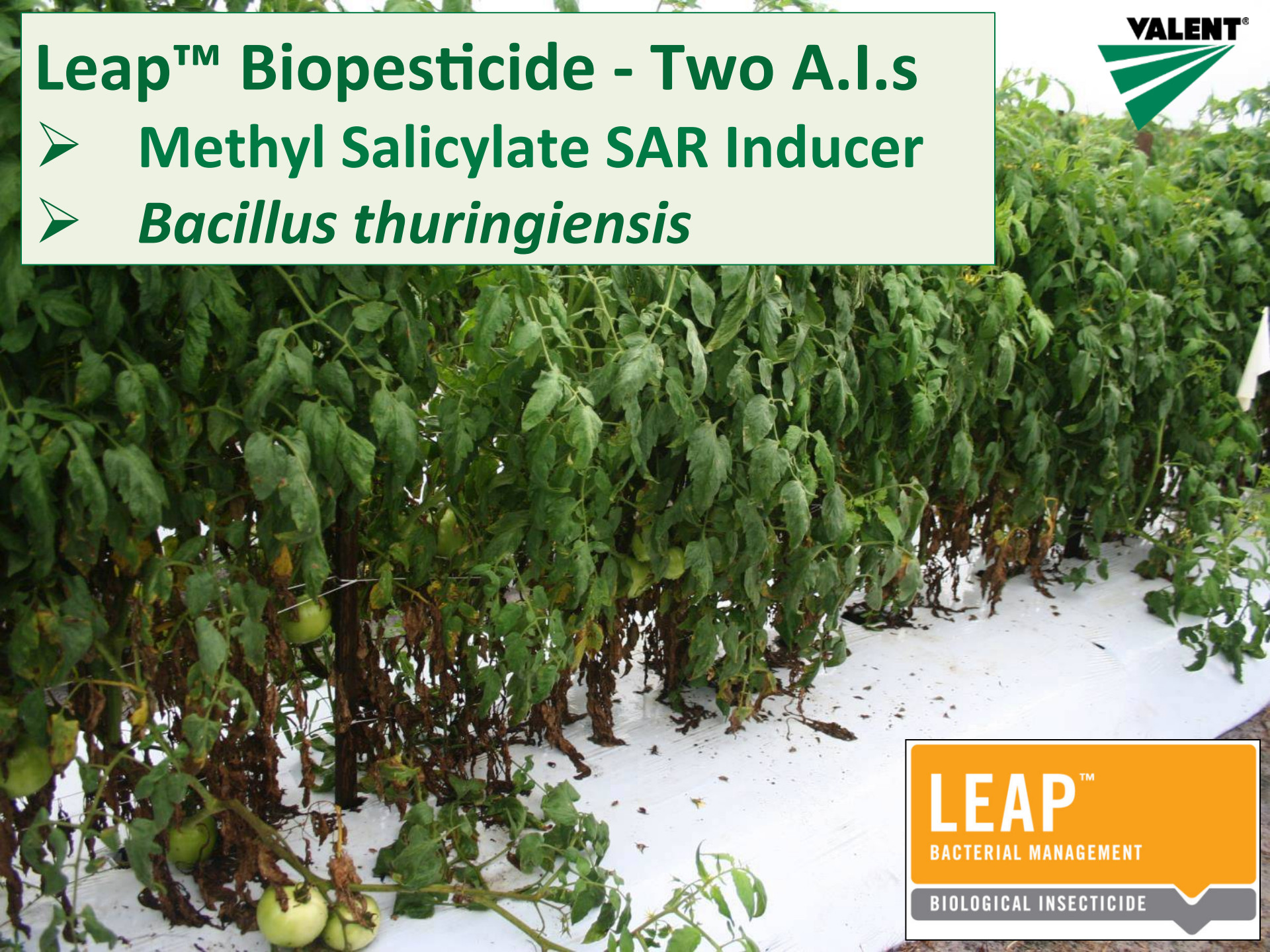
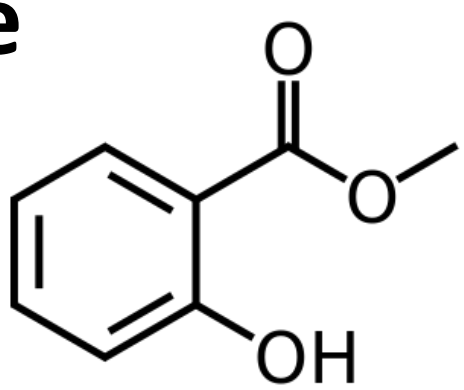
Leap™ Biopesticide - Two A.I.s

