## Inauguration of Agrometeorological Observatory at ICAR-National Institute of Abiotic Stress Management (NIASM) Malegaon, Baramati

Dr. Trilochan Mohapatra, Secretary, Department of Agricultural Research and Education (DARE) and Director General, Indian Council of Agricultural Research (ICAR), New Delhi, inaugurated an agrometeorological observatory of Class-II type at NIASM, Malegaon, Baramati. The observatory is situated in the scarcity agro-climatic zone (AZ95/MH-6) of western Maharashtra region. It has instrumentation facilities to measure relative humidity and maximum and minimum temperature; soil temperature at different depths; rainfall, bright sunshine hour, wind speed, wind direction, dew and evaporation. In addition, continuous observation on Photosynthetically Active Radiation is also being recorded using a Line Quantum Sensor. Technical folders "NIASM-Plant Phenomics", "An overview of ICAR-NIASM Agrometeorological Observatory and Present Climatic Trend at Baramati" and Breeding and seed production technology of stinging catfish *Heteropneustes fossilis* (Shingi) were also released on this occasion.



## Inauguration of Plant Phenomics National Facility at ICAR-National Institute of Abiotic Stress Management, Malegaon, Baramati

Dr. Trilochan Mohapatra, Secretary, Department of Agricultural Research and Education (DARE) and Director General, Indian Council of Agricultural Research (ICAR), New Delhi, inaugurated the high throughput Plant Phenomics facility at the ICAR-National Institute of Abiotic Stress Management (NIASM), Malegaon, Baramati, on 23<sup>rd</sup> October 2016 in the presence of Dr. N P. Singh, Director of NIASM and all the staff of the institute. This advanced facility supports the research activities involved in identification of stress tolerant genotypes through rapid and non-destructive methods. The facility was built as a component of the adaptation strategies of National Innovations on Climate Resilient Agriculture (NICRA) to manage abiotic stress impact on vulnerable crops.



The Phenomics facility enables the non-invasive and non-destructive digital imaging and dynamic monitoring of the crop genotypes under challenging environmental conditions. The facility has the imaging unit consisting of visual, near infra-red and infra-red cameras to capture images of the plants subjected to abiotic stresses like limited moisture stresses and high temperature during various stages of plant growth. The conveyor system of the facility enables the movement of carts carrying plants to the imaging unit and back to the climate controlled greenhouses. The facility also has the automated weighing and watering stations in the two appended greenhouses for exposing the plants to various water stress regimes for studying the effects of limited and excess moisture stresses. The final output from the visible images helps the researchers to quantify various growth and physiological traits like leaf area, biomass, plant height /width, chlorophyll content, growth rates etc. Infrared images assist in identifying temperature differences in a plant canopy, between genotypes and at different stages of growth after stress imposition. Near infrared images, help to quantify the water content and distribution within a plant at various stages of plant growth.

Inaugurating the facility, Dr. T. Mohapatra, highlighted the importance of such State-Of-The-Art facilities for addressing the abiotic stress tolerance in crop plants and understanding the mechanisms of tolerance in resilient plants. He emphasized the need for high throughput plant phenotyping research approaches for identifying crop genotypes tolerant to adverse impacts of abiotic stresses. He suggested that the Plant Phenomics Facility at ICAR-NIASM is a national facility to cater to the plant phenotyping needs of institutes dealing with different crops.

## Inauguration of Guest house at ICAR-National Institute of Abiotic Stress Management, Malegaon, Baramati

During the visit Dr. Mohapatra also inaugurated newly constructed Guest house of ICAR-NIASM in the presence of Dr NP Singh, Director, and NIASM. Guest house has been named as Nira in the name of Nira River of Maharashtra. Plinth area of the guest house is 1235 m<sup>2</sup>. This has 3 AC suits and 18 AC rooms with all modern facilities. The guest house also has the facilities of VIP lounge-Conference room and Dining hall.



