

**Mini Review**

# **Fungicides in Managing Phyto-Fungal Diseases: The Changing Scenario**

**TS Thind**

*Honorary Adjunct Professor, Department of Plant Pathology, Punjab Agricultural University, Ludhiana-141 004, India;  
E-mail: tsthind@pau.edu*

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## **Abstract**

Subsequent to genetic resistance, fungicides continue to serve as important tools for management of crop diseases. Several classes of fungicides starting from contact, multi-site compounds to systemic compounds with site-specific, curative action have been introduced during more than one hundred years of fungicide development. Fungicide resistance continues to be a major problem with site-specific fungicides posing a serious challenge to disease control. New modes of action are developed to manage resistance to existing modes of action and to provide effective disease control. Advancement in synthetic chemistry such as combinatorial chemistry and use of high throughput screening with biorational designs have helped in the discovery of several new active ingredients in a short span of time. Stringent regulatory norms have slowed down the introduction of new fungicides and more emphasis is now given on exploring natural products as fungicide leads. Microbial metabolites and compounds of plant origin hold promise for discovery of new fungicides in future.

**Key words:** Combinatorial synthesis, fungicide resistance, high throughput screens, natural products, new modes of action, regulatory pressure

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