



Late winter is always a bit of a tough grind for most in the horticulture industry, as it is the peak of the winter extension season, as well as the time when people try to get away for a break, get all their indoor pre-season preparations (ordering, planning, etc.) completed. For those in the ornamental greenhouse industry, greenhouses start to get fired up and seeds and plants start to go into the ground (as it were). With that in mind, here is another edition of Hort Snacks.

In this edition, you'll see that there are still many options for you to choose from to get that last bit of formal learning in before spring. There are workshops and conferences galore, which you will hopefully consider taking in. You'll also find an article on the fun and creativity that you can use to educate the public, whether kids, adults or a combination of both (we're referring to the fact that they come in groups, not suggesting immaturity...). This responsibility to educate has been heightened over the years and represents a market opportunity for those in the direct market industry, as well as a promotional tool for others.

As usual, there are pests to learn more about, as always. It is always worthwhile knowing about potential threats.

There are also several tidbits scattered in a couple of spots to remind you of various things, such as the annual Elm pruning ban, daylight savings change, and the direct market fruit and vegetable price survey, which will be launched mid-March.

If at any time you wish to contribute content, ideas, thoughts, feedback or share what is going on in your world, please feel free to do so. Have a great pre-spring.

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

FEATURED WEBSITE

U of Saskatchewan Horticulture Program Pages
 Vegetables - <http://veg.usask.ca/>
 Domestic Fruit - <http://fruit.usask.ca/>

Articles on new releases, research results and more!

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THINGS TO DO / THINGS TO THINK ABOUT THIS MONTH

Strawberries

- Monitor crown health – plan course of action if damage is evident
- Plan plant pickup, field planting layout, planting labour, etc.

Raspberries

- Thinning of floricanes raspberries / removal of spent floricanes
- Mowing to ground and removal of last year's growth from primocane raspberries
- Remember – using Reemay row covers will increase earliness and yield of primocane raspberries
- Make first application of nitrogen at month's end (snow melt); 2nd application in Mid-May
 - Floricanes → 20-40 lbs actual N/acre for each application (total 40-80lbs N/acre yearly)
 - Primocanes → 35-60 lbs actual N/acre for each application (70-120 lbs N/acre yearly)
 - Adjust rate if banding

Saskatoon Berries

- Pruning / Thinning
 - dead, diseased, low-spreading branches before bud break
 - branches bigger greater than or equal to "Loonie" sized
- If regenerating or renovating entire orchard → Mow entire orchard
- In planning new fields which will eventually be mechanically harvested consider:
 - Lay of land, slope, flat
 - Rows in line with prevailing winds, shelterbelts
 - Don't mix varieties
 - Keep saskatoons and chokecherries separated
 - Row spacing for machine harvesting should be 5-6 m (16-20 feet)
 - Ensure sufficient headland area for turning harvesters around
 - Choice of varieties → choose varieties that ripen uniformly
 - Ease of irrigation set up, proximity to water, delivery
 - Grassing requirements

Vegetables

- Some vegetable transplants may be started this month, but only those that require 6 or more weeks to grow

Marketing – Generalities

- Take a look at all of your existing product market "outlets" for each crop
 - Determine if they are adequate
 - Make adjustments (if necessary)
 - Do this for projected markets as well (it never hurts to be prepared)
- Do a review of your pricing
 - Is it adequate?
 - Has anything changed to might allow price adjustments?

General

- If / when soil conditions permit it, carry out soil sampling (if not done in fall). Calcium, magnesium, sulphur, sodium are important components, in addition to main macronutrients (N, P, K)
- Do a last minute check up on all equipment that you are going to use this spring (if you haven't done this already)
- Depending on what sort of spring you are having, some field preparation activities may be possible
- Final planning of planting / packing layout
- Prepare rough summer schedule for planting, spraying, irrigation, etc.
- Go and visit another grower

Pest Monitoring / Management

- Brush up on disease and insect pest identification
- Saskatoon berries
 - If plants progress rapidly, 1st Decis application may be required at month's end (green tip to bud elongation)

NOTE: Daylight Saving Time starts the 2nd Sunday in March so ... SPRING FORWARD

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.

