapatnam district is having a total population of 4,288,113 compared to 3,832,336 of 2001. Out of Total population Male and female were 2,140,872 and 2,147,241 respectively. Population Growth for Visakhapatnam District recorded in 2011 for the decade has remained 11.89 percent. The total area of Visakhapatnam District was 11,161sq.km; with average density of 384 per sq. km. Visakhapatnam population is constituted 5.06 percent of total Andhra Pradesh population. Krishi Vigyan Kendra operational Jurisdiction is entire Visakhapatnam district.

• **RESEARCH METHODOLOGY**

The study was conducted taking a sample size of 150 beneficiaries of KVK demonstrations and 100 non beneficiaries of KVK demonstrations. The major areas covered under the study were study were on field crops like Paddy, Sugarcane, Groundnut, Sunflower, Sesame, Black gram and on live stock activities like Poultry and Dairy. The study is carried out to understand the impact technology disseminated through KVK demonstrations on knowledge level of KVK farmers compared to other farmers. Ex-post facto research design (Snedor and Cochran 1986) was adapted for the analysis of data.

• **RESULTS**

I. Knowledge gap analysis of Beneficiaries & non Beneficiaries of KVK demonstration on latest agricultural and allied practices

Crop	Statement	Knowledge score of Beneficiaries	Knowledge score of Non Beneficiaries	Difference in knowledge	Rank
1.Paddy					
1.1	Seed rate required in drum seeder paddy is less than normal paddy	90	53	37	4
1.2	Most suitable [green manure] reclamation crop for salon soils management is diarchal	85	50	35	5
1.3	Application of butachlo@1.25 like area for the management of grasses and scales in paddy 3to5 days after transplantations	88	61	27	9
1.4	75kg urea require for one acre of paddy	90	64	26	10
1.5	Trycyclozole 0.6kg water require for the management for paddy	90	63	27	9
2.Sugarcane					
2.1	3.5 Tonus seed material require one ac of field	77	64	13	18
2.2	100kg urea require for one ac of sugarcane	77	55	22	14
2.3	Field release of trichograma@ 15,000 per hectare at 30days after rationing and subsequently should be made at fortnightly interval for four times	65	41	24	13
2.4	The plant crop infested with mealy bug should	67	34	33	6

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	not be returned				
2.5	Matribuzin@ ac in 450 liters of water with in 3days after returning in sugarcane	68	35	33	6
3.1Ground nut					
3.1.1	Seed treatment with carbonizing for the management of color rat in groundnut	76	24	52	1
3.1.2	200kg/ac Gypsum applied at flowering stage	50	23	27	9
3.2.Sunflower					
3.2.1	Sulphur containing fertilizer applied in sunflower is single super phosphate	76	27	49	2
3.2.2	Seed rate required for variedly 3-4 kg/ac	74	32	42	3
3.3.Sesame					
3.3.1	Seed rate required for one ac of sesame is 2	64	39	25	11
3.3.2	Seed treatment with MonoSol for the management of color rate	69	58	11	19
3.4.Black gram					
3.4.1	PU-31 is[yellow mosaic virus[YMV] resistant verity in black gram	60	57	3	21
3.4.2	Spaying carbonizing for the management of powdery mildew in pulses	60	65	-5	22
4.Poultry					
4.1	Vanaraja birds yield more members of eggs than dais birds of poultry	88	64	24	13
4.2	Disease resistance and adoptability of Vanaraja birds is more than that of disbursed	81	64	17	17
4.3	Backyard poultry don't requires intense farm of feeding in the farm of a balanced ration	86	66	20	15
4.4	Meat yield of Vanaraja birds greater than that of indigenous non-descript birds of poultry	89	64	25	11
4.5	Backyard Poultry is a source of income through the sale of eggs meat etc.. and is a Nutritional supplement at cheaper costs to the rural population	90	71	19	16
5.Dairy					
5.1	Dairy Milk yield of a buffalo is 3-4 liters while that of a HF cow is 5-7 liters	90	80	10	20
5.2	Azolla feeding supplements nitrogen, adequ8te proteins and other members like caparison etc...	90	55	35	5
5.3	Calf management especially during the 1 st 2 months of age is necessary to decrease mortality rate and healthy living	88	58	30	8
5.4	Cows mature at the age of 1 ½ to 2 years; Buffaloes at 2 to 2 ½ years	88	57	31	7
5.5	HF breed (cross-breed) are better than non – descript local breads by the fact that they yield more milk during lactation period and high disease resistance power	80	58	22	14

