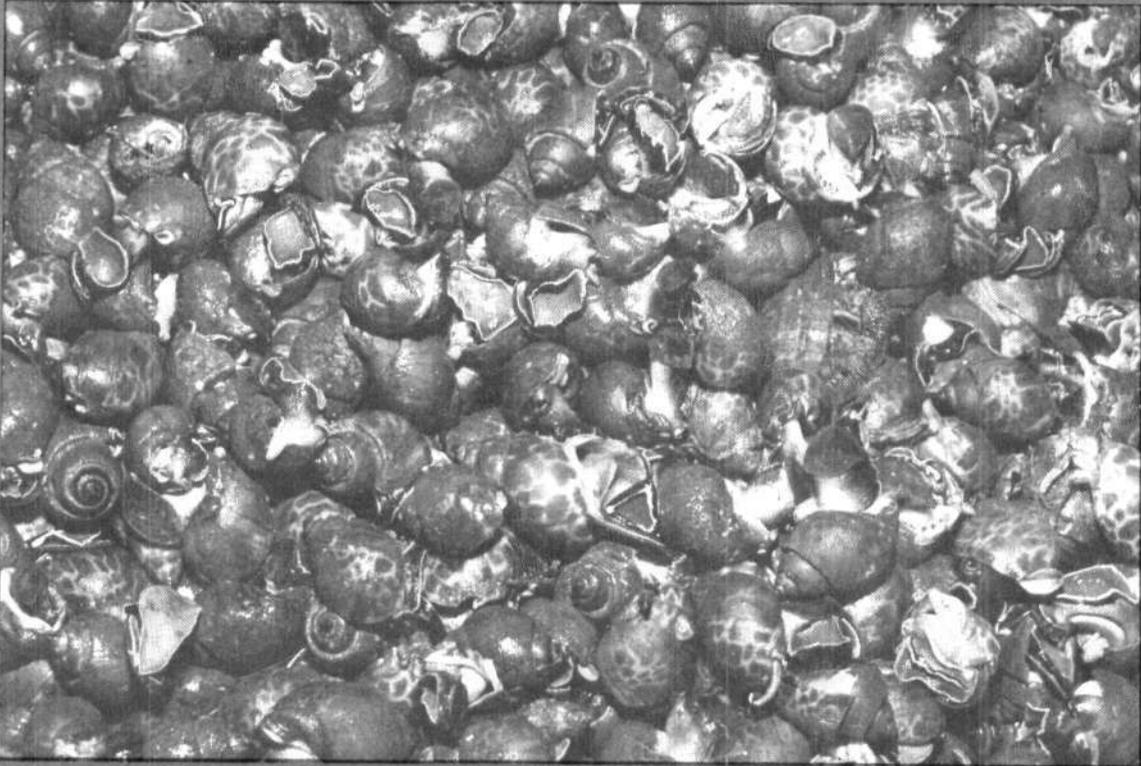




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भारतीय कृषि अनुसंधान परिषद  
INDIAN COUNCIL OF AGRICULTURAL RESEARCH

## **ACTIVITIES AND ACHIEVEMENTS OF KRISHI VIGYAN KENDRA OF CENTRAL MARINE FISHERIES RESEARCH INSTITUTE, NARAKKAL, KERALA**

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### **Introduction**

Krishi Vigyan Kendras are innovative grass-root level agricultural institutions established during the Fifth Five Year Plan (1973-'78) by Govt. of India through the Indian Council of Agricultural Research, based on the recommendations of National Education Commission (1964-'66). The Kendras aim at providing vocational education in agriculture and allied areas including fisheries, forestry, livestock, home science etc. for increasing agricultural production and thereby achieving integrated development of the rural sector. Farmers including women, school drop-outs, unemployed youth, field level extension functionaries etc. are the target groups. KVKs are functioning under ICAR Institutes, Agricultural Universities and non-governmental organisations. The first KVK in the country was established in 1974 at Pondicherry under the Tamil Nadu Agricultural University. The National Commission on Agriculture (1976) recommended the establishment of one KVK in each district by the end of Sixth Five Year Plan and three KVKs per district by the end of the present century.

### **Philosophy, concept and principles**

The basic philosophy behind KVK is vocational training in agriculture and allied subjects. Rapid, continuous and accelerated adoption of technology is possible only when the farming community is educated, enlightened and trained in the rudiments of science and technology in

agriculture and other subjects.

The three basic concepts are (i) Work experience, where the Kendra will impart training through work experience and hence will be concerned with technical literacy. (ii) Self employment, in which training is imparted to the extension workers, practising farmers and fishermen and those who wish to be self employed (iii) Need-based syllabus in which, programme of each KVK will be tailored to the felt needs, national resources and the potential for agricultural growth in that particular area. The three basic principles are (i) Acceleration of agricultural and allied production (ii) Teaching by doing and learning by doing, imparting skill-training and (iii) Training efforts primarily to be directed to improve the lot of the poor.

