



Well, hello, and welcome to another year of Hort Snacks e-newsletter. This is the 10th year, in fact. And if you wondered about the date, it is coming a couple of weeks early, to compensate for the Christmas/New Year's break.

In this edition, you'll find lots of things to keep you busy and interested (we hope). Since the depth of the extension season is upon us, you'll find numerous posters for a wide range of workshops, conferences and webinars, which hopefully will be of interest to you. You'll also find a promotional piece on a book that was recently published and released by a couple of Prairie folks.

There is also an article with some musings on the past season, from Rob's perspective, as well as a report and observations from the recent Great Lakes Expo Farm Market Bus Tour in Grand Rapids, Michigan. And, to round things out, there is a bit of information on a common pathogen that makes many forms in many crops, as well as 2 insect pests that we hope we never see, as they are nightmares. It should be noted that one of them (Emerald Ash Borer) was recently discovered on the prairies.

We hope that you have/had a wonderful Christmas holiday, filled with friends/family, food and festivities, and we wish you all the best for the New Year.

Rob Spencer / Dustin Morton, Commercial Horticulture Specialists
Alberta Ag-Info Centre, Alberta Agriculture and Forestry
310-FARM (3276)

FEATURED WEBSITE

Ted Talk – [How Urban Agriculture is Transforming Detroit](https://www.ted.com/talks/devita_davison_how_urban_agriculture_is_transforming_detroit)

https://www.ted.com/talks/devita_davison_how_urban_agriculture_is_transforming_detroit

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THINGS TO DO / THINGS TO THINK ABOUT THIS MONTH

- Register for relevant winter workshops
- Consider specific training courses for both yourself AND staff (e.g. First Aid, Advertising, Electronic bookkeeping, Record keeping, etc.) – Book it
- Are all of your licenses or certificates up to date?
- Review your insurance coverage. Do you have sufficient for your activities? Are all the things that happen on your farm covered? Has anything changed?
- Review your project to-do / wish list from the end of last season – What are some of the things that you identified?
- Start thinking about and planning your field layouts for the coming season. Does your current set up work for any new crops? Do you have sufficient space for everything you have planned (headlands, activities, parking, etc.)? Consider field orientation, irrigation systems, shelterbelts and traffic movement (foot, equipment, vehicles, etc.).
- Have you ordered the plant material that you will need for the next season? Planning and ordering in advance can save a lot of headaches in the spring.
- Are you ordering transplants? Growing your own? Cleaning up the greenhouse might also be in order.
- Update / tidy up / repaint sales sheds and signs

NEWSLETTER USE RESTRICTIONS

Please feel free to share all or portions of this newsletter with other interested parties.

If you want to use content from this newsletter in other media, please request permission before doing so.

Q&A

MENTAL SNACKTIME - Renewal

- "Problems can be experienced as... a chance for renewal rather than stress." – Marilyn Ferguson
- "The single overriding objective in wellness is creating constant personal renewal where we recognize and act on the truth that each day is a miraculous gift, and our job is to untie the ribbons. That's the Law of Esprit: living life with joy." – Greg Anderson
- "Change and renewal are themes in life, aren't they? We keep growing throughout life." – Susan Minot
- "As part of our renewal - we need to fight problems, not just wait for them to take place." – Nong Duc Manh
- "If there are flaws they are in ourselves, and our task therefore must be one not of redesign but of renewal and reaffirmation, especially of the standards in which all of us believe." – Elliot Richardson
- "A change in external circumstances without inner renewal is a materialist's illusion, as though man were only a product of his social circumstance and nothing else." – Jurgen Moltmann

Q: What do you do to kick off a new year? When does the new year start for you?

A: When our first shipment of seed comes in

A: We have a quiet New Year and start the new crop year in late February with the AFFPA meetings and school

A: Clean House!

A: Jan 1 is the start of the new year. My new year always means the start of planning my garden which means I'm browsing through the seed catalogues....even though all my ordering is done online

A: 1. Enjoy a glass of wine. 2. After the second glass of wine!

A: Celebrate with good food, friends and family starting on December 31 - January 1.

A: The new year starts in February, and I make sure I have had a good bout of skiing before I get back to the grind.

A: Depends on which agriculture adventure cow/calf enterprise - when the (girls)cows start calving in April ... that is the new year market garden enterprise - December ... that is when we have good understanding of the previous year's numbers/do's and don'ts list and a plan for the next year is firmly being put together integrating planting schedules/ labor & harvesting plans/ marketing ideas all the while putting in our orders for the proper amounts of rain/sunshine and good health to pull it all off.

A: Nothing special January 1

Next Month's ? → [What new trend do you see on the horizon? What are you doing to capitalize on it?](#)

Upcoming Conferences / Workshops

January 2018

- **Agronomy Update 2018**
Jan 9-10, 2018 – Sheraton – Red Deer, AB
Ropin' the Web (www.agriculture.alberta.ca) – Coming Events
- **Potato Expo 2018**
Jan 10-12, 2018 – Rosen Shingle Creek – Orlando, Florida, USA
www.potato-expo.com
- **Hort Snacks-to-Go Webinar – Challenges & Successes of Larger-scale Greenhouses in Alberta**
Jan 15, 2018 - [Register](#)
- **Using Shopify to Build Your Own Online Store workshop**
Jan 16, 2018 – Red Deer College – Red Deer, AB
To Register – 1-800-387-6030 or [Register](#)
- **Getting into Local Foods Workshop**
Jan 18, 2018 – Hillhurst Sunnyside Community Centre – Calgary, AB
To Register – 1-800-387-6030 or [Register](#)
- **Pricing Principles – Moving to Retail Workshop**
Jan 18, 2018 – Airdrie Ag Centre – Airdrie, AB
Jan 30, 2018 – Provincial Building – Grande Prairie, AB
To Register – Call 1-800-387-6030
- **Scotia Horticultural Congress 2018 – “Farming’s Changing Landscape”**
Jan 22-23, 2018 – Old Orchard Inn Convention Centre – Greenwich, NS - <http://www.horticulturens.ca/index.php/events/scotia-horticultural-congress/>
- **Manitoba Potato Production Days**
Jan 23-25, 2018 – Keystone Centre – Brandon, MB
www.mbpotatodays.ca
- **Explore Local Webinar – Human Resources Essentials Online Toolkit**
Jan 24, 2018 – [Register](#)
- **20th Annual Pacific Agricultural Show**
Jan 25-27, 2018 – Tradex Exhibition Centre – Abbotsford, BC
www.agricultureshow.net
- **37th Annual Guelph Organic Conference & Expo**
Jan 25-28, 2018 – Guelph University Centre, Guelph, ON
www.guelphorganicconf.ca
- **Hort Snacks-to-Go Webinar – Season Extension = Sustainable Farm**
Jan 29, 2018 - [Register](#)
- **FarmTech 2018**
Jan 30 – Feb 1, 2018 – Edmonton Expo Centre at Northlands – Edmonton, AB
www.farmtechconference.com
- **49th Annual Northwest Agricultural Show**
Jan 30 – Feb 1, 2018 – Portland Expo Centre – Portland, Oregon, USA
www.nwagshow.com

