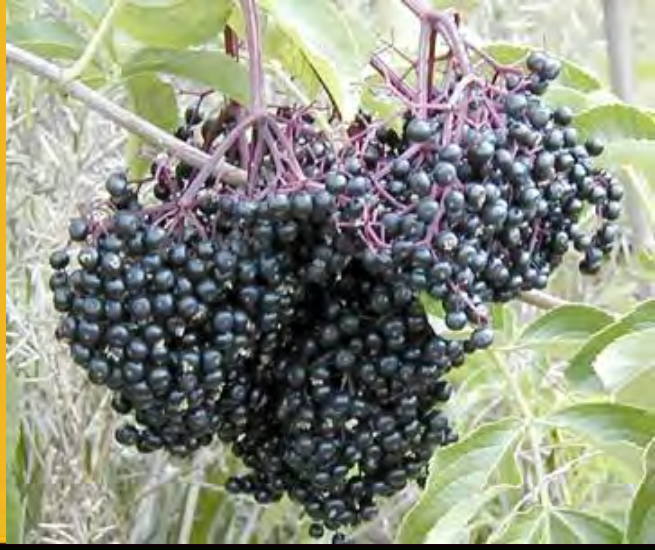
Elderberries
How to Get That Yield !



Patrick Byers
Commercial Horticulture Field Specialist
University of Missouri Extension

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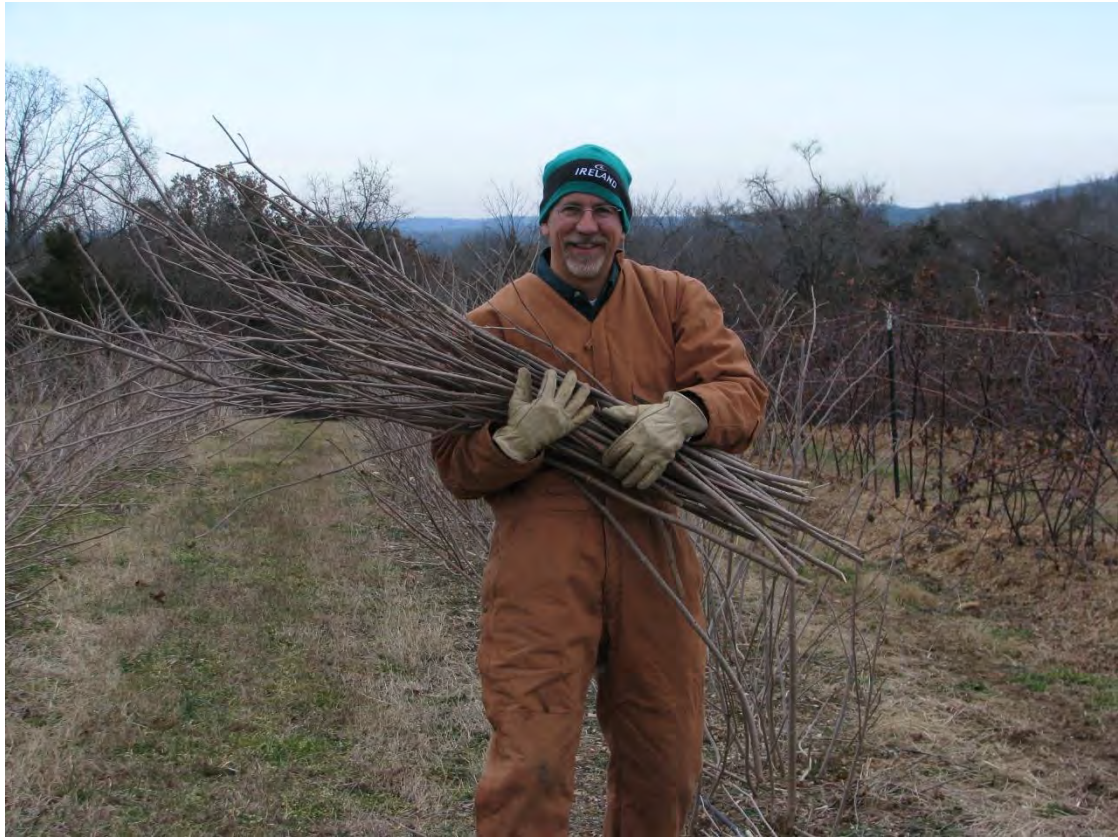
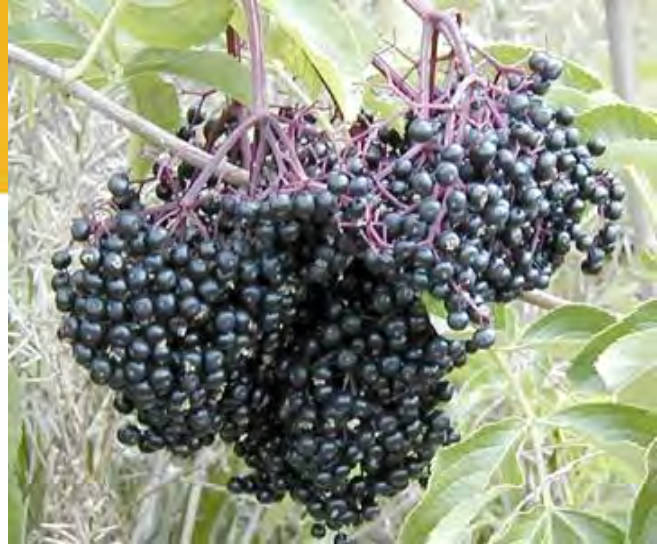
Your Speaker

- Patrick Byers
  - University of Missouri Extension
  - Farmer
- Co-director of the Missouri Elderberry Development Program (1997-date)



Outline



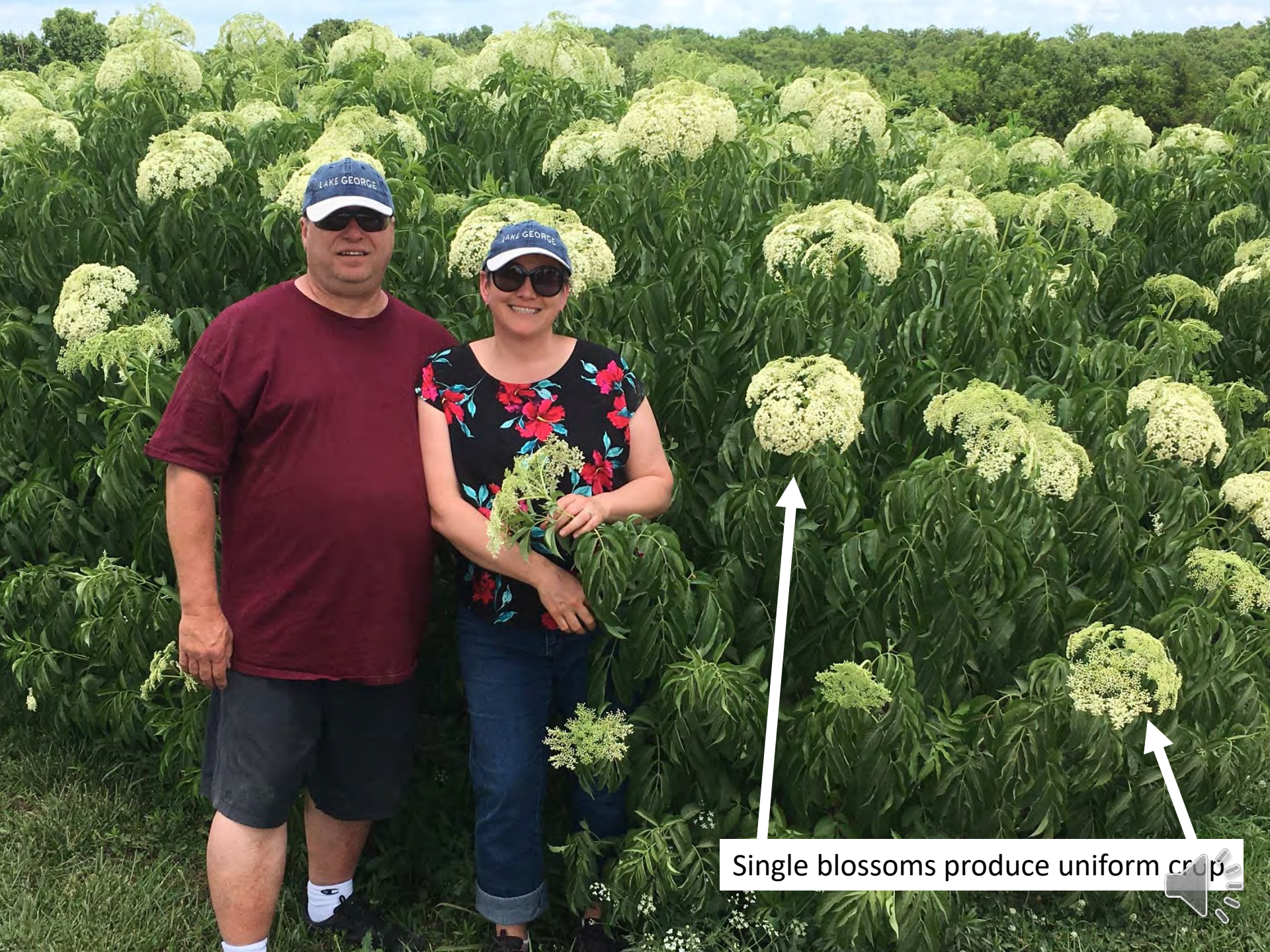
- Overview of productivity
- Selection of cultivars
- Environmental issues
- Site selection
- Cultural practices and productivity
- Pest management and productivity
- Harvest management and productivity