Upcoming Conferences / Workshops

March 2016

- **Potato Health Management for Fresh Potatoes**
Mar 1, 2, 3, 2016 – Coast Lethbridge / Lacombe Memorial Centre / Executive Royal Hotel (Leduc)
To register – 1-800-387-6030 – See [Coming Events](#)
- **Marketing on a Shoestring Budget Webinar**
Mar 8, 2016
- **94th Canadian Horticultural Council (CHC) Annual Meeting – “Growing a Better Tomorrow”**
Mar 8-10, 2016 – The Westin Ottawa – Ottawa, ON
www.hortcouncil.ca/
- **Getting Into Farmers Markets**
Mar 9, 2016 – Medicine Hat, AB
To register – 1-800-387-6030 – See [Coming Events](#)
- **2016 Manitoba Direct Farm Marketing Conference**
Mar 11-12, 2016 – Portage-la-Prairie, MB
www.directfarmmarketing.com
- **Canada Blooms 2016**
Mar 11-20, 2016 – Direct Energy Centre – Toronto, ON
www.canadablooms.com
- **Hort Snacks to Go Webinar – Encouraging Beneficial Insects**
Mar 21, 2016
- **Hort Snacks in the Weeds: Invasive Species ID Workshop**
Mar 22, 2016 – Crop Diversification Centre North – Edmonton, AB
To register – 1-800-387-6030 – See [Coming Events](#)
- **What’s Eating You?: Taking Biocontrols & IPM to the Next Level**
Mar 23, 2016 – Thiel’s Greenhouse – Bruderheim, AB
To register – 1-800-387-6030 – See [Coming Events](#)
- **Hort Snacks at Night – Greenhouse Energy & Waste Management**
Mar 29 (Grande Prairie) / Mar 30 (Bruderheim) / Mar 31 (Redcliff)
To register – 1-800-387-6030 – See [Coming Events](#)

April 2016

- **Canadian Produce Marketing Association (CPMA) Conference & Trade Show**
April 12-14, 2016 – BMO Centre – Calgary, AB
<http://convention.cpma.ca/>

May 2016

No events listed at this time

MENTAL SNACKTIME – Initiative

“Hold up a mirror and ask yourself what you are capable of doing, and what you really care about. Then take the initiative - don't wait for someone else to ask you to act.”
– Sylvia Earle

“Success depends in a very large measure upon individual initiative and exertion, and cannot be achieved except by a dint of hard work.” – Anna Pavlova

“Time is neutral and does not change things. With courage and initiative, leaders change things.” – Jesse Jackson

“Employers and business leaders need people who can think for themselves - who can take initiative and be the solution to problems.” – Stephen Covey

“The important thing is to concentrate upon what you can do - by yourself, upon your own initiative.” – Harry Browne

In the News / Articles Worth Reviewing

- [6 Tips for Getting the Most out of Your Greenhouse Poly](#)
– GGS Structures article
- [New study measures direct impact of bees on crop yields](#)
– HortiDaily article
- [Short Duration Cover Crops for Vegetable Production Systems](#) – Iowa State U factsheet
- [How To Hire The Right People For Spring \(Solve My Problem\)](#) – Greenhouse Grower article
- [Six everyday fruits and vegetables before and after humans changed them](#) – news24.com article
- [Tips To Help Reduce Wind And Snow Damage At Your Greenhouse](#) – Greenhouse Grower article
- [Why America Needs Plant Evangelists](#) – Greenhouse Grower article

Google Groups – HORT SNACKS FORUM

Google has all sorts of different features and tools. One that I ran across a couple of years ago is [Google Groups](#). You can essentially create and join common interest groups or discussion forums and share information and ideas back and forth. You can alter the settings to get forum updates all the time, daily, weekly or whatever.

A couple of years ago, we created a **HortSnacks Forum**, tied to this newsletter. Anyone can submit posts (questions, comments, etc.) via Google or via email. To submit a question (or post), either log into the group using a Google account or simply send an email to hortsnaacks-forum@googlegroups.com and it'll send it to all members. You can reply from email or from Google.

