# 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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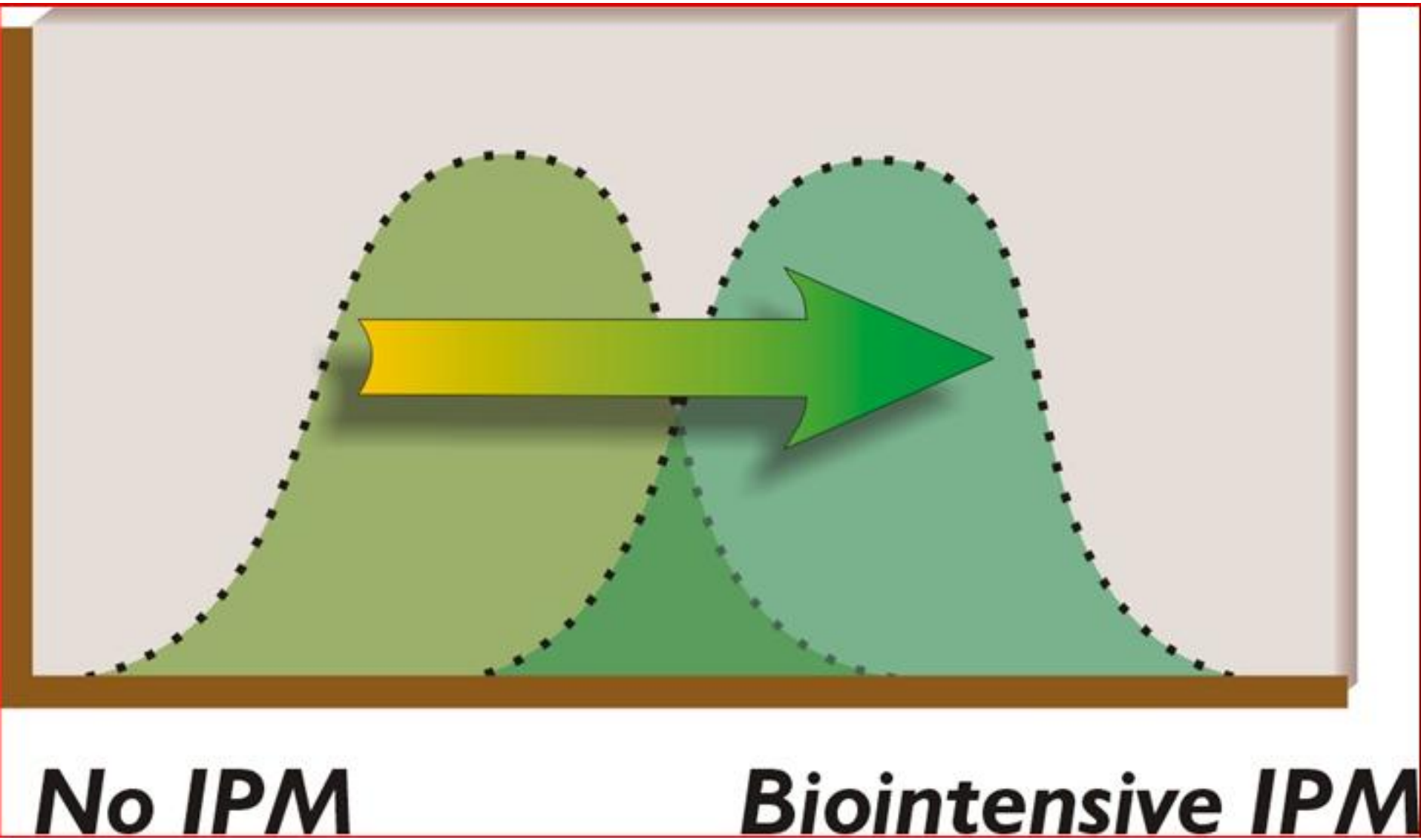
# Economic risks are overwhelming and the learning curve is steep

- 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?