February 2018

- **33rd Annual North American Farm Direct Marketing Association (NAFDMA) Convention**
Feb 1-7, 2018 – Los Angeles, California, USA
<http://www.farmersinspired.com/Convention/>
- **Explore Local Webinar – AHA Food Regulation for Farmers’ Markets**
Feb 7, 2018 – [Register](#)

Upcoming Conferences / Workshops

February 2018 continued

- **Organic Alberta Conference – Sustainability & Profits – Organic Ideas to Help You Grow**
Feb 9-10, 2018 – Westerner Park – Red Deer, AB
<http://organicalberta.org/news/2018-conference/>
- **2018 Manitoba Direct Farm Marketing Conference (Joint Prairie Fruit Growers Association / Direct Farm Manitoba)**
Feb 10, 2018 – Canad Inns Destination Centre Polo Park – Winnipeg, MB
www.directfarmmarketing.com
- **Hort Snacks-to-Go Webinar – Nuts and Bolts of Running a Market Garden**
Feb 12, 2018 - [Register](#)
- **Explore Local Webinar – Creating Top Notch Job Descriptions**
Feb 14, 2018 – [Register](#)
- **Getting into Farmers’ Markets Workshop**
Feb 15, 2018 – AFSC Boardroom – Camrose, AB
To Register – 1-800-387-6030 or [Register](#)
- **Ontario Berry Growers Association Annual Meeting**
Feb 20, 2018 – Niagara Falls, ON
www.ontarioberries.com
- **Ontario Fruit & Vegetable Convention**
Feb 21-22, 2018 – Scotiabank Convention Centre – Niagara Falls, ON
www.ofvc.ca
- **Sour Cherry / Haskap Production Workshop (+ Advanced Haskap Sessions)**
Feb 21, 2018 – Pomeroy Olds Inn & Suites – Olds, AB
To Register – 1-800-387-6030
- **Building a Working Destination Farm Workshop**
Feb 21, 2018 – Agriculture Business Centre – Leduc, AB
To Register – 1-800-387-6030
- **Alberta Farm Fresh School 2018 – Farm to Market Conference (AFFPA/AFMA)**
Feb 22-23, 2018 – Pomeroy Olds Inn & Suites – Olds, AB
- **Beyond Sticky Traps: Leveling Up Your Greenhouse Biocontrol (for greenhouse ornamental growers)**
Feb 28, 2018 – Thiel's Greenhouse – Bruderheim, AB
To Register – 1-800-387-6030

March 2018

- **Beyond Sticky Traps: Leveling Up Your Greenhouse Biocontrol (for greenhouse vegetable growers)**
Mar 1, 2018 – Gull Valley Greenhouses – Lacombe/Gull Lake, AB
To Register – 1-800-387-6030
- **Potato Pest Management Workshop**
Mar 6, 2018 – Festival Place – Sherwood Park, AB
Mar 8, 2018 – Coast Lethbridge – Lethbridge, AB
To Register – Call 1-800-387-6030
- **Explore Local Webinar – Image-driven Marketing**
Mar 7, 2018 – [Register](#)
- **2018 Canadian Horticultural Council (CHC) Annual Meeting**
Mar 13-15, 2018 – Westin Ottawa – Ottawa, ON
www.hortcouncil.ca/
- **Canada Blooms 2018**
Mar 9-18, 2018 – Enercare Centre – Toronto, ON
www.canadablooms.com
- **Hort Snacks-to-Go Webinar – Crunching the Numbers on Biocontrol in Bedding Plant Production**
Mar 12, 2018 - [Register](#)



HortSnacks-to-Go:

2017/2018 Webinar Series

To register: Email dustin.morton@gov.ab.ca

Time: 1:30 PM **Cost:** Free



October 16, 2017 – Dr. Bob Bors

Dr. Bors is an assistant professor at the University of Saskatchewan where his research focuses on prairie hardy fruit breeding. He'll be discussing some of the new haskap varieties they're working on and new innovations in the pipeline.

October 30, 2017 – Dr. Bridget Behe

Dr. Behe is a professor at Michigan State University and will be discussing the practical implications of her research using eye tracking technology in garden centres and how owners and operators can capitalize on this.

November 20, 2017 – Ron Valentin

Ron is Bioline AgroSciences technical lead for North America and will be discussing how other areas of the world are using biological controls in field scale vegetable and fruit crops and how Alberta producers can take advantage of this growing area.

December 18, 2017 – Dr. Kate Congreves

Crop fertility is a balancing game; soil fertility, fertigation, top dressing, foliar fertilizer, the list goes on. Dr. Congreves research focuses on soil health and fertility and she'll break down each of these and how best to manage your crops growth.

January 15, 2018 – Eric Doef, Doef's Greenhouses

Eric is the second generation of growers at Doef's Greenhouses in Lacombe, Alberta. Doef's own an 11 acre state of the art greenhouse in Alberta and will talk about the challenges and success of growing at that size in the Alberta climate.

January 29, 2018 – Dawn Boileau, Sunrise Gardens

Dawn and her partner Kate own and operate Sunrise Gardens in Onoway. Dawn and Kate have invested heavily into season extension and Dawn will discuss how this has allowed them to shrink their acreage while still sustaining the farm.