- Methyl Salicylate SAR Inducer
- *Bacillus thuringiensis*



Leap™ Biopesticide

Methyl Salicylate = SAR Inducer



- **Oil of wintergreen** (*Gaultheria procumbens*)
- Elicited by biotic stress (infection, insect attack)
- Triggers systemic acquired resistance (SAR) defensive pathways
- Plant pathogen defense - pathogenesis related (PR) proteins

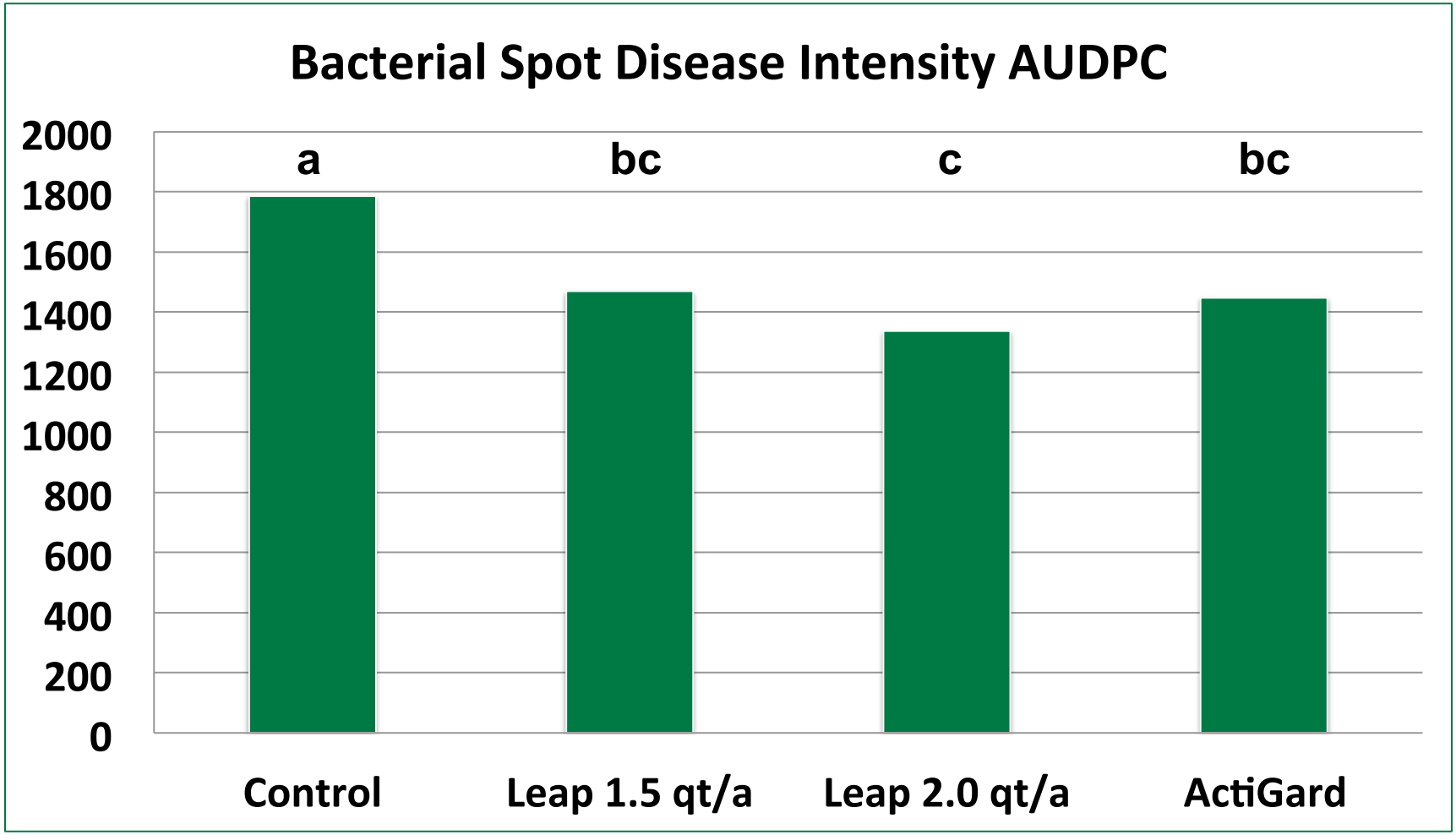
Leap™ Biopesticide

Leap Agrosolution- Appl. Guidelines

- ✓ **Standard rate 1QT/A (range 1QT – 2QT/A)**
- ✓ 1QT Leap applied at 50-100 GPA
- ✓ Do not exceed 10 apps per crop
- ✓ Note- Leap not yet registered by the U.S. EPA
- ✓ This is not an offer to sell or distribute Leap

