

# Trichoderma for Crop Production

#### R. Muniappan

Director, Integrated Pest Management (IPM IL)

Center for International Research, Education, and Development Virginia Tech









### Trichoderma spp. (Deuteromycetes, Moniliales)

- T. harzianum, T. viride and T. hamatum are common species used in biological control.
- Trichoderma is an avirulent plant symbiont that occurs in all agricultural soils.
- Highly competitive and displays antagonism against other pathogenic fungi.
- Colonizes plant root system and protects them from soil-borne pathogens.
- Decomposes organic material in which it grows.
- Plant growth promotor.
- Solubilizes and sequestrates inorganic nutrients.
- Releases compounds that activate plant defense mechanism.
- Successfully cultured for use as a biofungicide.
- Used in food and textile industry.







#### **Trichoderma** Production



Trichoderma production in India







Trichoderma production in Cambodia

Trichoderma production in the Philippines









#### Trichoderma Production in Indonesia

















## Production of Trichoderma in Bangladesh



















#### Trichoderma Workshops





Conducted six workshops and trained over 200 people from Africa, Asia, and Central America In production of *Trichoderma*.











#### Effect of Trichoderma on Crop Growth







Gross sales – onion/hectare in the Philippines

With *Trichoderma* = P217,020.00 (\$5,106.35)

No *Tridchoderma* = P171,284.36 (\$4,030.22)

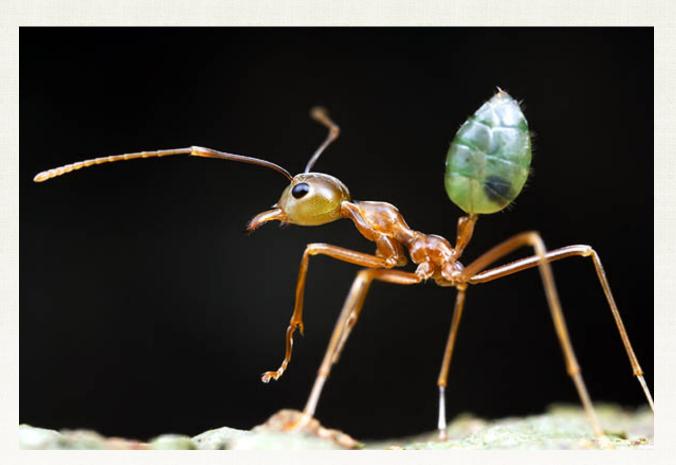
Difference = P54,283.12 (\$1,277.32)











Thank You.