

Case Study: Improving Equity in Pesticide Education and Licensing

Private Pesticide Applicator Pilot Training in Spanish in Hood River, OR:

An interagency, interstate collaborative project

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**Hood River
Soil & Water**
CONSERVATION DISTRICT



Oregon State
University

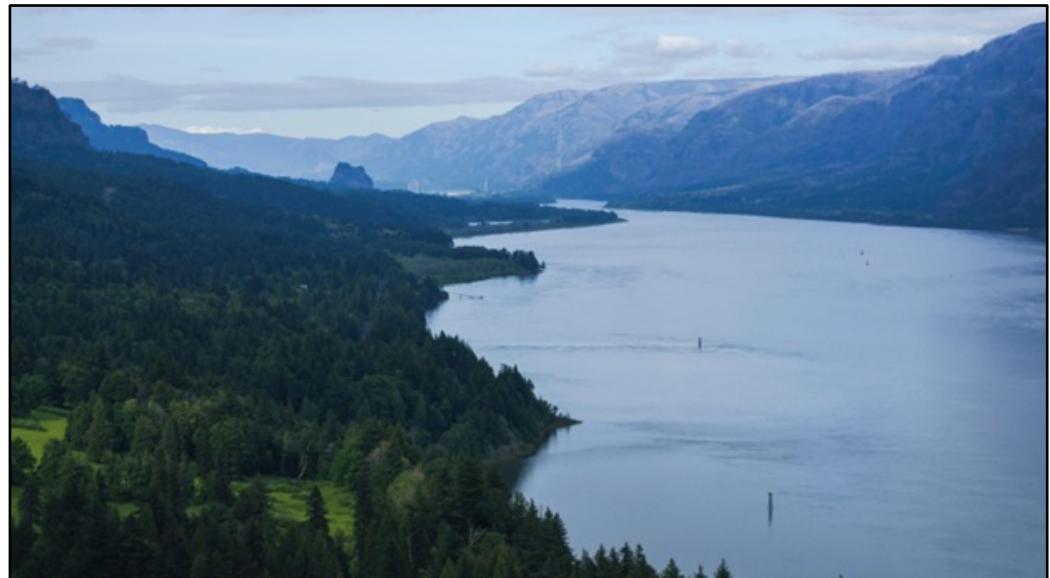


**OREGON
DEPARTMENT OF
AGRICULTURE**

Acknowledgements

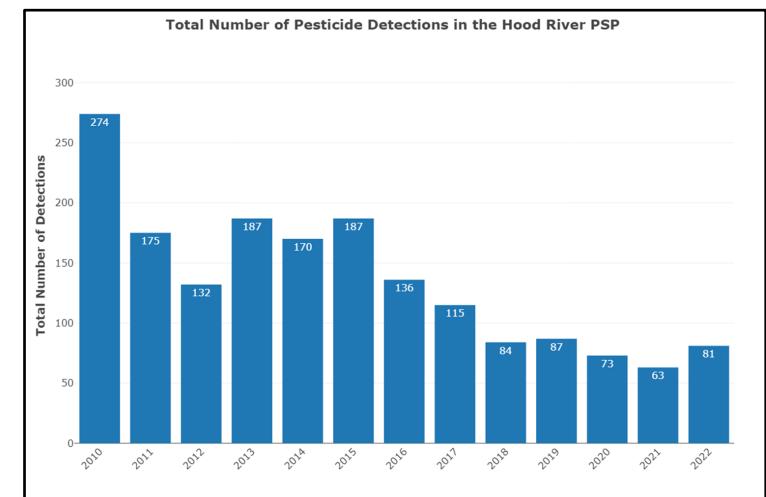
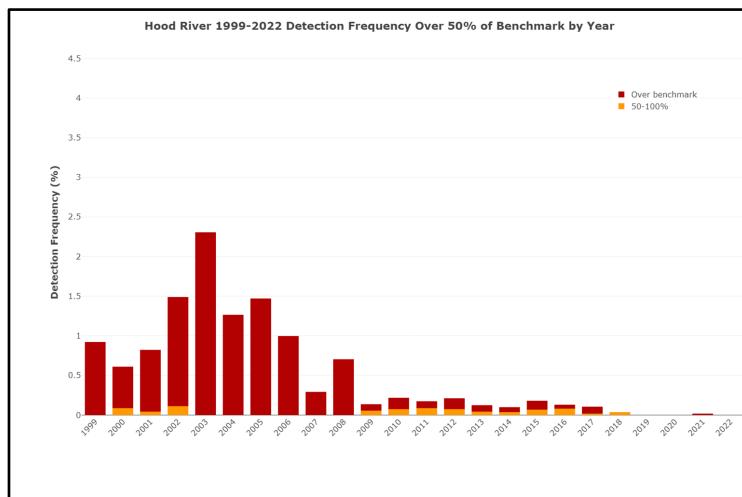
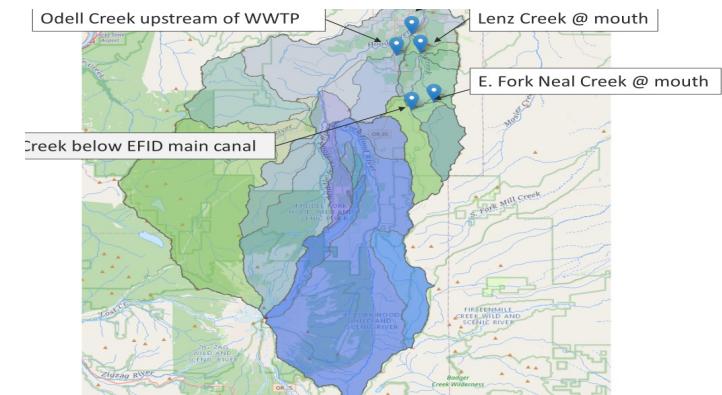
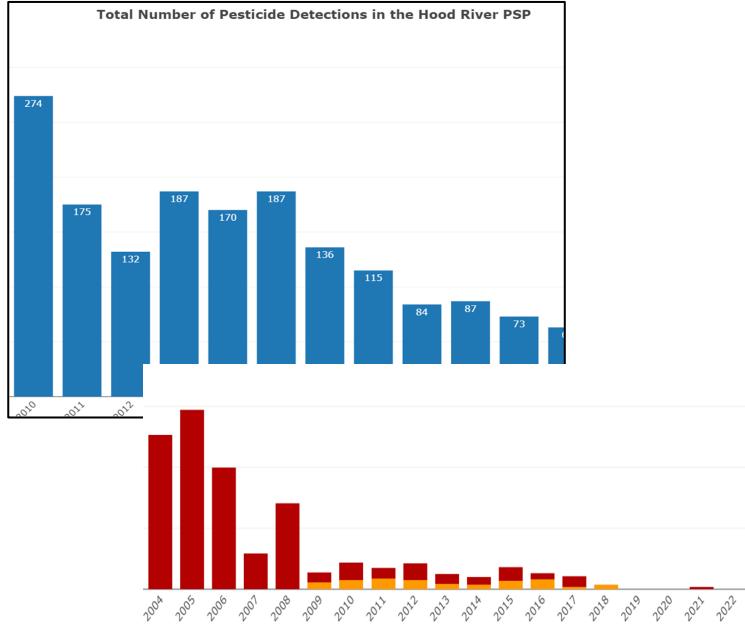
- the 40 orchardists who participated in this pilot program
- Ashley Thompson, OSU Extension
- Manuel Ornelas, Flor Servin and Lorena Rodriguez, WSDA
- Gilberto Uribe Valdez, Colton Bond, Katheryn Rifenburg and Rebecca Howes, ODA
- Heather Hendrixson and the HRSWCD Board
- Kaci Buhl, OSU- PSEP
- Leanne Giordono, Evaluation and Reporting-OSU Extension
- Mike Doak and the Columbia Gorge Fruit Growers Association
- Leslie Tamura, Andrew Halliday, and the CGFG Board
- Leo Garcia, Next Steps
- Kelly Denny, Metro Institute
- Christina Zimmerman and Ingrid Zaragoza, WSDA
- Shannon Caplan, OSU Extension
- Chad Chiesa, Ryan Kreps, and Jovani Elisea, Radcomp
- Felipe Mendez, Onsite Irrigation
- Oregon Watershed Enhancement Board
- Oregon Department of Environmental Quality
- Reka Siverkrop, The Pine Grove Grange,
- Gisela Ayala Echeverria, One Community Health
- Google
- GS Long

Hood River Valley & The Mid-Columbia Region



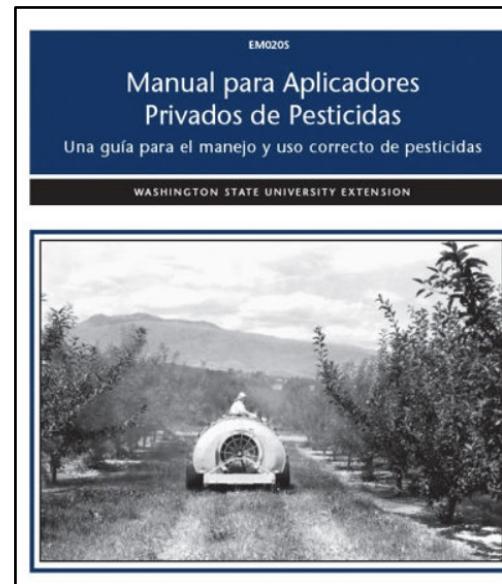
Oregon Department of Agriculture Pesticide Stewardship Partnership Program

- Voluntary approach to mitigating pesticides in waterways
- Piloted in Hood River Valley
- Combines monitoring, targeted education & outreach, and review and evaluation
- Focuses resources on serving pesticide applicators and shared goals



The Search for Spanish Language Exam Preparation Opportunities in Oregon

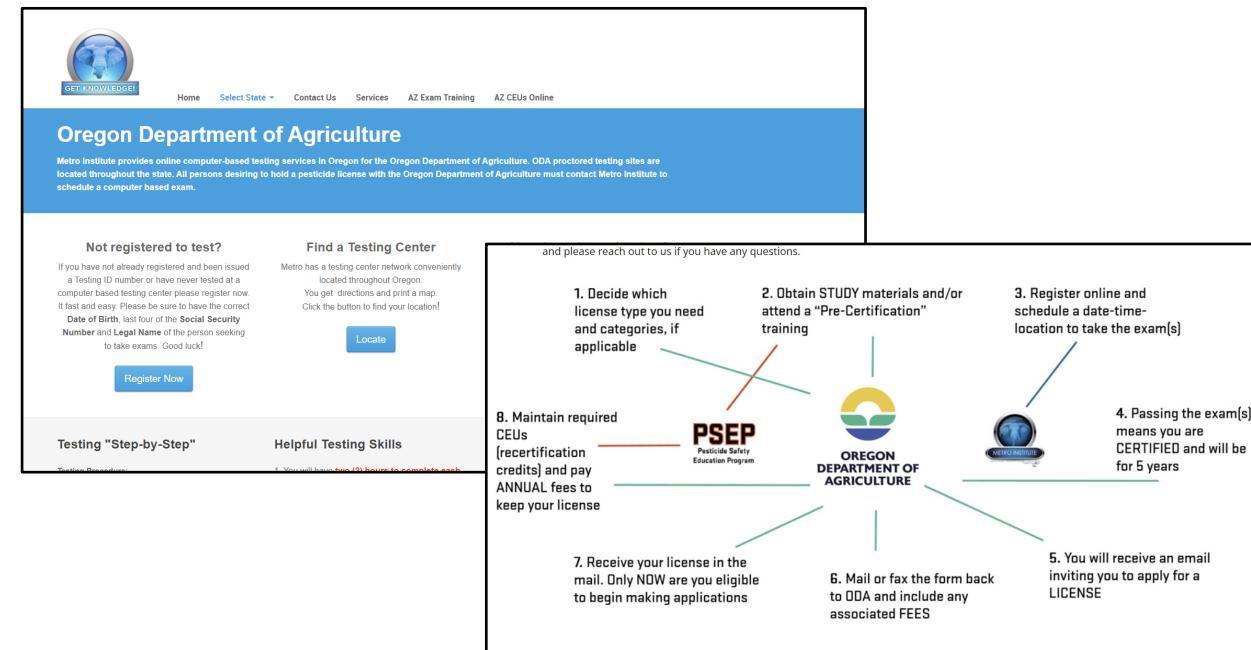
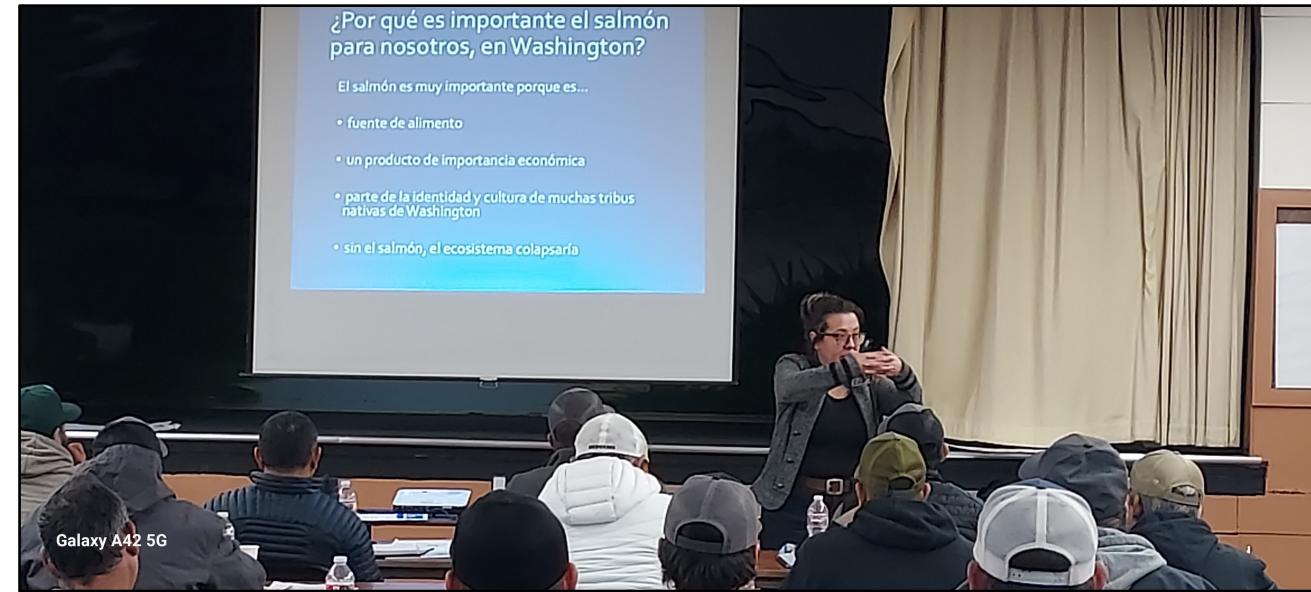
- Oregon currently has no available written, in-person, remote or online training.
- OSU PSEP hired their first bilingual trainer in 2023
- WSDA has in-person and remote pre-license training courses
- WSU 'Manual para Aplicadores Privados de Pesticidas'



