

US EXPERT DELIVERS A TALK ON “GREEN AMMONIA IN INDIA” ON 07-05-2025

The PAU Science Club and the Department of Biochemistry, Punjab Agricultural University (PAU), Ludhiana in collaboration with the United States–India Educational Foundation (USIEF), New Delhi, organized a talk on “Green Ammonia in India: An opportunity to advance sustainability?” by Prof. Eric A Davidson, a globally respected environmental scientist, currently serving as a Fulbright-Nehru Distinguished Senior Scholar in India. Prof Davidson is affiliated with the University of Maryland Center for Environmental Science (UMCES), where he is part of the Appalachian Laboratory, a renowned hub for interdisciplinary environmental research. He is the Principal Scientist at Spark Climate Solutions.

The chief guest Dr Satbir Singh Gosal, Vice-Chancellor, PAU, in his introductory remarks, highlighted the potential of green ammonia to significantly reduce carbon emissions, support climate-smart agriculture, and move us closer to our national and global sustainability goals. He encouraged the students to apply for Fulbright programs that support scholars, researchers, and professionals in both countries.

In his talk on Green Ammonia, Prof Davidson emphasized the critical involvement of nitrogen based fertilizers in agricultural productivity. Currently, fertiliser production in India is heavily reliant on the use of fossil fuels that leads to high emission of greenhouse gases like carbon dioxide and nitrous oxide, he observed. A new renewable energy technology can produce “green ammonia” for use as fertilisers and fuel, greatly reducing carbon dioxide emissions, he added. It can also be used to synthesize proteins for human and livestock consumption said he. Several Indian companies have announced ambitious plans for green ammonia production, though, significant challenges lie ahead in future adoption, he pointed out. This enlightening and thought-provoking talk was followed by discussion with faculty and students. For a country like India, where agriculture sustains nearly half the population, adopting green ammonia represents a forward-looking solution to an eco-friendly agriculture.

In her welcome address, Dr Manjeet Kaur Sangha, Head, Department of Biochemistry, acknowledged the vital role played by USIEF in fostering mutual understanding, encouraging innovation, and building enduring educational partnerships between India and the United States of America. She welcomed Ms Pavitra Soram, Program Manager for the Fulbright US Scholar Program at USIEF, the Fulbright Commission in India.

Dr Snehdeep Kaur, Assistant Professor (Education), from PAU Science Club, introduced the speaker, Prof Davidson, highlighting his area of research that encompasses terrestrial nutrient cycling, greenhouse gas emissions from soils, global biogeochemical cycles, and sustainable agriculture. Along with publishing research articles in high impact journals, Prof Davidson has published two books for the general public-You Can't Eat GNP:Economics as if Ecology Mattered (2000) and Science for a Green New Deal: Connecting Climate, Economics, and Social Justice (2022), she told.

Later, Dr Gosal felicitated Prof Davidson and Ms Soram (USEIF) with a PAU medal and a traditional framed Phulkari. The session concluded with a formal vote of thanks proposed by Dr Yadhu Suneja, expressing gratitude to all contributors for making the event a success.

The dignitaries comprising Dr MIS Gill, Dean, Post Graduate Studies; Dr Makhan Singh Bhullar, Director of Extension Education; Dr Shammi Kapoor, Dean, College of Basic Sciences and Humanities; Dr Vishal Bector, Associate Director, Institution Relations; and the Heads of the various Departments of the College of Basic Sciences and Humanities also attended the programme.