ICAR-SPONSORED 21 DAYS WINTER SCHOOL

ANTIMICROBIAL RESISTANCE IN FOOD FISH: CHALLENGES AND MITIGATION

09-29 January 2023

A Winterschool training programme on" **Antimicrobial resistance in food fish: Challenges and Mitigation**" was organized during 09 to 29 January, 2023 at Fish Processing Technology Department of ICAR-CIFE, Mumbai. This winter school program was designed to emphasize on the issue of antibiotic resistance in seafood pathogens, mechanisms, spread and different approaches for its mitigation through the "One Health" approach. The target participants included faculty members and scientists working in the level of Assistant Professor and above. A total of 16 trainees participated in this hands on training programme. The trainees included assistant professors and scientists from various state agricultural universities and research institutes in Jammu and Kashmir, Punjab, Bihar, Madhya Pradesh, Tamil Nadu, Kerala and Maharashtra. The topics covered in the training included theory and practical classes on status of antimicrobial use in food systems, antibiotic resistance and spread, fish-borne pathogens of public health significance, known and emerging, mechanisms of antibiotic resistance, genotypic and phenotypic methods for detection of antibiotic resistance, antimicrobial resistance in aquaculture systems and the environment, One Health approach for mitigation of antibiotic resistance, mechanisms of dissemination of resistance traits, microbiome and AMR gene mining. The training systematically covered the basic and advanced molecular techniques for detection of AMR in bacteria from seafood. The trainees were given exposure to the international guidelines for testing of antimicrobial resistance in bacteria, standard methods of antimicrobial susceptibility testing, bacteriophage techniques, gene cloning and transformation. Lectures on infographics, phylogenetic evolution of antimicrobial resistance, were also arranged.