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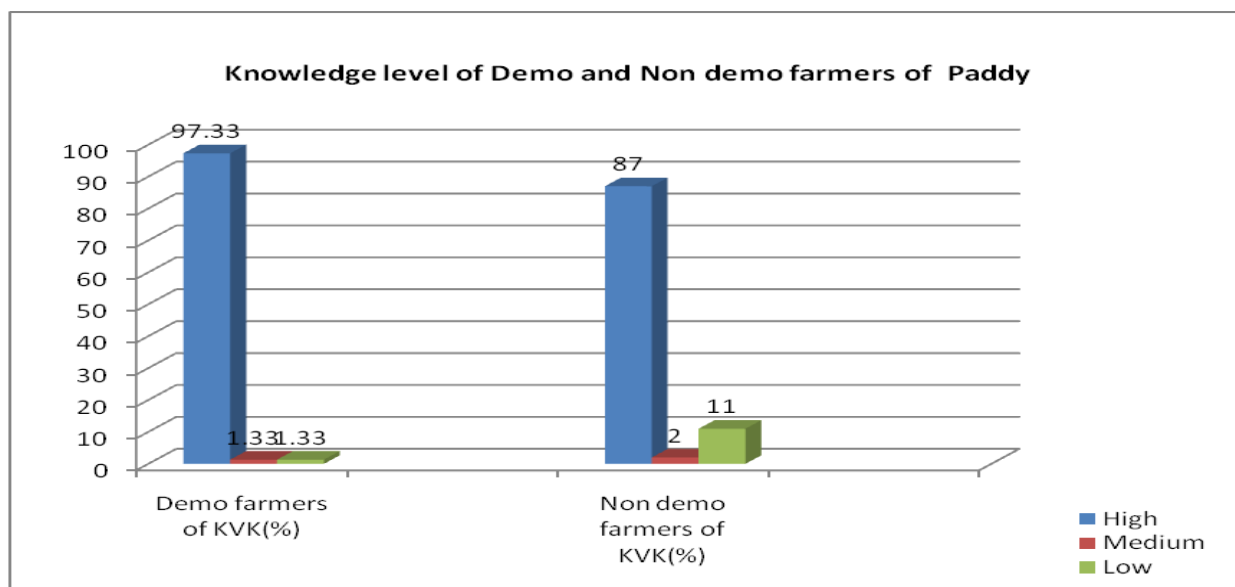
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.Review of the above table shows that knowledge gap is more among the beneficiaries and non beneficiaries of KVK with regard to oil seed crops especially sunflower. The probable reason may that sunflower is recently introduced crop in Visakhaptnam,dt and farmers have little awareness on the crop. Similarly knowledge gap is less among the Poultry and Dairy farmers the probable reason is due to well established Dairy and poultry enterprises across the district and the farmers receiving advisory services from veterinary experts of visakha diary regarding Dairy and poultry apart from Krishi Vigyan Kendra experts.

II.1 Knowledge level of Members & Non members of KVK demonstrations on Paddy: N=150 n=100

S.No	Level of Knowledge	Demo farmers of KVK		Non demo farmers of KVK		Knowledge gap (%)
		Frequency	Percentage	Frequency	Percentage	
1	High	146	97.33	87	87	10.33
2	Medium	2	1.33	2	2	-0.67
3	Low	2	1.33	11	11	-9.67
	Total	150		100		

Knowledge level of Members & Non members of KVK on Paddy cultivation: It was observed that 97.33% of trained are having good knowledge of paddy cultivation after conducting demonstration from BCTKVK. 87% of non demo farmers are having good knowledge without demonstration from BCTKVK. Gap Percentage is 10.33% between demo and control farmers in knowledge level.



