ACTIVE YEASTS IMPROVE SELECTIVE INSECTICIDES FOR CODLING MOTH CONTROL IN PEARS

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Will Pear Ester Work in Pears?

Cidetrak DA MEC
12 ml/Ac
Altacor in Pear

% fruit injury

Altacor
Alt + DAMEC
Alt + MIB
Alt + DA/MIB

5 sprays harvest 8/25
Entrust in Pear

5 sprays harvest 8/25

% fruit injury

Entrust | Ent + DAMEC | Ent + MIB | Ent + DA/MIB

[Bar chart showing comparisons]
MIB Works for Eggs Laid off of Fruit

Mean proportion of larvae causing fruit injury

- Water
- Altacor
- Altacor+MIB

Fruit  Foliage
MIB Works for Eggs Laid off of Fruit

Mean proportion of larvae causing fruit injury

- Water
- Entrust
- Entrust+MIB

Fruit: 0.7
Foliage: 0.4

- Fruit dataset
- Foliage dataset
Bioassays w’ Bread Yeast

Proportion larvae causing injury

- Water
- Entrust
- Altacor
- Delegate

None

With BY/S

Arrow indicates significant difference.
Saccharomyces cerevisiae looks Good

Proportion live larvae

- CpGV
- CpGV + dry bread yeast
- CpGV + wet bread yeast
- CpGV + dry wild yeast

The graph shows the proportion of live larvae for different treatments. The treatments with the same letter are not significantly different. The CpGV treatment has significantly higher proportion of live larvae compared to the other treatments.
2014 Summary

- DAMEC looked good in pear field trials!
- MIB did not help in pears.
- Combining DAMEC and MIB did not help.
- MIB had some activity early season in apple.
- Lab assays with MIB showed no improvement.
- MIB helped when larvae were placed on adjoining foliage.
- Bread yeast plus sugar looked better than MIB.
- BY+S looked good in assays with Delegate
2015 — Final Budget $13,000

- Final focus is on the use of DAMEC plus yeast/sugar for CpGV, Altacor, and spinosyn insecticides in replicated field trials.

- More study of larvae placed on or adjacent to fruits to determine whether additives should be restricted to sprays applied during the first generation when eggs are mostly laid on foliage or over the entire season.
Questions

1. Costs: This is rate dependent and we do not know the lowest effective rate that can be added.
   - DAMEC  - $12  @ 12 ml /acre
   - Brewers yeast - $3  @ 1 lb/acre
   - Sugar - $0.5  @ 1 lb/acre

2. Insecticides to be tested: Focus in 2015 will be ...
   - Delegate
   - Altacor
   - Virus
   - Others?

3. Field protocol:
   - Research farm has high pest pressure every year, fruit load varies.