

Fungi

Entomopathogenic fungi are fungi

that are parasitic or pathogenic on insects. Infective spores produced by these fungi stick to the cuticle of insects, germinate into infective hyphae, and penetrate through the cuticle. Once inside these pathogens kill the insect and consume it from the inside. Once the resource (insect) has been exhausted the fungi burst from the soft tissue joints of the exoskeleton and produce infective spores to repeat the process again (Figure 1).

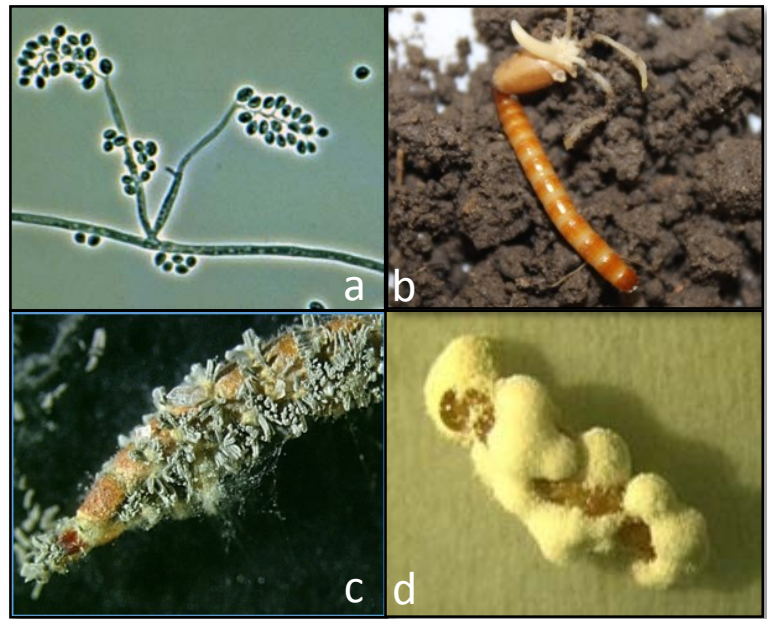


Figure 1. *Beauveria bassiana* a) spores, b) healthy wireworm, c) *Metarhizium* killed wireworm, d) *Beauveria* killed wireworm.

Activity

Fungal spores are commercially produced and available for application. Spores are active against a wide range of insects, but work better on some than others. Residual outbreaks may result from initial treatment (Figure 2).

Research

WTARC is researching the use of fungal pathogens for control of soil dwelling and foliage dwelling insects using commercially available products and is actively searching out new agents from the local environment. This research collaborates with the USDA and major chemical producers in obtaining results.



Figure 2. Grasshopper killed by natural *Beauveria* outbreak near Sydney, MT.

Products

Metarhizium anisopliae

(Green Muscle, Met52)

Beauveria bassiana

(BotaniGuard, Mycotrol O, Cease)