

## Report to the 2022 BCFGGA Convention

From the

### **Crop Protection, Research, Water and Environment Committee**

Members will notice the name of the committee has changed to encompass a greater scope of work. With climate change and greater environmental regulation, there is more interaction between environment, water, research and crop protection in the tree fruit sector. Perhaps we will in time simplify the name of the committee - perhaps the “Horticultural Committee”?

Crop Protection about two decades ago was about getting new products registered. Since then, the PMRA has de-registered many products due to emerging safety concerns, and many crop protection products have new restrictions on their use. Although there are new, lower risk pesticides, there are pests of concern that have fewer options for control. Fewer options means more risk of pesticide tolerance - in trying to make food safer, we are placing the food supply at risk.

Research is important in finding new types of solutions to pests. The SIR program is the best example. In the US, grower uptake is strong for sterile Codling Moths from the excess production in SIR Osoyoos rearing facility. Greg Evans from Creston wrote a letter to the SIR program, which is of interest to Okanagan apple and pear producers:

*I am very concerned about the extreme Codling Moth pressure in the Creston Valley. In 2021, my traps caught over 25 adult moths per week. I spent over \$350/acre in spray costs and thinned my apples twice by hand to remove Codling Moth stings. The result was still was 20-25% damaged fruit at harvest.*

and

*I have seen the SIR Program come and go in our area [Creston] and the devastating effects when it left. Many of my fellow growers are frustrated by the lack of Codling Moth control in their orchards, despite continuous spraying.*

The SIR program is under financial pressure due to the decline in Okanagan apple acreage, about 15% over the past 3 years. A study is being conducted to show the benefits of the SIR program to the environment and economy, in preparation for a request to the provincial and federal governments to invest in the program. SIR is also providing DAS, has helped place lures and traps for an Apple Clearwing Moth pheromone study, and is seeking to improve the effectiveness and reduce cost by trying out x-ray technology and the use of unmanned aerial vehicles to release moths. However, the program budget, like the cost of farming, is rising and growers will be asked to contribute more to this valuable program to keep it viable.

The Apple Maggot quarantine status was confirmed when detections in two separate areas 4 and 5 years ago did not result in subsequent detections. Area-wide trap monitoring continues and we hope that previous experience holds true - that Apple Maggot does not survive in our climate.

Brown Marmorated Stink Bug is a pest of concern in Ontario. Here in the Okanagan, trap counts outside of a central urban area of Kelowna have been low for several years. BMSB is not a quarantine pest, as its movement is virtually uncontrollable due to the way the insect flies. In the past year, a natural wasp predator of Brown Marmorated Stink Bug has been discovered locally recently, which may help control the pest, but it is uncertain to what level of control the wasp will be effective. Eventually, it is hoped that research will discover effective controls for Brown Marmorated Stink Bug, so that it stays out of our orchards.

The BC Plant Protection Advisory Committee (BCPPAC) is an inter-governmental group that looks at invasive pests and how to control them. The BCPPAC uses sub-committees to develop specific sector plans. The Tree Fruit Subcommittee of the BCPPAC includes the BC Ministry of Agriculture, Okanagan Horticultural Advisors, BCFGAs, Summerland Research and Development Centre, and other AAFC specialists. Work is ongoing for pests such as Brown Marmorated Stink Bug, Apple Maggot, Japanese Beetle and other possible pest introductions.

A limited survey of Little Cherry Virus did not find any evidence that the virus is a problem in BC, but the virus is an emerging threat in Washington State, so that will keep BC cherry growers on the alert for the virus.

Relatedly, work continues on the Plant and Animal Health Strategy established in 2017, with a new group forming in support of the strategy called the Canadian Plant Health Council. The Canadian Plant Health Council is focusing three initiatives:

- biosecurity,
- emergency response
- surveillance.

