



Biopesticides for Crop Disease Management

Preface: Biopesticides for Crop Disease Management

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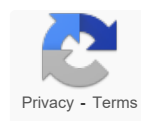
Interest in using biological products in agriculture has increased in recent years. While synthetic pesticides are important in managing many key agricultural pests, biological products, such as biopesticides, are an additional tool farmers may use to manage pests. Some of the first biopesticides widely used in field crops incorporated bacterial microorganisms such as *Bacillus* spp. that have been used for insect, nematode, and root rot management. Fungi such as *Coniothyrium minitans* and *Trichoderma* spp. have also shown efficacy as biopesticides in field crops for diseases such as white mold in soybean. Biopesticides can also supplement fungicide resistance management tactics by reducing synthetic pesticide selection pressure on pathogen populations. While there are some known benefits of specific biopesticide products, a need for clarity exists for the general terminology, efficacy, and optimal use of biopesticides in agriculture.

The primary goal of this publication is to help farmers, crop advisors, educators, and other stakeholders increase their understanding of biopesticides and their use in field crops. The information presented in this resource is based on our knowledge of relevant literature, consultations with industry representatives, and resources provided by regulatory agencies. The biopesticide industry is rapidly expanding and changing, and we acknowledge that this publication is not a comprehensive resource on biological control products. The authors aim to provide a framework of knowledge around biopesticides, specifically biological products that may affect plant pathogens (e.g., biofungicides), and provide context for their current and future role in agricultural disease management.

Use the Table of Contents on this page to navigate between chapters and resources available in this text. Adjust browser window size or view settings if tables are not fully visible.

Earn six Certified Crop Advisor CEUs after reading this web book. Complete a quiz for each chapter to earn one CEU per chapter. See the **Crop Protection Network CCA CEU page** or access quizzes directly for Chapters **1, 2, 3, 4, 5, and 6**.

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Pest Management Center; the Grain Farmers of Ontario; and the United States Department of Agriculture - National Institute of Food and Agriculture (USDA-NIFA).



Regardless of the type of pesticide used, it is important to identify and understand the targeted pest organism. Field scouting is a helpful way to gain knowledge about pest issues. Want to learn scouting basics? Check out the **Crop Scouting Basics in Corn and Soybean** web book (CPN 4007).

Iowa State University Integrated Pest Management



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