

NICRA (National Innovations on Climate Resilient Agriculture)

Climate change has become an important area of concern for India to ensure food and nutritional security for growing population. The impacts of climate change are global, but countries like India are more vulnerable in view of the high population depending on agriculture. The technology demonstration component deals with demonstrating proven technologies for adaptation of crop and livestock production systems to climate variability. This component is implemented in selected vulnerable districts of the country through location specific interventions by ICAR, Krishi Vigyan Kendra's in a participatory mode. The main objectives are to enhance the resilience of Indian agriculture covering crops and livestock and fisheries to climatic variability and climatic change through development and application of improved production and risk management technologies, to demonstrate site specific technology package on farmers field to adapting to current climatic risk and to enhance the capacity building of scientists and other stake holders in climate resilient agricultural research and its application.

Module I: Natural resources

This module consists of interventions related to in-situ moisture conservation, water harvesting, supplemental irrigation, improved drainage in flood prone areas, conservation tillage where appropriate, artificial ground water recharge and water saving irrigation methods.

Module II: Crop Production

This module consists of introducing drought/temperature/flood tolerant varieties, water saving paddy cultivation methods (SRI), custom hiring centres for timely planting, location specific intercropping systems with high sustainable yield index.

Module III: Livestock and Fisheries

Use of community lands for fodder production during droughts/floods, improved fodder/feed storage methods, preventive vaccination, improved shelters for reducing heat stress in livestock ,

management of fish ponds/tanks during water scarcity and excess water, etc.

Module IV: Institutional Interventions

This module consist of institutional interventions relating to seed bank, fodder bank, commodity groups, custom hiring centre, collective marketing, introduction of weather index based insurance and climate literacy through a village level weather station.

The village Rayapuram was selected for implementing this project. The main problem encountered during this season is submergence of paddy crop for about 10 to 15 days due to high intensive rainfall and cyclones during the period. The flood proneness was tackled by providing flood tolerant varieties CR 1009 Sub 1 under Crop Production Module. In this programme, seeds of flood tolerant varieties CR 1009 Sub 1 during Samba season and Swarna Sub 1 during Thaladi season were provided to the farmers.

Demonstration on seed treatment with *Pseudomonas* was organized on 07.09.2015 at NICRA village, Rayapuram. A lecture on importance of soil test was also taught to the farmers and a demo on methods of soil sample collection was also conducted during this programme and advised the farmers to take soil sample to avoid uses of excess fertilizer in turn reduce the input cost. In this programme, the Chairman of VCRMC Th. G.Venkatachalam, Secretary, Th. M.Ramachandran, Treasurer Th. N.Manimaran and other members and were participated. In these demonstrations, a total of 55 farmers were participated.

On 19.11.2015, Organic Pest Management in Paddy was conducted as off campus training to the NICRA village Rayapuram. During this training, various Biocontrol agents used in pest management in paddy crop viz., *Trichogramma chilonis* for the management of leaffolder, *T.japonicum* for stem borer and disease management in paddy crop viz., *Pseudomonas fluorescens* for the management of Blast and other leaf spot diseases were demonstrated and trichocrads wers placed in the fields. The importance of botanicals for the management of pest and diseases were also explained to

the farmers and advised the farmers to spray 5% neem oil or Azadiachtin 1% or 500 ppm spray. The farmers were trained to place the Tricho cards in the field and also provided with yellow and blue sticky trap for the management of sucking pests.

Jai Jawan Jai Kisan day was celebrated in the NICRA village Rayapuram on 23.12.2015. During this programme, the reason for celebrating Kisan Diwas was informed to the farmers and a special lecture on Integrated Pest Management in paddy was delivered during this occasion. The farmers were then taken to the paddy field for identifying the pests and natural enemies of Paddy. They were advised to conserve the natural enemies by adopting IPM technologies, which reduces the chances of resistance and residues in food grains

Demonstration of improved housing for backyard poultry

NICRA scheme has been approved to ICAR KVK Needamangalam and Rayapuram village has been selected as NICRA village. As a part of livestock component improved caged house for poultry and disease resistant chicks were given the selected beneficiaries. Bird cages fifty numbers of good quality chicks and poultry starter feed has been given to the beneficiaries on 08.03.16. The Programme Coordinator, and subject matter specialists of KVK and Secretary, Treasurer of NICRA and members of Village Climate Risk management Committee participated and aided the distribution. Care and management practices for day old chicks have been given and each beneficiary. Necessary modification in management practices has been demonstrated by the scientists. Further vaccination schedule and medicinal treatment advices were given and it is advised to maintain a separate notebook for the activities and information of the birds. One day training on vaccination chicks was conducted on 15.03.16 in Rayapuram NICRA village. The selected beneficiaries were trained for vaccinating their chicks by their own and Dr.S.Saravanan SMS, Veterinary and Animal Science conducted the training.



DEE, TNAU and Director ATARI with NICRA Farmers-21.09.2017



DEE, TNAU and Director TRRI with NICRA Farmers-11.09.2017



Tricogramma Egg card fixing at Rayapuram - 09.11.2016



PPFM spray demo - 03.01.2017



Field day at Rayapuram - 03.02.17



Harvesting of CR 1009 Demo-Rayapuram



Scientist visit-Livestock component Rayapuram



Interaction meeting -Action plan- Rayapuram