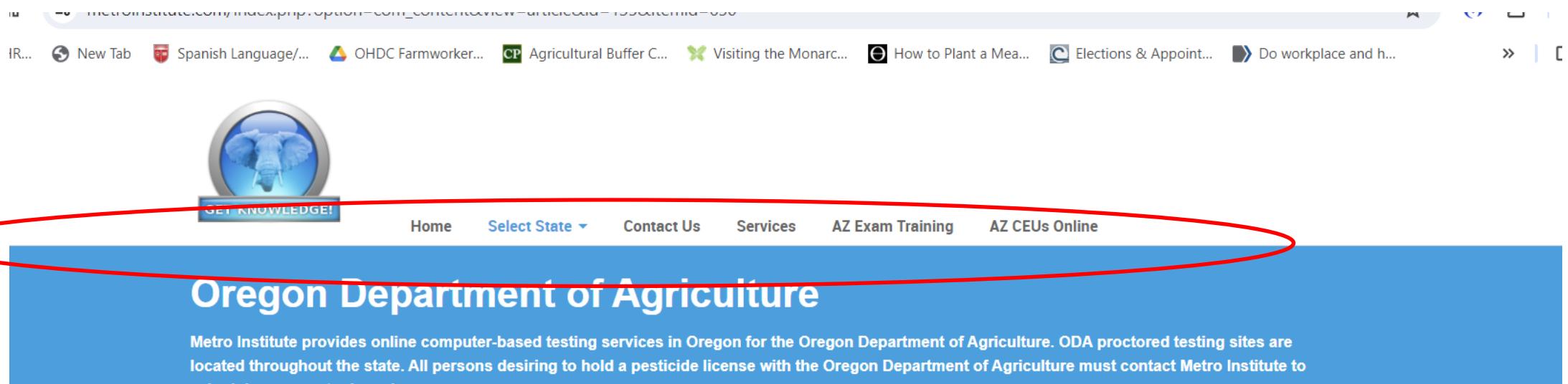
The Search for Test Access in Oregon

- Community college or university testing center
- Available only on a computer and registration is through a third party
- The test is 100 questions and default time is 2 hours
- No bilingual registration, little bilingual capacity at testing centers and the practice test and instructions are only in English
- Hood River- ~30-50 mile commute
 - CGCC Test was offered 1 x week, twice a day on 3 computers with no bilingual support.

A class of 50, would need 2 1/2 months for one chance at the exam.



Assessment of Pass Rates in Oregon



The screenshot shows a web browser with the URL https://metroinstitute.com/index.php?option=com_content&view=article&id=15&Itemid=630. The page features a logo of an elephant in a blue circle with the text 'GET KNOWLEDGE!' below it. A red oval highlights the top navigation bar, which includes links for Home, Select State (with a dropdown arrow), Contact Us, Services, AZ Exam Training, and AZ CEUs Online. Below this is a blue header bar with the text 'Oregon Department of Agriculture' and a descriptive paragraph about Metro Institute's testing services for the Oregon Department of Agriculture.

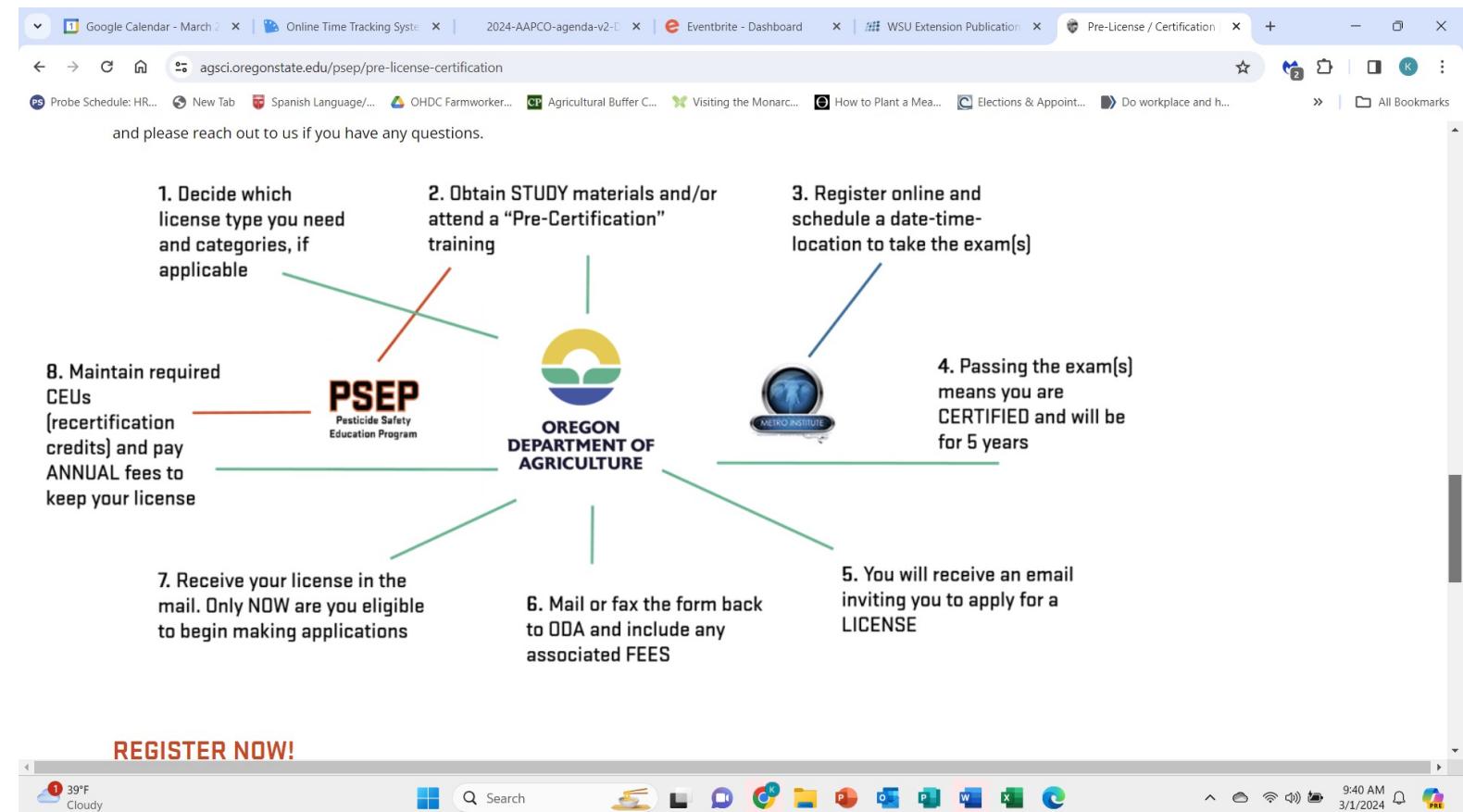
Metro Institute provides online computer-based testing services in Oregon for the Oregon Department of Agriculture. ODA proctored testing sites are located throughout the state. All persons desiring to hold a pesticide license with the Oregon Department of Agriculture must contact Metro Institute to

- In a five-year period, 7 people obtained their license in Oregon
 - Compared to over 1,300 people obtained their license through the English exam
- 2020-2023: 10-30 people attempt the exam annually with pass rates between single digits-20%
 - Compared to 250-300 people attempt the English exam with a 70-78% pass rate

Comparison to the Washington Exam

- Reciprocity in Oregon
- Paper and can be proctored on-site in a bilingual capacity
- 60 questions 3 hours

Test went through a review and improvement process with educators and industry with Spanish speaking farmworkers in mind



The Goals:

- #1 To give people their *best* chance to acquire education and obtain their applicators license
- #2 To improve Oregon's system for exam preparation, test access, and the exam itself.

