



REGIONAL ADAPTATION ENHANCEMENT PROGRAM | PROJECT SUMMARY

Pest & Disease Monitoring: the Front Line of Climate Adaptation

WARMER TEMPERATURES AND AN increase in the number of Growing Degree Days doesn't just improve production potential for crops, it opens the door to greater pressure from insect pests, diseases, weeds and invasive species.

During the *Peace Adaptation Strategies* planning process, the lack of monitoring for agricultural pests during the growing season was identified as a significant gap that needed to be addressed to enable adaptation. In recent years, pest-monitoring coverage in BC's Peace region has been very limited. Climate change is anticipated to alter the range and distribution of pests, potentially enabling problem species to increase and new species to move into the region. Being able to monitor these changes is important for grain and forage growers in the region.

"It has always been frustrating to BC producers that we don't have access to the same level pest monitoring information as producers in Alberta," says Rick Kantz, president of the

PROJECT *Collaborative Monitoring Pilot Project*

LOCATION *Peace region*

COMPLETION *Spring 2016*

PROJECT LEAD *BC Grain Producers' Association*

FUNDING PARTNERS *Agriculture and Agri-Food Canada, BC Ministry of Agriculture, BC Grain Producers' Association, Peace Region Forage Seed Association, Peace River Soil Conservation Association*

BC Grain Producers Association (BCGPA). "As the climate changes, so do our pests. It is important to have a local program to confirm the problems that we are facing here."

To address this issue, agricultural organizations in the BC Peace embarked on a two-year collaborative pilot project to monitor for pests, pathogens and weeds that have been identified as current or emerging threats. The findings have not only helped to identify regional hotspots for pests and diseases, but they show clear differences in the pressures



experienced between the Alberta and BC Peace regions, further validating the need for ongoing regional monitoring.

A partnership with the Agriculture and Agri-Food Canada research team in Beaverlodge, Alberta provided training in monitoring methods and research skills to ensure that the data collection processes were scientifically valid. This has allowed the data to be incorporated into the prairie-wide Insect Pest Monitoring Network.

“Being able to feed the BC Peace data into long-term databases makes it accessible to larger number of researchers with far more expertise than is available in a small region,” explains Jennifer Otani, pest management biologist with AAFC who has been monitoring pests in the Peace River region since 1999.

The pilot program provided an opportunity for weekly monitoring to be established during the growing season and provided crucial weekly data from seventeen producer co-operator sites within the BC Peace. Data shared through the Insect Pest Monitoring Network also feeds into the development of annual risk assessment maps and forecasts.

“This enhanced greatly the area from which data is being drawn, since it now includes north of the Peace River in BC. It is allowing us to gain a better understanding of the arthropod diversity in field crops being grown within the BC Peace,” adds Otani.

During the project, monitoring updates and alerts were provided to producers (via emails, social media and field days) during the production season. Regular communication to producers also allowed the project coordinator to

share information about management options including crop rotation, biocontrol agents, and variety selection. These approaches assist growers to manage risk proactively instead of relying on reactive treatments.

While the two-year pilot study wrapped up in April 2016, it demonstrated the need and value of ongoing pest monitoring, and has motivated growers in the area to find new ways to continue the program. Among the lessons learned, they found that working collaboratively – across organizations and the region – has been an effective way to share the costs and benefits of monitoring and knowledge transfer.

“It is more efficient and we get better results when we all work together to address crosscutting issues like insects, disease and weeds,” says Sharla Pearce, general manager of the BCGPA, the organization that administered the project. “Pest monitoring needs to be consistent; if that data chain gets broken you are starting from scratch again because the situation is always changing. If you miss one or two years of data, you don’t have anything to compare to, and you can’t track how new threats emerge.”

Projects like this are part of the work being delivered by the BC Agriculture & Food Climate Action Initiative (CAI). CAI develops tools and resources to assist BC farmers and ranchers with adapting to impacts of climate change. CAI’s Regional Adaptation Enhancement Program provides up to \$300,000 to implement priority projects identified in each regional adaptation strategy.

www.BCAGClimateAction.ca

The BC Agriculture & Food Climate Action Initiative was launched in 2008 by the BC Agriculture Council to enable a proactive and pan-agriculture approach to climate change issues. The Climate Action Initiative is currently supported by the BC Agricultural Research & Development Corporation and the Investment Agriculture Foundation of BC with funding provided by Agriculture and Agri-Food Canada and the BC Ministry of Agriculture through Growing Forward 2, a federal-provincial-territorial initiative.

Photos in this handout are courtesy of Talon Gauthier and Arlan Benn.

