

Partnerships for Innovation in Agriculture



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A close-up photograph of a tree branch with large, dark green leaves and several ripe, reddish-brown fruit hanging from the branches.

“Farmers are the most innovative
people on the planet”

Source: WA Tree Fruit Research Commission Board member

Agricultural Technology for Tree Fruit

Plant
physiology

Breeding

Pathology

Data
science

Engineering

Economics

Psychology

Entomology



Key:
A Farm is first and
foremost a business

Examples of Barriers to Technology Adoption in Tree Fruit

1. Lack of commercially available options
2. Lack of complementary technologies
3. Lack of skill and confidence with complex data and decision-making
4. Lack of proof points for ROI and risk analysis
5. Application constraints of existing technologies
6. Value proposition

History of Automation in Washington

WTFRC was founded to drive automation

1st Technology Roadmap

Cosmic Crisp® planted

2nd Technology Roadmap



Adoption of trellis systems

Platforms tested in orchards

First fully automated apple picking achieved



WTFRC Technology Roadmap



- Research, development, and extension activities: 2024-26
- Three high priority areas selected/three different timelines to impact:
 - Irrigation (near-term)
 - Crop Load Management (mid-term)
 - Harvest Labor (long-term)
- Within each priority area
 - existing technology landscape is described
 - 13 strategies and 48 example activities identified for focus and action
 - prioritized across the roadmap (i.e., overall priorities)



Strategy

Build + maintain vibrant
public-private partnerships

- Worldwide
- Scientists
- Private sector
- Actively involved diverse industry members



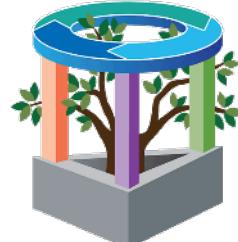
Vibrant public-private partnerships

LOCAL

- The Smart Orchard
- The Technology Roadmap

NATIONAL

- AgAID Institute



AgAID

AI Institute for Transforming
Workforce & Decision Support

GLOBAL

- Orchard of the Future Collaboration
 - <https://www.orchardofthefuture.org/>



smart farming with innovative technology

- Global Harvest Automation Initiative





Automated Ag



AgriDynamics Robotics Corp.







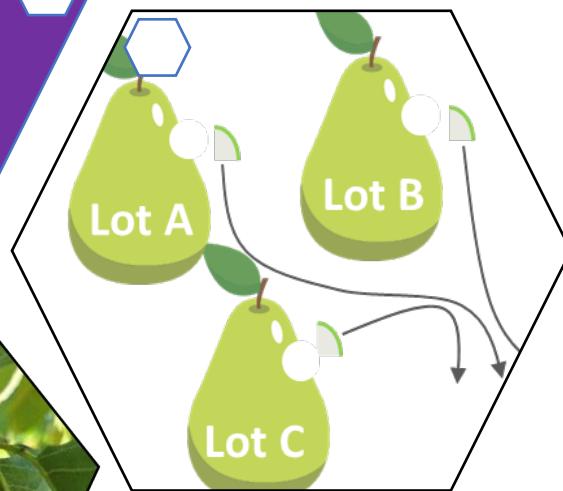
LCA

The
Smart
Orchard

Insect
models



Drone in
a box





“Vision systems are foundational technologies.”

Source: WA Tree Fruit Research Commission Board member

Areas of Opportunity (Examples)

Story Telling

Broad
collaboration

Engage young
people

Relationships

Co-opetition

Cross-
commodity

Travel

Land grant
universities



Don't create a
solution looking
for a problem.





<https://www.linkedin.com/company/washington-tree-fruit-research-commission/>



<https://www.instagram.com/watreefruitresearchcommission/>



<https://www.facebook.com/WashingtonTreeFruitResearchCommission>



<https://treefruitresearch.org>



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