



## *Grain, Grass & Growth*

### *March 2019*

*[www.chinookappliedresearch.ca](http://www.chinookappliedresearch.ca)*

## **Consider farm security to keep crime in check**

By Robert Arnason, The Western Producer

Farmers and rural residents, at least in Saskatchewan, are sick of crime and criminals.

Break-ins, vandalism and personal protection dominated the conversation at this year's annual meeting of the Saskatchewan Association of Rural Municipalities, as councillors and reeves debated more than 10 resolutions on the topic.

Chris Sobchuk, ag division manager for Allen Leigh Security and Communications in Brandon, has heard many shocking stories of break-ins and theft from farmyards during more than 20 years in the business. But it seems like criminals have become more determined or desperate in recent years. "They see the value of that stuff inside the cab of the tractor, that GPS guidance system... and they want to get in," he said. "(With) the drugs and guys dependent on it, they're doing whatever they can to support that habit."

Consequently, Sobchuk and other firms in the trade are getting more inquiries about farm security systems. Property owners should consider a number of security options, depending on type and size of farm:

Newer homes have thick insulation and high quality windows, which is great in January but makes it difficult to hear vehicles and people entering the property.

Sobchuk said there are a number of driveway alert systems on the market, including motion detectors and infrared beams.

"You could almost call it a laser beam that goes across (the driveway).

Another option is a magnetic probe that operates like a metal detector, reducing the risk of false alarms from wildlife.

"All of these (detectors) will basically send a message back to the home receiver and (set) a chime off."

The driveway alert can also be linked to lights and sirens. A vehicle entering the property would trigger the system,

sending a warning message to the intruder.

Similar alert systems can also be installed for shop doors and grain bins.

In a city, it's usually easy for a homeowner to peek outside a window and see what's going on in the yard. On an acreage or large farmyard it's more difficult to see everything, but high-resolution video cameras can solve that problem.

Cameras can be linked to a smartphone, tablet or computer. Knowing who or what is in the yard can help prevent a nasty altercation.

"If they hear something, they can turn on the camera, versus going out themselves to investigate, because they don't know what they're up against," Sobchuk said.

If a camera detects a trespasser, farmers and rural residents may need a protocol to alert neighbours.

RCMP corporal Mel Zurevinsky, who spoke at the SARM meeting, said rural crime watch programs improve communication and co-ordination between rural residents.

"Belong to a rural crime watch or a... calling list with your neighbours," Sobchuk said. "If something does go crazy, then you're able to phone them and they're able to phone (others)."

All terrain vehicles have always been popular targets for thieves. They're small, mobile and often have a high price tag.

Many owners chain ATVs, snowmobiles and motorcycles, but another option is a GPS tracking device. The small and fairly inexpensive systems can help police find stolen vehicles.

Last year, such a system was used to recover a Kubota tractor, taken from the headquarters of a utility service company in Ontario. When thieves moved the machine off the property, the GPS tracker sent an email alert to the business owner. He called the police and provided the coordinates of the tractor. The machine was returned an hour after the phone call.

## Determining a reasonable crop land rental rate

From the February 25, 2019 issue of Agri-News

With spring approaching, many landlords and tenants are reviewing their crop land rental arrangements to see whether they are fair and reasonable. Dean Dyck, farm business management specialist with Alberta Agriculture and Forestry (AF), looks at determining an equitable rate.

"Often, people use what others are charging or paying in the local area," says Dyck. "Following this approach has pitfalls because the rate may not be reflective of the soil productivity on the farm, or there may be a difference between what was rumoured and what was actually paid."

Ultimately, land rental agreements are pivotal to a producer's success, particularly as changes in prices and yields from year-to-year affect profit and the renter's ability to pay.

In Alberta, cash rent and crop share are the two predominant crop land rental arrangements. Cash rental is common because the lease is simple, the rent is fixed, and the landowner does not have to make any operating or marketing decisions. The tenant has more control over cropping decisions, and can benefit from higher profits. A useful method to estimate a cash rent is called a "crop share equivalent" or the rental rate that would be received from a typical 75:25 crop share lease. Computing the rate using this method requires estimates of long-term average yields in the area and realistic prices for the coming year.

"A suggestion is to use Crop Insurance yields and insurable prices. Then apply a discount of 25 per cent for variability in weather, yields, and prices since the tenant is assuming all of these risks," says Dyck. The formula: (yield x 25 per cent) x price x 75 per cent. Complete this calculation for at least four major crops grown in the area and take the average.

Another simple method is a percentage of gross returns. Compare cash rents in your area over the past five-to-ten years against gross returns of the crops that were grown. In many areas, cash rent is approximately 20 to 24 per cent of gross returns.

Crop share rentals are becoming less common because many landowners do not want to take the risk of price or yield. These leases are typically 75 per cent tenant, 25 per cent landlord. If fertilizer and chemicals are shared, then the lease shifts to 66 per cent tenant, 33 per cent landlord.

Dyck says that the general rule is to calculate, then negotiate. "Tenants should know their cost of production and calculate the potential profit before establishing a fair price. While money plays a role, other factors will come into the negotiations such as land quality, location, compatibility, communications, and honesty."

"Once a price and terms have been agreed, the most important thing you can do is put the agreement in writing," says Dyck. "This single act would eliminate the majority of disagreements that occur."

More information on establishing, negotiating, and writing a land lease is available for purchase via AF's comprehensive guide, *Leasing Cropland in Alberta*, or by calling the Ag-Info Centre at 310-FARM (3276).



## The Importance of Soil Sampling and Testing

Every field is different when it comes to soil type and nutrient content in soil. Soil sampling and testing can show you the plant available nutrients and other soil chemical factors important for crop production.

Nutrient levels in soil also vary from year to year, so it is important to perform soil sampling and testing prior to planting any new crop. It is important for farmers to follow certain recommended steps for soil sampling and testing to develop a fertility management program.

To ensure accurate results, standards must be set for performing soil sampling and testing. Here are some guidelines set out by Alberta Agriculture:

- Begin by evaluating each field to determine representative areas
- Major areas within fields that have distinctly different soil properties, such as texture, should be sampled and fertilized as separate fields because of the potential for different nutrient requirements
- Samples should be taken at 0 to 6, 6 to 12, and 12 to 24 inch depths from 15 to 20 locations within each field
- Each depth should be bulked into composite samples, air dried, and sent to a reputable soil testing lab

**NOTE:** In addition to analysis of chemical components of soil, biological and physical components are also important.

**CONTACT CARA** for more information on sampling and what the CARA Soil Health Lab can offer.





# Crop Strategy Seminar

Tuesday, March 26, 2019

10:00 am - 3:30 pm

Oyen Senior Center

\$25/ person

**Risk Management**  
**Variable Rate - Agronomy - Marketing**  
 Decisive Farming

**Market Update**  
 Farm Link

**When Weeds Won't Die-  
 Why You Must Mix It Up**  
 Dr. Hugh Beckie - Podcast

**CARA Soil Health Lab  
 & What it can do for your operation**

**CARA 2018 Regional Variety Trials**

To Register or for more information please:  
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 email cara-3@telus.net  
 or visit our Facebook page.



## Reaching Out

# Your neighbour is diagnosed with depression. What do you say next time you meet?

By Helen Lammers-Helps, Country Guide

When it comes to talking about mental health, there's a shift taking place in agriculture. Producers are bravely sharing their stories at farm meetings and on social media. Corporations and organizations are creating supportive resources. All this is helping to reduce the stigma around mental health.

With the incredibly high levels of stress farmers face every day, it's a much-needed change. A survey on farmer mental health by the University of Guelph in 2016 painted an alarming picture: 35 per cent of producers met the criteria for depression, 45 per cent were classified as having high stress, and 58 per cent met the criteria for anxiety.

Sadly, 40 per cent of farmers responding to the survey said they would feel uneasy about seeking professional help due to concerns about what people may think.

The good news is that rural communities also have a reputation for lending a helping hand. We want to support those in our communities who may be struggling.

What signs should we be watching out for? And what should we do if we are concerned? These are the questions I posed to Deborah Vanberkel, a psychotherapist in Napanee, Ont., who actively operates a dairy farm with her husband.

