RESEARCH NOTE

Agri-preneurship by Adopting Fishery based Integrated Farming System: A Success Story of Mr. BijuKalita

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ABSTRACT

The present study was conducted to find out the profitability of Fishery based Integrated Farming System and exploring the journey of a person from an ordinary farmer to a well-known agri-preneur. Case study method was followed for conducting the study. The study was conducted in Nalbari district of Asssam in a farm. BijuKalita's Fishery based integrated farm has five components i.e. fishery, piggery, horticulture, duckery and dairy covering around 4 hectares area. His annual gross return is 33.35 lakhs in the year 2016-17, as compared to Rs. 1.5 lakh in 2006 and Rs. 5 lakh during 2013. This fishery based Integrated Farming Approach contributes to both economic and environmental sustainability and has created several on and off farm jobs. Thus Mr. Kalita has been providing livelihood security to the workers of the farm. The gross Benefit Cost Ratio (BCR) of the farm is 1.81. The highest BCR among the five components is horticulture sector followed by fishery. The highest contribution in terms of income is from fishery sector which is 59.63 per cent of the total income followed by piggery.

Key word: *Success story; BijuKalita; Fishery based Integrated Farming System; sustainable development;*

The Integrated Farming System is a deliberated combination of various farm components to meet the food and nutritional security while ensuring sustainable development. IFS approach has multiple objectives of sustainability, food security, economic security and poverty reduction. *Agbonlaboret al. (2003)* in their studies undertaken in Nigeria defined the concept of Integrated Farming System as a type of mixed farming system that combines crop and livestock enterprises in a supplementary and/or complementary manner. *Vision 2020 (2011)* suggested that the integrated fish farming is a diversified and coordinated system of producing fish and agricultural/livestock produce in fish farms with fish as the main component for maximal utilization of land/ water through recycling of wastes and by - products, reduced application of fertilizers and feeds and maintenance of a balanced ecosystem.

Mohanty et al. (2010) identified the IFS model consists of field crops (Rice, groundnut, maize, pigeon, pea and ragi), horticultural crops (Yam, banana, tapioca and vegetables), vermi composting and poultry (Vanaraja breed) in Gajapati district of Orissa. IFS may be an alternative solution for the ever increasing population and reduced cultivable land. Since the IFS are a system for utilizing the available resources in an optimized way, it has the potentiality to support the food and nutritional security to the ever growing population. The IFS minimizes the negative effects of intensive farming which helps in achieving sustainable production levels with reasonable profits. The present study was conducted to find out the profitability of Fishery based IFS with optimized resource utilization and exploring the journey of as agri-preneur..

METHODOLOGY

Case study method was followed for exploring the real record of personal experiences. The study was conducted in Nalbari district of Asssam in a farm with an area of 4 hectare land located in Balitara village. The data was collected in the year 2017.

RESULTS AND DISCUSSION

Sri BijuKalita of Balitara village of Nalbari district is a young and energetic farmer with inclination towards fishery based integrated farming. He focuses on preserving the environment on natural biological processes for increasing crop yield, reducing erosion; maintaining soil biological activity and nutrient recycling, intensifying land use and improving profits. With a formal education upto higher secondary level and the job market discouraging, Mr. Biju Kalitathought of eking out a livelihood through agriculture from their family land. He came to learn about the newly established Krishi Vigyan Kendra (KVK) at Nalbari and accordingly stepped into KVK Nalbari during March, 2006. A group of scientists from KVK Nalbari visited his farm during April 2006 and proposed him a blueprint of strategic interventions for fishery based farming which could be easily translated into action by him for profit maximization. It is worth mentioning that despite a good land possession, he was financially poor. KVK Nalbari accommodated and facilitated Sri Kalita in attending different training programmes not only of KVK but also of other departments. Such interventions finally ignited the passion and will in BijuKalita to go for commercial agriculture through the adoption of total scientific management practices. He started with high yielding variety of paddy, toria and vegetables. In the same year, he also started a broiler farm with a capacity of 500 birds. During the latter part of 2007, he started a composite fish culture unit in a water area of 0.53 ha along with two small nursery tanks. He incorporated pig cum fish culture in the year 2011 as per the guidance of KVK Nalbari and in the same year he included other three components i.e. dairy, duckery and horticulture.