Act as a pilot program to be modeled throughout the state (and beyond)

The Plan February 2024: 40 participants

Preparation for the Exam:

Offer the WSDA Pre-license training in collaboration with OSU PSEP

Provide copies of the WSU manual and OR addendum

Access to the Exam:

Become a pilot testing center and facilitate registration and bilingual support

The Exam:

Offer the Washington exam first.

Participants return the following day to take the Oregon exam

Review and Evaluation:

Survey and interview all willing participants



Washington State Department of Agriculture (WSDA)

Technical Services and Education Program (TSEP)

Ofelio Borges
Program Manager



Washington
State Department of
Agriculture

Topics

- ❖ Program History
- ❖ Model
- ❖ Evolution.



Photo by Ofelio Borges

What is the TSEP?

1. Offers bilingual (Spanish and English) pesticide safety training
2. Started in 1998 as Farmworker Education Unit – as part of our Licensing Program
 - a. Spanish Private Applicator
 - b. WPS Handler



Background

1. Created based on a model from UC Davis.
2. WPS Train the Trainer program in 2002.
3. Two workshops/year.



Photo by Ofelio Borges

Background



1. Demand increased
2. Became the TSEP in 2015.
3. Legislature granted additional resources.

Our Model

- **Based Collaborations**
 1. Growers and grower organization.
 2. Pesticide distributing companies
 3. Educational institutions and other government agencies
 4. WA Farm Bureau



Photo by Ofelio Borges

Our Model

- **Our collaborators:**

1. Do most of the work.
 1. Recruit for participants
 2. Provide facilities
 3. Food & logistics
2. We provide the training
 1. Training materials, equipment and props.
 2. Instructors



Photo by Ofelio Borges

Our Model

- **Benefits:**
 1. Allow us to stretch our resources.
 2. Offer more training opportunities.
 3. Give the community to be part of the efforts.



Photo by Ofelio Borges

Our present



Photo by Ojello Borges

1. We have 12 FTEs
2. Seven bilingual programs including on-farm technical assistance services.
3. Partner with approximately 40 entities.

Our present



In 2024

1. Have participated in about 50 events.
2. Trained near 5,000 people.
3. Partner with approximately 40 entities.
4. Many people still do not have access to our services.

Agricultural Leadership Program

1. Washington State Tree Fruit Association and WSDA.
 1. Proactiveness
 2. Conflict resolution
 3. Emotional Intelligence
 4. Communication



Questions?

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Washington
State Department of
Agriculture



Oregon State University



Oregon State
University

OSU Extension:

- logistical and financial support to the HRSWCD
- expertise regarding evaluation of the project

OSU PSEP:

- collaboration with ODA in the translation of the Oregon Core Manual Addendum to Spanish
- development and delivery of the Oregon specific information at the Private Pesticide Applicator pilot training in Hood River
- analysis of the evaluation data (ongoing)

Evaluation

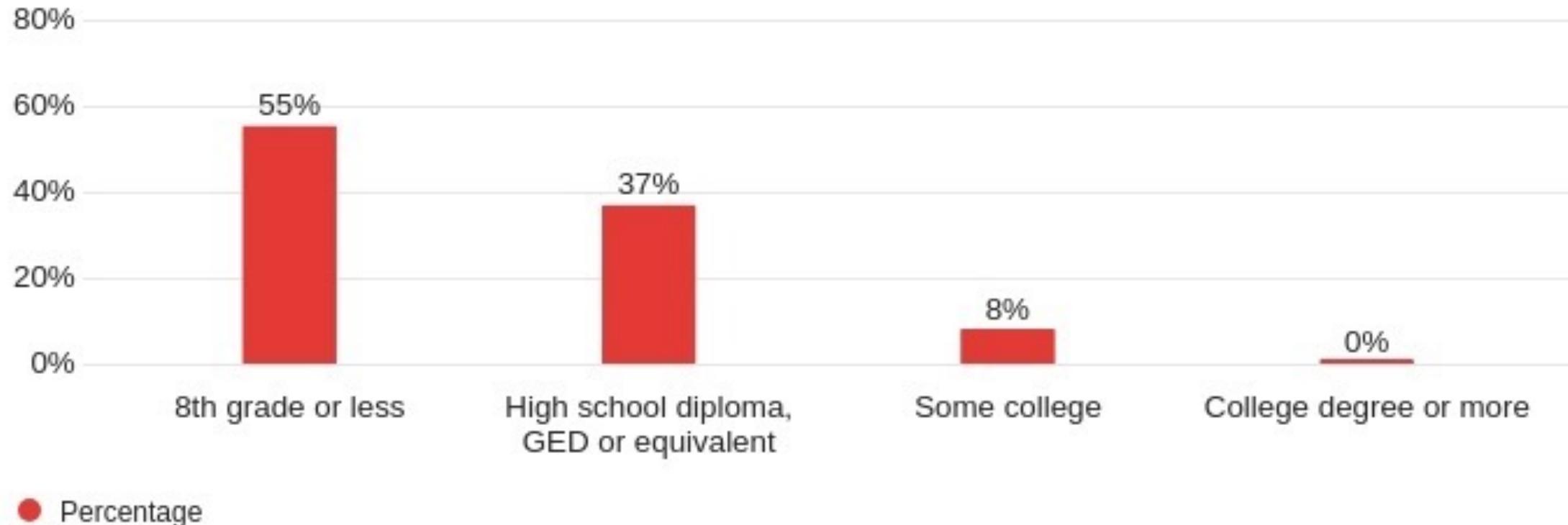
Purpose: Learn about project implementation and outcomes, to inform future programming, resources and policy.

Key evaluation questions:

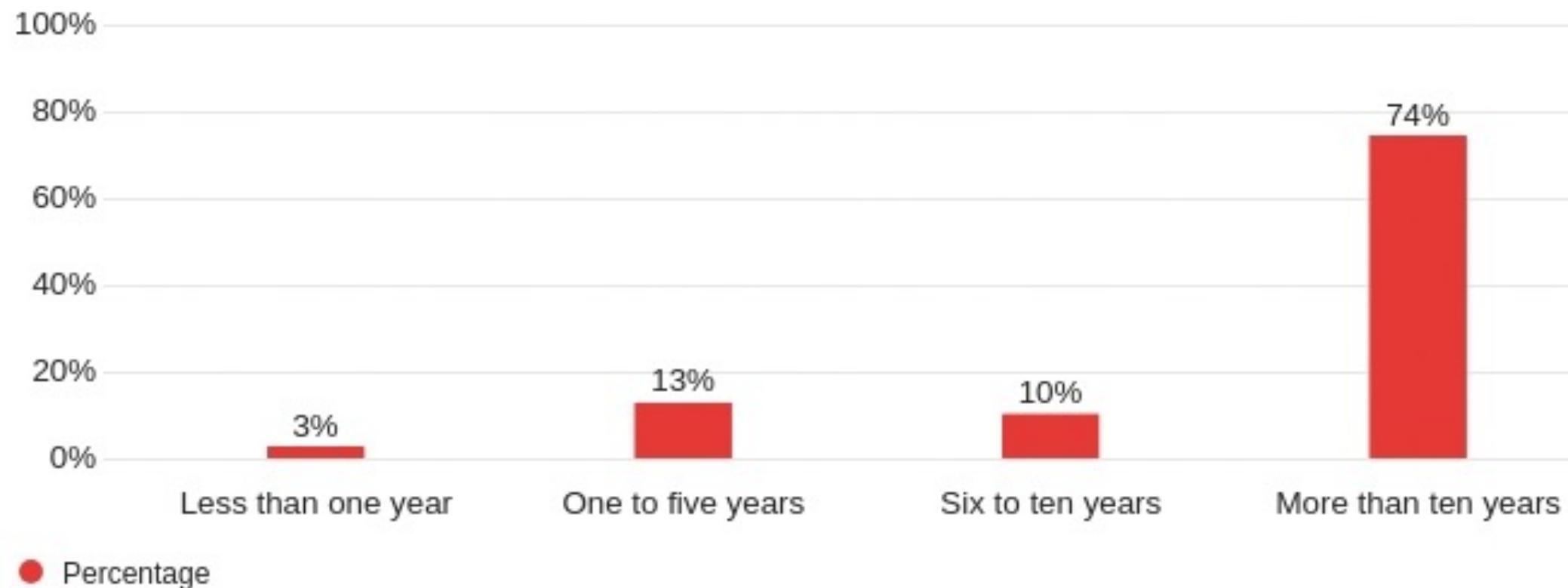
- Who participated in the pilot training?
- What did participants hope to gain from the training?
- How was the participant's experience in the training?
- How effective was the project?

Methods/Approach: mixed-methods design

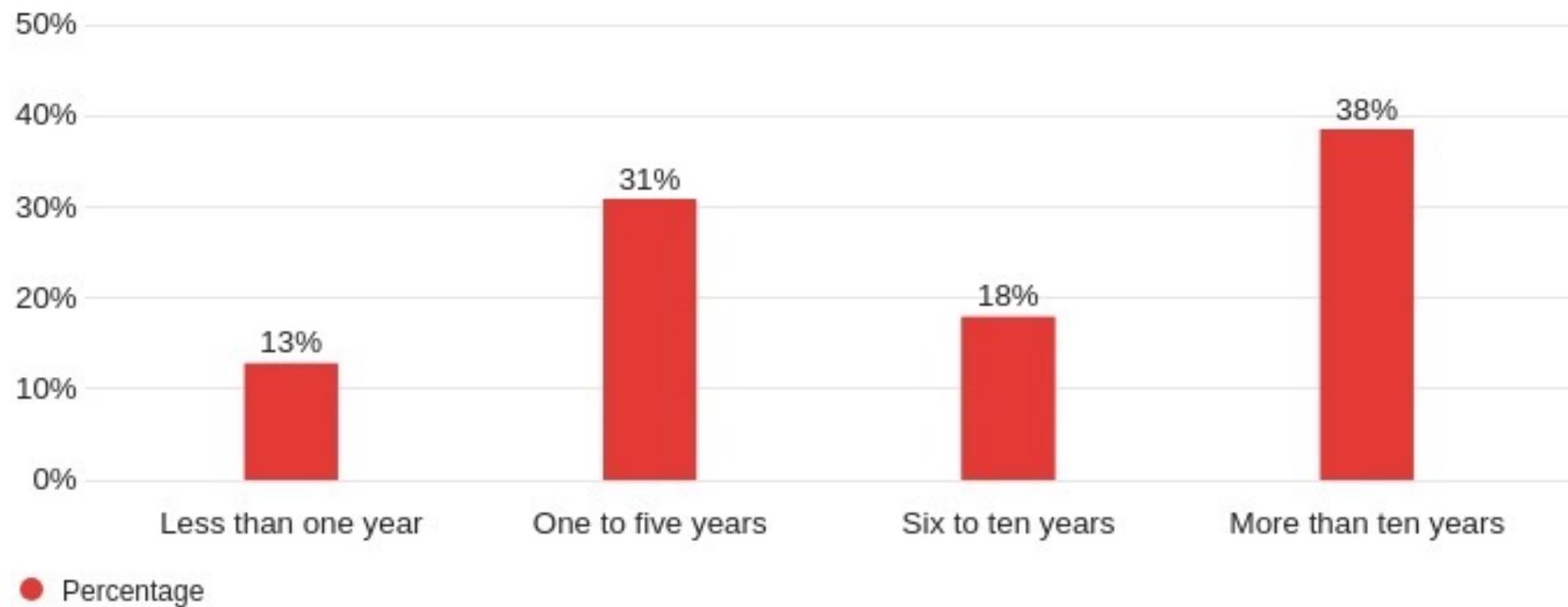
What is your highest level of education? (Check one)



How long have you worked in agriculture? (Check one)