Overview of Productivity

- What is productivity? Maximizing the production of fruit that meets appropriate quality standards
  - Genotype
  - Environment
  - The expertise of the elderberry farmer
- From a farm standpoint, productivity is just one component of profitability
  - Efficiency is just as important
  - Financial management is just as important
  - Successful marketing is just as important

Selection of Cultivars

- Plant characteristics
- Adaptation
- Pollination issues
- Yield
- Pest resistance
- Intended use


LAKE GEORGE
LAKE GEORGE
Single blossoms produce uniform crop


Side blossoms produce later crop

Environmental Issues

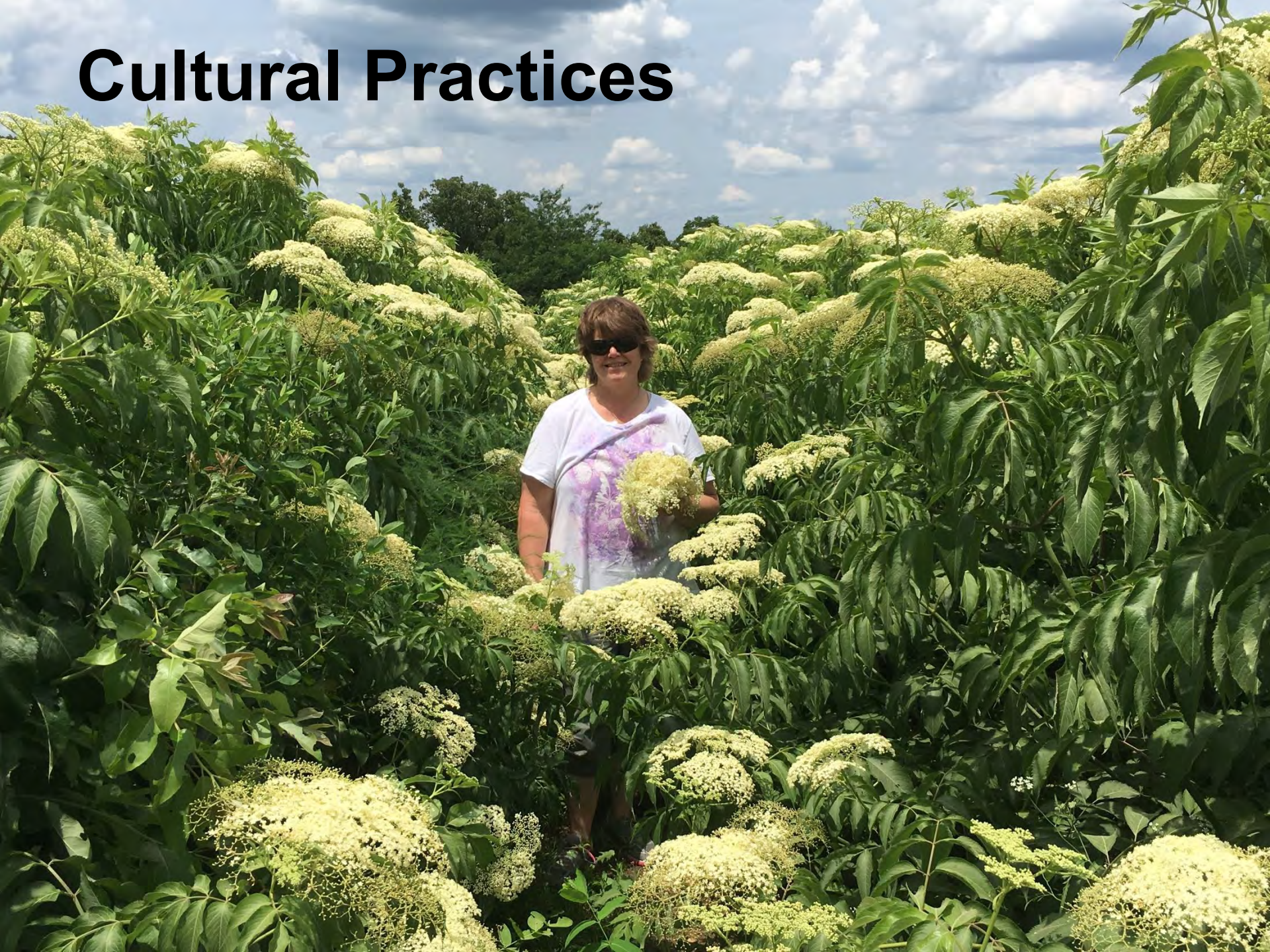
- Macroclimate vs microclimate
- Freeze and frost damage
- Excess rain, pollination issues
- Hail
- High temperatures

Regrowth following hail damage

Site Selection

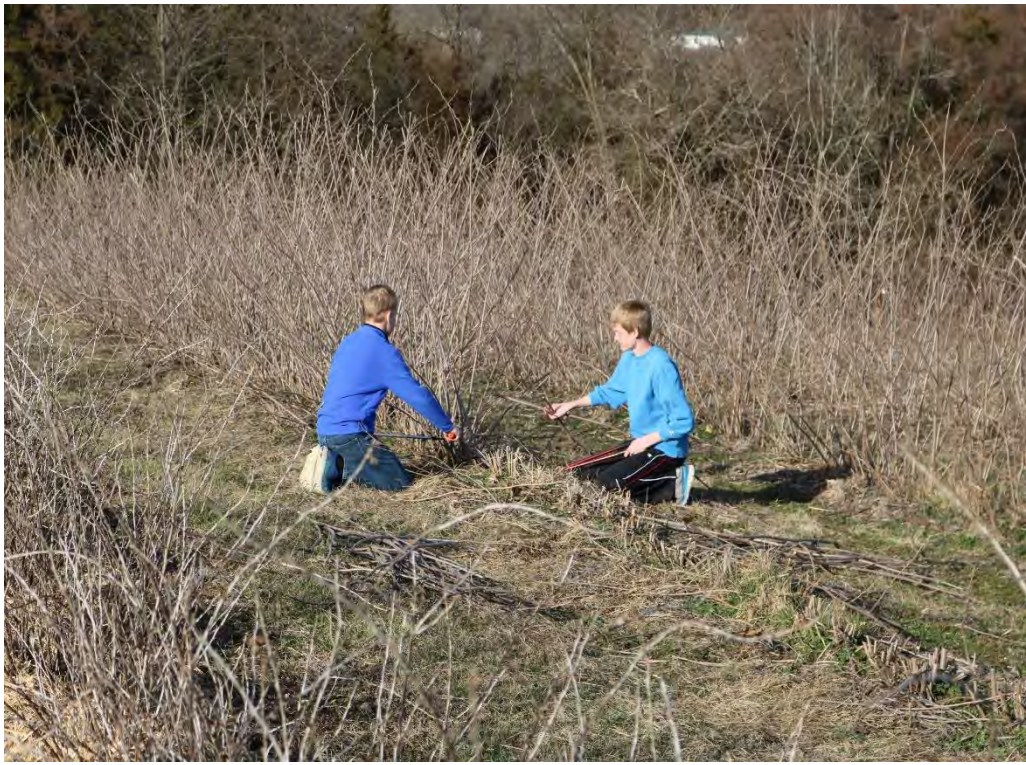
- Full sun
- Protected from high winds
- Well drained soil