February 12, 2018 – Chris Blanchard, Purple Pitchfork

Chris is the host of the popular "Farmer to Farmer" podcast and a former farmer. He'll be discussing the nuts and bolts of running a market garden including risk management, making a living, and working for the farm you want.

March 12, 2018 – Graeme Murphy, bioLogical control solutions

Graeme is an advocate for biocontrol solutions for common pest problems and will focus on the cost and economics of biocontrol in bedding plant production.

Growing Forward 2 

A federal-provincial-territorial initiative

Alberta  Government

Canada 



invites you to:

Using *Shopify* to Build Your Own Online Store

In this hands-on one-day workshop, you will create your online store, learn how to manage and sell your products, adjust inventory and be found by search engines.

Content for the Day

You will discover how to set-up visuals such as logos and store themes; add products, categories and maintain inventory; create pages and navigation links; understand search engine optimization, how to drive traffic to your store and much, much more!

This hands-on workshop will teach you how to:

- Determine if your business is ready for online sales
- Choose the e-commerce platform that is right for your business
- Set-up a *Shopify* online store and integrate it into your existing website or domain
- Set-up visuals of the store front such as logos, themes and more.

Shopify is a complete e-commerce solution that allows you to set up an online store to sell your products. It lets you organize your products, customize your storefront, accept credit card payments, track and respond to orders — all with a few clicks of the mouse.

Each producer will receive a trial Shopify account that has no time restriction (instead of 14 day trial), and will allow you to receive 50 orders before monthly subscription fees apply.

Registration and Information

Date: Tuesday, January 16, 2018

Location: Red Deer

Red Deer College, Computer Lab
100 College Blvd., Red Deer

Time: 8:30 a.m. – 4:30 p.m.

Cost: \$23.75 plus GST

Lunch and refreshments provided

Payment options: Visa, MC or cheque

Register by January 9

Seating is limited, only 17 spots available.

Online

If GST exempt, **do not** register online.

<https://eservices.alberta.ca/using-shopify-workshop.html>

By Phone

1-800-387-6030

For more information:

Cindy Cuthbert

Alberta Agriculture and Forestry

780-538-5287, for toll free calling, dial 310-0000, then

cindy.cuthbert@gov.ab.ca



invites you to:



Getting Into Local Foods

This one-day workshop is for producers who are new to selling food through farmers' markets or other direct to consumer methods. You will learn about the regulations, available services and market options for selling food direct to consumers.

Content for the Day

Setting the Stage

Learn about the local food opportunity and the different farm direct marketing channels, their benefits and challenges.

Overview

Hear about the regulations that apply to your business directly from the agencies responsible for enforcement.

Meet the Agriculture and Forestry specialists available to assist you as you establish your farm direct food business.

Producer Story

Shirley's Greenhouse takes pride in "providing good quality, safe products that consumers enjoy and will actually seek out". Dawn Buschert of Shirley's Greenhouse will share their farm story: how they got started, the different roles each family member has in the operation, and the diverse market channels they sell into.

Registration and Information

Date: Thursday, January 18, 2018

Location: Calgary

Hillhurst Sunnyside Community Hall
1320 5 Ave NW, Calgary

Time: 8 a.m. – 4:30 p.m.

Cost: \$23.75 plus GST

Lunch and refreshments provided

Payment options: Visa, MC or cheque

Register by January 11 at

<https://eservices.alberta.ca/agriculture/getting-into-local-foods-workshop.html>

or call 1-800-387-6030

If GST exempt do not register online. Please call 1-800-387-6030 to register.

For more information:

Delores Serafin

Alberta Agriculture and Forestry

780-427-4611

delores.serafin@gov.ab.ca



Pricing Principles

Moving to Retail

Planning on selling to retail? Expand your understanding of the costs related to setting a profitable price.



Attend this workshop if you are looking to:

- Price your products for profit
- Understand the components of pricing for the retail market
- Understanding retail buyers needs

Registration Information

Dates: **January 18, 2018**

Agriculture Centre
97 East Lake Ramp NE, Airdrie, Alberta

January 30, 2018

Provincial Building
Grande Prairie, Alberta

Time: 9 a.m. - 3:30 p.m.

Registration starts at 8:30 a.m.

Cost: \$25 per person

(includes snacks, lunch and GST)

To register
call the **Ag-Info Centre** at

1-800-387-6030



invites you to:

Getting Into Farmers' Markets

This one-day workshop looks at selling food products at Alberta approved farmers' markets.

Farmers' markets are big business in Alberta with over \$900 million in annual sales. Entering this market channel with the right skills can shorten your learning curve and enhance your success.

Content for the Day

Setting the Stage

Discover the size of the opportunity, what to look for in a market and what a market manager expects from a vendor.

Food Safety Best Practices

Find out the importance of having a food safety plan for your business, and resources to help you get started.

Product Pricing

Learn about product costing and effective pricing strategies.

Regulations – The Basics

Understand the regulations that apply to your business and why they matter.

Discover the specific requirements under the Alberta Food Regulation from a public health inspector.

Experiential Speaker Panel

Experienced vendors will share how they are successful at farmers' markets.

Registration and Information

Date: Thursday, February 15, 2018

Time: 8:30 a.m. – 4 p.m.

Location: AFSC Boardroom
4910 - 52 St, Camrose, AB

Cost: \$23.75 plus GST
Lunch and refreshments provided
Payment options: Visa, MC or cheque

Register by February 8 at

<https://eservices.alberta.ca/agriculture/getting-into-farmers-markets-workshop.html>

or call 1-800-387-6030.

If GST exempt do not register online. Please call 1-800-387-6030 to register.

For more information:

Delores Serafin
Alberta Agriculture and Forestry
780-427-4611
delores.serafin@gov.ab.ca



Sour Cherry and Haskap Production Workshop

This workshop provides new or potential dwarf sour cherry and Haskap producers with a detailed outline of all aspects of production in Alberta. Sessions include information on production, including varieties, establishment, maintenance and harvest, as well as the economics of dwarf sour cherries and Haskap. Advanced sessions on Haskap production will be included as part of an evening session.

Registration Information

Dates: February 21, 2018

Pomeroy Inn & Suites at Olds College, 4601 46 Avenue, Olds, AB

Registration deadline: February 14, 2018

Time:

8 a.m. to 9 a.m. registration

9 a.m. to 12 noon – Dwarf Sour Cherry sessions

12 to 12:40 p.m. – Lunch (Lunch and snacks provided)

12:40 to 4 p.m. – Economics and Introductory Haskap sessions

4 to 5 p.m. and 6:30 to 8:30 p.m. – Advanced Haskap sessions

Cost:

\$20/person (plus GST) (full day) or

\$10/person (plus GST) (advanced Haskap sessions only)

To register online visit:

<https://eservices.alberta.ca/sour-cherry-haskap-workshop.html>

Do not pay online if you are exempt from paying GST. Instead, call **1-800-387-6030** to register.

Building a Working Destination Farm



Workshop Featuring:

Alf and Sandee Krause of Krause Berry Farms & Estate Winery

9 a.m. – 3:30 p.m., February 21, 2018

Agriculture Business Centre, 6547 Sparrow Drive, Leduc, Alberta

Topics Include:

- Vertically integrating on-farm enterprises
- Adding value to farm-made products
- Sharing the food experience with guests
- Developing an authentic brand
- Building a great team
- Growing collaboration and community

Alf and Sandee Krause

are the owners and operators of the award winning Krause Berry Farms & Estate Winery in Langley, BC. Producing over 100 products on site from their berries and vegetables, they encourage guests to participate in their food experience through U-pick berry fields, a market, bakery, estate winery, restaurants, and the farmer's table cooking school.

Registration:

Cost: \$25.00

(includes lunch and refreshments)

To register call the Ag-Info Centre at

1-800-387-6030

Registration deadline is February 14, 2018.



AFFPA / AFMA presents ... "From Farm to Market 2018" – Tentative Agenda

Thursday, February 22, 2018 – Day 1					
Ballroom A	Ballroom B	Ballroom C	Wild Rose Room		
8:00 – 8:30 am REGISTRATION					
8:30 – 9:00 am Welcome & Opening Remarks – acknowledgement of sponsors / Intro by Olds College					
9:05 – 10 am PLENARY – Alf and Sandee Krause – Krause Berry Farms & Estate Winery					
10 - 10:30 am – COFFEE BREAK & TRADE SHOW					
10:30 – 11:55 am					
Predator Management For Orchards & Livestock – TBD	Diversifying your Farm – Arlin Loewen (Summer's Gold)	Starting a u-pick: Do's and Don'ts – Krause Berry Farms & Estate Winery	Social Media – Leona Staples (The Jungle Farm)		
12 noon – 12:30 pm – LUNCH		12:30 – 1:30 pm – Annual General Meetings AFMA			
1:30 – 2:25 pm					
Evolution of a CSA (Community Supported Agriculture) – TBD	Integrated Pest Management – What we learned in Essen, Germany – Panel	Marketing tips – Krause Berry Farms & Estate Winery	Farmers Market Managers – NAFDMA Presentation – Panel		
2:30 – 3:25 pm					
Livestock Nutrition – TBD	Strawberry Varieties and Tips to growing – Norcal Nursery	Beyond the Farmers' Market – How to sell beyond – TBD	Pricing Your Product – TBD		
3:30 – 4:00 pm – COFFEE BREAK & TRADE SHOW					
4:00 – 4:55 pm					
Agroforestry, Silviculture and Alley Cropping – Luke Wonneck (Agriforestry & Woodlot Extension Society)	Insect Management in Vegetable Crops – Rob Spencer (AF)	Co-operating with Local Farms – TBD	Labelling and Design – TBD		
5:00 – 5:30 pm	Networking & Trade Show				

TRADESHOW

NEW VENTURE CONSULTATIONS

5:30 – 7:30 PM – Dinner & Awards (Cash Bar Available)

7:30+ PM – Informal Mixer / Social – Olds College Wine and Beer tour – Ballrooms A, B,C pending approval with Pomeroy

AFFPA / AFMA presents ... "From Farm to Market 2018" – Tentative Agenda

Friday, February 23, 2018 – Day 2					TRADESHOW	NEW VENTURE CONSULTATIONS
Ballroom A	Ballroom B	Ballroom C	Wild Rose Room			
8:00 – 8:30 am REGISTRATION						
8:00 – 9:00 am Tradeshow						
9:00 – 10:00 am						
Rules and Regs for on farm events and temporary kitchens Kelly Bauer – Public Health Inspector (Alberta Health Services)	Vegetable Fertility management – TBD	Farmers Market Display – setting yourself up for success – TBD	New, Young and Diverse: How Aging Farmers Can Embody and Embrace the Next Generation – Nikki Wiart			
10:00 – 10:30 am – COFFEE BREAK & TRADE SHOW						
10:30 am – 12:00 pm						
Food Co-ops Innisfail Growers Celebrating 25 years Shelley Bradshaw- Beck Farms YYC Growers – Kye Kocher	Farmer Hacks Panel – TBD	Small Business Accounting – Bookkeeping and Financials – TBD	Market Manager Meetup			
12:00 – 1:30 pm – LUNCH 12:30 – 1:30 pm – Annual General Meeting AFFPA						
1:30 – 2:25 pm						
Soil borne diseases: Diagnosis, prevention, and what to do when you have them – Rob Spencer (AF)	Creating a website that works for you – Dave Cruikshank (Gaslamp Village Media Inc.)	Does and Don'ts at the Farmers Market – Kelly Bauer (Alberta Health Services)	Crafter Session – TBD			
2:30 – 3:30 pm						
Events on your Farm – What you need to do to be successful – TBD	Ethnic Diversity and New Cropportunities – Rob Spencer (AF)	Optimal Market Mix: The 80/20 Rule – Eileen Kotowich (AF)				
3:30 – Conference Ends						
Safe Travels						



This workshop will provide potato growers with in-depth information on potato disease and insect pests, including identification, factors affecting incidence and severity, as well as management using a range of tools and techniques. Featuring both live and recorded speakers.