II.2. Knowledge level of Members & Non members of KVK on Sugarcane demonstrations: N=150 n=100

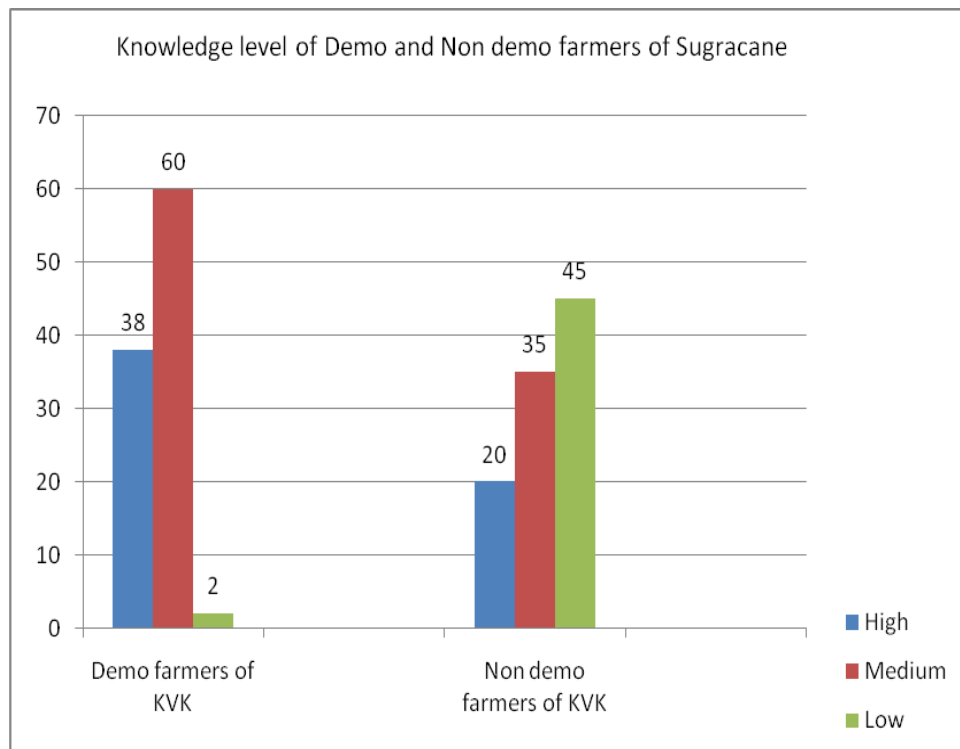
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S.No	Level of Knowledge	Demo farmers of KVK		Non demo farmers of KVK		Knowledge Gap (%)
		Frequency	Percentage	Frequency	Percentage	
1	High	57	38	20	20	18
2	Medium	90	60	35	35	25
3	Low	3	2	45	45	-43
	Total	150		100		

With regard to the knowledge level of Demo & non demo farmers of KVK on Sugarcane: It was observed that 38% of demo farmers are having good knowledge after conducting demonstration from BCTKVK. 20% of non demo farmers are having good knowledge of Sugarcane cultivation without demonstration from BCTKVK. Gap Percentage is 18% between Demo and non demo farmers in knowledge level.



II.3. Knowledge level of Demo & Non demo farmers of KVK on Groundnut, Sunflower, Sesame & Black gram: N=150 n=100

