

# *Microbial control of arthropod pests and disease: perspective of independent private research*

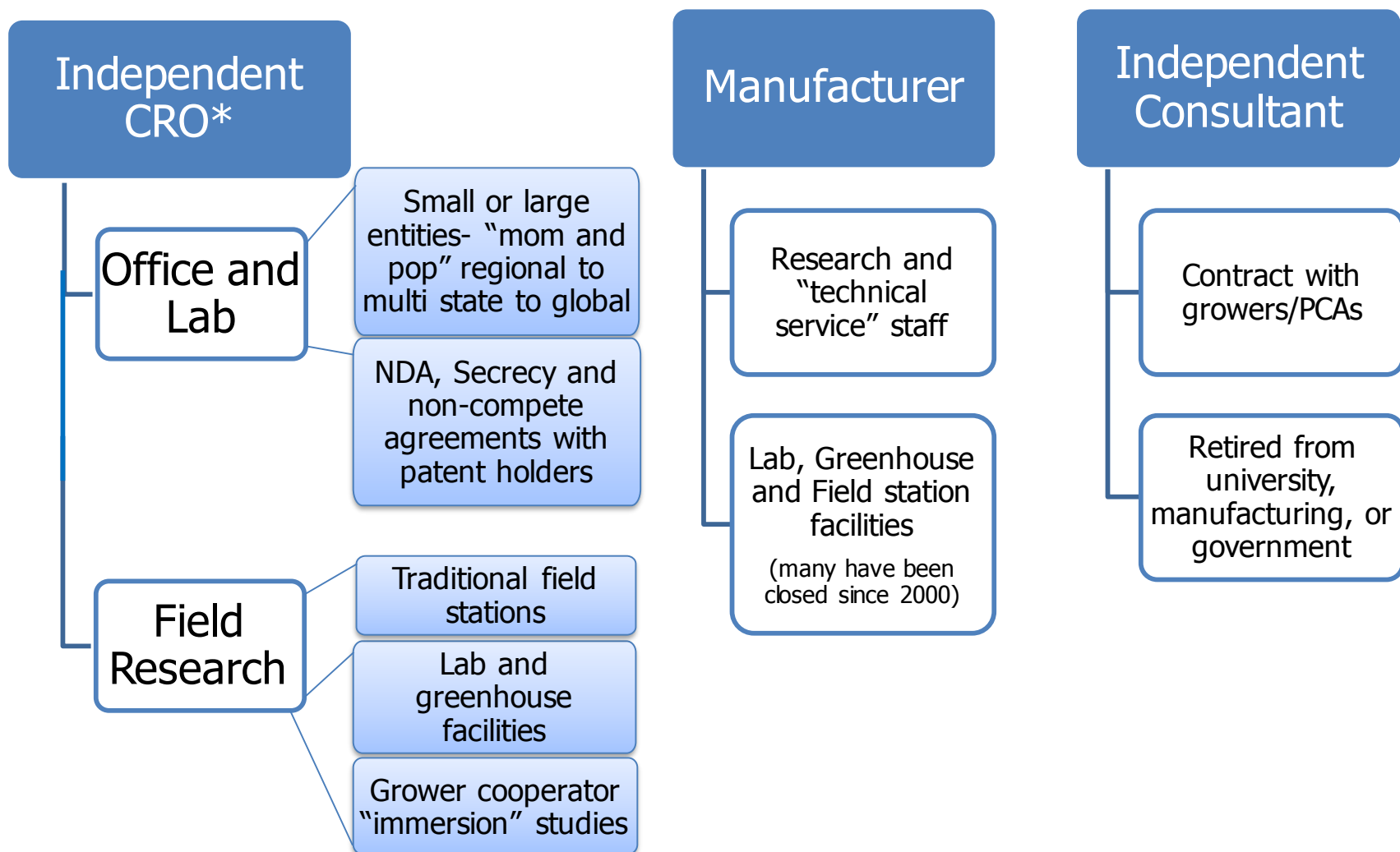
**Frank V. Sances**

Pacific Ag Group

August 13, 2017 – La Jolla, CA  
University of California San Diego



# *Product Development Research*



\*Contract Research Organization





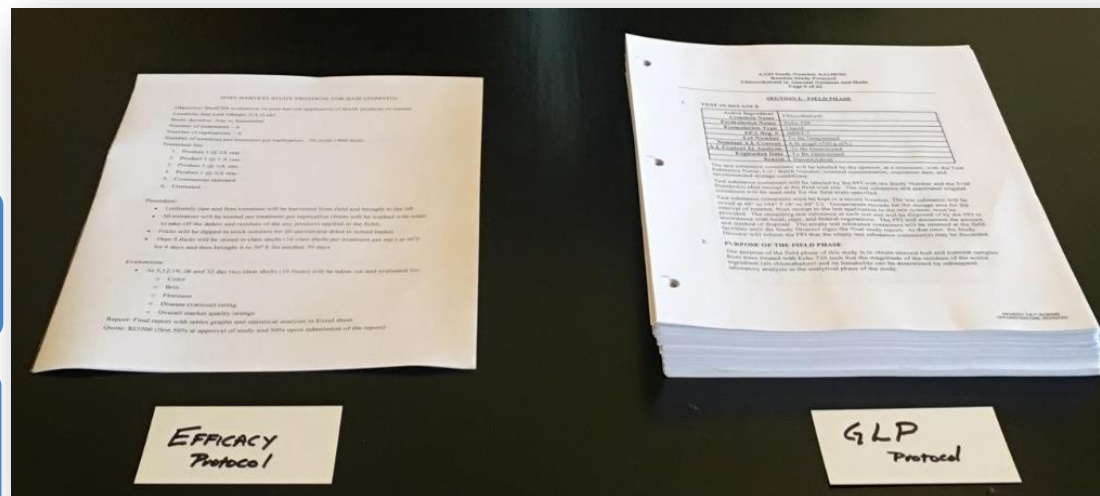
# Study Types

Efficacy – Product Performance





Regulatory – GLP

Agronomy – Fertilizer, Genetics, Other (i.e. Equipment)

