Viable Integrated Farming Systems(IFS) for Sustainable Livelihood of Rural Youth - Case Study Analysis in Srikakulam District of Andhra Pradesh.

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ABSTRACT

The feasibility and viability of any agricultural practice depends upon the effective combination of the cyclic components of field crops, horticultural crops, plantations, commercial crops and cattle for dairy, synonymously farming systems . The combination of these allied activities may be called as Integrated Farming Systems. There is a need to attract the rural youth towards Agriculture for its sustenance by handing over the prevailing viable Integrated Farming Systems to the rural youth. Keeping this in view, an extensive study has been taken up with the objective to identify the viable Integrated Farming Systems under various farming situations in Srikakulam district through case study analysis. Major five farming situations in the district were purposively selected. Case studies of five farmers one from each farming situation were analysed to identify the viable Integrated Farming Systems. Suitable statistical tools were used for the study. The results revealed that the Integrated Farming System (B:C Ratio 2.33) was found viable compared to Agriculture only (B:C Ratio 2.03), Dairy alone(B:C Ratio 2.15) but less profitable than Horticulture alone(B:C Ratio 3.18), but it may not be feasible to bring total area of the farmer under horticulture. Farming situation wise analysis revealed that Integrated Farming Systems under bore well irrigated red clay loams (B:C Ratio 2.58) was more viable than the tank fed red clay loams (B:C Ratio 2.39), canal fed red clay loams (B:C Ratio 2.38),tank fed sandy clay loams (B:C Ratio 2.27) and canal fed sandy clay loams (B:C Ratio 2.10). The by-products of the components of IFS were the additional benefits and mutually conservative in natural resource management. The Government should encourage the rural youth in Agriculture by providing credit facilities for processing units for establishing the sustainable and viable Integrated Farming Systems and to dwindle the disguised unemployment in Agriculture.

Keywords: *Benefit Cost Ratio(B:C Ratio), Farming Situation, Integrated Farming Systems(IFS) and Rural Youth*

Development of Agriculture comprises the research, education, extension cultivation and policy procedures. The feasibility and viability of any agricultural practice depends up on the effective combination of these components. Broadly agriculture contains the cyclic components of cattle, field crops, horticultural crops, plantations and commercial crops, now they were treated specifically as allied sectors and synonymously farming systems . The combination of these allied activities may be called as Integrated farming systems. The major work force (85%) in Agriculture is middle to old aged farmers and labour. There is a need to attract the rural youth towards Agriculture for its sustenance by inculcating the knowledge on good agriculture practices. Only agriculture activity leads to the disguised employment and vul-

nerable to even minimum adverse climatic aberrations. It is the time to hand over the prevailing viable Integrated Farming Systems to the rural youth. Keeping this in view, an extension study has been taken up with the objective to identify the viable Integrated Farming Systems under various farming situations in Srikakulam district through case study analysis.

MATERIAL AND METHODS

The Researcher had Selected major five farming situations in the district purposively. Case studies of five farmers one from each farming situation were analysed to identify the viable Integrated Farming Systems. Suitable statistical tools were used for the study

Table1. Details of the respondent farmers under each farming situation.

S.No	Name of the farmer	Farming situation	IFS
1	Panchireddy Simhachalam Komarthi Narasannapeta	Canal fed red cay loams	Agriculture + Horticulture+ Dairy
2	J Venkata Rao Tirlangi Kotabommali	tank fed red clay loams	Agiculture +Horticulture +Dairy
3	Bandaru subrahmanyam Kallepalli Srikakulam	Bore well irrigated red clay loams	Agril+Horti+Agro Forestry + Dairy
4	Tandra Ramana Rao Thotada Amadalavalasa	Canal fed sandy clay loams	Agiculture +Horticulture+ Dairy
5	Ch. Asiri Naidu K. P valasa Polaki	Tank fed sandy clay loams	Agril +Horti+ Dairy

RESULTS AND DISCUSSION

It can be revealed from the above table that horticulture component of the farming system is found more profitable with B:C ratio 3.57 than the agriculture(2.11) and dairy(1.54).

Case-1 Canal fed red cay loams

Table 1.

S. No.	Enterprise	Season	Crop	Area (Acres)	Yield	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	Kharif	Paddy	18	450 q	3,24,000	6,30,000	3,0,6000	1.94
			Sugarcane	20	700 t	8,80,000	19,25,000	10,45.000	2.19
		Rabi	Green gram	3	7.5 q	20,970	41,250	20,280	1.97
			Black gram	2	5 q	13,980	22,500	8,520	1.61
2	Horticulture		Banana	2.5	2000 bunches	1,25,000	3,00,000	1,75,000	2.4
			Oil palm	13	117 t	2,21,000	9,36,000	7,15.000	4.23
3	Dairy				12 cattle	17,280 lts	3,60,000	5,52,960	1,92,960	1.54

S. No.	Name of the Enterprise	Extent (Acres)	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	43	12,38.950	26,18,750	13,79,800	2.11
2	Horticulture	15.5	3,46,000	12,36,000	8,90,000	3.57
3	Dairy	12 cattle	3,60,000	5,52,960	1,92,960	1.54
	Total		1944950	4407710	2462760	2.27

Indirect benefits : 28,800 (Gobar gas)   28,800 (FYM)

Case-2 tank fed red clay loams

Table 3.