Vanberkel describes a few of the signs that a person may be struggling with a mental health condition. If a person's appearance becomes unkempt, if a regular churchgoer stops attending, or if they're not caring for their farm property as well as they usually do, these could be signs that stress levels have escalated beyond what someone is able to cope with.

Feelings of sadness, worthlessness, anxiety, anger, a lack of motivation and sleeping too much or too little can also be indicators of a problem.

What should we do if we think a neighbour or friend may have reached a point where they are unable to manage the stress and negative emotions?

It can be uncomfortable because you aren't sure what to say or do, but Vanberkel recommends a four-step approach when reaching out to someone you think may be struggling, or if you've heard they've received a diagnosis of a mental health condition.

"Put yourself in their shoes, be empathetic," says Vanberkel. Show your care by checking in with them. Ask them: "How are things? Are you okay? Is there anything I can do?" Let them know you are really there for them.

Then really listen to them. "The biggest form of support you can offer is to really listen," she says.



"Give them your full attention, put your phone on silent." The next step is to show your support. "Reassure them that you are there for them," she says. "Be kind, be genuine."

Finally, help them find the resources and services they need.

What shouldn't you do? "Don't judge them. Don't tell them to 'get over it,' or that 'things could be worse,'" says Vanberkel.

Avoid asking them directly if they are depressed, and don't make assumptions about what's going on. There could be many possible explanations for the changes in their behaviour, she says.

And if the person doesn't want to talk about what's going on or how they are feeling, Vanberkel says you should respect that. "But remind the person that you are available to listen if they need it."

The language we use when talking about mental health also makes a difference, says Vanberkel. We don't stigmatize those suffering from cancer, diabetes or heart disease, and likewise we shouldn't stigmatize those living with a mental health condition.

Avoid defining a person by their diagnosis. Instead of "Frank's depressed," say "Frank has depression." Instead of "Joan is OCD," say "Joan has OCD."

Instead of saying "someone is suffering from mental illness," it's better to say "someone who has a diagnosis of..." or "someone who is being treated for..." or "someone who lives with..."

Replace "committed suicide," with "died by suicide."

Don't refer to people with a mental health diagnosis as crazy, nuts, schizo, psycho, etc.

Avoid misusing medical terms such as saying someone "has OCD" because they are extremely organized, "bipolar" because they change their minds frequently, or "depressed" because they are feeling down. These terms should be reserved for describing actual psychiatric diagnoses with specific criteria.

Megz Reynolds, a grain farmer from southwestern Saskatchewan, agrees the language we use when we talk about mental health is important. "We need to normalize

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## Reaching out

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the conversations around it,” she says, pointing out that we shouldn’t be treating it any differently than having a physical health issue. “We need to have the conversations so we can end the stigma. That stigma can keep us from seeking help.”

Sometimes just changing a few words can make the difference between sounding judgemental or negative to a more supportive, constructive positive statement, says Reynolds. That’s the gist of the It Starts with Me campaign from the Do More Ag Foundation, a national non-profit organization which champions mental well-being in the ag community. Launched a year ago, the organization, says Reynolds, “is a collective voice saying, we need to make a change.”

### Your first step

#### Ask more

Don’t be afraid to ask someone how they are. Reach out to someone in a meaningful and genuine way to ask how they are doing. If you have noticed prolonged or progressive changes to someone’s “normal” over a long period of time, it’s okay to ask if they would like to talk and to let them know you’re there as a support for them. You can start a conversation by saying “Hey, I’ve noticed some changes lately and I am wondering if you’d like to talk” or “Are you okay?”

#### Listen more

You don’t have to be an expert to listen. Being an ear to listen can go a long way, and sometimes that is all someone needs. Most importantly, always remember to only support within your means and skill.

Try to listen without judgement and without interrupting with solutions; listening doesn’t mean fixing. Be mindful of your reactions and expressions, both verbal and nonverbal when someone is sharing their experiences or challenges with you.