In 2017, Mr Kalita's integrated farm ha five components i.e. fishery, piggery, horticulture, duckery and dairy covering around 4 ha of land. His total annual gross returns went beyond 33 lakhs in the year 2017, as compared to Rs. 1.5 lakh in 2006 and Rs. 5 lakh during 2013. Mr. Kalita, by adopting such sustainable model has been contributing to food and nutrition security of the district. Such endeavor of Mr. Kalita has created

Table 1. Farm production and income from different components of Mr. Kalita's IFS model during year 2016-17.

Components	Gross production			Production	BCR
	Production	Unit sale price (Rs.)	Income (Rs.)	Expenditure (Rs)	
Fish				8,40,000.00	2.37
a. Table fish	10,600 kg	95-270/ kg	17,49,000.00		
b. Fingerling/Yearling	30,000 nos	5-10/ no	2,00,000.00		
c. Fish spawn	40 lakh nos	500/50,000 nos	40,000.00		
Subtotal 1	19,89,000.00				
Piggery				7,80,000.00	1.28
a. Piglets	60 nos	2200/no	1,32,000.00		
b. Matured pig	7200 kg	120/kg	8,64,000.00		
Subtotal 2	9,96,000.00				
Duckery				21,000.00	1.54
a. Duck	120 nos	220/no	26,400.00		
b. Egg	800 nos	7.5/no	6,000.00		
Subtotal 3	32,400.00				
Horticulture				27,000.00	2.89
a. Banana	240 bunch	180/bunch	43,200.00		
b. Tuberose	30000 sticks	1/no		30,000.00	
c. Vegetables	400 kg	12/kg	4,800.00		
Subtotal 4	78,000.00				
Dairy (Milk)	6,000 liter	40/liter	2,40,000.00	1,70,000.00	1.41
Subtotal 5			2,40,000.00		
Total (1+2+3+4+5)			33,35,400.00	18,38,000.00	
Gross BCR=1.81					

Size of the farm: 4 ha

several on and off farm jobs and Mr. Kalita has been providing livelihood security to those people

Support received by Mr. BijuKalitafrom different agencies : KVK Nalbari and State Institute of Panchayat and Rural Development, Nalbarihad been taking utmost care to ensure the scope and momentum of Biju's endeavor. Their assistance has been instrumental in boosting up the achievement motivation of Mr. Kalita. During 2007, SBI, Nalbari branch financed a fishery project and he could get 30% subsidy from National Fishery Development Board, Govt. of India, Hyderabad. In the year 2014, Mr Kalitagot trained on induce breeding of carp at KVK Nalbari and started induce breeding at his farm through hapa breeding. Seeing his interest in seed production, KVK Nalbaridid liaison with ICAR-CIFA Bhubaneswar for a FRP carp hatchery which he received in the year 2016.

Economics of Fishery based IFS: Table 1 depicts the farm production and income from different components of Mr. Kalita's IFS model during the year 2016-17.The table shows that the gross income of the IFS is Rs. 33,35,400.00 where the maximum share i.e. 59.63 per cent income comes from fishery followed by 29.86 per cent from piggery and 7.19 per cent comes from dairy sector. It is also observed from the Table 1 that the gross BCR of the fishery based IFS is 1.81. The highest BCR among the five components was found to be in horticulture which is 2.89, followed by fishery sector i.e. 2.37. The lowest BCR was found to be in piggery sector, which is 1.28. *Channabasavanna et al. (2009)* found the benefit cost ratio of 1.97 in IFS than conventional system which is of 1.64. He also reported that among the various components of Palladam district, goat recorded the highest benefit cost ratio (2.75) followed by fish (2.23), vegetables (2.00) whereas poultry showed the lowest benefit cost ratio (1.13) as a result of high cost of maintenance. *Tripathi et al. (2010)* reported that the integration of 7 different enterprises namely, crop, fish, goat, vermicompost, fruit production, spice production and agro forestry obtained the net return to the tune of Rs. 2,30,329 annually with the Benefit Cost Ratio (BCR) of 1.07:1. It was also reported that highest contribution of the enterprise was from fish production (68.53%) followed by vermicomposting (9.90%), spices (8.46%) and animal production (7.40%). The BCR was found to be highest for the spice production (1.83:1) after fishery (2.25:1) followed by the vermicomposting (1.45:1).

CONCLUSION

Biju Kalita's Fishery based IFS contribute to environmental sustainability through nutrient recycling and energy recycling. It has been providing livelihood option to several families who are engaged in his farm, while the various components contribute to food and nutrition security of the society with quality macro and micro nutrients. The gross return with a considerably high BCR had supported Mr. Kalita to become an agri-preneur from an ordinary farmer.

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