To subscribe to the group, send an email from your email account to subscribe+hortsnaacks-forum@googlegroups.com

Try it out today!



HortSnacks-to-Go: 2015/2016 Webinar Series



To register call Dustin Morton at
403-742-7571 or email at
dustin.morton@gov.ab.ca

September 28 (3 PM MST) –

Dustin Morton, Alberta Agriculture and Forestry
Dustin will be discussing the results of an Alberta Agriculture and Forestry project looking at greenhouse energy and material efficiency and how best to manage these in your greenhouse operation.

October 19 (3 PM MST) –

Dr. Chieri Kubota and Mark Kroggel, University of Arizona

Long popular in Japan and Europe, hydroponic strawberry production has largely been ignored in North America. Chieri and Mark are looking to change this with their research and will discuss some of what they've discovered along the way.

November 16 (3 PM MST) –

Grace Fedak, Serviceberry Farms

Grace Fedak has been growing some of the best strawberries in Alberta for over 20 years on her heavily treed Strathmore area farm. As her shelterbelts have aged, Grace has begun to switch them to eco-buffers and will talk about her successes and failures along the way.

December 14 (3 PM MST) –

Dr. Jim Faust, Clemson University

Jim is an associate professor of Floriculture at Clemson University and an expert in the area of diagnostics. Over the hour webinar, he'll be running an interactive "Name that problem" with some bedding plant and greenhouse issues he has seen over his career.

January 18 (3 PM MST) –

Christie Pollack, Christie's Gardens and Greenhouses

As owner of Christie's Gardens and Greenhouse in High Prairie, Christie Pollack is passionate about customer service. She'll discuss how to engage even your most problematic clients without alienating and provoking them.

February 22 (3 PM MST) –

Dr. Laura Van Eerd, University of Guelph

Laura is an associate professor at the University of Guelph in the area of soil fertility and cover crops. A proponent of on-farm trialing, she will tell you what you need to set up your own on farm trialing so you get the biggest bang for your buck from new products and techniques.

March 21 (3 PM MST) –

Dr. Ken Fry

Ken is a world renowned entomologist and is passionate about the role of beneficial insects in cropping systems. He'll be talking about how to encourage these natural enemies in your horticultural crops to improve your crop health and ultimately your bottom line.

HortSnacks in the Weeds: Invasive Species Identification Workshop



Can you tell knotweed from purple loosestrife? Himalayan balsam from Ox-eye daisy? If not, this workshop is for you! These invasive species and their cronies will be featured in this interactive workshop with Alberta Agriculture and Forestry specialists. We'll cover the basics of plant identification, with lots of hands-on time with the species in question. Alberta Invasive Species Council Executive Director Barry Gibbs will also be on-hand to discuss the council and their newly formed "spotter" network.

March 22

Crop Diversification Centre
North, Edmonton, AB

Registration: 8:30 a.m. - 9 a.m.

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

Cost = \$25/person (includes resource materials). Lunch is provided.

To register, please call 1.800.387.6030

For more information contact Dustin Morton at 403-740-6539 dustin.morton@gov.ab.ca

Registration deadline: March 17, 2016

What's Eating You?

Taking Biocontrols and Integrated Pest Management to the Next Level



March 23, 2016

Thiel's Greenhouse, 4916-45 Street, Bruderheim, AB

Thrips got you seeing red? Aphids sucking the life out of you? Suzanne Wainwright-Evans of Buglady Consulting will be leading this hands-on workshop looking at the latest advances in biocontrols, their application, and maximizing their return. With over a decade in the business, Suzanne has been at the forefront of this growing industry and is sure to have something for everybody in this interactive one-day workshop.

Registration is Free! Call 1-800-387-6030 to register

or call Dustin Morton at 780-679-1314 for more information



Human Resources **Price: FREE**

Kristen Cumming of Cantos Performance Management is passionate about agriculture and small business human resources in Alberta. She'll be looking at current trends in goal setting, providing feedback and generating engagement in your business.

