

Agriculture and Natural Resources Sector

Summary of key themes, needs, and opportunities: June 2025

Prepared by the Agriculture and Natural Resources Center of Excellence

(1) What are the top 3-5 themes you hear from employers in your sector related to workforce development? (2-3 sentences max for each statement)

- **Lack of Awareness Among Youth:** There is a lack of awareness among youth about the breadth of family sustaining wage job opportunities available in agriculture and natural resources. This is limiting interest and engagement in these fields, particularly in comparison to other STEM pathways. Agriculture and natural resources are STEM heavy and technologically advancing career pathways, and the understanding of this with youth has immense potential in developing the workforce.
- **Critical Demand for Specific Roles:** Employers emphasize the urgent need for positions such as farmworkers, agronomists, crop advisors, truck drivers, welders, foresters, and conservation technicians.
- **Career Advancement Opportunities:** There are significant opportunities for career progression within agricultural roles, with employees often able to transition between departments, enhancing their skills and career prospects. Industry partners emphasize the advancement ability within their organizations, and the potential to partner with education providers to upskill their existing workforce. For many of the inter-sectoral skill sets (like welding and truck driving), there is potential to partner in new ways to provide training to incumbent workers.
- **Educational and Skills Gaps:** A significant barrier is the lack of individuals with the necessary education, training, and/or experience in fields such as agronomy, horticulture, and plant and soil sciences, leading to a limited pool of qualified candidates. This need directly ties to lack of awareness of both career pathways, and the STEM and technology aspects of these careers.
- **Geographical and Housing Barriers:** Recruitment efforts are hampered by limited access to affordable housing in rural areas and the remote locations of many agricultural and forestry operations, which deter potential candidates. Career connected learning opportunities through the K12 system has immense potential here, showing students some of the most scenic corners of our state, how they can live and work in these places, and the impact that agriculture and natural resources can have on environmental support and sustainability.

(2a) What are the 3-6 occupations that employers in your sector indicate should be high-priority for workforce development to help meet their hiring needs?

- **Farm Worker:** including leadership training for farm work crews, and language skills (bilingual in English and Spanish)
- **Agronomist/Field Consultant:** including understanding of cutting-edge soil health practices, precision agriculture applications, and communication skills

- Forester: including various trainings related to forest health and wildfire mitigation, equipment (chainsaw, large equipment operators) and, in certain areas, de-escalation practices
- Conservation Tech: including various trainings related to equipment and accessing rural areas
- Livestock Manager: including grazing, nutrition, and wildlife management
- Animal Nutrition Specialist

(2b) Which career connected learning programs are effectively meeting the hiring needs of employers in your sector?

- **Washington State University:** Field Crop Management, Agriculture Technology and Production Management
- **Walla Walla Community College** Certificate & Degree Options: Agriculture Education, Agriculture - Plant & Soil Science, Agricultural Systems*, Agriculture Technology & Mgmt, Field Crop Mgmt, Food Science, Organic & Sustainable Agriculture, Viticulture Science
- **Columbia Basin College** Certificate & Degree Options: Agriculture Systems*, Crop & Soil Science, Field Crop Management, Precision Agriculture
- **Wenatchee Valley College** Certificate & Degree Options: Hispanic Orchard Employee Education (HOEEP), Horticulture & Tree Fruit, Integrated Pest Mgmt, Sustainable & Organic Ag, Viticulture Sustainability
- **Western Washington University** – Sustainability Pathways Program (Twisp, WA location)
- **ESD 123** – High School to Highway CDL
- **NOTE:** We are excited to see Edmonds College moving forward with a conservation focused degree pathway, directly serving their region

(2c) Which career connected learning programs could be adjusted, expanded, or scaled to other regions to meet the hiring needs of employers in your sector?

- With the increasing demand for workers with a CDL, there is an opportunity to expand the **ESD 123 High School to Highway CDL program** to school districts across the state.
- **The Wenatchee Valley College programs**, including Hispanic Orchard Employee Education (HOEEP), Horticulture & Tree Fruit, Integrated Pest Management, Sustainable & Organic Agriculture, and Viticulture Sustainability, address critical workforce needs in Washington's agriculture sector. These programs equip students, particularly from underrepresented Hispanic communities, with specialized skills essential for modern, sustainable agricultural practices. Scaling these programs to other regions would enhance workforce readiness, promote sustainability, and support economic growth in Washington's agriculture industry.
- In regions throughout the state, there are schools providing **various career exploration opportunities** related to local industries. For instance, there's Wheat Week in the Mid-Columbia and East region, Salmon Summit in the Mid-Columbia region, and statewide programs like YESS and Microsoft's Farm Beats. With numerous valuable exploration opportunities already available, there's a desire to expand their reach. **With numerous valuable exploration opportunities already available, there is a desire to expand their reach.** For example, rather than just one 10th grade class in a particular district or region utilizing the YESS (through Pacific Education Institute) program, the aim is to involve 10th grade classes across the entire district or region in the program. This expansion would enable more students to benefit from these valuable career exploration opportunities. Feedback

indicates that many students are still unaware of the wide range of career options available within the fields of agriculture and natural resources. It is imperative to generate interest in these areas before expanding launch programs to ensure their viability and attract significant enrollment. Through the Sector Accelerator funds, Pacific Education Institute is working to address this critical need, identifying ways to embed knowledge of agriculture and our food system into existing K12 coursework.

