

CENTRE FOR INDIAN KNOWLEDGE SYSTEMS

REPORT OF WORK DONE DURING THE PERIOD

APRIL 2018 - MARCH 2019

1. IMPROVING THE LIVELIHOOD AND FOOD SECURITY OF SMALLHOLDER TRIBAL COMMUNITIES THROUGH WADI MODEL AND INTEGRATED SUSTAINABLE AGRICULTURAL PRACTICES

This project supported by NABARD (National Bank for Agriculture and Rural Development) is in progress in the Jawadhu hills block of Thiruvannamalai district of Tamil Nadu from May 2013 onwards. Activities of the project are spread over 39 hamlets covering 1051 beneficiary households with 400 acres in Kovilur panchayat. Four hundred acres of WADI fields (small orchard) with fruit crops and border crops have been raised by 511 beneficiary households. Fruit crops in approximately 100 acres have started to yield from March 2019 and the farmers have got a platform for their steady income through this component. A total of 551 landless beneficiaries are involved in the other livelihood activities such as, rearing of cows, goats and pigs, maintaining tailoring unit, pettishops, poultry incubation unit and fodder cultivation. These microenterprises are a source of additional income for the beneficiaries. Backyard kitchen gardens that are being maintained by the beneficiaries are the conservation spots of the traditional varieties of vegetables and seeds. A range of suitable sustainable agriculture techniques are being followed by the beneficiaries like, soil conservation methods, intercropping, nutrient management, vermicomposting etc. A total of 40 vermicompost production units have been established and the farmers are utilizing the manure produced for their own use. The Seramarathur Agricultural Machineries Facilitation Centre with a range of agricultural implements including a tractor is being utilized by the beneficiaries with modest rental charges. An Integrated Centre comprising of oil extraction unit, little millet processing unit and the community storage facility is being utilized efficiently. Under this programme, a Village Planning Committee, 18 Farmers' Clubs and 56 Participants Groups (PGs) are in place. Training programmes of different types comprising of technical trainings, institutional building, health and enterprises related techniques were conducted for the beneficiaries.

2. STRENGTHENING OF FARMERS THROUGH SUSTAINABLE AGRICULTURE IN ALANGADU VILLAGE - PHASE X

This phase of the project implemented in Alangadu village of Sirkazhi taluk from October 2017 concluded in September 2018. Strengthening of women groups and farmers through Sustainable Agriculture and Livelihood Enterprises was the main objective of this project. A total of 240 tree saplings were planted and being maintained in the village. “*Arivumaiyam*” – the evening tuition centre is functioning in the village with 60 students (Standards 1st to 10th) and a team of teaching volunteers from the village. A new eco-friendly building has been constructed for the tuition centre in Alangadu village and the same was inaugurated on 5th July 2018. A small library has also been setup in this facility. Several farmers in this village have been cultivating land that has been acquired by them as part of redistribution under the – “Land Ceiling Act” but they do not have proper documents to establish ownership. As a result of continuous efforts, currently a total of 94 farmers cultivating 91 acres have been issued what is known as – “F Patta” and it is expected that they would be issued with the final patta by the end of April 2019 which will provide them the required legal documentation for land ownership.

3. CAPACITY BUILDING SUPPORT FOR SMALL AND MARGINAL FARMERS PRODUCER COLLECTIVES IN TAMIL NADU - PROJECT SUPPORTED BY FWWB

This project supported by the Friends of Women’s World Banking (FWWB) has been implemented for a period of one year from January 2018 and concluded in February 2019. The project has the following three components. The first component is “Training of Trainers” under which comprehensive training has been provided to a group of 10 - 12 persons who will serve as trainers for Board members and staff. The second component is “Training of Board members and staff” under which training has been provided to a group Board members and staff. The third component is the preparation of resource materials in the form of booklets / manuals on four identified topics. During the course of this project, a total of 15 master trainers were trained on various selected topics. Subsequently, training was provided for a total of 1075 members which included office bearers and staff of 11 farmer producer collectives from Tamil Nadu. A set of eight publications were brought out in English and Tamil. The programme concluded with an evaluation session involving a discussion with all

the trainees and stakeholders, project team, external evaluator and representatives from the donors, which took place in March 2019.

