



NICRA News

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on

Climate Resilient Agriculture



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From the Research Front

The second meeting of High-level Monitoring Committee of National Initiative on Climate Resilient Agriculture (NICRA) was held at NASC, New Delhi during 12-13th December 2011 to review the progress of the project. The meeting was chaired by Dr S. Ayyappan, Secretary (DARE) and Director General (ICAR) and co-chaired by Dr YP Abrol, Chairman of NICRA Technical Expert Committee (Sponsored & Competitive Grants).

In this meeting all the Deputy Director Generals/ their representatives, Zonal Project Directors of all the zones, PIs of all strategic and competitive grants project under NICRA participated. Dr Ayyappan in his remarks outlined the importance of NICRA project and shared his experiences of having attended the launch workshops of Technology Demonstration Component in the KVKs at Uttarakhnad and Namakkal. He emphasized that NICRA platform can be an effective tool to build partnerships to respond to the farmers needs. Over all 20 presentations were made under the strategic research component. Even in his New Year message the DG has accorded high importance to NICRA as a platform for enabling science based agriculture in the climate change backdrop ([click here to see DG's message](#)).



Besides, the Fifth meeting of the NICRA Technical Expert Committee (Sponsored/ Competitive Grants Component) was held at Seminar Hall, NASC, New Delhi on 24th December, 2011 to review the progress of Sponsored projects. The meeting was chaired by Dr YP Abrol and co-chaired by Dr AK Singh, DDG (NRM).

The following points were discussed by the committee.

1. Action taken report on proceedings of the 4th meeting of Expert Committee held on 4th August, 2011.
2. Technical and financial review of the Sponsored Projects - Presentations by respective PIs of the project.
3. Consideration of revised / new projects under Sponsored/Competitive Grants Component.

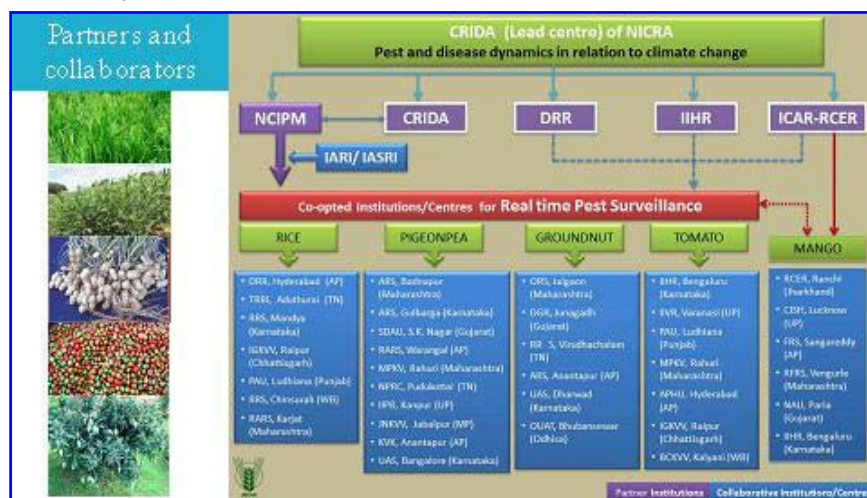
Presentations were made by PIs of the eleven sponsored projects, followed by discussions and comments by the experts. In addition to the technical programme review, administrative and financial issues were also discussed.

B. Venkateswarlu
Director
CRIDA

Real Time Pest Surveillance

Plant protection deserves prime importance in crop production because of the fact that potential yield of crops are limited by pest groups of various categories viz., insects, diseases, weeds, nematodes and rodents. Since pests are biotic natural resources of the earth, their interdependent interactions amongst system variables are equally influenced by the factors of climate change. Climate effects on pests could be direct as well as crop mediated. NICRA has recognized the importance of pest risks associated with climate change and provided a research platform across crops of rice, pigeon pea, groundnut, tomato and mango during its first phase of implementation under eleventh plan.

