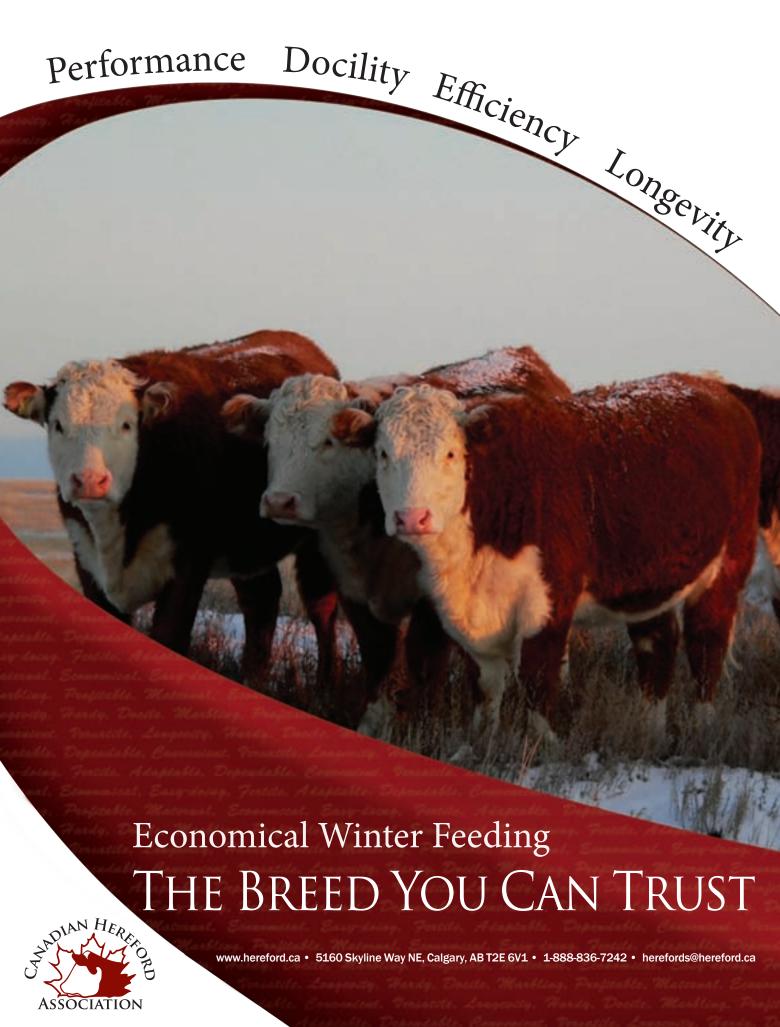
**GROWTH FROM CONSERVATION • BEEFWATCH** 

# Canadian The BEEF MAGAZINE CATTLE CANADATINE CANADATINE CATTLE CANADATINE CA



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Cover photo: Our photo by Debbie Furber

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By Gren Winslow

## PREPARING FOR THE DEATH OF NAFTA



fter the rumble in Virginia last month it is tempting to rail on about the possible loss of the North American Free Trade Agreement (NAFTA). But to be honest I'm NAFTAed out. President Trump will do what he wants. If he wants to shut down NAFTA the U.S. auto and ag industries will suffer, as will ours, but the rural community in the U.S. will swallow it.

Trump has already neutered the Environmental Protection Agency, and gained a better deal for U.S. beef in China than Canada enjoys. His treasury department has eased up on estate taxes, and Trump has promised to repeal the death tax, downsize the tax code, and repeal the hated Waters of the United States rule.

In short Trump is their guy, so if he doesn't listen to American agriculture on NAFTA, they will swallow the cost and make do — as will we.

If NAFTA falls it will almost certainly have some influence on your bottom line. So perhaps this would be a good time to look around and think about what you can do to make your place as efficient as it can be.

Along that line Canfax Research Services recently put out a fact sheet on ways to drive profitability in the cow-calf sector. Outside of 2014 and 2015 raising calves has been a tight-margin business. Even so surveys show as much as a \$100 per cow spread in the cost of production between herds based mainly on their management.

When Canfax set out to learn the secrets of these top managers here's what they found they had in common:

1. Good records and benchmarking. Production records track the age of the cow, inventories, reproductive efficiency, growth performance, pasture or feed usage, animal health, etc. Operational records track overhead, unpaid labour hours and so on, while financial reports track expenses, revenue, overall profitability and per unit cost of production by commodity.

The real value is found in the decisions you make based on your own history, by identifying the key factors that influence profit and keying on those.

The next step is to compare your operation to others by benchmarking to find better ways of doing things. In a University of Saskatchewan study those who benchmarked their herds gained 60 pounds per exposed female, which at \$2.10 per pound added \$12,600 to the books of a 100-cow herd.

Perhaps this is a good time to plug the second Western Canadian Cow-Calf Survey that benchmarks herds. You can sign into the survey at www.wccs.ca.

2. Manage your costs. Feed, as you already know, is the big one. From 2012 to 2016 feed accounted for 64 per cent of all costs in Western cow-calf herds. Low-cost producers tend to pay more attention to the feed/nutritional needs of various groups such as first calvers and mature cows. That makes the most efficient use of the feed, assuming you know what you are feeding. Forage testing allows you to match forage quality to needs of different groups.

3. Get the most from your labour. Labour efficiency varies wildly from one place to another. One study based on AgriProfit\$ data found 26 per cent of the variation in profit in a cow-calf enterprise can be related to labour hours. International agri benchmark data found Canadian wages among the highest on beef farms around the world at \$18-\$30 per hour. So to be competitive you need to produce more beef per hour or use fewer hours to produce the same amount by increasing production or herd size.

Physical labour productivity in Canada ranged from 29 to 64 kg live weight per hour compared to 26 to 49 in the U.S. and 41 to 174 in Australia.

4. Review your marketing strategy. Using average calf prices from 2012 to 2016 at a 90 per cent calving rate there was a \$3,000 difference in profit between 100-cow herds that sold at the annual top of the market versus the low. A marketing strategy identifies break-even prices for every group of cattle and encourages you to be disciplined is selling them depending on market trends, and the opportunity cost of holding them or selling them.

Another part of the strategy is to choose the market most suitable and profitable to your cattle, and then to produce the animals that fit that target, particularly when going after niche markets where the costs of meeting the specifications are generally higher.

Risk management tools should be part of a management strategy to protect your equity whether it be price insurance, futures, or forward contracting.

5. Reproductive efficiency has a major impact on cowcalf profits. AgriProfit\$ 2011 data showed low-cost producers have higher conception rates (90.9% versus 88%), calving rates (98.3% versus 97.7%), weaning rates (97.3% versus 96.2%) and calf crop percentages (86.7% versus 82.5%) than their competitors.

One way to do that is to assess the productivity of your cows going into winter by body condition scoring. In the cow-calf survey of 2014 only 19 per cent of producers scored their cows for body fat.

Up to 46 per cent of cows in Western Canada may be copper deficient, so a year-round mineral program is one way to improve reproductive efficiency.

Using records to cull defective, low-producing cows, paying particular attention to the growth and breeding of first-calf heifers and selecting bulls for traits like material characteristics and calving ease that drive profitability are all good ways to raise the reproductive rates of your herd.

Add a strong vaccination program and animal health plan which includes parasite control and you have most of the major points identified in the Canfax top gun survey.

None of this is new, or surprising, but it never hurts to be reminded that most herds can be made more efficient.

It's something you can do that may just ensure that you survive the death of NAFTA, should it ever happen. \*\*

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## **NewsMakers**



James Hargrave

Wildfires that swept through Alberta and into Saskatchewan last month claimed one of the young leaders of Alberta's cattle industry when **James Hargrave**, 34, of Walsh, Alta., died in a vehicle crash while

fighting a fire along the Alberta/Saskatchewan border. Hargrave was a vice-president of the Western Stock Growers' Association and former delegate of the Alberta Beef Producers. He and his wife operated Hargrave ranch established in 1888 by his grandfather Bert, who served as the MP for Medicine Hay from 1972 to 1984.

At the last annual meeting of the WSGA, *Cattlemen* field editor **Debbie Furber** says **Hargrave** spoke on the need for ranchers to insist that oil and gas companies do a proper job of native prairie reclamation without resorting to tame grass species that become invasive on native prairie. He was also an advocate for grazing leaseholders and held leases in Alberta and Saskatchewan.

Friends of the family have established a GoFundMe page in memory of **Hargrave** to assist his wife and their young family. At our press date donations had exceeded the \$50,000 target with over \$73,000 raised.

The Saskatchewan Cattlemen's Association will add two new members to its board of directors during its annual meeting in January, following the election of

Kyle Hebert from Wawota and Roger Meyers of Minton this summer. They will join four returning board members: Rick Toney from Gull Lake, Garret Hill, from Duval, Michael Spratt from Melfort and Dean Moore of Paradise Hill.



Shane Jahnke

The Saskatchewan Stock Growers Association and its president **Shane Jahnke** is seeking donations of cash, hay, feed, trucking — "whatever people can offer" — to assist ranchers who lost feed, fences

and livestock when wildfires spread across Alberta and into Saskatchewan last month. **Jahnke** says fires near Burstall, Leader, and Tompkins and another near Glentworth in early September destroyed nearly a million dollars worth of livestock. Some producers lost over half their herds, and feed for those that were left. To contribute go to www. skstockgrowers.com or call 306-757-8523.

Meanwhile a number of fundraising campaigns were set up on GoFundMe to help other individuals who suffered losses from the fires: Ron and Evan Wedrick and their families. The father and son were fighting the fire near Tompkins and were hospitalized in Calgary with severe burns; Joce and Laurry Orr, who farm west of Lethbridge and lost over 600 round hay bales' worth of winter feed; and the Brown family of Carseland,

Alta., who lost four of their five dogs when their home burned.



Doug Henderson

Angus breeders and many in the purebred industry were mourning the passing on October 24 of **Doug Henderson** of Henderson Cattle Co. and the marketing firm Douglas J Henderson and

Associates Ltd. (DJH) he established with his wife Linda in 1985. DJH has managed sales for almost every breed; however, its primary focus has been promoting purebred Black and Red Angus for breeders across Canada. Doug and Linda have also marketed semen from top bulls from North America for the past 20 years. As well they have exported Black and Red Angus embryos to the U.K., Japan, Argentina and Russia.

In October Cargill added to its share of the global feed additives market with the purchase of Diamond V, a provider of natural solutions and technologies to improve animal health, performance and food safety. This came close on the heels of Cargill's purchase of Delacon, a manufacturer of natural, plant-based phytogenic additives.