S. No.	Enterprise	Season	Crop	Area (Acres)	Yield	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	Kharif	Paddy	1.3	32.5	23,400	45,500	22,100	1.94
		Rabi	Green gram	30 cents	70 kgs	2097	3150	1053	1.50
			Black gram	1	2	6990	9000	2010	1.29
2	Horticulture		vegetables	4		176665	500,000	323,335	2.83
3	Dairy			20 nos	21,600	3,04,000	6,69,600	3,65,600	2.20

S. No.	Name of the Enterprise	Extent (Acres)	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	2.6	32,487	57,650	25,163	1.77
2	Horticulture	4	176665	500,000	323,335	2.83
3	Dairy	20 (Cattle)	3,04,000	6,69,600	3,65,600	2.2
			513152	1227250	514098	2.39

Indirect benefits : 28,800 (Gobargas**)** Rs   28,800 (FYM)

Case-3 Bore well irrigated red clay loams

Table 4.

S. No.	Enterprise	Season	Crop	Area (Acres)	Yield	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio (per Rupee)
1	Agriculture	Kharif	Paddy	4	50 q	70,000	1,40,000	70,000	2
			Sugarcane	3	102 t	1,32,000	2,80,500	1,48,500	2.13
		Rabi	Maize	2	60q	30400	102000	73000	3.35
			Black gram	2	8 q	13,980	36,000	22,020	2.56
	Sub total					2,11,380	4,88,500	2,77,120	2.31
	Horti		Banana	2	1400	80,000	1,96,000	1,16,000	2.45
			Oil palm	3	27 t	51,000	2,16,000	1,65,000	4.24
	Dairy			2 cattle	3,600 lts	48,000	1,0,8000	60,000	2.25

S. No.	Name of the Enterprise	Extent (Acres)	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio (per Rupee)
1	Agriculture	7	2,11,380	4,88,500	2,77,120	2.31
2	Horticulture	5	1,31,000	4,12,000	2,81,000	3.15
3	Dairy	2 cattle	48,000	1,0,8000	60,000	2.25
	Total		3,90,380	1008500	618120	2.58

Case-4 Canal fed sandy clay loams

Table 5.

S. No.	Enterprise	Season	Crop	Area (Acres)	Yield	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	Kha rif	Paddy	7.0	168 q	126,000	235200	109200	1.87
			Sugarcane	1.0	40 t	46,500	112000	65500	1.41
		Rabi	Green gram	2.5	9 q	20,970	49,500	28,530	2.36
			Sesame	3.0	2.24 q	16,200	36,960	20,760	2.28
			Groundnut	1.0	9.9 q	16200	39,600	23400	2.44
				8.0		209670	473260	263590	2.26
	Horticulutre		Cashew	1.0	6	9000	36000	27000	4.00
			Vegetables	0.5	54q	20000	54000	34000	2.70
	Dairy			4 nos	2,400 lts	46,000	1,15,200	69200	2.50

S. No.	Component	Extent (Acres)	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	8.0	209670	473260	263590	2.26
2	Horticulture	1.5	29000	90000	61000	3.10
3	Dairy	4 cattle	46,000	1,15,200	69200	2.50
			284670	678460	393790	2.38

Case-5 tank fed sandy clay loams

Table 6.

S. No.	Enterprise	Season	Crop	Area (Acres)	Yield	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	Kharif	Paddy	13	299	2,34,000	4,18,600	1,84,,600	1.79
		Rabi	Groundnut	1	8.8 q	11,440	39,600	28,160	3.46
			Green gram	6	14.4	41,940	56,700	14,760	1.35
			Black gram	6	12.6	41,940	56,700	14,760	1.35
			Red gram on field bunds		1 q	1200	6,000	4,800	5.00
	Horti		Marigold	0.1	4 q	6,000	14,000	8,000	2.33
	Dairy			20 nos	30,000	5,28,000	12,00,000	6,72,000	2.27

S. No.	Name of the Enterprise	Extent (Acres)	Cost of cultivation (Rs)	Gross returns (Rs)	Net returns (Rs)	B:C Ratio
1	Agriculture	13	3,30,520	6,00,100	2,69,580	1.82
2	Horticulture	10 cents	6,000	14,000	8,000	2.33
3	Dairy	20 cattle	5,28,000	12,00,000	6,72,000	2.27
	Total		864520	1814100	949580	2.10

From the above 5 cases it can be gleaned that Paddy (B:C Ratio1.5-1:2.5) +Groundnut/maize /sugarcane (B:C Ratio 1.85-3.5) of Agriculture, Banana/ palm oil (B:C Ratio1:3.5-1:4.0) /Vegetables(B:C Ratio 2.8-3.0) of Horticulture and Dairy farm/ (B:C Ratio1:3.0-1:4.5) are viable models of IFS and the livelihoods of the rural youth sustain in profitable manner.

CONCLUSION

The Govt. should encourage the rural youth in Agriculture by providing credit facilities and processing units for establishing the sustainable and viable Integrated Farming Systems and to dwindle the disguised unemployment in Agriculture.

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