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Plant Health Task Force

Online Workshop

on

TOOLS AND TECHNOLOGIES FOR MANAGING PLANT PARASITIC NEMATODES IN NORTH AMERICAN HORTICULTURAL CROPS

Thursday, August 1st, 2024

IICA
Agriculture and Agri-Food Canada
Canadian Food Inspection Agency
inifap Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias
USDA Agricultural Research Service

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SPEAKERS' BIOS

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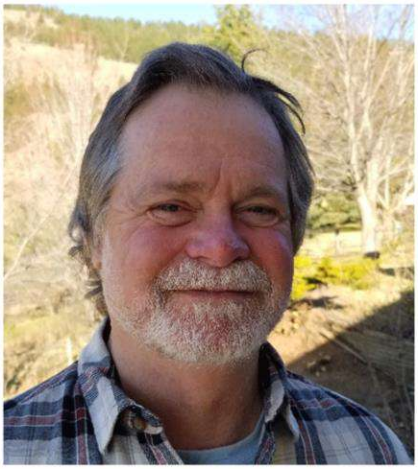
DR TOM FORGE



Tom Forge is a research soil ecologist and nematologist with Agriculture and Agri-Food Canada at the Summerland Research and Development Centre in British Columbia. He also holds an appointment as Adjunct Professor at the University of British Columbia and is Test Site Manager for the Minor Use Pesticides Program in British Columbia. Tom's research program seeks to understand how alternative soil and water management practices affect nematode populations in relation to soil health indicators, the impacts of plant-parasitic nematodes on perennial fruit crops, and to develop alternatives to fumigation for management of orchard and vineyard replant disease complexes. Tom is actively involved in the Canadian Phytopathological Society and the Society of Nematologists.

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DR TAHERA SULTANA

Dr. Tahera Sultana is a research scientist and nematologist for the London Research and Development Centre-Vineland, Agriculture and Agri-Food Canada. She also holds a position of Adjunct Professor at the Brock University, Ontario, Canada. Dr. Sultana's research is focused on understanding the importance of cover crop use and rotation in different crop management systems considering nematode as bio-indicator and characterizing nematode communities under different agricultural practices. Her research also investigates identifying nematode as a causal agent and their involvement on agricultural production and finding the alternative of chemicals against plant-parasitic nematodes on greenhouse fruits and vegetables. Along with traditional nematode identification and characterization, she is also conducting research on developing molecular markers to identify nematodes at the species level, nematode genomic and metagenomics study using high end technology.

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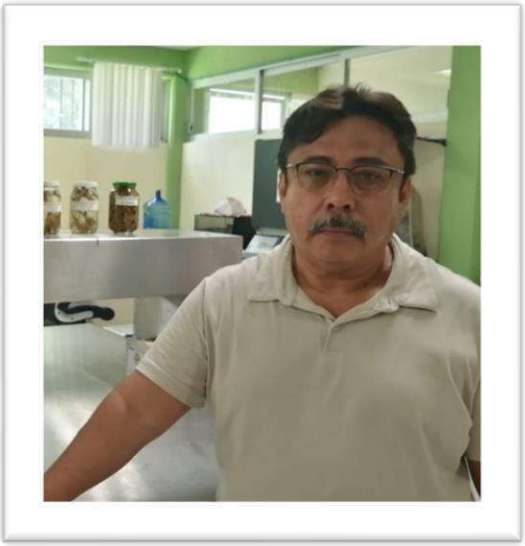
DR JAIRO CRISTÓBAL ALEJO



He has a master's degree and a PhD in Phytopathology from the Colegio de Posgraduados. He is a Research Professor at the Tecnológico Nacional de México/Campus Conkal, Yucatán, attached to the Graduate Studies and Research Division, where he teaches the courses of Advanced General Phytopathology and Integrated Pest and Disease Management in the Master of Science in Tropical Horticulture and in the Doctorate in Science in Sustainable Tropical Agriculture. He is a member of the National System of Researchers (SNI) level I. Leader of the Consolidated Academic Body: Protection of Tropical Vegetables, recognized by the program for the professional development of teachers. He oversees the Phytopathology Laboratory. He has directed multiple theses related to the diagnosis, etiology and control of tropical vegetable diseases. He has given lectures and courses in national and international congresses related to biorational control and use of microorganisms in the management of diseases in tropical vegetables.

