2013 Soybean Management Field Days

Hunt

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**Integrated Pest Management: As Important Now as Ever**

The goal is to manage pests in a way to minimize economic, health, and environmental risk. This is accomplished by combining biological, cultural, physical, and chemical tools to manage pests. Pest management, not pest eradication, is the most desirable strategy. Key components are scouting, pest ID, and the use of thresholds.

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**A few terms -**

**Resurgence**
- Survival and reproduction by remnant population

**Flare-up**
- Similar to resurgence, but original population often not economic or likely to become economic

**Recolonization**
- New insects colonize field
- Can be single vs. multiple events

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**The Damage Curve and its Components**

- Tolerance
- Overcompensation
- Linearity
- Compensation
- Damage Boundary
- Desensitization
- Inherent Impunity

**Why can resurgence & recolonization be so dramatic?**

*Average Aphid Densities 2005*

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- Control
- Partial exclusion
- Total exclusion

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*Days Post Infestation*
**Multiple Populations: Worst Case**

- Treat
- Pop. Growth
- Treat Again
- Pop. Growth
- Pop. Growth

- July 1
- August 1
- Sept 1

**Do Insurance applications pay? An example**

- **Nebraska CruiserMaxx Study 2006-2008**
- NSB funded project
- Northeast Ag Consulting, Harlington, NE
- Dan Steiner, Ben Pinkelman

- Two locations/year planted during “normal” planting window
- Three reps of two treatments: CruiserMaxx Pak seed treated, untreated seed
- Plots: 240 ft wide strips across a quarter section
- Data: BLB counts, BLB injury, soybean aphid counts, yield

**CruiserMaxx Study 2006-2008**

- Significantly reduced spring BLB, and at times F1 & F2 BLB
- Significantly reduced spring BLB injury, although injury was minor (< 10%/plant, ~5%/plant)
- Did not significantly reduce soybean aphid
- **No effect to yield for early or mid-May planting dates WHY?**
  - Spring BLB thresholds rarely met
  - BPMV (BLB vectored) not yet a significant issue in most of Nebraska
  - Not recommended for soybean aphids – appear too late in season
Natural Enemies of Insect Pests are Abundant
Preserve Them!

Predators

Parasitoids

Pathogens