Diagnostic – Crop Investigation



# Multiple Facilities Across Broad Geography and Microclimates



**Pacific Ag Research:**

Central Coast:





- San Luis Obispo
- Arroyo Grande (2)
- Huasna
- Guadalupe

Salinas Valley:

- Spreckels
- Chualar

San Joaquin Valley:


- Five Points
- Avenal



**Michigan Ag Research:**




- Albion
- Sunfield

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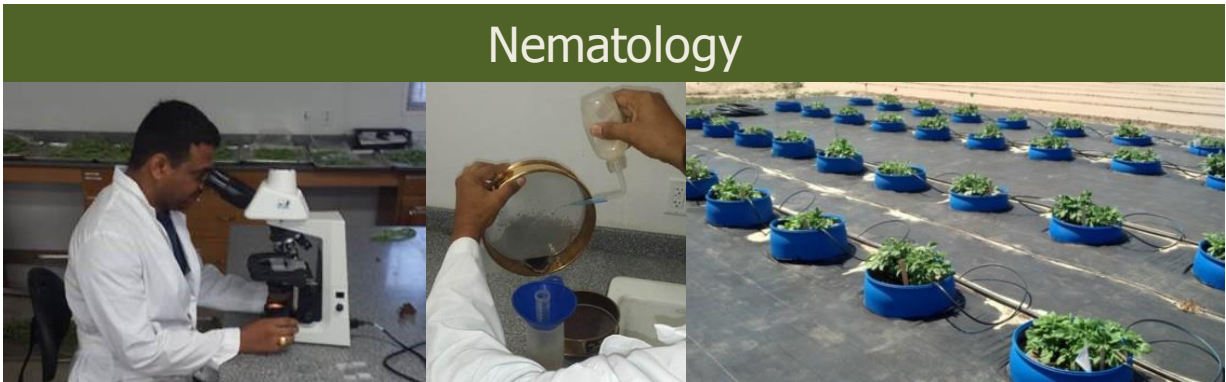
**Florida Ag Research:**