4. PROMOTION OF FARMER PRODUCER ORGANIZATIONS IN TAMIL NADU – SFAC (PHASE II)

The Small Farmers Agri Business Consortium (SFAC) has identified CIKS as a Resource Institution for the Formation and Strengthening of Farmer Producer Organizations (FPOs) in December 2014. The activities of this project were implemented in Thanjavur, Nagapattinam and Thiruvannamalai districts and concluded in August 2018. Three Farmer Producer Companies (FPCs) - Raja Raja Chozhan FPC in Thanjavur district, Veerachozhan FPC in Nagapattinam district and Thenpennai FPC in Thiruvannamalai district were promoted. Series of orientation and technical trainings and meetings were organized for the shareholders, Board of Directors (BoDs), FIG members and leaders. Raja Raja Chozhan FPC has constructed a dhal mill in Kokkeri village under the National Food Security Mission (NFSM) scheme and regular processing of dhal is in progress. Veerachozhan FPC is taking efforts to establish a seed processing unit in Sitharkadu village. This FPC has opened an input shop in Malaikudi village in April 2018. Raja Raja Chozhan FPC has involved in the marketing in collaboration with the National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED). It has also signed an agreement with IFFCO under the scheme e - Bazaar for the supply of fertilizers and pesticides. An input shop has been opened in Thozhavanniyankadu village in November 2018. Veerachozhan FPC has got the Equity grant of Rs. 10 lakhs from SFAC, New Delhi. Thenpennai FPC in Thiruvannamalai district has constructed a dhal mill in Radhapuram village under the National Food Security Mission (NFSM) scheme. Regular processing is in progress. A colour sorter has been installed in the dhal mill through the Mission on Sustainable Dryland Agriculture (MSDA) scheme. Annual General Body Meetings were conducted for all the FPCs.

5. PROMOTION OF FARMER PRODUCER ORGANIZATIONS IN TAMIL NADU – SFAC (PHASE III)

The Small Farmers Agri Business Consortium (SFAC) has identified CIKS as a Resource Institution for the Formation and Strengthening of Farmer Producer Organizations (FPOs) in December 2014. The activities of this phase of the project

are in progress in the Perambalur district of Tamil Nadu. Efforts were taken to strengthen the activities of the Perambalur District Maize and Small Onion Producer Company in Thanjavur. It is working in collaboration with the IIFPT (Indian Institute of Food Processing Technology) in Thanjavur towards value addition activities and training on onion value addition. An onion incubation centre is functioning in Chettikulam Market Complex with necessary value addition machineries. A tripartite agreement for marketing and export of onion signed on 13th August 2018. Representatives of the FPC participated in the International Food Expo named “Vibrant Tamil Nadu” held at Velammal campus in Madurai between 11th and 15th August 2018. Meetings of the FIG leaders, BoDs, shareholders etc., were organized regularly. A training programme on GST and Accounting procedures was organized at Sirkazhi. A total of 17 representatives from seven FPCs participated. Mr. Srinivasan Murali of Numeral Consulting Services in Chennai served as resource person.

6. PROMOTION OF FARMER PRODUCER ORGANIZATIONS IN TAMIL NADU – SFAC (PHASE IV)

The fourth phase of this project for the Formation and Strengthening of Farmer Producer Organizations (FPOs) is being supported by the Small Farmers Agri Business Consortium (SFAC) from October 2016 onwards. At present project activities are being implemented in Cuddalore, Thanjavur, Thiruvannamalai and Kancheepuram districts of Tamil Nadu. A total of six FPOs have been promoted and strengthened in these districts. Veerananarayanan Agriculture Farmers Producer Company in Cuddalore district and Peravoorani Coconut Agro Producer Company in Thanjavur district were strengthened through various activities. Selected shareholders and BoDs were taken to visit the CODISSIA Agri Fair held in Coimbatore on 15th July 2018. Training programmes on “Paddy cultivation techniques - Nutrient management and weed management” and “Neera production techniques” were organized for the shareholders. Peravoorani FPC has got the license for the Neera production in November 2018. In the input shop in Pinnalur village of Cuddalore district, 141 tonnes of BPT paddy seeds were sold. Veerananarayanan FPC is involved in the construction of a seed processing unit under the scheme on “Sub-Mission for Planting Material – Development of Seed Processing Units”. Peravoorani FPC is involved in the exporting of coconuts to Oman through Dream Global exports,

Chennai. This FPC has got the Equity Grant of Rs. 10 lakhs from SFAC, New Delhi. Veerananarayanan and Peeravoorani FPCs participated in the International Food Expo named “Vibrant Tamil Nadu” held at Velammal campus in Madurai between 11th and 15th August 2018. Coconut orchards in Thanjavur district were severely affected by cyclone Gaja in November 2018. Due to this, activities of the Peravoorani FPC got affected and efforts are on for the restoration of coconut crop. In Kancheepuram and Thiruvannamalai districts three FPCs are in place with 3055 shareholders. Annual General Body meetings were conducted by all the FPCs. Technical, orientation, business and management trainings were organised for the shareholders, BoDs and CEOs. Three oil extraction units have been established and regular production and marketing of groundnut oil is in progress by these FPCs. These FPCs are also involved in the certified seed production of paddy varieties. They are also involved in the trading of seeds, fertilizers and pesticides through the Agro Service Centres promoted in their respective working areas. All three FPCs have received the Equity Grant of Rs. 5 Lakh each from SFAC, New Delhi. Cheyyar and Groundnut FPCs have also got the Equity Grant of Rs. 5 lakh from TNSFAC, Chennai. Cheyyar and Kanchi FPCs are involved in setting up a seed processing unit followed by the sanction from the Department of Agri Business and Agri Marketing Chennai. Cheyyar FPC has also got the sanction for establishing an oil extraction unit and a dhal processing unit from the Department of Agri Engineering under its Mission on Sustainable Dry land Agriculture (MSDA) scheme.

