

81ST PLENARY MEETING

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Cotton Value Chain: “Local Innovations for Global Prosperity”



Dr PK Singh

Dr PK Singh is a Chief Scientist at the Molecular Biology and Biotechnology Division of CSIR-National Botanical Research Institute, Lucknow, India, and a Professor at the Academy of Scientific and Industrial Research. He obtained his master’s degree from Guru Nanak Dev University, Amritsar, and his PhD from CSIR-National Botanical Research Institute and the University of Lucknow. In his early research days, he developed a novel method for the chemical synthesis of double-stranded DNA and became the first Indian to synthesise agronomically useful genes artificially. His current research interests include (a) Identifying novel proteins for the control of cotton insect pests, (b) Structure-function relation of insecticidal proteins, (c) Mode of insecticidal action, (d) Protein engineering for higher efficacy, (e) The development of insect-resistant cotton through genetic engineering, and (f) Safety study and deregulation of GM cotton. Dr Singh devised an innovative method of isolating novel insecticidal proteins from ferns and cloning their genes. He has generated several transgenic cotton events tolerant to *Pectinophora gossypiella* (pink bollworm), *Spodoptera litura* (leaf armyworm), and *Bemisia tabaci* (whitefly), using novel and engineered genes. He is also the first in the world to demonstrate whitefly control by employing RNAi technology through transgenic plants. He is an elected Fellow of the Indian National Science Academy, New Delhi, and was a recipient of the CSIR Technology Award in 2005