M P Srivastava, Agrotechnol 2016, 5:2(Suppl)
http://dx.doi.org/10.4172/2168-9881.C1.018



# Pesticides in management of plant diseases: Public perception and ground realities

**M P Srivastava**
CCS Haryana Agricultural University, India

Plant diseases are known since time immemorial. Outbreaks of several diseases have changed the history of mankind. India is losing annually $ 25.4 Billion [INR 1, 40,000 crores; (Kumarasami, 2008] of which diseases account for INR 25,000 crores. Worldwide plant pests are responsible for about 40% losses in yield. Main challenge for agriculture is to increase productivity to sustain the need of ever-growing population. Throughout the world pesticides have been widely used to control diseases and pests and in future too fungicides will play a crucial role in meeting this challenge. Though pesticides have been successfully used for plant protection and public health, yet a section of society see pesticides with blinkered vision on the pretext that pesticides are responsible for affecting ecosystem, environment and human health. In fact, most of the problem is due to users, who are using pesticides recklessly. In spite of outbursts against pesticides by Rachel Carson in 1962 the process of discovery continued and more effective and safer fungicides such as, SBIs, MBIs (tricyclazole, pyroquilon etc.), strobilurins etc., were developed. Today with the availability of relatively safer and effective fungicides of 4th generation including novel fungicides, most of the diseases can be effectively controlled and crop yields can be improved with least impact on biodiversity. While phenylamides and fosetyl-Al have revolutionized control of downy mildews and phytophthoras, SBIs have offered control of diverse group of fungi, MBIs to rice blast and strobilurins unusually wide array of crop diseases from all four classes of plant pathogens, namely the Ascomycetes, Basidiomycetes, Deuteromycetes and Oomycetes. Since *Silent Spring* another publication Silent Spring Revisited published by American Chemical Society in 1987 also appeared supportive of Silent Spring. However, if used judiciously, following the guidelines of Pesticide Action Network (PAN) and Fungicide Resistance Action Committee (FRAC) such problems are not likely to occur and conversely improve crop yield. It is, however, unfortunate that many of us really lack insight to *Materia Medica* of plant diseases and most of the problems have occurred due to misuse and abuse of pesticides for which man is responsible and not the fungicides/pesticides. Surprisingly Europe is strongly discouraging use of chemicals but in one of publications, the author cite abolishing fungicides in crop production in Germany would cause drastic decline in income, on average equally a monthly salary, but can be even more severe with specific faming system. Some people also think that prior application of pesticides could be more beneficial but it is not true. We need not be over dependent on pesticides but should not give-up pesticides under the influence of rather go for minimal use. The present paper critically analyses to present a balanced view with regard to their positive role in pest management and who is to be blamed responsible for associated hazards – man or pesticides and feasibility of shedding over-reliance on pesticides and mitigating associated hazards.

## Biography

M P Srivastava is former Director Planning & Head Plant Pathology, CCS Haryana Agricultural University. He has been honored with "IPS Recognition Award 2014" in recognition of his contribution to the growth of Indian Phytopathological Society (IPS), and more importantly services rendered towards society in mitigating crop losses due to plant pests. He is a distinguished plant pathologist with 50 years of experience, recognized nationally and internationally for his contributions on post-harvest diseases, multiple resistance in rice, and on technology/knowledge transfer, plant health clinic and fungicides. He is credited with his popularization of Plant Clinic and application of plant pathology knowledge in towards sustainable agriculture.

mpsrivastava28@gmail.com

**Notes:**