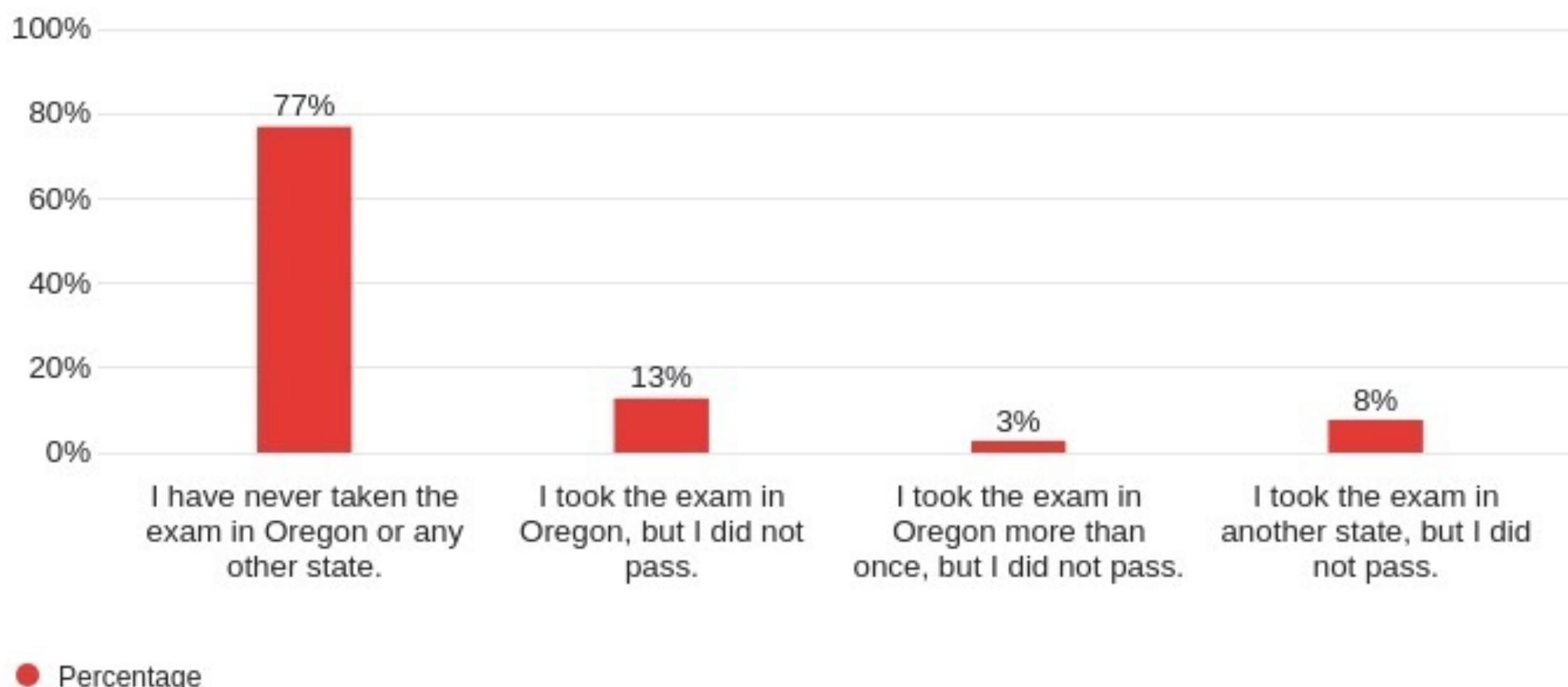


How long have you worked with pesticides? (Check one)

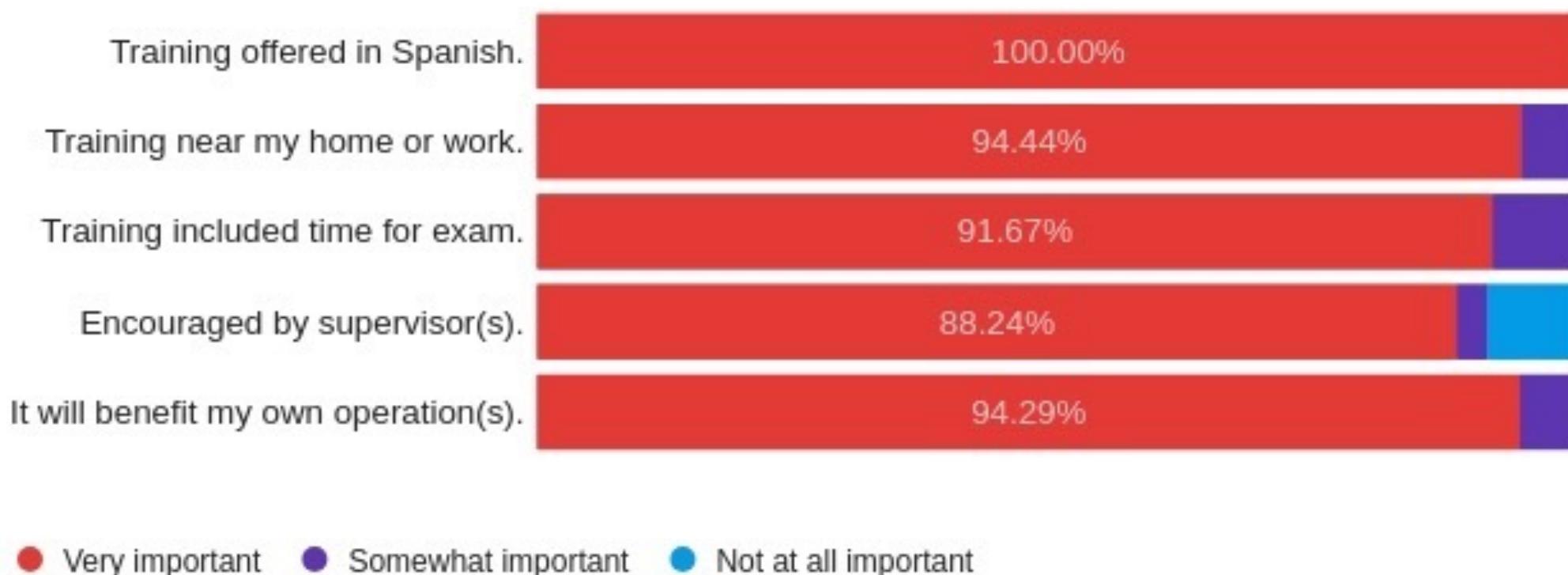


● Percentage

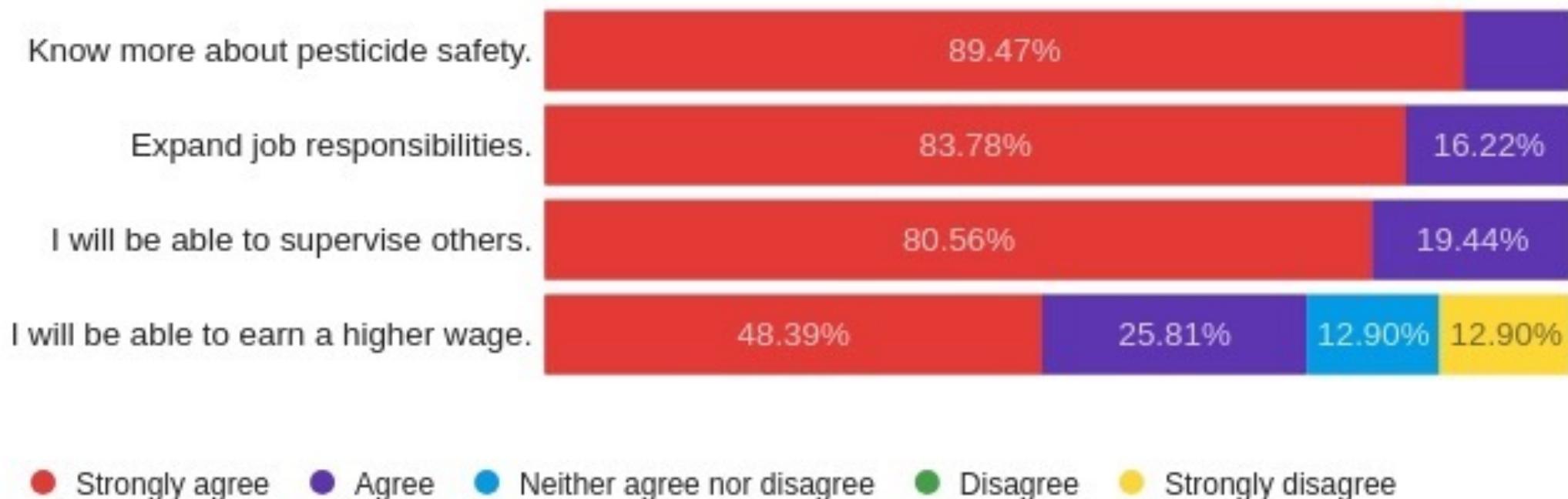
What experience do you have with taking a private pesticide applicator licensing exam? (Check all that apply)