Potato Pest Management

Registration Information

Dates: **March 6, 2018**

Sherwood Park and Ardrossan Rooms, Festival Place,
100 Festival Way, Sherwood Park, AB

March 8, 2018

Coast Lethbridge Hotel & Conference Centre,
526 Mayor Magrath Drive South, Lethbridge, AB

Registration deadline: February 27, 2018

Limit of 2 registrants per farm operation

Time: 8 a.m. registration. Sessions run 8:45 a.m. to 4 p.m.

Lunch and snacks provided, as well as reference material (one copy per participant)

Cost: \$15/person (plus GST)

To register online visit:

<https://eservices.alberta.ca/potato-pest-management-workshop.html>

Do not pay online if you are exempt from paying GST.

Instead, call **1-800-387-6030** to register.



GARDENING REFERENCE

\$39.95



At last! Great news for gardeners in cold climates

Here is the definitive guide to growing fruit in colder zones. Written by two of Western Canada's foremost horticulturists, *Growing Fruit in Northern Gardens* is an encyclopaedic collection of information gained from years of practical experience and combined with the most current research.

From saskatoons to sea buckthorn, this book covers fruit both familiar and esoteric. It includes more than 20 species and almost 200 varieties – from heritage plums introduced over a century ago (and still available!) to the most recent releases of dwarf sour cherries. All the information you need to select and grow fruit in places where the weather can be challenging if not downright nasty.

Sara Williams and Bob Bors bring years of hands-on experience to the creation of *Growing Fruit in Northern Gardens*. It begins with "The Basics" – practical, problem-solving information on hardiness, propagation, pollination, soil, water, mulch and pruning. Then comes the stuff you really don't want to know until you have to – weeds, diseases, insects, and other pests, along with their prevention and control.

Growing Fruit in Northern Gardens is fully illustrated with charts, tables and high-quality, full-colour photographs that will help you choose what to plant and will serve as an aid to identifying pests and plant diseases.



www.coteaubooks.com



ISBN 13: 9781550509137

SARA WILLIAMS
& BOB BORS

SARA WILLIAMS & BOB BORS

Growing Fruit in Northern Gardens

Growing FRUIT *in Northern* GARDENS

2017 – A Year in Review

Every year, I think, “I should look back and summarize what happened”. And, every year, it is a challenge to do so, partly because it is hard to remember what happened and partly because it is hard to generalize events, based on limited information. Regardless, I’ve always advocated in favour of reflection, simply because it helps to provide some closure and compartmentalization (or mental storage). You can also gain perspective, which is beneficial (if not always obviously helpful).

I would (and have) summarize 2017 as mostly ok, even, dare I say, average. I don’t think that I can say that there weren’t challenges, but there didn’t seem to be huge, sweeping challenges, as in previous years. Obviously, that can’t be said for every single person, but in general, most people seemed to come through things OK.

Most “conversations” start with a discussion of the weather. I’ve mentioned it before, but if you are interested in the weather, Alberta Agriculture and Forestry (with some other provincial and federal departments) has a dazzling array of weather stations gathering data from across the province. Even better is the fact that much of this data is analyzed and you can access all sorts of interesting things on the Alberta Climate Information Service website (www.agriculture.alberta.ca/acis/). There are maps, individual station data reports and much, much more. Colourful maps and charts can be interesting on a general level, and area-specific information can be helpful, if you need it.

- Winter 2016/2017 was a bit on the strange side, in my opinion. There were the standard bone-chilling stretches of cold that drive many away to warmer climes and that make us both proud and sad to be Canadian. Similar to the previous year, we had a pretty mild winter, or at least significant stretches of time where things “weren’t too bad”. In the past couple of years, we seem to have a rapid/sudden arrival of winter, followed by stretches of “fall-ish” weather, interspersed by cold reminders. In 2017, we had a pretty hard frost to start things off, but November and December have been ultra-mild.
- Depending on where you live, it was either fairly dry (but not as dry as it had been last year), or fairly wet. Most parts of the province came into the growing season with good levels of moisture, but most parts of the province seemed to stay pretty dry for the rest of the season, with limited moisture falling. But most people weren’t complaining about being out of water, which was nice. If you live in the Northeast, you were wet, but things dried off enough to get things done in a satisfactory manner.
- There was no major late spring frost this year, and most people report this year as having been good to excellent, in terms of fruit crop production (I include all fruit in that, not just berries). Dry conditions resulted in excellent quality, things didn’t get too hot to accelerate harvest excessively and yields rebounded nicely from 2016.
- Severe weather events seem to be a perennial challenge for producers most of the time now, although it wasn’t something that came up a whole lot in calls over the season (thankfully). Hail seems to be the usual (bad) flavour of the day, most years, but this year, we didn’t hear of too many producers that were hit. Central Alberta received a number of severe high wind events, which did a lot of damage to trees in the region. Clean up has taken a long time.
- As a result of the predominately dry conditions, the number of reports of disease was significantly down, which is never a bad thing. We didn’t hear much about root or foliar issues, which is great. Insect pest reports were also minimal, for whatever reason.
- In complete opposite of the previously delivered statement, there were lots of problems reported in trees, whether shelterbelt or rural acreage. The cause of damage and decline in trees is always challenging to pinpoint, but a combination of environmental stresses is mostly likely to blame.
- Some of the diseases that we’ve been concerned about in recent years, particularly Late blight of potato and tomato, were not reported or discovered in any major way this season (for a third year in a row), likely due in large part to improved monitoring and careful management in crops. The dry conditions didn’t hurt either.
- Limited resources has resulted in a decline in the amount of monitoring and surveillance for problem and/or invasive insect pests, mainly in fruit and vegetable crops (there is monitoring for invasive pests in some horticulture crops). Monitoring in some locations by individual producers found some pest issues, but mostly things were quiet. Spotted Wing Drosophila (SWD) is still a major concern for Alberta, as it is a major problem across North America. The main concern is still day neutral strawberries (fall production) and raspberries (especially fall-bearing types). Levels of SWD are still not such that you might be looking at significant inputs for control/management, but there is definitely a potential need in coming years for increased monitoring and vigilance. We delivered more information and training for individual producer monitoring this past year.
 - Other insect pests, such as Swede Midge and Pea Leaf Weevil, weren’t monitored for this year in horticulture crops, but surveillance has been underway in field crops, and spread and populations are on the rise.
 - In commercial potato crops, monitoring for insects such as Potato Psyllid is ongoing, with some insects trapped. This season a very small number were found to be infected with the pathogen that causes Zebra chip.
- Continued changes and introduction of legislation or programs had some impact on horticulture crop producers, with some sectors affected more than others. Things like minimum wage, Farm Safety Legislation and other things need to be watched.
- Horticulture extension programming was again quite extensive in 2017, with a range of events offered throughout the winter, spring, summer and fall, for the various horticulture sectors. Webinar offerings were maintained this year, and topics appeared to be more appealing to growers and industry. Topics were highly variable for programming, with something for everyone. While we offered many different events for people to learn at, we also were able to talk to many people on the phone or via email. It was a rewarding year and we hope that we were able to help out in a positive, impactful way.

Some Things I Learned on the GLEXPO 2017 Farm Market Bus Tour

Every tour that I attend and every farm operation that I visit provides me with at least one good nugget of information or idea that I can take home and share with someone else (sometimes, it is just for me). No matter the focus of the operation, there is something to be taken away from seeing someone else's operation.

This year, I was able to take in the 2017 Great Lakes EXPO Farm Market bus tour, where participants had the opportunity to tour/hear about 6 different operations, ranging from Farmers' Markets (which incorporate an institutional food hub component, cooking classes for kids and seniors and an incubator kitchen), high level agritourism/agritainment operations to farm market/u-pick fruit operations. It was very interesting to see each place, how they've evolved and what they are doing to reach customers in creative ways.

A. Lenderink Tree Farm – Belmont, Michigan – www.lenderink.com/christmas-tree-farm

This is a multi-generation, multi-faceted, family-owned/operated business. This aspect of the company sells cut-your-own and pre-cut Christmas trees. They plant 1000s of trees each year. Originally an exclusively wholesale business, now they focus on retail and the fun, on-farm experience. They offer wreaths, greens and other related items.

- The on-farm experience offers free hot chocolate, free marshmallow roasting pit, Santa Claus (on weekends), free bundling, free tree shaking, etc.
- They used to have a tractor and trailer that ran in an oval circuit, for drop off and pick up, but now they've switched to a truck and trailer (warmer).
- They offer free greens with any tree, tree stand or garland purchase.
- Plant mix of species, to reduce disease and insect pest impact and management
 - They also sell a hypoallergenic species – Concolor fir (it smells like oranges)
- Sell trees based on height of tree – they have a simple price pole system, with colour-coded markers
- Use former student athletes for staff



Top Left: Christmas tree farm (from the top of the hill by the sales shack)

Bottom Left: Photo booth with mascots

Right: Sales shack – free hot chocolate, check out and lots of merchandise

Photos by Robert Spencer





Concolor Fir (*Abies concolor*)

Photos by Robert Spencer

Christmas trees are sold by the foot, with a simple Price Pole system that match up with baler equipment. Coloured washers are attached to baled trees, which makes checkout quick and simple.



Tree cutting saw storage rack at entrance/checkout shack



Marshmallow roasting pit down by Santa Claus shack – clean, tidy with a bed of wood chips

Some Things I Learned on the GLEXPO 2017 Farm Market Bus Tour (continued)

Photos by Robert Spencer

B. Cards of Wood – Belmont, Michigan – www.cardsofwood.com

Another component of the Lenderink business (they produce wood veneers, etc.), this 50 year old, 3rd generation family owned business produces a wide range of wood veneer business cards, wedding announcements, ornaments, coasters, etc. They recently purchased an old barn which was moved onto another site. The purpose of the barn has yet to be determined.



Old barn – outside / inside

Wood veneer products

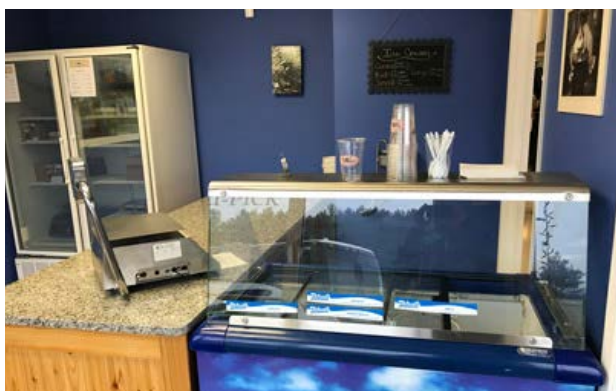
C. Jawor Brothers Blueberry Farms & Country Store – Ravenna, Michigan – www.jaworblueberries.com

This family owned business started in 1962 by the grandfather and now has several generations and branches of the family working on the operation. They have approximately 900 acres of 11 varieties of blueberries in the ground, with about ½ not yet in production. The farm market was added in 2011, and is connected to the adjacent u-pick acreage (14ac), which has helped it to increase in profitability.

- The store offers jams, jellies, pies (grandma's special recipe), muffins, turnovers, etc. They have cut their hours to align with blueberry season, running from early July to September.
- Originally used to hand roll their pie crusts – now use a purchased pie crust, allowing them to do more, easier.
- They sell about 1700 pies and sold 44,000 pounds of fruit this year.
- Main improvement in marketing has come through the Muskegon Farmers Market.
- They mostly hand pick fruit now, but with increase in acreage, will have to shift to some machine harvest.
- They have a window to watch the grading plant and sell local ice cream and products.



Photos by Robert Spencer



Top Left: Outside of Country Store
Bottom Left: Ice cream counter
Centre: Window to grading line
Right: U-pick hand washing station



Some Things I Learned on the GLEXPO 2017 Farm Market Bus Tour (continued)

D. Muskegon Farmers Market – Muskegon, Michigan – www.muskegonfarmersmarket.com

This city-owned Farmers Market is much more than a space for 100's of local producers (fruit, vegetables, nursery, flowers, handicrafts and baked goods). It has a commercial kitchen (Kitchen 242) that offers classes for seniors, kids and is an incubator space for local businesses. They rent the space as they gradually become established and then move out on their own.

