Proposed Discussion

- Sabbatical leave at AAFC, Summerland
  - Facilities and resources
    - Current research
    - Future opportunities
Simcoe Research Station

- Total area - 87 ha
- 10 -15 ha of apple research orchards, planted in 4 blocks
- Laboratory and regular air storage facilities
Resources

Personnel

• Debbie Norton Technician (funded 85% through OMAFRA)
• Currently two graduate students
• Research station staff to assist with orchard management (spray/prune/harvest etc)

Annual Operating Costs

• $300 - $400,000 /year
• ~75% provided by UoG/OMAFRA
• ~25% (80K) required externally
Present Funding

- Univ. of Guelph/OMAFRA Sustainable Production systems competitive research program
- Ontario Apple Growers ($20K in 2010)
- Private Industry (Chemical Companies)
- Federal Gov’t R&D Programs
Current Research Focus

- Orchard management practices to improve production efficiency, profitability, and fruit quality
  - Fruit thinning
  - Fruit quality
  - Harvest Management
• Research-based cultivar and rootstock evaluation

Focus on new cultivars (Honeycrisp, Ambrosia, Aurora Golden Gala, etc)
Current Research Focus

- Use and physiology of plant bio-regulators to regulate cropping, improve production efficiency and fruit quality
Research- Based Cultivar Development
Research-Based Cultivar Development
Current Research Focus

- Mineral nutrition and soil management effects on fruit quality and tree growth
- Beneficial use of organic and inorganic amendments for reducing soil-borne disease, herbicide use, and improving fruit quality and plant health
Current Extension Activities

- Direct grower and consumer inquiries
- Preparing factsheets (Ambrosia is most recent)
- Assist with editing Publication 360
- Collaborate with OMAFRA Specialists
- Station Tours
- Communicate research through:
  - orchard network
  - popular press articles
  - grower meetings

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Future Research Activities

- Methods to enhance the return bloom of Honeycrisp
- Optimizing fruit quality of new apple cultivars
- Biennial bearing and precocity of Northern Spy and Honeycrisp
- Mechanical thinning of apples with focus on potential replacement for Carbaryl
- Continuation of the development of Vineland rootstock
Future Research Activities

- Increasing access to and use of economic tools to determine long-term feasibility of orchard planting decisions
- Field validation of new technology that can non-destructively determine fruit quality (starch, ethylene, soluble solids)
  - Determine orchard variability to assist with harvest management
  - Increased sampling -> better understanding of fruit storage potential for CA or Air