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DR WILLIAM RUTTER

Dr. William Rutter is a Research Plant Pathologist for the USDA Agricultural Research Service stationed in Charleston South Carolina. He received a Ph.D. in Genetics while studying molecular plant-nematode interactions in the Department of Plant Pathology at Iowa State University. He went on to work as a Post-Doctoral Researcher at Kansas State University in the Department of Plant Pathology studying molecular plant-fungal interactions. Since he started with USDA in 2017, Dr. Rutter's research has focused on using molecular and genetics-based approaches to identify and develop new sources of nematode resistance in vegetable crops including pepper, watermelon, cucumber, and sweet potato. His research program seeks to provide stakeholders with new tools to help mitigate the damage caused by plant parasitic nematodes.

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DR BENJAMIN MIMEE

Dr. Benjamin Mimee holds a Ph.D. in plant pathology from Laval University (2008). He joined Agriculture and Agri-Food Canada in 2011 as a research scientist in Nematology. The main goal of his lab is to develop integrated pest management strategies for plant-parasitic nematodes. He is particularly interested in molecular plant-nematode interactions involving cyst nematodes and in population genomics.

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DR ÁNGEL RAMÍREZ SUÁREZ

Agricultural Engineer specialized in Agricultural Parasitology from the Chapingo University, with a Master's Degree in Phytopathology from the Colegio de Postgraduados and a PhD in Agronomy from the University of Nebraska, USA. Specialist in Phytopathology.

He served as Technical Coordinator of the National Phytosanitary Reference Center of the General Directorate of Plant Health. He was a member of the Technical Advisory Group on nematodes of the grapevine and potato panel, as well as of the Seed Expert Group of the North American Plant Protection Organization (NAPPO). In addition, he was a member of the National System of Researchers of Conacyt level C and I. He also participated as Conacyt Professor, assigned to the National Metrology Center in the project “Development of Reference Materials of Microorganisms and Viruses of Importance in Agriculture and Food Safety”. He has published several articles and phytopathological reports in journals.

He currently serves as Director of Integration and Sanitary Analysis of SENASICA, an area in charge of facilitating Mexican exports of vegetables.

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DR INGA ZASADA

Inga Zasada is a Research Plant Pathologist with USDA-ARS Horticultural Crops Disease and Pest Management Unita in Corvallis, Oregon. She received a Ph.D. in Plant Pathology from the University of California, Davis. Her research program focuses on the management of plant-parasitic nematodes in small fruits and other horticultural crops. Current research endeavors include developing integrated management strategies for soil-borne pathogens of small fruits, evaluating rootstocks for nematode management into Washington wine grape vineyards, and genome sequencing and exploration of understudied plant-parasitic nematodes.

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DR JEAN-CHARLES LE VALLÉ

Dr. Jean-Charles Le Vallée is the IICA Country Representative for Canada, Secretary for PROCINORTE, and Coordinator for IICA's Caribbean Agritourism Network. Before joining IICA, Jean-Charles was a former World Bank agricultural economist, and the first ever Coordinator for Canada's Food Security Bureau at Agriculture and Agri-Food Canada. He has extensive international diplomatic, leadership, teaching, research and field experience in over two dozen countries across Sub-Saharan Africa, South-East Asia, the Caribbean and Latin America, with Global Affairs Canada, USAID, the World Food Prize, IFPRI, FAO, Université Laval, Cornell and Michigan State University. Jean-Charles has written extensively on food issues, including a book on food system resilience in Belize, and a book chapter in India on political will for food security. Later on, he helped train agri-food SMEs in Colombia, Senegal and Vietnam to grow their business and increase their food trade. In Canada, he helped produce a pan-Canadian Food Strategy, and published various global food report cards (over 100+ million media impressions) across 17 OECD countries on food industry performance; agri-food trade; food safety; food security; nutrition, diseases & diets; food waste & environmental performance.