- The farmers market has 160 stalls that are rented seasonally or daily
- The Farmers Market is also a food hub for a weekly institutional supply system, with businesses ordering through the market for weekly pickup. A staff member sorts the produce that comes in, so it is ready for pickup.
- They also run an indoor market on certain days.
- They have a kid's token "Future Shoppers" program, where children are given tokens to go and shop for produce on their own.



Top/Bottom Left:
Outside of
Farmers Market



Left: Washing / Prep Kitchen area
Right: Ovens, etc.



Photos by Robert Spencer

E. Schwallier's Country Basket – Sparta, Michigan – www.schwalliers.com

This family-owned business opened in 1989, starting as a roadside stand, growing into a thriving farm market. They are mainly an apple orchard, with over 100 acres of apples. Their converted dairy barn has been expanded several times. They have a corn maze, petting farm, pumpkin patch and other attractions. This past year, they purchased, and then had deconstructed/moved/reconstructed an old barn, which has an amazing view of the orchards.

- They are finding that their market has shifted from toddlers to teens, as their customers' age.
- Their expansions have taught them that you have to be two or three steps ahead in your thinking. For example, their most recent building expansion included an insulated 2nd floor over top of their kitchen, which could be many things in the future, but is currently storage.
- Their décor matches their apple orchard theme, using apple bushel baskets as light shades, checkered table cloths to brighten up the rafters, etc.
- It is important to understand what is making you money. They discovered that while they were selling thousands of donuts every weekend, their big money maker was apple cider sippy cups for kids.
- Cars make them more money than apple trees – they removed a number of trees to expand their parking lot and it has paid off.
- They invest strongly in their employees, as they recognize that they are a big part of their success.



Outside of Farm Market



Inside décor of Farm Market



Pumpkin sizing chart



Educational factoid sign inside Farm Market



Outside of "new" old barn



Inside of old barn – original rafters and structural materials, but replaced sheeting, adding insulation underneath new roofing, so it looks old while being modernized.

View of orchard from 2nd floor of old barn



Photos by Robert Spencer

Some Things I Learned on the GLEXPO 2017 Farm Market Bus Tour (continued)

F. Lewis Farm Market and Petting Zoo – New Era, Michigan – www.lewisfarmmarket.com

This 5th generation family owned and operated 700 acre farm features fruit orchards, a well-designed farm market and bakery and extremely diverse range of agritainment activities for the whole family. The farm market opened in 2004, with expansions almost every year. They run from May through the end of October. They have a lot of great activities that are incorporated with their fantastic petting zoo.

- They charge admission with a wrist band, offer season passes and charge extra for specific other activities.
 - Some of their agritainment activities include an extensive petting zoo, 6 acre corn maze, ball zone, bee popper, photo booth sets, bouncing pad, bird aviary, petting zoo, apple cannons, pig races, weddings, fire pits, concerts, etc.
- They try and keep things really clean and tidy.
 - The animals have lots of bedding, and are cleaned up after all of the time (as needed, not on a schedule).
 - They paved their pathways around the entire petting zoo area.
- They have a house with a bridal suite, with wedding ceremonies performed in the orchard.
- They have invested in security cameras around the entire site, which helps to keep animals safe and reduces liability.



Rubber ducky races



Musical entertainment station



Below: Candy cannon



Bee Popper – bouncy pad air system floats the balls up in the air



Below Left: Themed sinks
Below: Themed bathroom



Above left: Photo booth station
Left: Giant rocking



Themed hands-free hand-washing station



Photos by Robert Spencer



Goat castle portion of petting zoo



All pathways around petting zoo are paved, keeping things neat and tidy



Bird aviary features 200-250 parakeets that move in and out of their apartment complex to feed on/around visitors



Feed sticks are for sale to visitors (\$1 each) – used sticks are disposed of neatly



Photos by Robert Spencer

Animal barns are clean, tidy and animals have names – most pens are open to visitors to go in and pet the animals





Fire pits for rent by visitors/groups



Concert area and seating



Pig racing arena – benches placed on hill slope, with the pigs raced around the track – when races are run, everything else stops



Outer areas to visit – toys, apple cannon range, etc.

Photos by Robert Spencer



Apple cannon range – visitors purchase an ice cream pail of ammunition (windfall apples) for \$/pail. The cannons run off of an air compressor system. The cannons are ~\$7200 each. Apples are placed in the hole, a lever is depressed to load and the tripper is pulled to shoot at the various targets.

Invasives – Emerald Ash Borer

Agrilus planipennis

Crops Affected: Ash species (green, black, white, etc.)

Life Cycle:

- Originated in Asia, being first detected in 2002 around Detroit, Michigan and Windsor, Ontario
 - Has since spread in some areas of Ontario and Quebec, as well as 21 US states.
 - Recently detected in Winnipeg, Manitoba
- Adults emerge in late May-early June, by chewing through the bark of the host tree
 - Emergence holes are D-shaped
- Adults are a narrow, 8.5-14mm long, metallic, blue-green beetle, with a flat head.
- Adults feed on foliage for a short time prior to mating.
- Eggs are laid singly in bark crevices or under bark scales on trunks and branches
- Larvae are creamy white in colour, flat and broad shaped, with multiple segments, with a bit of bell-shape to the end of some segments.
 - The final segment has a pair of pincer-like appendages
 - Larvae develop through several instars, reaching a full size of 26-32mm
- Larvae bore through the bark to feed, forming flat and wide, S-shaped galleries which are filled with fine, brown frass.
 - Galleries can be 9-16cm (up to 20-30cm) long
- Larvae double back on themselves to pupate
- A small percentage of pupae will require a second winter to reach maturity
- Pre-pupae are very cold resistant

Symptoms:

- D-shaped emergence holes are hard to see unless great care is taken in looking for them
- Dying or dead trees, with crown die-back, sloughing bark can be indicative of infestation
- Thinning crowns
- Vertical cracks in the trunks of host trees
- Shoots growing out of the trunk, roots and branches
- Woodpecker activity may indicate presence of the pest



Emerald Ash Borer – adult & larva

Photo by ontario.ca



Invasives – Japanese Beetle

Popillia japonica

Crops Affected: over 250 species including elm, maple, grape vine, peach, apple, apricot, cherry, plum, rose, zinnia, corn, asparagus, soybean, blueberries, raspberries and blackberries, etc.

