

**ICAR Short Course**  
on  
**“Concepts and Mechanisms of Soil Carbon Sequestration and Stabilization for Soil Health Management and Climate Change Mitigation”**

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ICAR Indian Institute of Soil Science organized a short course on “**Concepts and Mechanisms of Soil Carbon Sequestration and Stabilization for Soil Health Management and Climate Change Mitigation**” during 02-11 March 2022. The short course aimed to provide information on soil carbon sequestration and strategies to enhance carbon stabilization in soil for climate change mitigation to the scientists of ICAR and State Agricultural Universities. Sixteen participants from UT of J&K, states of Himachal Pradesh, Tamil Nadu, Uttar Pradesh and Madhya Pradesh attended this short course. In this training program 25 lectures were delivered. Besides class room lectures, ten practical sessions were organized to provide hands on training to participants. All aspects of soil carbon sequestration and stabilization were dealt in detail including carbon stabilization concept and its mechanisms, soil carbon pools, labile, resistant fractions of carbon in soil including total carbon and particulate carbon and their estimation methodologies in the laboratories. Also, green house gas emission, a threat to soil carbon, was also discussed in detail. Besides this, practices to restore soil carbon including biochar, organic farming and conservation agriculture were also demonstrated to the participants. An exposure visit to organic farms as well as conservation agriculture demonstration plots was also arranged to show the effects on soil health and crop improvement. Different models to predict soil carbon such as Roth-C, APSIM, DNDC were demonstrated to make predictions on soil carbon sequestration over a long period of time biomass input. The participants expressed their satisfaction on the conduct of the short course.

