

Journal Club Presentation

Department of Agriculture

The Department of Agriculture, Integral Institute of Agricultural, Science and Technology (IIAST) has initiated IIAST Journal Club in order to raise awareness of the agrarian counter-trend among students, scholars, researchers and academicians. The second session of Journal Club was held on 03/12/2022 at 10:00 A.M. in the Seminar Hall of the Department of Agriculture. Maintaining the same consensus, Mr. Mithlesh Pandey, Research Scholar, Department of Agriculture, IIAST, gave an articulate presentation. He presented a research paper entitled “Suppression of *Alternaria* blight disease and plant growth promotion of mustard (*Brassica juncea* L.) by antagonistic rhizosphere bacteria” published in the Applied Soil Ecology in 2018. The paper was discussed thoroughly which concluded that the capacity of soil to sustain biological productivity using beneficial microorganisms. It has been improved recently by using various methodological developments in the last decades leading to promotion of plant health while maintaining environmental quality. The problem of environmental pollution and health hazards, microorganisms inhabiting the mustard rhizosphere have been identified in this study for the biological control of the *Alternaria* blight disease. Rhizobacterial isolates were found to inhibit the growth of *Alternaria brassicae* on LB medium plates. The inoculation of the selected rhizobacterial isolates i.e., HMR25 and HMR48 on mustard caused 55–114.6% increase in shoot dry weight and 80–100% disease control at 50 and 75 days of plant growth under pot house conditions. These results offer new opportunities to estimate the contribution of the rhizosphere bacteria under field conditions in the biological control of *Alternaria* blight along with the promotion of mustard plant growth for sustainable agriculture. This topic extensively reinforces the concept of eco-friendly agricultural system as an important thrust area globally for long-term soil environmental sustainability and to minimize the environmental pollution associated with indiscriminate use of chemical pesticides and fertilizers.

Dr. Sanjay Kumar Goswami, Scientist, Division of Crop Protection, Indian Institute of Sugarcane Research (IISR), Lucknow, was present as an external expert. Dr. Saba Siddiqui, Head, Department of Agriculture, IIAST, welcomed the external expert by presenting a bouquet. The presenter responded to questions from an assortment of students, scholars, researchers, and faculty members and led an interesting discussion. Dr. Sanjay Kumar Goswami addressed the audience about the idea thoroughly and offered his insightful advice and knowledge. With his words of congratulations, he concluded the discussion.

The presentation was concluded with a vote of thanks by Dr. Shipra Yadav. The faculty coordinators of IIAST Journal Club Dr. Faria Fatima, Dr. Suhail Ahmad khan, Dr. Shipra Yadav, conducted the whole session efficiently.

**Glimpse of Journal Club Presentation, 3rd December, Department of Agriculture,
IIAST**