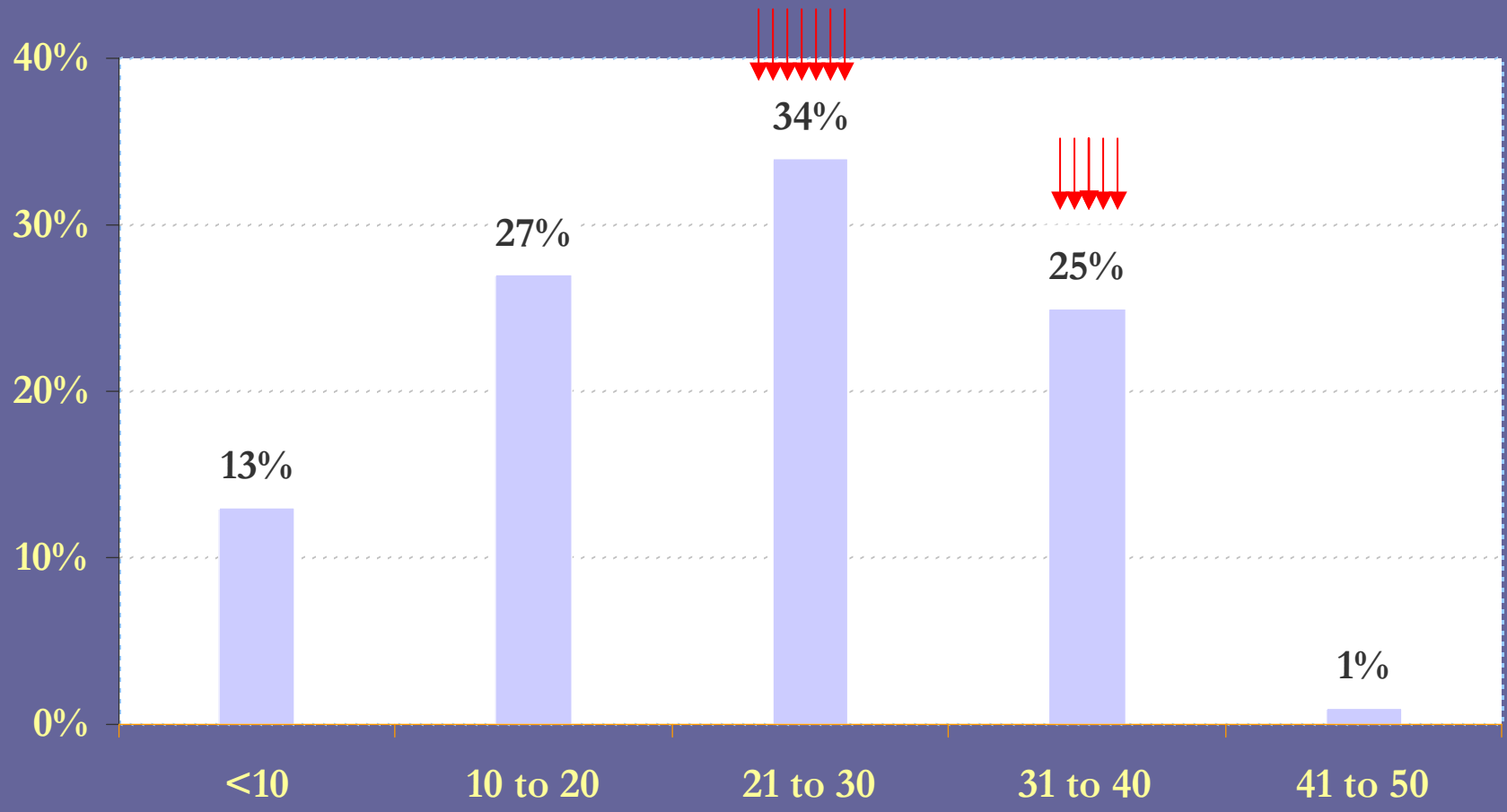
# Grower incentives key to successful retooling