In the case of studies relating to pest dynamics, it is essential to streamline methods of surveillance through carefully designed data recording formats relating to crops, pests, and production and protection practices in addition to weather. Implementation of pest surveillance across 36 centres representative of different agro ecologies located among 11 agro climatic zones for crops rice (7), pigeonpea(10), groundnut(6),tomato(7) and mango (6) have been integrated for real time pest surveillance under NCIPM. Operationalizing pest surveillance through pest scouts and data collection and collation under proper guidance makes it possible to capture quality data at field level. Real time pest surveillance program as envisaged under NICRA is schematically represented below.



NCIPM & CRIDA

From across the KVKs



The month of December was full of several activities involving field level monitoring and project review. During the month, launch event was held at village Sirusuwada in Srikakulam district of Andhra Pradesh. Farmers in this village are very receptive to the project and have been showing keen interest in making its best use. Besides this a very important activity was initiated during the month. Based on the initiative of Dr P Gidda Reddy Director of Extension, Acharya NG Ranga Agricultural University, all the NICRA KVKs of Andhra Pradesh were invited for a critical review of progress. During the review, emphasis was on implementation issues. A careful look was taken to see how the interventions being implemented by KVKs are relevant to climate resilience issue. Later, this kind of review was held for Maharashtra's NICRA-KVKs also. Followed by this, Dr AK Singh, ZPD, Zone II organized a separate review for the 15 NICRA KVKs located in A& N Islands, Bihar, Jhrakhand and West Bengal at KVK, Nimpith. This was a very useful exercise which enabled refinement of the interventions and clearing of doubts of KVKs in matters related to procurement, establishment of automatic weather station, small weather station at NICRA village, recruitment etc. The year 2011 has given the project a good grounding. And we hope that the New Year brings better outcomes from each of the KVKs. Wish you all a very happy New Year 2012 !

Sreenath Dixit
Coordinator
Technology Demonstration Component

Zonal level review of interim progress

A review of progress of NICRA projects have been started at zonal level in the presence of the Zonal Project Directors and representatives, Directors of Extension of the SAUs. This exercise was started with Zone V in which two separate reviews were held for the NICRA KVKs of Andhra Pradesh and Maharashtra on 17th and 22nd December 2011 respectively. Another review was held at KVK Nimpith, South 24 Parganas, West Bengal for the NICRA KVKs of Zone II. This exercise was found very useful in terms of sorting out many issues relating to project management. Some key issues like fund release, appointment of contractual staff, purchasing of equipment for custom hiring centre were discussed in the presence of the Director Extensions. It also helped clarifying several doubts of the Programme Coordinators regarding implementation of Climate Resilient interventions.



Project Launch Event

KVK Amadalavalasa, Srikakulam, Andhra Pradesh

National Initiative on Climate Resilient Agriculture (NICRA) project was launched at Sirusuwada village, Kotturu Mandal, KVK Amadalavalasa, Srikakulam district on 24.12.2011. Dr.P.Gidda Reddy, Director of Extension, ANGRAU launched the project in the presence Dr. Sreenath Dixit, Coordinator, TDC-NICRA, Mr.A.Bairagi Naidu, Former Member, MPP, Mr.Vasudeva Rao, Agricultural Officer, other local members and NGO representatives, block level officers of the Department of Agriculture, Officers of the District and Panchayatraj, village Panchayat. Mr Bhaskara Rao, Ex-President of the village inaugurated the Custom Hiring Centre for farm implements. Almost all the households of the village participated in the launch program. A series of activities were conducted as part of the launch project. viz., initiation of activities such are de silting of tank, supply of superior breeding rams, tarpaulins on contributory basis, release of booklets and bulletins on climate resilient agricultural practices. Press and media people covered the entire event. Dr. P. Jamuna, Programme Coordinator and her colleagues of the KVK organized the event. Popular vernacular television channel E-TV covered the programme in its prime time ([click here to see the video clipping](#))