7. PROMOTION OF FARMER PRODUCER ORGANIZATIONS IN TAMIL NADU (POPI I)

This programme implemented under the Producers Organization Development and Upliftment Corpus (PRODUCE) Fund scheme of NABARD concluded in March 2018. However, the services to the farming community are continued through the six Farmer Producer Companies (FPCs) comprising of 9000 shareholders promoted in Kancheepuram, Dindigul, Thiruvannamalai and Ramanathapuram districts. To build the capacities of Board of Directors, Chief Executive Officers and shareholders different kinds of technical, managerial, financial and legal training programmes and exposure visits were organized. Monthly meetings of the Board of Directors and project review meetings were also conducted regularly in all the districts. These FPCs are providing their services through six Agro Service Centres established in their

respective working areas. Services like supply of various inputs, groceries, cattle feed and knowledge dissemination activities are rendered by the FPCs. Credit linkages for working capital, milch animal purchase and crop cultivation were created with the Friends of Women's World Banking (FWWB) in Ahmedabad and Samunnati in Chennai. All the six Producer Companies have applied for the second term of Equity Grant Fund from SFAC.

8. PROMOTION OF FARMER PRODUCER ORGANIZATIONS IN TAMIL NADU (POPI II)

This project is being implemented under the NABARD's PRODUCE Fund scheme concluded in August 2018. A total of four Farmer Producer Companies with 5000 shareholders have been promoted in Thiruvannamalai and Dindigul districts. Series of technical, managerial, financial and legal training programmes and exposure visits were organized to build the capacities of Board of Directors, Chief Executive Officers and shareholders. Monthly project review meetings and Board of Directors meetings were conducted regularly. All the four FPCs are providing various services through four Agro Service Centres that have been established by the FPCs in their respective working areas. Through these Centres supply of various inputs, groceries, cattle feeds and knowledge dissemination activities are being carried out. Credit linkages for working capital, milch animal purchase and crop cultivation were created with the FWWB, Ahmedabad and Samunnati, Chennai. All the four Producer Companies under this programme have applied for the second term support of Equity Grant Fund from SFAC.

9. INCREASING THE INCOME LEVEL OF FARMERS THROUGH PRODUCTION, VALUE ADDITION AND MARKETING OF INDIGENOUS RICE VARIETY – *KITCHILI SAMBA*

This project from NABARD under its Farm Sector Promotion Fund (FSPF) has been implemented in Kancheepuram district concluded in September 2018. Project activities were implemented in Uthiramerur, Madhuranthagam and Achirapakkam blocks. Beneficiaries were trained on indigenous rice varieties, organic farming and seed production technologies through 30 training programmes. Four exposure visits were also organized to the CIKS Indigenous Seed Conservation Centre in Sukkankollai village of Kancheepuram district. Information booklets on Organic

Paddy Cultivation and Traditional Paddy Varieties have been distributed to the beneficiaries. Demonstration fields were established in 10 acres by the beneficiaries. *Kitchili Samba* grains have been procured from the beneficiaries. To promote the *Kitchili Samba* paddy and organic inputs, an Agro Service Centre has been started in Kancheepuram. A documentary video film about the project has been produced.

10. A PILOT PROGRAMME FOR INITIATING RURAL WOMEN INTO AN ENTERPRISE USING BIOMASS DRYERS UNDER AICRP ON BIOMASS BASED TRAY DRYERS - DINDIGUL DISTRICT, TAMIL NADU

This pilot project implemented with the support of DST is in progress in Kalathupatty and Mallanayakkanpatty villages of Natham taluk in Dindigul district since August 2016. Two women groups have been selected from these two villages to become entrepreneurs by using the biomass dryer. Regular production is in progress in the biomass dryer units established in Kalathupatty and Mallanayakkanpatty villages. Based on the techno economic feasibility results, five raw materials were selected for further production namely - onion, tomato, bitter gourd, brinjal and pea eggplant (*Sundaikkai*). Standardization of all the dried products were done by testing for total fat, energy, carbohydrates, proteins and bacterial, yeast and mould counting. All the results obtained were in the permissible level. Microenterprises development training was given to the members of both the groups. Packaging and labeling was also done under the umbrella of Kurinji Sustainable Agricultural Producer Company Limited in Dindigul. Marketing efforts were taken through this Company and the women entrepreneurs are able to earn income out of it. Company also obtained licenses like TIN, GST, FSSAI and shop license needed for trading. The women groups have received credit supports from FWWB, NABKISSAN and Samunnati by linking with the Producer Company.

