



Sustainable Agriculture

Agriculture and Natural Resources Committee Meeting, January 2025

Presented By: Madison Roy, Agricultural Economist; Dani Gelardi, Senior Soil Scientist; and Julia Terlinchamp, Special Assistant to the Director



Washington
State Department of
Agriculture

The Mission of WSDA

“Through service, regulation, and advocacy, the Washington State Department of Agriculture (WSDA) supports the viability and vitality of agriculture while protecting consumers, public health, and the environment.”



Washington Agriculture & Sustainability

Sustainable agriculture is defined by the USDA as (U.S. Code Title 7, Section 3103) as an integrated system of plant and animal production practices that:



**Satisfy human food
and fiber needs**

\$14B Value of Production
\$23.4B Export Value
300+ Commodities

**Enhance environmental
quality and our natural
resource base**

Stewards of 52% of all
land in
Washington state

**Make the most efficient
use of resources**

Agriculture is 3x more
concentrated in
Washington than the
average state

**Sustain the economic
viability of farm operations.
Enhance quality of life for
farmers and society**

32,076 Farms
95% family owned

State of the Agricultural Industry

Trends:

Increased cost of doing business

- 2022 – 2023: Production expenditures (input cost) increased 12% in Washington

Consolidation

- In the past five years:
 - 10.4% decrease in the number of farms
 - 5.6% increase in the size of farms

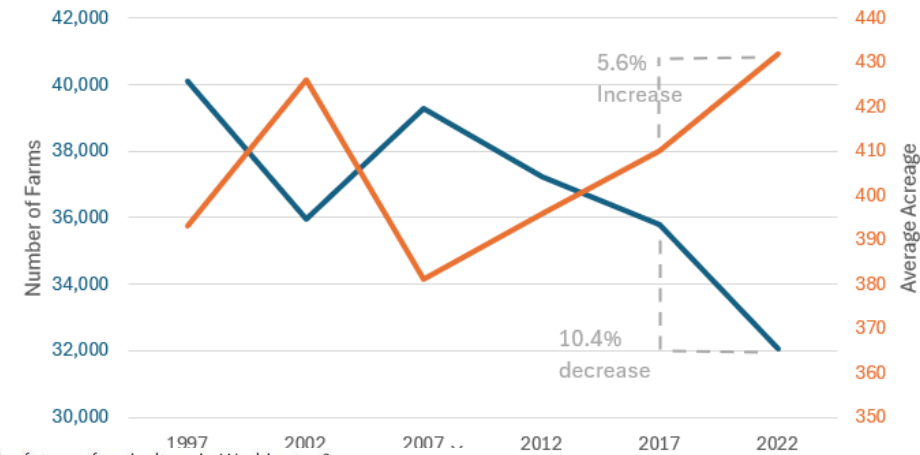
Less people connected to agriculture

- Less than 1% of people in Washington are agricultural producers

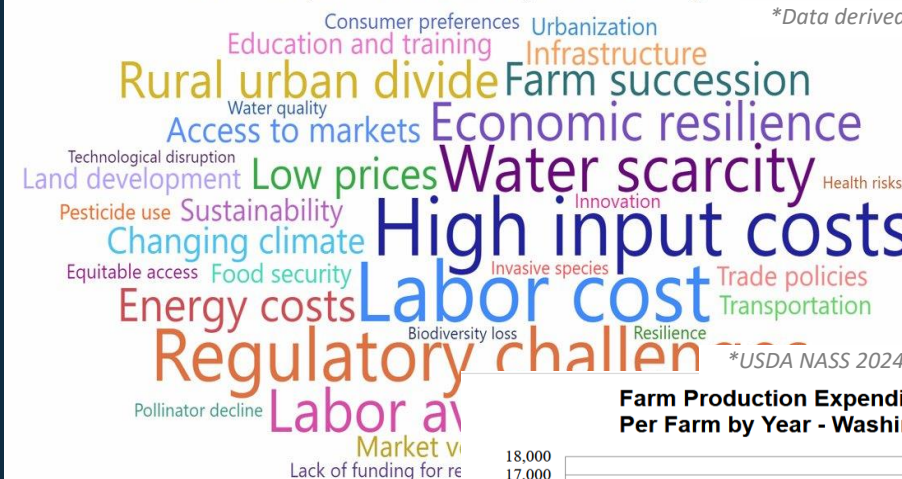
Challenges:

- Rising input costs
- Land and capital access + availability
- Labor
- Market infrastructure and support services
- Technical/ research support
- Regulatory burden
- Weather and climate
- Water availability
- Loss of foreign and domestic markets