In the same month, pharmaceutical giant Lilly announced it was "reviewing strategic alternatives for its Elanco Animal Health business, including an initial public offering, merger, sale, or retention of the business. The company will provide an update no later than the middle of 2018.

In September, Ontario Corporation 1780010, operating as Eastern Meat Solutions Inc. of Etobicoke, Ontario, pled guilty in an Ontario court to five counts of contravening the federal Food and Drugs Act by mislabelling a substantial quantity of meat and was fined \$200,000. A Canadian Food Inspection Agency (CFIA) investigation found the company falsely labelled 4,557 cases as containing prime rib beef trim, Angus boneless beef trim and sirloin boneless beef. The entire amount valued at \$613,572 was rendered by order of the court.

### FIELD EDITOR: CANADIAN CATTLEMEN

Canadian Cattlemen Magazine, a monthly publication serving the cattle business for more than 75 years, seeks a field editor. This is a full-time position, based in Western Canada. The ideal candidate will be a self-starter with strong writing and photography skills who is knowledgeable about the cattle and beef business. He or she will be able to meet with ranchers in the field and attend industry events as part of the story gathering process.

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## **WILLIAMS LAKE SALE**

By Richard Andre From the November 1950 Canadian Cattlemen



he old west — the real west — came to the life as hundreds of Cariboo ranchers, their cowboys, buyers and Calf Club youngsters came to Williams Lake to celebrate the 13th annual sale sponsored by the Cariboo Cattlemen's Association during the week of October 7th to October 13th.

All-time records for the region in both feeder calf prices and prices for registered bulls were made during the week, while commercial cattle were up during the sale, according to R. G. Waite, Association secretary.

The Williams Lake cattle sale is one of the few old time sales still going on. Cattle are driven hundreds of miles over the rugged Chilcotin trail and drives up to 300 miles are not uncommon. Breeding stock is brought to the sale by the leading British Columbia breeders.

Feeder calves were in excellent demand, far exceeding the supply. Thirteen head owned by Lee Avery Pigeon were bought by L. Turcott. In all there were only a little over 200 head offered.

Altogether there were 1,810 head of cattle sold during the sale, a drop from the 3,368 which went through the ring last year. Ranchers reported better feed conditions and were holding on to their stock.

A load of show steers, consisting of ten head owned by Dan L. Lee of Hanceville sold for \$25.58 per cwt. to L. Henderson, packing house buyer, while the rest of the prices varied between 22 and 25 cents.

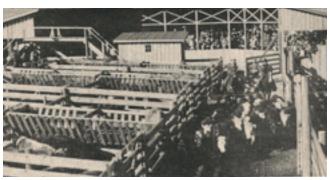
Bright and early Saturday, Oct. 7th the first of the livestock began to arrive. Penning and weighing started under the direction of Ray Pigeon, rancher and sales manager, and by late Tuesday all the cattle were in the barns and the pens awaiting the start of judging.

Judging of both the commercial and the breeding cattle started Wednesday morning. Martha Twan won the Grand Champion steer honours and the Dave Spencer challenge trophy. Reserve Champion honours were won by Pat Webster, last year's winner, who also was awarded the showmanship prize.

V.E. Ellison, Oyama, B.C. was awarded Grand Champion bull honours for Kaiwood Beau Donald. Mr. and Mrs. Leonard C. Johnson, RR2 Heffley Creek, B.C., garnered (the) Reserve Champion ribbon with their Victory Domina 10th.



L. to r.: Martha Twan, Pat Webster, Nora Twan and Tom Windt of the Narcosll Calf Club, which placed first at the 13th Annual Cariboo Feeder & Fat Cattle Sale. Williams Lake, B.C. Martha's calf was the Grand Champion fat animal, Pat Webster won the Reserve Championship and first for showmanship, Tom Windt won first in judging.



A new and larger sales ring was used at this year's Williams Lake sale.

During the commercial and club steer sales Thursday buyers reversed the judges. The reserve champion steer owned by Pat Webster brought 45 cents per pound, while the champion sold for only 30 cents.

Friday at the bull sale, the reserve champion outnosed the grand champion. Ben Jaffee and John Wood, owners and operators of the Chilco ranch, bought the reserve champion for \$1,725, while the grand champion was purchased by the Alkali Lake ranch for \$1,700.

All the selling and the judging was done in the new \$5,000 sales ring which was just completed.

Ross Phillips, well-known British Columbia cattleman, judged the commercial and individual fat classes. J. Bulman judged the breeding classes.

Hon. Harry Bowman, minister of agriculture, attended the sale and pointed out what can be done and has been done by ranchers cooperating with their associations.

Shortly after the sale was completed special stock trains of the Pacific Great Eastern Railroad pulled alongside the yards. As soon as the inspection was done, cowboys started the loading and in less than two hours the first trains pulled out, southward bound.

Only someone who knows the Cariboo and the Chilcotin realizes what accomplishments the sale means. Ranchers operate in 50-below-zero weather during the winter when roads are often blocked by snow. In the spring the worst enemy is mud.

Right now, led by their Association, under Lord Martin Cecil, owner-operator of the famous Hundred Mile Ranch, who is the president, they are improving the breed of other ranch cattle. That's why the bull sale is held and helps to bring in new breeding blood.

Sales week in Williams Lake is a unique experience. Restaurants and hotels are crowded. The PGE brings in two or three sleepers to help with the room situation but still people sleep everywhere and often spend hours in a restaurant awaiting daylight.

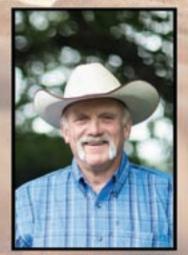
Thursday night, after the commercial cattle sale, a banquet is held and Friday night, after the bull sale, the week winds up with the Klondike Night. Saturday, all the ranchers are homeward bound for a winter of hard work, with no play.

For more of the past from pages of our magazine see the History Section at www.canadlancattlemen.ca.

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**Bobby Farias** 

n the rain shadow of one of the wettest spots in the world, at 39 feet of rain per year, is the Kunoa cattle ranch on the Hawaiian island of Kauai. It is one of the many ranches statewide that ship some 70,000 head of cattle each year to Canada and the U.S. mainland. However, there are big changes in the way beef is raised and sold in Hawaii.

While some of Hawaii's live cattle are shipped to Canada and the U.S. mainland, Kunoa cattle ranch (meaning "stand free") is pasture-raising them on Kauai and harvesting the beef at a newly acquired facility on Oahu. Kunoa meats are now available in a growing number of supermarkets and restaurants throughout Hawaii.

Cattle arrived in Hawaii in 1793 when Captain George Vancouver presented King Kamehameha I, the first king of Hawaii, with several cows and bulls. Ropes and slings were used to offload the cattle from the early ships. The king made it forbidden to kill the cattle, so by the mid-1800s there were 25,000 wild cows roaming the islands and devastating the landscape. Later, this law was lifted, and ranches were established. Mexican-Spanish cowboys (vaqueros — eventually known in Hawaii as paniolos) were hired by King Kamehameha III to teach Hawaiians.

Until the 1990s the majority of cattle were finished and processed in Hawaii, but by 1992 the local industry collapsed as there were better returns in shipping cattle to the U.S. mainland. This meant that retail meat had to be shipped back to the islands.

That is starting to change. With the decline of the sugar cane and pineapple industries in Hawaii, ranches like Kunoa are marketing local, pasture-raised beef as a way to enhance food security in the islands. Approximately 90 per cent of Hawaii's food is imported, prompting the state government to work toward doubling food production there by 2030.

Bobby Farias, a third-generation Hawaii rancher and co-founder of Kunoa, is a champion rodeo team roper who has also worked with cattle on the U.S. mainland. "There are many benefits to raising cattle on Kauai," he said. "We have a year-round grazing season and adequate water, so Kunoa cattle are able to grow on grass and we have few animal diseases like respiratory or scour problems."

"With the demise of the sugar cane industry on Kauai, they were able to assemble large tracts of excellent land suitable for pasture adjacent to the rivers."

Kunoa runs 2,000 cow-calf pairs on 4,000 acres of grassland, with a year-round breeding season. The company gathers the different herds four times a year and weans calves weighing at least 450 pounds. The year-round breeding system allows calves to be weaned and shipped to the mainland at different times of the year.

"Many of these newly weaned calves have never seen a human. As part of our pre-conditioning program, we train them to feed and water at the corral, as well as understand electric fences and handling," Farias said.

The calves are put onto Hawaii-grown Guinea grass hay bales (which look like small sugar cane) while in the corrals and then placed into nearby Guinea grass paddocks. The calves can be on grass up to several months. Kunoa uses a distillers grain-based protein supplement block at one-pound intake per head for grass cattle, increasing to 1.5 pounds for finishing cattle on grass pastures, up to 1,100 pounds.

Founded in 2014, Kunoa has been able to improve their pastures year after year through proper sustainable grazing management and they have received recognition from various organizations for their efforts.

The ranch recently purchased the only meat harvesting and processing facility inspected by the USDA on Oahu. To supply the plant they need to process cattle from ranches across Hawaii so they've built the only cattle receiving corral system on Kauai using old highway guardrails. It includes a large receiving scale so ranchers who bring in their livestock can receive payment immediately.

The meat plant has been upgraded with the addition of a new animal receiving and holding area designed by Temple Grandin, the well-known animal-welfare expert from Colorado State University. The facility is handling up to 100 head of cattle per week to start.

As with any meat processing facility, it isn't difficult to sell the steaks. The challenge is selling the rest of the carcass. To that end Kunoa has developed a high-quality ground and smoked beef bar that has a stable shelf life. It's like beef jerky, but not as tough.

With the renewed emphasis on the safe transportation of cattle in Canada, it is interesting to look at the challenges Hawaiian ranchers have had to overcome in shipping cattle to the mainland.

Shipping costs are high for any type of goods moving to or from Hawaii due to the 1920 Merchant Marine Act entitled the Jones Act which stipulates that any vessel that  $transports\, cargo\, or\, passengers\, between\, two$ American ports must be U.S. flagged, crewed, owned and built. Foreign carriers cannot compete under these rules and the lack of competition drives up the cost. There are no U.S. flagged ships designed to transport livestock so Hawaiian ranchers were forced to come up with specially designed shipping containers, known as cow-tainers.

They are the same size as a traditional 40-foot shipping container with a built-in water and feeding system. Most are divided into four compartments, two on each level, and carry 50 to 80 calves, depending on size, up to 30,000 pounds - so 60 five-weight calves, with 15 in each compartment.

