Indigenous Technique in Green and Blue water Management in Kandi Region of Jammu for Livelihood Security

The site of study is the Kandi region of Jammu Province of Jammu and Kashmir state of India. The region is about 200 km in length with width varying from 15 to 50 km. The farmers of the region have developed innovative techniques of rainwater harvesting and soil moisture enhancement and conservation, due to their ingenuity and skill. The farmers exploit the deep soil moisture and bring it up to the plough-layer by the manipulation of tillage operations. The field is ploughed before the sun-rise, keeping the furrows open to imbibe dew moisture. Five to six ploughings are done for retaining sufficient moisture and improving physical condition of the soil for easy and optimum germination of crop seeds. The study showed that at least 5 ploughings are necessary during October for optimum soil moisture conducive for seed germination. The soil moisture increase varied from 3% to 15% with the number of ploughings from 1 to 5 before sowing the crop seeds. The seed germination was above 90% at soil moisture of 16% and above; whereas the germination per cent was much below at lower ploughing rates. Optimum crop stand ensured two to three times higher crop yields compared to the yields obtained from plots where the ploughings were done only 2 to 3 times. The stored water is used for life-saving irrigation at critical stages of crop growth. Only the indigenously available material is used in these innovative methods, which have helped in increasing food production and ensuring food security.