

## Brief CV: Dr Mukesh K. Dhillon

### Mailing address

- Principal Scientist - Entomology, Division of Entomology, Indian Agricultural Research Institute, New Delhi 110 012, India. Phone: +91-9013473641; E-mail: [mukeshdhillon@rediffmail.com](mailto:mukeshdhillon@rediffmail.com); [mukeshdhillon@iari.res.in](mailto:mukeshdhillon@iari.res.in)  
<https://www.researchgate.net/profile/Mukesh-Dhillon>



### Professional expertise

- Insect-plant interactions, insect physiology, tri-trophic interactions, integrated pest management, mechanisms and genetics of insect resistance, biosafety of genetically modified crops, and climate change research in the context of plant protection.

Dr. Mukesh K. Dhillon has made significant research contributions in deciphering mechanisms, physico-chemical basis of host plant resistance, inheritance of resistance to insects; and identified several diverse sources of resistance in maize and sorghum against *Chilo partellus* and *Atherigona soccata*, and *Bactrocera cucurbitae* in bitter melon to develop pest resistant varieties for sustainable crop production. He has determined mechanisms and factors governing induction and termination of diapause, developed temperature-based development models for diapausing larvae, and genetics and inheritance of diapause in *C. partellus*, which will be highly useful for predicting the occurrence, seasonal emergence, number of generations and population dynamics of *C. partellus*. He has also mapped phenotypic variability and established different biotypes of *C. partellus* in different agroecological regions of India. Development of new techniques for biochemical insect-plant interactions such as HPLC-PDA based amino acids and GC-MS based lipophilic metabolite profiling methods for different plant parts and insect pests; and development of various bioassay and screening techniques for host plant resistance to insect pests in maize, sorghum, chickpea, pigeonpea, cotton, groundnut and rapeseed-mustard are also some of the notable contributions to his credit. Apart from research, he has also been involved in R&D such as development and release of first double zero mustard variety (Pusa Double Zero Mustard 31) possessing low erucic acid (<2%) in oil and low glucosinolates (<30ppm/g) in seed meal cake, two other rapeseed-mustard varieties (PM 32 and PM 33), and one maize hybrid (PJHM-1).

### Honors/Awards/Fellowships

- **Fellow:** National Academy of Agricultural Sciences (NAAS); Plant Protection Association of India; The Academy of Environmental Biology; The Entomological Society of India.
- **International Plant Protection Congress Award for Scientific Achievement 2019:** International Association for the Plant Protection Sciences, University of Nebraska, Lincoln, NE 68583-0816, USA.
- **Co-chairman IPPC 2019:** XIX International Plant Protection Congress held during 10-14 November at Hyderabad, Telangana, India.
- **Prof. T.N. Ananthkrishnan Senior Scientist Award for the biennium 2016-2017** conferred by T.N. Ananthkrishnan Foundation, Chennai, Tamil Nadu.
- **Prof. G. S. Shukla Award 2020** conferred by “The Academy of Environmental Biology”, Lucknow, Uttar Pradesh, India.
- **DEF Young Scientist Award 2006** in “Environmental Biotechnology” fostered by The Academy of Environmental Biology, Lucknow, Uttar Pradesh, India.
- **Jawaharlal Nehru Award for Postgraduate Agricultural Research 2005** in “Crop Improvement” fostered by Indian Council of Agricultural Research, New Delhi, India.

### Publications

- **Total publications: 225:** Papers in peer reviewed journals: 90; Books: 1; Book chapters: 40; Conference proceedings/Information bulletins: 10; Papers in conferences/symposia: 60; Other publications: 24