Examining sluice at village tank for renovation



Contributory Superior breeding Ram



Project launch by Dr.P.Gidda Reddy, DE



Contributory tarpaulins

Technology Demonstration Component

Aerobic rice helps farmers cope with drought in Kullu, Chatra, Jharkhand

Rice is the major Kharif crop in the KVK Kullu, Chatra, Jharkhand, where early season drought is the major climatic challenge. This year also due to delayed monsoon the farmers could not take up transplanting in time. Therefore farmers lost their seeds used for nursery raising. Farmers did not have seeds to meet the contingent situation. In July 2011, KVK Chatra introduced aerobic cultivation of paddy with improved variety *Lalat* that is short duration (120-130 day) and drought resistant. Seed were sown (100kg/ha) in line and applied 80, 60 and 34 kg/ha of N, P and K respectively. Farmers could harvest 22Q/ha yield of paddy.

This demonstration was conducted in 23 farmers' plots covering 24 ha. A field day was also organized on 10 November 2011 for creating the awareness among the farmers about aerobic rice cultivation.



Aerobic Paddy Field day visit

Land shaping to alleviate Aila effects, Nimpith, South 24 Parganas, West Bengal

The NICRA village of Bongheri of South 24 Parganas district is situated close to the brackish water river Matla. Extreme cyclonic weather, ingress of saline water into the main field particularly during high tides, rendering most of the lands saline. Even after 2-3 seasons of monsoon, the salinity problem continues to persist. On the 25th of May, 2009 the super cyclone- "Aila" hit the village and salinity problem persist even today. The area is traditionally monocropped with paddy. The region being low lying, water stagnates up to 3 to 4 feet. During monsoon, with heavy rainfall up to 1600 to 1800 mm, the entire region becomes inundated with fresh rainwater, drains down into the brackish water river. Water scarcity is the problem in *rabi* season, because of high evaporation and seepage losses.



View of the field post land shaping

In order to overcome the salinity and augment availability of irrigation water during the *rabi* season, an engineering solution was promoted by the KVK, Nimpith. In this 1/5th portion of a low land is excavated up to 9 feet deep. The excavated soil is spread over the adjacent field so that it is elevated up to 1 to 1.5 feet. On this elevated patch paddy is cultivated during *kharif* and *rabi* vegetables are grown on the main land, land embankment and pond embankment. Fresh rainwater is harvested into the excavated pond in which fish culture is practiced. Thus, this technology of land shaping is offering a model for harvesting rain water in *kharif*, vegetable cultivation in *rabi* and fresh water fish culture in the ponds by converting monocropped land into a diversified land with enhanced productivity and reducing risk. The intervention was taken up in affected fields of 10 farmers. The cost of this is Rs.40000-50000 (approx.) for 20 m X 20 m size of pond.



Vegetable crops on & around the pond

Check Dam by Shramdaan on Masharia Rivulet, KVK Gumla, Jharkhand

Farmers in Gunia village, Ghaghara block, KVK Gumla, Jharkhand were not able to cultivate rabi crop due to non availability of any water source. However a rivulet Masharia that flows by the village is also seasonal and dries up soon after monsoon. If this flow is arrested, large quantity of water can be stored for irrigating the nearby fields during rabi. Based on this, KVK Gumla organized a "Shramdaan" of the villagers in which nearly 150 persons participated for two days. During the "Shramdaan" the villagers built a sand bag check dam across the rivulet. The KVK facilitated purchase of empty cement bags. In which sand was filled by the villagers and built the check dam. Over 550 bags were placed one above the other and the cost of each bag ranged between Rs two to three. Community lunch was organized on both the days. In all around Rs 13000 (Rupees thirteen thousand only) was spent in mobilizing the community "Shramdaan". As a result of this check dam, a large quantity of water has been impounded and the villagers are very happy with this intervention.

