

CENTRE FOR INDIAN KNOWLEDGE SYSTEMS

REPORT OF WORK DONE DURING THE PERIOD APRIL 2007 TO MARCH 2008

I RESEARCH WORK

1. Enhancing livelihood and food security through capacity building for organic farming and natural resource management – phase II

This three year project supported by the Ford Foundation which was commenced in July 2006 continued during this financial year. More than 500 acres of land has been identified in twenty four villages for complete organic cultivation with certification. We had to wind up our activities in Tiruvallur district due to heavy industrialization. Dindigul district has been chosen as an alternative. A range of crops are being cultivated organically which includes rice, pulses, vegetables, fruits and oil seeds in the districts of Kancheepuram, Tiruvannamalai and Nagapattinam. The beneficiaries are being systematically trained in internal control systems for small holder organic certification. Seventy two training programmes have been conducted this year and also twenty exposure visits were organized for farmers. A new NGO based in Dindigul has been identified for capacity building. A trainers' training programme was provided for twenty one NGOs. Construction of the biofertiliser unit and purchase of required equipments have been completed and production is to commence shortly. Construction of the neem expeller unit is also nearing completion and a few equipments have already been purchased. A business plan for marketing has been completed. Three organic farmers producers societies have been formed and the organic products are currently being marketed through them. Support is also being provided to entrepreneurs for marketing.

2. Paddy organic chain – seed to market

The project entitled – “Paddy organic chain – from seed to market : A pilot project in Tamil Nadu” which was launched during October 2005 with support from HIVOS continued this financial year. During this phase ten training programmes and four exposure visits were

undertaken. Two internal inspections were completed and also an external inspection by IMO was undertaken. The lands of the beneficiaries under this project completed their period under organic conversion and have been given the status of certified organic from April 2008. Participation in various agricultural exhibitions and fairs also took place during this phase of the project. Two capacity building workshops on seed production and soil management were conducted for our technical staff. The assignment for working out a business plan for organic marketing was completed this year. A soil testing laboratory has been set up in the organic research farm at Sukkankollai. A manual on internal control systems for small holder certification has been designed and field tested which will be taken up for publication next year. Research on enhancing phosphorus content in the soil was also undertaken. A mini paddy processing unit is also nearing completion in the Vandavasi district.

3. Enhancing nutritional and food security of small and marginal farmers by a package of organic and sustainable farming technologies

This two-year project which was launched in June 2005 and supported by CAPART, New Delhi continued this financial year also. More than 400 beneficiaries from ten villages in Kancheepuram district are participating in this programme. Sangam meetings, training programmes and exposure visits continued during this phase of the project.

4. Capacity building for organic farming technologies in the Kancheepuram district of Tamil Nadu

CIKS has been recognized as a Technology Resource Centre by CAPART and the above mentioned project support is for the same. Preparation of various training modules on organic farming continued this year. Three publications were brought out in Tamil. One was on fodder cultivation, the other on the importance of organic foods and the third one on organic pest and disease management. Demonstration of different organic farming technologies were done in twelve farmers fields. A trainers' training programme was conducted for NGOs in the TRC for five days. Four trainings on organic certification were conducted. Two short term

trainings were also conducted. Besides this there were several groups of visitors to our TRC. A consultation meeting of all the TRCs was conducted in Chennai.

5. Improving livelihoods of farmers through organic vegetable cultivation in the irrigated areas of Dindigul district, Tamil Nadu

This project is currently being implemented by CIKS with support from Sir Ratan Tata Trust starting from November 2007. The main aim of this project is to bring vegetable farmers together and help them to convert to organic cultivation. It also aims to empower farmers with organic farming technologies so that the programme become sustainable. Three organic farmers self help groups were formed in three villages. A total of twenty acres of land has been selected in these three villages for project implementation. Monthly trainings have been conducted for farmers on organic farming technologies. Inputs have been procured and supplied for organic cultivation.

6. Capacity building for farmers on organic farming towards restoration of tsunami affected lands in the Nagapattinam district of Tamil Nadu

This project was supported by The Cottonwood Foundation, USA. Under this project more than hundred farmers were trained on organic cultivation of indigenous varieties in the saline land. They were provided some basic inputs for organic cultivation through the programme.

1. Development of Storage Forms of Biopesticides prepared by Low Cost Ecofriendly Methods: Testing And Standardisation through Insect Rearing Laboratory and Field Trials.

This project is supported by the Science and Society Division of the Department of Science and Technology of the Government of India. It is mainly focused on the development of storage forms of biopesticides by low cost ecofriendly methods. An Insect Rearing Laboratory has been established at Sirkazhi. Tobacco caterpillar, aphids and epilachna beetles have been reared under laboratory conditions. A series of plant products have been converted to storage forms such as *Kshaaram*, *Arkam* and soaps and tested. Seven training programmes

have been conducted at Sirkazhi and field experiments have been conducted in the villages of Agani and Allivilagam.

2. Testing and propagation of methods based on Vrکشayurveda (Traditional Indian Plant Science) for the cultivation of selected vegetables. Studies on disease resistance, growth enhancement and pest control for chilli, tomato, brinjal and okra.

This project is supported by the Science and Society Division of the Ministry of Science and Technology, Government of India. Its objective is to carry out studies on disease resistance and growth enhancement and pest controls for Chilli, Tomato, Brinjal and Ladies Finger. Organic packages have been developed for cultivation of these vegetables. A fumigator has been designed and tested for treating seeds with herbs. Economics of organic cultivation have been worked out. A publication summarizing organic methods for the cultivation of these four crops has been brought out in English and Hindi and the project concluded this year.

3. Core Support Programme of the Department of Science and Technology

Our Centre is one of the fifteen agencies receiving Core support from the Science and Society Division of the Department of Science and Technology of the Government of India. The major focus areas of work are development of biopesticides, experimentation on the various aspects of Vrکشayurveda (Traditional Indian Plant Science). Studies have been carried out on biopesticidal properties of twelve selected plants including two that have been hitherto not been mentioned in literature. Detailed experimentations have been carried out both in the field and laboratory conditions. Micro scale biopesticides unit have been set up at the village level in four districts of Tamilnadu.

4. Comparing and Supporting Endogenous Development (COMPAS) (Jan 2007 – December 2010)

This phase of the programme included field activities in selected areas in Kancheepuram and Dindigul districts to build capacity for sustainable agriculture based on indigenous practices, knowledge and wisdom. Documentation is being carried out in selected acres about the prevalence of traditional seed varieties and three organic farms operating successfully in the

districts of Kancheepuram, Thiruvallur and Thiruvannamalai have been studied. Research is being carried out on specific traditional practices for pest control including fumigation of seeds with herbs and the use of *kshaaram* as storage forms of biopesticide. Collaborative work is being undertaken with the Department of Plant Pathology in Annamalai University at Chidambaram. A training programme was organized from 26th to 28th November 2007 on Legal and Regulatory Aspects relating to Natural Resources Management in Chennai. A publication has been brought out entitled – “Endogenous Development in India: Revisiting Swadeshi”. As part of the coordinated work relating to the use of animal products in agriculture experiments are being carried out for pest control in Sirkazhi. There is also an effort for documentation and capacity building with respect to the use of fodder.

1. Restoration of Tsunami Affected Lands in the Nagapattinam District of Tamilnadu

CIKS has been working on restoration of tsunami affected agricultural lands in the Nagapattinam district of Tamilnadu. We had received support for part of this work earlier from Wetlands International and the current phase an extension of this work during the period July – December 2007. During this phase, vermicompost units have been set up, kitchen gardens have been initiated and support has been provided for organic paddy cultivation. These activities were carried out in Siddhivinayagapuram village in the Nagapattinam district.

II EDUCATION, TRAINING AND EXTENSION WORK

1. Traditional Agriculture Promotion Programme (TAPP)

The Traditional Agricultural Promotion Programme has been expanded and a new dimension has been added. The Centre has promoted the formation of Organic Farmers Producers Associations in the districts of Kancheepuram and Tiruvannamalai – these are independent registered Societies and are being helped to market independently.