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DR AMAN DEEP

Dr. Dr. Aman Deep currently serves as the Director of Research, Development and Technology (DRDT) at the Agriculture and Agri-food Canada (AAFC), overseeing the St-Jean-sur-Richelieu Research and Development Centre, Living Laboratories, and the AgroClimate, Geomatics, Earth Observation, and Agri-Environment Resilience Centre. Furthermore, he provides national leadership to shape and advance plant health research and technological developments, thereby contributing to an agriculture and agri-food system that is environmentally sustainable, socially responsible, and economically viable.

Before assuming his current position, Aman gained a wealth of experience through various roles of escalating responsibility at the Canadian Food Inspection Agency (CFIA). Over his decade-long tenure at CFIA, Aman played an instrumental role in advancing agency priorities across diverse domains, including operations, policy development, program implementation, international trade, and research management.

Academically, Aman holds both a Master of Science and a PhD from the esteemed University of Saskatchewan, underscoring his dedication to scholarly pursuits and research excellence. Outside the professional realm, Aman enjoys listening to music and embarking on travel adventures with his wife and daughter.

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DR JOSEPH MUNYANEZA

Dr. Joseph (Joe) Munyaneza is currently a National Program Leader for Specialty Crops in the Crop Production and Protection Program Area within the USDA-ARS Office of National Programs (ONP). Joe has been in this position since November 2016 and oversees research projects related to Vegetable, Fruit, Nut, Sugarbeet, Greenhouse and Ornamental Crops, in addition to ARS IR-4 Minor Use Pesticides Program. Prior to joining ONP, Joe was a Research Entomologist and Lead Scientist at ARS Temperate Tree Fruit and Vegetable Research Unit at Yakima Agricultural Research Laboratory near Wapato in Washington State, for 14 years. He also served as Acting Research Leader at numerous occasions. In addition, Joe served as Adjunct Professor in the Department of Entomology at Washington State University for 12 years. Joe recently completed an 8-month detail at USDA-NIFA, serving as Acting Director for Plant Protection Division. Dr. Munyaneza received a Ph.D. from Iowa State University in Agricultural Entomology, with a minor in Plant Pathology; M.S. in Entomology from Southern Illinois University; and B.S. in Biology from the National University of Rwanda. Dr. Munyaneza is nationally and internationally recognized for his research in insect pests and insect-transmitted pathogens of potato and other vegetable crops, particularly psyllid and leafhopper-transmitted Liberibacter, phytoplasmas, spiroplasmas, and zebra chip disease of potato. He has authored over 235 scientific publications and made over 130 invited presentations at professional and commodity group conferences, symposia, workshops, and field days. Joe is the Subject Editor of Horticultural Entomology for the Journal of Economic Entomology. Also, he is Past President of the International Association of Black Entomologists (IABE). Furthermore, on the behalf of USDA, Joe serves as a member of the World Vegetable Center Board of Directors.

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DR JAIME MENA COVARRUBIAS

Dr. Jaime Mena Covarrubia is a Mexican researcher that has worked for the National Institute of Forestry, Agricultural and Livestock Research (INIFAP) since 1979 in the area of Entomology at Zacatecas Research Station. He has developed several research projects on insect pests of cactus pear, chili, dry beans, guava, peach, and corn, which he has carried out almost entirely on farmers' plots. He graduated from the Chapingo Autonomous University (1979); he completed the Master of Science in Entomology at Michigan State University (1989) and the Doctorate in Agricultural Sciences at the University of Maine (1995).

His professional development has focused on the identification, biology and ecology of pest and beneficial insects, to develop integrated pest management schemes that are environmentally friendly. He likes to interact in the area of training and technology transfer. He has participated as an instructor in more than 250 courses for extension workers and producers who grow peaches, cactus, chili, apple, corn, dry beans, small grains, and guava, among others. One of his technological achievements is the development of a food trap to effectively eliminate, without the need to use conventional pesticides, the adults of pest insects such as fall armyworm, corn earworm, armyworm, cutworm, etc., which is used by corn, dry beans, and vegetables growers at Zacatecas, several states of Mexico, and even in Georgia, USA. nematodes.

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