- 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

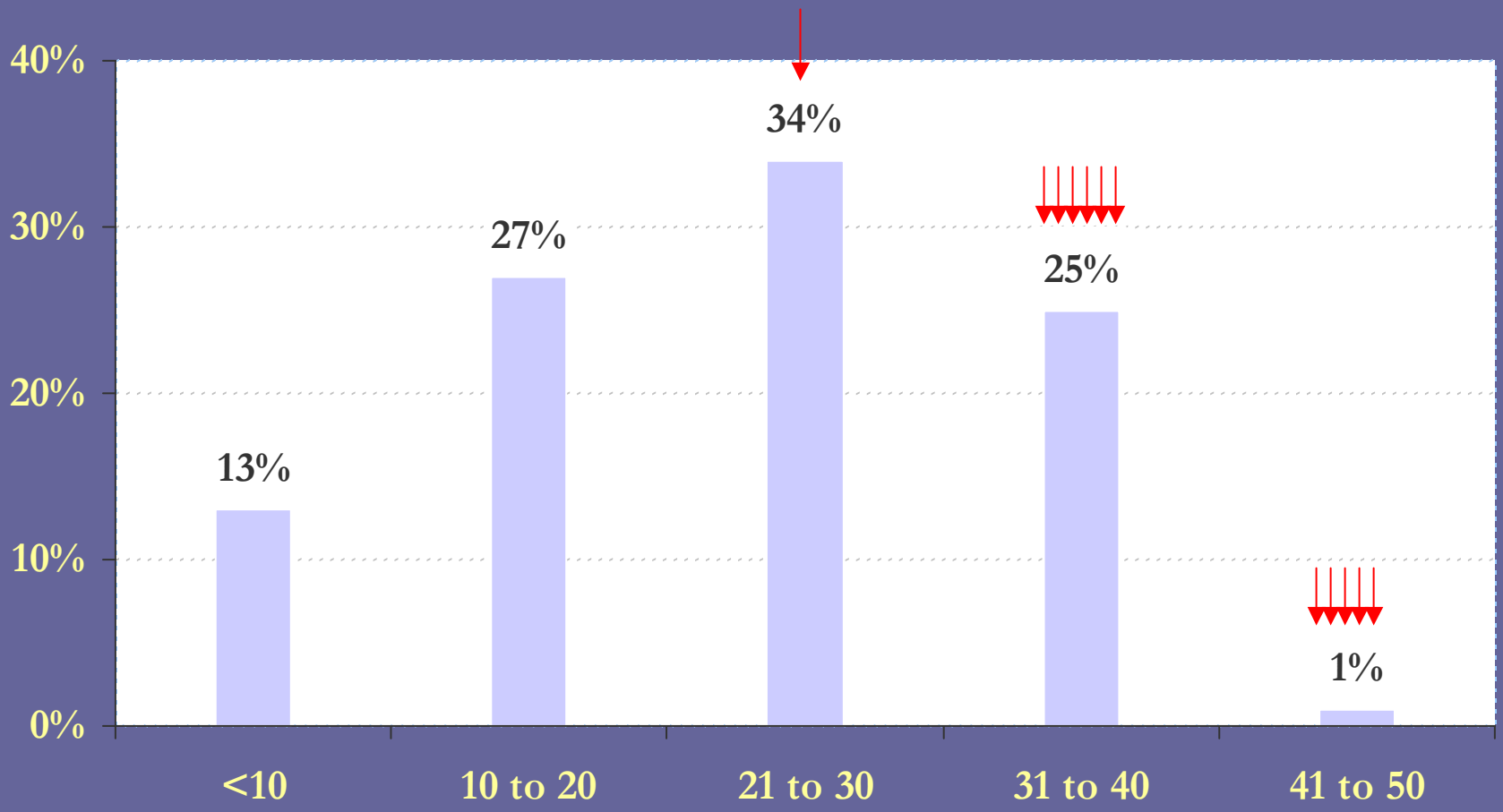
# IPM Continuum



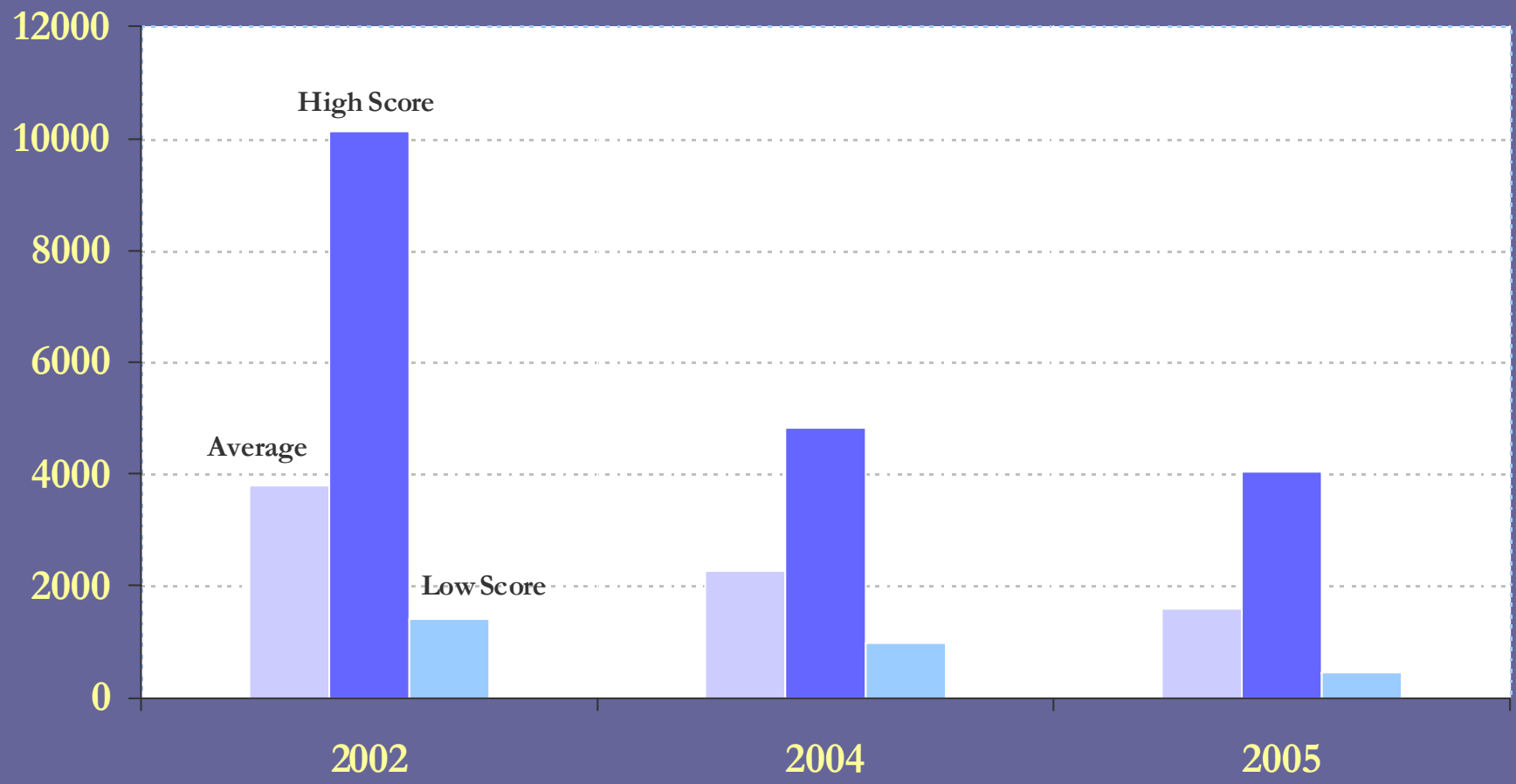
# Apple Grower IPM Adoption 2002



# Network grower IPM adoption 2005 compared to industry baseline 2002



# Network Grower Toxicity Reduction



# 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