Atlantic Tech Transfer Team

for Apiculture

ATTTA Update

Kentville, NS

October 20, 2018

Robyn McCallum, PhD, PAg

Objectives

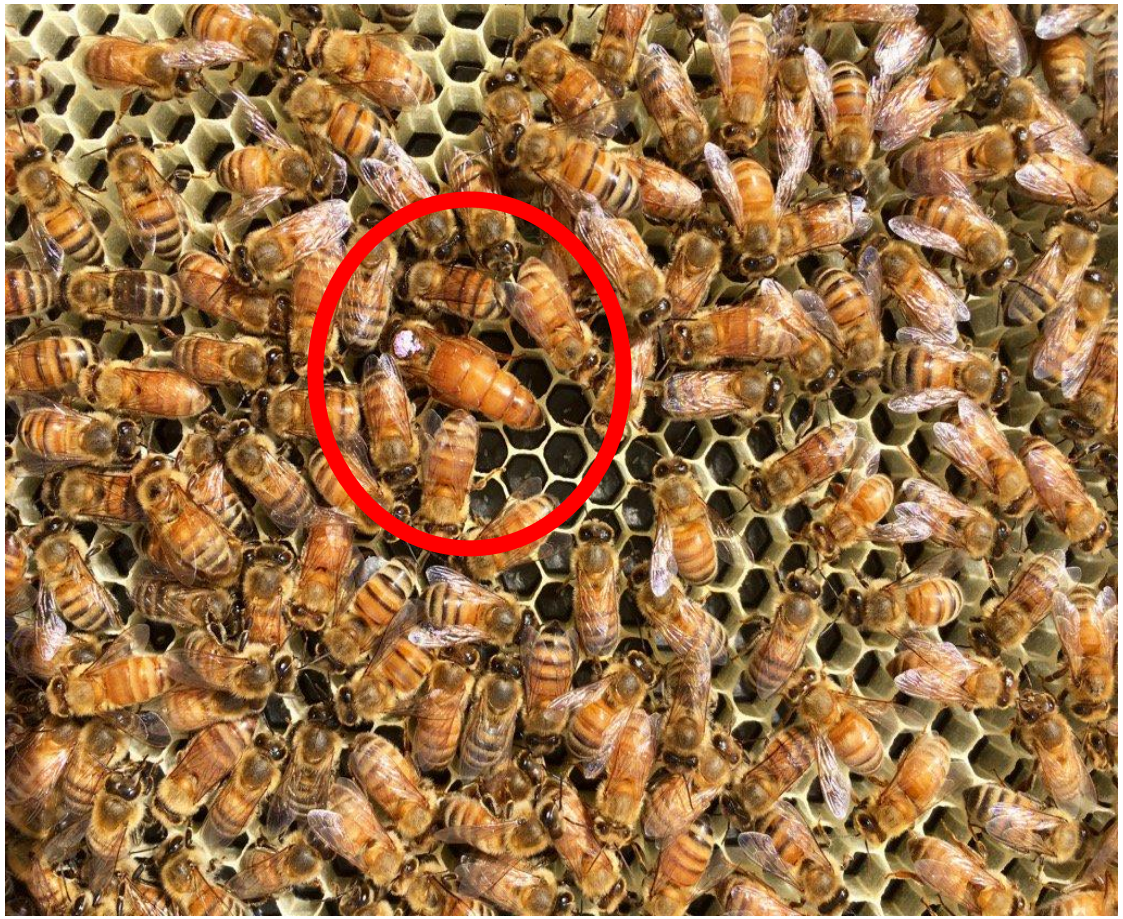
- **Optimizing** hive placement, timing, density, and strength for wild blueberry pollination
- **Improving**
  - overwintering success and addressing spring dwindle
  - honey bee health and nutrition
  - disease and pest monitoring and management
  - biosecurity techniques

Faces of ATTTA

Research

- Nosema
- Pollination
- Pollen Patty
- Miticide Efficacy and Resistance
- Queens