- **January 12, 2016 – Chinook Honey, Okotoks, AB Start Time: 7 p.m.**
- **January 20, 2016 – Green Island Garden Centre, Fairview, AB Start Time: 7 p.m.**
- **January 27, 2016 – Arber Greenhouses, Wetaskiwin, AB Start Time: 7 p.m.**

Greenhouse Energy and Material Efficiency **Price: FREE**

Toso Bozic, Bioenergy/Agroforestry Specialist with Alberta Agriculture and Forestry, will discuss this recent project looking at ways to make Alberta's greenhouse industry more efficient and what you can implement in your own operation.

- **March 29, 2016 – Grande Prairie Provincial Building, Grande Prairie, AB Start Time: 7 p.m.**
- **March 30, 2016 – Thiel's Greenhouse, Bruderheim, AB Start Time: 7 p.m.**
- **March 31, 2016 – Red Hat Co-op, Redcliff, AB Start Time: 3:30 p.m.**

Registration: RSVP to 1-800-387-6030

Fun ideas for Agri-education

As more and more of our population and society becomes further and further removed from their traditional farm roots, many farm direct operators have expanded their activities to include an educational component. It allows them to bring customers, potential and future customers and others to the farm to regain lost knowledge. At the same time, visitors gain perspective on the value of the farm and the products it produces, as well as the work that goes into producing it.

For some, this means participating in a one-day event like “Open Farm Days”, where the public can come and visit a farm to learn about what they do. For others, it includes a wide slate of activities, school or group tours, all of which provide a solid introduction to life on the farm and information about what goes on in specific aspects of the farm operation.

Activities that are fun can help cement the principles that are being taught. Over the past several years, I've come across a number of nifty examples of what I'll call “Agri-education”. Here are some of things that might be fun for you to try in your operation, as you work to reconnect the people with the farm.

Corn Mazes

Corn (and other) mazes are pretty variable, in terms of size and scope, but regardless, you can do a lot of educating in them, through the types of activities that you carry out and the focus of those activities. In one great example that I saw, Hopcott Farms used a CSI (crime scene investigation) theme to teach about things that go on in the farm. Participants learn about farm life (e.g. animals, etc.) while finding fact-based stations throughout the maze. They had different degrees of difficulty for different levels of participants. They also included lots of little signs scattered here and there in their mazes and in their “corn-ference rooms”, to educate people on the corn and the farm.



Corn Maze at Hopcott Farms Meadows

Other examples that I've seen included factoid stations within the maze, as well as stations with clues that help you connect the facts with the questions that are asked.

Bees

There is a great deal of interest in bees, more so now than ever. Providing a way to demonstrate their role and function on the farm can be lots of fun, if done carefully (people are also more scared of bee-related issues than ever before).

At Andy T's Farm Market in Michigan, they had a thing called “The Bee Barn”, which had a small demonstration hive, along with a board with facts and information about the bees. The hive was contained, which reduces the risk factor somewhat.



At Hopcott Farms in BC, they had a Bee Observatory, which was essentially a small open hut-like structure, which was screened and let people observe bees at work. Information was provided at the same time.



Photos by Robert Spencer

Two examples of bee education stations

Dairy Discovery provides information about a dairy operation



Dairy Discovery

A large dairy in Michigan was struggling with connecting with their neighbours and the decreasing awareness of what life on a dairy is all about (with the associated stench, noise, environmental challenges, etc.). As a result, they implemented an educational/outreach program called Dairy Discovery. It has been immensely successful.

Colourful lifecycle of a pumpkin



Where does "this crop" come from? / What is this crop all about?

Teaching visitors about how a crop grows or how an animal lives and acts is a big part of the reconnection to the farm. Throughout the season, depending on the crop, you can have different stations, different games and activities, and teach visitors all sorts of things.

Andy T's Farm Market (Michigan) and The Jungle Farm (and lots of others) do some good stuff to teach their visitors about the food that they grow. Andy T's had a nice sign outlining the life cycle of a pumpkin. The Jungle Farm and many others take their groups through the farm on wagons.



The Calgary Corn Maze (Calgary) has some nice animal fact signage to accompany their menagerie of animals on the farm. People see the animals and connect with the information. Petting zoos of all shapes and sizes have similar purposes.