Cultural Practices



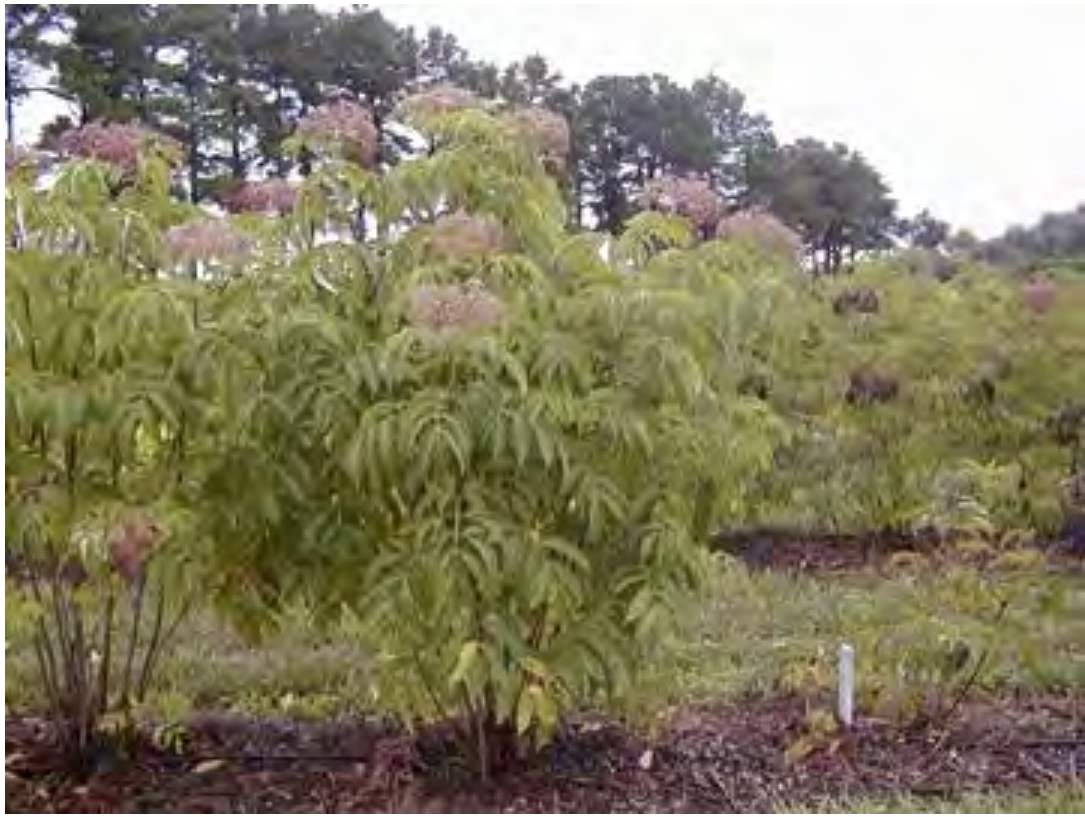
Cultural Practices

- Pruning
  - Annual removal of all shoots can improve harvest efficiency
    - Larger, fewer flower cymes
    - Concentrated ripening period
    - Implications for eriophyid mite and SWD management?
    - Will this work in northern growing areas?



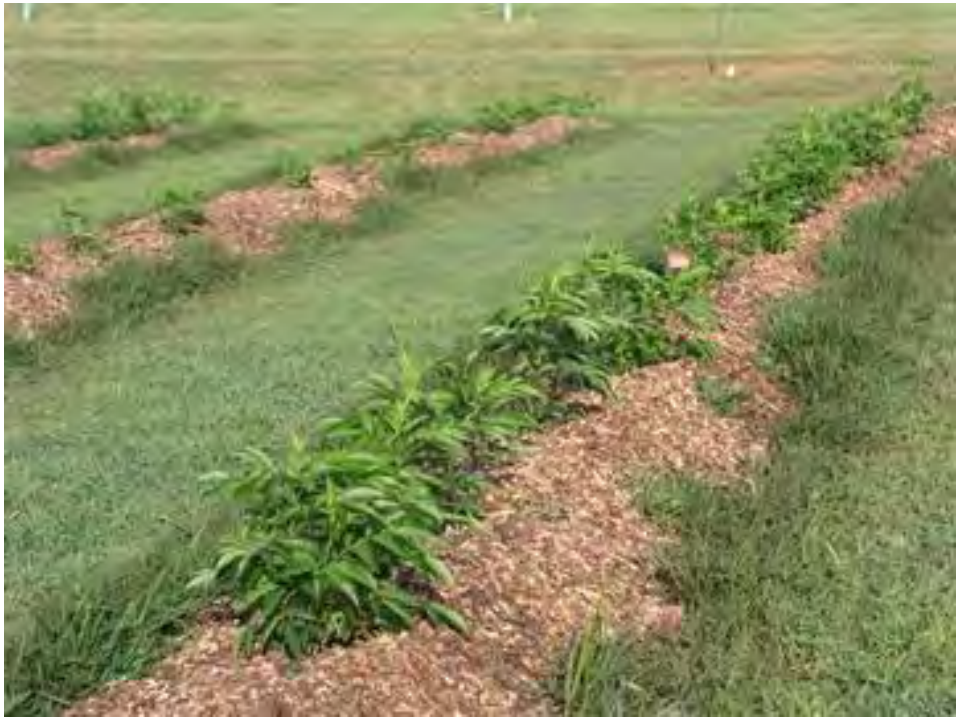
Cultural Practices

- Fertility management
  - Nitrogen – at least 80 lbs N/acre
  - Other nutrients as indicated by soil test
  - Foliar sampling to monitor nutrition



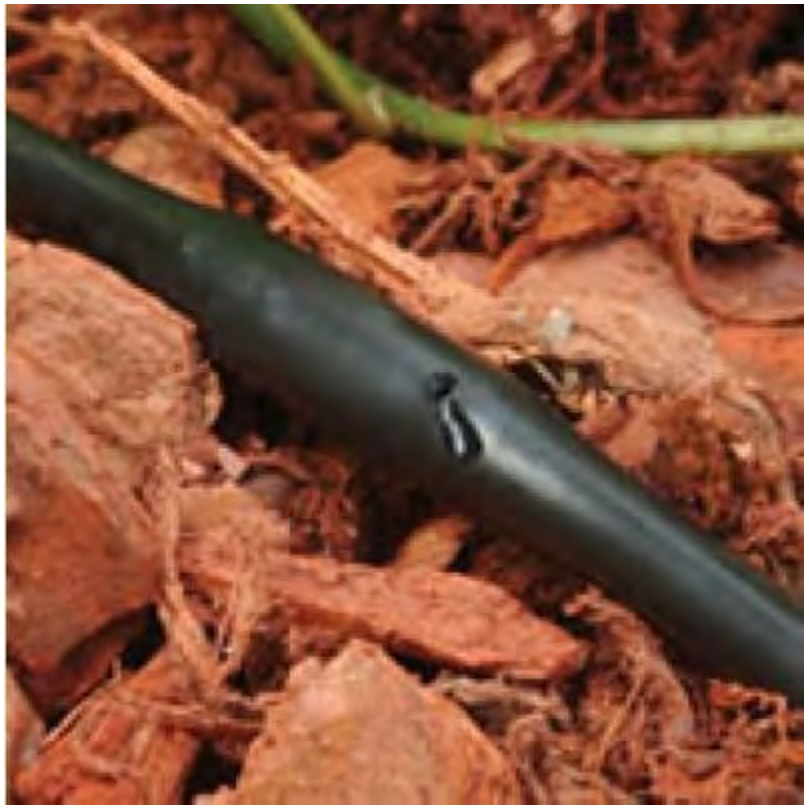
Cultural Practices

- Planting layout
  - Bermed plantings are helpful if soil drainage is an issue



Cultural Practices

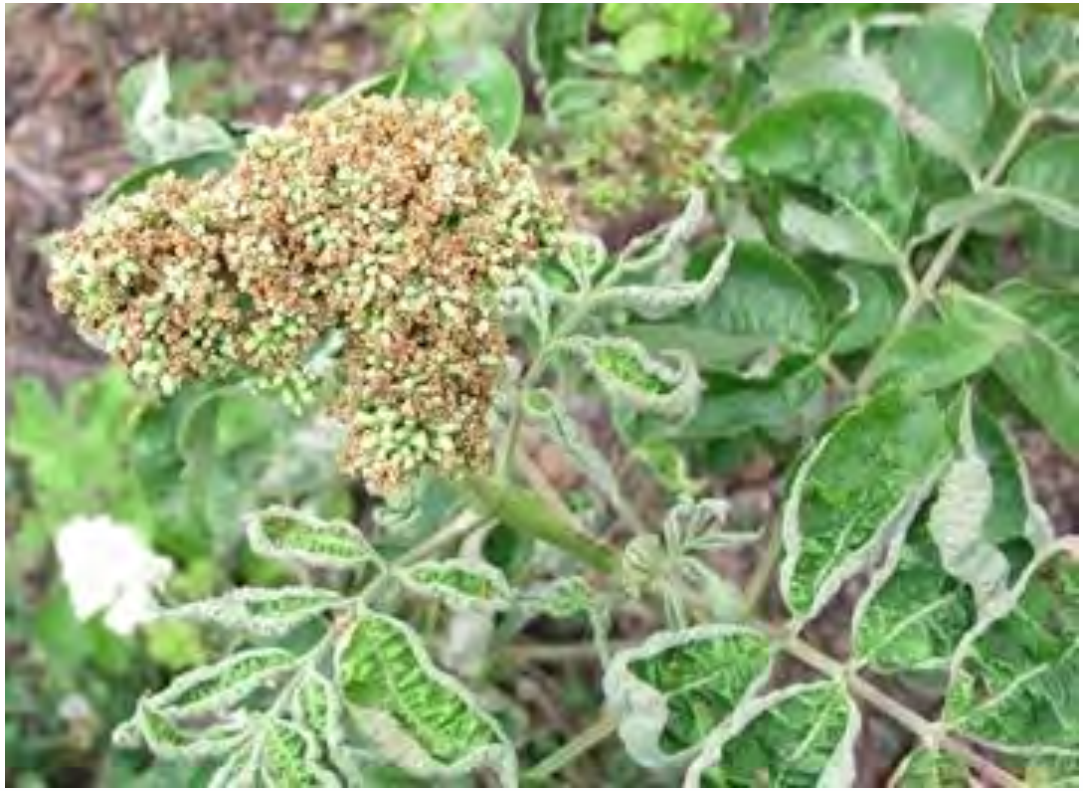
- Irrigation
  - Elderberries are not drought tolerant plants
  - Drip or trickle irrigation systems work well – 18mm tube with emitters every 18-24 inches
  - Water needs: 38-50mm per week



