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Integrated Fish cum Poultry Farming: Step towards employment and Nutritional Security in East Kameng District of Arunachal Pradesh: A- Success Story

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INTRODUCTION

The State of Arunachal Pradesh forms a complex hill system with the varying elevation from 300-7000 meter having an area of 83,743 km^2. In this state the East Kameng district is situated in the western part of Arunachal Pradesh between 92^o 30' and 93^o 24' East longitudes and 26^o 56' and 27^o 59' North latitudes covering an area of 4134 sq. km on the hilly tract ranging from 150 to 1960 m of elevation which provide a wide range of suitable climate for the aquaculture, agriculture and allied activities. As most of population in the district living living in rural areas and these rural folk are greatly under-nourished and need not only a large supplement of animal protein in their diet but also new sources of gainful employment for their overall development. In these rural areas, our strategy must focus on; conserving their natural resources, enhancing efficient use of resources, increasing productivity and profitability and improving quality and competitiveness through reduced unit cost of production from their agricultural and allied activities. At present the agriculture and its allied sector plays a pivotal role in the economy of the East Kameng, being the main occupation for the rural population at mass level and main emphasis is focused towards to enhance the farmer's income by all the possible means.

In view of the facts given above a diversified multidisciplinary Integrated Fish cum Poultry farming approach has been started initially by the K.V.K East Kameng in the leadership of Dr Vipin Kumar Misra S.M.S (Fishery) with the support of District Veterinary Officer Seppa East Kameng at Pampoli, Wessang, Jayanti, Kafla and Bana Village under Seppa and Bana Circle. This programme has been started with a view to provide the employment opportunity along with nutritional security to the rural populace at mass level.

After proper survey, villages from the said location of the district have been selected for the said purpose where there was sufficient available resource. After the village selection the programme was immediately started by the K.V.K through the involvement of farming community of the villages including men and women both, as they play an important and major role especially at household level for the upliftment of their family socioeconomic status.

Overview of Intervention Methodology:

The programme was implemented after the proper training to the beneficiaries of all the locations. After proper pond preparation the stocking have been carried out with advanced yearlings of IMC and EMC @ 10,000 fingerlings/ ha.

Table: Proportion of Stocking for integration for (IMC) Indian Major Carps

Sl. No	Common Name	Niche Occupied	Proportion
1	Catla	Surface feeder	20%
2	Rohu	Column feeder	20%
3	Mrigal	Bottom feeder	15%
1	Grass carp	Macro vegetation feeder	10%
2	Silver carp	Surface feeder	20%
3	Common carp	Bottom feeder	15%

Preparation of poultry housing:

The house of birds was prepared with the help of bamboo fencing and other locally available materials providing the space area about 0.3-0.4m^2. The poultry sheds were installed on the dyke of the fish ponds to facilitate the wasted food and chicken dropping to fall directly into the pond water. About 20 days old, healthy and well adopted chicks @500/birds/ha for all the 5 locations of local breeds were introduced in poultry shed.

Housing arrangements for Poultry birds

Prior to shifting the birds after proper disinfection of poultry house and equipment's they were vaccinated also against diseases

Feeding of birds:

- A layer mash was provided to the birds @ 80-120 gm/bird/day.
- The feed is provided to the birds in feed hoppers to avoid wastage.
- An ample supply of water is made available to all the birds at all the time.

Egg laying:

- Generally, egg production commences at the age of 20 weeks.
- Each pen of laying birds is provided with dry straw @ one nest for 5-6 birds.

Evaluation of Integrated fish and poultry farming system:

Egg laying started when the chickens become 20 weeks old. Eggs were counted and removed from

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the shed daily. Fish culture practice without any integration as farmer's practice was compared to fish-cum-poultry integration as experimental trials. Yields of fish eggs and poultry meat were evaluated and compared with farmer's practice.

PRODUCTION:

The production obtained from the IFS Fish-Poultry System is given below in on average from all the locations.

1. Fish Production 3.5 tone / ha, 2. Chicken 1.1 Tonne / ha and about 5000 eggs / ha

Fish Poultry Production System

Economical Study of intervention from the recorded data from all the locations:

A. Expenditure involved:

Cost of Yearling (10,000 nos.) Cost = 50,000/-

Cost of low cost poultry housing arrangements = 75,000/-

Feed 15000 kg = 3, 00,000/-

Miscellaneous Expense 1, 00,000/-

Labour Cost = 1, 50,000/-

***Total Expenditure* = 6, 75,000/-**

B. Economic Outcome

1. 3500 kg Fish @400/kg = 14,00,000/-
2. 1100 kg Chicken Meat @250= 2,75,000
3. 5,000 egg @10/pc = 50,000

***Gross Income* obtained= 17,25,000/-**

Profit/ Net Income = 17, 25,000 -6, 75,000 = 10, 50000/-

Intervention Outcome:

As per observation and recorded data it has been found that Integration of chicken with fish farming was very successful in term of employment and nutritional security of the involved beneficiaries. After seeing the success of this intervention, a horizontally spread of this technology had been observed at some more places in the district like Lumdung, Nere, Seba, New Seppa, Pabhua, Tassomara and Jejudad villages.

CONCLUSION

Integration of chicken with fish farming might be an economically viable and productive system for the sake of livelihood generation and nutritional security for the rural masses.Supplemental feed and fertilizers - the high-cost inputs in fish farming are not needed in such systems and the cost of inputs is therefore reduced. It improves the economy of production as well as opportunity for employment generation and decrease the adverse environmental impact of farming.