Dr. Ashley M. Stokes, an extension and research veterinarian currently at Colorado State University, has worked closely with Hawaiian ranchers in promoting protocols to help ensure their calves remain healthy during the sea voyage of approximately eight to 10 days. She has worked with the Hawaiian Cattlemen's Council who developed stringent preconditioning requirements to be implemented at least 30 to 45 days prior to shipment in order to reduce the effects of transportation stress.

Upon arrival at mainland ports, the cowtainers are typically loaded directly onto trucks for transport to grazing operations or feedlots.

Stokes, and researchers at the University of Hawaii and Iowa State University, conducted



A Hawaiian cow-tainer.

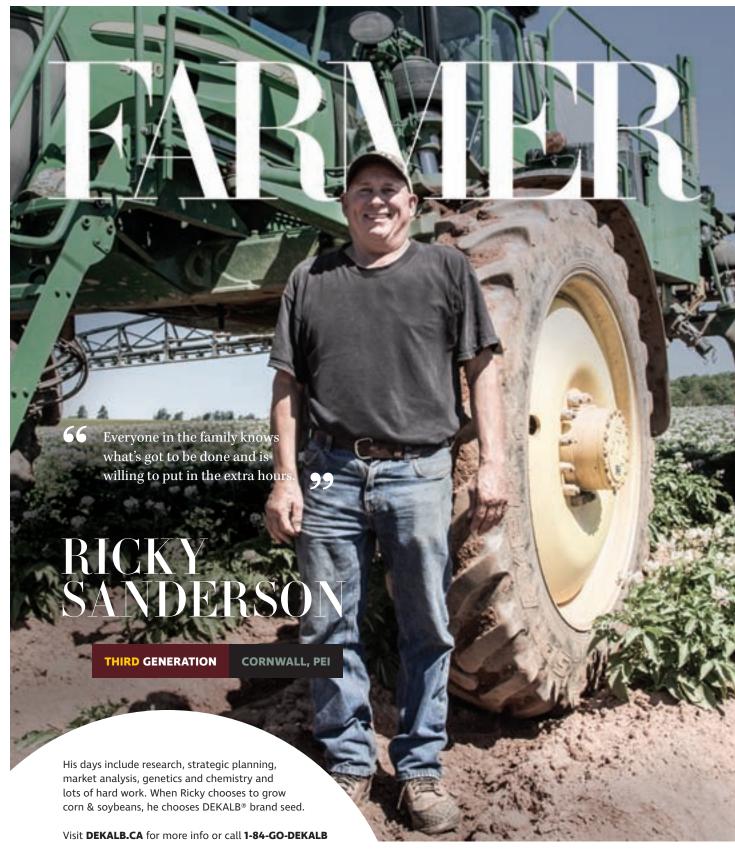
a study to evaluate long-haul shipping stress for cattle transported from Hawaii to the mainland. The researchers concluded that beef calves shipped from Hawaii to the mainland using these preconditioning and shipping protocols showed little physiological indicators of stress. The cattle were accustomed to and comfortable in the cow-tainers and had access to feed and water, sound footing and good ventilation during transport. Keeping them in the cow-tainers eliminated the stress of unloading and loading onto conventional trailers and avoided further commingling and potential disease transfer.

This might be something that the Canadian livestock transportation industry could look into.

More details on the Kunoa ranch can be found at www.Kunoacattle.com. \*\*

Duane McCartney is a retired forage-beef systems research scientist in Lacombe, Alta.







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Every day on the farm, Ricky Sanderson is close to his roots. His grandfather, Fulton Sanderson, started the farm just outside of Cornwall, PEI in 1947 just after World War I. Today, Ricky and his wife, Shirley, live on the same family farm a stone's throw away from his father John's house along the North River of Charlottetown. He farms with his father, John, uncle Robert, brother-in-law David, and 3 brothers: Randy, Rodney, and Robby. Shirley and his sister, Tracey, also support the farm by keeping on top of the bookkeeping, and of course, keeping the family in line. When it comes to doing the work on the farm, everyone is a team. "Everyone in the family knows what's got to be done and is willing to put in the extra hours," explained Ricky.

Ricky started farming after he graduated school. He remembers his father, John, pulling him out of school at an early age during the busy times to help out with whatever was needed on the farm. Now 84 years old, John is still very passionate and involved in the operation. "He just loves it," explains Ricky, "He can't stop farming and still spends 12-hour days on the farm. It's in his blood, and he's happy doing it."

The Sanderson farm raises beef cattle, but also grows a variety of crops including potatoes, corn, barley, and soybeans. Corn is a long-standing crop that the Sandersons have been growing for over 30 years. They use it as a feeder for their feed lot to add nutrition to their grass and barley mix. DKC30-07 RIB are just one of the hybrids that they plant and use for cattle feed on the farm. "It's done quite well on PEI – it's a good yielder and has good starch."

When it comes to soybeans, Ricky likes his fields clean and his hybrids to finish early. One of the biggest challenges he finds with soybeans is that they can sometimes compete during harvest with potatoes and it becomes hard to manage both crops late in the fall, but the Sandersons manage to make it work. On their farm, they grow a few different varieties with higher CHU's to help spread out harvest, like DEKALB\* 25-10RY, 27-12RY, and 27-60RY. "They're fairly easy to grow," explains Ricky, "soybeans were a learning experience in the beginning, and it still is, but there's not a whole lot to them once you get them figured out." Both Ricky and John appreciate the advice they get from their local DEKALB\* Dealer, Shawn Kerry.

"We've got a super guy here," said John,
"He's terrific! He's a top notch salesman,
he looks after everyone, he never growls,
he never complains, you can talk to him
anytime you want... which I do quite a bit!"

Shawn knows the Sanderson's crops so well, he sometimes notices changes before the family does. "Last year they weren't cutting beans around here," John recalls, chuckling, "I said to Ricky, why aren't we cutting the beans yet? I told Ricky to

phone Shawn and ask him if they're ready. And Shawn told us, 'that field was ready last week'. So we went right at it!"

Just as enthusiastic about farming are Ricky's sons, Dylan and Brodie, and daughter, Jaime-lynn, who are all close to home to help out on the farm. Even keener are granddaughters, Reese and Reagan, who can regularly be found picking potatoes and rooting in the dirt when visiting their Grandpa. Reese is already boasting that she wants to be a farmer when she grows up. With great-grandpa John still riding the tractor around the farm, the kids have a pretty good idea of how deep the love of farming can go. And with a love that deep, it's no wonder the farming gene has stayed strong in the family for 60 years

We thank the Sanderson family for choosing DEKALB\* brand seed for their farm and wish them a safe and successful harvest this year and for many generations to come. Check out the results of farmer-managed Market Development trials on DEKALB.ca this fall.



**EQUIPMENT** By Heather Smith Thomas

## **ARE YOU READY FOR A DRONE?**

In today's world unmanned aerial vehicles (UAV) or drones are used for everything from small indoor toys to delivering military weapons or managing cattle

rones are a relatively inexpensive way to locate cattle in big pastures so you know where to ride and start gathering.

John Church, an associate professor in the natural resource sciences department of Thompson Rivers University at Kamloops, B.C., an area with semi-arid grassland, forested range and many large ranches, says some ranchers in this vast range country hire helicopters to find lost cattle. "It's expensive, at \$1,000 to \$1,500 an hour. You could buy a drone for that, and fly the area many times," says Church.

Church is also the B.C. regional innovation chair in cattle industry sustainability. His job is to bring new technology to the table, to try and make ranching more sustainable. He first started working on drones five years ago when he watched children playing with them in a park. "This is a great way to extend your vision - and a huge benefit to cattle ranchers," he says.

"If you want to look at what's over the ridge or in a group of trees, or some other place you can't access readily or immediately, this is a nice tool. We did tests, out of curiosity, to see how fast you can get across a pasture to look at a water troughs. We had a person on a quad, versus one of my students using a drone. There is no comparison; the drone was so much quicker. It can save time and labour in simple things like checking water troughs, mineral feeders or inspecting fence lines," he says.

Before you turn cattle out on summer pastures you could send a drone around the fences to see if a tree blew down on the fence over winter, or a herd of elk tore down a section of fence — or if gates were left open by hunters.

"In the past it took a lot of time to check fences, and when you find a problem you need to have the right tools and materials to fix it. If you already checked the fence with a drone, you could go right to the problem and have the proper things for repair. You'd know whether you might need to take a chain saw to get trees off a fence, or some new posts. Twenty minutes of flying time could save hours of travel in rough terrain. Then you'd only have to go to the areas that need repair.



Student Chris Solecki pilots one of the school's drones.

Drones can also come in handy for checking water troughs and gates in remote locations. If a water trough quits working, you could know about it sooner, and go fix it. You can pre-program drones to run a route, such as checking a fence. With a drone, you can check pastures more often or more closely, to find out if there is something unusual, or if the neighbour's bull is in with your cows.

Some people use a drone as a herder to move cattle up out of riparian areas or to round up or move cattle.

"It is very effective for that purpose; you just lower the drone to where the cattle feel the prop wash, and they move," says Church. "I don't like using it that way, however. I've found that if you move cows with drones they become afraid of it, and as soon as they hear it they start running from it. If you just use drones to observe cattle, however, they get used to it and it doesn't bother them," he says.

"I feel it is better to be able to use drones as an observational tool, rather than as a flying border collie, but each producer can figure out how they want to use it," Church says. These are two opposite uses and you'd have to choose one or the other. If someone wants them just for herding, however, they are very quick.

If you want to use a drone for checking

and monitoring cattle, take a little time to get them used to it, advises Church.

"The first time we fly over they may look up and might move away a little, but if you don't herd them and nothing happens, they quickly accept it. The next day, they realize it won't hurt them. The noise is a continuous hum and doesn't startle them. The larger drones actually disturb cattle less because they don't have the higherpitched noise of a smaller one. Cattle seem to get used to the bigger drones very quickly," explains Church.

Roy Lewis, DVM, of Lewis Farms near Edmonton, and technical services veterinarian with Merck Canada, first used a drone to make promotional videos of bulls on the farm, and was so impressed he recently purchased his own.

"It's a high-quality over-the-counter drone. There are some bigger commercial drones that can do quite a bit more and carry more weight, but this small one serves our purposes for now. It is very useful for checking cattle and finding missing cattle," he says.