Pest Management

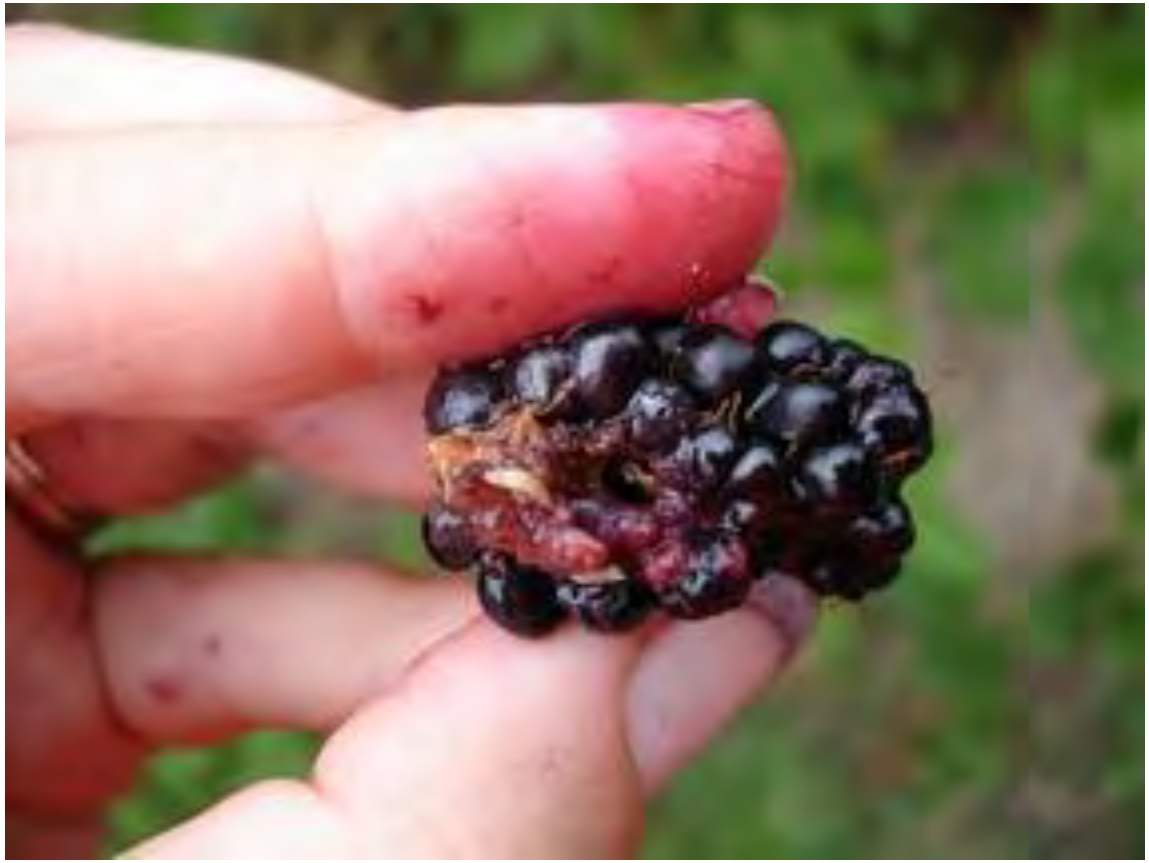
Pest Management

- Eriophyid mites



Pest Management

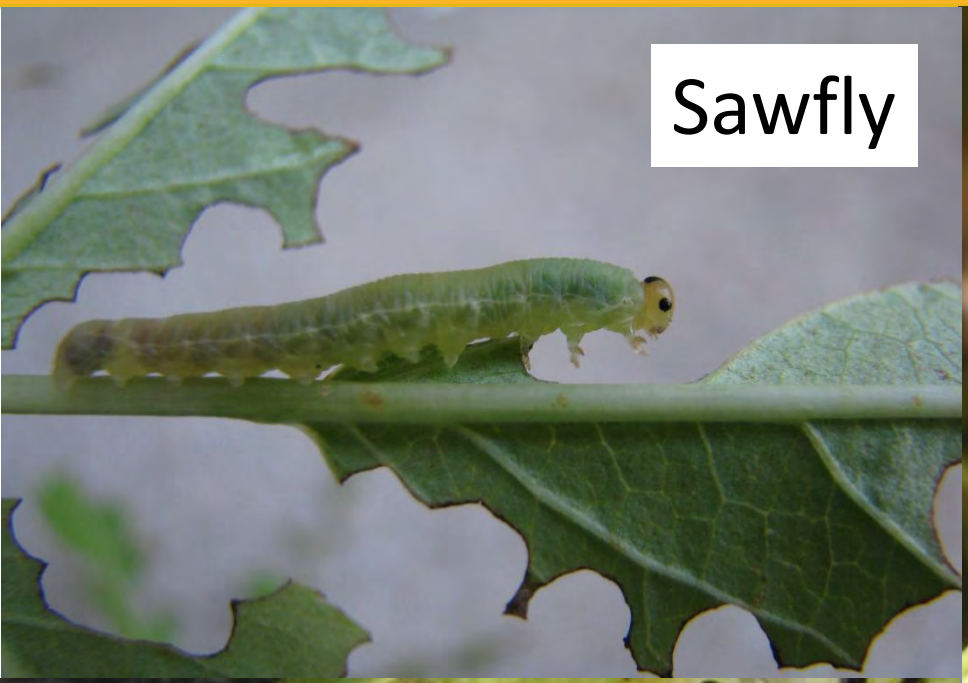
- Spotted wing drosophila

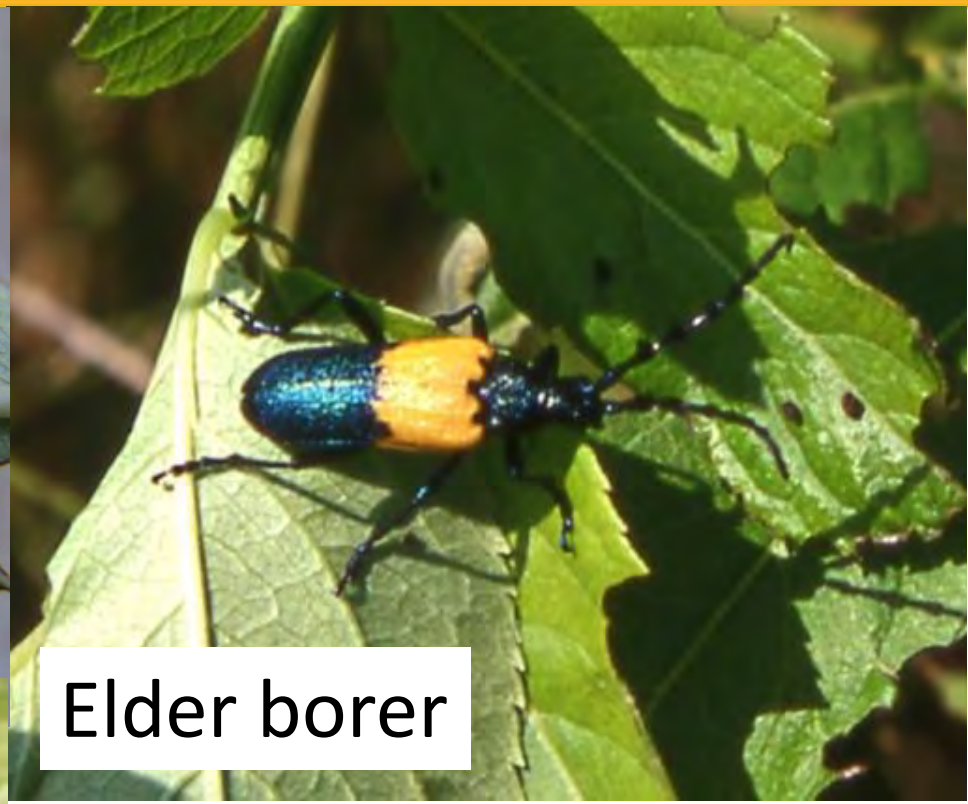


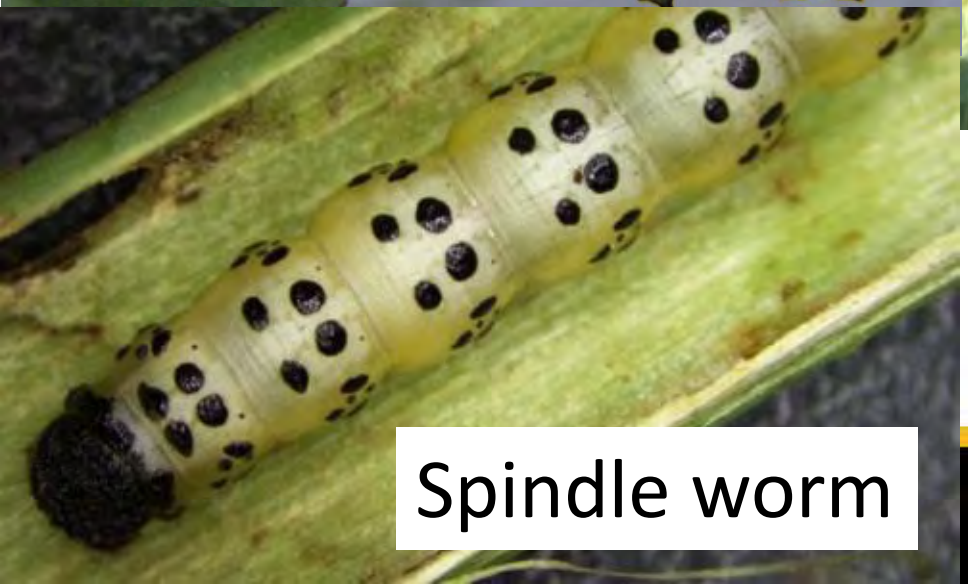
Pest Management

- Japanese beetle

Pest Management



