

impact

University of Idaho Extension programs that are making a difference in Idaho.

Improving IPM skills through the Pest Friends board game

AT A GLANCE

UI Extension educators responded to the need for an innovative educational tool to teach new skills. *Pest Friends* is a board game simulation that empowers players with integrated pest management skills.

The Situation

Pest management in agriculture is often a large consideration in the cost of production of agricultural goods. Based on the 2017 Census of Agriculture, \$17,585,163 was spent on chemicals in the U.S. In Minidoka County advisory meetings, it was identified that education on pesticide use is needed not only for those in the agricultural sector but the general public. In general, we lack knowledge of the principles of integrated pest management which results in overuse and over-dependence on pesticides.

Our Response

To help farmers, our team developed an experiential board game known as *Pest Friends*. The project was funded by a University of Idaho Extension innovative project grant and a Western Sustainable Agriculture Research & Education (SARE) mini grant. The game is based on a representation of an agricultural field that changes over time. As the participants go through the months of the season they need to employ basic and advanced principles of integrated pest management to get a high score. Players practice pest management by intentionally making a limited number of choices and using their resources wisely. These actions include chemical, biological and cultural management



Players deliberate as they try to make the best pest management decisions as a team to get the highest score possible.

methods. Each of the player's choices is tracked and has consequences that the players see at the end of the simulation.

Program Outcomes

As of April 27, over 200 individuals have played the game. Those who have played come from a wide variety of individuals with varying levels of agricultural experience from home gardeners, landscape professionals and farmers. These audiences include youth, senior citizens, males and females. The game is currently being used as part of a middle school curriculum and as a lab for multiple college courses in both Idaho and Texas. Of those who played, we have received feedback from 55 of them. Of those surveyed, they indicated the following.

- 100% agreed that this training was more engaging than traditional training on pest management.
- 90% agreed that they learned more by playing the game than they would have from traditional training.
- 63% indicated that moving forward they planned to change their pest management strategy and practices because of their experience.

Greater engagement means that learners are processing and exercising their brains more. This leads to higher retention and a greater chance for long-term changes in behavior to occur. As learners become more engaged, they will also ask more questions and understand how the concepts are relevant to them.

In addition to the responses above, we asked individuals what they learned or gain from this process. A few of their responses are listed below:

- “It has made me more aware of the importance of surrounding yourself with quality people and having good relationships with open communication to make the most informed decisions to mitigate crop losses and increase crop yields.”
- “I have a new appreciation for all the factors farmers have to balance to effectively manage pests and most effectively grow crops.”
- “This was a great exercise because I was forced to think outside the box from what I am familiar with.”
- “I think we’re led to believe that all insects are “bad” but fail to realize the benefits some species provide in mitigating the net damage to crops.”

- “It was challenging and took me out of my comfort zone.”
- “I think there is a lot of power in experiential learning through games. This game was a perfect example, I never could have truly understood the decisions farmers have to make without putting myself in their shoes so to speak. This game did just that. I hope many more people can experience it too.”
- “It was interactive enough to feel like you were actually doing the decisions and see the consequences.”

Summary: All the respondents to our survey felt the game was much more engaging than a traditional IPM training and the majority felt they learned more through this experience and planned to implement changes in their pest management strategies.

The Future

Pest Friends has been awarded a \$100,000 Western SARE Professional Development grant to continue the development of different pest scenario expansions and to create a web-based version of the game. It is also in the process of being published as a peer-reviewed publication through the University of Idaho Extension publishing.

Cooperators and Co-Sponsors

Sponsors: Western Sustainable Agriculture Research & Education (SARE) State of Idaho mini-grant & Western Regional PDP, University of Idaho Extension Innovative project grant and USDA-IPM Idaho Statewide Extension Implementation Program grant.

FOR MORE INFORMATION

Grant Loomis, Extension Educator • University of Idaho Extension, Blaine County • 208-788-5585 • gloomis@uidaho.edu

Jason Thomas, Extension Educator • University of Idaho Extension, Minidoka County • 208-436-7184 • jasont@uidaho.edu

8-22-gloomis-pest-friends • 5/22