The Narakkal KVK under the Central Marine Fisheries Research Institute started functioning from December 1976 and the training courses were organised from April 1977. The main objective of the Kendra is to meet the local needs of the farmer by transferring the technology developed in laboratories. Since KVKs are district oriented programmes and the main avocation of the farmers in this area is prawn farming, more emphasis has been given on training courses related to this aspect. Apart from this, training courses on other subjects such as animal production, crop production and home science are also arranged. The achievement of KVK is

measured in terms of (i) Training courses organised and number of beneficiaries (ii) Extension activities organised and (iii) Follow-up service undertaken.

### **Training courses conducted from 1977 to September 1993**

The training courses conducted under KVK are mainly for the benefit of the farmers. The target group also consists of school drop outs, village youths including girls and small and marginal farmers. The training courses are conducted under the disciplines, fisheries, animal production, crop production and home science.

Under the fisheries discipline short duration courses are conducted in the following aspects namely prawn/fish farming; prawn/fish seed collection; fish-cum-paddy cultivation; bund construction and sluice fixing; prawn/fish farm management; eradication of predators from culture ponds, financing agencies for prawn/fish culture, harvesting, handling and marketing of prawn/fish and post-harvest technology of prawn and fish. A total of 375 training courses were conducted and 6659 persons were trained, of which 3662 were women.

In the discipline of animal production, subjects such as dairy farming, livestock management, fodder production, duck farming and poultry farming were dealt with. A total of 93 training courses were conducted. 2066 farmers were trained, of which 1497 were women. In the discipline of crop production, training courses are conducted in vegetable cultivation, coconut cultivation, paddy cultivation and agro-forestry and a total of 72 training courses were conducted. In all 1504 persons were trained of which 965 were women. In home science, training courses in health and hygiene, fruit preservation, nutrition, handicrafts and dress making were arranged. 129 training courses were conducted. A total of 2291 persons were trained of which 38 were men. The duration of training courses varies from 1 to 45 days depending upon the needs of the farmers.

### **Follow-up service and extension activities**

Follow-up service and extension activities form an integral part of KVK programmes. They include Lab-to-land programmes, field level demonstrations, field visits and lectures, film shows, science camps for school children, adoption of schools for inculcating the spirit of scientific

farming among children, melas and farmer's days, exhibitions, radio programmes and publications.

### **Lab-to-land programme**

The KVK has successfully implemented the first four phases of the Lab-to-land programme. The first two phases were implemented at the prawn fields belonging to a colony of 138 families of Harijan community at Valappu in Vypeen island. Under the programme 73 persons belonging to the colony were given training by the KVK and follow-up services including technical consultancy, facilities for eradication of predators and supply of prawn and fish seeds were undertaken. The farming area extending over 3 hectares has been developed through an integrated approach with focus on prawn and fish farming. During monsoon, when water is not conducive for prawn culture, paddy-cum-fish culture is done. The land area available at the farm is utilized for growing coconut and horticultural crops.

### **Farmer's day**

As a follow-up measure, the KVK occasionally arranges meeting of the ex-trainees and other farmers who are actively associating with prawn and fish culture and related trades. This would enable them to come under a common forum to interact and exchange their ideas and also to gain more information from the subject matter specialists. The Kendra has so far organised seven farmers' days.

### **Radio, television programmes and film shows**

The Kendra has presented 25 radio programmes including talks, discussions, interviews and features, on varied aspects of prawn farming and allied topics. A programme on prawn farming was also telecast over Doordarsan, Trivandrum. So far, the Kendra has arranged 549 film shows at different campuses and in villages.

### **Publications**

The Kendra has published a total of 31 articles in the form of Krishi Vigyan Patrikas, leaflets, books, popular articles in journals and dailies, symposia-seminar papers etc. on a variety of topics concerned with fisheries, agriculture, home science, extension methodologies etc.

### **Seminar/symposia**

The staff of KVK have participated in 19 seminars with a view to strengthen the subject

matter support and update the know-how.

### **Functional linkages developed with other departmental agencies**

Apart from the regular training programmes, the Kendra provides training facilities on prawn and fish farming to the farmers sponsored by the brackishwater fish farmers development agency. Officials from the nationalised and scheduled Banks were also given training on important aspects including the cost-benefit factor of prawn farming technology to enable them to evaluate the projects submitted by the farmers for financial assistance.

The students from the vocational higher secondary school of Narakkal and Kadamakudi are regularly benefitted by providing them with two days exposure programme in prawn farming. These schools are functioning under the Department of Fisheries, Kerala state.