Queen Rearing Case Study: Overwintering and Spring Buildup = Priority One

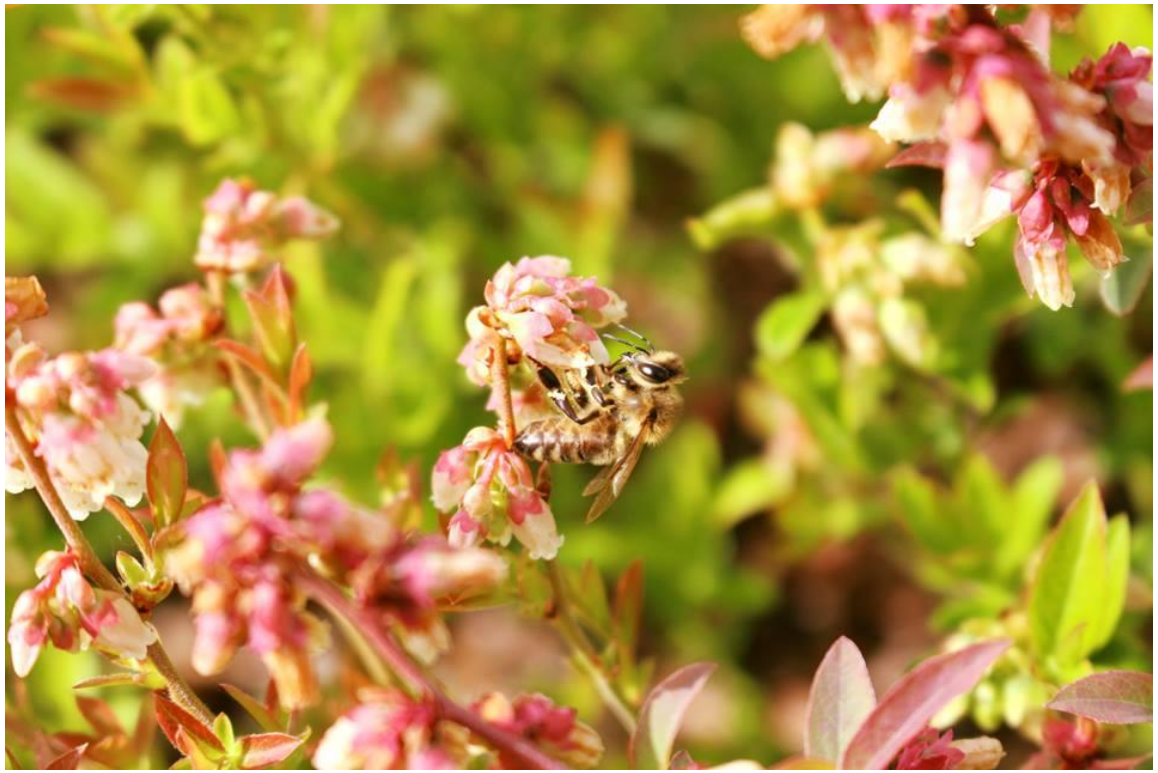



GATORADE
PERFORMER
SensiCare
SensiCare
Sharpie

Queen Research Highlights

- Produced 400 queens for commercial operation in 1st year
- Selected high quality hives
- Conducted cost analysis of rearing queens on-farm
- Trained beekeepers on rearing queens

