



A Success story on fish species diversification to enhance farmer's income through Farmers Field School (FFS) in the East Kameng district of Arunachal Pradesh, NER India

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INTRODUCTION

The farmer's field school is an important segment under Agricultural Technology Management Agency (ATMA); which governed by district Agricultural Officer/ Project Director at district level in our country. The prime focus of ATMA is to provide flexible working environment by integrating research, extension and all other stake holders at the district level to support the farmers need and interest through strategic plan. The Farmer field School organized at the farm of progressive farmer under the guidance of technical expert. This type of school promotes sharing of knowledge as well as skill from one farmer to other through learning by doing concept. The school is a centre where farmers can easily communicate in their own language/dialect. Different types of activities like- training cum awareness programmes, demonstrations and group discussions are involved under school. With reference to the facts given above to garb these benefits in the field of fish culture 2 nos. of farmer's field school has been constituted by the KVK East Kameng in the technical guidance of Dr. Vipin Kumar Misra S.M.S Fisheries and other line departments/stakeholders. *i.e.* one at Lumdung under Debyar circle and one at Pampoli under Seppa HQ circle in the East Kameng district of Arunachal Pradesh to popularize the Amur carp and Jayanti Rohu in carp Polyculture system to improve the farmers income under fish species diversification programme.

Sites Selection and establishment of farmer's field school (FFS):

The District East Kameng district is situated in the western part of Arunachal Pradesh lies between $92^{\circ} 30'$ and $93^{\circ} 24'$ East longitudes and $26^{\circ} 56'$ and $27^{\circ} 59'$ North latitudes covering an area of 4134 sq. km. The district is surrounded in the east by Pakke Kesang, Lower Subansiri and Papumpare districts of Arunachal Pradesh, Sonitpur district of Assam on the south east, West Kameng district of Arunachal Pradesh on the west and Tibet as well as a part of Lower Subansiri district on the north. The district is divided into 2 sub-divisions viz. Seppa and Chayangtajo; 7 community development blocks and 12 circles comprising 310 villages, 125 Gaon Panchayat and one Mahakuma Parishad. The district headquarter, Seppa is situated at a distance of about 200 km from the state capital Itanagar. The district is situated on 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. At present the agriculture and its allied sector plays a pivotal role in the economy of Arunachal Pradesh, being the main occupation for the rural population at mass level. In the recent years, main emphasis is focused towards to enhance the farmer's income by all the possible means among which fish farming is providing a promising opportunity for the farming community living in

areas suitable for fish culture but the poor growth performance of stocked fishes and higher pond maintenance cost are major constraint in the popularization of fish farming technology at larger scale.

On the basis of above facts, the said FFS Farmers field schools were constituted by the KVK in the technical guidance of Dr V. K. Misra Subject matter Specialist (Fisheries) KVK East Kameng and others stockholders in the suitable areas for the fish culture at the various locations in the district. Before the FFS constitution a detailed survey was done by using the PRA and RRA techniques for the said purpose where there were sufficient available resources to implement the programme beside some constraints. The establishment of these FFS were done with the aim to empower the beneficiaries involve in fish farming at both places for Smooth implementation of species diversification programmes. The Select beneficiary to run the FFS was trained properly through hands on training programmes jointly organized by the office of KVK and DFDO East Kameng along with office of the ATMA East Kameng. The said FFS are well equipped with the optimum resources for field-based experiential learning processes which are providing a very good knowledge sharing platform for the farmers living in the distant places of the district.



Farmers field school programme at Pampoli



Visit by ADC Seppa at FFS Site in Pampoli



Interaction with NABARD officials, KVK staffs, FFS Host farmers and stockholders from line department

Overview of the Programme:

Through mixed fish farming, an attempt is made to make maximum use of all the food materials and the entire water area available in a pond. In composite fish farming, those varieties of fish are selected whose food habits are different from each other and which can utilize the food materials available at every point of the pond and in this way maximum production can be obtained

in minimum time. Earlier, indigenous species like catla, rohu and nain and exotic species like silver, grass and common carp have been mainly used for composite fish farming. Among the indigenous species, Rohu is in great demand among consumers but due to its growth being less than the demand, there is a gap between supply and demand. Among the exotic species, Common Carp is a hardy species but due to its

reproductive development capacity in just six months, the energy which should be converted into meat gets used in reproductive development, due to which fish farmers face its poor growth problems and it does not achieve the expected growth. On the other hands due to its browsing habit, it often damages the pond embankments which also create problems to the farmers. Keeping all these problems in mind, Krishi Vigyan Kendra East Kameng used 60 to 75%

Jayanti Rohu in place of Rohu and Amur Carp in place of Common Carp under species diversification. The said species diversification Programme has executed by using the help of Farmers field school to popularize the technology in a speedy and easier way. There was a good increase recorded in the production and income of the fish farmers, which is now being implemented on a large scale in the district.



CONCLUSION

After the 2 years of study (2023-2025) the data recorded and analyzed, revealed that the programme has a very good response in term of improved income of the farmers along with nutritional security at household level. The result obtained clearly indicates that the remote areas of the district should be linked with the farmers field school for the speedy transmission of gain knowledge by the host farmers and their field resources for better hands on experience

within the district to improve the economic and social security of the beneficiaries. In the successful implementation of such type of programmes FFS may play a very crucial role as evident by the programmes implemented in the above said areas.

Key words: FFS farmers Field School, Socio-economic upliftment, Amur Carp, Jayanti Rohu and Composite fish culture etc.