The BCFGAs continue to nominate three producer-directors to the Sterile Insect Release Board - David Dobernigg, Amarjit Lalli, and Walter Makepeace have served for several years and there will be some renewal with new members after the BCFGAs Convention. Glen Lucas also attends Board meetings. SIR is also seeking to improve performance in the areas where there are 'outbreaks' to ensure that they can be better controlled in future. SIR also continues to consider the scope of the program, perhaps by adding other insect pests if growers agree. SIR is seeking to grow revenue from commercial sales of Codling Moth to keep its fees to growers stable. At the Horticultural Symposium, it will be interesting to hear about Washington State's plans to make use of Sterile Codling Moth control.

The BCFGAs ensure that an industry representative attends the national Minor Use meeting on behalf of tree fruit. Last year, Deep Brar attended and will represent tree fruit interests again this year.

## **Research**

There are several possibilities for research projects on pest management and control that BCFGA contributes to, including:

- Peach Thinning (University of Guelph) - \$3,000 / 3 years
- Optimized Netting Systems, using low pesticide inputs and mechanized practices (Research and Development Institute for the Agri\_Environment, IRDA). \$10,100 / 5 years
- Sustainable Control Practices for Apples Pests (apple leaf curl midge and Leafroller). \$6,900 / 3 years
- Monitoring several pests to establish or improve Degree Day Models.

A new set of research projects is being considered under the Apple Research Cluster, involving the four apple-producing areas of Canada.

We are looking forward to more progress on two federal projects:

- Establishing a new plant virus research centre in Sidney, BC
- Getting resources for the Plant Protection Strategy, which was adopted about 3 years ago federally.

The initiatives have the potential to bear great benefits for growers and the Canadian economy.

## **Water**

Take note, growers with irrigation wells need to register their wells by the end of the month of February 2022 in order to preserve their access to water and gain priority for their water use.

The increased water rates for Okanagan farms has far exceeded the general inflation rate. At a time of great financial pressure on growers, many think that the increased cost of treating water for drinking water concerns is unfair to agriculture. Resolutions on this and other water issues will be considered as part of the Annual Convention.

Water concerns are increasing with climate change. The 2022 heat dome was compounded by a drought - it was hot and dry. A partial solution for growers is to apply more water. Irrigation systems need to be properly designed (there is an EFP grant for this technical work to be done) and irrigation districts and cities need the help of the provincial and federal governments to increase water storage. Also, we need more flexibility in rules - in a mild Spring, it does not make sense to keep the same water turn-on date as we watch all of the water flow downstream to Portland - it would be good to have the flexibility to fill up our soil water holding capacity when the opportunity arises. The piloting of an Agricultural Water Reserve in the Okanagan needs to be promoted. Katie Sardinha is the new BCFGA representative on the Okanagan Water Stewardship Council who will be taking forward regional water concerns. The BCFGA recently had input into the proposed provincial water strategy via the BC Agricultural Council.

It is notable that increasing the amount of water applied to soil will generally result in an increase in soil organic matter, or carbon sequestration. In other words, increasing the water supply available for irrigation is good for climate change.

## **Environment**

The new area of effort is the Agriculture Climate Solutions (ACS) Program. Growers recently had an opportunity to complete a survey on “beneficial management practices” related to sequestering carbon and reducing greenhouse gas emissions. For the 28 growers who completed the survey, thank you and we hope the \$75 Canadian Tire gift certificate you received for participating will be useful to you.

The next step, putting together a project plan, is almost complete. Hans Buchler of the BC Wine Grape Council has been instrumental in leading the project. The focus for tree fruit will be cover crop in the drive lane of the orchard - experimenting with different seed mixes and seeing how greenhouse gas emissions and soil organic matter respond. Grower who expressed interest in hosting a pilot project may expect to be contacted for a start-up of pilot projects in 2023.

There are also opportunities to be examined in the province’s announcement of climate change programs in the February 22 budget.

It is important to note and to thank the efforts of our partners, including the Sterile Insect Release Program, the Canadian Food Inspection Agency, the Pest Management Regulatory Agency, and the Pest Management Centre of Agriculture Canada. The scientists at PARC and the BC Ministry of Agriculture are critical to our pest control objectives.

Although the BCFGAs Crop Protection, Research, Water and Environment (Horticultural?) Committee did not meet this year, the BCFGAs has been very active in many aspects.

Respectfully submitted,

Deep Brar,  
Chair  
Crop Protection Committee