

aims at adopting location specific, integrated/composite farming system; soil and moisture conservation measures; comprehensive soil health management, efficient water management practices and mainstream rainfed technologies. Besides, climate resilient interventions have been embedded and mainstreamed into Missions/Programmes/Schemes of Department of Agriculture and Farmers Welfare (DAC&FW) through a process of restructuring and convergence.

Further, ICAR initiated a network project called "National Innovations on Climate Resilient Agriculture (NICRA)" to enhance resilience of Indian agriculture through strategic research, capacity building and technology demonstrations. Under Technology Demonstration Component (TDC) of NICRA, the climate resilient interventions are implemented by taking one representative village each in 151 vulnerable districts. Major interventions implemented under the scheme include efficient management of natural resources, adoption of resilient agronomic practices, adoption of stress tolerant varieties, efficient management of livestock, poultry and fisheries and strengthening local institutions. In addition, the ICAR has developed district contingency plans including crop advisories to tackle any eventuality due to change in weather pattern affecting agriculture. So far, contingency plans for 614 districts of the country have been prepared and uploaded at [www.farmer.gov.in](http://www.farmer.gov.in), [www.agricoop.nic.in](http://www.agricoop.nic.in) and [www.crida.in](http://www.crida.in). The contingency plans are also being constantly updated to meet the emerging situations.

#### **Encouraging farmers to move out of water intensive crops**

1348. DR. K.V.P. RAMACHANDRA RAO: Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

(a) whether Government is aware that the present crop pattern and intensive agriculture practices have created 'thirsty crops' that are dependent on rain-dependent irrigation facilities; and

(b) if so, whether Government would consider encouraging farmers to move out of water intensive crops, if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND FARMERS WELFARE (SHRI S.S. AHLUWALIA): (a) and (b) Indian Council of Agricultural Research (ICAR) advocates crop diversification with low water consuming crops in place of high water consuming crops like rice, sugarcane and banana for rain dependent areas and areas having lack of assured irrigation.

Department of Agriculture, Cooperation and Farmers Welfare is promoting cultivation of pulses and coarse cereals under National Food Security Mission (NFSM) and oilseeds under National Mission on Oilseeds and Oil Palm (NMOOP) in the country, as these crops need less water. Crop Diversification Programme is also being implemented in Original Green Revolution States of Punjab, Haryana and Western Uttar Pradesh to diversify cropping pattern from water guzzling paddy to pulses, oilseeds, maize, and agro-forestry with the objective of tackling the problem of declining soil fertility and depleting water table in these States. To reduce utilization of water in paddy, water conservation techniques like Direct Seeded Rice (DSR), System of Rice Intensification (SRI), alternate wetting and drying method, laser land levelling, adoption of short duration and drought tolerant varieties, etc. are promoted through various crop development programmes like National Food Security Mission (NFSM), Bringing Green Revolution to Eastern India (BGREI), etc.

In order to enhance water use efficiency in water intensive crops, assistance is given for promotion of water saving tools/technologies like sprinkler and drip irrigation, creation of farm ponds, efficient delivery and distribution systems and adoption of agronomic practices like alternate row/furrow irrigation, mulching, etc. Pradhan Mantri Krishi Sinchai Yojana also focuses on creating sources for assured irrigation, creating protective irrigation by harnessing rain water at micro level through 'Jal Sanchay' and 'Jal Sinchan' to ensure 'Per drop-More crop'.

#### **Climate resilient variety of paddy**

1349. SHRI RIPUN BORA: Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

- (a) whether Government has any report on climate resilient variety of paddy;
- (b) if so, details of the paddy variety and the production yield of clean rice therefrom;
- (c) the action plan of Government for the marketing of seeds of such variety; and
- (d) the research results of ICAR, Manipur centre in this regard?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE AND FARMERS WELFARE (SHRI SUDARSHAN BHAGAT): (a) and (b) The Indian Council of Agricultural Research (ICAR) institutes namely Indian Institute of Rice Research (IIRR) and the National Rice Research Institute (NRRI) along with the All India Coordinated Research Project (AICRP) on rice and in association of the International Rice Research