- Thonotosassa
- Dover





# Facilities & Staff Disciplines





# Types of Data

## Crop Safety



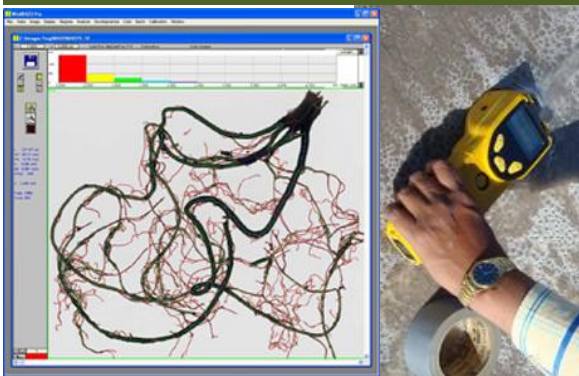
## Damage



## Post Harvest



## Digital Data



## Herbicide





# Specialty Equipment Engineering and Fabrication



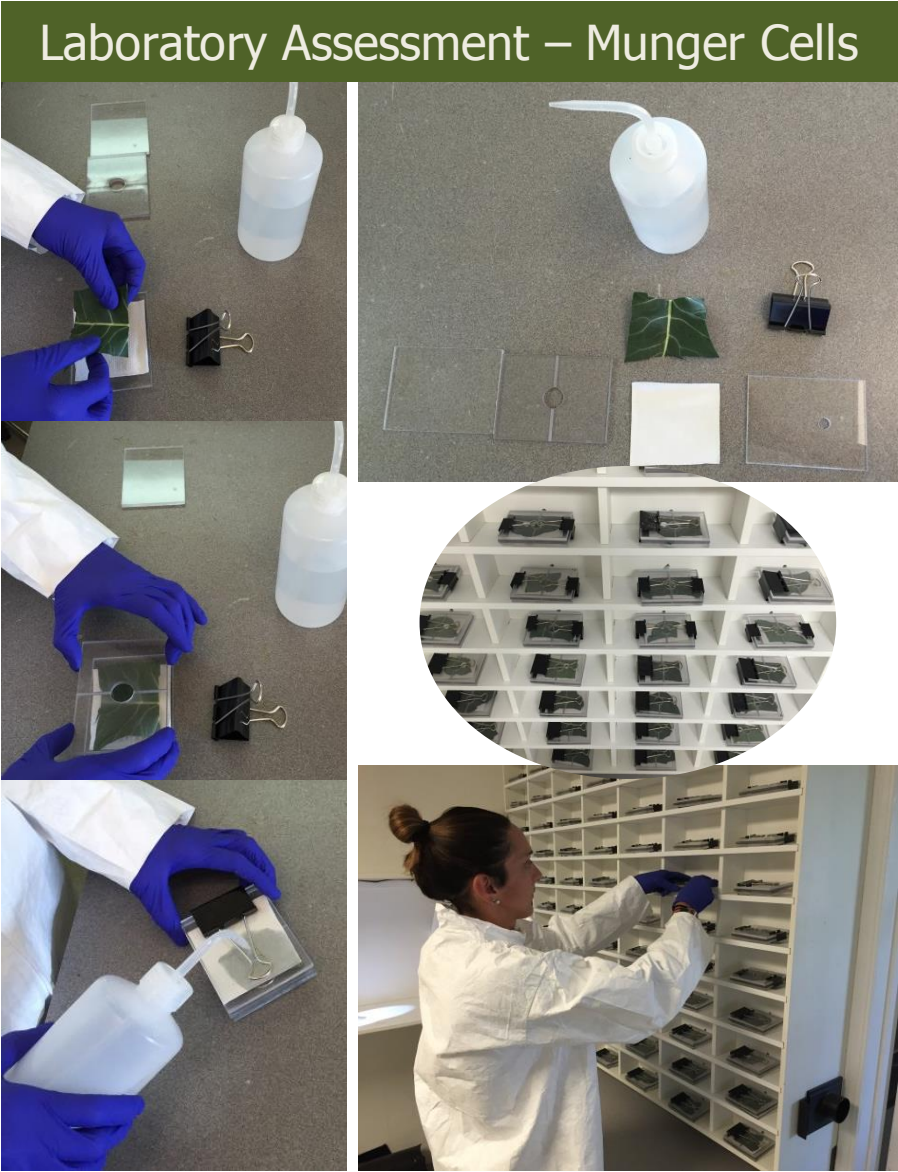


# *Role of Plant Health in product performance testing*





# Primary Methods of Biopesticide Testing





# *Air Monitoring and Worker Exposure*



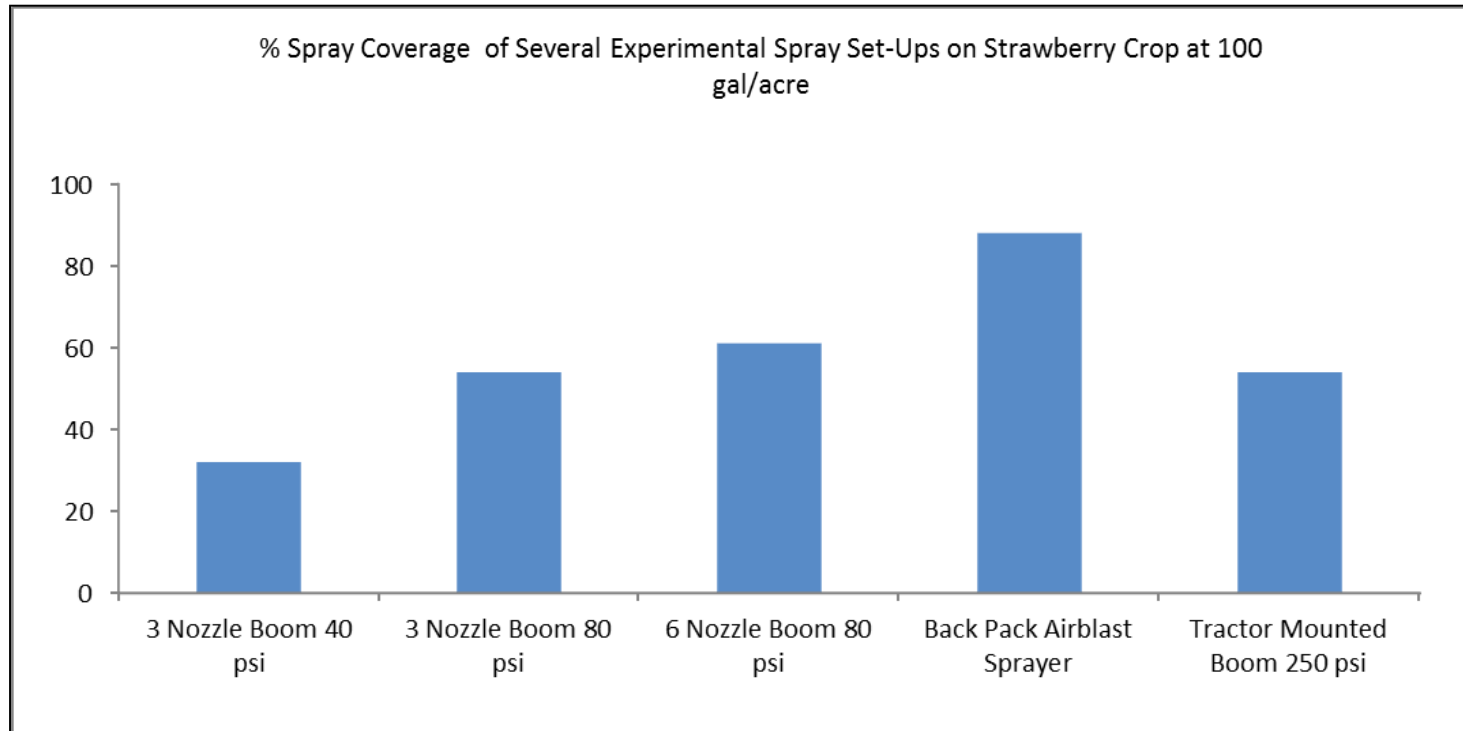


# Improving Biopesticide Efficacy – Spray Coverage





# Improving Biopesticide Efficacy – Spray Coverage



- High Pressure or Air Assist More Effective
- 3 Nozzles at 40 psi not effective



## **Regulatory**

Coordination with state and federal regulatory agencies throughout trial conduct



## **Reporting**

Unless the results are easily understood by the end user, reporting is incomplete







# Thank You

Please visit [www.pacificaggroup.com](http://www.pacificaggroup.com)

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