Be compassionate and encouraging. Be supportive of someone’s efforts to seek professional support. This support can take many forms: you can refer them to resources you’re aware of, offer to call a crisis number with them, or even offer to accompany them to an appointment.

(Source: Do More Ag Foundation “How to Do More Toolkit”)

### How to help your community

- Get trained on how to recognize the symptoms of mental illness and how to help.
- Mental Health First Aid courses are available through the Mental Health Commission of Canada. Visit [mentalhealthfirstaid.ca](http://mentalhealthfirstaid.ca).
- 4-H Healthy Living Initiative. Beginning spring 2019, 4-H Canada will deliver webinars and workshops, assist in the creation of resources to train volunteer leaders, and offer resources that help recognize youth in distress and provide the access to support they need.

- In the Know — A Mental Health Literacy Training program, tailored to address the needs of the agriculture industry, is expected to be available by late spring or early summer 2019.

### Raise awareness in your community.

- A presentation package with slides and speaking points that anyone can deliver in their community is available from the Do More Ag Foundation.
- Share this powerful video by Do More Ag on changing the language we use around mental health.

### Resources

- Farm Credit Canada resources include an information sheet with tips for dealing with stress and the Rooted in Strength: Taking Care of Our Families and Ourselves mental health resource guide
- A List of Crisis Lines and other resources are available from the Do More Ag Foundation, a Canada-wide not-for-profit organization championing the mental well-being of all Canadian producers.
- Call 911 or go to your local emergency department if someone is in crisis and in need of immediate help.

### Farm Stress / Mental Health Help Lines

**Manitoba** 1-866-367-3276

**Saskatchewan** 1-800-667-4442

**Alberta** 1-877-303-2642

Or search online for your province’s mental health resources.



### Local Family Community Support Services

Consort FCSS - 403-577-3011

Hanna FCSS - 403-854-4433

Oyen FCSS - 403-664-2255

## DYK?

(Did You Know?)

**CARA’s Regional Variety Trial data that is collected every year contributes to the annual publication Alberta Seed Guide.**

**Want to learn more about the Regional Varieties? Join CARA’s membership to gain access to our Annual Report with Trial data and more!**

The Annual Alberta Seed Guide is annual publication provides information on cereal and oilseed variety performance in Alberta and northeastern British Columbia. Important agronomic characteristics and disease resistance information is provided for varieties of wheat, barley, oat, rye, triticale, flax and canola.

# Taking fertility back to the basics for better nutrition

The Western Producer - By Thom Weir PAg

This is the first of five columns that will look at building yield efficiently.

I continue to get calls from farmers with questions regarding fertilizers.

Some of them are what I consider basic questions that I assume most producers would know, but then we all know what assume will do. So I thought I would go back to the basics, so to speak, with a series of columns discussing fertility.

In my career I have had the opportunity to work with some great minds in the fertility world — or more specifically, the fertility world as it relates to Western Canada. These include the team I worked with during my time with Westco Fertilizers, including John Harapiak, Rigas Karamanos, Norm Flore, Lyle Cowel and Tom Jensen. These men could take complex issues and dynamics that are our soils and boil them down into concepts that farmers are able to put to work on their farms.

Over this series of columns, I will try to take some of what I learned from these experts and 40-plus years in the field and communicate it to you so that you can better understand the fertility end of your farming business.

I see a lot of information being thrown your way: some factual, some based on speculation and some that is science fiction. What I hope to be able to do is give you some background information so that you can reasonably decide on which pile to file the information. First, some laws.

The first law of understanding fertility is Liebig's law of the minimum. This concept is a principle developed in agricultural science by Carl Sprengel about 1828 and later popularized by Justus von Liebig. It states that a plant's growth will be limited by the most limiting of the essential plant factors or nutrients. For the most part, this law remains relevant today, almost 200 years after it was first proposed.

So, what does this mean?

