Spider mite management

New choices for 2005

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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
• Zeal - Sept 2003
• FujiMite - August 2004

• Pending
  ▪ Kanemite (acequinocyl, Arvesta)
  ▪ 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
Lots of new choices

• Getting through registration quickly
  ▪ OP-replacements
  ▪ Safe for consumers
  ▪ More environmentally-friendly

• Some new classes
  ▪ More chloronicotinyls
  ▪ More METIs
  ▪ Unique miticides
Zeal

• First use in 2004

• Valent
  ▪ Excellent miticide
    ● Unique mode of action
    ● Selective
    ● Fits well in resistance management

▪ Use it once per year
  ● Use Acramite in alternate years

▪ Envidor from Bayer
  ● Another miticide on the way
  ● Also selective and effective

Dunley - Dec 2004
**FujiMite**

- Registered late last season
- Nichino America
  - METI – related to Pyramite / Nexter
  - Targets
    - Spider mites
      - Excellent control of TSSM
    - Also ERM
    - Perhaps rust mites
    - Pear psylla
      - Good control of PP
      - Short PHI makes it useful
      - No degradation in late season control
Neonicotinyls and mites

• Problems with mite increases noticed
  ▪ First noted with Provado in 1995

• Early research with Assail also noted problems
  ▪ In development tests
    • Small plots
  ▪ Observations over many trials confirm it
    • However, it doesn’t always occur

  • The more you use, the more likely the mites
Spider mites in Assail-treated apple

Tetranychid: Cumulative mite days (09 Sep)

- Imidan C1-2-3-4: 6.05
- Assail + oil C1-2-3-4: 159.75
- Assail C1-2-3-4: 254.15
- Assail/oil C1-2 + Imidan C3-C4: 70.26
- Assail C1-C2 + Imidan C3-C4: 72.47
- Assail/oil C1-2 + Imidan C3-C4: 42.69
- Assail C2 + Imidan C1-C3-C4: 25.88
- Utrearted check: 50.00

Assail x 4 increased mites
Viagra for mites?

- At low concentrations, Assail and Calypso appear to increase mite reproduction.
New miticides

- All work well in controlling two-spotted spider mites

TSSM Control

Zeal = Secure
BAJ = Envidor