

## PRESS BRIEF

### NICRA Awareness –Cum- Training Programme on “Contingency Plan for Drought like Situation” held at ICAR RC NEH Region, Umiam, Meghalaya on 2<sup>nd</sup> August, 2014

Global climate change has jeopardized Indian agriculture affecting about 84.97 percent of small and marginal farmers of the country with very poor resource capacity to deal with the vagaries of weather and climatic change to ensure food and nutritional security. In India, significant negative impacts have been implied with medium-term climate change which predicts a reduction in yields by 4.5 to 9 percent, resulting around 1.5 percent of GDP loss per year as a cost of climate change. Under these circumstances, the Government of India has accorded high priority on research and development to cope with climate change in agriculture sector through launching of a project entitled “**National Initiative on Climate Resilient Agriculture (NICRA)**” during February 2011, by Indian Council of Agricultural Research (ICAR) under the aegis of Ministry of Agriculture, Government of India. The mega project has three major objectives of *strategic research*, *technology demonstrations* and *capacity building*.

#### Objectives

1. To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies. - (*strategic research*)
2. To demonstrate site specific technology packages in farmers’ fields for better adaptation under current climate aberrations - (*technology demonstrations*).
3. To enhance the capacity building of scientists and other stakeholders in climate resilient agricultural research and its application - (*capacity building*).

#### Activities

##### **Strategic Research**

The strategic research has been planned at leading research institutes of ICAR in a network mode covering various crops, horticulture, livestock, natural resource management and fisheries sectors. It encompasses the crops like wheat, rice, maize, pigeon pea, groundnut, tomato, mango and banana; cattle, buffalo, pig, small ruminants and poultry among livestock and both marine and freshwater fish species of economic importance. As a part of strategic research, both short term and long term climate resilient technologies are expected to be evolved through NICRA project in terms of new and improved varieties of crops, livestock breeds, management practices that help in climatic adaptation and mitigation and inputs for policy making to mainstream climate resilient agriculture in the developmental planning with the overall expected outcome of enhancing resilience in agricultural production in the face of climate change. Out of 21 ICAR Institutes involved under NICRA project, ICAR Research Complex NEH Region, Umiam, Meghalaya is addressing all issues related to North-East region of the country.

##### **Technology Demonstration**

This component is implemented in 100 selected vulnerable districts of the country through location specific interventions of suitable climate stress technologies by Krishi Vigyan Kendras in a participatory mode involving over one lakh farm families across the country. The interventions in the village panchayats are finalized following a participatory approach with the help of PRA in consultation with Village Climate Risk Management Committee (VCRMC) to ensure local ownership of the project and convergence of related schemes currently in operation in the panchayat. In each village, the technological interventions are made through following four modules:

**Module I: Natural resources management (NRM):** 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, advancement of planting dates of *rabi* crops in areas with terminal heat stress, water saving paddy cultivation methods (SRI, aerobic, direct seeding), frost management in horticulture through trash burning, community nurseries for delayed monsoon, 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 either by strengthening the existing ones or initiating new ones 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.

### **HIGHLIGHTS OF THE NICRA AWARENESS-CUM- TRAINING PROGRAMME**

This year due to climate change, the whole NEH Region except few districts has experienced severe water stress problem during June to July, 2014 due to scarce precipitation that posed a serious threat to agriculture production in north east region of the country. The intense drought like situation has an adverse impact on *kharif* crops that may lead to large scale yield loss in *kharif* paddy specially. In view of this problem this one day **NICRA Awareness-cum- Training Programme** is being organized by ICAR Research Complex for NEH Region, Meghalaya today (**2<sup>nd</sup> August, 2014**) to develop awareness on climate resilient agriculture and to make large scale campaign for implementation of contingency plans for adaptation to climate change. On this occasion scientists of ICAR RC NEH Region will highlight the suitable adaptation and mitigation strategies for addressing the problems in farmers' field due to scanty rainfall in the region. Some critical inputs such as water lifting pump along with pipes, seeds, planting materials in addition to vitamins and minerals mixtures for livestock will be distributed among the farmers to tackle drought like situation due to long dry spell of monsoon. A suitable contingency plan has been chalked out keeping eye upon the recent climatic aberrations which has been disseminated to stakeholders through SMS on KIRAN portal ([www.kiran.nic.in](http://www.kiran.nic.in)) of ICAR RC NEHR; which are as follows:

1. Explore the possibility for life saving irrigation through water sources like stream, community pond, dug well or any stored water (*Jalkund*).
2. Conserve *in-situ* soil moisture in the field through mulching with locally available biomass.
3. Undertake gap filling in the rice with aged seedlings in nursery.
4. Apply foliar spray of 2% urea and 2% MOP in the transplanted rice. (20 gm/litre) for proper nutrient management.
5. Weeding in crops needs to be done immediately either manually or by application of weedicide.
6. In case of late transplanted rice, transplant 3-4 seedlings/hill as it will enhance the yield
7. Short duration rice varieties like *Sahabhagi*, *Vandana*, *Bhalum-4* and *IURON* etc can be sown in upland for better yield performance.
8. Undertake plant protection measures for case worm, gal midge infestation in rice in time
9. In upland, if rice could not be sown, grow rice bean, soybean, groundnut and sweet potato etc.
10. In case of late transplanted rice, follow SRI/ICM practice.
11. If moisture stress situation prevails after 1st week of August, 2014, then take initiative for sowing of early *rabi* crops such as rice bean, soybean and other winter vegetables.
12. If there is excess water, then grow pulses/ vegetables on raised and sunken bed.
13. In Jhum field a) Weeding should be done followed by mulching with the locally available biomass. b) Foliar spray with 2% Urea or DAP may be done for nutrient management under moisture stress condition.