Pollination




Frost June 4th

Impact of Frost on Bees

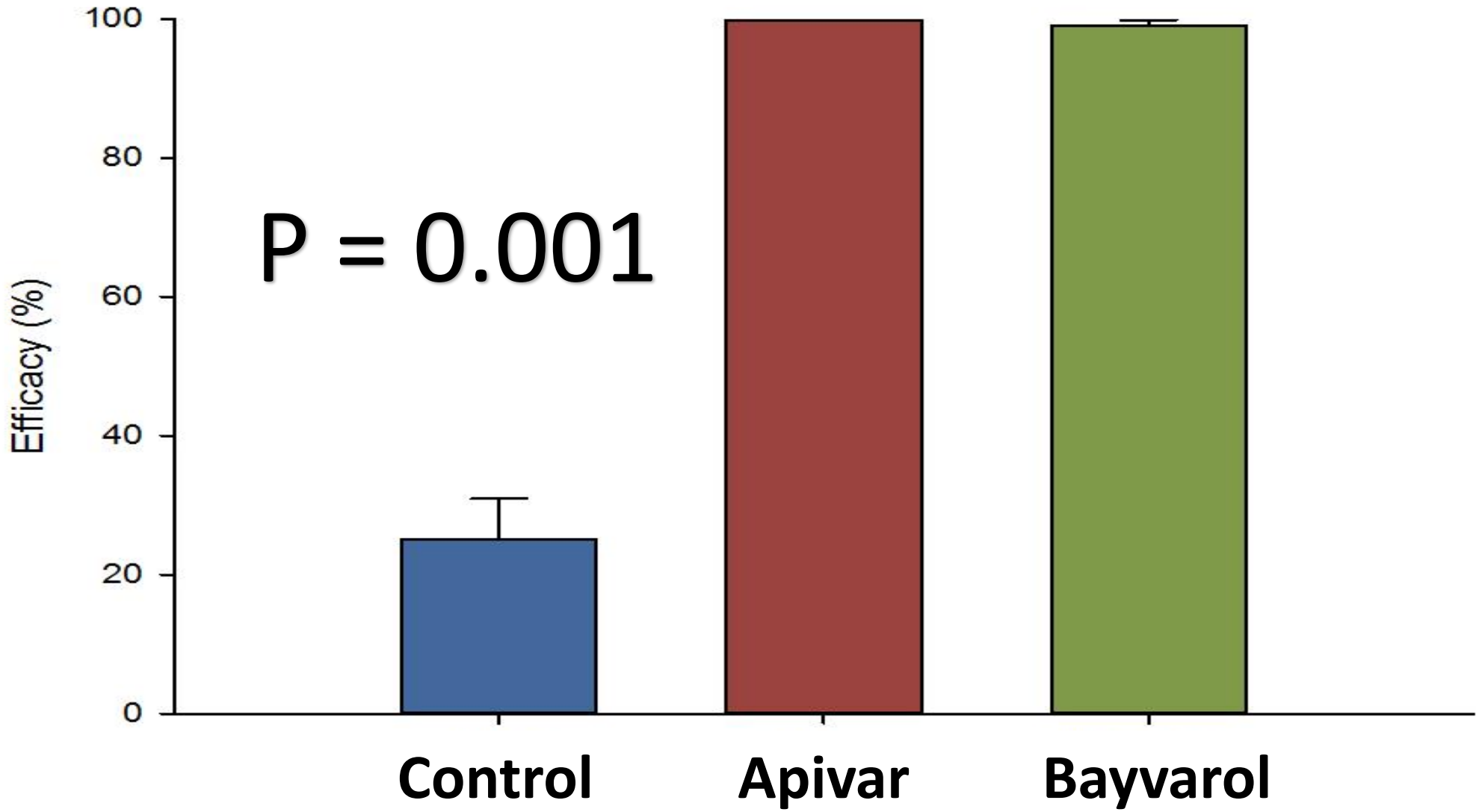
- Working with AAFC to document losses/impacts during pollination
- E.g. compromised honey crop, nuc production, colony growth
- Let us know if you were impacted

(Email rmccallum@perennia.ca or solmstead@perennia.ca)

