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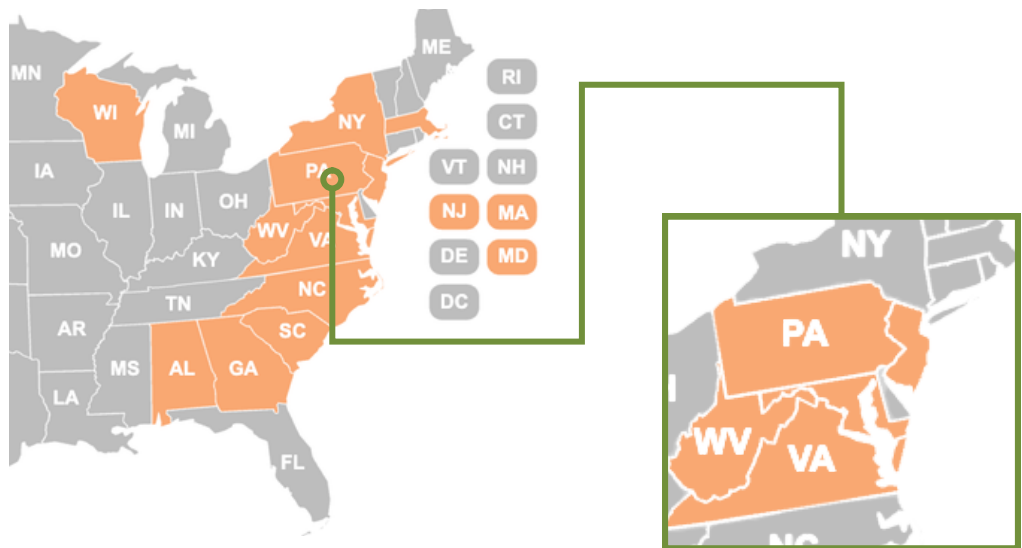
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Listening Sessions on Eastern Tree Fruit Farms: Mid-Atlantic

Seven listening sessions were held across various U.S. regions in early 2025 as part of a four-year USDA-funded project called, ***Cultivating Tomorrow's Orchard: Evolving and Enhancing IPM in Eastern Tree Fruit Systems***. Each session focused on gathering the experiences, challenges, and needs of orchard owners and managers regarding pest management, Integrated Pest Management (IPM) adoption, regulatory constraints, economic pressures, and weather pattern impacts. This fact sheet summarizes results from the listening session that took place on January 29, 2025 with orchard owners and managers in New Jersey, Pennsylvania, Virginia, West Virginia, and Maryland. Many of them operate diverse farms, growing apples, peaches, pears, cherries, small fruits (berries), vegetables, and field crops. Some also run pick-your-own (U-pick) operations and direct-to-consumer sales, while others focus on commercial processing and wholesale markets.



Key Pest Challenges

- **Peach Scale**
- **Spotted Wing Drosophila (SWD)**
- **Codling Moth**
- **Borer species becoming harder to control due to pesticide restrictions**
- **New invasive species emerging**
- **Loss of effective pesticides (such as Lorsban) has limited treatment options**

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Current IPM Strategies

- **Mating Disruption:**
 - Many growers use pheromone-based mating disruption techniques, especially for borers and internal worms.
- **Rotational Spraying:**
 - To prevent resistance, growers rotate insecticides with different modes of action.
- **Targeted Spraying:**
 - Instead of blanket applications, sprays are applied based on pest life cycles and biological models.
- **Scouting & Monitoring:**
 - Many orchards are scouted weekly for pests, with some relying on university extension programs (e.g., Rutgers' scouting program).
- **Weather Models:**
 - Growers use weather stations and models to track pest emergence and optimize spray timing.
- **Non-Chemical Methods:**
 - Grape juice to deter birds.
 - Physical barriers (e.g., deer fencing, tree lines) to keep animals away.