Number & Average Acreage of Washington Farms (1997 - 2022)



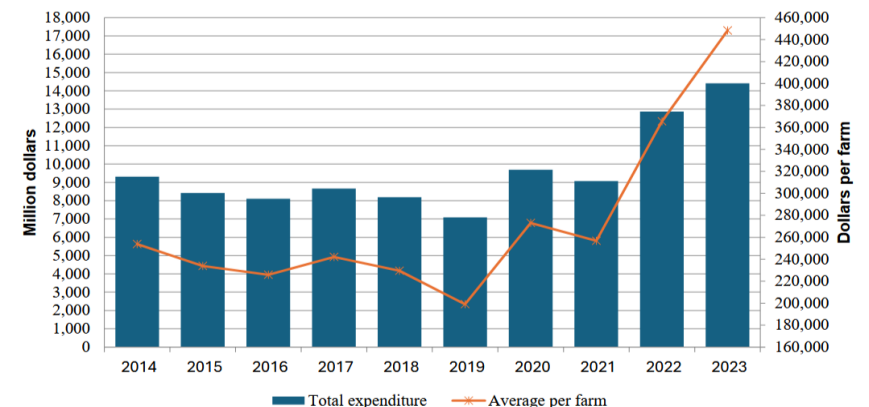
What worries you about the future of agriculture in Washington?



*Data derived from USDA NASS 2022 Census of Agriculture

*USDA NASS 2024 Farm Production Expenditures Press Release

Farm Production Expenditures, Total and Average Per Farm by Year - Washington: 2014-2023



*WSDA Washington Agricultural Viability Conference attendee responses, May 2024

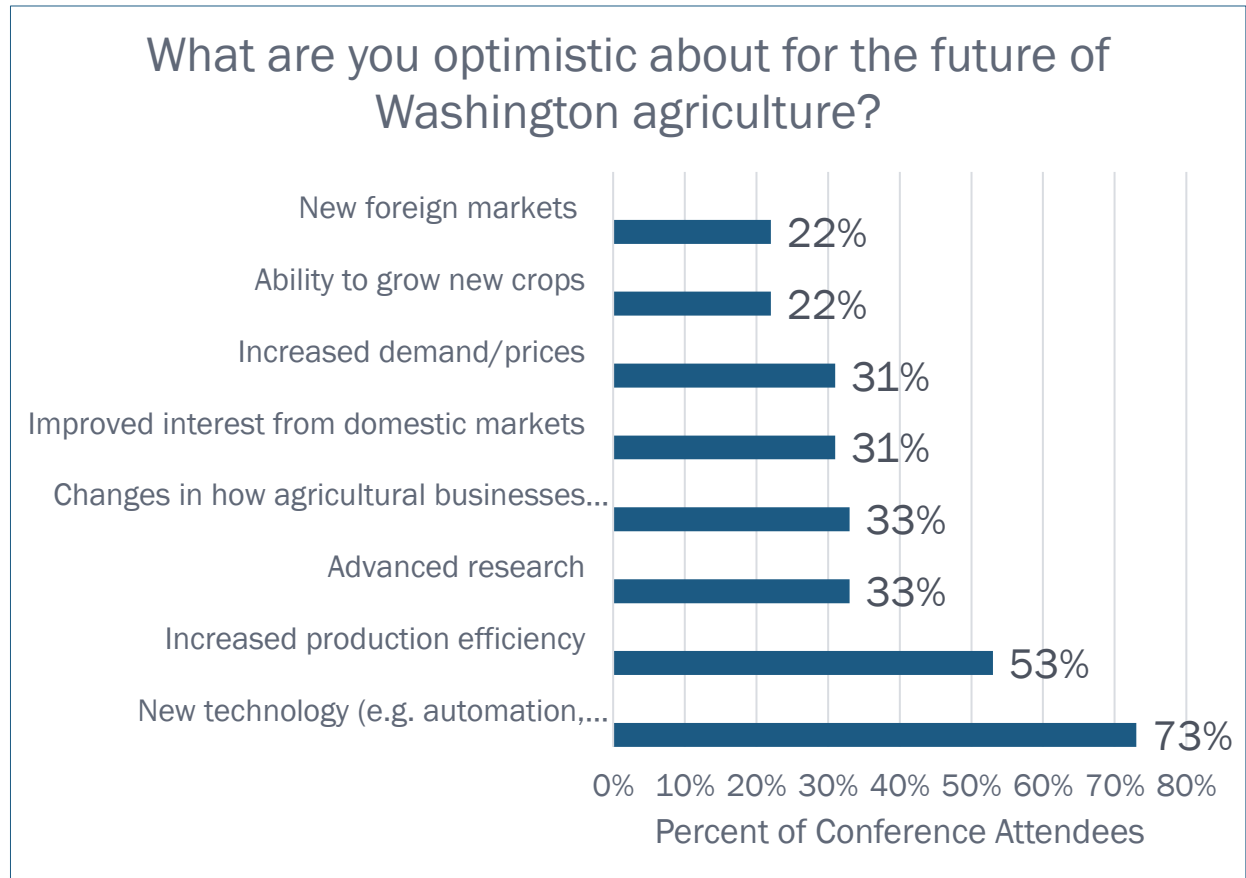
Opportunities to Invest in Sustainable Agriculture

