International Webinar on
Applications of Artificial Intelligence and Machine Learning in Forest Insect Pests Management
21st April, 2023at ICFRE-IFGTB, Coimbatore

The Institute of Forest Genetics and Tree Breeding, Coimbatore organised a webinar on "Applications of Artificial Intelligence and Machine Learning in Forest Insect Pests Management" on 21st April 2023. Recently Artificial Intelligence (AI) techniques have been used for precision control of insect pests which causes havoc to agriculture and forestry. Effective pest management requires reliable information which is being provided easily by artificial intelligence since deepunderstanding of the complex relationships between changing climate, forests and forest pests is vital. This webinar aimed to understand the role and scope ofArtificial Intelligence (AI) and Machine Learning (ML) in Forest Insect Pests Managementparticularlyto develop control measures. Thirty participants and 140 online participants comprising officers, scientists, technical staff, research scholars, project students of IFGTB and other ICFRE institutions, other research organisations and academic institutions at national and international level participated in the webinar.

Dr. Rekha R. Warrier, Scientist F &Head, Chemistry and Bioprospecting Division welcomed the gathering. The organising secretary Dr. N. Senthilkumar, Scientist- F gave an overview of the webinar, in which he stated that the webinar is an attempt to gain knowledge on Artificial intelligence and Machine learning. He highlighted the IOT based research carried out in IFGTB for the management of forest pests. Group coordinator Research Dr. R. Yasodha, Scientist -G spelt the importance of the webinar and stated that the monthly seminars are designed to identify contemporary innovative ideas to help ICFRE to initiatenew research. She also stated that as far as forestry is concerned AI is in infancy and this will be of great utility in near future.

Dr. Sudhir Kumar, DDG (Extension), ICFRE, Dehradun in his inaugural address highlighted the importance of AI in forest management and helpful to

scientists and its scope. The resource persons, **Dr. Vyoma Singh**, Associate Professor, KL University, Vijayawada delivered alecture on "**AI & ML based pest detection and information**"; **Dr. D. Sugumar,** Associate Professor, Karunya Institute of Technology and Sciences, Coimbatore spoke on "**Artificial Intelligence system development and deployment for pest and disease management using deep learning approaches**" with case studies; **Shri SeshathiriDhanasekaran**, The Arctic University of Norway, Norway made a presentation on "**Pestmanagement using Machine Learning Algorithm**" and **Dr. S. Lovelyn Rose**, Associate Professor, PSG College of Technology, Coimbatore interacted with participants on "**Predicting population density, damage loss due to insect pests using AI and ML techniques"**. The resource persons provided insights about system development, deep learning approaches, machine learning algorithm to predict population density of pests, damage loss and pest management. Dr.J.P. Jacob, Head, Forest Protection Division in his concluding remarks,stated that AI and ML will play a major role in control of insect and pests through digital platform and digital extension for identification of problems and solution strategy in the future.The queries raised by the participants were clarified by the speakers. Dr.K.N.Ashrith, Scientist- B coordinated the discussion session. The webinar ended with the formal vote of thanks by Smt.R.Sumathi, CTO.

Inaugural address by Dr. Sudhir Kumar, DDG (Extension), ICFRE

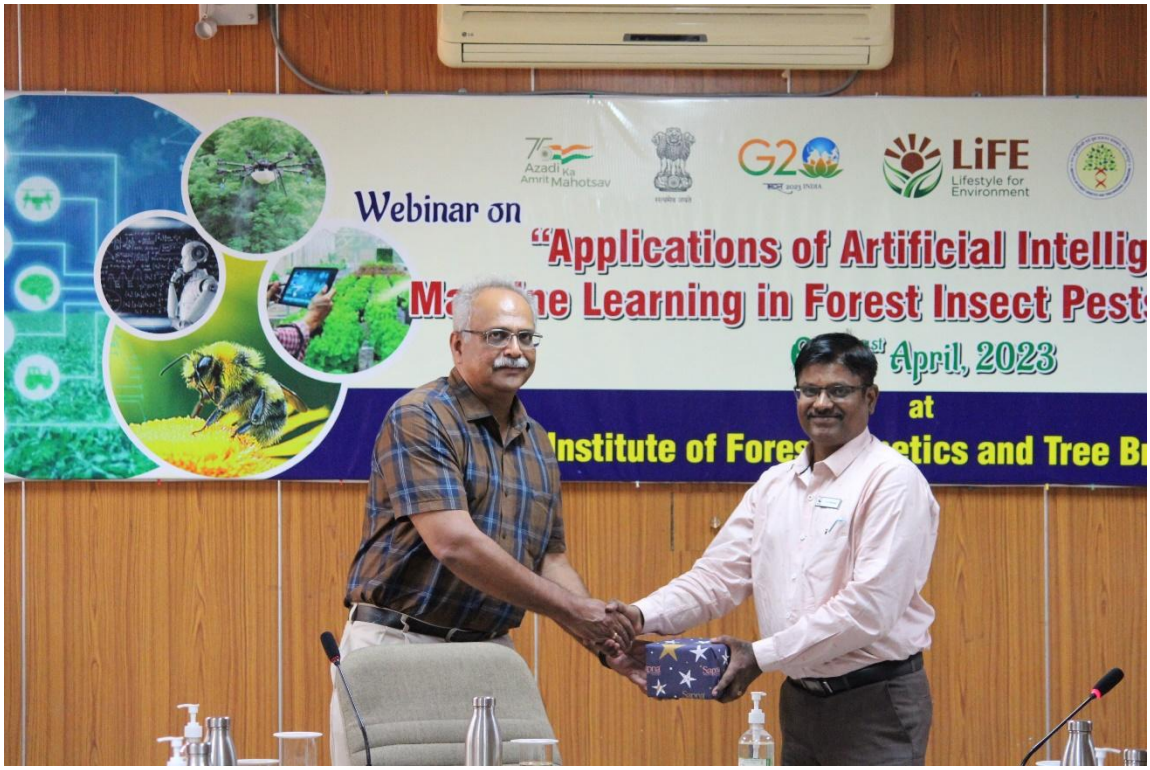
Importance of the webinar by Dr. R. Yasodha, Scientist G&GCR,

Lecture by Dr. D. Sugumar, Asso.Prof, Karunya Institute of Technology and Science

Lecture by Shri SeshathiriDhanasekaran, The Arctic University of Norway

Lecture by Dr. S. Lovelyn Rose, Asso.Prof, PSG College of technology

Concluding remarks by Dr. J.P Jacob, Scientist G, Head, Forest Protection Division, ICFRE-IFGTB



Resource person honoured byDr. J.P Jacob, Scientist G, Head, Forest Protection Division, ICFRE-IFGTB

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