



WASHINGTON STATE
UNIVERSITY
EXTENSION



WSU CROP DIAGNOSTIC CLINIC

BY THE NUMBERS

- The initial grant for the program was \$10,000 from the Washington Grain Commission.
- 3 clinics have been conducted.
- 300 people have participated in the clinics, 130 growers and the remainder from the agriculture industry.
- The clinics have produced \$18,500 in revenue.

2015 ISSUE

Wheat contributes more than \$1 billion to Washington's economy each year, while millions of dollars are lost in small-grain production due to disease, weed competition, and insect pests. For example, Eastern Washington is a persistently vulnerable area for stripe rust. Each year stripe rust can significantly impact yield throughout the state. In 1961 and 1976, yield losses to stripe rust were 26-50%, In 1984, 1990, 2005, 2010, and 2011, losses were 6-10%. If there was a 26% loss (as was the case in 1961) due just to stripe rust in Washington in 2014, that would result in more than \$187 million in loss (\$719.3 million total wheat production value for 2014). Stripe rust races are constantly changing, as are other diseases, weeds, and insect pests that impact crop production across the state. Continued education about new resistant crop varieties and treatments is necessary for producers to make educated decisions that lead to increased profits.

RESPONSE

In 2010, a Crop Diagnostic Clinic was developed to address these problems. The first WSU Crop Diagnostic Clinic was held that year, followed by others in 2011 and 2014, and it now will be conducted every other year. The primary objective of the WSU Crop Diagnostic Clinic is to enable growers, private and public breeders, extension educators, ag fieldmen, industry representatives, and researchers to hone their crop production troubleshooting skills so that they can accurately diagnose crop problems, improve crop management strategies, and improve economic return to the agricultural producer.

The first crop diagnostic clinic was funded by a \$10,000 grant from the Washington Grain Commission. Funding of this clinic helped initiate two additional Crop Diagnostic Clinics and has brought in more than \$18,500 in revenue since 2011. The success of the Crop Diagnostic Clinic required the cooperation and collaboration of WSU Research and Extension faculty, USDA researchers, University of Idaho faculty, and Oregon State University faculty from multidisciplinary fields of study. The experts integrated their specialized knowledge in a way that enabled clinic participants to better understand how interrelated factors influence crop health and growth. The Crop Diagnostic Clinic was incorporated as a priority project within the WSU Small Grains Team in 2014. In 2014, 10 short, informative videos from the clinic were published and posted on the small grains website at <http://www.smallgrains.wsu.edu>.



QUOTES

"I will use knowledge learned today to make more informed decisions on my farm."

"... large knowledge of disease and identification to better serve customers."

"Very useful and resourceful day. I like the variety and knowledge base that was made available to use."

"I got a lot of good information out of the clinic and believed it was well worth my time and would like to attend future clinics."

PARTNERS AND FUNDING

Thanks to the Washington Grain Commission for providing the financial support to jumpstart this program. The Crop Diagnostic Clinic has helped in acquiring funding from Western Sustainable Agriculture Research and Education, in collaboration with Oregon State University, for an education program: Ag Industry on Weed, Insect and Disease Identification and Management.

IMPACTS

The WSU Crop Diagnostic Clinics have been a huge success. In 2010, more than 153 individuals (producers, members of the agricultural industry, private industry, financial management, and university faculty) attended the clinic from eastern Washington. The clinic brought in more than \$8,000 in revenue to be used for additional clinics. An evaluation summary was collected from more than 80 participants at the conclusion of the clinic. Attendees improved their knowledge of plant pathogens and their symptomology by 27% and herbicide injury by 30% by attending the clinic. More than 97% of the attendees evaluated said the Crop Diagnostic Clinic enabled them to make better crop management decisions.

The number of attendees was limited in 2011 and 2014 to make it a more hands-on experience. In 2011, more than 65 individuals attended the Crop Diagnostic Clinic. After comparing attendees' pre and post-tests, the average knowledge of attendees increased 31% regarding foliar plant pathogens and their symptomology, 58% for soil borne plant pathogens and their symptomology, 18% for herbicide injury, 47% for wireworm symptoms and their control, 15% for weed identification, and 27% for cereal grain fertility. The overall average increase in knowledge from the clinic was 33%. All of the attendees who were evaluated said attending the Crop Diagnostic Clinic would enable them to make better crop management decisions.

In 2014, approximately 80 people attended a field day. According to the attendees, the most informative demonstrations were herbicide injury, weed identification, and disease identification.

Through the success of the WSU Crop Diagnostic Clinic and other train-the-trainer programs, Western Sustainable Agriculture Research and Education has provided a \$74,755 grant for a program titled *Training IPM Professionals in Rural Areas: A Model to Achieve Sustainable Knowledge*.