



It seems like the weather (and the season) is on the cusp of changing permanently at the start of each month, but I think that with Halloween over and November looming, we are going to actually make the change from Fall to early Winter. Not a great prospect, but it is what it is. With the arrival of a new month, here is a new edition of Hort Snacks, for your educational reading pleasure.

In this edition, you'll find a number of short articles on a range of topics. There is information on assessing and "scoring" the past season, including a number of comments and insights from people in industry. There are also articles on pruning, mechanical injury of trees, as well as a pest of peppers. You'll see the extension calendar filling up as the winter comes, so there are lots of things you can take in between now and Spring, whether in-person or online.

We hope that things have wrapped up smoothly, if you are a field-based grower, or are at an appropriately smooth stage for you if you are an indoor grower. If you have suggestions, ideas, questions, thoughts, or anything else related to production or marketing of any horticulture crop, feel free to contact us at your leisure. And hopefully we'll cross paths at some point this winter.

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FEATURED WEBSITE

[Alberta Agriculture and Forestry – Horticulture Microsite](#)

- See horticulture content organized by sector, plus past recorded webinars, factsheets, information and more...

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.

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THINGS TO DO / THINGS TO THINK ABOUT THIS MONTH

- Dedicate some time to reviewing this past season
 - What went well?
 - What could have been different?
 - What changes might be implemented next year?
 - Make sure all your records are up to date
 - Gaze into your own crystal ball – what do you anticipate might happen or be an issue next year? – What can you prepare for
- Start thinking about your plant requirements (and probably put your orders in) and your various association memberships
- Take time to overhaul irrigation and spray equipment before putting it away for winter
- Plan to visit or contact a number of fellow producers over the course of the winter (at meetings or courses) to discuss successes and failures. Identify 1 or 2 specific individuals that you think you could learn from.
- Plan to attend at least 1 or more workshops / courses over the winter
 - Register for workshops
- If you haven't applied winter protection to strawberries or fall-planted garlic, it should be done this month before hard freezes arrive and kill off plants
 - Strawberry plants can be damaged and killed by exposure to temperatures below -6°C to -9°C
- Application of Casoron to Saskatoon berries should be done prior to snowfall, after the ground has cooled off
 - Remember to carefully adjust the rate for banding
 - If you are planning on rejuvenation or renovation pruning, do not apply Casoron, or plants will be damaged

MENTAL SNACKTIME – Perspective

"The only thing you sometimes have control over is perspective. You don't have control over your situation. But you have a choice about how you view it." – Chris Pine

"It's not only moving that creates new starting points. Sometimes all it takes is a subtle shift in perspective, an opening of the mind, an intentional pause and reset, or a new route to start to see new options and new possibilities." – Kristin Armstrong

"You must look within for value, but must look beyond for perspective." – Denis Waitley

"Sometimes we may ask God for success, and He gives us physical and mental stamina. We might plead for prosperity, and we receive enlarged perspective and increased patience, or we petition for growth and are blessed with the gift of grace. He may bestow upon us conviction and confidence as we strive to achieve worthy goals." – David A. Bednar

"Distance not only gives nostalgia, but perspective, and maybe objectivity." – Robert Morgan

"The manager has a short-range view; the leader has a long-range perspective." – Warren Bennis

