

An Intervention of KVK on Farming System Module at Farmers Field- Case study

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I. Introduction

The Indian Council of Agricultural Research, New Delhi, established the Krishi Vigyan Kendra's in nearly every district of the Country with basic concepts to provide suitable location specific technologies through OFT/s, FLD/s and the skill based training to the farmers, rural youths, farm women in crop production, horticulture, livestock production, crop protection, fisheries etc., to provide the technical information regarding the agriculture and allied subjects, to work for the upliftment of socio-economic status of the farmers Besides, the objectives of KVK were also to disseminate the latest agricultural technologies generated by ICAR-SAU's research system through appropriate extension activities.

The Krishi Vigyan Kendra, Yavatmal working under Dr Panjabrao Deshmukh Agricultural University Akola started its functioning in Yavatmal District since the year 2004. In Krishi Vigyan Kendra, Yavatmal the technology assessment need based refinement, demonstration and frontline extension work is being carried out that with intra and inter disciplines viz. Agronomy, Horticulture, Plant Protection, Animal Science, Agriculture Engineering, Agricultural Extension and Home Science The KVK, Yavatmal felt to intervene for identify a location specific suitable Farming System Module on at selected farmers field. The work on Farming System Module was started from the year 2007-08 onwards with following objectives--

1. To identify a location specific farming system module with integrated approach of farming system and natural resource management
- 2 To study the socio-economic status of the selected farmer
3. For upliftment of socio-economic status of the selected farmer.

II. Methodology

The Krishi Vigyan Kendra, Yavatmal carried out the applied research work on the Farming System Module as Case Study Method of Social Research with the selected farmer from the village Bhisani, Dist. Yavatmal from 2007-08 and onwards.

The details of the Farming System of selected farmer before and after intervention, as below.

Socio-economic profile of adopted Farmer (as on April, 2007)

Name of the Farmer: **Shri Manohar R. Dhok**
Address: At post Bhisani, Ta Yavatmal, Dist Yavatmal
Age: 54 Years, Family Size: 5 members, Family Type : Joint

Farming situation while intervention of KVK

Land available—02.29 ha
Type of land –Light to medium
Land slope –3%
Farming situation-- Rainfed
Sources of income
Major—Agriculture
Minor—Farm Labour, Auto Riksha(hired one)
Annual income a)Gross- Rs. 37,000/-
b)Net-- Rs.12,000/-

Identified strength of resources of Farm and Farmer

1. Water availability at nearest site (High water table)
2. Family labour strength
3. Farmer from Early adoptive group
4. Ready to take risk and adopt changes that desired with KVK's intervention.
5. Desirous and ambitious towards improving his socio-economic level.

III. Results and Discussion:

The details regarding Farm and Farming situation of the farmer and the Farm interventions before and after KVK approaches towards Farming System Module are as depicted in the tables below.

table 1. Details of Farm Technology Interventions before and after KVK approach

Particulars	Pre- intervention Years		Intervention Years		
	2006-7	2007-08	2008-09	2009-10	2010-11
Total land	2.29 ha	2.29 ha	2.29 ha	2.29 ha	2.29 ha
Land under cultivation	2.00 ha	2.00 ha	2.00 ha	2.00 ha	2.00 ha
Farming situation	Rainfed	Rainfed with protective irrigation			
Type of land	Light to Medium soil				
Farming system	Agriculture + Farm Labour	Agriculture + Horticulture	Agriculture + Horticulture+ Animal Husbandary	Agriculture + Horticulture + Animal Husbandary	Agriculture + Horticulture + Animal Husbandary
Cropping system and technology advised by KVK 2007-08 and onwards	Cotton + Pigeonpea (9:1): 1.60 ha Sorghum: 0.20 ha Green gram: 0.20ha Fallow : 0.29 ha	Cotton + soybean(1.1): 0.80 ha soybean + Tur(2:1): 1.20ha sowing across the slope. Plantation of drumstick & Anola seedling on 0.29 ha	Cotton + Sorghum + Tur (6:1:2): 2.20 ha Gap filled by Anola and Drumstick farm Farm pond suggested (& sanctioned) Goatary/poultry unit suggested	soybean + Tur(2:1): 2.10ha Started gotary with Fodder crop raising 0.10ha	Cotton +Tur (6:2) Black Gram + green gram followed by wheat in rabi Mulberry pl antation : 0.30ha
Observation that KVK came across	<ol style="list-style-type: none"> 1. Sowing of non suitable varieties. 2. Non suitable cropping pattern was followed 3. Sowing was not solely across the slope. 4. No irrigation facilities nor protective irrigation facilities were tried to develop. 5. No water conservation practices were observed to follow 6. No subsidiary business was run by farmer 				
Variety used	Cotton: NHH-44 Tur: ICPL87119 Sorghum: JK22 Greengram:Local	Cotton: NHH-44 Tur: ICPL-87119 Soybeen: JS-335	Cotton: AHH-8828 Tur: ICPL-87119 Sorghum: CSH-9	Soybean: TAMS-9821 Tur: Maroti	Cotton: Bt hy Tur: PKV Tara Black Gram : TAU1 Green gram: Green gold
Total Yield obtained	Cotton: 10q Tur: 4q Sorgham: 4q Fodder: 4q Greengram: 2q	Cotton: 9q Tur: 3q Soybeen: 17q	Sorghum: 11 q Cotton: 21 q Tur: 8 q Goat sold: 1	Soybean: 13.5q Tur: 7.75 q	Cotton: 5 q Tur: 5 q Black Gram: 0.5q Greengram: 0.5q Silk caccon: 25kg Back yard poultry: 1200(Rs)
Cost of cultivation	Rs.25,254	Rs.26,764	Rs.28,050	Rs.31,410	Rs.33,000
Gross Return	Rs.36,600	Rs.59,410	Rs.87,000 Rs.2,000 (Goat sale)	Rs.63,045	Rs.1,08,700
Net return	Rs.11,346	Rs.32,646	Rs.60,950	Rs.31,635	Rs.75,700
Avg.net return per unit area	Rs.2,269/acre	Rs.6,529/acre	Rs.10,646/acre	Rs.6,327/acre	Rs.13,383/acre
C:B Ratio	1:1.44	1:2.21	1:3.17	1:2.01	1:3.29

