

## World Environment Day: Indian farmers urge govt to allow GM technology to address climatic change

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On the eve of World Environment Day, the Confederation of NGOs of Rural India (CNRI), an association of NGOs representing 7,000 NGOs and 200,000 self-help-groups across India, issued a statement urging the Union environmental minister, Mr Prakash Javadekar to accelerate genetic engineering technology for farmers and agriculture and make it a priority focus area to help combat disease, pests and climate change challenges in India.

CNRI through its partners recently engaged with over 3,000 farmers across the key agricultural states of Bihar, West Bengal, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Punjab, Gujarat, Uttar Pradesh and finally Karnataka (the only state from the southern part of India to participate in this exercise) seeking their inputs on issues of climate change and its effect on agriculture. These included a mix of small farmers and marginal farmers. CNRI representatives also met with large farmers, i.e. those holding land in excess of five acres. The results were collated primarily from Kharif, Rabi and Zaid growing regions across these ten states.

In addition to lack of irrigation and limited access to bank credit, the biggest concern expressed by farmers was the lack of quality seeds as per the multi-agro climatic zones and usage of breeding technologies like agriculture biotechnology applications to combat climate change - primarily drought, unseasonal rains and increasing soil salinity in semi-arid and arid regions.

CNRI found that farmers across these ten states were keen to ask the government to accelerate the development of seeds through new breeding techniques which can be achieved through agriculture biotechnology applications. This would enable the application of water-use-efficiency along with nitrogen-use-efficiency to help grow crops with less water and reduced application of nitrogenous fertilizers. Other agri-biotechnology traits such as yield improvement traits, herbicide tolerant traits and others are also being demanded by farmers to enable higher yields.

Highlighting the findings, the CNRI National President, Dr Raghupati Singh said, "On the eve of World Environment Day I would like to share the anguished cry for help of the Indian farmer with the environment minister, Mr Prakash Javadekar. The Indian farmer needs technological help to combat the ill-effects of climate change. Indian farmers want the success of Bt

cotton replicated with other crops and have them genetically modified to combat the ill-effects of climate change. The application of genetic engineering in agriculture will lead to higher yields and assured supply and result in consumers benefitting through reduced or stable prices for agricultural products."

He further emphasized that the "BIMARU" states would never come out from their poverty syndrome. Surprisingly states like Gujarat, West Bengal & Telengana are treading on the path of these "BIMARU" states.

CNRI also takes this opportunity to give a clarion call to the governments of Gujarat, Tamil Nadu, West Bengal & Rajasthan to allow field trials of GM crops to generate relevant scientific data so that ill-conceived myths around the safety of GM crops can be busted. It also requests organisations like Bharatiya Kisan Sangh and Swadeshi Jagaran Manch to create a consensus amongst all stakeholders concerned with genetic engineering technology.

CNRI also requested crusaders like Ms Vandana Shiva and noted Supreme Court advocate Prashant Bhushan to talk with scientific facts and evidence before creating hurdles to utilize the best of these technologies for the benefit of rural India.

Dr Raghupati Singh further said, "In this time of crisis, Prime Minister Narendra Modi's recent statements saying that he wants farmers to be self-reliant and economically prosperous has ushered in a new ray of hope among us. Modiji believes that technology applications in agriculture can pave the way to an ever-green revolution. We support and endorse this and urge his government to enhance the agri-economy by giving farmers access to new genetically engineered seeds that will enable them to mitigate the effects of climate change."

India is self-sufficient in cereals only but not in pulses and oil-seeds where it is a net importer. India is importing over 3 million tonnes of pulses alone. Similarly almost 50% of India's edible oil requirements is imported. A recent report by the agriculture ministry states that India's food-grain production will report a decline of 3 percent in 2015 as compared to the previous year. The total food-grain production is estimated to be 257.07 million tons in current crop year (July-June period) as compared to 265.57 million tons in 2013-14. This decline has occurred on account of lower production of rice, coarse cereals and pulses due to erratic rainfall conditions during monsoon season in 2014. Farmer suicides have risen 50 per cent increase in suicides in the January-March period, after crop damage due to unseasonal rains. According to figures from the Ministry of Agriculture, the total of number of suicides committed by farmers for agrarian reasons in the last three years stands at 3313. Maharashtra alone has witnessed over 200 suicides this year alone.

India's population is expected to reach 1.5 billion by 2025 and the need for additional food-crops will put huge pressure on existing agricultural land or marginal soils. No single approach such as conventional crop improvements alone will help increase crop production (that will require to double by 2050). Crop losses due to climatic conditions, insects, pests, diseases and declining soil fertility, will also need to be factored in to apply genetic modification of crops.