- ✓ Leap on tomato-application regime:
  1. Rotation program: Leap (1QT/A) / copper product
  2. Rotate products and use 5-7 day spray interval

Leap™ Biopesticide

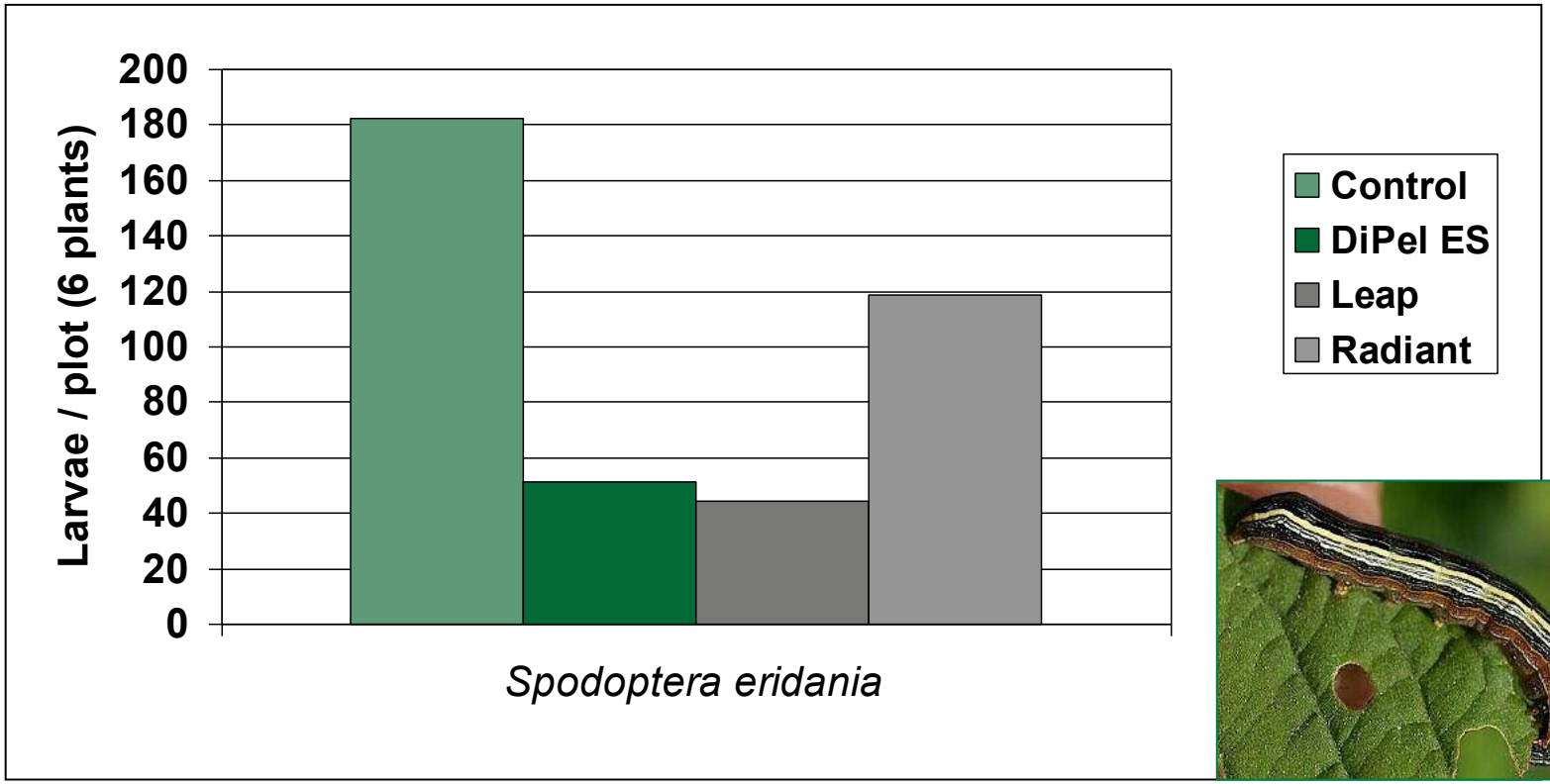


Mathews Paret (Univ. Florida) 2015 Field Trial

Note: SAR products rotated weekly with Mankocide

Leap™ Biopesticide

Better Crops field test (Ft Pierce, FL) showed strong insect control from both DiPel ES and Leap™

