8th International Conference on

FISHERIES & AQUACULTURE

October 02-04, 2017 Toronto, Canada

Scientific approaches towards rainbow trout farming in Indian uplands for entrepreneurship development

Atul K Singh and Biju Sam Kamalam Directorate of Coldwater Fisheries Research, India

The mountainous regions in the Himalayan states of India is endowed with copious amounts of highly oxygenated pristine freshwater highly suitable for culturing rainbow trout, which is a robust and fast growing salmonid fish farmed across the globe. Eventually after its introduction in India in the early 20th century, rainbow trout is fast becoming the most remunerative cold water fish that provides livelihood and food security to the hill population. The present annual rainbow trout production in India is nearly 842 tons from 62 government trout farms and 660 private trout production units distributed across the states of Jammu and Kashmir, Himachal Pradesh, Sikkim, Arunachal Pradesh and Uttarakhand. Serial and parallel flow through raceway culture systems is widely used. In terms of seed and feed production capacity, 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. Moreover, rainbow trout brood banking and triploid production trials have been initiated. Comprehensive disease surveillance is continually undertaken and diagnostic/control methods are being developed. Cost-effective feeds with better feed conversion ratio have been developed and the use of sustainable feed ingredients is being evaluated. Farm operation and activities like fish seed transportation are being scientifically optimized. 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.

Biography

Atul K Singh is the director of ICAR-Directorate of Coldwater Fisheries Research, Bhimtal, Uttarakhand. His international experience includes various programs, contributions and participation in different countries for diverse fields of study. His research interests as a Scientist reflect in his/her wide range of publications in various national and international journals.

aksingh56@rediffmail.com

Notes: