

Report to the 2017 BCFGGA Convention

From the

Crop Protection Committee

Crop protection issues have exploded in the past year.

The late-season 2015 detection of a single Apple Maggot in west Kelowna generated a lot of communication and the quick decision-making of CFIA to take action was very much appreciated. Mapping was completed, harvest of fruit in the vicinity around the find was conducted by CFIA, with some logistical help from the BCFGGA. It was quickly determined to increase 2016 monitoring in the area of the find. Also, it was decided to complete the monitoring of the whole valley area over 2 years completing in 2016, instead of three years completing in 2017, using a sampling methodology developed by Dr. Howard Thistlewood at the Summerland Research and Development Centre. The Sterile Insect Release Program contributed by taking on the extra monitoring in 2016. Growing Forward 2 provided additional funding for this activity and Susanna Achaempong, the provincial tree fruit entomologist played a very important role throughout the planning process.

The good news is that no further Apple Maggots were found *in the vicinity of the first find* - a West Kelowna residential area. Since there is no breeding population established and a second life stage (e.g. an egg or a larvae) found, the area continues under quarantine, but with extra vigilance.

However, in late summer 2017 a different single detection occurred on the other side of the Lake, in a commercial area of Kelowna. Similar to last year, increased monitoring in the area of detection will be conducted. The BCFGGA is partially funding the removal of the host tree and other host trees in the area and we appreciate the full cooperation of the landowners in both West Kelowna and Kelowna.

In 2017 two Brown Marmorated Stink Bugs (BMSB) were found near Penticton canal. Late in the 2017 season, a BMSB was found by a Kelowna homeowner. BMSB is not a quarantine pest, as its movement is virtually uncontrollable. The pest flies far and also 'hitch hikes' on vehicles and on exported products. For example, some were discovered (and eradicated) from a shipment of bath towels to Canada. However, we want to protect our Okanagan area. We do not consider that a breeding population is established in our area yet. Everyone from the BC Ministry of Agriculture, BC Tree Fruit Cooperative field services, BCFGGA, Summerland Research and Development Centre (also Aggasiz research station), national pest identification specialists at CFIA, and Sterile Insect Release Program is working to come up with a BMSB plan for 2017. We understand the BC Cherry Producers Association has also held a meeting recently on BMSB. The Tree Fruit sub-committee of the BC Plant Protection Advisory Committee (BCPPAC) is key to bringing all of the various aspects of the industry together.

Though there have been traditional tools for control of BMSB, the Eastern US has struggled to control this invasive pest. For BC, we hope that BMSB does not like our climate, or that it is very slow to

spread. Better traps may help in control of very low populations. A predator wasp has been discovered in Eastern US, Eastern Canada and in Washington State (the predator lays an egg in a BMSB egg. The wasp egg hatches and the larvae then consumes the BMSB egg).

In addition to the urgency of dealing with Apple Maggot and Brown Marmorated Stink Bug, the BCFGA's Crop Protection efforts have further intensified due to other crop protection priorities. First, there are various reviews by the federal government. Deep Brar of our Executive attended a December meeting on a national animal and plant health protection strategy. Animal health is critical because some of the diseases spread very rapidly and can cross to infect human populations if action is not prompt (i.e. avian influenza, BSE and bovine tuberculosis have all been issues in the past few years). Although plant pests do not create a direct health impact on humans, plant pests do impact our industry and economy. We have indicated the importance of having similar tools and supports available to preserve plant health in Canada. Resolutions 15, 16 and 17 all seek to increase the effort to combat invasive pests.

A recent CFIA review of imidacloprid, known as Admire, has resulted in notice of intention to withdraw the product. CFIA has summarized information on the re-evaluation as follows:

For the environmental assessment, potential risks to organisms on land and in water were examined. Risks to bees and other pollinators were not a part of this re-evaluation, as they are part of an ongoing pollinator risk assessment (see [Re-evaluation Note REV2016-05, Re-evaluation of Imidacloprid – Preliminary Pollinator Assessment](#) for more details).

The environmental assessment showed that, in aquatic environments in Canada, imidacloprid is being measured at levels that are harmful to aquatic insects.

For the protection of the environment, PMRA is proposing to phase-out all the agricultural and a majority of other outdoor uses of imidacloprid over three to five years.

Industry comment is possible until February 21, 2017, and BCFGA and the Canadian Horticultural Council will be responding. We will point out that residue in water courses is not apparent from water samples in the Fraser Valley, and that water samples have not yet been tested in the Okanagan. We will put forward the position that differences in how BC uses imidacloprid appear to eliminate the concern of harmful residues in water bodies. Further research is needed before banning this pesticide.

The BCFGA continues to nominate three producer-directors to the Sterile Insect Release Board. Glen Lucas and I also attend Board meetings, if we are available. SIR continues to be a unique partnership between regional government and growers. There are several resolutions on SIR, but Resolution 16 on expanding the role of SIR to cover other pests could be very important to our future methods of controlling insect pests.

A recent workshop on Area Wide Pest Management, organized by the Summerland Research and Development Centre, was attended by several growers, including Deep Brar and myself from the BCFGA Executive, Glen Lucas our General Manager, and Erin Wallach who helps coordinate research for Summerland Varieties Corporation. Other associations and horticulturists were present. We heard several presentations and then attempted to seek consensus on priorities for Area-Wide. Although the

official notes of the session are not final yet, growers from several commodity groups felt that making use of SIR for other pests would be beneficial. Pests and activities of interest included: Apple Maggot for monitoring and possible control methods including monitoring, urban compliance, and distribution of predator wasps; Brown Marmorated Stink Bug for monitoring and pheromone traps as well as distribution of predator wasps; Mealy Bugs; and Western Cherry Fruit Fly (CFF) for monitoring and urban enforcement. It was noted that growers have 100% control of CFF using spray calendar methods, but incursions from urban host trees is preventing IPM control of the pest in the first part of the season with products such as GF120 - later season is controlled with sprays for SPotted Wing Drosophila for which there are no known IPM methods at present.

The BCFGGA also sponsors a horticulturist to attend and represent the tree fruit sector at the annual Minor Use Meeting, which seeks to place priorities for pest control through new pesticide label uses at the CFIA and to develop new methods through the national Pest Management Office.

Finally, the BCFGGA successfully launched a 3 year pilot project on Apple Clearwing Moth. The BC Investment Agriculture Foundation provided funding for this project. It is composed of three parts:

Zone 1, the South Okanagan and Similkameen will see pheromones deployed in areas that are as discrete from other areas as possible. Previous efforts at pheromone control were unsuccessful, but deployed in irregularly in an area. Pheromones will be provided to the selected areas to provide four years of coverage..

Zone 2, the Central Okanagan not including all of Winfield, will see pheromones deployed in all farms. One-half of the farms received the 2 year pheromones last year, and the other half will be deployed this year. In the third year, the original area will receive pheromones one last time.

Zone 3, the North Okanagan including part of Winfield, will be protected mainly with kairomone, an alternative method of control that uses attractant trapping. Dr. Gary Judd is providing kairomone and research assistance with this part of the project.

Bucket traps were deployed in all areas of the valley in 2016, following previous deployments in 2014 and 2012 for reference. The trap captures are being identified and counted by a contractor, with results to be mapped by SIR later this Spring.

All areas are being monitored with trunk surveys for larvae and this information will be cross-referenced with treatment types and also bucket trap results.

The Apple Clearwing Moth project is large and ambitious, and we are conducting it on a very tight budget. I am very hopeful that we will achieve insight that will let us control and reduce the population of this pest. Growers are encouraged to continue spraying to reduce damage from Apple Clearwing Moth.

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

It is clear, with all that is going on in Crop Protection, that it is time to re-activate a committee of BCFGAs members to provide input and to come up with new ways of tackling existing and new pests. If you are interested in serving on the Crop Protection Committee, please contact Glen Lucas or me.

Respectfully submitted,

Peter Simonsen,
Chair, Crop Protection