His niece Jordan Buba used it this spring, calving out cows on pasture. "Our cows that calve in winter are in smaller pens where we can see them easily, but the spring-calving

Continued on page 16



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to help strengthen immunity



to help treat and prevent disease outbreaks



to help promote growth

## Merck Animal Health: Driven to enhance potential



Continued from page 14

cows are out on 80 acres. They are a little more aloof; they want to be off by themselves when they calve, and the drone allows us to observe them a little closer than if we were walking or driving out there," says Lewis.

"You can get goggles that show you what the drone is seeing but Jordan just looks at the image on her cell phone. Our cows are freeze branded for ID, which enables us to see the number from a distance — easier to read than an ear tag," he says.

This is helpful when trying to determine the identity of an animal that is sick, lame, or having a calving problem.

Church uses drones to make teaching videos for his students and for ranchers. It's a good tool for explaining how to move livestock with low-stress handling techniques. The video can be played back, to show what happens in various situations, the mistakes that are made, etc.

"I am most interested in using a drone for disease detection, or for monitoring calving, to know if something is wrong," says Lewis. "In a group of cattle that's moving, you can whip around to the other side of the herd or watch an individual animal; it's much easier to do that from above." You can fly it high and monitor the whole herd or drop down and closely monitor one animal, to look at clinical signs and get identification. The drone can zip from one side of the herd to another so it is easy to watch an individual.

"If you saw a cow limping you might suspect foot rot. Then you could go out there prepared to treat it, and have a plan for capturing that animal," says Lewis.

You can replay the video to scrutinize an animal and try to determine if it is sick or what might be wrong with it. This might help you to make a decision whether to go treat it or just monitor it. The video can show what degree of lameness the animal had today, and you could compare with how lame it was yesterday, to see if it is improving.

"There is also some work being done with thermal cameras that detect heat. You can tell if an animal is getting sick or has a sore foot with heat in it. You need a bigger drone for that, to carry those cameras," he says. They can detect the body heat of an animal under trees, for instance, if you are looking for cattle.

"We've used our drone to watch a cow calving, and observing behaviour. Those videos can be useful to teach vet students. You can get fairly close to a cow with a drone and it doesn't bother her, whereas if you were out there she would be more wary. You can check on her without her being worried. With drones and with stationary cameras in the calving area, we've been able to see cows stealing another cow's calf. This is crucial to discover, especially in a purebred herd," he says. The drone can fly by, or hover in one spot if you need it to. The way the cameras pivot, it can give you a very clear image of what you want to look at.

"Drones can save tremendous time checking pastures. Bulls with breeding injuries can be identified and the location noted for removal. There are many uses for drones in food animal production. We have probably just scratched the surface regarding monitoring devices, RFID readers, etc. that may be attached to them. They are limited by the weight they can carry, however," Lewis says.

"They can provide a recorded image that could be sent for further evaluation by your veterinarian, horticulturist or nutritionist depending on the problem. I frequently look at recorded videos on sick, injured or lame bulls for insurance exams. A video can form a medical record and can be compared to a later video to watch for improvement. This technology is affordable, and if it helps save a calf at calving, identifies a lame bull quicker or finds lost livestock, the payback is fast," he says.

#### **POTENTIAL USES**

New technology has potential, including the active RFID tags. Passive RFID tags must be within one or two metres of the reader but active RFID tags could be read from a distance. Instead of having to scan the whole pasture to know where the livestock are, the drone gets high enough to see them, and might be able to read those tags.



Chris Solecki and professor John Church have found multiple uses for drones on ranches.

"We're thinking of building an antenna to read RF2 ultra-high-frequency cattle tags. We've been able to pick up signals from the new RFID ear tags three to five miles away and have been testing solarpowered ear tags from a company in Utah," says Church.

"For the future, we are also trying to get some network tags that can talk to each other. This means that if you find one cow, you can find them all, since those tags are all linked together. We can get that information (GPS positions) into the Cloud. You can know where your cow is, and also get temperature information."

Cameras are now built into the drone. "The image transmission of the video is remarkable," says Church. "You can view it on your goggles or your iPad or android phone. You can get that signal from well over a mile, and if you have permission (if it's legal), up to three miles away," he says.

Most drones have automated take off and landing capability, as well as returnto-home features. "These drones are smart enough to land themselves and are also portable.

The Mavic, for example, can fold down and fit in a saddlebag. The newer drones have decent flight times. You can get well over 20 minutes per flight, and a drone can go a long way in 20 minutes. If you have four to six batteries with you, it can fly a long time. If we have a big project, we've taken a portable generator out into the field to keep those batteries going, and kept drones in the air all day long," Church says.

"Drones can also serve as platforms for other sensors. We put thermal cameras on drones to see how much better we can find animals under trees. DJI now has drones that can carry two cameras at once, but those are a little more expensive. A good drone now, with video capabilities will cost between \$1,000 and \$2,000, but that is still fairly reasonable if it saves miles and hours," he says.

"It would be easy to put an accelerometer chip on a drone, to see if the animals are chased by a predator. We are also putting multi-spectral or near-infrared cameras onto drones — the same drones we are using to find lost cattle. We are now mapping flights, to look at large aerial photos (orthomosaics) to map farmers' fields, like precision agriculture. We can use Normalized Difference Vegetation Index, which enables us to look at the pasture

Continued on page 18

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### **EQUIPMENT**

Continued from page 16

and determine things like proper fertilizer application or water. In the future we are hoping to come up with unique spectral signatures for things like invasive weeds. Maybe we can not only identify noxious weeds (and pinpoint location with GPS co-ordinates) but also send out a second drone, using those co-ordinates, to spray the weeds," he explains.

"One rancher came up with the idea of using a paint ball gun when checking cattle," says Lewis. "The person checking cattle could mark one with a paint ball so the people who come out later to treat it would know which one to treat. I don't know how well that might work, but there are many innovations people will come up with." As the technology keeps improving and drones become more useful for more things, there are many possibilities.

#### **PURCHASING AND LEARNING** TO USE A DRONE

A Chinese company called DJI makes most of the high-quality drones on the market today, with several models. Price for a topof-the-line drone may be \$1,000 to \$1,400 but by the time you buy a couple of extra batteries (about \$160), a case for it, etc., it will probably be another \$500.

"The drone we purchased was very basic, and cost \$600," says Lewis. "Some are much more expensive, but this one takes clear pictures and videos. The price of a drone goes up partly by the quality of the camera. Drones the professionals use are bigger and may cost \$10,000 to \$20,000. They can go farther and carry a bigger camera and do many different things," he says.

It takes a little practice to learn how to fly a drone if you are not already used to video games. With the standard drone, the left joystick controls altitude and direction the drone is facing (yaw). The right one controls speed and moving left or right (roll). "When we got our first research funds for drones, we crashed some, learning how to use them," says Church.

"Those first drones were not very reliable. They have improved. Frank Wang, founder of DJI, is an expert on drones. We have used almost every drone that DJI has come up with. We seldom crash them anymore; most of them now have active collision-avoidance built in. They are smart enough that even if you are a beginner they can keep from flying into a tree or the side of the barn."

► MARKETING

## **Promotional** photography

Videos and photos taken from a drone can be useful for promotional purposes. "I've seen professional videos of farms, and for bull sales," says Lewis. "You can take photos for sale catalogues or other advertising purposes. Aerial shots are very impressive. Using a drone would be an inexpensive way to get aerial views of your farm or ranch."

Aerial photos or video when moving cattle can be spectacular, taking cattle out in a long line across the field or rangeland. These kinds of pictures may be useful to help show farm or ranch life to the general public. There are many potential uses for drones that could be helpful to the cattle industry.

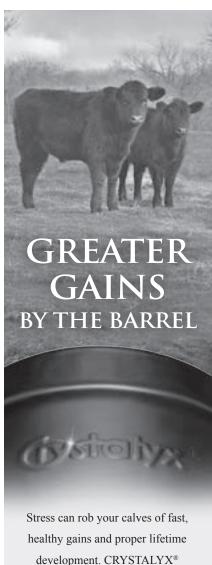
"I think this is a great tool that many ranchers will adopt in the future. The younger generation has grown up with iPads, cell phones, Xbox, etc. I am amazed at how well my students fly! They have incredible muscle memory and don't even think about the controls. They just think about where they want to go and the drone starts going that direction, whereas I have to consciously think about running the controls."

The older generation can learn, however. "My uncle is in his 70s and is now flying a drone. It takes some practice to learn how to use it, but there are many resources available now that didn't exist five years ago."

"In the near future we'll see better controllers, and better antennae on the ground that will connect you better to the drone, so you can fly farther. With those you'll be able to get a drone out at least six miles with a solid connection, providing a very large search window. DJI is coming out with something they call the Tractenna, but you have to make sure you can legally use these longer-range drones," says Church. Always check the regulations in your own province.

The biggest actual limitation is battery life. The upper end is about 30 minutes, but if there's wind it may be closer to 20 minutes. The faster you go, the more battery it takes. Even then, you can see a lot in 20 minutes.

"A bigger battery would be more weight," says Lewis. "You'd have to use it a lot to need a bigger battery." 🗻



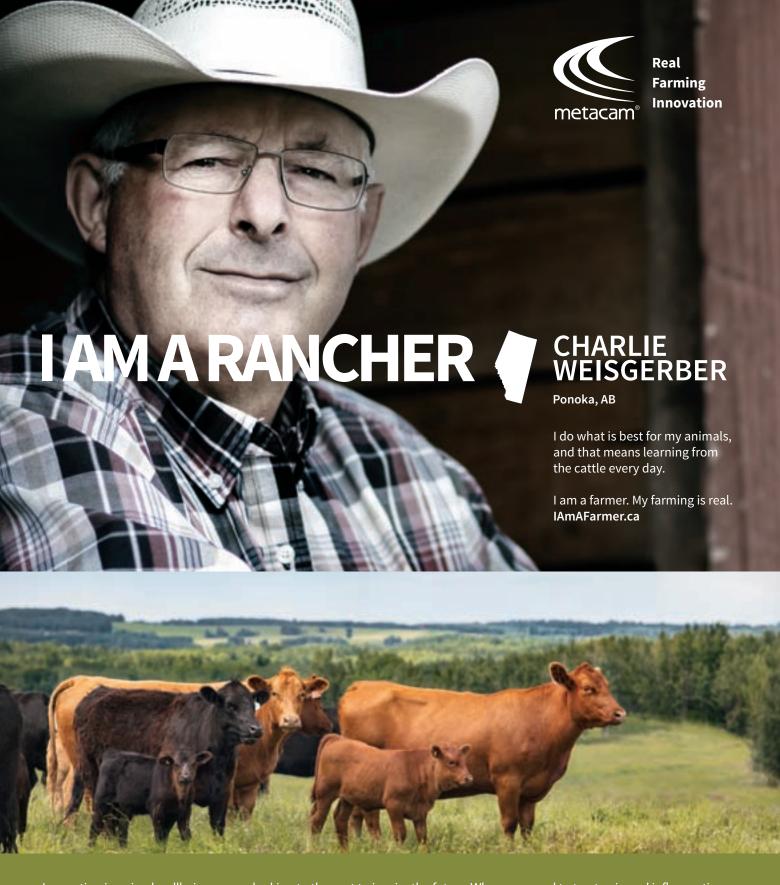
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HEALTH By Roy Lewis DVM

## **AVOID LAPSES IN YOUR** VACCINATION PROGRAM

s veterinarians and producers we need to constantly review our vaccination protocols to check for lapses in scheduled booster shots or missing antigens in our vaccines in response to new or emerging diseases.