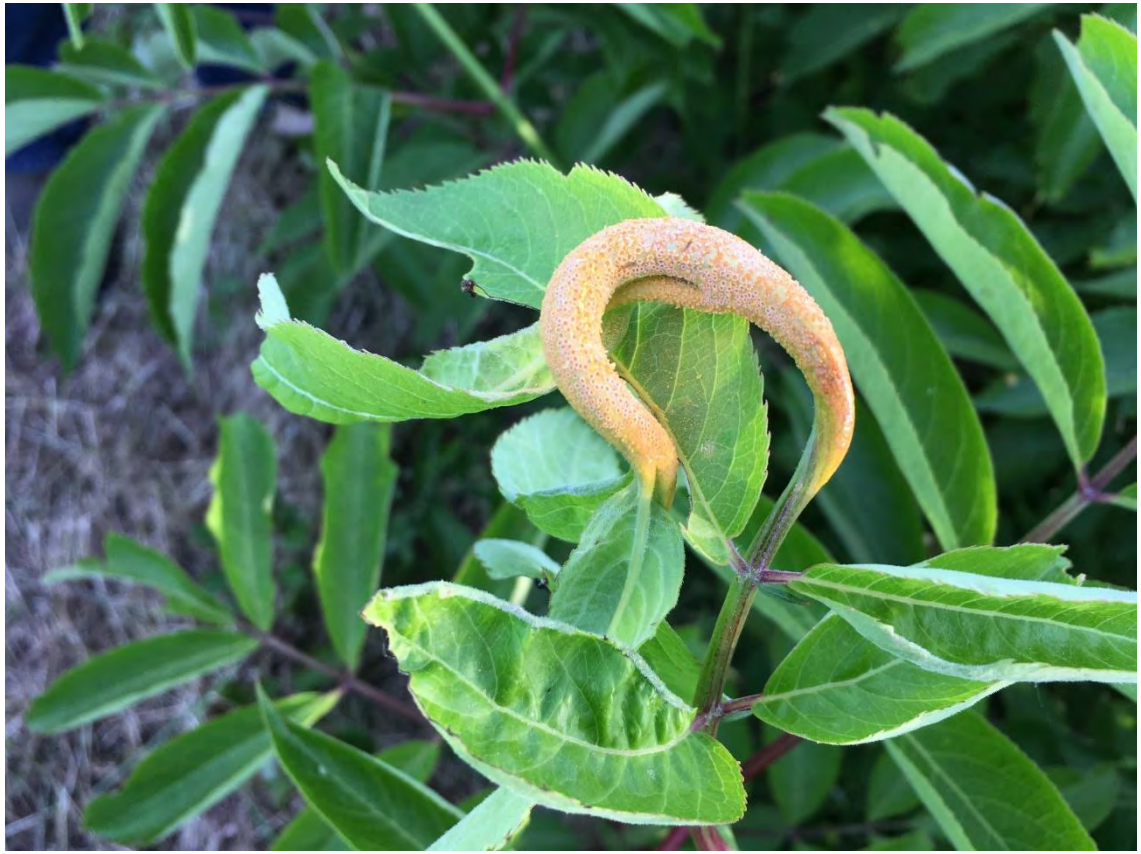




- Other insect pests

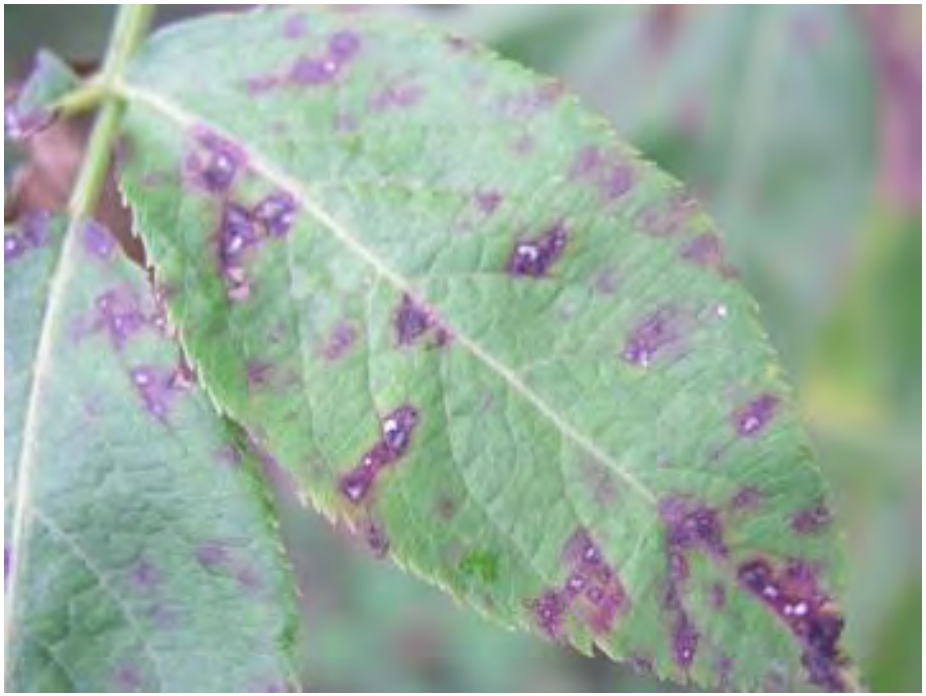
Pest Management

- Elderberry rust



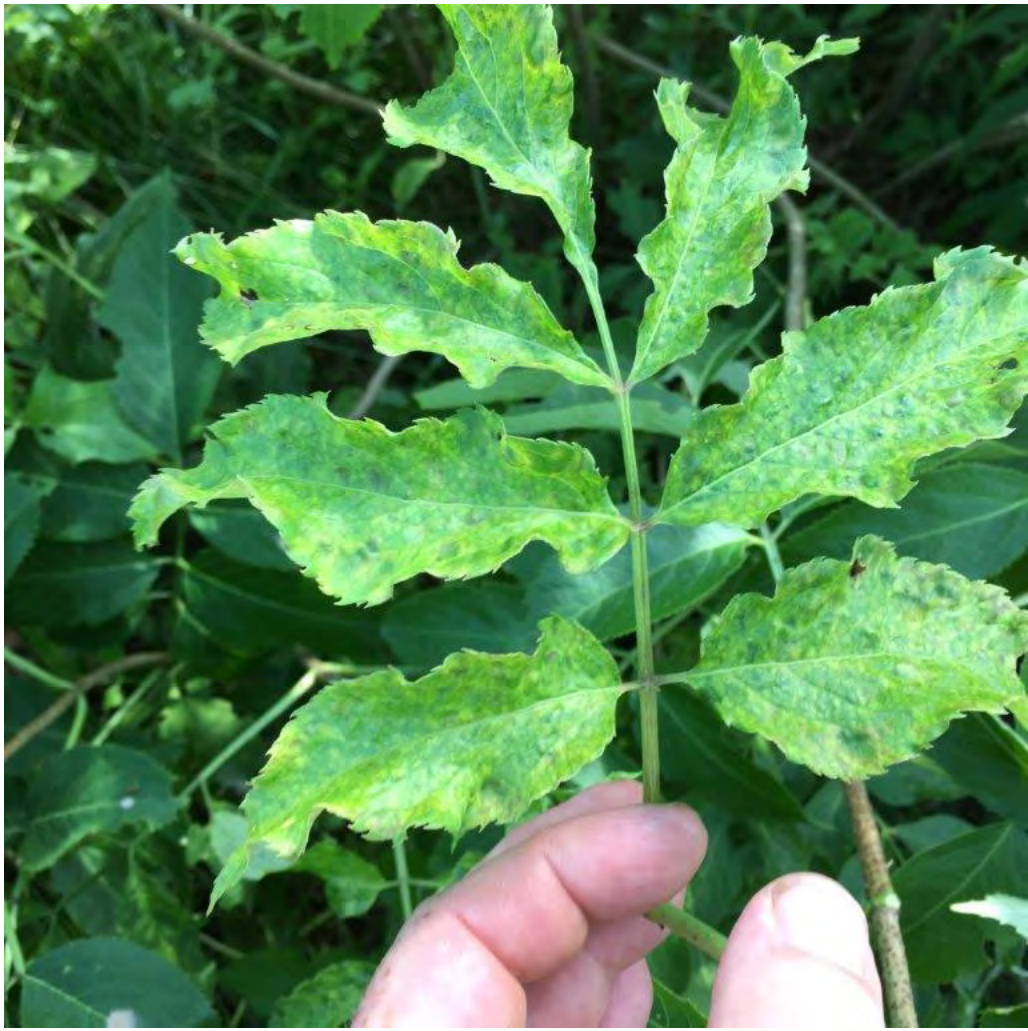
Pest Management

- Other elderberry diseases



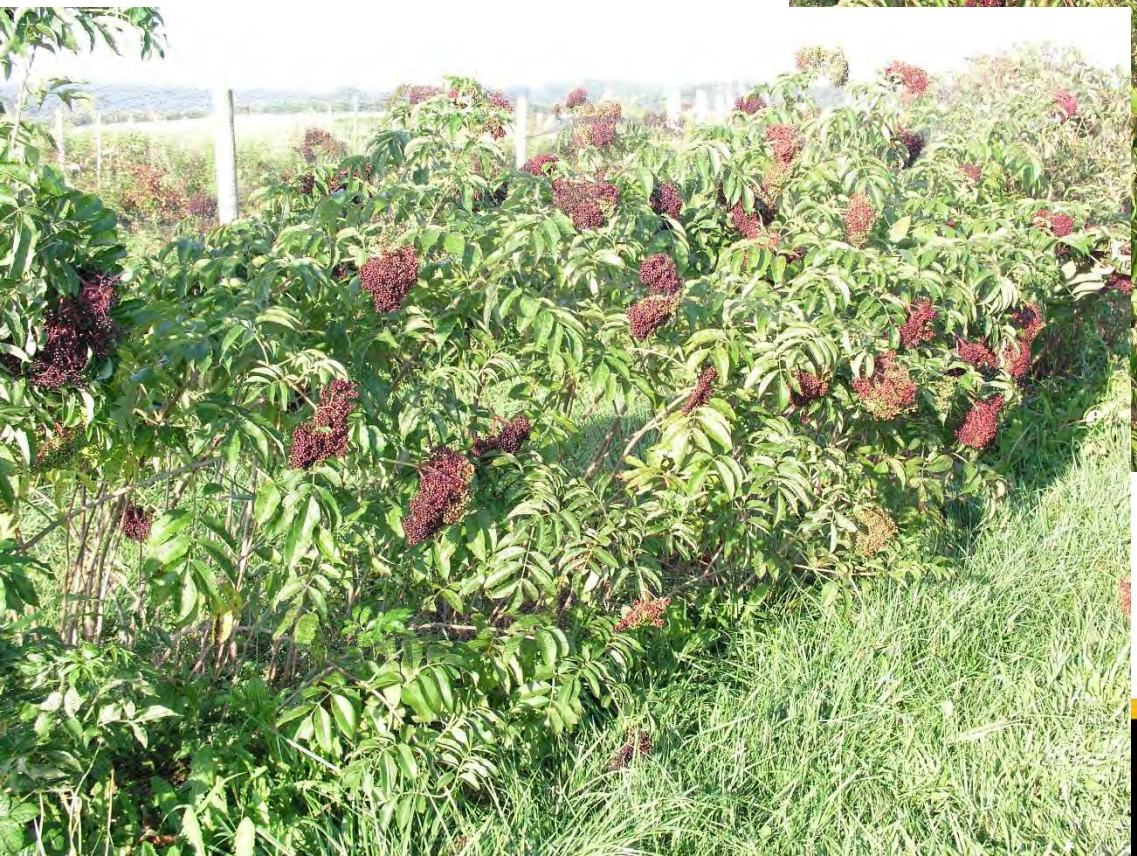
Pest Management

- Elderberry viruses