Upcoming Conferences / Workshops

November 2017

- Explore Local Webinar – Navigating Online Food Sales Regulations – Part 1
Nov 1, 2017 – [Register](#)
- Explore Local Webinar – Navigating Online Food Sales Regulations – Part 2
Nov 8, 2017 – [Register](#)
- Saskatchewan Green Trades Conference & Tradeshow
Nov 7-9, 2017 – Saskatoon Inn, Saskatoon, SK
<http://www.saskgreenhouses.com>
- Potato Growers of Alberta Annual General Meeting
Nov 14-16, 2017 – The Sheraton – Red Deer, AB
www.albertapotatoes.ca
- Green Industry Show & Conference
Nov 16-17, 2017 – BMO Centre at Stampede Park, Calgary, AB
Pre-conference Workshops
Nov 15, 2017 – Calgary, AB
www.greenindustryshow.com
- Hort Snacks-to-Go Webinar – Using Biocontrols in Field-scale Fruit & Vegetable Crops
Nov 20, 2017
- Explore Local Webinar – Exploring Food Hubs
Nov 22, 2017 – [Register](#)
- Bridging the GAP: Making CanadaGAP Work on Your Fruit & Vegetable Farm
Nov 29, 2017 – Agriculture Centre – Airdrie, AB
To Register – 1-800-387-6030 or [online](#)

December 2017

- Great Lakes EXPO Farm Market Bus Tour
Dec 4, 2017 – Grand Rapids, Michigan
<http://bustour.greatamericanmediaservices.com/>
- Canadian Food & Drink Summit 2017: Measuring Performance, Taking Stock, Inspiring Action
Dec 5-6, 2017 – Calgary TELUS Convention Centre – Calgary, AB
<http://www.conferenceboard.ca/conf/foodsummit/default.aspx>
- Great Lakes Fruit, Vegetable and Farm Market Expo
Dec 5-7, 2017 – DeVos Place Convention Centre – Grand Rapids, MI
www.glexpo.com
- Bridging the GAP: Making CanadaGAP Work on Your Fruit & Vegetable Farm
Dec 6, 2017 – Agriculture Business Centre – Leduc, AB
To Register – 1-800-387-6030 or [online](#)
- Explore Local Webinar – Selling Online: Carve Out Your Niche, Increase Sales and Gain Loyalty
Dec 6, 2017 – [Register](#)
- Explore Local Webinar – Bringing Your Story to Life
Dec 13, 2017 – [Register](#)
- Hort Snacks To Go Webinar – Soil Fertility & Soil Health
Dec 18, 2017

Upcoming Conferences / Workshops

January 2018

- 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
- Agronomy Update 2018
Jan 9-10, 2018 – Sheraton – Red Deer, AB
Ropin' the Web (www.agriculture.alberta.ca) – Coming Events
- 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
- 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
- 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
- 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

SAVE THE DATE

The **Alberta Farm Fresh School** is tentatively set for February 22-23, 2017 at the Pomeroy Inn & Suites in Olds, AB (on Olds College campus). This conference is offered by Alberta Farm Fresh Producers Association (AFFPA).
Watch www.albertafarmfresh.com for details.

FYI, a day-long Sour Cherry & Haskap Production Workshop for New Growers (as well as some more advanced Haskap sessions later in the day) has been planned before the School on February 21st.

Explore Local is putting on a direct marketing workshop in Leduc featuring Alf and Sandee Krause, on February 21st.



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





Bridging the GAP:

Making CanadaGAP work on your fruit and vegetable farm



Are you a fruit or vegetable grower who needs to up your on-farm food safety (OFFS) game? Want to sell into retail or food service markets but need certification? Unsure of where to start thinking about food safety?

This one day workshop led by Alberta Agriculture and Forestry staff will help you better understand the benefits of an on-farm food safety system, how CanadaGAP works, and walk you through assessing risk on your farm. A producer will share how having CanadaGAP has affected their business and a produce buyer will talk about why they want their suppliers to be CanadaGAP certified.

Registration Information

Dates: **November 29, 2017**
Agriculture Centre, 97 East Lake Ramp NE, Airdrie
Registration Deadline: November 22
or

December 6, 2017
Agriculture Business Centre
6547 Sparrow Drive, Leduc
Registration Deadline: November 29

Time: 9 a.m. – 4 p.m.

Cost: **\$30 + GST per person** (coffee & lunch incl.)

To register call 1-800-387-6030 or online at <https://eservices.alberta.ca/bridging-the-gap-workshop.html>

If GST Exempt, DO NOT register online; please call the registration line.



