

Cherry Notes

Okanagan Kootenay Cherry Growers' Association
December 2011 Newsletter

Greetings from the Chair

With no snow, and mild temperatures, I hope you are taking advantage of the conditions to get started on your pruning. The leaves dropped nicely, and with the autumn moisture, and November snow, I think the trees are in great shape for the winter months.

On January 31, 2012, the annual research review will be held at PARC, Summerland. It is a morning session, starting at 9am, to listen to the results of the research projects sponsored by the association this past year. An informative session, with lots of questions and answers, I encourage you to attend. Our research this year included many projects. We continued starling control and research into the source of the flocks. We funded several projects to learn about and provide

education on spotted wing drosophila. We also supported continuing work on post harvest treatments and fruit handling, and also mildew control.

Please plan to attend, listen, learn, and participate. This is the core function of the association, and these are the results from your funding.

Once again we are planning our AGM to coincide with the Okanagan Packinghouse Fieldmen's Group spring workshop at 1905 Springfield Rd., Kelowna. It is a great forum for thought-provoking speakers who bring insight and create discussions that can lead to positive change in your operations. The tradeshow provides information on new equipment, services and other important resources for you as growers and shippers. Having our meeting in conjunction with the Fieldman's

Workshop was highly successful last year and so we have decided to partner with them again. The workshop dates are March 1 and 2, with cherry topics being covered on the 2nd. Our AGM will also be in the afternoon of March 2nd.

Recently the Board met for a discussion on the future direction of the Association. The OKCGA has been around for almost 15 years, and has focused primarily on research to date. Successes were discussed, along with potential opportunities, and ultimately our priorities. Research continues to be our focal point. Advocating for the Cherry Growers and our industry were also deemed important, as "you are your own best advocate" or "no one else will speak up for you as well as you". We also decided that promoting and marketing are not in the realm of responsibilities of the association, although there are many possible projects and topics that could be targeted, should our priorities change in the future. The underlying common theme was the desire for new members, both in the association, and on the Board, to help broaden our representation of this growing and dynamic industry.

With best wishes to everyone for a warm and happy holiday over Christmas, and I look forward to seeing you January 31st!

Dave Stirling, President



Spotted Wing Drosophila (SWD) in the Southern Interior of B. C. (2011)

In 2010, Spotted Wing Drosophila (SWD) was widespread in the Okanagan and Similkameen valleys and was found in Creston. Substantial fruit damage was reported by the cherry industry and other grower groups in 2010, and many questions were raised regarding the biology and control of SWD during the season. A reduced surveillance program was conducted in 2011 to help guide area-wide management of the pest and to gather information on adult emergence, population levels and trends, and life cycle. Work on

native hosts also continued in 2011, in order to understand the relative risk posed by native plants. An important gap identified in 2010 was communication of SWD information to more growers. To improve grower education in 2011, extensive outreach occurred through workshops, industry meetings, "on the ground" extension by contracted staff, and weekly monitoring reports and brochures.

Monitoring

Approximately 180 apple cider vinegar-baited traps (clear plastic drinking cups with 3/8" holes on the sides) were deployed in southern interior valleys in 2011. The number and type of trap was chosen after careful discussion with other researchers so as to reduce costs and compare results across years. Traps were placed in cherries, peaches, nectarines, apricots, plums, berries and table grapes from mid-May until the end of September. Traps were collected weekly, and flies identified.

The first SWD adult flies trapped in 2011 were two males from a cherry orchard in Oliver. Flies were caught in all survey areas, except Creston. The numbers of

flies in 2011 were generally low compared to 2010 (Figure 1). In 2011, the average number of flies/trap/week was low until mid-August, and fly populations did not build up late-season to the levels recorded in 2010 (Figure 1). Comparatively fewer flies were caught in 2011 in the Similkameen and South Okanagan than in 2010, but higher numbers were found in the North Okanagan, and as reported none were trapped in Creston (Figure 2).

Native Hosts and Parasitoids of SWD flies

In 2010, fruit from native plants was collected as available and as time permitted during a massive trapping program. In 2011, certain species were targeted and collected weekly for rearing at AAFC, Summerland. Fruits were checked to ensure they were free of adult SWD before rearing in sealed containers in an environmental chamber for 2-3 weeks. Fruit samples were checked regularly and adult emergence recorded.

Confirmed native hosts of SWD in the Southern Interior to date are Oregon grape, blue elderberry, northern black currant, honeysuckle (species to be

identified), Mahaleb cherry and ornamental elderberry (species to be identified). No SWD has been reared yet from multiple samples of snowberry, wild rose, choke cherry, hawthorn, saskatoon, mountain ash, red-osier dogwood, asparagus, climbing nightshade and Virginia creeper.

Despite finding relatively fewer SWD flies in 2011 than in 2010, many parasitoids were collected from fruit in multiple sites, and rearing of them for identification is still in progress. The parasitoids found in 2010 were identified as important natural enemies of vinegar flies and cherry fruit flies.

Damage

No economic damage to commercial fruit was reported by industry in 2011.

Outreach

Tristan Mennell was hired as a SWD Outreach Coordinator by the Ministry of Agriculture for the 2011 season. The Okanagan-Kootenay Cherry Growers' Association (OKCGA) hired Tamara Richardson and Kari Bredahl to help outreach efforts. These coordinators did an excellent job by reaching many growers and

problem neighbours needing SWD information and education.

Trapping results were reported by area on a weekly basis on the OKCGA website

(<http://www.bccherry.com/>) and the Ministry of Agriculture website

(http://www.agf.gov.bc.ca/cropproduct/swd_report.pdf).

These reports were also emailed to grower organizations for re-distribution to individual growers. SWD brochures and factsheets were produced, updated, and distributed to commercial growers and home gardeners. All information was kept updated on the BC Ministry of Agriculture website

(<http://www.agf.gov.bc.ca/cropproduct/swd.htm>).

Control Sprays

Emergency registration products for spotted wing drosophila control in 2011 were Delegate, Entrust, Malathion, and Ripcord. Entrust is still the only product available for organic growers.

Discussion

Monitoring over two seasons shows that SWD is probably established in the Okanagan and Similkameen Valleys, at least under the climatic conditions experienced since 2009.

The pattern of appearance in particular sites in the early season of 2011 was similar to that in 2010, suggesting that overwintering may be occurring in protected sites. Population levels in 2011 were generally lower than in 2010. Although flies were detected in Creston in 2010, none were trapped there in 2011. These results could be due to factors such as the relatively unusual season with a cool spring, low survival of overwintered populations, better grower education and proper timing of control products based on monitoring information, or to a combination of the above factors. As a result of the major differences in population levels experienced in 2010 and 2011, it is difficult to predict what population levels to expect in 2012. Similarly, it is unclear what governs regional variation, especially in view of the absence of catches in Creston this year.

High numbers of native parasitoids have been found emerging from flies and fruits in both years, in a joint study occurring in B.C. and Oregon as part of this project. Natural enemies play an important role in suppressing vinegar flies world-wide, and will help to slow

down the development of insecticide resistance in the flies.

Objectives for 2012

- Monitoring on the same scale as in 2011 (~180 traps) to help provide information on when SWD flies emerge for proper timing of control measures.
- Monitoring in 2012 will also help to confirm population trends and overwintering, in order to determine the long-term risk to B.C. soft fruit.
- Weekly monitoring reports will be made available to growers and SWD brochures and factsheets will be updated.

ACKNOWLEDGEMENTS

It has been a good season on the SWD front and we would like to thank all growers for their vigilance and the good work done. We recommend continued vigilance in 2012, because it might be a totally different season. We would like to thank the SWD monitors; Rachel MacGregor, Patricia Onofrechuk, Catherine Wallace, Corrine Janow; Brigitte Rozema, Yen-Yu Lin and Candace Klassen for technical assistance; Tristan Mennell, Tamara Richardson and Kari Bredahl for providing excellent outreach education; and Diane Thomas and

Tamara Richardson for sharing their monitoring data. We thank all our collaborators; Okanagan Tree Fruit Cooperative, BC Wine Grape Council, BC Fruit Growers Association, Okanagan-Kootenay Cherry Growers' Association, many fruit growers, consultants, Canadian Food Inspection Agency, Agriculture and Agri-Food Canada, and BC Ministry of Agriculture for their support.

by different sources including Agriculture, Environment and Wildlife Fund, the BC Ministry of Agriculture Biosecurity Funding, Okanagan-Kootenay Cherry Growers' Association, BC Fresh Market Grape Growers' Association, and the Tree Fruit Industry Development Fund.

SUBMITTED BY:

Susanna Acheampong, Howard Thistlewood, Charlotte Leaming, Duane Holder, Gayle Krahn and Molly Thurston

FUNDING

This article summarizes work on SWD from various projects funded

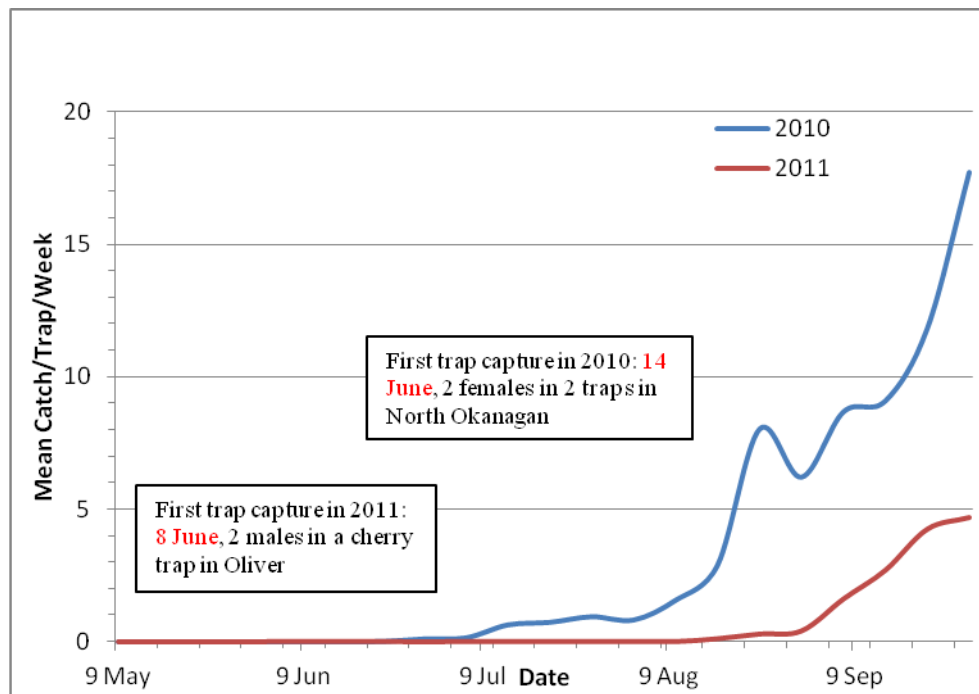


Figure 1. Comparison of mean SWD catch/trap/week for all sites in Interior Valleys of British Columbia (2010-2011); 2010, n traps = 73-349; 2011, n traps = 19-163

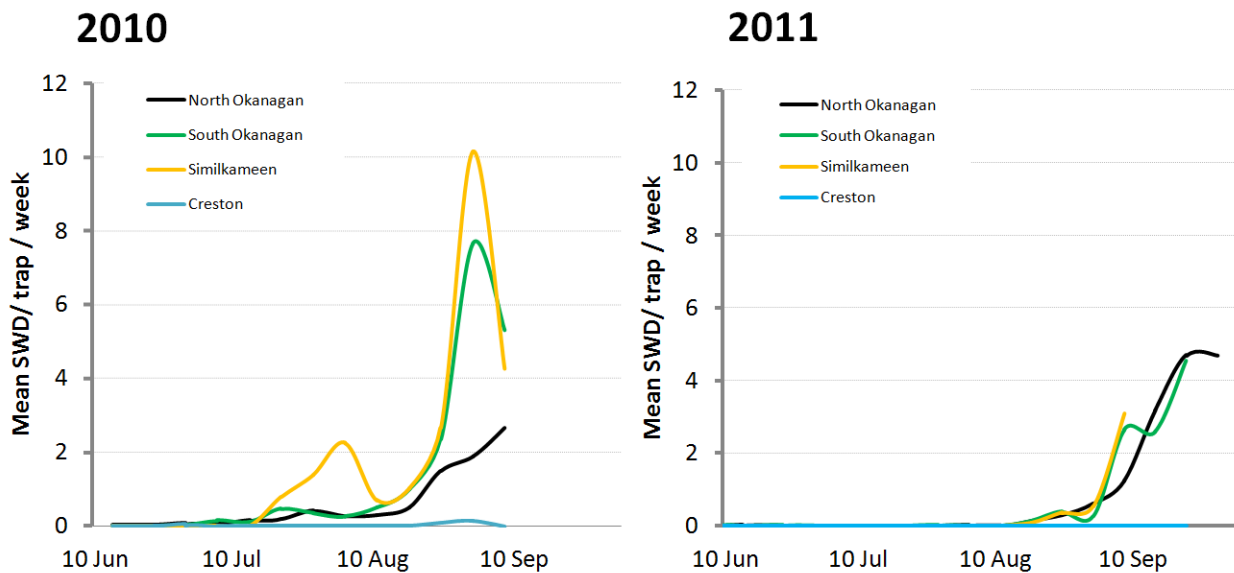
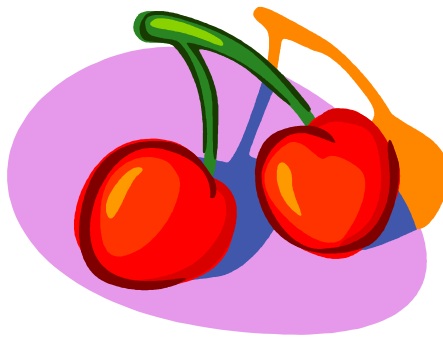


Figure 2. Regional comparison of spotted wing drosophila captures in Interior Valleys of British Columbia (2010-2011); 2010, n traps = 25 - 210; 2011, n traps = 19 - 163.



New Project Approved!

Fruit Waste Utilization

Throughout the Okanagan Valley there are a growing number and variety of on-farm packing and fruit sales outlets, all generating a certain amount of cull or

unsaleable fruit which requires disposal. Typically this has done by burying or dumping fruit in a pit or pile on the farm, which poses a real problem as it provides a breeding ground for fruit flies, wasps, and can attract bears, apart from the odours and fermentation gasses given off. Control of the

spotted winged drosophila makes this a far more serious problem than before. With very few (and diminishing) processing options to utilize cull or fruit that cannot be marketed on the fresh market, and concerns of greenhouse gasses and potential for energy production from (high calorie) fruit waste, it is timely to determine if it is feasible to economically ferment or digest fruit waste, either on farm, with portable units, or in a central location where the fruit could be collected and delivered. Given the relatively short season of cherries (3 to 5 weeks for each farm), it may be more feasible to spread related capital investment over multiple fruits (possibly including grapes and apples) and a larger region, depending on the transportation costs. With seed money from the OKCGA and BCFGGA, the AEFWF recently approved funding an economic and technical feasibility study for finding potential alternative energy or other by-product value from processing fruit waste, which will have the further benefit of reducing waste disposal and related insect problems. Consultants will be commencing the study early in January and the assessment of economic feasibility will be completed in the spring of 2012.

Fruit growers and packers may be requested to provide information and opinions to help with this study and your co-operation will be appreciated if you are called.

**Contributed by Christine Dendy,
Project Lead**



Up Coming Events

January 13, 2012 - 2012 Cherry Institute with trade show will be held at the Yakima Convention Center. The tentative agenda and additional information has been posted which will include:

Hand Held Thinning Crop Management -- Karen Lewis

MRL Issues Affecting Cherry IPM -- John Dunley

Prediction & Prevention of Rain-induced Cherry Cracking -- Ines Hanrahan

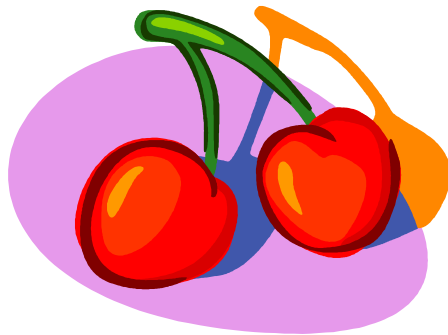
Brown Marmorated Stink Bug: West Coast Implications -- Jay Bruner

Check the website:

<http://www.nwcherries.com/press-room>

January 31, 2012: OKCGA 2011 Research Review and Presentation of Proposals for 2012 funding consideration will be held at PARC, Summerland, 9:00 am. All OKCGA members and researchers are welcome.

March 2, 2012: OKCGA Annual General Meeting and presentations by various speakers, including 2011 research highlights, will be held in the afternoon following workshops and talks on cherries in the morning. Agenda and details will be posted on the website www.bccherry.com when available.



Research Shorts

Evaluation of pruning techniques and bactericides for managing bacterial canker of sweet cherry

J. E. CARROLL, T. J. Burr, T. L. Robinson, S. A. Hoying, K. D. Cox

Phytopathology (2011) 101:S27
Vol. 101, No. 6 (Supplement),
page S27

Bacterial canker of sweet cherry occurs worldwide, causing bud mortality, twig cankers, leaf spots, flower and fruit lesions, and severe collapse and death of trees. In New York, *Pseudomonas syringae* pv. *syringae* (Pss) is most commonly isolated from infected tissues. Given that the pathogen may enter through pruning wounds, our objectives were to determine if, by leaving pruning stubs, trunk and scaffold cankers could be reduced, and if pruning time or bactericides reduce stub infection severity. Pruning techniques and bactericides (copper and phosphorous acid, applied at March and April pruning times) were evaluated in replicate orchard blocks in Geneva and Highland, NY. Stub pruning (avg 20-cm-long × 3.5 cm diam) and inoculation were done in March, April, May and post-harvest. Cut surfaces were inoculated with Cu-sensitive Pss (108 cfu/ml). Canker progression down stubs (severity) was assessed during the growing season. Stub infections rarely progressed into scaffolds or trunks. Cankers progressed furthest in stubs pruned in March and least when

pruning was done post-harvest. Bactericide treatments failed to prevent infections and provided less than 19% reduction in canker severity. Our results indicate the ineffectiveness of bactericides at pruning and the effectiveness of post-harvest, stub pruning to manage cankers. Reducing copper applications in orchards will slow the emergence of Cu-resistant bacterial strains and reduce copper build-up in soils.

Benefits of composting

Bill McPhee and Greg Norton
(Brief summary of 2011 results)

A compost consisting of a blend of cattle manure, orchard and farm organic waste was tested to determine the overall benefits to application of compost to tree fruits. One of the most striking impacts was that compost encouraged the development and persistence of feeder roots of fruit trees. Development and retention of healthy feeder roots is important to maintaining tree health, a tree's resistance to stress and production of high yields of high quality fruit. Sweetheart cherries in compost treated blocks produced fruit with greater stem retention and higher acid contents. Better stem

retention and higher acid contents could improve the storage potential for cherries.

ARDCORP BC Environmental Farm Plan Program

has recently announced significant improvements in the BMPs for eligible producer projects. Further details and a list of the changes and contacts is found on our website www.bccherry.com Don't miss out.

2012 MEMBERSHIPS and 2011 CROP LEVIES

are due. A renewal form is attached. **PLEASE** send it in now, before it is lost in the Christmas wrapping, so your executive know what funds are available for 2012 research project decisions in January. Your levies are fully tax deductible AND qualify for up to 40% SR&ED Investment Tax Credit, so it is a terrific opportunity for us to invest in research for our industry and get money back as well as all we benefit from the research! Also, employment listings expire December 31, 2011 and there is a possibility we may implement an extra charge for this service, so renew now and keep your orchard listing current at no extra cost. Cherries are our business; we all share in the benefits of supporting the OKCGA. **THANK YOU!**

OKANAGAN KOOTENAY CHERRY GROWERS' ASSOCIATION MEMBERSHIP APPLICATION

NAME		COMPANY/ORCHARD	
ADDRESS			
CITY		PROV	POSTAL CODE
PHONE	FAX	EMAIL	

MEMBERSHIP CATEGORY (Please check all that apply)

Grower
 Marketer
 Supplier
 Consultant/Fieldman
 Government
 Other

ACRES IN CHERRY PRODUCTION: _____ NON-BEARING CHERRY ACRES: _____

Please attach cheque payable to **OKCGA, Box 28100 RPO East Kelowna, Kelowna V1W 4A6** for:

20012 MEMBERSHIP FEES .

50.00

20011 CROP LEVY: total pounds packed @ 1 cent/pound

Total \$

On receipt of your application and membership fee, a PIN number will be emailed to you that will enable you to access the Members' Area on our website - with full research reports and other material that will be posted from time to time. Newsletters and research reports are now presented online at www.bccherry.com and are NOT mailed unless you specify that a mailed copy is required.

Notices will be emailed to you, so please be sure we have your current email address.

If you have questions about your membership status, PIN, or email, please contact Christine at admin@bccherry.com or Tel: (250) 860 3537, Fax: (250) 868 8979.

WEBSITE LISTING on www.bccherry.com

Membership entitles you to list your orchard on bccherry.com for seasonal job applicants.

If you wish to have your orchard listed, please complete the following: Yes, please list us.

1. Contact information IF different from the information above:

NAME		COMPANY/ORCHARD	
ADDRESS			
CITY		PROV	POSTAL CODE
PHONE	FAX	EMAIL	

2. Website address if you have a website: _____

3. Approximate picking season dates. _____

4. Certified? Please specify: GlobalGAP, CanadaGAP, Organic, or _____

5. Brief (three line) description of your orchard, the work, facilities for employees etc.:
