Strategic Approaches to Promote Rainbow Trout Farming in India

There is a vast scope and potential for enhancing fish production in hills. The important aquaculture species in hills is trout, which are cultivated in ice-melt cold-water of J&K, Himachal Pradesh, Sikkim, Uttarakhand and Arunachal Pradesh. Rainbow trout farming is fast becoming the most remunerative coldwater fish that provides livelihood and food security to the hill population. During the decade, a number of farmers adopted trout farming practices elevating the production of trout from mere 147 tonnes to over 1000 tonnes per annum. There are over 62 government trout farms and over 660 private trout production units distributed across the states of Jammu & Kashmir, Himachal Pradesh, Sikkim, Uttarakhand and Arunachal Pradesh. Catering the need of seed and feed for trout production, there are 32 government affiliated rainbow trout hatcheries with an estimated production capacity of 13 million eyed ova and 3 well equipped feed mills with an installed capacity of nearly 10 tons per day. Considering the huge gap between the actual and potential trout production, the ICAR-Directorate of Coldwater Fisheries Research is undertaking concerted research and development efforts to expand and intensify rainbow trout production, in partnership with the concerned state fisheries departments. Spatial decision support system has been employed to generate GIS based site suitability maps for trout culture. To minimize land and water usage in trout culture, water recirculation system has been developed on trial basis. Laying the base for genetic improvement programs, genetic variability in different rainbow trout stocks has been characterized using DNA marker technologies. The concept of cluster farming modules and

culture chains are also gradually introduced and promoted by sharing technical knowledge and science base culture technology that facilitate high returns on investment. All these multipronged strategies will stimulate vertical and horizontal expansion of trout production in India. Some of the Himalayan states such as Sikkim and to lesser extent Uttarakhand are deemed as Organic states. It is important to develop protocols for organic fish farming including Organic trout farming in these states. This endeavor will attract the buyers and add value to the produce ultimately benefitting the farmers. Due to the increased health consciousness and increased purchasing power of the consumers, demand to ensure mass scale production in future will boost up.