Pest Management

- Birds



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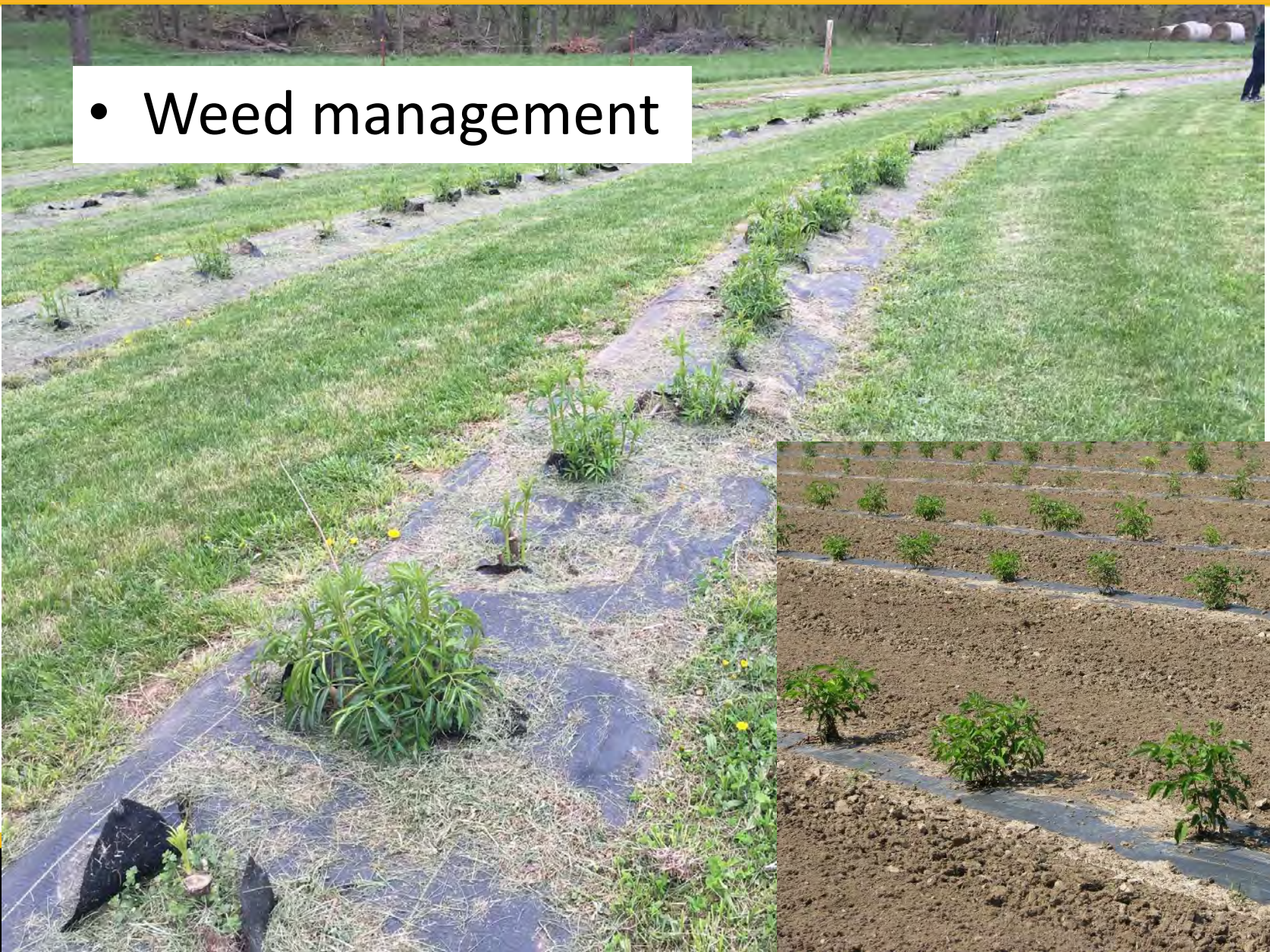
Pest Management

- Removal of woody stems after pruning
- Dormant application of oil
- Regular scouting for SWD, JB
- Removal of all fruit from planting
- Routine spray schedule?