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

Q&A

Q: How do you evaluate and "score" a season? What determines whether it has been successful or not?

A: A successful year for us means that we met our financial commitments and made an extra 5-10% profit on top of that.

A: If we have to go against bad weather and still succeeded with our crops, I think we were successful. We also score our crops to other growers and if we were better, we were successful

A: I cover strawberries with straw and also prune out the dead raspberry canes. The canes could be done at a different time of year but I have more time in the fall.

A: Total income is the first evaluation and return customers numbers is my second

A: I don't usually participate in these questions because as a municipal operation we aren't really in the traditional production industry. Even though our product isn't sales or quantity of produce, we do have our own ways of determining success or failure. While our municipality has several hundred food bearing plants in our asset inventory, we don't typically track yields as a producer would. Instead we track plant health, aesthetics and incidence of disease and infestation. Our programs are primarily based around these metrics. However, we are in year 4 of our urban agriculture project, so I anticipate that we will need to follow this tread and learn how to quantify our food crops as they begin to fully bear crops.

A: Number of products harvested and amount of them sold.

A: I score it based on the amount of food I have stored for the winter.

A: We analyse EVERYTHING. Not just yield, but cost per acre versus return per acre. We take in all costs not just current years but drainage, land rent, labour. We also look at yields and compare it to seasonal marketings. Can we move production to match seasonal highs in produce marketings? We also try to analyse what went wrong when things did and how to improve for future

A: Financial - total dollar sales. Number of participants at our events and through our u-pick. Increase in sales of different area i.e. - strawberries, vegetables, food, etc. This is tracked by our cash register system. Increase in social media fans - interaction with customers on social media. Number of participants in our CSA, educational programs, school groups, summer youth programs. Number of coupons returned - indicates the success of our promotions program. Staff consistency - stay the season, harmonious, use the staff training materials with customers.

A: A successful season is filled with conversing and interacting with the public. Enough earnings to cover expenses and make a little cash is always nice as well.

A: Good crop health and production and the bottom line, did we make money?

A: I figure out what percentage of what I planted sold.

A: What sort of profit is made, number of jobs and number of workers hired.

A: Of course the bottom line always dictates whether it was a good season. That is barring any unforeseen occurrences such as bad hail, drought too much rain or early frost. A successful season can also be measured by having been able to get accomplish what you had set your mind to.

A: My "scoring" is based on how much money I have made in relation to other seasons.

Next Month's ? → [What are some of your favorite ways of recognizing the contributions of others?](#)

Scoring a growing season - what makes success?

When the furious pace and excitement/stress/extreme busy-ness of the growing season dies down, it is important to do an internal debrief to assess the ups and downs, highs and lows of the past growing season. What worked? What didn't work? What could be done differently? What should stay the same? Essentially, you are evaluating the various aspects of the season, scoring each part.

So, what determines whether a season was successful, versus not successful? For most operations, it probably comes down to whether the business made a profit, or didn't suffer a loss, financially. Certainly, unless you've got a pot of cash somewhere that can offset losses year after year, this would be a critical indicator of success. I'm sure anyone with an economist's mind or training could go into great detail on what constitutes financial success, but realistically, it is important to not just look at the basic revenues versus expenses (i.e. did you bring in more money than you paid out in bills), but look at the more fixed expenses, paying yourself and putting money back into the business.

Other indicators that you could consider might include:

- Did your production match up demand?
- Did you manage to sell all that you produced?
- Did you have any shortfalls in production?
- Did one product sell better than another?
- Was there anything that seemed to shine this year?

Other indicators of success could relate to quality:

- Where you able to bring in quality product without having to go to great lengths to protect it?
- Did you have to do a bunch of culling?
- Did you experience any major pest issues (expected or unexpected)?