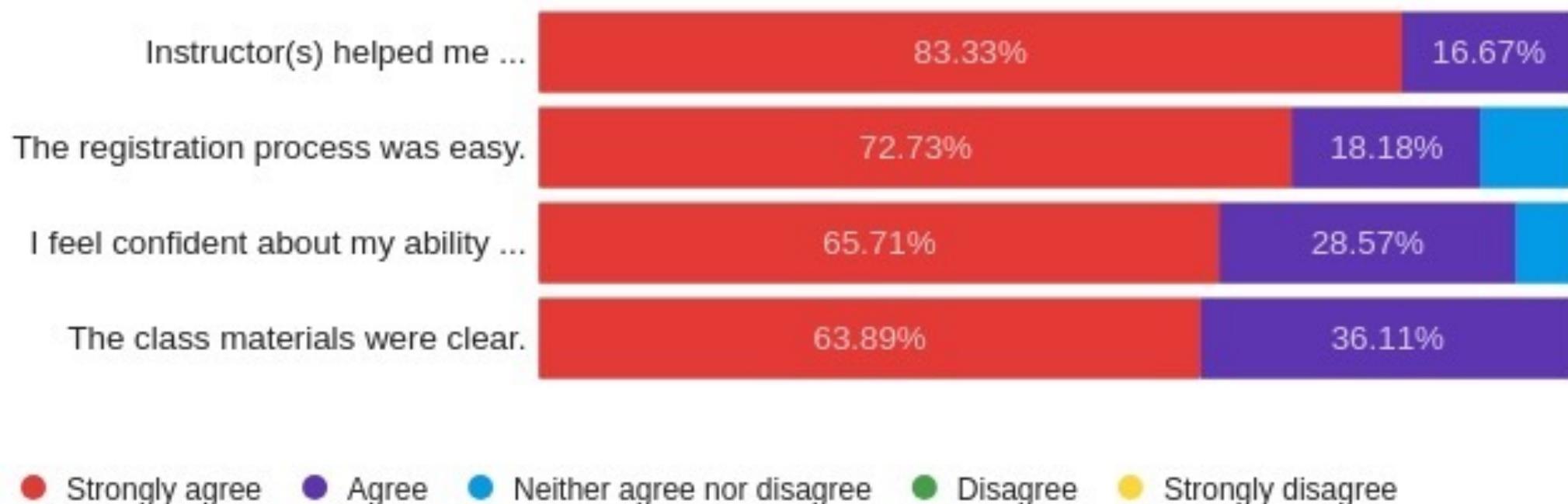
Please indicate how important each of the following reasons was for taking this class.



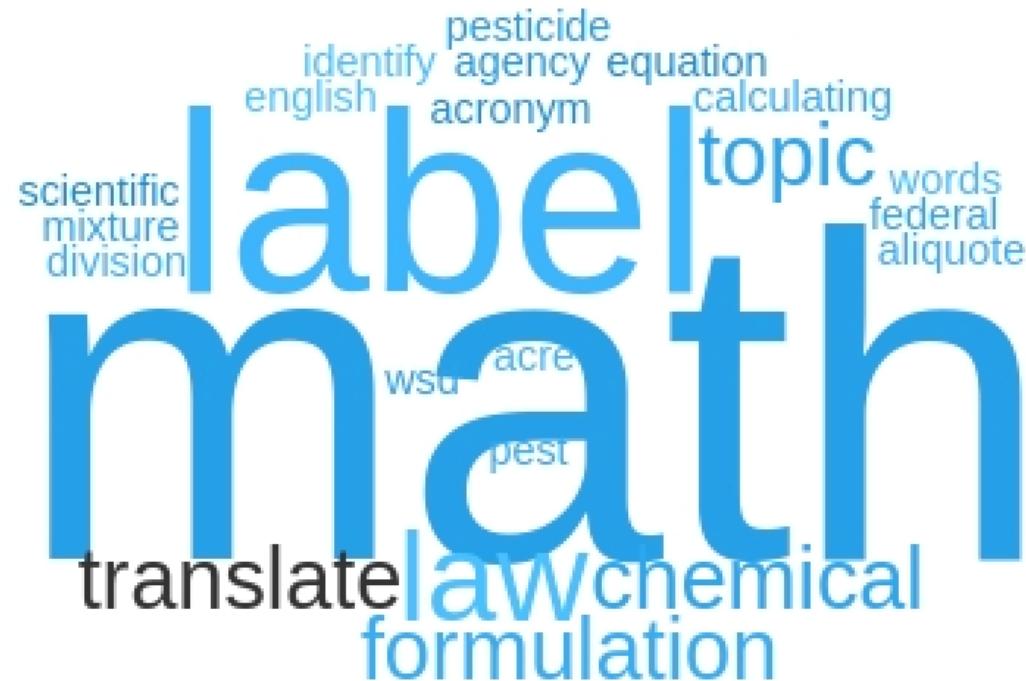
How much do you agree with each of the following statements about the potential benefits of getting licensed?



Please indicate your agreement with the following statements about your experience in this class.



Hardest topics identified by participants



A word cloud centered around the words "label" and "math". The words are rendered in large, bold, blue font. Smaller, semi-transparent blue words are scattered around the main text, representing related concepts. The words include: scientific mixture division, english, identify, agency, acronym, pesticide, equation, calculating, topic, words, federal, aliquote, wsd, acre, pest, translate, law, chemical, formulation.

label
math
translate
law
chemical
formulation

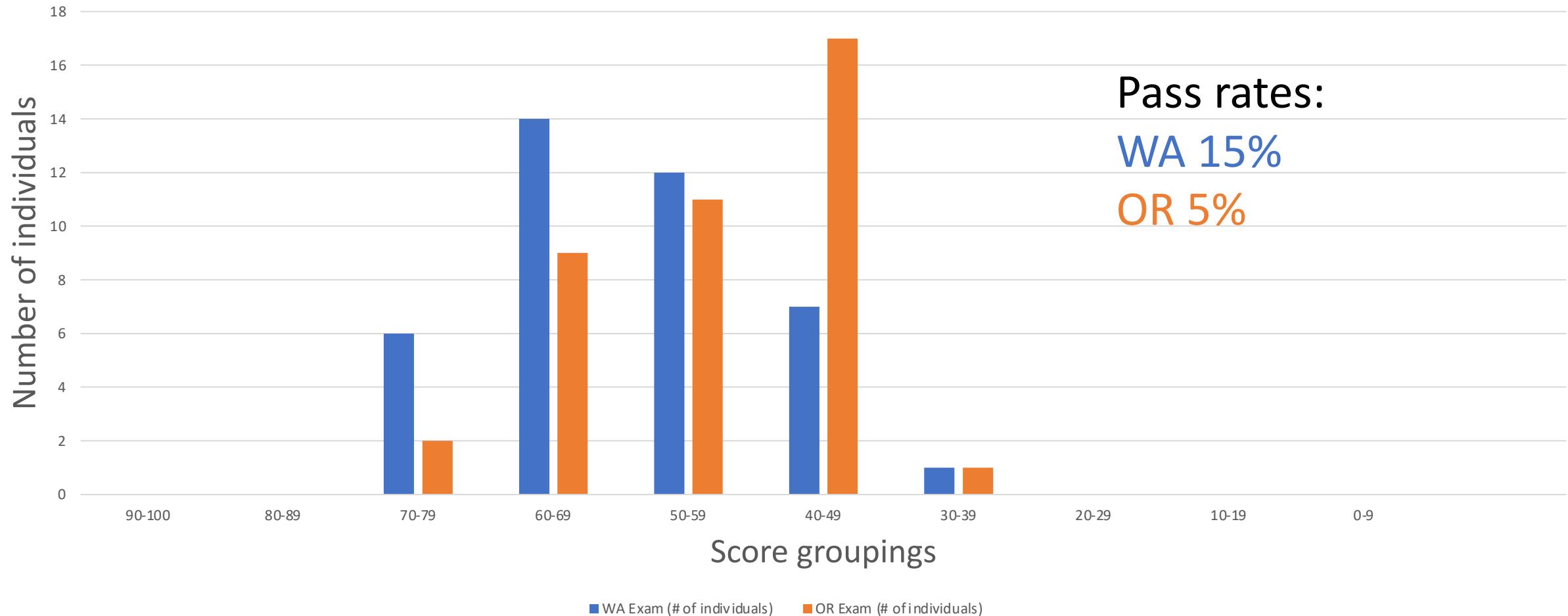
scientific mixture division
english
identify
agency
acronym
pesticide
equation
calculating
topic
words
federal
aliquote
wsd
acre
pest

Easiest topics identified by participants

pesticide
mathmeasurement
application affect distance
safety **conversion** risk
chemical law home fungus
applicator label calculation
wild convert
ppepest point
life gallon ounce
worker

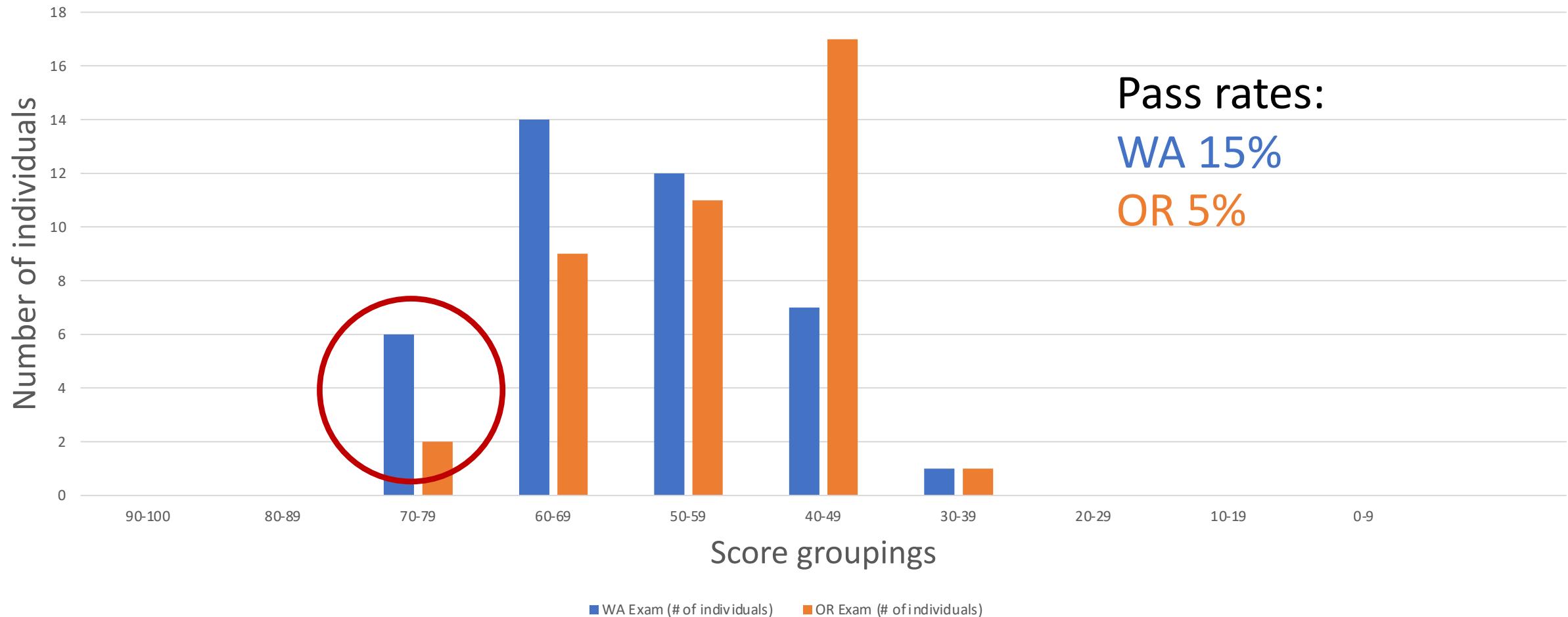
Comparison of Private Applicator License exams in Spanish for WA and OR

Overall numbers of individuals by exam and score groupings



Comparison of Private Applicator License exams in Spanish for WA and OR

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Preliminary Qualitative Data: interviews (ongoing)

- Participants see real benefits from getting licensed

“La licencia es del empleado, no del empleador. La licencia puede ser utilizada en cualquier trabajo.... y es una ventaja grandísima. Tener la licencia es muy valioso para un ranchero que tenga necesidad de alguien que sepa eso [mezclar químicos].”

“The license belongs to the employee, not the employer. The license can be used in any job...and it is a great advantage. Having the license is very valuable for a rancher who needs someone who knows that [mix chemicals]”

“Si yo tuviera esa [la licencia] es como si mis compañeros de trabajo se sintieran más seguros o mi patrón [confiara] más en mí.”

“If I had that [license] it is as if my-coworkers would feel safer or my employer would trust me more”

“Me dieron un aumento [de sueldo], entonces eso fue un incentivo también para seguir trabajando, para seguir mejorando.”

“They gave me a [salary] increase, so that was also an incentive to continue working, to continue improving.”

- Participants found the training challenging but useful and welcomed.
- Participants had constructive criticism about the Oregon private applicator licensing exam

“El curso cumplió con todas las medidas y creo que hasta más de lo que yo esperaba. Nos enseñó muchos puntos o detalles que yo no sabia o no tenía ni idea. Fue algo que me gustó porque aprendí muchas cosas y me ayudaron y me seguirán ayudando en el futuro”.

“The course complied with all the measures, and I believe that even more than I expected. It taught us many points or details that I didn't know or had no idea about. It was something that I liked because I learned many things and [those things] helped me and will continue to help me in the future.”

“Sin duda, el formato del examen de Washington es más simple, menos confuso y con menos preguntas.”

“Without a doubt, the format of the Washington exam is simpler, less confusing and with fewer questions.”

“No todos tenemos la capacidad de manejar una computadora”

“Not all of us have the ability to use a computer.”

Lessons learned

- Complex issues require diverse points of view and capacities: interagency, interstate collaborations were essential for this project!
- Importance of local **stakeholder's involvement and support**
- Importance of knowing who are our pesticide applicators to best **respond** to the **needs** of that **community** in a meaningful and culturally appropriate way
- Assessment of **strengths** and **weaknesses** among collaborating partners to efficiently allocate **limited resources**

Future plans

- Increase language accessibility and improve readability and comprehension in educational materials and trainings
- Increase opportunities for educational growth in coordination with local stakeholders
- Identify potential improvements and revisions to the Oregon Private Applicator exam
- Expand the pilot experience from Hood River to other locations statewide

Thank you!