Cattle transported to new areas where different diseases are prevalent are often the cause of outbreaks such as redwater disease or anthrax, to name just two.

Add to that the growing pressure to raise cattle with fewer antimicrobials and all producers face a greater need to vaccinate their herds as fully as possible to garner the greatest immunity against disease challenges.

Vaccination will never prevent everything but it definitely can raise the immunity of a population to reduce the chance of outbreaks.

Pharmaceutical companies are developing more comprehensive vaccines to reduce the number of treatments down to two or three at most, and more intranasal vaccines are being developed which further reduce the number of injections needed. There are even oral vaccines on the market, so producers have a vast repertoire of choices.

This can sometimes add to the confusion when selecting the right product for each group of cattle and at times some of them can be missed. Every time you process cattle you need to ask yourself: Are there any vaccines I am missing?

Veterinarians need to be equally consistent with their vaccine recommendations to lessen the chance of confusion when you set up to start treating. Your veterinarian knows your herd best based on its past history and disease challenges.

Recommendations may vary slightly from herd to herd. Most will start with core vaccines given pretty much across Canada, then build on that with specific vaccines for anticipated challenges based on a herd's history or disease history within a specific area.

In my experience the core vaccines recognized by most veterinarians and producers are the five-way viral vaccines covering IBR, PI3, BRSV, and BVD types one and two. These are given to the calves often along with at least mannheimia and often pasteurella to prevent pneumonia. These often come together in one shot, generally



given at two to three months of age and again at or, ideally, before weaning.

In cases where calves run into pneumonia issues earlier than two to three months old, this is where viral and bacterial intranasal vaccines are commonly prescribed.

Intranasal vaccines are also finding a place during entry to the feedlot where quick immunity is paramount. Later in the feedlot finishing period many veterinarians recommend boostering with IBR vaccine specifically at re-implant time. This helps prevent the severe pneumonias and tracheitis IBR can cause late in the finishing period. These are examples of situations where a respiratory protection gap is most commonly noted.

The five-way viral component is given as a followup yearly to the mature cattle and heifers, ideally before breeding, to prevent reproductive diseases.

In some dairy and beef herds, especially in Eastern Canada, when pneumonia has been a problem in the mature cattle, mannheimia and pasteurella are added to the mix.

Histophilus is the other agent causing pneumonia, arthritis, heart and brain issues so it is often combined with the clostridial vaccines in one needle.

Some veterinarians have removed the histophilus because they weren't seeing any cases in their practice, or they felt they were still seeing brain issues after vaccination. The fact is

the vaccine has worked well for decades and we don't see cases because we do vaccinate. There are many individual causes of brain disease so one must get a proper diagnosis before jumping to conclusions. This is one disease that starts with stress so preconditioning programs are one way to significantly prevent the disease. Vaccination upon entry to the feedlot is often too late for cases initiated at weaning. This is a situation where feeders must rely on the cow-calf producer to give the priming shots for histophilus, BVD and others to avert big problems in the feedlot.

Clostridial diseases still occur in outbreak form in unvaccinated cattle or those given multivalent vaccines lacking tetanus, clostridium hemolyticum (redwater) or sordelli. I always suggest using as broad a multivalent vaccine as available and be sure to give a booster shot in areas where there is a high prevalence. We see some clostridial outbreaks in calves vaccinated at turnout but the immunity wanes come late fall leaving calves susceptible on pastures with a high incidence of spores. Most producers do their cows yearly as well, especially in areas where redwater is prevalent, as immunity is short-lived with that particular disease. In a redwater area, vaccinating at turnout to the pasture is the ideal time.

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#### Continued from page 20

Remember, tetanus is never present when histophilus is in the vaccine so if banding calves or in other instances where tetanus is a possibility, cattle must be boostered at least two weeks before the event. Vaccination at banding may still yield tetanus cases if no previous tetanus shot was given. I have seen that happen many times across Canada.

When giving a scours vaccine be sure to note the calving dates for the cows. With some products protection wanes after about 90 days, so later-calving cows may need to be given a booster shot. I think it is imperative, especially for larger herds, to vaccinate for scours. If we can prevent that first case from developing we avoid contamination of the calving grounds and an outbreak.

In all our vaccination programs let's not forget the bulls. Especially the clostridials, and if most vaccines get down to a yearly application, why not administer them at semen checking time. Clostridials and footrot vaccinations are the common ones given to bulls, but others may be given in certain situations. Many great breeding bulls are brought down every year by preventable diseases because they were forgotten about at vaccination time. Cattle insurance policies generally include a vaccination history and may refuse paying out on death due to a vaccine-preventable disease. Makes sense, doesn't it? If there is cheap protection on a valuable animal one needs to undertake it.

Remember also to vaccinate new purchases, or inquire into their vaccination history, especially if they are transported in from a different geographic area.

Finally, don't forget the other species on your farms and ranches. Good working dogs and barn cats are all susceptible to preventable diseases such as distemper, parvo and rabies for dogs, distemper and rabies for cats, and influenza, rhino, and tetanus plus a few neurological diseases for horses. Again your herd veterinarian can best advise what vaccines to use on these helper animals.

Different vaccinations for leptospirosis, vibriosis, anthrax and rabies may be required in different parts of the country. And some herds may need to be protected against pinkeye, footrot or corona virus depending on their level of risk. We are fortunate in Canada to be free of diseases such as brucellosis or foot and mouth. Vaccines are available for these, but fortunately they are unnecessary here.

I repeat — no vaccines are 100 per cent. But clostridials are close and when combined with other vaccines a herd's immunity is considered complete when we reach the level of 80 per cent protection.

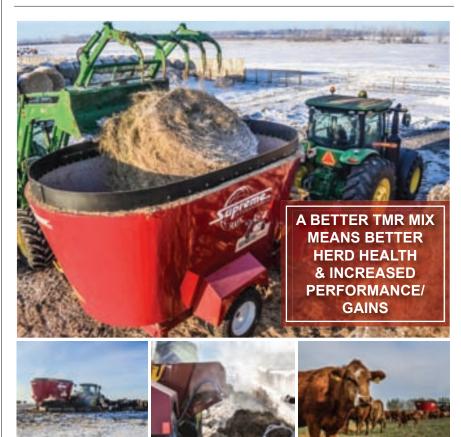
Many factors can confound that immunity but as long as we look after the their nutrition, minimize the parasites and stress, and store, handle and administer our vaccines properly our blanket of immunity should hold.

That doesn't mean we shouldn't aim to improve it. Always ask about new developments or ways to increase immunity in your herd. Pharmaceutical companies are always

adding new vaccine antigens to make your life easier.

Add that to a good vaccination strategy and you will go a long way toward minimizing the cost of these preventable diseases on your cow-calf or feedlot operation.

Roy Lewis is an Alberta-based veterinarian specializing in large-animal practice. He is also a part-time technical services vet for Merck Animal Health.



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NUTRITION By John McKinnon

## FORAGE QUALITY FROM THE PERSPECTIVE OF ONE **BILLION BACTERIAL CELLS**



John McKinnon is a beef cattle nutritionist at the University of Saskatchewan.

t is a time of year when feedlot operators and cow-calf producers are implementing their winter feeding programs. Forage, whether it is fed as hay, stockpiled forage (i.e. barley swaths or standing corn) or silage will play a big role in the vast majority of these operations. For feedlot operations, goodquality hav is often used to start calves on feed, while silage is a critical source of both energy and protein in growing rations and to a lesser extent in finishing programs. Cow-calf operators are even more reliant on their forage supply as it is a critical source of nutrients for wintering cows and calves.

The ability of cattle to use forage as a source of nutrients is due to the nature of their digestive tract, specifically the rumen. The rumen is often referred to as a large fermentation vat that houses a vast array of bacteria, protozoa and fungi that collectively ferment the feed the animal consumes. When I say a vast array, I am actually understanding reality! It is often stated that one teaspoon of rumen fluid will contain in excess of one billion bacterial cells. These bacteria, and to a lesser extent, the protozoa and fungi are critical to the animal's ability to utilize forage.

Energy in forages is tied up to a large extent in the cell wall of the plant, particularly the cellulose and hemicellulose components. Both of these cell wall constituents are indigestible due to their complex chemical makeup (i.e. the animal lacks the right enzymes in the gut to digest). In contrast, in cereal grains the energy is contained in starch, which is readily available to the animal. In forages, a further complicating factor is the fact that as a plant matures, lignin becomes an important component of the cell wall and can bind cellulose and hemicellulose, further reducing their digestibility.

It is the complex matrix of cellulose, hemicellulose and lignin in plant material that makes the rumen and specifically the bacteria so valuable in ruminant production systems. The rumen bacteria possess the necessary enzymes to ferment cellulose and hemicellulose, releasing the energy contained within their chemical bonds. This energy is released as volatile fatty acids which are absorbed across the rumen wall and are then utilized by the animal for its maintenance and productive needs. Rumen bacteria can also ferment starch and in fact are very efficient at it. However, as stated above, rumen fermentation of starch in cereal grains is not necessary, as the animal has the ability to digest starch.

To this point, you might be thinking this is a nice review of rumen biology but are beginning to wonder how it relates to your feeding program. For beef producers, forage quality primarily relates to its energy content. Yes, protein is important, but your major focus when producing or buying forage should be on energy content. The energy content of a forage, particularly hay, will

depend on a number of factors that influence the relative proportions of cellulose, hemicellulose and lignin in the plant cell wall. These include the grass/legume ratio, plant maturity at harvest, environmental conditions over the growing season and method of forage preservation. Perhaps most important is the stage of maturity at harvest. More mature plants will have higher levels of cellulose, lignin and hemicellulose. In particular, the negative influence of lignin on plant cell wall digestibility increases as the plant matures, lowering the relative energy value of that forage. Silage is somewhat different in that as the plant matures, these components of the cell wall increase to a point and then plateau or even decrease. In contrast, starch content increases as the plant matures and is positivity related to the energy content of the silage.