If you move beyond the financial and the basics production and supply/demand criteria, there are many subjective indicators that can be used to give positive success points to a season. These might include:

- Did you see more customers come through the gate?
- Were there new customers?
- Were your old customers satisfied and happy?
- Were you able to connect with your customers (and beyond) through social media, one-on-one or in effective ways?
- Did you feel more visible this year, as a result of specific targeted activities?
- Did you introduce a new product, activity or element to your business?

In the end, it really comes down to how you felt about things. If you can answer positively the questions "Do I feel good about continuing this endeavor?" or "Am I still interested in doing all of this again?" or "Is all of this worth it?", then I suppose that the year was a success, since you are willing to do it again. It's kind of simple.

How Pruning Affects Fruiting Plants

Pruning is a necessary part of any fruit operation, as well as nursery businesses. It is an important tool in helping trees and shrubs to develop into properly shaped plants, and to maintain healthy and productive plant growth. When it comes to fruit trees and shrubs, pruning is a critical tool for controlling and directing plant growth and ensuring that there are good yields over the life of the orchard.

Pruning will cause a number of changes in the plant, including physical and physiological effects. These changes can take effect over the entire plant (such as those affecting dwarfing, fruit production and growth habit, etc.) or at localized points on the plant (such as those affecting the growth direction of a branch, etc.). The effect of specific pruning practices will vary depending the age and maturity of a plant. For example, extensive pruning on a large or overgrown orchard will result in a large flush of regrowth, as the plant attempts to re-establish the balance it had between the formerly large top and correspondingly large root system.

Fruiting trees and shrubs are pruned for a number of different reasons, depending on the age and stage of growth of the individual plant and the entire orchard. In general, early pruning of (juvenile) plants will:

- Help new plants to become well-established. By controlling early top growth, pruning allows the plant to establish a sturdy root system, with top and root growth balanced.
- Help to establish correct plant structure by training growth and by controlling the height, size and shape of the plant.
- Improve plant structure and branching habit, creating a framework for maximized productivity that is compatible with mechanical harvesting. Good structure will also help to reduce mechanical injury and damage.

As plants and orchards get older, pruning of fruiting (mature/maturing) plants will:

- Remove sucker growth, which affects row width, air flow within the canopy, etc. In general terms, pruning keeps the canopy open, which will improve plant health. Pruning suckers will also keep the row at a desired density, which will allow mechanical harvesters to function effectively and efficiently.
- Help to maintain plant health and vigorous, steady growth by keeping most of the plant growth young and healthy and by removing weak, diseased or damaged tissues.
- Encourage the plant to establish new growth regularly, improving plant health and overall vigour. This will ensure that there is a good amount of young, fruiting wood. Pruning will delay plant maturity (in terms of declining productivity), keeping plants young and extending overall orchard longevity. Older plants can/will be rejuvenated and proper structure and growth habits can be re-established.
- Help to keep plants producing a stable and predictable high yield of fruit each year, rather than having a boom and bust biennial bearing cycle.
- Remove diseased, dying or dead plant material which will improve health and prolong the lifespan of plants. It can also prevent or limit the spread of problems within an orchard, provided proper practices are followed.

When properly applied, pruning can have a significant impact on the healthy and productivity of individual plants and orchards.

INSECT OF THE MONTH

Pepper Weevil

Anthonomus eugenii

Crops Affected: All Solanaceous crops – all types of peppers (primary host), eggplants, potatoes, tomatoes, and nightshade weed species

Life Cycle:

- Generally recognized as a common pest in warmer regions, it can migrate into northern areas or survive in milder areas/winters and in protected environments
 - It is thought that pepper weevils will not survive in most winters, except in protected areas (such as greenhouses)
- In the prairies, it represents a pest of concern for greenhouse pepper crops
- Adults are small weevils, with 1/8 inch (3-4mm) long, dark bodies with a brassy luster
 - Adults lay eggs in holes that they make in pepper buds or in the base of pepper pods
- Larvae are whitish grubs with brown heads, which reach approximately ¼ inch (6-12mm) when mature
 - Larvae feed and develop within the pods on the seed cores or the tissue of the pod wall
 - Larvae go through 3 instars, lasting about 2-3 weeks, at which time larvae pupate within the pod for 3-6 days
- New adults chew an exit hole and emerge when mature
- Multiple generations are possible in a year, depending on the location
- Holes in the fruit represent a potential entry point for plant and human pathogens, representing a food safety risk