Pest Management

- Weed management

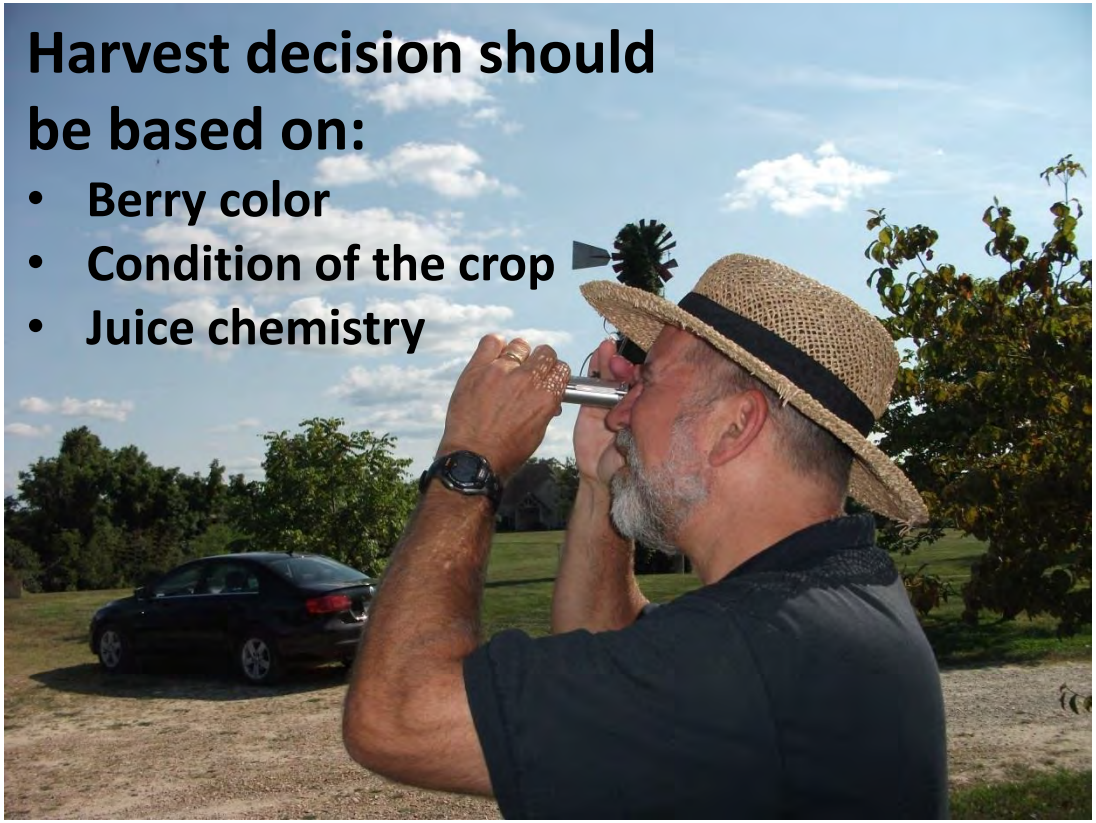


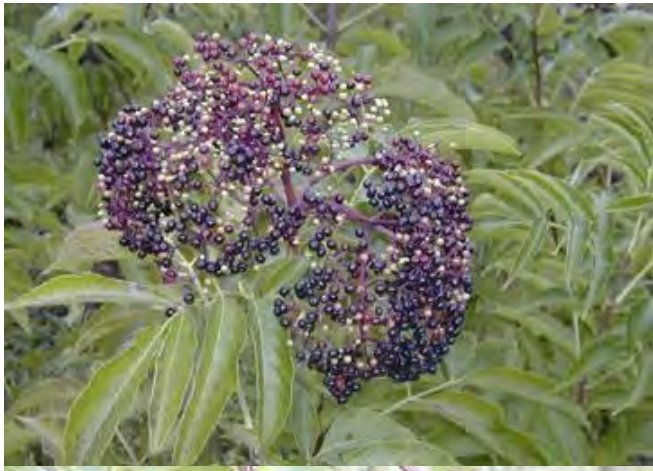
Harvest Management

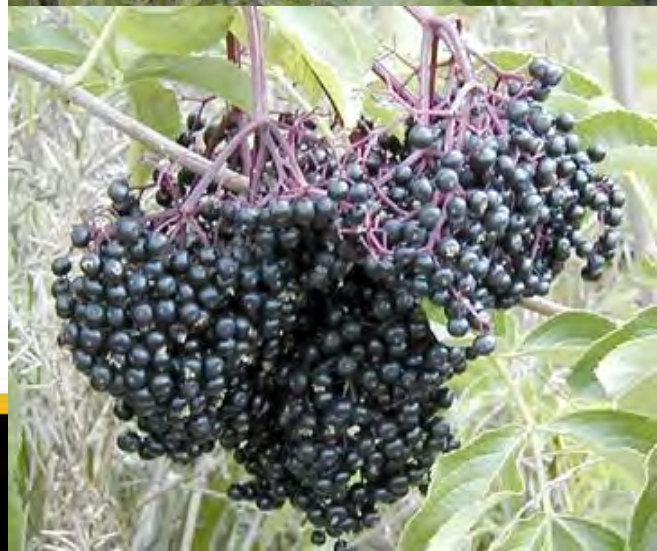
- Harvest timing
- Harvest practices
- Destemming
- Postharvest handling