Consequent on the introduction of providing insurance facilities to the prawn growers, the General Insurance Company has also taken note of the importance of this Kendra in the field of scientific prawn farming.

The Krishi Bhavan of the Department of Agriculture, Kerala State was serving as a resource agency in implementing the short duration training programmes of this Kendra in agricultural aspects. The chief training organiser of KVK is also a regular participant of the monthly workshops on TV programmes.

The KVK keeps liaison with various departments of Kerala State, NES Block, land development Banks, All India Radio, Trichur and Kochi, CIFT, Kochi and also with the adopted schools of Vypeen island.

### **Impact of training and extension activities**

The impact of training and extension activities undertaken by the KVK, can be evaluated by gathering feed-back information on the mode of utilization of the know-how gained by the trainees and also by taking into account the overall changes taken place in the field of prawn farming, the thrust area focussed by the Kendra.

In order to evaluate the mode of utilisation of the know-how gained by the trainees, follow-up surveys are conducted once in two years. This is done by visiting the trained farmers and gathering feed-back information such as the level

of adoption of the new technology, constraints faced if any, or reasons for not putting the knowhow into practice. The KVK has conducted five follow up surveys, in 1980, '82, '84, '87 and '89. During the latest survey (1989), 76.6% of the farmers trained during 1986-'87 were contacted. Analysis of the data has revealed that 47.15% of the ex-trainees were engaged in different activities connected with prawn/fish industry, including 3.77% engaged in scientific farming of prawn, 2.26% adopting the technique of supplementing the natural stock in the traditional culture practice, with the desirable species of prawn seeds procured from outside, 6.03% engaged in prawn seed trade, 5.28% employed in prawn culture fields, 0.75% practising the traditional method of prawn filtration, 17.0% engaged in fishing activities and 12.06% involved in prawn processing industry.

### **Prawn seed trade**

It is only after the establishment of the KVK that the prawn seed trade came into being in and around Ernakulam district. The newly generated business created plenty of employment opportunities for the rural youth, trained as well as untrained. As a result of the training and extension activities, seed collection centres came into existence in different regions of the state of Kerala, all along the coastline from Quilon to Kasaragod.

### **Increased production by adoption of new technology**

The innovative idea of farming prawns in the canal systems in coconut groves was successfully demonstrated in farmers fields. The cost-benefit factor of scientific farming of white and tiger prawn are also well appreciated by entrepreneurs. The KVK has been advocating the feasibility of taking three harvests of prawns in an year by judicious management and also by carefully utilising the monsoon months of the year for generating enhanced production. The proposition has been put to reality and an ex-trainee, with technical backing of KVK could produce 3472.6 kg of prawns (3045 kg tiger prawns and 427.6 kg white prawn) and 852 kg of fishes (429 kg grey mullets and 423 kg milk fish) by doing three culture operation lasting from May 1990 to March '91 from a water area of 1.6 ha. The total income generated by this was 4.5 lakhs against a total expenditure of 1.2 lakhs. The average production rate per ha of water area

worked out at 2170 kg of prawns and 532 kg of fishes per year. The net income realised was Rs. 2.08 lakhs/ha/yr. Thus the significance of selective stocking methods and their advantage over the traditional system have been well demonstrated.

#### **General awareness created**

Being the pioneering agency responsible for propagating the technology of scientific prawn farming, Narakkal KVK has been directly or indirectly instrumental in creating a general awareness on the potentiality of prawn farming in Kerala and adjacent states. Whereas, the total area under traditional prawn filtration practice in Kerala was only around 45,000 hectares confined only to Ernakulam and adjacent districts before nineteen seventies, the recent data show that the practice has been extended to more districts including Kasaragod, Kannur and Kollam with a total extent of 12,511 ha, excluding the newly added 354 hectares of farms under scientific farming spread over the districts of Kasaragod, Kannur, Trichur, Ernakulam, Alleppey, Kottayam, Kollam and Trivandrum. In order to meet the

ever-increasing demand for seed and feed, more than a dozen hatcheries and feed mills also have come up in southern India.

#### **KVK system under VIII plan period**

During the VIII plan period, all the first line transfer of technology projects of ICAR have been integrated into Krishi Vigyan Kendra (KVK). The projects integrated into KVK are (i) Lab-to-land Programme (LL); Socio economic uplift of Scheduled castes and Backward communities Tribal area project (SC/ST/TAP); National Demonstration Project (NDP), Operational Research Project (ORP), Technology Mission on Oilseeds and National Pulses Development Project. Due to such integration the mandate of KVK has been enlarged to cover the farming communities under the transfer of technology. To achieve the goal of integration, help from other organisations and agencies are taken wherever necessary. The Narakkal KVK has identified 100 farm families under the lab to land programme at Ezhikkara and Nayarambalam village. 50 families have been identified for the implementation of SC/St project at Narakkal.