

Issue 2: July 2016

## What's in this Newsletter

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- Research Priorities

### MISSION

Enhance the profitability and sustainability of the Ontario grape and wine industry through directed and coordinated financing of research and development activities

### VISION

Ensure prosperous and sustainable growth within the Ontario grape and wine industry

## Upcoming event

Dr. Marc Fuchs from Cornell University will be visiting Niagara on **August 16, 2016** to host a free educational workshop on grapevine viruses.

Information will go out to all growers and processors once details are finalized.

## New Research Projects

OGWRI kicked off 2016 with a Request for Proposals. Through consultation with the Technical Committee the OGWRI Board of Directors selected three projects for funding.

**Project 001600: The use of methoxypyrazine binding proteins to remove ladybug taint from juice and/or wine**

**Lead Researcher: Debbie Inglis, CCOVI**

**Project end date: June 2017**

The technology to be optimized in this project is the use of proteins with naturally high affinity for MPs, bound to an inert support, to bind to and remove MPs in juice and wine, whether the MPs are grape- or insect-derived. The proteins will be tested for their ability to bind and remove MPs once the proteins are immobilized on an inert support. Silicon dioxide beads will be used in this project as the solid inert support as it is already FDA approved for use in wine production.

*For more information, please visit [www.ontariograpeandwinereseach.com](http://www.ontariograpeandwinereseach.com)*

## New Research Projects

### **Project 001700: Improving Cold Hardiness and Delaying Deacclimation using Long Lasting Absciscic Acid Analogs**

**Lead Researcher: Jim Willwerth, CCOVI and Sue Abrams, University of Saskatchewan**

**Project end date: December 2018**

ABA or synthetic ABA analog application may be a novel and practical way to improve cold hardiness in grapevines without negatively impacting fruit composition or quality. A plant growth regulator like ABA may prove very beneficial in optimizing cold hardiness in grapevines especially in Ontario's climate where cool and wet fall periods can delay cold hardiness. Furthermore, ABA application may also delay deacclimation which could result in less freeze damage associated with sporadic warming and freezing events during dormancy.

### **Project 001800: Screening vineyards for GRBaV**

**Lead Researcher: Wendy McFadden-Smith, CCOVI**

**Project end date: March 2017**

The distribution of grapevine red blotch disease in select vineyard blocks will be determined using a medium-density sampling procedure. These data will be related by GIS to scion variety and clone, rootstock, vine age and source. This valuable information will be used to help guide future Red Blotch Research.

## Red Blotch Task Force

In addition to funding research projects, OGWRI has created a Red Blotch Task Force which will be funded through MVIP.

The Task Force is being led by Dr. Helen Fisher and invitation letters have been set to key industry stakeholders to participate. The key strategic priorities of the Red Blotch Task Force will be to:

- Identify areas of opportunities to improve current virus testing techniques for GRBaV;
- Identify proof and incidence of GRBaV; and
- Identify ways to obtain clean plant material in the absence of a national clean plant program.

More information will be made available on our website [www.ontariograpeandwinereseach.com](http://www.ontariograpeandwinereseach.com) in the coming months.

*If you would like additional information on any of the current research activities, please contact:*

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## MVIP Update

OGWRI is now entering its second year of OMAFRA's Research and Innovation Development (R&ID) portion of the Marketing Vineyard Improvement Program.

For Year 2 OGWRI selected 6 research projects through a RFP process. Three of these projects are a continuation from Year 1 in order to obtain the most accurate research results.

**Geotextiles and winter injury:** The use of geotextiles will be assessed to determine if they are an appropriate alternate to burying grapevines for the winter.

**Spring assessment of winter injury:** Taking bud samples on an annual basis helps grape growers assess the level of damage of grapevines, and to make changes to their pruning strategies.

**VineAlert:** Monitoring bud hardiness throughout the dormant period is an invaluable tool to assist the Ontario Grape and Wine Industry in managing winter injury mitigation strategies.

**Weather INnovations:** Allows growers access to real time weather information to assist in decision making for quality grape production.

**NEW\* MOG Impacts:** Investigation to ascertain concentrations of key odor-active compounds in all frozen MOG affected and non MOG affected wines and conduct sensory trials of the wine.

**NEW\* Use of proximal sensing:** The objective of the first project is to show sensory relationships between the high and low normalized difference vegetation index (NDVI) wines.

## 2016 Research Priorities

### Top Priorities

1. Identification and mitigation for Leaf Roll
2. Identification and mitigation for Red Blotch
3. MALB (Replacements for Synthetic Pyrethroids)

#### Viticulture:

- Quality Improvement (Canopy Management, Powdery Mildew etc.)
- Sour Rot
- Spotted Winged Drosophila (Fruit Fly)
- Vitis Certification (Local Vine Proliferation/Supply)
- Winter Injury
- Black Rot
- Brown Marmorated Stink Bug
- Spray Programs Strategies (Rotation, Feedback Mechanism)
- Short and Long Term Effects of Viruses on Plant Performance
- Clonal and Sub-Clonal Stability (Assessing Trueness to Type)

#### Oenology:

- Clonal Sensory Evaluation
- Post-frost picking strategy and must handling in the winery
- Crop Level vs. Quality (i.e. Color, Tannin Development)
- Sparkling Wine
- Icewine, Late Harvest
- Operations of Winery (i.e. Filtration, Yeast, Nutrients)
- Site Selection (Terroir)
- Clonal and Sub-Clonal Stability (Assessing Trueness to Type)

#### Market Research

- Export/Market Development
- Forecast of "Winning" Varieties and Style of Wine
- Sparkling Wine Profiles
- Sensory and Consumer Science
- Late Harvest