From the above table the following points are needed to look over...

1. Total land available with the farmers :2.29 ha
2. Land under cultivation :2.00 ha
3. Farming situation :Rainfed
4. Type of Land :Light to Medium soil
5. Farming system (Before intervention) :Agriculture + Farm Labour
6. Farming system (After intervention) : Agriculture + Horticulture + Animal Husbandry + Sericulture
7. Source of Income (Before intervention) :Agriculture + Farm Labour
8. Source of Income (After intervention) : Agriculture + Subsidiary business

Before the intervention the KVK Yavatmal came across with following Points...

1. Sowing of non suitable varieties.
2. Non suitable cropping pattern was followed
3. Sowing was not solely across the slope.
4. No irrigation facilities nor protective irrigation facilities was tried to develop.
5. No water conservation practices were observed to follow.
6. No subsidiary business was run by the farmer.
7. No attention towards management of natural resources like water conservation, organic matter etc.

From the above mention table, it is revealed that before the intervention of KVK, Yavatmal the farmer was solely dependent on the income that he received from the agriculture and certainly farm labour. The farmer was not following the appropriate methods of farming, i.e. sowing was not across the slope, no irrigation facilities nor protective irrigation facilities were developed by the farmer. The farmer was eager to improve his socio-economic status, he had adopted the technologies that the KVK, had provided time to time. The farmer followed technical suggestions as provided by the various subject matter specialists of KVK, Yavatmal. On technical suggestion of KVK, Yavatmal the Farm Pond was created by the farmer only after the 2nd year of intervention period.

The Farmer was adopting the traditional crop varieties from which the production was not achieved up to the mark, the KVK had suggested him to use thenewly evolved crop varieties, subsequently the farmer is using the new crop varieties which are suitable to the geographical situation also started the subsidiary business like gotary and poultry further started sericulture as subsidiary business. From which the gross return from the agriculture and subsidiary business has improved remarkably.

From the table it is clear that the Gross return from the same piece of land after the intervariation of KVK has increased marginally. The Gross return which was only Rs. 36,600 before the FSM intervention. Which during later years it could increase upto Rs. 1,08,700/- (2010-11). The Cost: Benefit ratio which was 1:1.44 before the intervention it was recorded to 1:3.39 for the year 2010-11.

2. Socio-economic condition of the farmer during the FSM intervention period

The table 2, showed that the year wise change in the socio-economic status of the farmer due to the intervention carried out by Krishi Vigyan Kendra, Yavatmai from the year 2007-08 to 2010-11.

Table 2.. Year wise change in Socio-economic status of farmer due to intervention of KVK Yavatmal under Farming System Module

Sr No.	Category	Score	2006-07	2007-08	2008-09	2009-10	2010-11
1	Very high SES	14.68 &above	---	---	---	---	---
2	High SES	11.53-14.67	---	---	---	---	---
3	Medium SES	8.38-11.52	---	---	10.70	10.20	10.85
4	Low SES	5.22-8.37	---	---	---	---	---
5	Very low SES	Below 5.21	4.10	5.10	---	---	---

The table revealed the changes that occurred in the socio-economic condition of the farmer during the year 2006-07 and onwards. The year 2006-07 (before the intervention) the farmer was belonging the very low level of Socio-economic status. After the intervention by the KVK, the table revealed regarding the changes that was measured in the socio-economic status of the farmer. During the year 2007-08 the farmer was belonging to the very low level of socio-economic status but from the year 2008-09 he placed to the medium level of socio-economic status. The KVK, Yavatmal hopeful that in the next few years the farmer would definitely achieve the higher level of socio-economic status.

IV. Conclusion:

It is hereby to conclude that, after the intervention made by KVK, Yavatmal on the farmer field there was change in the farming system of the farmer. The farmer had created the farm pond on his field, started using newly evolved crop varieties, adopting recommended technologies of the University with the consultation of Subject Matter specialists of KVK. He also developed sericulture and animal husbandry unit as his subsidiary occupation along with his farming business.

Thus the KVK, Yavatmal has created a significant impact in terms of change in socio-economic status of the farmers after making intervention of Farming System Module on the farmer's field.

Reference:

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