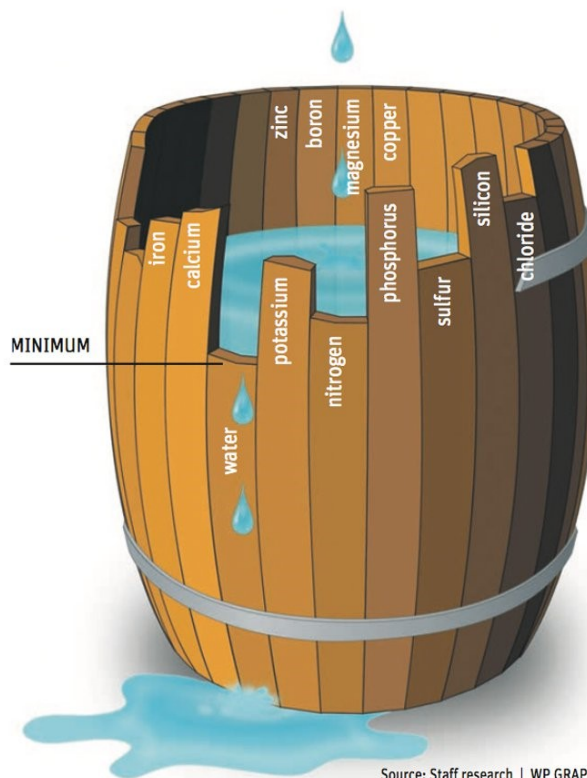
You have probably seen this concept described as staves on a barrel of varying lengths, where the yield is limited by the shortest nutrient supply and can be increased only by lengthening that limiting stave. Over my years of scouting in the field, I have become a firm believer in this concept.

I have solved many issues and problem areas in fields, including wheat, barley, peas, canola, alfalfa and other crops, by using tissue and soil sampling as my primary diagnostic tools. I lengthened the shortest staves. However, in these situations, there has already been some top-end yield loss for that year.

## LAW OF THE MINIMUM – LIEBIG'S LAW

Justus von Liebig formulated the law of the minimum: if one crop nutrient is missing or deficient, plant growth will be poor, even if the other elements are abundant.

The analogy for the potential of a crop is a barrel with staves of unequal lengths. The capacity of the barrel, a crop's yield, is limited by the length of the shortest stave and can be increased only by lengthening that stave. When that stave is lengthened, another one becomes the limiting factor.



The second law is the law of diminishing returns, which says that yield will increase as an input is added to a crop. However, as each incremental units of fertilizer are added, there will be a point where the additional output of crop gained from one additional unit of fertilizer will be smaller than the additional output of production from the previous increase in fertilizer.

At some point, there may also reach a point where the output actually begins to decrease because too much fertilizer can become deleterious to production.

There is a cost to each unit of fertilizer, so there will be a point, before the point where yields are starting to decline, where the economics turn and the cost of applying another unit of fertilizer will, while still increasing yield, show no economic yield. This point is called the maximum economic yield.

The bottom line is that there is an end-point to the amounts of fertilizer you can apply and still get a reasonable return on the investment. This is governed by a number of factors, including crop types (canola versus soybeans, for example), crop varieties or hybrids, crop prices, fertilizer prices, weather

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## Taking fertility back to the basics for better nutrition *CONTINUED*

(including rainfall) and your unique soil.

The third law is based on 4R nutrient stewardship, which states that for each nutrient, there is a right source, a right rate, a right time, and a right place to apply that will result in maximum economic returns and minimum environmental impact.

These four decisions will be unique for each farming situation and may vary from field to field. However, being able to use them correctly will improve yields, lower costs and lower the losses of nutrients from your field.

### Let's look at the nutrients you deal with annually on your farm.

The mineral elements are the ones we think about most often. They are divided into three different categories, classified by the quantity used by the plant. However, this does not mean that a primary nutrient is necessarily more important for plant growth; only that more of it is required.

•**Primary:** nitrogen (N), phosphorus (P) and potassium (K). Because the plant uses a larger quantity of the primary nutrients, we see deficiencies of these nutrients showing up more frequently.

•**Secondary:** calcium (Ca), magnesium (Mg) and sulfur (S). The crop uses more secondary nutrients than micronutrients, but less than the primary nutrients. We rarely see deficiencies in calcium and don't often see magnesium deficiencies, but sulfur

deficiencies have become more common as we started growing crops with high sulfur demands, as well as the reduced sulfur dioxide emissions from power plants.