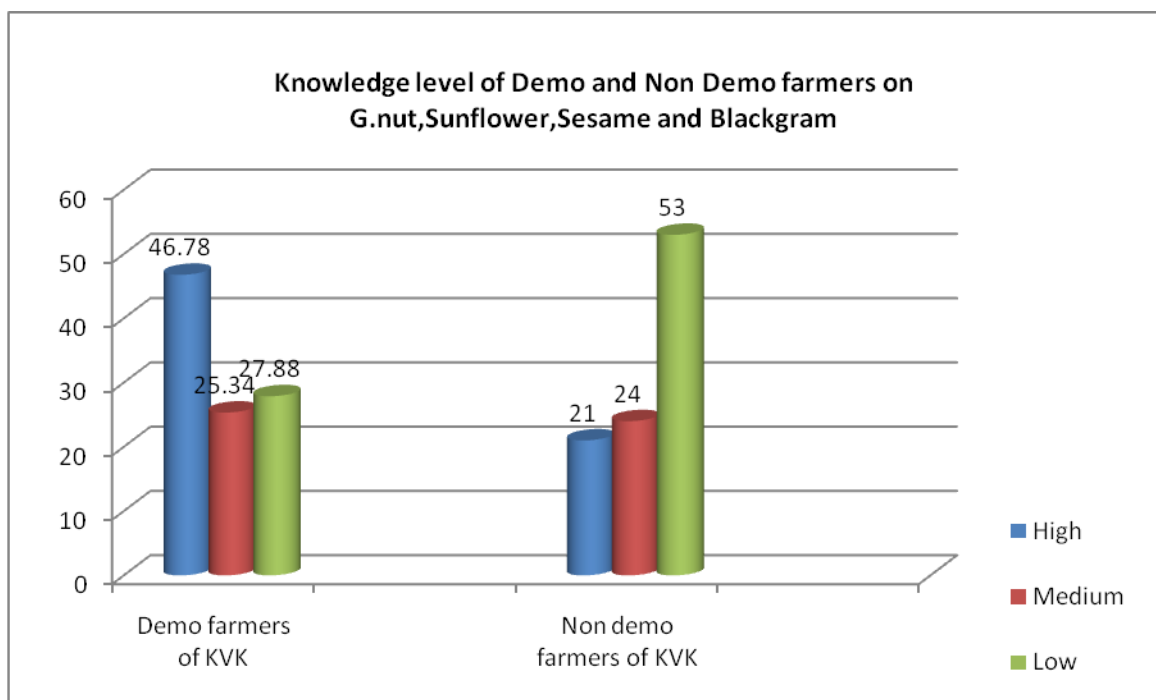
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S.No	Level of Knowledge	Demo farmers of KVK		Non demo farmers of KVK		Knowledge gap (%)
		Frequency	Percentage	Frequency	Percentage	
1	High	70	46.78	21	21	25.78
2	Medium	38	25.34	24	24	1.34
3	Low	42	27.88	53	53	-25.12
	Total	150		100		

Knowledge level of Demo & Non demo farmers of KVK on Groundnut, Sunflower, Sesame & Black gram: It was observed that 46.78% of Demo farmers are having good knowledge of Groundnut, Sunflower, Sesame & Black gram cultivation after conducting demo from BCTKVK. 21% of farmers are having good knowledge without demo from BCTKVK. Gap Percentage is 25.78% between Demo and non demo farmers is significantly high.



II.4. Knowledge level of Demo & non demo farmers of KVK on Poultry:

N=150

n= 100

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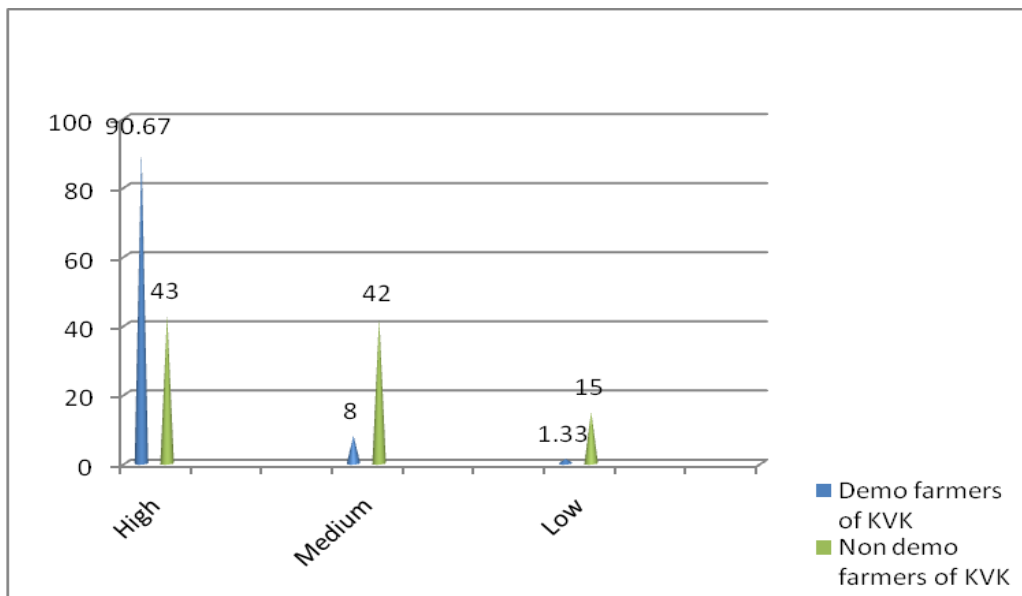
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S · n o	Level of Knowledge	Demo farmers of KVK		Non demo farmers of KVK		Knowledge gap (%)
		Frequency	Percentage	Frequency	Percentage	
1	High	136	90.67	43	43	47.67
2	Medium	12	8	42	42	-34
3	Low	2	1.33	15	15	-13.67
	Total	150		100		

Knowledge level of Demo & Non demo farmers of KVK on Poultry rearing

It was observed that 90.67% of Demo farmers are having good knowledge of Poultry rearing after conducting demo from BCTKVK. 43% of farmers are having good knowledge without demo from BCTKVK. There is a significant difference in knowledge gap Percentage ie 47.67% between Demo and non demo farmers of KVK.



II.5. Knowledge level of Demo & Non demo of KVK on Dairy:
N=150 n=100

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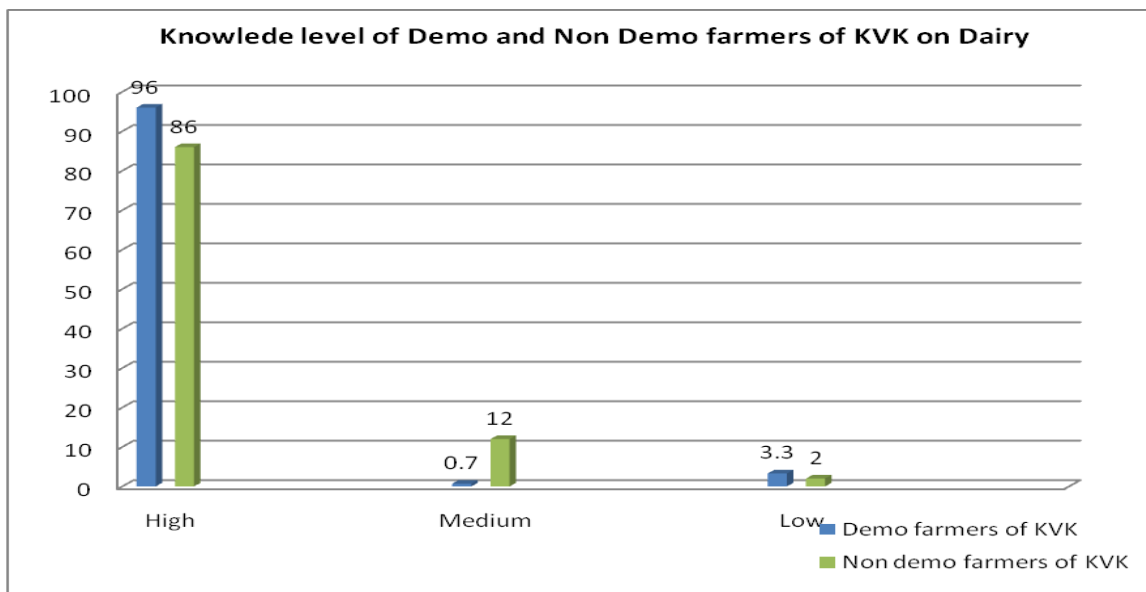
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S. No	Level of Knowledge	Demo farmers of KVK		Non demo farmers of KVK		Knowledge gap (%)
		Frequency	Percentage	Frequency	Percentage	
1	High	144	96	86	86	10
2	Medium	1	0.7	12	12	-11.3
3	Low	5	3.3	2	2	1.3
	Total	150		100		