Life Cycle:

- One full generation per year
- Adult beetles are oval-shaped, 1cm long by 6mm wide, with metallic green body and metallic copper-brown wing covers
- Adults emerge in summer, with an active period of about 2 months
- Adults feed on foliage and fruit
- Adults can fly up to 8km, although most flight is only in response to food or sex stimuli
- Feeding is most active in clear, warm, sunny days, with reduced feeding when it is cool, cloudy, windy or rainy.
- Feeding starts at the tops of plants, progressing downward
- Feeding is on upper surfaces, chewing tissues between leaf veins, leaving a skeleton pattern
- Eggs are laid about 8 cm deep in soil of lawns and grassy areas
- Eggs hatch in 2 weeks and c-shaped, creamy-white larvae feed on grass roots until cold weather arrives
- Larvae spend winter 5-30cm below the soil surface, resuming feeding in the spring until they are fully grown, pupate and emerge in mid-summer

Symptoms:

- Adults may be visible clustered in pairs or groups on the upper areas and surfaces of the plant
- Feeding by adults results in lace-like skeletonized leaf tissues
- Severely injured leaves may turn brown and drop
- Feeding by grubs in grass (in heavy infestations) may cause brown patches

Emerald Ash Borer Resource Factsheets:

[Natural Resources Canada EAB factsheet](#)
[Canadian Food Inspection Agency EAB factsheet](#)

Japanese Beetle Resource Factsheets:

[Canadian Food Inspection Agency Japanese Beetle factsheet](#)

Japanese Beetle – skeletonized leaves + adult beetles

Botrytis

A.K.A. Grey/Gray Mould, Botrytis blight, Botrytis Grey mould, etc.

Causal Organism: *Botrytis cinerea*

Crops Affected:

Very wide host range – asparagus, lettuce, onion, garlic, leeks, cucurbits (pumpkin, squash, cucumber, and melons), beans, potato, tomato, eggplant, pepper, etc.

Disease Cycle:

- Widespread saprophyte of dead or dying plant material
 - Invades wounded and damaged tissues and may invade soft tissues
- Favoured by cool, humid conditions
- Initial infection typically comes from air-borne conidia landing on susceptible tissues in the presence of water
 - Once infection occurs, sporulation occurs rapidly, with a rapid acceleration of growth
 - Spread is more rapid in dead or dying tissues (e.g. senescing or damaged tissues)
- Fungus spreads by breaking down tissues ahead of spread, producing a soft rot
- May spread between plants/produce by mycelium (in storage, etc.)
- Sclerotia may form once tissues are fully colonized and persist in dry soil and become an inoculum source
- Main spread is by conidia

Symptoms:

- May attack wide range of different plant parts, with the disease symptoms related to the death of those tissues
- May attack leaves, stems, floral parts, whole heads, bulbs, fruit, roots, etc.
- Name of disease is often descriptive of the symptoms and plant parts attacked (e.g. onion neck rot)
- Grey coloured mycelium and grey/brown spore-producing bodies are distinctive
 - Spores are produced in vast quantities
 - Water-soaked areas proceed the grey mouldy areas
- Sclerotia are hard and black (may not form as readily as *Sclerotinia*)
- Differentiated from White Mould (*Sclerotinia*) by the colour of mycelium

Management:

- Ensure sites are well-drained and have good air movement
- Ensure adequate but not excessive nitrogen applications (excess will result in lush, soft growth)
- Remove trash and debris
- Control weeds to ensure good ventilation and air circulation
- Ensure all fruit and produce are harvested in a timely manner – over ripe fruit is more susceptible
- Irrigate at a time when plants will dry quickly
- Chemical controls are available for **protection** of the various crops. Timely application is critical for maximum success. See labels for application timing and rates. Adhere to appropriate Pre-Harvest Intervals.

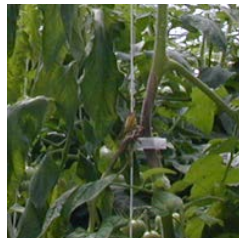


Botrytis infection on strawberry fruit

Photo by Robert Spencer

Botrytis infection on greenhouse tomato stem – resulting in death of the whole top

Photo by Robert Spencer



Ghost Spotting on green tomatoes

- Photo by Mississippi State U



Botrytis – Ghost-spotting, Fruit rots

Causal Organism: *Botrytis cinerea*

Crops Affected: cucurbits (cucumber, squash, etc.), beans, tomato, peppers, strawberry, and raspberry; wide range of crops with other disease symptoms

Disease Cycle:

- Similar cycle for all Botrytis Grey Mould on most crops
- Pathogen produces a large number of asexual spores, particularly under cool, moist conditions
- Sensitive, weak or damaged tissues (young/tender, stressed, mechanically injured, etc.) or senescing tissues are typically most susceptible to infection

Symptoms:

- Infection typically occurs at the flower end – dead or senescing flowers/petals stick to the fruit
 - Fruit may abort
 - Infected fruit is usually attacked by secondary organisms, resulting in rots (wet or dry)
- Bean pods may develop dark green, water-soaked lesions, which turn light brown to grey, with concentric areas
 - Small, black flattened mycelium may develop in pods
- Tomato or pepper fruit may develop a tiny, brown necrotic spot surrounded by a pale halo of tissue
 - Often referred to as “ghost spot”
 - Typically occurs on green fruit, but may also occur on ripe fruit
 - Ghost spots often do not develop beyond the initial symptom but may reduce quality
 - Fruit infected at later stages (e.g. through petals stuck to fruit surface) may develop an irregular, brown lesion where the tissues make contact
 - Fruit may become infected at the stem end, by the calyx, with a water-soaked, soft rot developing
 - Fruit often drops
- Fruit rots generally commence as a water-soaked lesion, that is slowly colonized and masses of grey spores developing
- General post-harvest disease development (called “nesting”) develops as a dirty, white mycelium

Management:

- Ensure that plants are grown in well-drained soils, with adequate nutrition
- Clean up trash piles and bury crop residues, which serve as a source of inoculum
- Ensure good air drainage and avoid high humidity positions
- Control weeds
- Handle harvested produce correctly, removing field heat rapidly and holding at appropriate temperatures