Within a short period the villagers have realized that the water levels in their wells have risen considerably. Apart from this, it has become an attraction for many neighboring villages from where people are visiting to see this sand bag check dam. They are enquiring if the project could assist in building a similar one for their villages as well.



Sand bag check dam built by shramdaan

Technology Demonstration by AICRPDA Centre

Coping with drought, Girigetla village, Thuggali, Kurnool, Andhra Pradesh

Groundnut is the major conventional *kharif* crop in red soils of NICRA village Girigetla, Thuggali Mandal, Kurnool district. Farmers in the district normally sow pearl millet in July-August in red soils. To develop climate resilient alternative crop management systems, Ananthpur centre of AICRPDA adopted pearl millet + pigeon pea based inter cropping system. In this intervention, sowing was taken up on second week of June 2011 as early sown inter crop and last week of July 2011 as normal sown crop. The early sown pearl millet crop (second week of June 2011) gave a grain yield of 7.5 q / ha while the normal sown pearl millet crop failed when sown on last week of July 2011 due to moisture stress at Knee-height stage. Pigeon pea crop is at its reproductive stage.



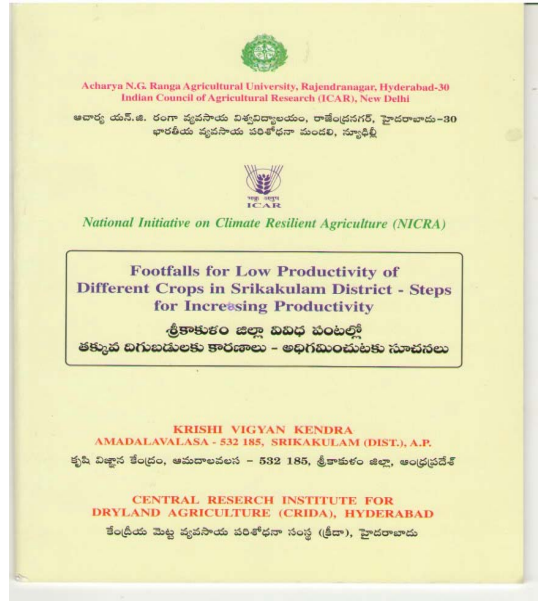
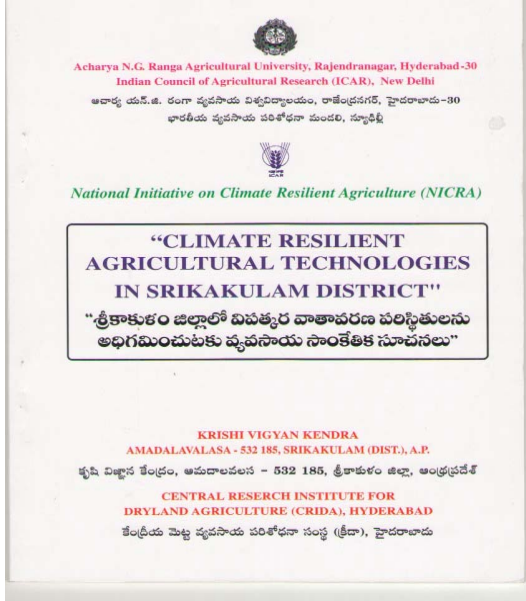
Photo Gallery



Brown manuring promoted in paddy, Coochbehar, WB



Bulletins & Publications released during Launch workshop by KVK, Srikakulam



Announcements

We invite short write-ups (not more than 200 words) with good quality photos (not more than two in JPEG format) from the PIs of sponsored and competitive grant projects and PCs of NICRA KVKs on any interesting outcome of the project so far. It may be on why some interventions worked and why some did not. We also encourage you to report those that did not work. In fact such learnings will be more useful to our colleagues. So send in your write-ups and photographs to coord.nicra@gmail.com

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