Knowledge level of Demo & Non demo farmers of KVK on Dairy management

It was observed that 96% of demo farmers are having good knowledge of Dairy Management after getting demonstration on dairy technologies from BCTKVK. 86% of farmers are having good knowledge without taking demonstrations from BCTKVK. The Knowledge Gap Percentage is 10% between Demo and non demo farmers of KVK.



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• FINDINGS AND SUGGESTIONS

1. knowledge gap is more among the beneficiaries and non beneficiaries of KVK with regard to oil seed crops especially sunflower. The probable reason may that sunflower is recently introduced crop in Visakhaptnam,dt.
2. knowledge gap is less among the Poultry and Dairy farmers the probable reason is due to well established Dairy and poutry enterprises across the district and the farmers receiving advisory services from veterinary experts of visakha diary regarding Dairy and poultry apart from Krishi Vigyan Kendra experts.
3. Knowledge level of Demo & Non demo farmers of KVK on Paddy cultivation: It was observed that 97.33% of farmers are having good knowledge of paddy cultivation after getting demonstration from BCTKVK. 87% of farmers are having good knowledge without taking demonstration from BCTKVK. Gap Percentage is 10.33% between demo and non demo farmers in knowledge level.
4. Knowledge level of Demo & Non demo farmers of KVK on Sugarcane: It was observed that 20% of farmers are having good knowledge without taking demonstrations from BCTKVK. 38% of farmers are having good knowledge of Sugarcane cultivation after getting demonstration from BCTKVK. Gap Percentage is 18% between demo and non demo farmers in knowledge level.
5. Knowledge level of Demo & Non demo farmers of KVK on Groundnut, Sunflower, Sesame& Black gram: It was observed that 46.78% of farmers are having good knowledge of Groundnut, Sunflower, Sesame& Black gram cultivation after getting demonstration from BCTKVK. 21% of farmers are having good knowledge without taking demonstration from BCTKVK. Gap Percentage is 25.78% between demo and non demo farmers in knowledge level.
6. Knowledge level of Demo & Non demo farmers of KVK on Poultry rearing, It was observed that 90.67% of farmers are having good knowledge of Poultry Rearing after getting demo unit through back yard poultry from BCTKVK. 43% of farmers are having good knowledge without getting demo unit through back yard poultry from BCTKVK. Gap Percentage is 47.67% between demo and non demo farmers in knowledge level.
7. Knowledge level of Demo & Non demo of KVK on Dairy management : It was observed that 96% of farmers are having good knowledge of Dairy Management after getting demonstrations on dairy technology from BCTKVK. 86% of farmers are having good knowledge without taking demonstrations on dairy technology from BCTKVK. Gap Percentage is 10% between demo and non demo farmers in knowledge level.

• CONCLUSION

The above findings on different demonstrations observed that there is better knowledge gain among the demo farmers of BCT- Krishi Vigyan Kendra on technologies related to Paddy, Sugar cane, Groundnut, Sesame, Black gram crops and technology related to Poultry and Dairy are better compared to non demo farmers of KVK. The better knowledge gain is due to hands on experience in the demonstration and due to series method demonstrations conducted for demo farmers of KVK compared to non demo farmers.

• ANNEXURE I

Knowledge

State the following statement fully correct, partially correct or incorrect.