11. GAJA CYCLONE RELIEF

Cyclone Gaja hit the coast of Tamil Nadu and Puducherry on 15th November 2018. Due to this cyclone, the major crops - Coconut and other inter crops such as Banana, pepper, cocoa, teak were completely uprooted, 90% trees have fallen on the ground and farmers lost their livelihood completely. CIKS team visited the above affected areas and assessed the immediate requirements. FWWB, Ahmedabad and individual donors had donated a total of Rs. 2.55 lakhs for the relief work. This was utilized for

the purchase and distribution of various materials that were immediately required such as, bed sheets, tarpaulins, mosquito nets, chain saw, solar lights and *Pseudomonas*. The above materials were distributed to 250 farm families in Vedharanyam block and 205 farm families in Peravoorani block. In Vedharanyam block, foliar spray of biofertilizer *Pseudomonas* done for the existing paddy fields affected with BLB (Bacterial Leaf Blight) disease in six villages.

12. RAPID ASSESSMENT OF THE MARKET POTENTIAL OF TRADITIONAL RICE VARIETIES IN TAMIL NADU

This was a Tamil Nadu focused rapid study of the market for traditional rice varieties that we had taken up between December 2018 and January 2019. It was carried out through a series of stakeholder consultations in various parts of Tamil Nadu as well as a desk study. The key findings are the following:

- The business case: From a triple bottom line perspective, it is evident that traditional rice varieties are suitable for people (farmers and consumers) and the environment. It is also evident from this study that there is a compelling business case for traditional rice varieties.
- The supply constraint: Food businesses in various parts of Tamil Nadu have responded that the supply constraint is the critical challenge; they are confident that they can market and sell increased production volumes of the top traditional rice varieties.
- Volumes: Significant monthly volumes of varieties such as *Seeraga Samba*, *Mappillai Samba* and *Kitchaili Samba* are consistently registered by retailers, traders, millers and farmer-aggregators in different locations of Tamil Nadu state.
- Consumer awareness: Awareness levels of consumers are already increasing due to a combination of factors; with the increase in disposable income, this is resulting in a willingness to sample traditional rice varieties and value-added products; working on awareness and adoption can result in more households becoming regular consumers of traditional rice varieties for different consumption occasions.

13. PROJECT ON GRAIN STORAGE, NUTRITION AND BIOLOGICAL ACTIVITY OF OILS

This is a project funded through the donations and we have taken up research under following three topics.

A. Grain storage - *Is it possible to store grains using vacuum packaging and have a good shelf life?* Trials are to be made with Hand Pounded Rice (HPR), millets, pulses, oil seeds etc. Trials have started with stored grains.

B. Biological activity of oils - *Experiments with the preparation of solid and liquid soaps using various oils.* Trials have started with Neem oil, Pongam oil and mixtures of oils from which solid and liquid soaps have been prepared. Field trials are in progress.

C. Nutritional analysis - *Analysis of nutrient content of rice in the laboratory.* Currently, about 25 rice varieties have been shortlisted for testing.

14. NAMMA NELLU - CONSERVING INDIGENOUS RICE VARIETIES IN TAMIL NADU

Namma Nellu is an initiative of Centre for Indian Knowledge Systems (CIKS) to conserve traditional rice varieties in Tamil Nadu. Through this programme, 140 traditional paddy varieties have been conserved this year. The conservation of traditional paddy varieties took place at two different locations in Tamil Nadu during *Samba* 2018 (August 2018 to February 2019). We have cultivated 116 traditional paddy varieties during *Samba* 2018 and 24 varieties during *Navarai* 2019 (January – April 2019). We have produced over two tonnes of seeds from 116 varieties during *Samba* season. Twenty four varieties cultivated in the *Navarai* 2019 season are yet to be harvested. In the *Samba* 2018 season, seeds of 50 different traditional paddy varieties were distributed to 50 farmers in Kancheepuram and Thiruvannamalai districts under this programme and marketing arrangements were facilitated by CIKS through the Producer Companies. During the cultivation process, we have documented various agronomical properties of the varieties. Nearly 5.2 tonnes of 36 traditional paddy varieties namely *Kuzhiadichan*, *Pisini*, *Salem samba*, *Mapillai samba*, *Navara*, *Muttakaar* etc., have been procured. Details about this programme can be found in a website (www.nammanellu.com) that is dedicated to this programme.