One teaspoon of rumen fluid will contain in excess of one billion bacterial cells critical to the animal's ability to utilize forage

The energy value of a forage can be determined by having your feed tested. Labs use a number of tests that reflect the relative proportions of the plant cell wall in that sample. Typically, they measure fibre content, particularly acid (ADF) and neutral detergent fibre (NDF). The NDF content reflects the amount of cellulose, hemicellulose and lignin in the sample. The NDF content of a good-quality grass hay can range from 50 to 55 per cent (DM basis) while good-quality barley silage will range from 45 to 50 per cent NDF. Very high levels of forage NDF will limit the intake of that forage. Acid detergent fibre content measures the amount of cellulose and lignin in the sample and is a measure of digestibility. The higher the ADF, the lower the digestibility and the lower the energy content of the forage. In fact many labs predict the energy value of a sample from its ADF content. Good-quality grass hay will have an ADF value ranging from 35 to 40 per cent while barley straw can exceed 50 per cent ADF. In silages, direct measurement of starch content can be used to help determine its energy value.

The bottom line of this discussion is that your forage supply is one of your largest feed investments. If you truly want to know the feeding value of the forage you are purchasing or planning to feed, there is no substitute for a feed test!



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**EQUIPMENT** By Debbie Furber

## **CONSERVATION FITS** THE GROWTH PLAN FOR THE HAGAN FAMILY RANCHES



he Hagan families of Virden, Man., were pleasantly surprised this summer to hear that they had not only been nominated by Manitoba Habitat Heritage Corporation for the prestigious National Blue-winged Teal Award, but had been chosen by the North American Waterfowl Management Plan Committee as this year's recipient.

The award is presented annually through Environment Canada and the U.S. Fish and Wildlife Service to Canadian, American and Mexican individuals, government officials and departments, non-governmental organizations, corporations, partnerships, programs or donors of land, services or cash that have been of regional or national significance to waterfowl, migratory birds, wetlands and other habitats.

The Hagans are unique among the list of past recipients because this is the first time the award has gone to a family, says MHHC CEO Tim Sopuck.

"The conservation easements stand out as to the commitment the family has made, but more than the easements is the family's conservation ethics. The award tends to go to individuals and organizations, but in this case, we have a family of ranchers who are walking the talk," he says.

The Hagans have been working with

MHHC since 2003 and now have nearly 4,900 acres of private natural land protected by 15 conservation easements, by far the largest number of easements established by a farm family in Manitoba.

"Cattle producers are very important clients for us because we view raising cattle on native range and hayland as very important elements of wildlife habitat conservation in Western Canada. We welcome every opportunity to work with and applaud the beef industry's efforts to conserve (grassland, woodland and wetland) habitat for wildlife. Good range management is good habitat management — they just fit together," says Sopuck.

That's exactly what Thomas and Felicity Hagan have seen on their ranch bordering Oak Lake where there are waterfowl and wildlife aplenty.

"We calve in June and put a ton of focus on soil health, grazing techniques and genetics in the cows to fit that program. Conservation is really a byproduct of what we do because if we are benefiting our cows, we are benefiting the birds, insects and wildlife," Thomas says.

Alistair and Erin Hagan view conservation easements as a two-way street. The agreement with MHHC supports conservation, while the one-time payment received

from MHHC for each conservation easement has helped their parents, Shawne and Jocelyn, and now the brothers' families build their ranches.

The Hagans have taken a road less traveled to expansion with each couple stepping out to make significant purchases of land and operate independently rather than adding onto their parents' ranch. The families work together on the annual Hagan Performance and Ranch Horse Sale each October and when one needs extra hands, but it's each family to its own when it comes to the business decisions, management strategies and financials.

Alistair says conservation easements would be equally as useful for intergenerational transfers, enabling the younger generation to make a lump sum payment to the parents for a start on their retirement.

An easement doesn't need to cover large blocks of land, he adds. While the Hagan ranches do have a large tract of native grassland pasture protected corner to corner, most of the easements are on much smaller parcels with natural wetlands, potholes and low-lying hayland.

Conservation easements are legal agreements with a lifetime caveat placed on the

Continued on page 26



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Continued from page 24

land so they are careful not to blindly put them on land that might have better use someday, he explains.

Land committed to conservation easements has to remain intact in that it can't be drained, bulldozed or cultivated, but MHHC doesn't place grazing or having limitations on the easements or interfere in any way with day-to-day ranching activities. Nor does MHHC stand in the way of potential mining or oil development activities that offer ranchers and farmers the opportunity to earn income from leases. In that situation, MHHC works with the development company to trade land for conservation.

#### **VERTICALLY STACKED AND OPEN FOR BUSINESS**

Use of skills and resources from one enterprise to add another keeps the Hagan families moving forward through the third and fourth generations to farm in the district since 1913.

Their grass-based cow-calf and yearling operation, led into custom grazing and a newly added direct-marketing business,



The Hagan families of Virden, Man., (I to r): Erin, Alistair, Slade and Harley-Mae, Shawne and Jocelyn, Thomas, Rory and Felicity accepting the National Blue-winged Teal Award. PHOTO COURTESY MHHC

while their horse breeding and training programs supply the horses they rely on for everyday ranch work before they ever make the cut for the family horse sale.

"Our dad had a strong influence on us to do our own thing because he followed his own dream of creating a ranch and cowboy lifestyle. We are very interested in what each

other is doing, but we are okay with everyone not doing the same thing," Alistair says.

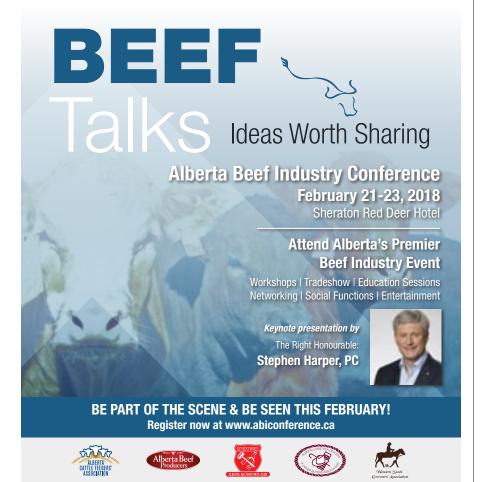
Being the eldest sibling, he well remembers the evolution of their parents' farm from a mixed grain and purebred Charolais operation with winter calving in the barn, to a ranch with 600 commercial cows. They now consider themselves to be semiretired with 220 black and red cows calving in spring and a yearling operation.

Alistair's family resides on the original Hagan farmstead where they have built up a 1,000-head custom grazing operation in a managed rotational system on tame forage land, while their herd of 250 cows is managed in a slow rotation on the native pasture near Oak Lake.

The year starts with weaning calves in March and the cows grazing some of the 40-acre custom paddocks from early April until early May, when they are trailed the nine miles to summer pasture to begin another calving season. The weaned calves stay in the custom paddocks and are sold in fall at the local auction market or directly to feedlots paying for natural calves.

Back at home in late fall, the new pairs graze crop residue and brushy wetland areas across from the home place on threequarters of land they rent to a local grain farmer. The herd winters most often on bale grazing, but they have used swath and corn grazing as well. With harvest generally being earlier nowadays, they are working with the renter to figure out a way to incorporate fall cover-crop grazing.

This summer proved to be interesting from a rotational grazing perspective because of the lack of rain in contrast to flooding a couple of years ago. Compared to their hayland that yielded about



60 per cent of what they'd normally bale up, they had tremendous grass in the custom grazing paddocks. This he attributes to the quick three- to five-day rotation, giving each paddock lots of rest between grazings. Some paddocks lagged behind, though, and a look back through his nine years of grazing records showed why. They were paddocks where cattle had been left to graze for longer than usual during busy times in past years.

Alistair also manages the Wallace municipal pasture where his dad is the right-hand man, giving them lots of opportunity to put extra time on developing reliable, safe horses for sale customers. Erin and their children, Harley-Mae and Slade, put their fair share of time in the saddle working with cattle on the ranch and competing at local events, as do Thomas and Felicity, who buy and train horses for the sale.

Alongside the horse sale, Thomas and Felicity's main enterprises are a 250-head cow-calf and yearling operation and their new grass-fed beef business. Custom grazing 200 pairs is helping them move toward their goal of eventually having 400 cows of their own to fit their native grassland base of 3,200 acres, all of which is covered by a conservation easement.

This summer they launched their own brand, Naturally Manitoba, to sell grass-fed beef directly to customers.

Renard Meats, a provincially licenced plant right in their home town, handles the processing.

"We've been preparing for this for quite a while. It's not that we have anything against grain-finished beef but we need to do the most with our grass as we can so we have been doing a grass-fed program anyway," Thomas explains.

They move the fence every one to five days from early spring through late fall to keep fresh grass in front of the pairs and have noted the improvement in soil health and cow health.

The overall goal is to maintain vegetative, high-energy (carbohydrate) grass by allowing the cattle to graze only the top third of the plants. The rest period between grazings varies from parcel to parcel.

The big bonus has been the improved productivity and quality of the lowland native grasses, particularly the species, Redtop, he says. Cattle typically avoid it because it gets coarse and seedy in a hurry, but managing one-day moves through it at the right times to clip off the tops keeps the plants vegetative. In this way they have been able to graze these areas three or four times a year at high-density stocking rates.

The calves stay on the cows for the winter, bale grazing quality purchased hay in three-week paddocks. Adding the grassfed beef sales was just a matter of carrying their open yearling heifers over the winter and grazing them for the summer to put on the finishing fat layer.

The final product has been scrutinized by the butcher, the government inspector and many friends and relatives who give it two thumbs up for taste and tenderness.

The dos and don'ts of marketing learned from 10 years of horse sales gives them a head start on that end of the business, but they have every confidence that their product will sell itself. They firmly believe that beef is poised and ready to fill the demand for healthful fats to replace the overabundance of carbohydrates as an energy source.

