Pear psylla management

New choices for 2005

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Pear pest management

• Key pests
  - Pear psylla
  - Spider mites
  - Codling moth
  - Pear rust mite
  - Others
    • Leafrollers
    • Grape mealybug
    • True bugs

Pear psylla is KING!

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Pear IPM

• Many tools
  ▪ For many pests
  ▪ Most new tools control more than one pest

• Problem of plenty
  ▪ IPM system is:
    • More complex
    • More considerations
    • More decisions
    • (more cost?)
Hard or soft?

- Mating disruption
  - Is an important option
  - Esp. in soft programs

- Chemical management
  - Remains most important
  - Even in soft programs

- Biocontrol is a good goal
  - But tough to rely on

- Integrate
  - Use the best of both chemical and biological controls
New registrations

- **Calypso** - Sept 2003
- **FujiMite** - August 2004
- **Pending**
  - Applaud (buprofezin, Nichino America)
  - Clutch (clothianidin, Arvesta)
  - Rimon (Diamond, novaluron, Crompton)
  - (flonicamid, FMC)
New registrations

- So many choices
- Only two new modes of action
  - New products are all in the same classes as available materials
    - Applaud, Zeal
  - Some work better than available comparable compounds
    - Fujimite
    - Rimon
Neonicotinyls

• Provado
  - PP, GMB

• Actara
  - PP, GMB

• Assail
  - CM, PP, GMB

• Calypso
  - CM, PP, GMB

• Clutch
  - PP, GMB, (CM)
Calypso

• First use in 2004

• Bayer
  ▪ Targets:
    • Codling moth
      ▪ Equal to Assail
    • Pear psylla
      ▪ Equal to Assail
      • Close to Actara
    ▪ Better than late-season Assail
    • Grape mealybug
      ▪ Equal to Actara and Assail

• May have the same sort of effect on mites as Assail
**Calypso**

- **Best used early in the season**
  - First generation codling moth
    - Re-entry interval is short
    - Pick up pear psylla, grape mealybug
  - First generation pear psylla
    - Clusterbud
    - Petal-fall
    - Target first and second instar nymphs

- This
- NOT this
Clutch

• Close to registration

• Arvesta
  ▪ Targets:
    • Pear psylla
      ▪ Equal to Assail
    • Close to Actara
    ▪ Better than late-season Assail
    • Grape mealybug
      ▪ Equal to Actara and Assail
    • Codling moth
      ▪ Not as effective as the other neonicotinyls

• May also have the Viagra effect on mites

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• All neonicotinyls work for PP
• Also Applaud
Clutch also works

Accumulated Nymph Days High Trial 2

Accumulated Nymphs/Leaf Low Trial 2
2004 Trial – Neonicotinyls at PF

1st Generation Nymph Days

- Clutch 4oz/Oil
- Clutch 6oz/Oil
- Calypso 4oz/Oil
- Calypso 6oz/Oil
- Calypso 8oz/Oil
- Assail 2.3/3.4 oz/Oil
- Actara 5.5 oz/Oil
- Nexter 6.6oz/Oil
- Nexter 10.0oz/Oil
- Agri-Mek 16 fl oz/Oil
- Check

5/25/2004
2004 Trials - Neonicotinyls in summer

3rd Generation Nymph Days

- Clutch 4oz/Oil
- Clutch 6oz/Oil
- Calypso 4oz/Oil
- Calypso 6oz/Oil
- Calypso 8oz/Oil
- Assail 2.3/3.4 oz/Oil
- Actara 5.5 oz/Oil
- Nexter 6.6oz/Oil
- Nexter 10.0oz/Oil
- Agri-Mek 16 fl oz/Oil
- Check

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Applaud / FujiMite Trial

• Large plots
  ▪ Speed sprayer
  ▪ High pressure (*no Surround prebloom*)
  ▪ Low pressure (*Surround prebloom*)

• Treatments (*Clusterbud / Petalfall*)
  ▪ Assail Applaud
  ▪ Assail Actara
  ▪ Applaud FujiMite
  ▪ Nexter Actara
  ▪ Untreated
Applaud / FujiMite trial  Nymph PP

All work through first generation

Date


Untreated

Assail 3.4 oz/Applaud 2 lb
Applaud 2 lb/Fujimite 2 pt
Assail 3.4 oz/Acatara 5.5 oz
Nexter 10 oz/Actara 5.5 oz
Applaud / FujiMite trial - Adult PP

All work through first generation

But Assail/Applaud held adults down longest
Low pressure trial - Adults

Everything works all season

Agri-Mek

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Low pressure trial - Nymphs

Everything works all season

Agri-Mek

Date

Fujimite
Esteem
Fujimite
Applaud
Nexter
Esteem/Carzol
Esteem/Carzol
Check

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Rimon / Diamond

• Effective CM material
• Also effective for pear psylla
  ▪ Like Dimilin
    • But better
• But CM is better use
  • More alternatives for pear psylla
  • OP-replacement important
Resistance management

- Many options
- Use material once per season
  - Several are limited to once
- Rotation, Rotation, Rotation
  - Little difference in cost
  - Little difference in efficacy
The Peshastin Ck. Areawide Project

- The Peshastin Creek Growers Association
  - Association of local growers and fieldmen

- Pest Management Program
  - Based on Organic insect management practices
    - Areawide techniques to control Pear psylla and Codling moth
    - Reduce non-selective pesticide use
    - Increase potential migration of beneficial insects
Areawide Organic Project

• After 3 years
  ▪ Psylla are down
  ▪ Codling moth are down
  ▪ Spider mites aren’t a problem
  ▪ Costs are no more than conventional

▪ The program works
**Areawide Organic - pear psylla adults**

- Organic slightly higher
- Entire areawide project kept low

![Graph showing mean number of adult pear psylla per tray from 2003 to 2004.](image-url)
Areawide Organic - pear psylla nymphs

• Again, no differences
Pear IPM for 2005

- Many options
  - Most work very well
- New alternatives
  - Relieve pressure on Agri-Mek
- Take advantage of the new materials
  - Multiple pest effects
  - More bang for the buck
- Develop a strategy
  - Soft-
  - Organic-
  - IGR-
Develop a strategy

• Conserve your tactics

• Avoid difficult situations

• But some growers and fieldmen still put themselves in dangerous situations

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But I am here to help!