•**Micronutrients:** boron (B), chloride (Cl), copper (Cu), iron (FE), manganese (Mn), molybdenum (Mo), nickel (Ni) and zinc (Zn). Micronutrients are used in smaller amounts, but we do see deficiencies occurring from year-to-year. Because micronutrients are found in such small amounts in the soil, tissue testing in conjunction with soil testing can be a solid practice to help detect deficiencies. Also, because many of the nutrient's availability is affected by soil pH, presence of the nutrient in the soil does not mean it's getting to the plant.

Except for potassium, these nutrients must be mineralized from organic matter, and mineralization occurs at different rates every year and is driven by various environmental factors.

There are four additional nutrients that can be classified as essential in some crops but are rarely deficient in most soils: sodium (Na), cobalt (Co), vanadium (V) and silicon (Si).

So let's dig in and examine these nutrients, what they do in the plant, how they get there and other things that are handy to understand as it relates to your crop. Over the next few columns, I will try and discuss the individual nutrients in more detail and relate them to the three laws described above.

## What's in your calving kit?

Regardless of whether producers are ready for the calving season, calves are being born. Being prepared is one of the best ways to ensure that the season goes smoothly. Here is a few things every producer's calving tool kit should contain:

**1. Veterinarian's phone number** – call if you are not sure about how the calving is progressing.

**2. Long plastic gloves** – These should be worn when examining the cow to protect you and the cow. If these are not available, be sure to wash your hands and arms thoroughly, keeping all materials as clean as possible.

**3. Pail of warm water.**

**4. Disinfectant** – Udder wash diluted in warm water or a suitable iodine preparation can be used to wash the plastic gloves and cow's vulva.

**5. Clean towels and paper towels.**

**6. Lubricant** – Using a veterinary lubricant is a preferred light mineral oil, Vaseline or Crisco oil can be an alternative option,

**7. Calving chains or straps plus two handles.** Be sure to put one loop (half hitch) above the dewclaw and the second below the dewclaw, using one chain for each leg.

**8. Special Equipment** – a calving jack and calf snare – be familiar with and know how to use these pieces of equipment before calving starts.

**9. String or dental floss** to tie off a bleeding navel cord.

**10. To stimulate breathing** have a) cold water to put on the calf's head b) clean straw to put in nostril. Do not put your fingers in the calf's mouth – use a clean paper towel or apply pressure with your hand from the eyes on down to the nostrils to clear the nasal cavity of mucus.

**11. Colostrum** – Have a supply of fresh, frozen or commercial colostrum available for calves which have been stressed from thin cows, cows with large teats, twins, premature calves, from difficult or cesarean deliveries and/or uterine prolapses.

**12. Nipple bottle or esophageal feeder** to ensure that the calf gets colostrums. Try the nipple bottle first but make sure that at least 4 litres of colostrums are given to the calf within 6 hours after birth.

**13. Large Zip Ties** - Can be used to help restrain the calf and prevent injury if it has to be moved.

**14. Rope Halter** - to restrain or help shift positions of the cow if necessary.

**15. Tags, notebook and pencil** - Keep good records



## Schedule of Events

### Crop Strategy Seminar

Tuesday, March 26, Oyen, AB

Join us for the day to learn about risk management using variable rate & agronomy tips, market update, navigating the new grants, CARA's 2018 trial results, CARA Soil Health Lab & managing herbicide resistant weeds  
To register please call the CARA office at 403-664-3777 or email [cara-3@telus.net](mailto:cara-3@telus.net)



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### 2019 Forecast Map

The Alberta Insect Pest Monitoring Network has published their 2017 forecasting maps for bertha armyworms, cabbage seedpod weevils, grasshoppers, pea leaf weevils, wheat midge and wheat stem sawfly. To view the forecasted maps visit the Alberta Agriculture and Forestry's Insect Pest monitoring network website.

Alberta Insect Pest  
Monitoring Network



### More of a Digital Person?

If you would like to receive this newsletter via email, please contact Olivia at [cara-3@telus.net](mailto:cara-3@telus.net)

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