Economic Challenges

- **Cost of Production has Increased by 40% Since COVID-19:**
 - Growers reported that their input costs (chemicals, labor, fuel, insurance) have skyrocketed.
 - Market prices for fruit have not kept pace with rising production costs.
- **Chemicals Are the Second-Largest Expense:**
 - Labor remains the #1 cost, followed by chemical inputs, then insurance.
 - Many growers cannot afford more expensive IPM strategies without guaranteed returns.
- **Market Constraints on Adopting New Integrated Pest Management Strategies:**
 - Some processors and buyers dictate what pest management practices are allowed.
 - If an expensive new method does not translate to a higher selling price, growers cannot afford to implement it.
- **Potential Solutions:**
 - Some are exploring soil health improvements to boost tree resilience and reduce chemical reliance.
 - More growers are considering biological controls to cut costs.

Regulatory & Social Challenges

- **Pesticide Bans & Restrictions:**
 - The loss of Lorsban (chlorpyrifos) has left no effective alternative for borer control.
- **Endangered Species Protection:**
 - New regulations require checking every pesticide for potential mitigation strategies, adding layers of bureaucracy.
- **Label Changes:**
 - Frequent changes in pre-harvest intervals and exclusion zones require constant monitoring.
- **Social Pressure from Neighbors and Consumers:**
 - Non-farming neighbors complain about spraying.
 - Some growers plant tree buffers or buy nearby houses to reduce conflicts.
 - Many consumers misunderstand organic farming, assuming it means "no sprays at all."
 - IPM as a Marketing Tool: Some growers promote IPM as a middle ground between conventional and organic farming.

Impact of Erratic Weather Patterns on IPM

- **Longer Growing Seasons & Additional Pest Generations:**
 - Pests are emerging earlier in the year and staying active for longer periods.
 - Traditional degree-day models used to predict pest emergence no longer align with reality.
 - Growers are seeing an extra pest generation per season, requiring more sprays.
- **Unpredictable Weather Swings:**
 - Trees are breaking dormancy earlier, making them more vulnerable to late frosts.
 - Severe temperature fluctuations (e.g., rapid drops from 40°F to -10°F in December) stress trees and contribute to tree mortality (e.g., rapid apple decline).
 - Warmer winters allow pests like spotted wing drosophila to survive at higher rates, increasing pressure on crops.
- **CO₂ & Tree Growth:**
 - Interestingly, some growers observed higher nutrient levels in leaf tissue tests, possibly due to increased CO₂ levels, which may be improving tree vigor and reducing fertilizer needs.

Research Priorities Identified by Growers

- **Decision-Support Tools for Codling Moth & Oriental Fruit Moth:**
 - Current degree-day models are outdated due to weather pattern shifts.
 - Growers cannot accurately predict peak hatches, leading to mistimed sprays.
 - Models need to account for additional pest generations.
- **Improved Monitoring & Mating Disruption for Borers**
 - No effective monitoring traps currently exist.
 - Mating disruption works, but its long-term effectiveness is uncertain.
 - Some orchards are not configured to maximize pheromone disruption.

Best Way to Share IPM Research with Growers

- **Growers' Preferred Communication:**

- In-Person Meetings (e.g., Mid-Atlantic Fruit Growers meeting, Virginia Tech updates).
- University Extension Weekly Emails (Rutgers, Penn State, Virginia Tech).
- Industry Magazines (Good Fruit Grower, Fruit Grower News).
- Web-Based Resources (Land-grant university blogs).
- Podcasts for On-the-Go Learning: Many support weekly audio updates to replace emails.

- **Challenges with Information Access:**

- Updates often arrive too late to be useful.
- Research findings are scattered across multiple universities with no centralized database.

Additional Concerns

- **Periodic Cicadas:**

- Periodic cicadas are a huge but unpredictable threat.

- **Loss of Natural Predators:**

- Past IPM practices relied on beneficial insects, but invasive species required broad spectrum insecticides that wiped out natural predators.
- Many hope to restore predator populations to reduce chemical dependence.

- **Spray Efficiency & Alternate Row Spraying:**

- Some use alternate row spraying (spraying every other row) to reduce chemical loads.
- Requires ideal conditions for success.

Conclusion

The discussion highlighted the complexity of modern pest management and the need for adaptive, science-backed solutions. Growers are eager for better decision-support tools, improved monitoring traps, and updated IPM strategies that reflect real-world challenges like extreme weather patterns and pesticide resistance.