EXECUTIVE SUMMARY

Introduction

Zonal Coordinating Unit VIII of Transfer of Technology Projects was established in September 1979 as a Cess Fund Scheme at Tamil Nadu Agricultural University, Coimbatore to monitor the activities of **Lab to Land Programme**. Subsequently, the unit was transferred to Southern Regional Station of National Dairy Research Institute Campus, Bangalore in September 1981. Since 1987, this unit was given the additional responsibility to monitor all the ICAR supported TOT Projects located in the zone.

The mandates of the Zonal Coordinating Unit are as follows:

- To formulate, implement, monitor and evaluate the Transfer of Technology Projects especially Krishi Vigyan Kendras.
- To coordinate the work relating to Transfer of Technology Projects of various agencies such as State Agricultural Universities (SAUs), ICAR Institutes, Voluntary Agencies and Development Departments.
- To coordinate with State/Central Government Agencies, credit institutions and any other organization for successful implementation of programmes.
- To serve as feedback mechanism from the projects to research and extension systems.
- To help in implementation of other projects on oilseeds, pulses, popularising improved implements and cotton etc. assigned by ICAR headquarters.
- To have a very close liaison with ICAR headquarters particularly with Deputy Director General (Agricultural Extension) and his staff and prepare reports/write-up for their use.

Krishi Vigyan Kendras of the Zone

At present the Zonal Coordinating Unit monitors activities of 70 KVKs in four states namely Karnataka, Kerala, Tamil Nadu and Goa and two Union Territories namely Pondicherry and Lakshadweep. During the year three new KVKs have been established in three districts namely Davanagere, Bagalkot (Karnataka) and Karur (Tamil Nadu)

State wise Status of Krishi Vigyan Kendras

Name of the State	No. of Districts	Details of KVK				TOTAL
		SAU	NGO	ICAR	Others (State Dept of Agriculture and Deemed University)	
Karnataka	27	19	04	01	-	**24**
Kerala	14	07	03	04	-	**14**
Tamil Nadu	30	15	10	-	02	**27**
Pondicherry	04	-	-	-	02	**02**
Goa	02	-	-	01	01	**02**
Lakshadweep	01	-	-	-	01	**01**
Total	**78**	**41**	**17**	**06**	**06**	**70**

ICAR – Indian Council of Agricultural Research SAU – State Agricultural University NGO – Non-Governmental Organization

Activities of KVK

KVKs plan their activities based on the current problems in the major crops/enterprises of the operational area. Normally, a group/block of villages are covered in each taluk of the district by working intensively on the prioritized problems treated as thrust areas for KVKs. Problem identification and prioritization of thrust areas is the fundamental activity of KVKs. Following are the thrust areas on which the KVKs of Zone VIII performed their interventions namely skill training of farmers, vocational training to rural youth, in-service training of extension personnel, organizing frontline demonstrations to establish production potentials on farmers' fields and provide feedback, on-farm testing, organizing extension activities, production and supply of quality seed and plant materials and analysis of soil, water and plant samples.

- ⇒ Sustainable crop production through integrated nutrient management and organic farming strategies
- ⇒ Integrated Pests and Disease management
- ⇒ Scientific management of dairy and small livestock with appropriate feeding, breeding and health management practices
- ⇒ Introduction and popularization of improved varieties/hybrids of crops through technical and material back-up
- ⇒ Development and promotion of crop diversification and alternate land use systems
- ⇒ Empowerment of women and youth through improved nutrition, health, income and reduction of drudgery
- ⇒ Promotion of horticulture as a mechanism of crop diversification, augmenting family income and national income through export
- ⇒ Natural resource management for sustaining resource productivity
- ⇒ Value addition, processing and market facilitation of household and commercial enterprises
- ⇒ Soil, water conservation and watershed management for drought proofing and sustainable rainfed farming
- ⇒ Capacity building of rural youth and women to establish self-employment units
- ⇒ Small scale mechanization for saving time and reducing cost and drudgery
- ⇒ Popularization of crop production technologies and integrated farm development strategies
- ⇒ Capacity building of farmers through information access, exchange and forecasting mechanisms
- ⇒ Increasing income from fishery enterprises through production, processing and marketing enhancing activities

Farmers' Training

A total of 6257 training courses benefiting 178293 farmers and farm women were organized in various aspects of crop production, horticulture, plant protection, livestock production and management, home science, agricultural extension, agricultural engineering, fisheries, agro forestry, apiculture, soil fertility and management, sericulture, seed technology, mushroom cultivation, organic farming, vermiculture and beekeeping.