1. CAPART Young Professional Programme

During the course of this year two Young Professionals (YPs) were posted by the Council for Advancement of People’s Action and Rural Technology in our Centre. Ms. Ancy Thomas

who is a Postgraduate in Agriculture was posted in Chennai Office. During the period 13th August to 31st October 2007 she was involved in assisting in production of technical literature, course material and publications. Ms. P. Josephine who holds a postgraduate degree in Sociology has been posted in our Sirkazhi office from 6th August, 2007 onwards. She is involved in survey and documentation of our activities relating to organic farming.

2. Consultation Meeting of Technology Resource Centres

The Council for Advancement of People's Action and Rural Technology (CAPART) has set up twenty three Technology Resources Centres (TRC) in various parts of India. CAPART has engaged in a series of consultations with the TRCs to assess their functioning and promote networking and coordinated action. CIKS had organized a meeting of nine of the TRCs from the states of Tamilnadu, Kerala and Andhra Pradesh on 17th March 2008 at Chennai. The meeting was attended by representatives of nine TRCs and a team from CAPART including Mr. Maria Desalphine, Director General, CAPART, Mr. P. N. Srinivasan, Director, Rural Technology, Division at Hyderabad, Mr. L. B. Singh, RR and Member Convenor, CAPART South Zonal Office, Hyderabad and Mr. K. K. Raman, PS to the Director General, New Delhi.

III PRODUCTION OF AUDIO VISUALS AND PUBLICATIONS

1. Organic Cultivation Techniques – Tomato – Brinjal – Lady's Finger – Chilli.

This book describes the major pests and diseases affecting the four major vegetables cultivated in Tamil Nadu namely chilli, brinjal, lady's finger and tomato. It also provides information about the various non chemical pest management methods and the preparation procedure for some of the botanicals and plant growth promoters used in these vegetable crops. Organic cultivation practices for all these four vegetables have also been described. This booklet is available in English and Hindi.

2. *Iyarkkaivazhi Vunavu* (Organic foods)

This publication in Tamil gives basic information about organic foods. Some of the frequently asked questions about organic food have been answered in this booklet. Besides this it also gives information on some of the outlets where organic foods are sold in Tamil Nadu.

3. *Pasumtheevanapayir Sagupadi (Organic Fodder Cultivation)*

Cattle forms an integrated part of organic farming. Providing clean organic fodder to cattle is a very important task of an organic farmer. This small booklet produced in Tamil gives detailed information on the organic cultivation techniques of important fodder crops of Tamil Nadu.

4. Enhancing soil fertility in organic farming

Farmers have realised the importance of maintaining the fertility of the soil using organic amendments. They are now looking for alternatives to chemical fertilizers. It is possible to enhance the fertility of the soil by making use of easily available material like Farmyard manure, Green manure and Green leaf manure. Besides this, compost can also be prepared easily using material available in the farm. This book describes the methods by which soil fertility can be enhanced using organic material. Preparation of compost is also described.

5. Botanicals for pest management in organic agriculture

Farmers have been using plants for pest control since time immemorial. Several plants have pest control properties. Research shows that there are more than 2400 plants with pesticidal properties. There are a number of research programmes which make use of such plants and examine their pest and disease controlling properties. In this book methods to prepare plant extracts from commonly available plants which have pest control properties and the method of use has been described in detail.

6. Endogenous Development in India - Revisiting Swadeshi

The objective of this publication is to provide an overview regarding the experiences of the Indian partners in the area of endogenous development during the previous phase of the COMPAS project that concluded in December 2006. This also includes a chapter where the

Indian experience has been synthesized based on inputs that have been received from all the partners.

7. Organic Methods of Pest and Disease Management

This book is designed in such a way that it can either be used as a book or the material in it can be separated and used as individual posters. The first section consists of three posters which highlight identification of important pests of vegetables and their control measures. The second section consists of two posters which deal with identification of important diseases of vegetables and their control measures. The third section consists of four posters which give general non-chemical methods of pest control which can be applied in a variety of crops. It would be a useful tool for anybody wanting to shift to organic agriculture.