Agricultural Competitiveness and Business Viability Study

Conducted by WSU IMPACT Center in partnership with WSDA - Shedding light on the challenges producers in Washington are facing and works with partners at every level—local commissions, state agencies and Legislators – to develop sustainable solutions.

Other opportunities:

- Continue support for programs and technical assistance that enhance farm viability.
- Invest in workforce development programs and solutions to high labor costs.
- Provide opportunities for producers to protect our natural environment while improving business viability through investment in emerging opportunities including innovation and technology.
- Invest in Washington's market resources, such as export and infrastructure, through policies that support the agricultural industry.



*WSDA Washington Agricultural Viability Conference attendee responses, May 2024

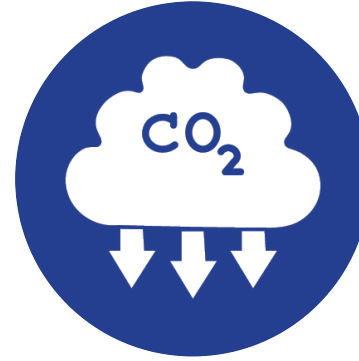
Overcoming Barriers To Statewide Sustainable Agriculture

*Presented by: Dani Gelardi, PhD
Soil and Climate Scientist*



Research demonstrates the economic benefits of sustainable agriculture.

- Increased yield
- Reduced input costs
- Reduced insurance losses
- Reduced yield variability
- Increased profit



Significant Barriers to Conservation Practice Adoption Remain

- Start up costs
- Lack of information
- Lack of technical support
- Lack of specific research
- Complicated grants



WSDA is Here to Help, Now and in the Future

- *“...WSDA supports the viability and vitality of agriculture while protecting consumers, public health, and the environment.”*



Our Programs Have Supported Sustainability for 100+ Years

NUTRIENT MANAGEMENT TECHNICAL SERVICES



COMPOST REIMBURSEMENT PROGRAM



WSDA's Climate Resilience Plan for Washington Agriculture

Stakeholder engagement +
Policy review +
State of the Science =

6 goals and 27 actions to
enhance agricultural
resilience

Coming March 2025



Innovation & Sustainable Agriculture

*Presented by: Julia Terlinchamp,
Special Assistant to the Director*



The Role of Technology in Sustainable Agriculture

- **Precision Agriculture:** Data-driven tools to optimize inputs like water, fertilizers and pesticides
 - Reduces environmental impact
 - Increases yield efficiency and resource use
- **Robotics & Automation:** Autonomous tractors, drone monitoring, laser weeders and more!
 - Addresses labor shortages
 - Improves efficiency & reduces operational costs
 - Enhances food safety through precision handling
- **Economic & Environmental Impact:** Remaining competitive while meeting sustainability goals



Innovation in Washington's Tree Fruit Sector

- Adapting to extreme weather events & unpredictable markets
- Smart Orchard project & Technology Roadmap
 - Irrigation & Precision
 - Crop Load Management
- WSU's AgAID
- Semillero de Ideas



Innovation in Washington's Dairy Sector

- Key Innovations:
 - Energy Solutions
 - Manure Management
 - Enteric Methane Reduction
 - Feed Production
- Funding as a Critical Enabler
- Research & Demonstration Efforts
- The Broader Vision



Barriers & Opportunities

Barriers to Adoption:

- A. High upfront costs and return on investment
- B. Unfunded infrastructure maintenance and support for higher-ed programs
- C. Need for technical training and support
- D. Access to broadband in rural areas



Opportunities:

- A. Financial Incentives
- B. Education and Workforce Development
- C. Research and Innovation
- D. Examples in the state:
 - A. Lending Libraries
 - B. WSU's AgWeatherNet
 - C. WSDA Climate Resilience Plan



Questions

Contact Us



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