Bottom up thrips control

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“Bottom up” Thrips Control

Effective Pest control

RIGHT PLANT

RIGHT ENVIRONMENT

RIGHT CONTROL AGENTS

• Plant resistance
• Genetic
• Induced
• Production practices
• Fertilizer
• Biostimulants

Exclusion/sanitation
Clean start
Mass trapping

Greenhouseipm.org
Link between thrips and fertilizer

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![Graph showing thrips population comparison between low and high fertilization]

- Reducing N did NOT affect crop yield!

Food for thought...

- Most greenhouse crops are on high-fertilizer regimes
- Research suggests nutrient concentrations can be reduced 50-75% without affecting the quality of the finished crop (Zheng et al., 2004; Zheng et al., 2010)

- **Other considerations:**
  - Climbing costs of fertilizers
  - Potential legislation regulating N and P runoff
Biostimulants

- compounds, substances and micro-organisms that are applied to plants or soils to improve crop vigour, yields, quality and tolerance of abiotic stresses.

Microbial fungicides that can also act as biostimulants
Effects of biostimulants on insect pests

- **May** help with insect pest management via:
  - better signaling to natural enemies
  - Priming leaves for defense against insects

Battaglia et al. 2013