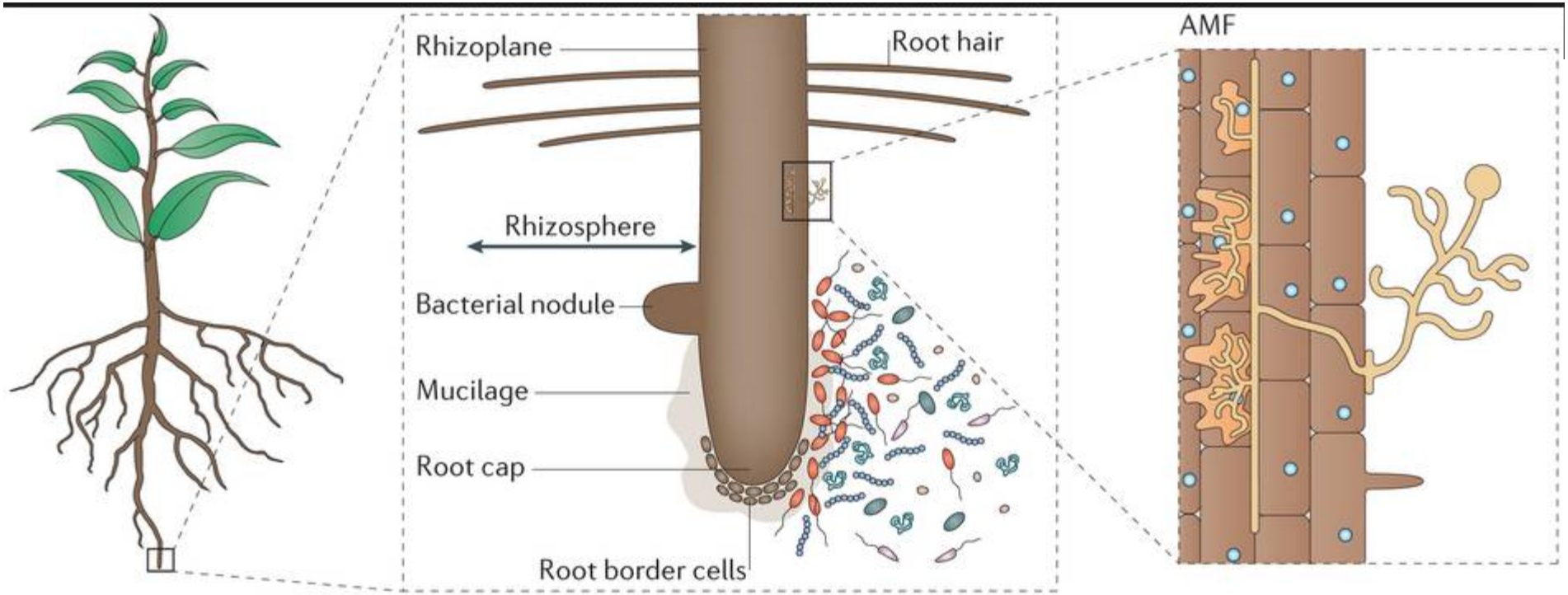


VBC Scientist: C. Campbell
Cooperator: Better Crops LLC
ExSum#: 2012CCAM2010

Crop: Tomato
Cultivar: Tygress
Plant Date: 08-29-12

Eval Date: 72DAP
Site: Ft. Pierce, FL
Country: USA

THE RHIZOSPHERE



Nature Reviews | Microbiology

Rhizosphere Factoids:

- **2-5 mm zone around root surface**
- **Billions microbial cells**
- **High level similarities with human gut**

ECOLOGY

Soil immune responses

Soil microbiomes may be harnessed for plant health

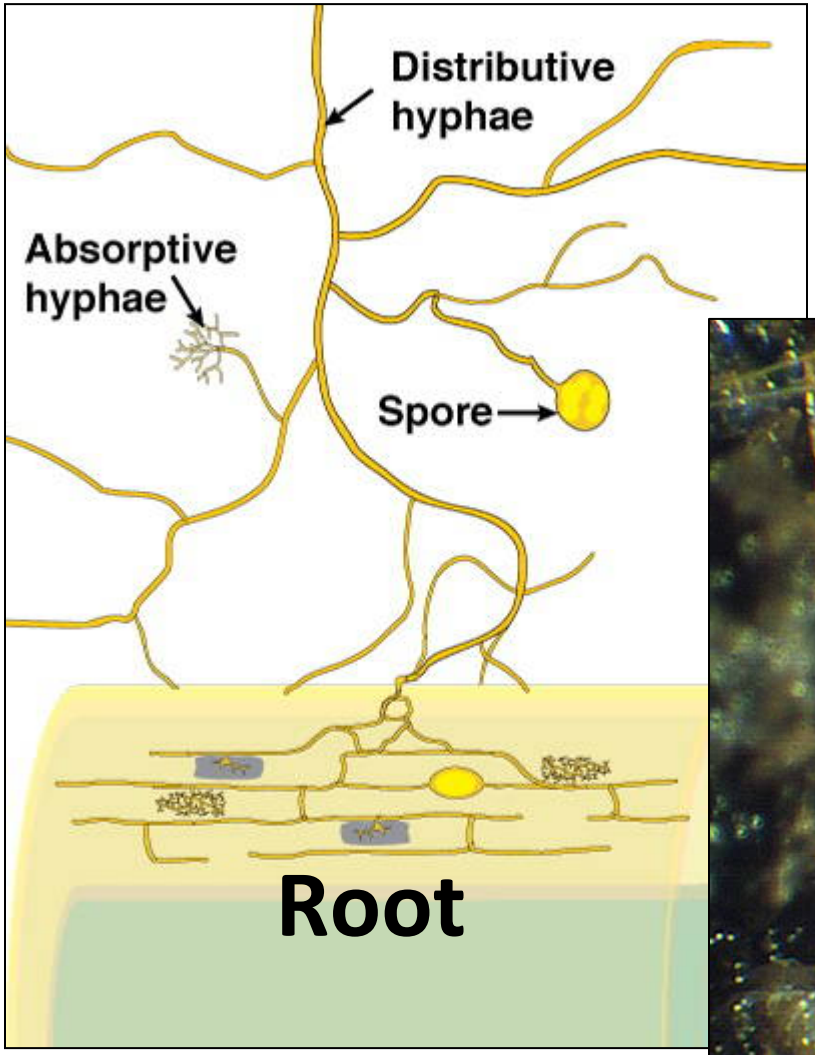
Science
AAAS

Soil immune responses
Jos M. Raaijmakers and Mark Mazzola (June 16, 2016)
Science **352** (6292), 1392-1393. [doi: 10.1126/science.aaf3252]

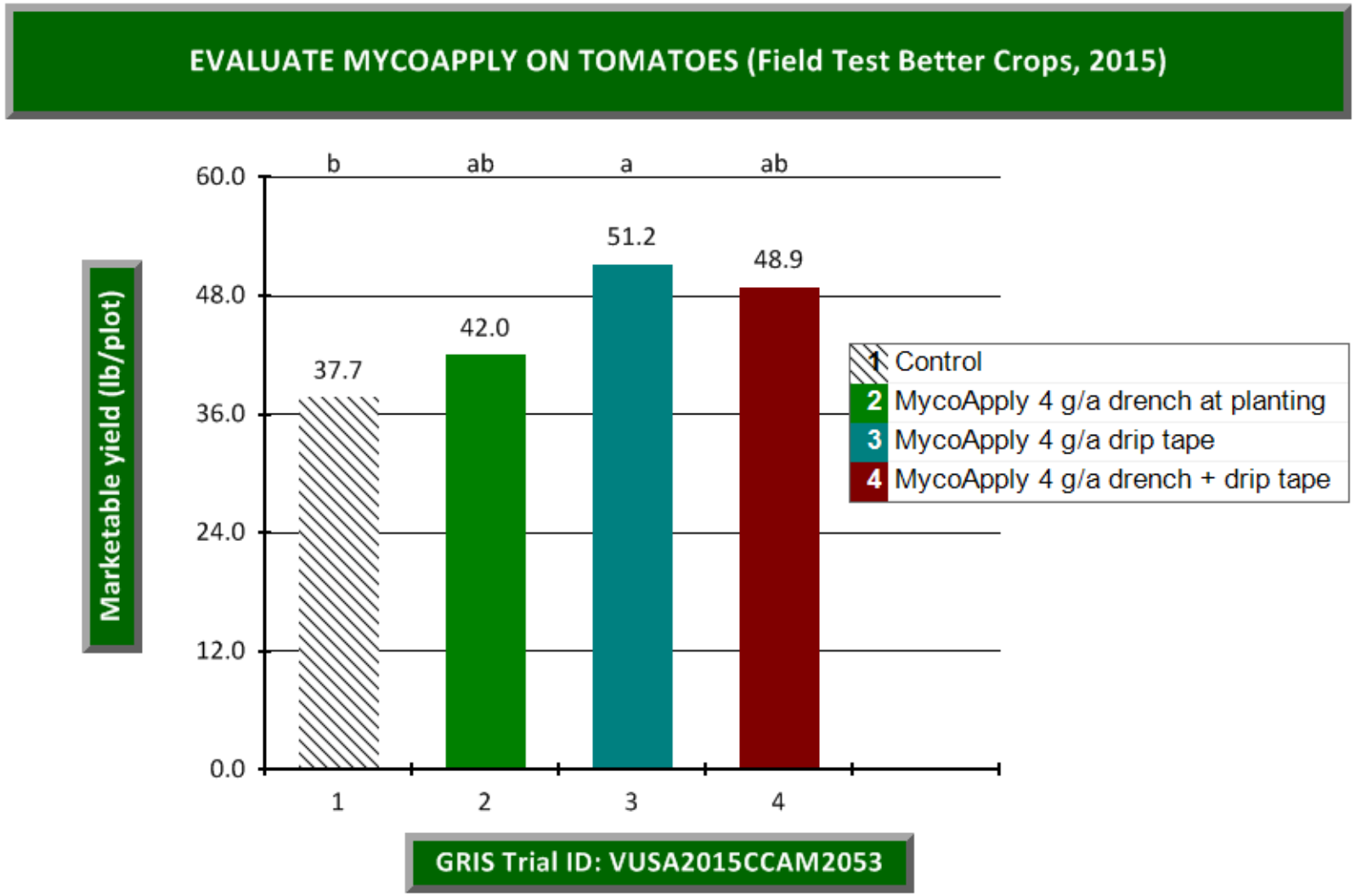
EndoMAXX Arbuscular Mycorrhizal (AM) Fungi

GENERAL INFORMATION

- Contains living propagules of 4 species of AM fungi
- Colonize rhizosphere of plants in a symbiotic manner
- AM fungi grow into network of hyphae associated with roots
- Expand root absorbion of water & nutrients under variable environmental conditions
- **Mycorrhizal fungi form symbiotic associations with roots of 80% of all plant species**

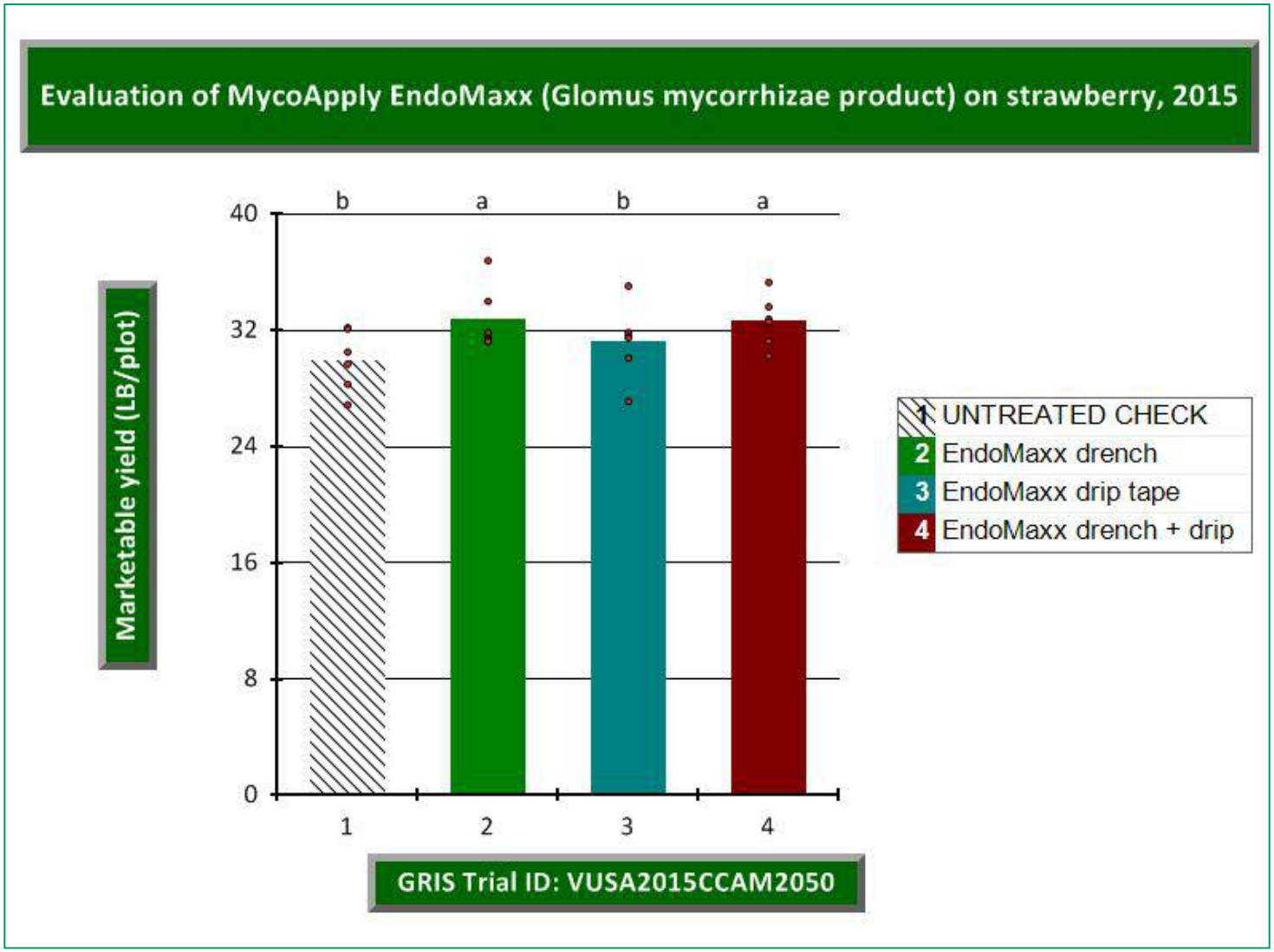

Distributive hyphae
Absorptive hyphae
Spore
Root

MycoApply - Tomato Field Test – Ft. Pierce, FL

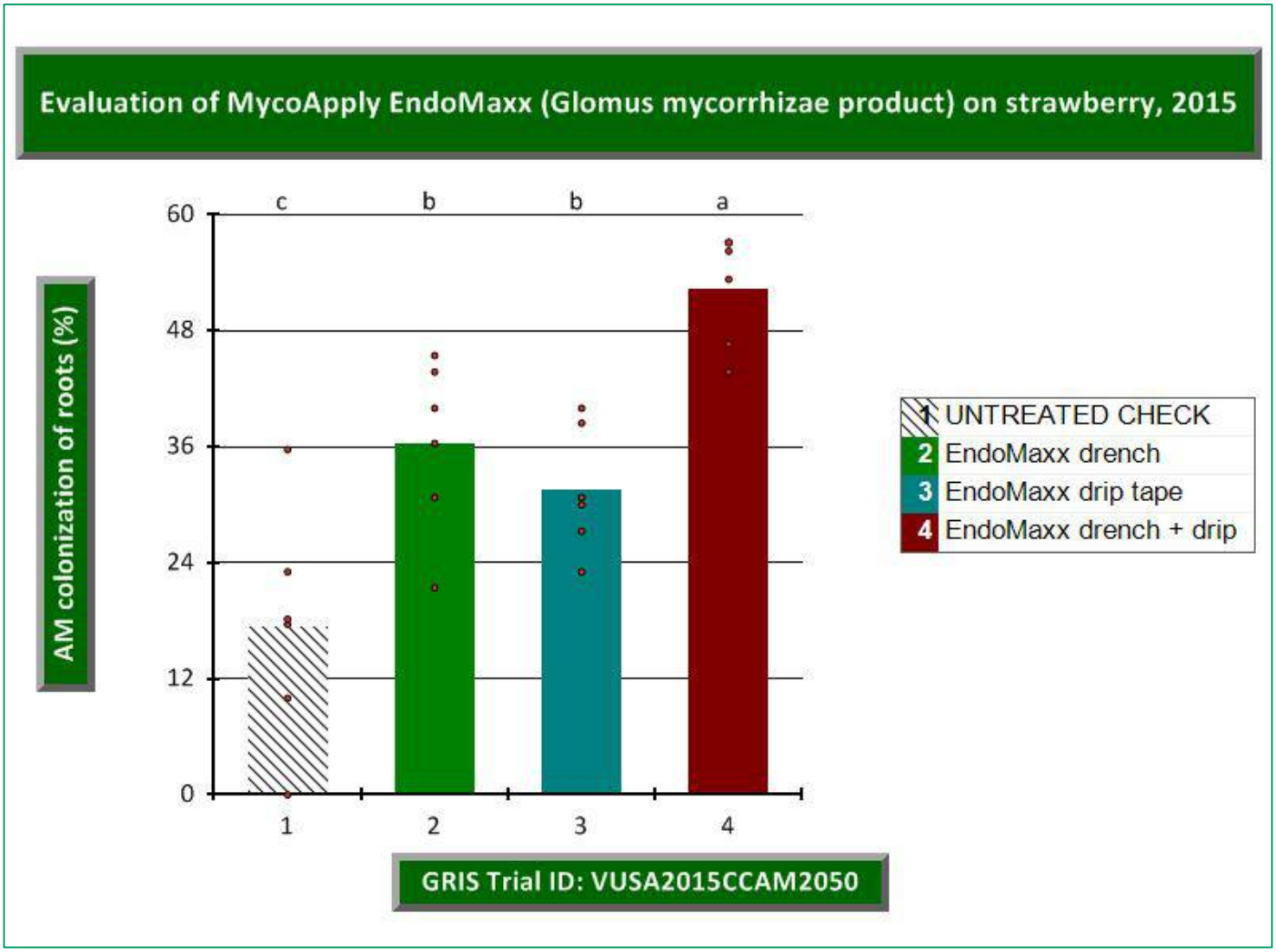


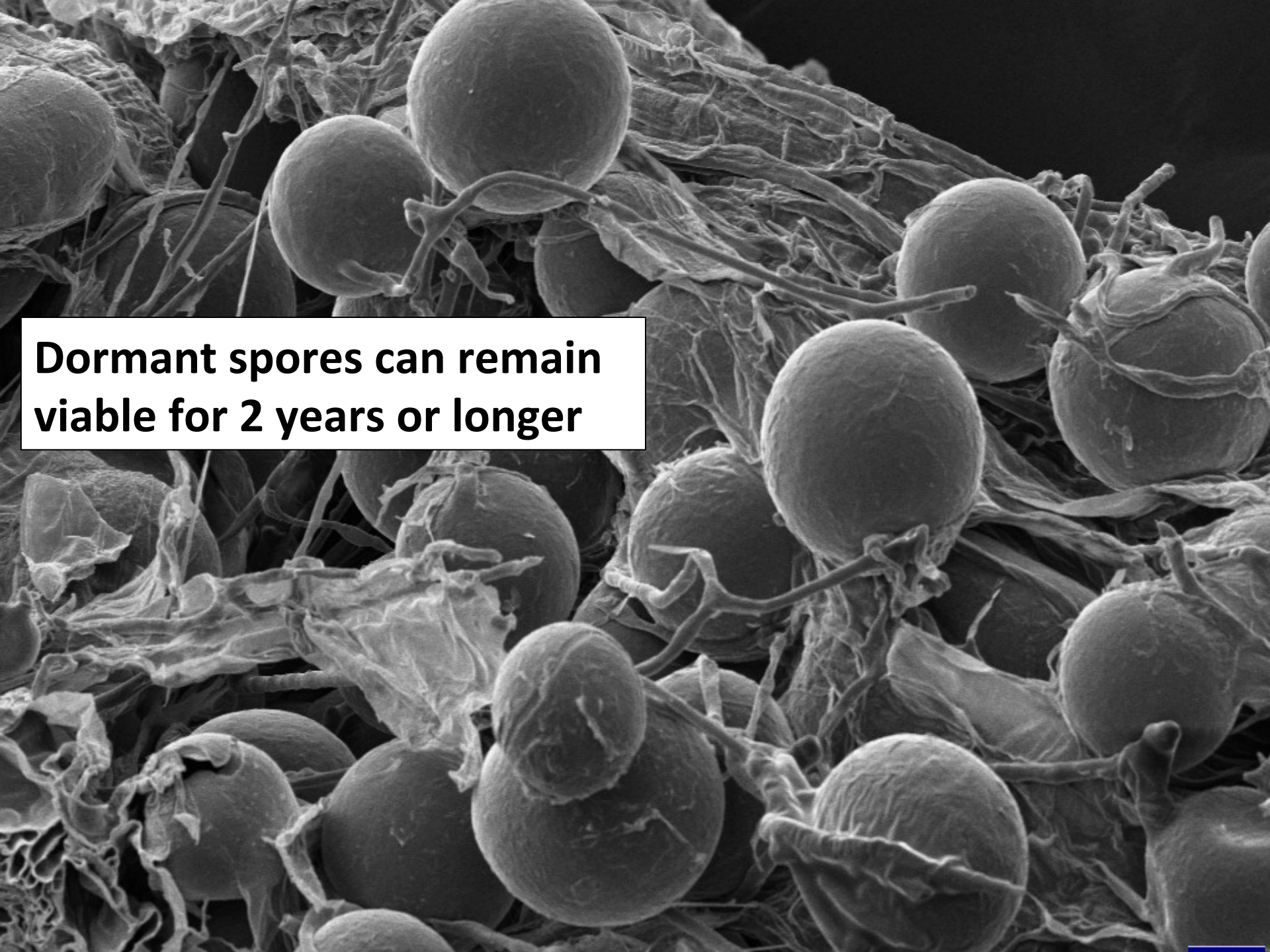
MycoApply EndoMaxx Field Trial: Strawberry

MycoApply EndoMaxx Field Trial: Strawberry



MycoApply EndoMaxx Field Trial: Strawberry




Dormant spores can remain viable for 2 years or longer