Facts about Donkeys with Donkeys at the Calgary Corn Maze



Harvest Fun

Harvest is a big part of any operation and this is often when people are more likely to be on the farm. Themed festivals or events can help promote the sale of a particular item and that product becomes the focus of education for a time. Pumpkin-themed events are big in October, whereas things like apples, strawberries or other things can be focused on at other times.

Produce harvest activity at Hopcott Farms

At Klackle Orchards, in Michigan, they had a number of "stations" or "venues" where entrants to Klackleville can play in themed villages, learn about apple harvesting or apple washing and packaging.



Apple education activities at Klackle Orchards



Photos by Robert Spencer

Grain corn "sandbox" at Heidi's in Michigan



Tactile (touch) or Experiential activities

There is an expression "Seeing is believing", but there are lots of people out there that have to touch or experience something to really "know". Particularly with children, sensory-based activities can really cement home a principle and create a connection with something. In some cases, this can be as simple as a grain corn "sandbox" for the little kids to play in, which I saw at Heidi's in Michigan. But that could also include the Barnyard Chalkboard at Klackle Orchards or the Dress a Scarecrow / Colour a Pig at Hopcott Farms Meadow Mazes.

Barnyard Chalkboard



Dress a Scarecrow / Paint a Pig

Climbing, exploring or just playing on stuff can also be educational. You'll find farm-themed bale tractors, wooden play areas and all sorts of other activities on many farms.

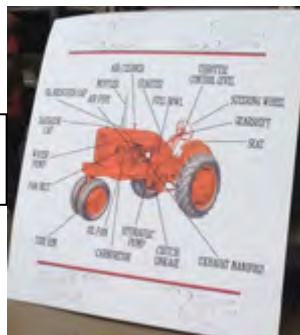


Wooden play structures on the farm

Learning about the farm

During a recent visit to Klackle Orchards, I saw a really neat idea for teaching people about common farm stuff (in this case, a tractor) through a game. Kids love to discover (I think most kids are diggers, a.k.a. archeologists, at heart), so I thought the Tractor Dig was a fantastic thing to try out.

Tractor Dig activity teaches about farm equipment



Stories

At Krause Farms in BC, they had a number of different things to teach kids through stories. However, in this case, they had the stories mounted along fences. The stories connected to a physical item that was nearby (e.g. a flower garden or a wooden pioneer wagon). As kids moved along the story fence, they could learn a few things about the farm.

Story Wagon at Krause Berry Farm in BC



Just fun activities with a farm feel

Not every activity that you do has to be realistic, firmly planted in fact or information or accomplish some great purpose. Sometimes, it is great to just have things that are fun to do, so that visitors enjoy and remember the experience and want to come back to experience it again and again.

Photos by Robert Spencer

During my visit to Klackle Orchards in Michigan, they had lots of examples of these. Their rubber chicken toss was cheap and easy to put together, portal and amusing. Same story with their Horse Hoops (hoola hoop toss on horse-shaped frames), their Big Cornholer (soft animals tossed into a flat board – essentially a beanbag toss).



Chicken toss activity at Klackle Orchards



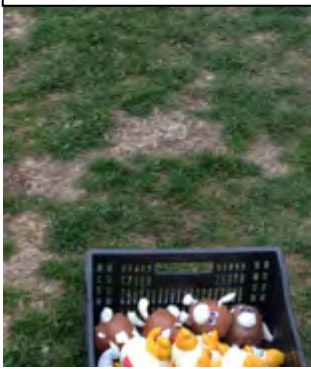
Barrel horse activity



Cornholer game with soft animals



Hoola hoop horse roping



Idea Resources

There are literally hundreds (if not 1000s) of great educational ideas floating around out there to use in reaching your customers of all ages. There are a decent number of resources also. Try attending the North American Farm Direct Marketing Association convention or take in the North American Strawberry Growers Association Tour or the Great Lakes Farm Market Bus Tour.

If you really want to connect your programming or offerings to a school curriculum, there are some decent resources also. You could talk to a teacher to help you develop specific things for their classes, ensuring that you have people to come on your school tours for years to come.

