

Plain Language Research Summary - AgriScience Grape & Wine Cluster 2023-24

Activity 7: Precision management of grapevine stress and development under the challenges of climate change

Principal Investigator(s): Dr. Ben-Min Chang (AAFC Summerland)

1. What is the overall focus of this research activity?

The frequency and magnitude of extreme weather events will increase due to climate change. In the Okanagan valley, drought and heatwaves are highly concerned weather events that could challenge the production of wine grapes. Better grapevine stress monitoring and mitigation strategies will be needed for stabilizing production and improving fruit quality. This research activity will integrate plant stress sensing technologies, geographic information systems, existing cultural practices, and automatic control technologies for drought and heat stress management.

2. What are the main progress updates/milestones in terms of work that was done on this research activity this year?

Though this research activity has not officially started, soil water sensor, weather station, and plant water potential sensor had been tested. These sensors are essential for monitoring grapevine drought and heat stress.

3. What is this research activity's intended impact on the Canadian grape and wine industry? What benefits could/will the growers, wineries, consumers, etc. see as a result of this research?

This research activity will offer growers a new tool set for managing drought and heat stress. Growers can use the tool or knowledge for reasonable and optimum resource inputs to respond to the stresses.

4. **Do you have any communications materials, publications, or other content related to this research activity that you would like CGCN-RCCV to share? If so, please provide a brief description here and either link it here or send the file as an attachment along with this summary.**

This research activity has not started. No associated communication materials, publications, or other content is available.