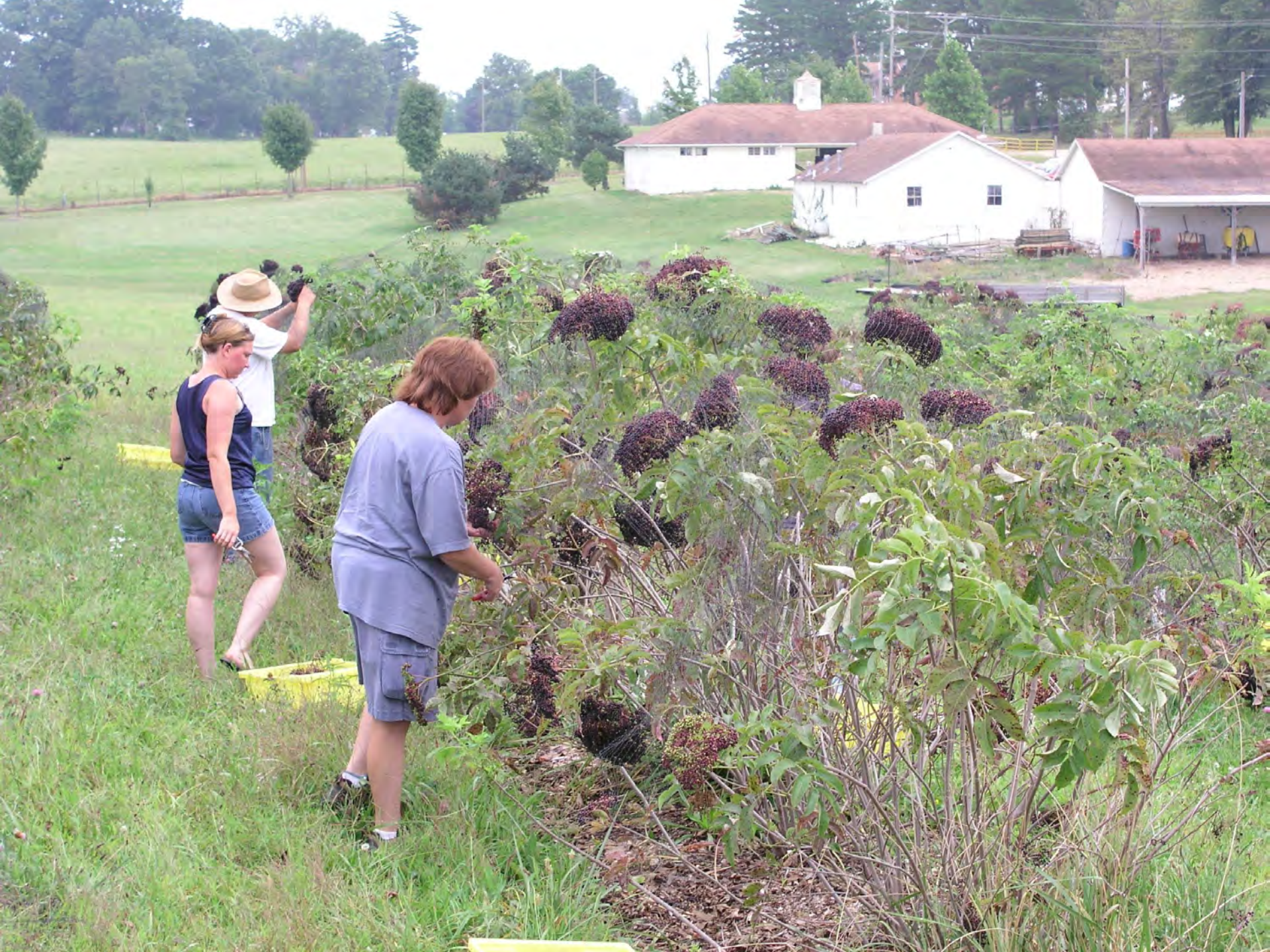
Harvest Management

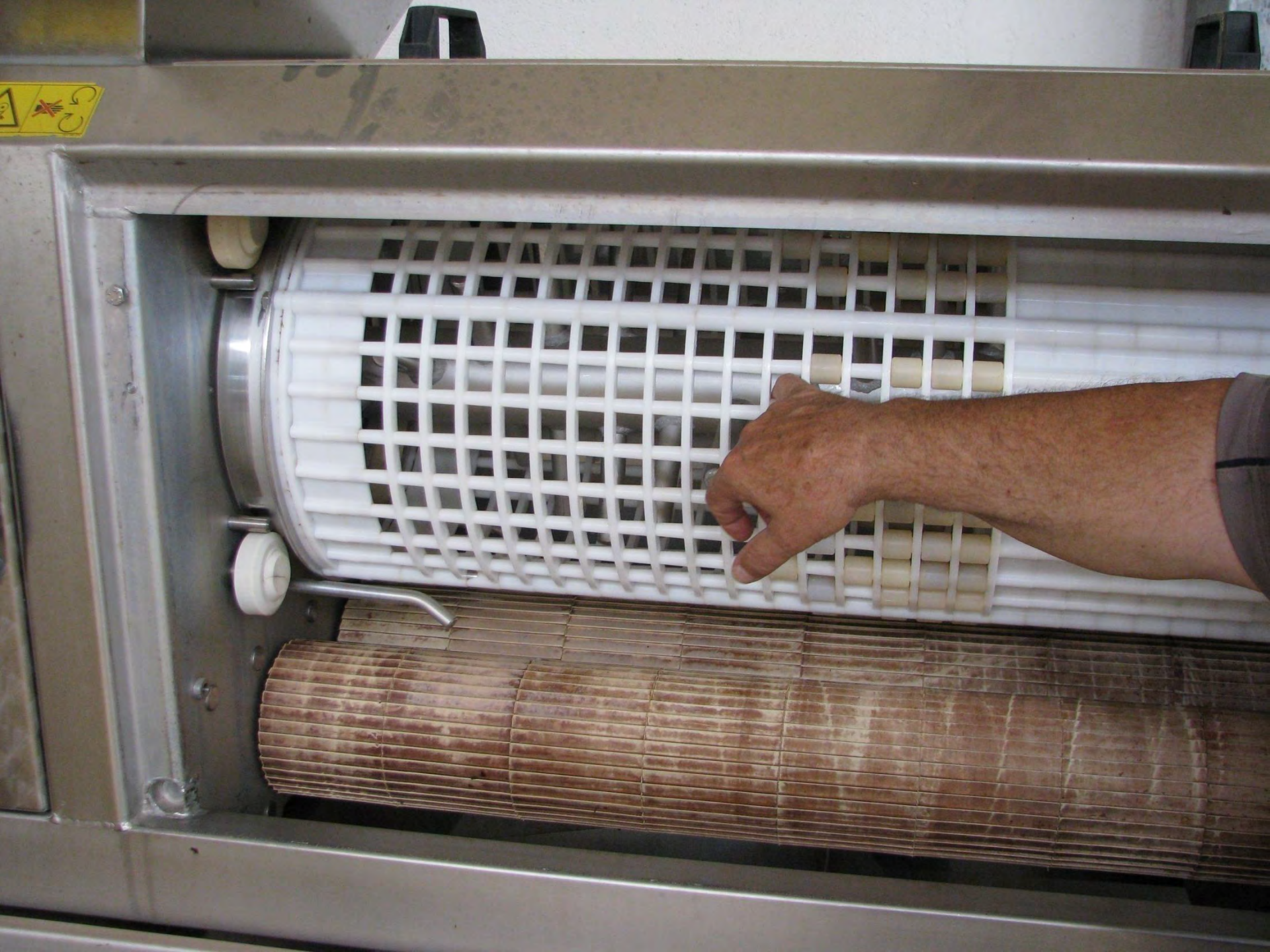
- Let’s discuss the harvest decision process…



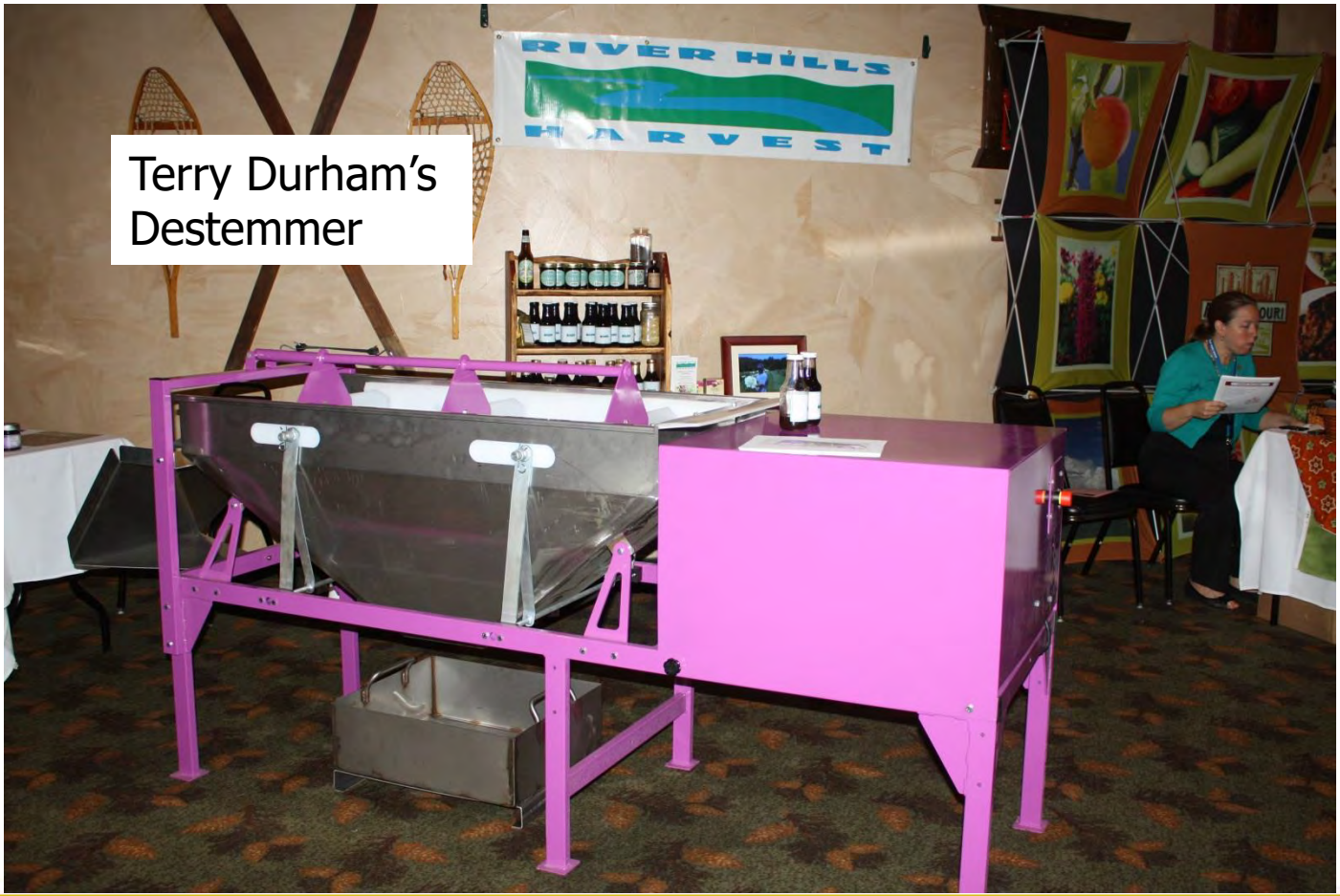








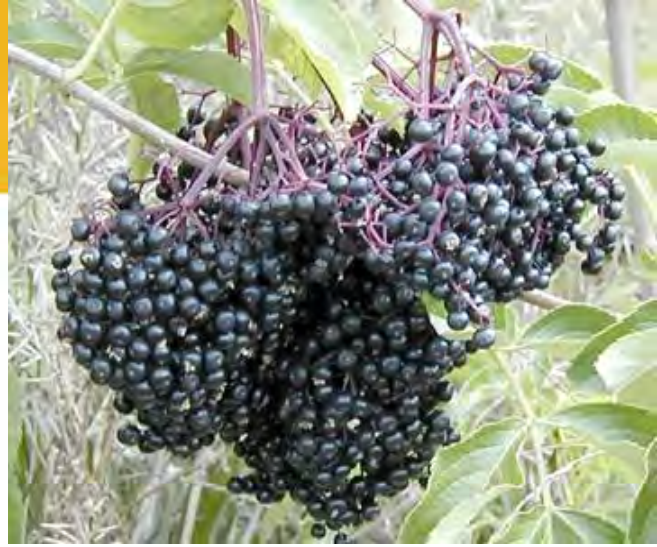
Harvest Management



Terry Durham's Destemmer

Harvest Management

In Conclusion…



- Productivity is not the same as profitability – remember experience and efficiency
- Design a planting with productivity in mind
- Choose cultivars carefully
- All aspects of management impact productivity
- Pest management and productivity
- Harvest management and productivity

Comments or Questions?

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- http://extension.missouri.edu/greene/ElderberryDevelopmentProject.aspx