Sustained support for grower IPM implementation: The Wisconsin eco-apple project

Michelle Miller
University of Wisconsin
Center for Integrated Agricultural Systems

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Economic risks are overwhelming and the learning curve is steep

- Growers want to reduce pesticide risks to themselves & environment
- Expect an increase consumer confidence
- How tailor complex management systems to their particular orchard?
- Who will pay for retooling?
Grower incentives key to successful retooling

- One-on-one coaching – most expensive component, can be augmented with mentoring from grower networks. We estimate $250/visit, min. 3 visits/yr.
- Monitoring tools – low cost investment (~$2,000/ grower per three year commitment)
- Data analysis – developing tools that are crop and eco-tone specific, affordable to any grower
IPM Continuum
Apple Grower IPM Adoption 2002

- 13% <10
- 27% 10 to 20
- 34% 21 to 30
- 25% 31 to 40
- 1% 41 to 50
Network grower IPM adoption 2005 compared to industry baseline 2002
Network Grower Toxicity Reduction

- High Score
- Average
- Low Score


Values: 0, 2000, 4000, 6000, 8000, 10000, 12000
Orchard level changes

• 2002
  – 45% had a structured scouting program
  – 64% used a weather monitor
  – 27% used formal pest counts
  – 36% calculated degree days on-farm
  – 55% used predictive models
  – 27% used thresholds to determine application

• 2005
  – 83% had a structured scouting program
  – 92% used a weather monitor
  – 75% used formal pest counts
  – 92% collected data on-farm
  – 83% used predictive models
  – 83% used thresholds to determine application
Retooling takes time

- Three years to establish data-based management systems
- An additional 3-5 years to make a more complex transition: labor-intensive orchard floor management, costly pesticide substitution
So we know how to do it....

but how do we pay for it?
Need estimate

• ~$1.1 million needed statewide for changes at apple orchard level; ~$80,000 EPA and $100,000 NRCS committed to date (16%)
• ~$75,000 EPA invested to shape federal program to support orchard IPM
• ~$300,000 USDA invested for R&D, extension on eco-apples ($50,000 for 6yrs)
• Cherry and berry growers interested
Long term funding solutions

Market-based certification systems
  – Appropriate for commodity-scale growers
  – Despite years of investment, mixed success given market organization (supermarket consolidation, product line competition)
  – Demand must be strong, consistent to “pull” perennial crop growers through transition
Long term funding solutions

USDA – Natural Resources Conservation Service Environmental Quality Incentives Program
- Developed to provide growers with an incentive to “retool” farms to protect environmental quality
- Less than 1% of EQIP money goes to grower contracts for IPM
- Program administratively complex and current commitments to animal waste management politically entrenched
EQIP experience in WI

- Time-consuming process with little pest management expertise program-wide
- Fortunate to find advocates w/in NRCS staff, STC & industry
- Statewide signup in 2005 very successful, but under-funded
- 2006 more money to distribute, but administrative barrier disallowed revisions to pilot to until 2007 sign-up
Issues encountered

• Political resistance to reallocate $ to pest management
• Pilot must move to local control by 2008
• Lack of expertise with high-value cropping systems
  – NRCS, STC
  – Tech Service Providers
  – Consultant certification
  – Local Work Groups
• Shortage of consultants for tech assist
Addressing issues

- Statewide training effort on orchard IPM 2006-2007
- North Central Region Working Group on EQIP
- Strategy to grow consulting businesses for technical assistance
- Proposal to add a planning process standard for high value crops