Vocational Training for Rural Youth

The training courses for rural youth were organized in agricultural extension, agricultural engineering, agro forestry, livestock production and management, apiculture, crop production, fisheries, home science, horticulture, apiculture, mushroom production, plant protection, soil fertility and management, sericulture, seed technology, organic farming and vermiculture. As many as 1828 vocational and skill-oriented training courses were organised for 38904 rural youth.

Training for In-service Personnel

A total of 830 training programmes were conducted covering 21787 participants. The training was imparted through participatory training methodologies, field visits and other interactive methods.

Frontline Demonstrations

The Frontline Demonstrations (FLDs) were conducted to demonstrate the production potential of the newly released production technologies in a given farming system. The training and field days were organized for extension workers and farmers for dissemination of technologies.

***Oilseeds*:** During the year, 1320 demonstrations were conducted covering 690.1 ha area on major oilseed crops including Groundnut, Sesame, Soybean, Castor, Sunflower and Safflower. The percentage increase in yield varied from 16.31 in sesamum to 49.64 in soybean.

Pulses: The demonstrations were conducted on Bengalgram, Redgram, Blackgram and Greengram. A total of 434.5 ha area were covered with 779 farmers. The percentage of increase in yield varied from 27.45 in Bengalgram to 39.52 in Greengram.

***Other crops*:** The KVKs organized FLDs on cereals, fodder and horticultural crops covering 639.1 ha area benefiting 1528 farmers. Among the cereals, large numbers of demonstrations were conducted in Paddy (291) and Finger millet (282). The percentage increase in yield was highest in Finger millet (39.64 %) followed by Foxtail millet (37.43 %). Under vegetables, Okra and French beans demonstrations were conducted in 81 and 75 farmer's fields respectively. However, the highest increase in yield was recorded in Brinjal (53.79%) followed by Okra (53.74%). The demonstration yield vis-à-vis local check are given below.

***Enterprises*:** In respect of enterprises, technologies were demonstrated to 266 farmers. The percentage increase in yield ranged from 15.88 per cent in sheep to as high as 155.56 per cent in turkey birds. The details are as follows:

Frontline demonstrations on Cotton

A total of 257demonstrations covering an area of 140 ha were conducted by 15 KVKs under FLD on cotton under Mini-Mission II. These demonstrations were conducted on high-yielding and pest-tolerant varieties/hybrids of cotton. The integrated management of pests and diseases, and the demonstration of agricultural implements suitable to cotton cultivation were also carried out as separate demonstrations.

On-Farm Testing

Technologies (2160) were identified for on-farm testing by the KVKs to evaluate and assess its impact on location-specific basis in different farming systems. This included varietal trials (35), nutrient/feed management (66), cropping systems (16), weed management (9), pest and disease management (87) and post harvest management (3).

Utility of tissue culture banana plants of variety Nendran was tested against sucker planting of the same variety (with and without sucker treatment) in Pathanamthitta district. Tissue cultured plants and treated suckers proved tolerant to rhizome weevil attack and recorded a net profit of Rs.82 and Rs.80 per plant respectively against Rs. 48 per plant in farmers practice. The incremental B: C ratio was 2.99 for tissue culture plants and 7.27 for treated suckers (due to low cost of production). This proved that planting of treated suckers provided nearly same net income as that of tissue cultured plants and was highly acceptable to medium resource farmers because of its high incremental B: C ratio (IBCR).

At Haveri district, fruit and shoot borer in brinjal was managed with refined technology of soil application of neem cake @ 2.5 q/ha in three splits along with two sprays of Thiodiocarb 75 SP at 15 days interval which gave 21% higher yield over farmers practice.

Leaf Colour Chart (LCC) based Nitrogen management in wetland paddy of Villupuram district proved to be both cost saving (Rs.400/ha) and also to be high yielding (31 per cent more yield).

The System of Rice Intensification (SRI) approach to paddy farming in Trivandrum district reduced the seed requirement by 10 per cent and reduced water requirement substantially. Conoweeder was not found to be suitable and in its place rotary weeder was used and was found to be more suitable. The refined technology yielded 6 t/ha as against 4.2 t/ha yield obtained in conventional recommendations of KAU and 3.6 t/ha yield obtained in farmers practice.

Infertility in heifers due to anoestrus was managed by refinement at Erode and Tuticorin districts. Feeding of extracts of Aloe vera or Pedalium murex extract + Abrus precatorius one grain for three days in milk resulted in 55% of treated heifers showing oestrus signs. These materials are locally available and farmers themselves could practice the refined technology.

Spraying of Nimbicidin 2ml/lit (neem based insecticide) or 5% Neem Seed Kernel Extract + slaked lime @ 0.5% enabled control of bud worm in jasmine and resulted in 23.8% more yield and better quality flowers at Trichy district.

Seedling roots dipping and two foliar sprays with pseudomonas fluorescence enabled better management of fruit rot in chillies at Thiruvannamalai district. The additional yield of 0.82 q/ha was achieved at low cost and in eco-friendly manner, thus helping farmers to meet the export specifications of dry chilli.

Extension activities

The KVKs organised 42493 extension activities to accelerate the process of dissemination of technologies. These included advisory services (17167), campaigns (41), exhibitions (147), diagnostic services (10173), ex-trainees sammelans (34), farmers visits (8732), field days (266), field visits (2044), film shows (498), conventions (339) kisan melas (69), special days celebrations (56), farmers meetings (61), newspaper coverages (1302), popular articles (421) and radio and TV talks (691). The extension activities organised by KVKs could reach 13.6 lakh farmers and 9436 officials.

Production and supply of quality seed and planting material

The KVKs produced 1225.75 qtl. of seeds of cereal crops, 89.21 quintals of oilseeds, 154.85 quintals of pulses and 102.03 quintals of vegetables. About 3587 quintals of seeds of other crops were also produced by the KVKs. In addition, 158540 fruit saplings, 26210 vegetable seedlings, 40252 spices seedlings, 185338 seedlings of forest species, 38694 seedlings of ornamental crops, 43666 seedlings of plantation crops and 120997 seedlings of other crops comprising of mainly the fodder species were produced. Value of these seeds and planting materials were worth Rs.49.61 lakhs and Rs. 48.81 lakhs respectively.

Newsletter

Thirty seven KVKs have started publication of newsletters in local languages for the benefit of the farming community. On an average each KVK is bringing out 800 copies of news letter per issue. The periodicity of publication of these newsletters are quarterly (26 KVKs), half yearly (10 KVKs) and bi monthly (one KVK). Theses newsletters contain information on agricultural operations for the coming three months, besides useful articles on crop production, vegetable cultivation, horticulture, animal sciences, home sciences, agricultural engineering, etc. The newsletters also carry the schedule of training programmes for the ensuing three months. These newsletters are widely circulated to the farmers, Gram Panchayats and officials of line departments.

Analysis of soil, water and plant materials

Twenty nine KVKs have been equipped with soil, water and plant analysis laboratory and started analyzing the samples. A total of 1036 samples of soil, water and plant were analysed during the reporting period.

Monitoring Mechanism

The Zonal Coordinating Unit monitors activities of the KVKs by organizing and participating in Workshops, Scientific Advisory Committee Meeting and visits. During the year four Zonal Workshops were organized with the participation of the head of each KVK to review the work done during the year and formulation of action plan for the next year. Similarly six State Level Workshops were organised in order to review the frontline demonstrations on oilseeds, pulses and cotton. To upgrade the knowledge and skills of KVK staff four Workshops were organized under HRD programmes. Apart from the above one Traveling Workshop was organized at KVK, Pondicherry for the Independent Evaluation and Impact Analysis of KVKs.

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