For more information, visit the family's website, www.haganhorsesale.com. 🚕



## CAN FEEDING NITRATE **IMPROVE EFFICIENCY** AND REDUCE METHANE?



he rumen allows cattle to make highly nutritious beef out of things that humans can't even digest. Rumen microbes have digestive enzymes that mammals don't. This allows rumen microbes to break down complex feeds into very simple molecules, and reassemble those molecules into volatile fatty acids that the animal can absorb and use as an energy source. These microbes can also take some simple nitrogenbased compounds like ammonia and urea, turn them into amino acids, and assemble those amino acids into microbial proteins that the animal can digest and absorb. But the rumen can be wasteful as well. Some rumen microbes assemble carbon (C) and hydrogen (H) molecules together into methane (CH4) instead of volatile fatty acids. The animal can't absorb or use methane, so methane gets belched out. This can waste significant feed energy - methane is the main ingredient in natural gas, after all. If we can find a way to reduce methane production in the rumen, we may be able to further improve feed efficiency and shrink beef's environmental footprint at the same time.

A team of scientists led by Karen Beauchemin at Agriculture and Agri-Food Canada's Lethbridge Research Centre has been studying whether feeding nitrate can reduce methane production without risking nitrate poisoning (Journal of Animal Science 95:3700-3711 and 95:3712-3726). The theory is that the hydrogen (H) molecules in the rumen will attach to the nitrogen (N) molecule from the nitrate instead of carbon (C), thus producing ammonia (NH3) instead of methane (CH4). Then the rumen microbes can convert the NH3 into amino acids and microbial protein. This could reduce methane production while improving feed efficiency.

What they did: This team fed three different diets to 132 crossbred steers averaging 645 pounds in a backgrounding and finishing study. All three diets contained the same amount of crude protein, but the crude protein sources differed slightly. The control diet contained urea but no nitrate. Another diet replaced some of the urea with 1.25 per cent nitrate. The third diet contained 2.5 per cent nitrate. The nitrate was encapsulated for gradual release to give the rumen microbes a better chance of using it over time, rather than letting the nitrate be absorbed directly into the animal's bloodstream. The urea and nitrate supplements were mixed in with the grain and silage rather than top-dressed. The cattle were backgrounded (65 per cent corn silage, 25 per cent barley grain) for 91 days then finished (10 per cent corn silage, 80 per cent barley grain) for 150 days. A sample of 20 steers were used for methane measurements during both the backgrounding and finishing periods. Animal intake and weights, feed and blood samples, and carcass measurements were also collected.

What they learned: In measuring performance, dry

matter intake, growth rate and feed:gain were similar for all three groups during the backgrounding period. In the finishing period, the 2.5 per cent group ate slightly less than the other two groups but gained just as fast, meaning that the 2.5 per cent group converted slightly more efficiently than either the 1.25 per cent or control groups.

Methane production was highest for the control, intermediate for the 1.25 per cent and lowest for the 2.5 per cent nitrate group during the backgrounding period, but these differences were not statistically significant. No differences were seen during the finishing period either.

**Health:** Blood samples showed no evidence of nitrate poisoning, and no animals exhibited signs of nitrate poisoning during either the backgrounding or finishing periods.

Carcass traits and liver abscess scores were similar among groups. Nitrate levels in meat and organs were virtually undetectable, and far below the levels allowed when nitrate is used to cure meat products.

Feed sorting appeared to differ among the three groups. The urea and nitrate particles were small but similarly sized, so the percentage of large (e.g. silage), medium (e.g. rolled grain) and small (e.g. nitrate and urea) particles were similar in all three total mixed rations. But when weekly samples of uneaten backgrounding ration were collected from the bunk and analyzed, the 2.5 per cent diet contained a lower proportion of large and medium particles, and a greater proportion of small particles than the control and 1.25 per cent diets. In the finishing diets, the 2.5 per cent and 1.25 per cent diets contained a lower proportion of large and medium particles, and a greater proportion of small particles than the control diet. It looked as though the cattle may have been trying to avoid the nitrate, especially in the finishing diet.

What it means: Feeding nitrate didn't reduce methane production, but it may have improved feed efficiency with no adverse health effects. The apparent undesirable flavour of nitrate tastes may even be useful. An earlier study monitored feeding behaviour in individually fed cattle. Compared to cattle receiving no nitrate, cattle fed nitrate ate just as much, but they ate smaller meals, more often, and had more stable rumen pH. If further research demonstrates similar effects in group-fed cattle, perhaps nitrate can help manipulate feeding behavior, modulate rumen pH, reduce acidosis and help maintain liver health in feedlot cattle.

The Beef Research Cluster is funded by the Canadian Beef Cattle Check-Off and Agriculture and Agri-Food Canada with additional contributions from provincial beef industry groups and governments to advance research and technology transfer supporting the Canadian beef industry's vision to be recognized as a preferred supplier of healthy, high-quality beef, cattle and genetics. \*\*

Dr. Reynold Bergen is the science director of the Beef Cattle Research Council.

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he can't say she's surprised when people walk over and ask if the boss is around. After all the feedlot sector is dominated by male operators, but Andrea Stroeve-Sawa couldn't be prouder as the fourth generation to carry on the Shipwheel brand to say, "you're talking to her."

She admits that it was a little unnerving receiving her first load of calves to be custom fed for the natural beef market in fall 2015, shortly after taking over management of the feedlot at Shipwheel Cattle Feeders near Taber, Alta.

"I remember thinking I'm entirely responsible for these cattle and they aren't even mine," she says.

It's not that she was unfamiliar with the care of cattle and the land.

She was her dad's sidekick growing up. Blake Holtman established the 5,500-head feedlot after purchasing Shipwheel Ranching from his father, Billy Holtman, in 1973, but it was her dad's planned grazing system for yearling cattle that intrigued her the most. He started setting up three cells with 65, 10-acre paddocks in all after making a trip to Texas in 1980 to take the first Holistic Resource Management course put on by Allan Savory.

She went on to earn her diploma in agriculture from Lethbridge College and her interest in the feedlot side grew as she worked with her late husband, Eddy Stroeve, at his family's feedlot near Picture Butte, Alta. The passion for what they had been working toward together dwindled after his accidental death as she tried to pull her life together caring for their two small children.

Her future started to become more clear the more intent her dad became on retiring. He had already leased out the feedlot and was looking to sell or lease the land as well.

"I was worried what would happen to everything he had worked so hard for — the productive grassland and riparian areas, the habitat for wildlife — and the memories — the row of trees I had walked though every day from the house to the feedlot, my treehouse. It would probably all be plowed under for crops. I decided to go back to my roots and begin a new journey at Shipwheel. I didn't want to get 20 years down my path in life and regret not taking this opportunity," Stroeve-Sawa told her audience at the 2017 Holistic Management Conference.

With a transition plan in place, she took

on management of the grazing program in 2013 and continues to manage 400 to 600 yearlings with daily moves, breaking the 10-acre paddocks into thirds to get a more even graze during times of fast forage growth. The goal is to leave one-third of the plants after the final graze to build the organic layer over the sandy soil base.

The Holistic Management planned grazing strategy has underpinned the success of the grazing program and that year she set out to quantify it. Digging into her dad's grazing records dating back to 1982, she was amazed to discover that they were successfully stocking cattle at six times the ecologically suggested stocking rate for their land in their area on their soil type.

The records show that stock days per acre on dryland cell 2, for example, have steadily increased from 2.36 in 1982, to 23.7 in 1985, to 45.1 in 1995, and 93.5 in 2015. The trend is similar on irrigated cell 4, added in 1986 by converting a corn silage field to a multi-species forage pasture, where stock days per acre have increased from 6.9 in 1987, to 16.9 in 1990, to 90.8 in 2003, to 105 in 2013.

Composting is a relatively new venture

her dad established after taking a course from Neil Kinsey in Missouri. It is proving to be a good fit for Shipwheel because there are lots of high-value crops grown in the local area and fewer feedlots than in some areas where feedlots can make use of the manure for growing their own field crops.

The composting process begins with pen cleanout at the end of May when the manure and bedding is piled in windrows on a clay pad designed for this purpose near the feedlot. The key to creating a valuable product is controlling the conditions (optimum combination of organic feedstocks, aeration, turning frequency, temperatures and time) to enhance the natural decomposition that converts organic material into a humus-like end product. By August, the 6,700 tons of fresh manure have been reduced to 3,400 tons ready for sale, mostly to repeat customers.

In a holistic context, her decision to return to Shipwheel offered the quality of life she wants, and she can describe how she would like the resource base to look in her time and to support that quality of life for generations to follow. What she struggled with was the forms of production, namely what to do with the feedlot as the end of the five-year lease drew closer.

It did have its place because she knew that removing it from the landbase would have consequences for the sustainability of the farm as a whole. It filled a need for a winter enterprise and fit with her quality-of-life goal to not work off the farm.

As fate or fortune would have it, a customer who wanted to feed cattle without added hormones or antibiotics approached her.

"It seemed like a challenge that would require skills and creativity. That really appealed to me. I knew with our focus on individual animal care, stockmanship and high-quality feed we could do this," says Stroeve-Sawa.

In the bigger picture, it was about choice — her choice to differentiate her smaller-sized feedlot and step away from competing for cattle with the bigger feedlots, and her desire to provide one group of consumers with their beef of choice.

"We need to connect with consumers on a personal level. Let's tell them about the good beef we raise. It doesn't matter if it's natural, grass-fed or conventional. Let's work together as an industry to do our very best to raise the very best beef in the world. We know that we can," she urges.



The pens and feed mill underwent a major overhaul, topped off by a new processing barn that offered plenty of natural light and a Bud-box handlng system when Andrea took over the feedlot im 2015.

#### MANY PIECES TO THE PUZZLE

After she took back the feedlot in the summer of 2015, the pens and feed mill underwent a major overhaul, a new processing barn with lots of natural light and a Bud-box handling system was put up and employees were hired all before the first set of calves arrived at the beginning of October.

Her first, and greatest, challenge in those first few months was finding the right people after the initial crew left her in the lurch more than once.

Fortunately, she attended an Alberta Cattle Feeders Association's workshop led by the Canadian Agricultural Human Resource Council that winter where she learned about refining the interview process to get a better grasp on whether the person would be a good match for the job and her vision and values.

It didn't take long to realize that she was looking for people with a work ethic like her husband, Trevor Sawa, whose career was in the construction trades. With next to no background in cattle, he agreed to join the Shipwheel team and soon became passionate about stockmanship.

She adds, Shipwheel will always be thankful for the weeks the late Bud Wil-

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liams spent at their place in the early 1990s teaching people about proper stockmanship and low-stress handling of cattle, making the job low-stress for people, too. That training continues to this day with, for example, a workshop by Dylan Biggs this past summer.

