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Tribal farmer success story of integrated farming system in Andhra Pradesh

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Farming systems approach introduces a change in farming techniques for attaining food and nutritional security and for maximizing farm income through optimal utilization of resources by a judicious mix of allied enterprises like dairy, small ruminants like goat and sheep, poultry, piggery, fishery, sericulture etc., with crops suitable for the existing agro-climatic conditions and socio-economic status of the farmers. Advantages includes Food and nutritional security, enhanced and stable farm income and cash flow through allied components at regular intervals, maintain soil fertility and soil health, environmental protection through effective recycling of waste from animal based enterprises like dairy, goatery, piggery, poultry, etc., and employment generation.

Factors which influences the selection of crops and other components in IFS includes food and other needs and resource base of the farmers, soil type, rainfall, irrigation facilities and length of growing season and market facilities. Criteria for the selection of components varies with units. For example, cropping unit should ensure household food requirement by selecting suitable crops and allotting 60-70 per cent area of farm holding. Horticulture should be mango / custard apple / guava / sweet orange may be integrated and 10-20 per cent area of farm holding may be allotted. Fruit crops, being perennial in nature, can with stand weather aberrations and ensure stable income. Farmers living in close vicinity of towns and cities can grow vegetable/flower crops keeping market facilities in mind.

A project entitled "Development and on-farm evaluation of farming systems for improving the profitability and livelihood of tribal farmers of AP" is conducted under TSP with a budget out lay of Rs. 22.4 lakhs. From IIFSR, Modipuram.

Sri. S. Neelam Dora, CSR Peta, Veeraghattam Block of Srikakulam District

Latitude	Longitude	Altitude (m)
18.39.588	83.37.283	85

Details of farm household

Name of Farm household / group of farmers	Sri.S.Neelam Dora,
Address	CSR Peta, Veeraghattam Block of Srikakulam District
Mobile	9642394707
Photo of farm household with farmer or group of farmers as applicable	Enclosed

Brief description of existing farming systems (with details of area and type of components, cost of cultivation of each component, Net income, recycling, household consumption of vegetables etc)

District	Srikakulam	State	Andhra Pradesh
Agro-climatic zone: 11 (East coast plain and hills)			
Agro-ecological region: 18 (East coast plains, hot, sub humid to semi arid eco region (S7 Cd 2-5)			
NARP Zone (Zone code)	52 (AZ 119)	Rainfall (mm)	915
Area (ha)		Distribution (rainy days)	55

Changes made in existing IFS practiced by farmers and additional cost (Rs.) (Mean of one households if applicable)-0.52ha

Existing system				Changes made	Cost of intervention
Module	Details	Cost (Rs.)	Net income (Rs.)		
Cropping systems	Rice-Greengram 0.52ha Rice local variety (Isaka Ravvalu-Konda dhanyam), Paddy-Imbalanced fertilizer use *i.e.*, 56-21-28 kg NPK per ha	15950	5670	*Kharif*- Medium-Short duration high yielding varieties MTU 1001, 1010 and 1121 and balanced fertilizer application, *i.e*, 80-60-60 NPK per ha 0.2ha	1460
	Greengram-Local Variety with high incidence YMV in 0.52ha	4212	3140	Maize crop with high yielding variety seed DHM—107+Herbicides atrazine and paraquat was introduced with zero tillage practice 0.2ha	1100
Livestock	Bufallows-4, grazing on open land : Low milk yield	28480	20650	Fodder strips, feed and mineral mixture supplied	4480
	Desi Birds-18, desi birds : Low egg laying and low meat production	640	11420	25 Vanaraja backyard poultry birds 6 weeks old with all vaccination supplied per year + Feed	2225
Product diversification	Composting			Vermicomposting Cemented rounded structures were supplied to make vermicomposting	900
Optional	No vegetable production Purchasing vegetables from market			Kitchen gardening	150
		49282	40880		8515

Economics of low-cost IFS over different years

Parameters	Benchmark (Before intervention)	Low cost based intervention period (years)				
		1	2	3	4	Mean
Cost of cultivation (Rs./year)	49282	57797	62365	64840	67360	63091
Gross return (Rs./year)	90162	134630	146380	157430	164860	150825
Net income (Rs./year)	40880	76833	84015	92590	97500	87757
B: C ratio	1.82	2.32	2.34	2.42	2.44	2.39

Area and income share

Components	Area share (%)	Net income share (%)
Field crops including vegetables	93	22
Horticulture (only fruits, plantations, spices, flowers etc)	0	0
Fodder (Please specify name of fodders here)	5	0
Livestock (dairy, poultry, goat, pig etc)	0	78
Fishery	0	0
Kitchen garden	2	0
Other enterprises (Pl specify like vermicompost, mushroom)	0	0

Impact of interventions made (Put tick mark in the applicable column)

Enterprise (Field crops, horticulture, livestock, fishery, others)	Name of interventions (Specify the details with name of variety, nutrient dose, mineral mixture quantity,	Continuing fully	Partially continuing	Discontinued
Field crop	*Kharif*-Medium-Short duration high yielding varieties MTU 1001, 1010 and 1121 and balanced fertilizer application, *i.e*, 80-60-60 NPK per ha 0.2ha	Yes		
Field crop	Maize crop with high yielding variety seed DHM—107+Herbicides atrazine and paraquat was introduced with zero tillage practice 0.2ha	Yes		
Fodder and feed	Fodder strips, feed and mineral mixture supplied	Yes		
Back yard poultry	25 Vanaraja backyard poultry birds 6weeks old with all vaccination supplied per year+ Feed		Yes	
Optional	Vermicomposting Cemented rounded structures were supplied to make vermicomposting			Yes
Optional	Kitchen gardening	Yes		

Spread of interventions: Spread of improved varietal intervention and balanced fertilizer application taken out neighbourhood villages and also non-experimental villages.

Awards and recognitions if any received by the farm households/group of households: Nil

Sr. No.	Name of the award	Year	Awarding organization	Value in terms of cash if any (Rs.)
1.	Mandal level best farmer award	2014	DOA	Nil

Visitors and feedback on IFS

Sr. No.	Year	Type of visitors (Government/ private/ other farmers)	Number of visitors	Feed back on interventions
1.	2013-14	University officials and Extension personals of DOA, Staff from ITDA	4	Successful
2.	2014-15	AICRP IFS Monitoring team, University officials and Extension personals of DOA, Staff from ITDA	6	Successful
3.	2015-16	University officials and Extension personals of DOA, Staff from ITDA	7	Successful
4.	2016-17	University officials and Extension personals of DOA, Staff from ITDA	6	Successful

Enterprenural components of inegrated farming systems

General constraints, cattle shed for housing, fodder blocks, poultry shed for back yard poultry support needed for up scaling of success story among other farmers Financial assistance and technical assistance is needed

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