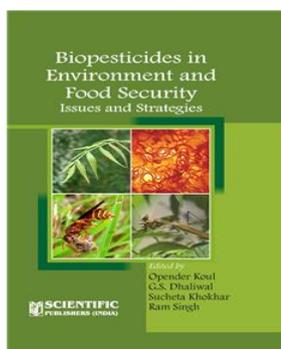


Biopesticides in Environment and Food Security: Issues and Strategies

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Blurb

Drivers behind food security and crop protection issues vis-à-vis the food losses caused by pests include rapid human population increase, climate change, loss of beneficial on-farm biodiversity, reduction in per capita cropped land, water shortages, and pesticide withdrawals. Integrated pest management, therefore, becomes a compulsory strategy in agriculture, which offers a toolbox of complementary crop- and region-specific crop protection solutions to address these rising pressures. IPM aims at more sustainable solutions by using complementary technologies and one of them is the use of biopesticides including genetically modified cropping systems. The aim is to reduce pests below economic thresholds utilizing key ecological services, particularly biocontrol systems via semiochemicals, biopesticides, precision pest monitoring tools, and rapid diagnostics. In fact, we are facing twin problems of environment and food security for the expanding population and it is necessary to ensure adequate pesticide-free food. The ecofriendly nature of biopesticide products suggests environment protection and safety for natural enemies and non-target organisms. However, their adoption and use have lagged behind due to certain constraints like variable performance under field situations, lack of quality standards and interest by big industrial houses, and cumbersome regulatory procedures. The present book is an attempt to critically debate over all these issues and suggest a road map for future.

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