Symptoms:

- Egg-laying scars may be visible as dimples on the pepper fruit
- Exit holes may also be observed where mature adults have emerged
- Calyxes may turn yellow
- Fruit and flowers may wither and drop
 - Small fruit drop is common, as adults and larvae bore into younger fruit to feed on developing seeds
 - Larger fruit do not tend to abort, but remain attached and may be infested with larvae
- Larvae may be found within fallen fruit

Monitoring:

- Adults can be monitored for using pheromone traps and/or sticky traps, placed in or next to pepper crops (field or greenhouse)
- Opening up fallen fruit to find larvae will give an indication of presence of the pest, but is not useful in early detection and management

Management:

- Ensure that transplants are clean and free from the pest, prior to planting
- Remove alternate hosts (e.g. nightshade weeds) from field plantings
- Remove and dispose of culled, dropped and fallen fruit quickly
 - Do not leave debris, culls or other potential host material in or around fields/greenhouses
 - Debris should be covered during transport (to reduce escape) and should be buried at least 12 inches (30cm) deep to prevent emergence of adults
- Remove and destroy fruit and plants immediately at the completion of harvest, shredding plant material
 - In fields, disc under all plant residue
 - In greenhouses, after all plant material has been removed, maintain greenhouse temperatures above 27°C for 7-10 days
- In fields, rotate to non-Solanaceous host crops
- Parasitization of eggs by biological parasitoids can be effective in reducing the population and minimizing impact of the pest
- The application of registered pesticides to control weevil adults may reduce infestation and impact of the pest



Pepper weevil adult

Photo by: Alton N. Sparks, Jr., University of Georgia, Buqwood.org

DISEASE OF THE MONTH

Mechanical Injury in trees

Causal Organism:

- May be caused by many different things
 - Humans (deliberate / accidental)
 - Animals – either through brushing against them, climbing them, feeding on them
 - Equipment
 - Severe weather – hail, wind, heavy rains, lightning, etc.

Crops Affected: Any crop can be affected – the impact will vary depending on the stage of growth, the extent of the damage, etc.

Symptoms/Damage:

- Represents some degree of physical injury
 - May be dramatic, like breakage or a sharp fracture, severed leader, shredded bark
 - May be subtle, like bruising, scrapes, lacerations, etc.
 - Damage may include foliar injury
 - May range from slight leaf holing to tearing and shredding of leaves to partial to complete defoliation of leaves and stems
- The plant will often focus on recovery of lost tissues, which results in the diversion of resources away from storage areas (such as fruits, storage roots, etc.)
- As a result of the loss of the foliage/foliar area, the plants have reduced photosynthetic capacity and reduced sugar (metabolite) production and increased sunburn to exposed fruit
- Regrowth efforts by the tree may result in weakened growth, deformities or poor shape, as well as potentially delayed dormancy (and subsequent winter injury)
- Some desiccation may occur, as damaged tissues lose moisture

Conditions Favouring Disease Development:

- Extreme weather conditions
- Exposed trees
- Weak growth or poor structure
- No protection from wildlife
- Careless operation of equipment
- Poorly trained staff or customers

Management:

- Ensure that trees are healthy and have sufficient moisture, nutrients, shelter/protection from elements
- Remove broken or damaged plant material as soon as possible
- Manage new growth/regrowth as best as possible
- Monitor trees for disease/pest issues in following seasons (e.g. increased incidence of fireblight following hail/heavy rains in fruiting species)



Broken branch on a fruiting shrub

Photo by Robert Spencer