

Outcomes and Impact Quarterly

Volume 1
Issue 4 *Local Agriculture and Community Resilience*

Article 2

12-1-2021

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Recommended Citation

Wierda, Michael; Zesiger, Cody; Hadfield, Jacob; Pace, Micheal; and Wray, Paige (2021) "Providing Pesticide License Holders CEU Credits During the COVID 19 Pandemic," *Outcomes and Impact Quarterly*. Vol. 1 : Iss. 4 , Article 2.

DOI: <https://doi.org/10.26077/d94a-af6a>

Available at: <https://digitalcommons.usu.edu/oiq/vol1/iss4/2>

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Providing Pesticide License Holders CEU Credits During the COVID 19 Pandemic

Michael Wierda, Cody Zesiger, Jacob Hadfield, Michael Pace, and Paige Wray

Abstract

USU Extension and UDAF provide continuing education units (CEUs) for pesticide license renewal. However, in 2020, face-to-face meetings were canceled due to COVID-19. Workshop cancellation left CEU seekers with limited options. In response, programming was adapted and 2,992 CEU hours were provided via online sessions.

Introduction

Each year during the fall and winter months, Utah State University (USU) Extension and the Utah Department of Agriculture and Food (UDAF) provide face-to-face Pesticide Safety Education and Applicator Training to commercial, non-commercial, and private pesticide license holders (referred to as applicators). Applicators may maintain their current license by attending UDAF approved educational seminars that provide continued education credits in (a) pesticide law, (b) pesticide safety, and (c) pesticide use. Each seminar awards a preapproved number of Continuing Education Units (CEU) from the three areas based on subject matter. Applicators are responsible for maintaining their own CEU records for license renewal.

Due to the COVID 19 pandemic, face-to-face meetings in Utah were canceled at the Governor of Utah's request, the Center for Disease Control and Prevention, and Utah State University (USU) in 2020. The cancelation of regularly scheduled workshops left those seeking CEUs license renewal in 2020 with limited options (Clemens et al., 2020; Emm et al., 2020). USU Pesticide Safety Education Program (PSEP) spearheaded an effort to partner with UDAF to provide a series of CEU opportunities in November 2020.

As planning for the virtual meetings started, concerns became apparent with regulatory agencies, including UDAF questioning, "*How will CEU event facilitators verify participant engagement while attending the event remotely?*" Hence, attention verification quizzes became a requirement for approval of virtual event CEUs. To earn CEU credits, the participant needed to pass a four-question attention verification quiz with a 75% correct response threshold as the pass rate.

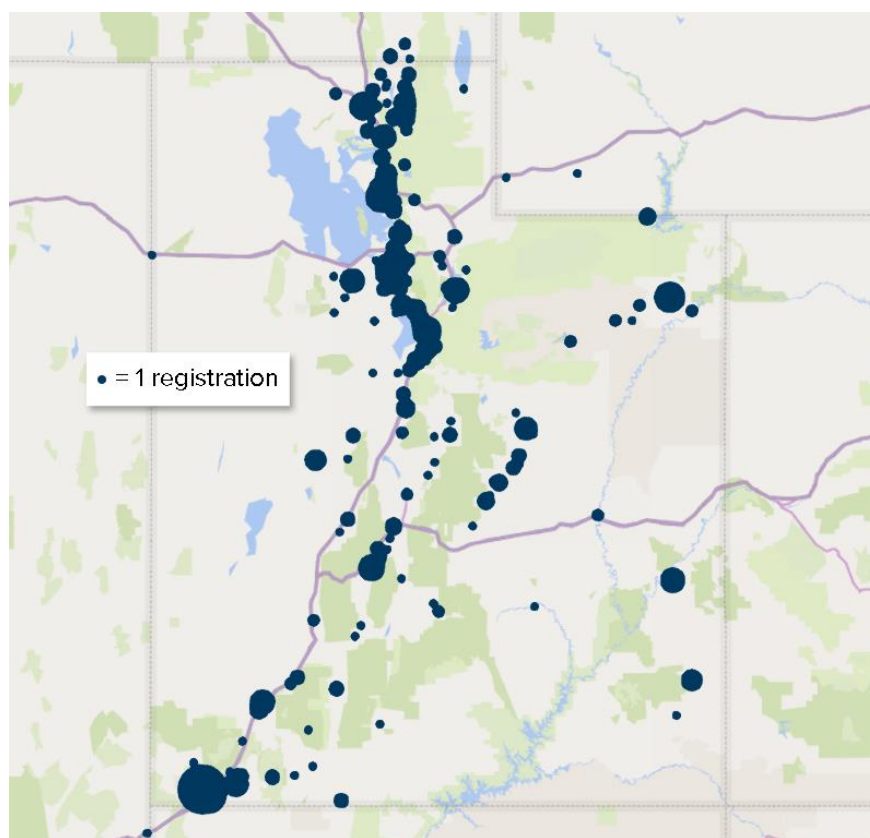
Additionally, USU PSEP collaborated with the National Pesticide Safety Education Center housed at Michigan State University (MSU) for additional supports in this effort. MSU Agriculture and Natural Resources Events Services coordinated the virtual registration, attendee tracking, reporting, certificate production, administering quizzes, and program delivery via Zoom.

Target Audience

Of the eight (8) pesticide CEU events, four (4) were intended for private applicators and four (4) were intended for commercial applicators. These were held in November 2020. The topics covered varied, allowing participants to attend multiple events as needed. Private applicator and

commercial applicator event participants possessed commercial licenses, non-commercial licenses, and private licenses. For the private applicator event, 36% of participants possessed commercial licenses, 61% possessed non-commercial licenses, and 3% possessed private licenses. For the commercial applicator event, 12% of participants possessed commercial licenses, 35% non-commercial licenses, and 54% possessed private licenses. Participants represented all 15 commercial applicator license categories in Utah. However, license types, categories, and applicator demographics reported only reflect registration data and not survey results. As shown in Figure 1, applicators registered from every county in Utah for the events.

Figure 1: Registration distribution of Utah licensed applicators for USU PSEP events.



Outcomes and Impact

In total, eight (8) virtual events were hosted in 2020 offering three CEU credits (1 Pesticide Safety, 1 Pesticide Law, and 1 Pesticide Use). All sessions provided a total of 24 presentations which resulted in 2992 credit hours for Utah pest management professionals. Participants were invited to complete a survey after the events. The survey was used to evaluate participants' satisfaction with the events, changes in knowledge, and intended behaviors.

Most survey responses indicated participants' knowledge on pesticide safety, law, and use improved after the sessions. Results of a pre-post self-assessment indicated participants experienced a statistically significant increase in their knowledge related to most topics covered during the private and commercial applicator events, including mental health self-awareness,

state and federal laws, and sprayer calibration. For self-reported behavioral changes, most participants in the private and commercial applicator events indicated they would change their behavior by adopting the recommended pesticide application practices (Table 1).

Table 1. Participants' intentions to adopt the recommended pesticide application practices.

Events	Intent to change behavior			
	No	Maybe	Yes	Already Doing
Private Applicator Events	21	36	275	124
Commercial Applicator Events	42	73	225	137
Percent of response	6.8%	11.7%	53.6%	28.0%

Survey responses and live comments in the virtual chat showed participants were generally satisfied with the presenters and topics covered in the Private and Commercial events (Tables 2 and 3).

Table 2. Participants' satisfaction in the Private Applicator events (n = 157).

Question: How satisfied are you with the ...	Mean*	Variance
...relevance of the information to your needs?	3.39	0.38
...presentation quality of instructors?	3.50	0.59
...subject matter knowledge of instructors?	3.56	0.32
...the virtual training platform?	3.41	0.43
...overall quality of the training workshop?	3.43	0.63

*Note. Satisfaction ranged from 1 (Not satisfied) to 4 (Very Satisfied).

Table 3. Participants' satisfaction in the Commercial Applicator events (n = 170).

Question: How satisfied are you with the ...	Mean*	Variance
...relevance of the information to your needs?	3.33	0.39
...presentation quality of instructors?	3.36	0.41
...subject matter knowledge of instructors?	3.44	0.31
...the virtual training platform?	3.24	0.59
...overall quality of the training workshop?	3.37	0.40

*Note. Satisfaction ranged from 1 (Not satisfied) to 4 (Very Satisfied).

Next Steps

Given the prolonged effect of COVID-19, virtual pesticide events are likely to continue. However, based on the evaluation results, transitioning to a Zoom platform did not impede CEU delivery to applicators. We learned that an Events Coordinator position is essential to provide successful virtual CEU trainings. In addition, we learned program reach, convenience, and the ultimate success of virtual pesticide trainings was equal to, or greater than past face-to-face events. We plan on exploring options for alternative attention verification measures and ways to reduce time in virtual waiting rooms. The goal for USU PSEP is to develop hybrid CEU events offering options for group gatherings while still allowing for remote participation by attendees and presenters (Werlin et al., 2020). Given the success of USU PSEP virtual pesticides events, applicators in Utah can benefit from a wider range of learning opportunities to maintain their pesticide licenses.

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