Here is a resource produced by Alberta Agriculture a few years ago to help start School Gardens. The beauty of it is that it has lots of garden-based activities that are specifically tied to Alberta grade-specific curriculum.

Photos by Robert Spencer

[A Guide to Growing School Gardens in Alberta](#)

Q: What is one product that you sell that is going to change in price (up or down) this year? Why?

A: New Potatoes. Price going up by 10 % Why? They are a lot of work and space for the present return.

A: Any bedding plants with "orange" flowers. To cover the added costs of the "orange" advantage we now have in Alberta.

A: Strawberries will be going up in price. I already have too much demand for them, and with bill 6 restrictions I will be unable to increase supply to meet demand so the price will go up.

Next Month's ? → [How do you prepare your fields for planting?](#)

Alberta's Elm Pruning Ban Starts April 1st

To help keep Alberta Dutch elm disease (DED) free, there is a provincial elm pruning ban in place between April 1st and September 30th. It is important to properly dispose of all pruned elm wood by burning, burying or chipping by March 31st. It is illegal to prune elm trees during the pruning ban and to store elm firewood.

Elm bark beetles, responsible for spreading the deadly DED fungus, feed on healthy elms and breed in dead and dying elm trees. If elm trees are pruned during the pruning ban period, these beetles, which are active at this time, can be attracted to the scent of the fresh wound and possibly infect your otherwise healthy elm with DED. Once an elm tree is infected with DED it will die within that year.

Having your tree pruned properly is important. Many trees are killed or ruined annually from improper pruning. Pruning like any other skill requires knowledge and should be done by an International Society of Arboriculture (ISA) Certified Arborist who can determine what type of pruning is necessary to maintain or improve the health, appearance and safety of your trees.

Topping or removing an excessive amount of live wood is not recommended on any variety of trees and will weaken the tree's structure. For more information on pruning, ISA Certified Arborists, and DED visit either <http://www.isaprairie.com/> or www.stopped.org

Berry & Vegetable Price Survey – Head's up!

Having price information is valuable for people of all experience levels, to use as a reference against your own pricing and to compare against when calculating your cost of production and setting your prices.

Each year, I put a call out to producers, asking them to share what they were charging for their fruit and vegetable crops the past season (both u-pick and pre-pick for FM), as well as any price changes that they anticipate for the coming season. From that, I assemble average prices (as well as the range) to share with the industry. It is coming up on that time of year again, as experience has shown that earlier is better for everyone involved.

For those readers that get this newsletter electronically, I will send out the formal request in a separate, direct email. I hope to publish the summary in the April 2016 edition of Hort Snacks (May at the latest). For those that get this by hard copy, please feel free to send in your information by mail, fax or give me a call.

The following is an outline of the type of information I need.

Crop	Upick price	Pre-pick price	Farmers Market Price	Unit of measure for each market (e.g. per pound; per head/bunch)
Examples of Crops wanted	Strawberries, raspberries, Saskatoon berries, black currant, sour cherries, Haskap, chokecherries, other fruit - Beets, carrots, radishes, rutabagas/turnips, corn, cabbage, broccoli, cauliflower, Brussels sprouts, kohlrabi, kale, spinach, lettuce (head and/or leaf), cucumbers (pickling, slicing), potatoes (baby, regular), rhubarb, peas, snap peas, snow peas, beans, tomatoes, onions, garlic, Swiss chard, winter squash, zucchini, pumpkins, etc.			

Pea Leaf Weevil

Sitona lineatus

Crops Affected:

Succulent peas, field legumes (field peas, dry beans, fababeans)

Life Cycle:

- Adults overwinter in alfalfa or perennial crops
- Adults move into annual crops by flying (if temperatures are above 17°C) or by walking short distances
- Adults emerge in spring and females lay many eggs (1000+) near or sometimes on developing plants in May to June
- Adults feed leaf margins and seedling growing points
- Larvae move into the soil to feed on the nodules
- Larvae undergo 5 instars and then pupate in the soil
- New adults may emerge in summer and feed on any pulse crops that they can find before overwintering
- Typically there is only one generation per year

Symptoms:

- Adult feeding on leaf margins results in characteristic notched or scalloped appearance
- Larval feeding on root nodules would not be visible unless plants are pulled up
- Heavy infestations may result in severe defoliation and ragging of leaves
- Damage may have more impact on younger seedlings
- Plants that rely on nitrogen fixed within root nodules may be weakened

Monitoring:

- Adults are slender, greyish-brown weevil (beetle), 5mm long, with 3 light-coloured stripes running down the length of the body. They have a short, blunt snout
- Larvae are "c" shaped, 3.5-5mm long, light white coloured, legless and have a dark brown head
- Economic thresholds are set for field peas (1+ feeding mark per 3 clam-leaf pairs)
 - Damage thresholds for succulent peas are not established
- Forecast and survey maps are available

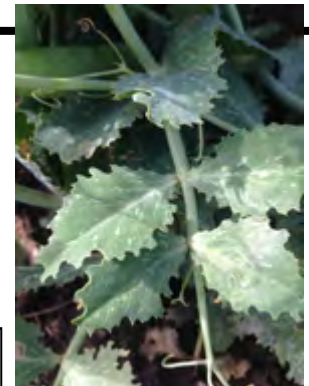
Management:

- Cruiser 5FS is a registered **seed** treatment for control of PLW – use as directed
- Encourage rapid germination and seedling growth and ensure plants have sufficient nutrients and moisture for rapid, healthy growth
- Isolate plantings from fields of other hosts (such as alfalfa and clover)

Other articles

[2016 Pea Leaf Weevil Forecast](#)

[Pea Leaf Weevil – AAF factsheet](#)



Leaf notching by Pea Leaf Weevil adults on succulent peas

Photos by Dustin Morton

DISEASE-OF-THE-MONTH

Entomosporium Leaf & Berry Spot

Causal Organism: *Entomosporium mespili*

Crops Affected: Saskatoon berries

Disease Cycle:

- High humidity / precipitation and warm temperatures
- Spore dispersal is triggered by precipitation
- Flourishes from early-May through mid-July
- Optimal temperatures for development are 20-26°C
- Affects leaves of succulent new shoots and berries (immature to mature)
- May overwinter on fallen leaves & twigs (not proven conclusively)
- May also be present on twigs and branches

Symptoms:

- Most serious disease of Saskatoon berry
- Infected fruit is downgraded or becomes unmarketable
- Infection of greater than 6% of fruit surface area is considered unusable by processors

Leaf Symptoms

- Small, angular brown spots
- Spots may grow & join together, with a yellow halo
- Leaves may turn yellow & may fall off if petioles are infected
- Severe defoliation can reduce productivity

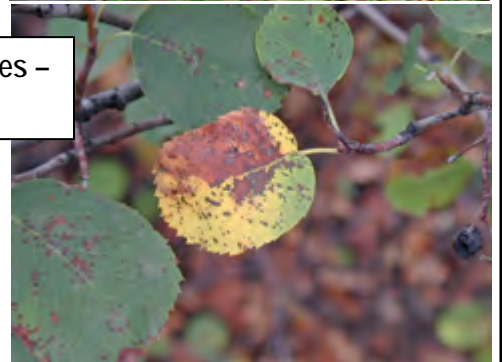
Fruit Symptoms

- Watery, greyish lesions
- Fruit may become discoloured, disfigured, shrivelled or cracked
- Fruit stalks may become infected

Management:

- Ensure adequate air circulation
 - Pruning
 - Orchard orientation
 - Careful consideration of plant stand density
 - Control weeds
- Apply water to the soil surface (not sprinkler applications)
- Apply preventative fungicide sprays
- Fungicide Spray Timing
 - Flowering stages = White Tip, Petal Drop, Green Fruit (varies with product)
 - Make 1st application after first rain event that occurs 1+ days after flowering (when petals open up)
 - Connected to spore dispersal
- Fungicide Selection
 - Chemistry/efficacy of products varies somewhat
- Remember the Pre-Harvest Interval (PHI) as this sets limits on application timing

Entomosporium lesions – varying degrees – mild (top) to severe (bottom)



Severe Entomosporium infection resulting in cracking and desiccation of fruit

