Article 22-1

The Story of An Organic Pinot Noir

Organic Science Cluster II
Activity B.12

The Science of Organic Agriculture in Canada

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Industry Partners:

In nature, there is a symbiotic relationship between arbuscular mycorrhizal (AM) fungi and plant growth. In organic agriculture, roots of certain crops can be inoculated with the fungi to strengthen the crop and protect future growth, increasing yield.

In **Organic Science Cluster II** (2013-2018), researchers and industry partners wondered if this relationship could be applied to organic viticulture. In Activity B.12, Kalala Organic Estate Winery in British Columbia partnered with organic science researchers to find out. Industry partner and winery owner Karnail Singh Sidhu worked with the researchers to inoculate vine roots with AM fungi and monitor the effect on the vines.

In spring of 2022, Organic Science Cluster reached out to Singh Sidhu to ask about the inoculated vines almost ten years later.

The Vineyard Today

Although significant results from the root inoculation were not measured at the close of Cluster II in 2018, over the years, Singh Sidhu has noticed a difference between the plants on the trial plots and those on other plots in the vineyard.

At the beginning of Cluster II, the trial vines used to have lots of fungus, like powdery mildew, and were on the verge of being removed. However, since the research, the mildew infestation has not been observed, and the winery has kept the vines. They are still in the vineyard today and, according to Singh Sidhu, they are used to make a very excellent Pinot Noir.

So excellent, Singh Sidhu won B.C.'s viticulturist of the year in 2020.

The Future of Organic Vines

Since collaborating on the Organic Science Cluster research, Kalala Organic Estate Winery has adopted the practice of inoculating vine roots with AM fungi moving forward. Singh Sidhu believes this is only one of many benefits from participating in the research, citing other benefits like increased knowledge about soil conditions for microbes to survive.

In his view, the Kalala Organic Estate Winery is one of many others that make up the B.C. wine industry, part of the larger group of Canadian wine producers. “If one winery is doing well, we can all learn and all do well,” he says, citing the importance of research and communication amongst farmers and producers. The Kalala Organic Estate Winery has shared what they've learned about vine inoculation with other wine producers in the area.

Adopting these vine inoculation strategies from the Organic Science Cluster research has changed the Kalala Organic Estate Winery practice.

Future Organic Science Cluster research activities could help spread awareness, and make organic crop practices like these more achievable.

Since collaborating as an Industry Partner in organic science research, Kalala Organic Estate Winery will adopt the practice of inoculating vine roots with AM fungi.

ABOUT THE ORGANIC SCIENCE CLUSTER

The Organic Science Cluster is led by the Organic Federation of Canada in collaboration with the Organic Agriculture Centre of Canada at Dalhousie University. The Organic Science Cluster is supported by funding from the AgriScience Program under Agriculture and Agri-Food Canada’s Canadian Agricultural Partnership and over 70 partners from the agricultural community. To learn more, visit, www.dal.ca/oacc/OSC.