Miticide Efficacy & Resistance

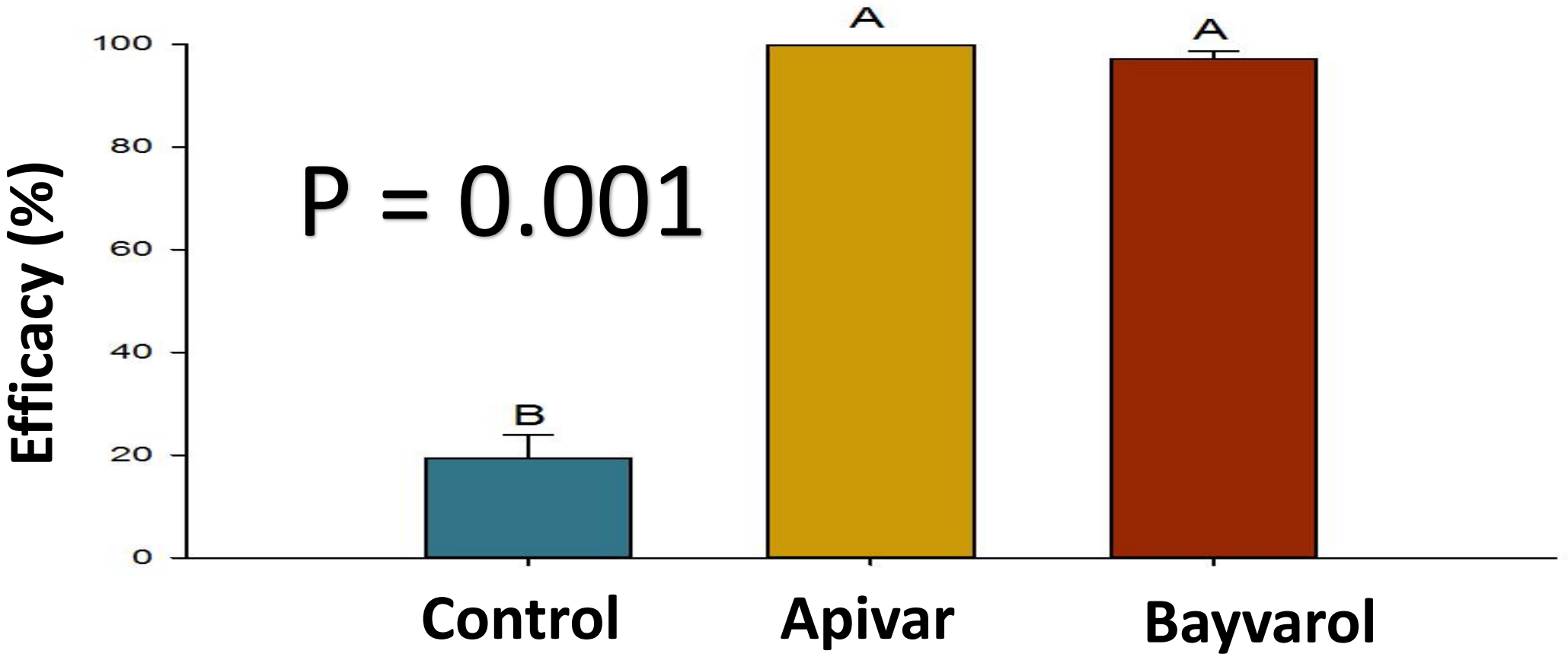
Miticide Results 2018

Late March, NS



Miticide Results 2018

Late Summer, PE

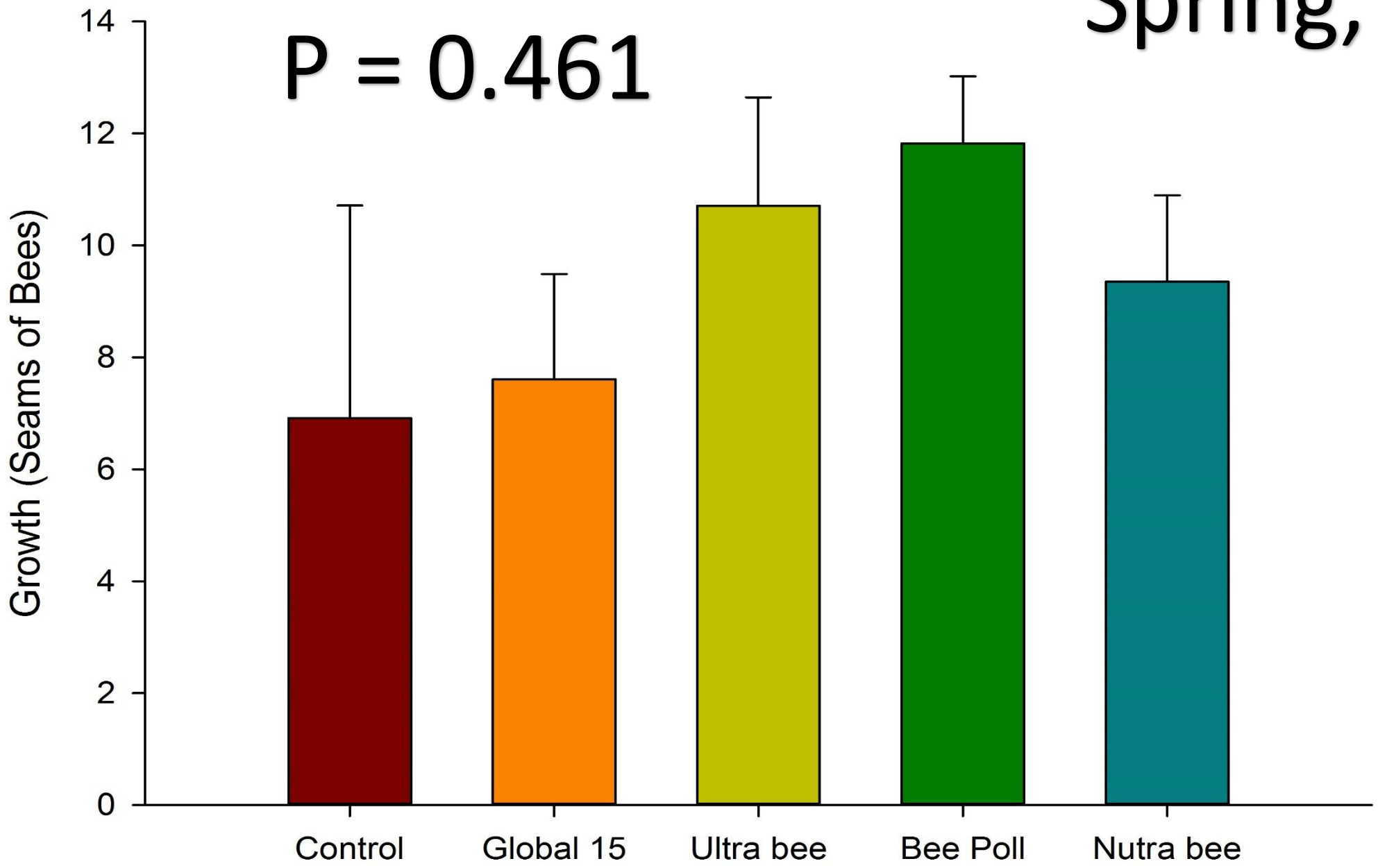


Pollen Trial

Materials and Methods

- Fed pollen patties to treatment groups and compared to control
- Each hive fed 2 lbs of pollen sub
- Monitored hives for colony growth in the spring

