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A step towards sustainable progress

A Case Study of Tribal Farmer from Manyam District, Andhra Pradesh

Building a Livelihood Security through Eco-farm Pond

BiddikaThabai, is a tribal farmer of Peddamooleguda village, Bhamini Mandal, Manyam district, Andhra Pradesh. He resides in a joint family of 6 members. His family owns a total of 2.4 acres of agricultural land.

Mr. Thabai is a migrant labour. During his time in Kakinada from 2020-2022, he happened to work in commercial fishponds as a daily labour. Seeing the income through fish culture, he decided to venture into fish farming. After his return to the village, he attended a 3 day training program on Eco-farm pond and the culture of fishes in rainfed areas organized by Watershed Support Services and Activities Network (WASSAN). Mr. Thabai expressed his interest in constructing a fishpond to the WASSAN team.

WASSAN has considered his request to help him establish a fishpond in his village so that his migration can be stopped, thus empowering him for local sustainable income generation. Mr Biddika has contributed Rs.10000 and the remaining expenditure was borne under the FDP program of HDFC Bank Parivartan. A farm pond with 10 cents area size was constructed in March 2023. He used to get a net income of Rs 8,000-10,000 per year by growing cotton on an acre where he constructed a pond in a portion of 10% of the same land.

He released 300 fingerlings (4 inches in size) in his 10-cent farm pond in the month of August 2023. He followed a combination of fish species like Catla, Rohu, Mrigal (Indian Major Carps) along with Grass carp and Common carp (Exotic Major Carps) as composite farming. As an initial assistance, the expenses of fish seed were borne by WASSAN. *Dravajeevamrutha (DJ)* and Rice Bran were used as fish feed. In a span of eight months, he has harvested (partial harvest) a total of 63kg of fish in April 2024. He sold 52 kg of fish, distributed 23 kgs to relatives and reserved 3 kgs for household consumption. In the second harvest, after a month, he gained 19 kg of fish, and 5 kg were kept for own

consumption. A total of 72 kg fish harvested which boosted his confidence with an average size of 500 gm, and a maximum of up to 1.2 kg fish. Around 40 per cent of mortality of the seeds observed during the grow-out culture. He made earnings of Rs 8580 from the fish farming.

The dikes were strengthened, terraced, prepared and fertilized by application of pond silt. Different vegetables i.e., Pumpkin, Brinjal, Broad Bean, Ridge gourd (Okra), and gram varieties like red gram were grown in the pond embankment. Plants on the embankment, strengthen the dyke. An additional income of Rs 11605 (*Table 1*) has been earned from the sale of vegetables.

He utilizes the excess water from the fishponds to irrigate the crops. The water from the fishpond contains higher organic matter, rich in nutrients and acts as a natural fertilizer to improve soil fertility.

Table – 1: Total Income from selling of vegetables

Sl.No	Vegetable type	Total (in kgs)	Cost (per Kg)	Amount (in Rs)
1.	Ridge Gourd	32	30	960
2.	Red gram	48	50	2400
3.	Beans	19	20	380
4.	Bottle Gourd	21	20	420
5.	Pumpkin	46	10	460
6.	Bitter Gourd	26	20	520
7.	Small Bitter Gourd (AA Kakara)	39	110	4290
8.	Brinjal	33	20	660
9.	Tomato	19	15	285
10.	Cluster been	12	25	300
11.	Lady finger	14	15	210
12.	Green chilly	18	40	720
	Total Income	327		**11605**

IMPACT

After the successful interventions, 6 of the nearby farmers cultivated *Guli Ragi* and other vegetables in the rabi season through the irrigation support of this pond the fish farmer gets an additional income of around Rs 20000 in nine months of farming from growing fish and vegetables on the pond embankment. Eco-farm pond concept does not only consider farming in terms of economic and household level nutritional security.

The concept of fish farming with culture of vegetables on bunds or inner dykes of the pond enhanced the production leading to higher farm income. In an eco-farm pond, vegetables and fishes are produced in a coordinated framework. Under this perspective, the case study of Eco-farm pond was undertaken to showcase showcase the benefits of fish culture along with vegetable culture.

Broadcasting the feed to stocked fingerlings

Harvest of market size fishes