



बिरसा कृषि विश्वविद्यालय BIRSA AGRICULTURAL UNIVERSITY

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Message

Agriculture is primary and most important sector of Indian economy. Nearly two third of the population is dependent on agriculture sector for livelihood. Agriculture contributes 15.4 percent to India's GDP (OECD, 2017). Human interference with natural resources has significantly changed the environment and its ecosystem since last few decades. There has been increased frequency of dreadful events like floods, cyclones, droughts, heat waves, cold waves, hail storms, unseasonal rainfall patterns, seawater intrusions leading to coastal salinity which are serious concerns adversely affecting the farm productivity.


According to United Nations Office for Disaster Risk Reduction (UNISDR) (2018), disaster hit countries experienced direct economic losses to the tune of US \$ 2908 billion during 1998-2017. Of the total losses, 77 percent were due to climate related disasters. Climate change impacts are more pronounced on agriculture sector in recent past. Government of India's economic survey (2018) estimated that the annual loss of US \$ 9-10 billion was due to the adverse effects of climate change.

Agriculture is extremely vulnerable to climate change. Higher temperature eventually reduce yield of desirable crops while encouraging weeds and pest proliferation. Changes in precipitation increase the likelihood of short run crop failures and long run production decline. Climate change is likely to contribute substantially to food insecurity in future, by increasing food prices and reducing food production. Climate change is likely to have 4 to 9 percent impact on agriculture each year and presumably causes about 1.5 percent loss in GDP. As per Food and Agriculture Organization (FAO), if the current situation in GHG emissions and climate change continues then by the year 2100, there will be decline in the production of major cereal crops (20-45% in maize, 5-50% in wheat and 20-30% in rice). By 2030, rice and wheat are likely to see 6 to 10 percent decrease in yields. However, the crops like soyabean, gram and potato are likely to be benefitted from higher CO₂ levels in atmosphere.

The demand of nutritionally enriched/fortified food grains and other commodities like fruits, vegetables, and livestock/fish products is enhancing due to burgeoning human population and better purchasing capacity in the country during last few decades. There is need to synergies resource conservation, enhancing or restoring soil fertility and increasing water use efficiency by applying sustainable agricultural innovations and resilient agri-technologies for achieving the goals of food/nutritional security and making farming a remunerative venture on sustainable basis. The latest technologies on resource conservation, precision farming, artificial intelligence, agriculture sensors, application of drones in agriculture, internet of things (IOTs), Value addition, marketing strategies and many more are in practice globally as well as at national level. These technologies need to be upscaled for mass utilization.

It is very heartening to learn that the Indian Ecological Society is organising International conference (IESIC-2022) on “Sustainable Agricultural Innovations for Resilient Agri-Food System” at Sher-e-Kashmir University of Agricultural Science & Technology of Jammu. The International Conference on such an important topic with participation of luminaries from all over world will prove to be game changer for boosting agriculture production and farmers income. The deliberations in the conference will definitely bring out recommendation w.r.t. multi disciplinary agriculture research innovations, technologies and strategies for resilient agri-food system, which will be very useful for all stakeholders including policy makers, research managers, researchers scholars, Industrialists, progressive farmers and marketing agencies. I believe this is a great opportunity for scientists/scholars and other participants for cross learning and making challenges as opportunities for enhancing agriculture production on sustainable basis for food/nutritional security.

I wish grand success for this mega event.


(Onkar Nath Singh) 31/05/2022