Spring, NS

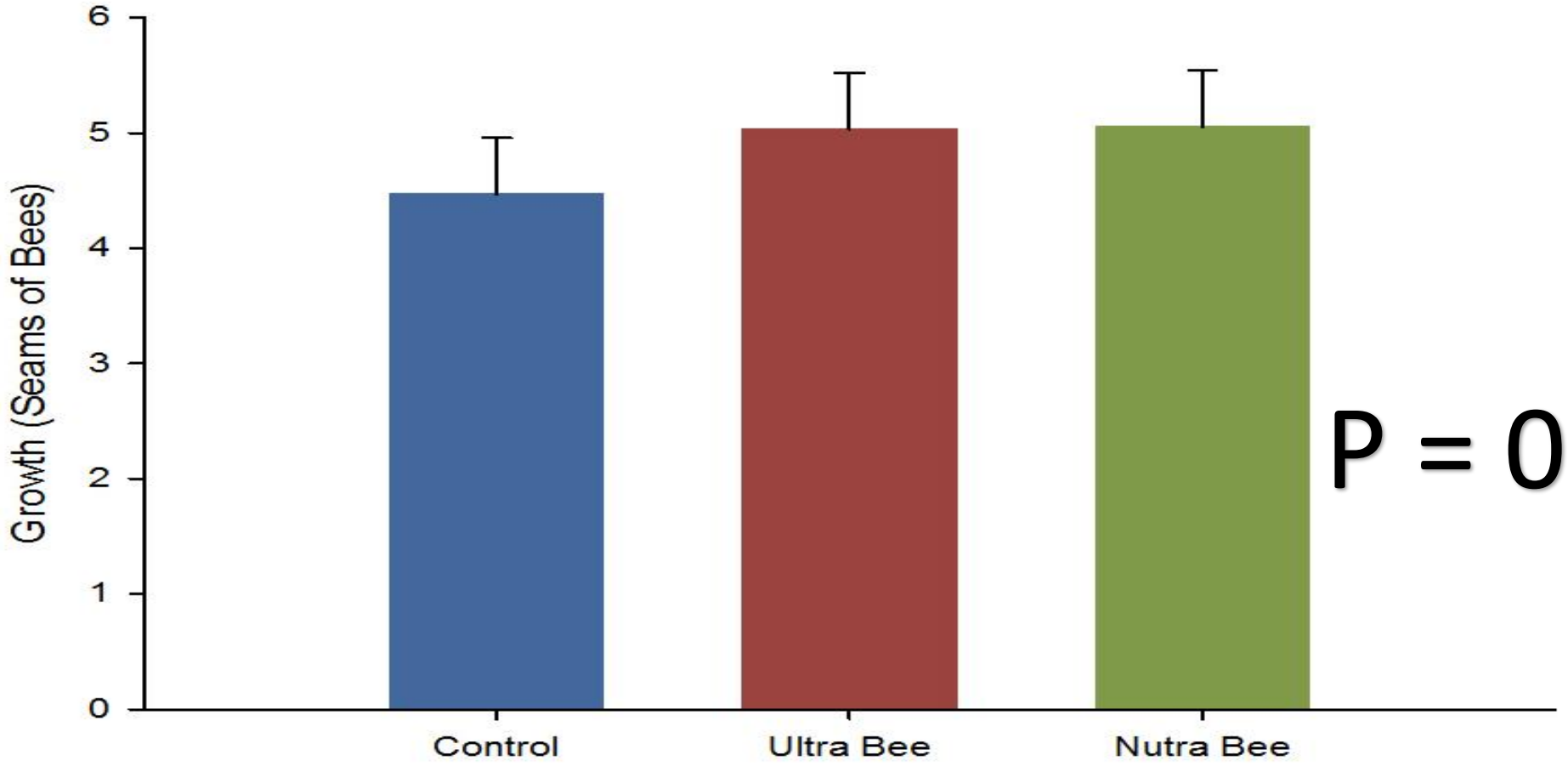

P = 0.461
Growth (Seams of Bees)
14
12
10
8
6
4
2
0
Control
Global 15
Ultra bee
Bee Poll
Nutra bee


ATTTA
Nutra Bee
Rep 7

Materials and Methods

- Treatment colonies fed 3 pounds of pollen sub (10 day intervals)
- Monitored growth of hives from August 9- September 27 (one more week than 2 complete brood cycles)
- Growth in treatment hives subtracted from growth in control hives to calculate growth due to pollen sub

Late summer pollen trial



P = 0.605

Next Steps

- Compare natural pollen collected to pollen sub content
- Examine colonies following spring for overwintering success
- Analyze bees from treatment groups and control to look at physiological differences
- Cost analysis

Nosema Study 2018- determining a baseline


BK 16024
BK 16024
BK 16024


1
3
2
4
5
6


ADENNA

Extension & Teaching

- Northeastern workshops
- Modern Beekeeper
- Veterinarian training

Honey Bees and Pollination

ATTTA Publications & Fact Sheets

Report – Initial Findings on Miticide Efficacy in the Maritimes

Small Hive Beetle Poster

Creating a Bee Yard La création d'un rucher

Feeding Honey Bees Le nourrissement des abeilles

Summer Disease and Pest Monitoring in Honey Bees Dépistage estival des maladies et ravageurs chez l'abeille mellifère

A Comparison of Honey Bee Swarm Prevention Techniques

Fall Honey Bee Management Guide Guide de gestion automnale de l'abeille mellifère

Condensed Report on Miticide Resistance in Atlantic Canada

Comb Rotation

Spring Management Guide

perennia
ideas • innovation • success

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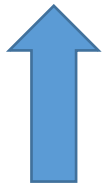
Sustainability Plan

- Communication and consultation
- Creative thinking… can we/should we be selling queens?
- What other hort industries can we bring on board?
- What collaborations can we form (e.g. pesticide companies, environmental groups?)
- Can specific groups fund specific research projects?

Making the Connection

Decrease disease and pest pressures, decrease antimicrobial use, decrease reliance on imported bees



Increase overwintering success, improve spring build up, implement regional queen rearing, implement alternative treatments, enhance pollination efficiency

Diversified income streams, decrease cost of production, more and stronger hives available for pollination, stronger blueberry and beekeeping industries

Contact Info

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