Pomology Research on Tender Fruit at the University of Guelph

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Present Funding Acknowledgements:

- Univ. of Guelph/OMAFRA Sustainable Production systems competitive research program
- NPF&VGA

Current Research Focus

- Orchard management practices to improve production efficiency, profitability, and fruit quality
  - Fruit thinning
  - Fruit quality
  - Harvest Management
- Beneficial use of organic and inorganic amendments for improving fruit quality, tree growth and health

Current Research Focus

- Fruit tree water relations, crop response to micro irrigation, and water conservation measures physiology

Tender Fruit Program Impact

Research Initiated in 2002/2003

Peaches

- developed new methods to manage crop load and reduce hand thinning
- Efficacy of AVG (ReTain) on processing and fresh market peach cultivars
- New size-controlling rootstocks for peaches and nectarines
- Performance of columnar peaches in Canada
- Quantified nitrate and tile drainage losses from peach orchards

Tender Fruit Program Impact

Peaches (continued)

- A 6-YR peach/nectarine research plot in Simcoe has demonstrated that high quality peaches that can be produce in Norfolk
- Investigated the genes involved in fruit abscission of peach (A. Taheri and J. Subramanian).

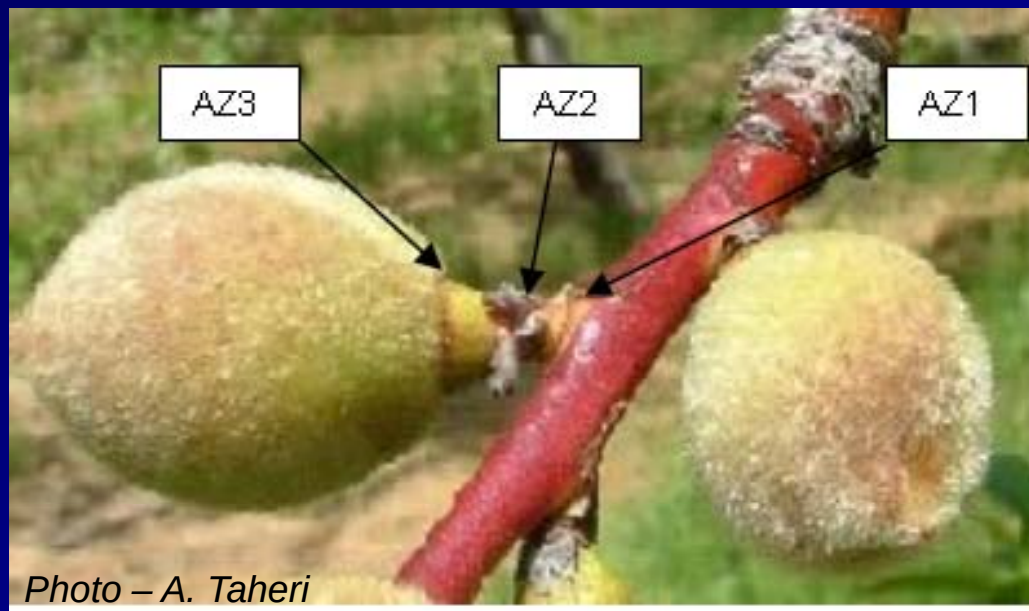


Photo – A. Taheri

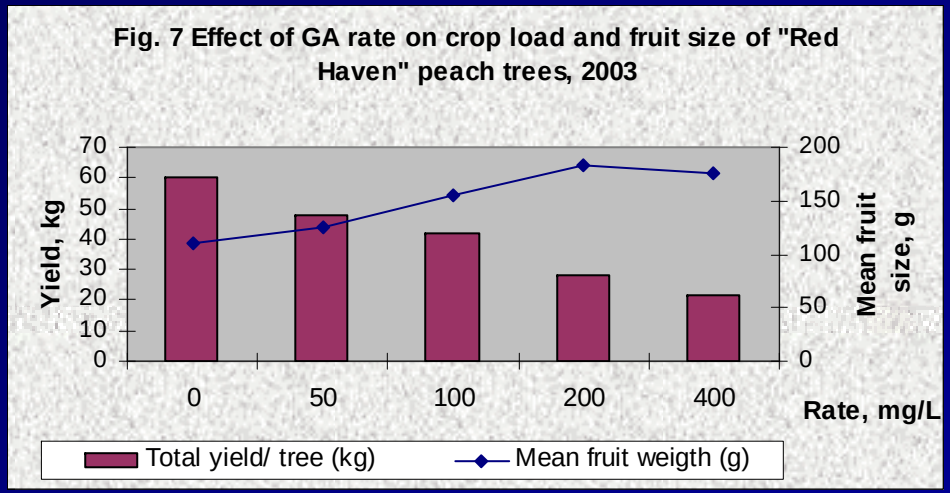
www.plant.uoguelph.ca/treefruit

One of 4 new methods to Thin Peaches

To use plant bioregulators to regulate the crop load of peaches and cherries

Method:

- Use flower inhibitors (GA_3) for partial inhibition of flowering of peaches and cherries



Untreated control


GA at
100 ppm

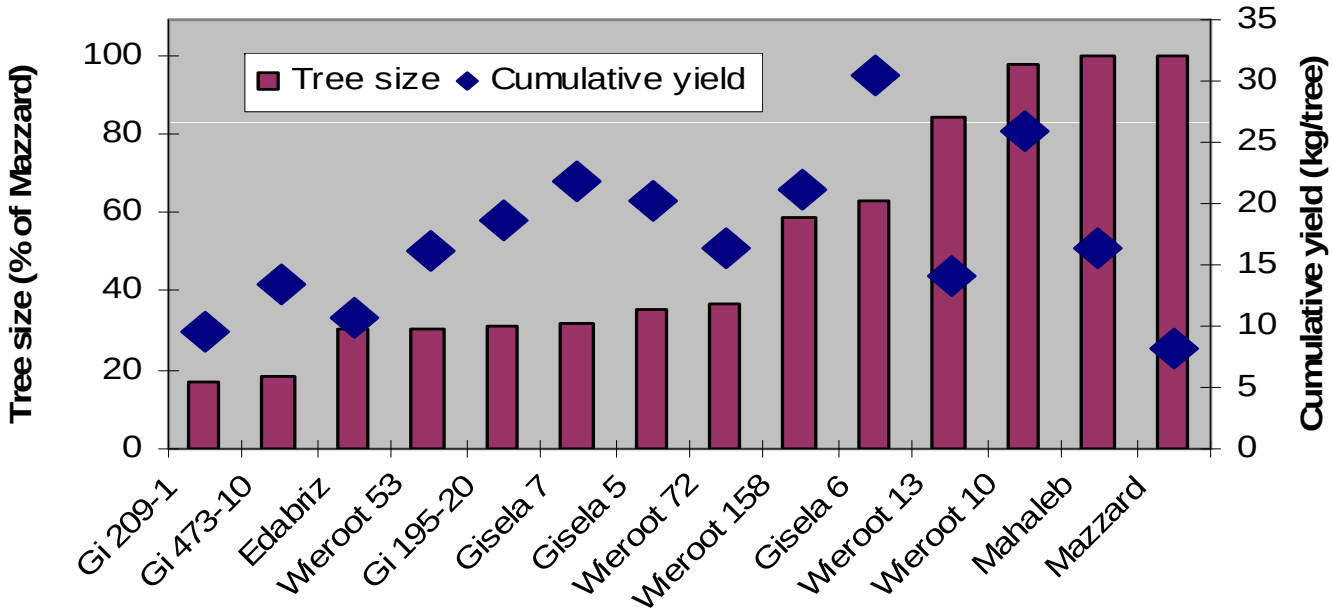
Tender Fruit Program Impact

Sweet and Tart Cherries

- Reported on the long-term performance on new size controlling rootstocks
- Efficacy of gibberellic acid on fruit quality
- Quantified influence of tree covers for reducing rain-induced fruit cracking of sweet cherries
- Have demonstrated a 40% reduction in vegetative growth through the use of prohexidione calcium (Apogee)
- That fruit size cannot be readily increased through reductions in crop load (thinning).

Cherry Rootstocks

Fig. 1 Tree size and cumulative yield of Hedelfingen in relation to rootstock



Barriers limiting Research Capability

- Eroding resources
  - Technical assistance
  - Financial support through OMAFRA
- Access to funding
- Partnering with Industry

Most important Issue Facing the OTFPMB that my research can Impact

Labour Saving Technology for Improving Fruit Quality and Increasing Market Share of Ontario Tender Crops

Ontario Agricultural Services Coordinating Committee (OASCC)

- Most competitive OMAFRA research projects require some linkage to the Ontario Hort Crops Research and Services Annual Reports
- New competitive funding will be provided through one of 7 themes:

Agricultural and Rural Policy
Bioeconomy - Industrial Uses
Emergency Management
Environmental Sustainability
Food for Health
Production Systems
Product Development and Enhancement through Value Chains