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### Biopesticides and plant products for plant disease management

**Chintamani Deokar**

Mahatma Phule Krishi Vidyapeeth, India

Bio-pesticides are derived from natural resources and have a three categories : Microbial pesticides, biochemical pesticides and genetic material added in plants. The microbial bio-pesticides material added in plants . The microbial bio-pesticides contain useful microorganisms that used as biological control agents, directly or indirectly affects the plant pathogen in producing enzymes or stimulating specific plant responses. Biochemical pesticides contain naturally occurring plant extract and mineral oils that used for management of diseases. The genetic material added in plants through genetic engineering which develop the resistance against plant diseases. These all types of bio-pesticides plays an important role as preventive management of plant diseases. They are mostly host specific and pathogen should be present on plant. The preventive management of plant diseases these bio-pesticides acts as nutrient and space competition, mycoparasitism or production of antibiotics. They either inhabits the growth and sporulation of pathogen or sometimes directly kills the plant pathogens. Seed inoculation with bio-pesticides helps to germination and root development and also kept the plant healthy. Bio-pesticides has less residual period as compare to chemicals. Selection of bio-pesticides is very important by considering its mode of action towards targeted plant diseases. Our Department has under taken many experiments on efficacy of bio-pesticides for control of plant diseases. It was observed that many environmental factors affect the performance the bio-pesticides against targeted pathogen or disease. Before using the bio-pesticides for targeted disease we should know the safety to precaution and application time and methods. The soil borne disease problems are manage by using bio-control agents viz., *Trichoderma sp.*, *Pseudomonas floescence* etc. use of bio-pesticides for preventive management of plant diseases is the effective, economical and eco friendly method.

### Biography

Chintamani Deokar is professor in Mahatma Phule Krishi Vidyapeeth, India, He published several journals and articles.

cd\_deokar@rediffmail.com

### Notes: