

# 2012 SMFD

## Michael Rethwisch – Reuse from 2011

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## INOCULANTS & GROWTH STIMULANTS

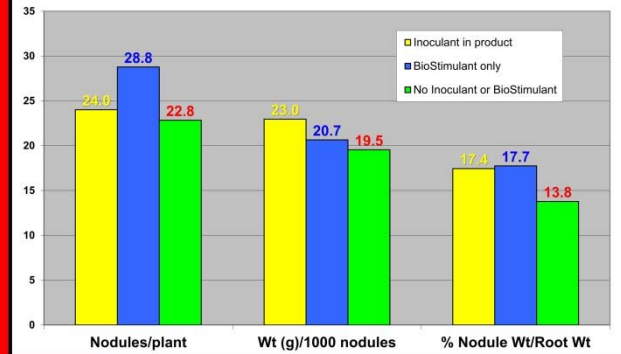
What are they?

How are they similar?

How do they differ?

2011SMFD-Rethwisch-Reuse (1)

### Effect of Seed Treatment Class on Nodules, Lancaster County, 2011



2011SMFD-Rethwisch-Reuse (2)

## INOCULANTS

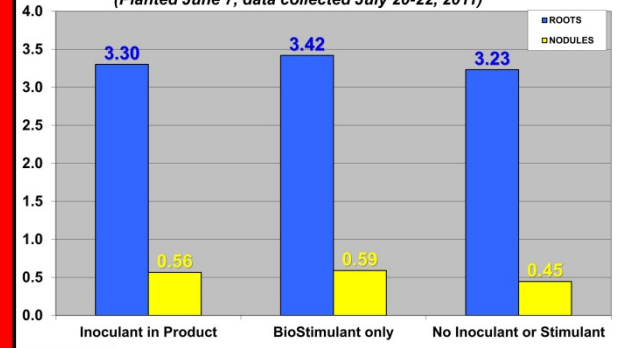
*(Live bacteria or fungi intentionally added to plants)*

- **THREE MAIN CLASSES:**
  - a) Symbiotic relationships with plants
  - b) Antogonistic with pests
  - c) Increase nutrient uptake

2011SMFD-Rethwisch-Reuse (3)

### MEAN WEIGHT/PLANT (g) of PIONEER 93M11 SOYBEANS by TYPE of SEED TREATMENT, LANCASTER COUNTY, NE

*(Planted June 7, data collected July 20-22, 2011)*



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## **BIO-STIMULANTS**

**Substance from one biological system that elicit positive growth responses in a different organism.**

**This could be a hormone, extract, or a molecule**

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## **TAKE HOME MESSAGE**

- **Bio-stimulants can increase potential yield**
- **They do not replace nutrition**
- **Increased yields from bio-stimulants will not be realized if fertility is limiting**

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