(2d) Which career connected learning programs should be developed to meet the hiring needs of employers in your sector?

Facilitate and support the development and implementation of new frameworks such as the cross-sector MAC project, which provides Welding Frameworks that can be utilized in classrooms across the state. These frameworks support cross-sector industries, including agriculture, maritime, and construction. Additionally, advocate for the integration of the PEI Agriculture & Food Literacy frameworks into the K-12 system to expand students' understanding and the importance of the state's food system. We see immense potential in these programs, as they are developing resources to address critical needs immediately, and in a statewide manner.

(3) What are the top three efforts, initiatives, or investments that could meaningfully support the workforce development needs of employers in your sector?

- **Expand Career Explore and Prep Programs Across K-12:**
There is a persistent need to increase awareness among students about the diverse opportunities in agriculture and natural resources. Scaling up career explore and prep programs across entire districts (rather than isolated classrooms) can generate early interest in careers related to agriculture and natural resources. Proven initiatives provide engaging hands-on learning, while new frameworks like the PEI Agriculture & Food Literacy and the MAC Welding project can be integrated statewide. Partnering with ESDs and Regional Networks to embed these into school curricula and aligning them with industry exposure (e.g., site visits, internships) will help build sustained interest and participation.
- **Support for New and Cross-Sector Frameworks (e.g., MAC Welding, Ag & Food Literacy):**
The development and statewide rollout of frameworks like the cross-sector MAC Welding and PEI's Agriculture & Food Literacy Frameworks represent key investments in scalable, transferable, and industry-aligned curriculum. These frameworks support a wide range of occupations—spanning agriculture, construction, maritime, and more—by helping students build foundational, cross-sector technical skills. Continued support is needed to accelerate OSPI adoption, provide professional development for educators, and encourage CTE directors to embed these frameworks locally. These frameworks make it easier for educators to connect students to tangible career opportunities across multiple sectors and develop a deeper understanding of our food system and its economic impacts to our state.
- **Increase Access Through Transportation Solutions and Rural Program Investments:**
Transportation remains a top barrier to equitable access—particularly in rural areas—where work-based learning opportunities are often geographically spread out. Investments that support shared-use transportation models, district-coordinated bus routes for CCL activities, or stipends for rural students can meaningfully increase participation in site visits, internships, and field-based career exposure. Additionally, increased investment in rural-serving programs

(like mobile labs or externships for ag educators) and expanded use of bilingual materials can help ensure both students and families are engaged and informed about available opportunities. This also supports employers' goals to "grow their own" local workforce in hard-to-staff locations. We cannot stress enough that reaching our most underserved students requires creative transportation solutions. While rural areas are front of mind for our sectors (ag and natural resources), we have had great conversations working to understand our more urban colleagues, and recognize that they often face the same challenges.

(4) What are the top 3-5 approaches you recommend to increase participation of underrepresented students in your sector's high priority occupations? (2-3 sentences max for each statement)

- **Exploration Opportunities for Urban and Rural Learners:** Implement tailored career exploration and preparation initiatives such as career fairs, classroom visits by industry partners, industry site tours, and informational sessions that address the unique experiences of both urban and rural students. Collaborate with schools, community organizations, and local businesses to provide hands-on exposure through site visits, job shadowing, and internships, ensuring accessibility for BIPOC students and students from rural areas.
- **Support for Rural Programs:** Allocate funding and resources to support programs specifically designed for rural communities, addressing their unique needs and challenges. Invest in technology and transportation to enhance access to education and training opportunities for rural learners and provide financial assistance for related costs such as transportation and materials.
- **Exposure for Students and Parents, Particularly Spanish-speaking Communities:** Provide program information and materials in Spanish and host informational sessions and workshops in Spanish to engage Spanish-speaking communities. Collaborate with community leaders, school districts, and cultural organizations to ensure effective outreach and culturally relevant guidance on pursuing high priority occupations in agriculture and natural resources.
- **Promotion of Career Pathways:** Develop marketing materials and online resources that highlight career pathways within the sector and showcase the successes of individuals from diverse backgrounds, focusing on Spanish-speaking and indigenous populations. Partner with schools and community organizations to integrate career exploration activities into curricula and provide training for educators and counselors on supporting BIPOC and rural students.