1	Paddy	Fully correct	Partly correct	In correct
1.1	Seed rate required in drum seeder paddy is less than normal paddy.			
1.2	Most suitable [green manure] reclamation crop for salon soils management is diancha.			
1.3	Application of butachlo@1.25 like area for the management of grasses and scales in paddy 3to5 days after			

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	transplantations.			
1.4	75kg urea require for one acre of paddy.			
1.5	Trycyclozole 0.6kg water require for the management for paddy.			
2.	SUGERCANE			
2.1	Tonus seed material require one ac of field.			
2.2	100kg urea require for one ac of sugarcane.			
2.3	Field release of tricograme@ 15,000 per hectare at 30days after rationing and subsequently should be made at fortnightly interval for four times.			
2.4	The plant crop infested with mealy bug should not be retuned.			
2.5	Matribuzin@ ac in 450 liters of water with in 3days after returning in sugarcane.			
3.1	GROUND NUT			
3.1.1	Seed treatment with carbonizing for the management of color rat in groundnut.			
3.1.2	200kg /ac Gypsum applied at flowering stage.			
3.2	SUNFLOWER			
3.2.1	Sulphur containing fertilizer applied in sunflower is single superphosphate.			
3.2.2	Seed rate required for variedly 3-4 kg/ac.			
3.3	SASAMUM			
3.3.1	Seed rate required for one ac is 2kgs.			
3.3.2	Seed treatment with MonoSol for the management of color rate.			
4	BLACK GRAM			
4.1	PU-31 is[yellow mosaic virus[YMV] resistant verity in black gram.			
4.2	Spaying carbonizing for the management of powdery mildew in pulses.			
5	POULTRY			
5.1	Vanaraja birds yield more members of eggs than dais birds			

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	of poultry.			
5.2	Disease resistance and adoptability of Vanaraja birds is more than that of disbursed.			
5.3	Backyard poultry don't requires intense farm of feeding in the farm of a balanced ration.			
5.4	Meat yield of Vanaraja birds greater than that of indigenous non-descript birds of poultry.			
5.5	Backyard Poultry is a source of income through the sale of eggs meat etc.. and is a Nutritional supplement at cheaper costs to the rural population.			
6	DAIRY			
6.1	Dairy Milk yield of a buffalo is 3-4 liters while that of a HF cow is 5-7 liters.			
6.2	Azolla feeding supplements nitrogen, adequate proteins and other members like caparison etc.			
6.3	Calf management especially during the 1 st 2 months of age is necessary to decrease mortality rate and healthy living.			
6.4	Cows nature at the age of 1 ½ to 2 years; Buffaloes at 2 to 2 ½ years.			
6.5	HF breed (cross-breed) is better than non – descript local breads by the fact that they yield more milk during lactation period and high disease resistance power.			

ANNEXURE II

• LITERATUE CITED

- Angadi J G, Jahagirdar K A and Shinde P S 1992 Awareness knowledge of farmers about improved cultivation practices of Groundnut. Maharashtra journal of Extension Education XI : 356:357.
- Balabhaskar K 1991 A study on the impact of national oil seeds development project in Knowledge and adoption behaviour of farmers towards recommended rainfed Groundnut practices in chittore district of Andhra Pradesh. M.Sc(Ag) thesis, Andhrapradesh Agricultural University, Hyderabad.
- Nagabhushanam and Prasad 1994 Knowledge and adoption of coconut practices. Journal of Extension Education 5(3): 919-920.
- Narwal,R.S and Dixit,V.B 1991 A study on farmers knowledge and Attitude about feeding practices in Buffaloes. Indian Jr. of Dairy sciences.

**International Journal of Innovative Research in Science,
Engineering and Technology**

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- Rao PDP 1991 A study on the impact of oil seed production thrust programme with particular reference to Groundnut growers in Karimnagar district of Andhra Pradesh. M.Sc(Ag) thesis, Andhrapradesh Agricultural University, Hyderabad.
- Ramkumar.et al 1995 A study on technological gap on scientific dairy farming in different states. NDRI Annual Report 1994-95.
- Sakharkar V S, Nikhade DM and Bhople R S 1992 correlates knowledge and adoption behaviour of Soyabean growers. Maharashtra Jornal of Extension Education. XI: 212-217.
- Veeraiah A 1991 A study on adoption and dissemination of critical skills in Groundnut cultivation by the farmers trained in Krishi Vigyan Kendra in Ananthapur district of Andhra Pradesh. M.Sc(Ag) thesis, Andhrapradesh Agricultural University, Hyderabad.