"What we do is challenging, raising cattle with no antibiotics, but there are many people in my fold helping make us successful in what we are doing," she says.

Aside from Trevor and her crew, Andrea's dad, remains on standby as her No. 1 mentor.

Then there's their veterinarian and nutritionist. Both are trusted long-time friends who've been invaluable in helping them achieve their goal of focusing on the immune system of the cattle. The veterinarian provided alternative treatment protocols relying on vitamins, probiotics and other immune-boosting products instead of going to antibiotics on the first treatment. Their nutritionist ensures they use quality ingredients and incorporate unique supplements to ease the transitions through the feeding period.

Along the way colleagues in the grazing and feeding sectors, as well as their customers, have offered practical advice based on their experience feeding cattle for the natural or conventional market.

Shipwheel's conventional cattle are managed very similarly to the cattle in the natural beef program, she adds.

One of the keys to the success of their natural beef program are pre-vaccinated ranch-direct calves that are drawn from

nearby ranches, and co-ordinated delivery schedules that limit new arrivals to 700 per week during the fall run.

This gives the incoming calves time to acclimate to their new surroundings. The process is described well in a video she uses as a resource that is part of the Creating Connections training modules by Merck Animal Health (www.creatingconnections.info).

"Acclimating applies to the whole herd because cattle prefer to move as a herd. It's our job to gain the herd's trust by our proper posture, position and distance. People relieve stress by going for a walk and cattle do, too, but they need to move as a herd. When cattle have gained confidence in us as caregivers we are able to actually take them for a walk through the pen to relieve stress and place them at the bunk and at the water bowl," Stroeve-Sawa

"We have found that acclimating new animals to the yard is the most important job we have in that first seven to 10 days after arrival to break the negative cycle of stress," she says. The cycle starts with whatever stresses cattle enough to cause the blood cortisol level to rise — weaning or transport being two prime examples. The increase in cortisol depresses the immune system giving pathogens the upper hand, in turn causing sickness and weight loss that adds more stress to perpetuate the

Records from the past two years for the natural beef program show the importance of this acclimation period.

The first winter, about 38 per cent of the fall calves fell out of the program because of conditions that required treatment with antibiotics for animal welfare reasons, but the death loss was only 0.5 per cent.

That first experience gave them some insights that led to changes in their feeding program and treatment protocols for the second year. In addition to having a great team in place by then, they spent about 20 minutes at a time for a total of about 24 hours in each pen during the first week until the calves grew comfortable with their new environment.

Even though the second winter was harder weather-wise, the dropout rate from the natural program slipped to 6.2 per cent. Alternative treatments saved an additional 4.0 per cent from having to move to the conventional pens.

These results were even more significant when she discounted one pen of 500 calves that were highly stressed at arrival. They walked the fencelines like zombies, eventually broke down with IBR and the crew had to intervene with intranasal vaccines and finally an antibiotic for about 20 per cent of them.

When she removed those 500 head from the calculation, the overall dropout rate fell to 2.6 per cent, and the death loss dropped from 1.2 to 0.7 per cent.

"Acclimating takes time and commitment. It all comes back to the people. They are so important in this. Everyone has to be on board working toward the same goal because one person can walk into a pen and undo everything," Stroeve-Sawa says.

For more information on their operation, visit www.shipwheelcattlefeeders.ca, follow them on Facebook, Instagram and Twitter, or call 403-223-4333.





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GRAZING By Steve Kenyon

## DEALING WITH THE MOB

healthy soil is an incredibly complex ecosystem that we know very little about. There are millions and millions of interactions that occur within our soils. It is more complex and busier than a bookie in Vegas on fight night. I call this My Secret Underground Black Market and it is controlled by the plants. Let's just call them the Mob! How does this mob of plants control the black market? It is because they produce and control all of the currency. Everyone in the soil wants sugar. Sugar is the currency, the sustenance of life and it is only produced by plants. There are millions of soil organisms that constantly broker deals with the mob in the quest to get sugar.

Every critter in the soil needs it. As an example, we all know legumes are plants that are known to produce nitrogen. It is not actually the plant that acquires the N. There is a type of bacteria that works with the different types of legumes and forms nodules on their roots. It is the bacteria that gets the N from the air and then trades a molecule of N with the plant in return for a molecule of sugar — a fair trade all around.

I do not have enough time or knowledge to get into all of the different critters and all of the different interactions. It is incredibly

complex. I would, however, like to single out one other critter that we have in our soil that does not get enough recognition for all of its hard work.

Mycorrhiza fungi is the mob's No. 1 man. It is in charge of transportation and distribution. This fungus sets up a system of arbuscules which are like root hairs that can extend the reach of the plant's root system up to 1,000 times. In exchange for sugar, this fungus can transport nutrients directly to the plant's root system. It acts like a system of root extensions that help to gather the needed nutrients. This is truly a symbiotic relationship benefiting both parties and it only works if both sides do their part.

Every plant is approximately 45 per cent carbon, 45 per cent oxygen, six per cent hydrogen and 1.5 per cent nitrogen. And 97.5 per cent of that comes from the air. (So why is it that we add nutrients?) Only the remaining 2.5 per cent needs to come from the soil. Nature has had this figured out long before we came along with soil amendments.

This is where our mycorrhiza fungi comes in. It spreads though the soil and gathers everything else. It actually has the ability to decompose stone and extract micronutrients from it for the plants. This

is the ultimate courier in the black market system. Whatever the plant needs, the mycorrhiza fungi can get it.

If one arbuscule of the mycorrhiza runs out of nutrients in its location, the plant will cut off its supply of sugar and let it die, and send sugar to other arbuscules that are bringing in supplies. There is no free ride when dealing with the mob.

There are four big benefits that we get as ranchers from this symbiotic relationship. Obviously, with a continuous supply of nutrients, we will get more yield from our pastures without the added cost of supplying fertilizers. More growth with less cost is always good for the bottom line.

Second, the hard-to-get phosphorus is released by the fungus. Phosphorus is usually bound up in the soil and is unavailable for the plants. Our friendly neighbourhood fungus comes to the rescue and can broker a deal for the rare commodity, a win for us ranchers.

Our third benefit is drought resilience. When the times turn dry (and the soil gets hit with prohibition laws), the small plant root system can no longer reach its favourite drink. So our extensive network of fungus starts supplying water to the mob. There is nothing they will not do in the quest for sugar.



I like to see mushrooms in my pastures as that is a sign to me that my mycorrhiza is also functioning.

#### **GRAZING**

This underground black market will always find a way. If you think about it, it is a life or death situation. If the plant can't get water, it stops handing out sugar. Without sugar, our fungus will die so it is pretty important all around that this symbiotic relationship stays strong. We all know that one-sided relationships never last.

Mycorrhiza fungi is also the enforcer.

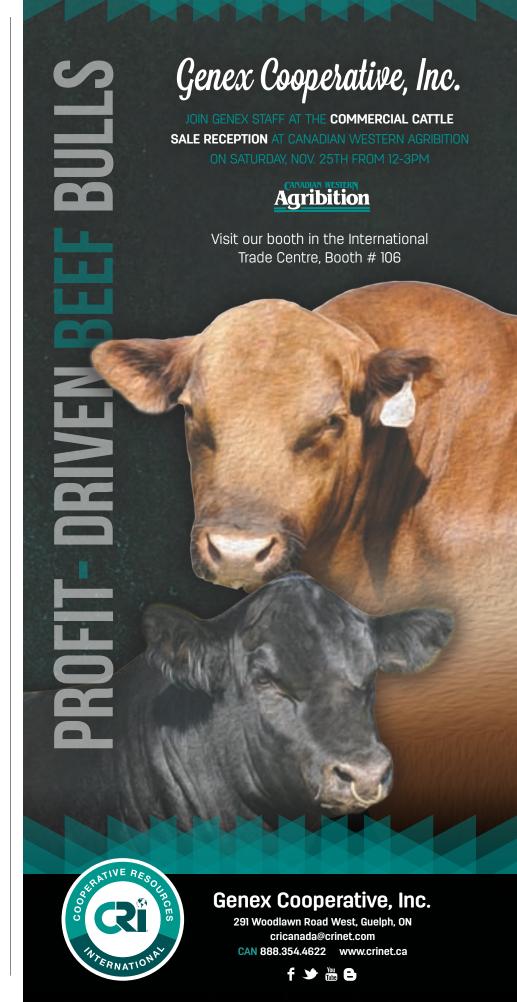
The fourth benefit that we receive is disease resistance. This tough guy for the mob helps to fight off a variety of diseases and pests that can be detrimental to the plants. They strengthen and protect the mob from bad guys. It can also transport information to other plants warning them about an incoming disease and the next plant over will start building up resistance before the parasite or disease even reaches it. So not only is the mycorrhiza fungi the highway it is also the internet of the soil web sending information back and forth. Talk about your world wide web!

Here is the kicker. If the plants are weak, they can't spare any sugar. With no sugar there is no fungus. The system fails. All the more reason to maintain healthy pastures. An overgrazed pasture has a poorly functioning black market. This is why there is more mycorrhiza fungi present in rotationally managed pastures than in continuously managed ones; the stronger the plants, the stronger the fungus. So be sure to plan for short graze periods and long rest periods. Remember, this black market depends on you.

What do you think would happen if you added in chemical fertilizer to the mixture? The plants get excess nutrients for free so the fungus is out of a job. The black market is disrupted and the fungus dies. Then when the drought hits, who is there to supply the plants with the hard to reach moisture, or the other needed micronutrients? What happens when you then stop supplying the fertility? How about if a fungicide is added to the system? I think you get my point.

This secret underground black market it pretty important to our pastures. This is just one example of the many trade deals brokered by the mob. There are millions of interactions that occur beneath our feet that we are completely unaware of. Take care of your black market. The survival of the whole system depends on it.

Steve Kenyon runs Greener Pastures Ranching Ltd. in Busby, Alta., www. greenerpasturesranching.com, (780) 307-6500, email skenyon@greenerpasturesranching.com or find them on Facebook.



**MANAGEMENT** By Lee Hart

## **GET COWS AND HEIFERS READY FOR WINTER NOW**

No matter your feeding system, have your breeding animals in good condition before the snow flies

If cows and heifers aren't there already, there is a short window to get them into a proper body condition for winter.

If you have skinny or poor condition cows heading into winter, that December to March period is probably one of the toughest and most expensive times to try to get them back into condition, say researchers and ranchers alike. And if they are on the poorer side heading into calving, then calving difficulties can increase resulting in weaker and low vigour calves. After that, the costs and management mount trying to get those mothers back into condition for the approaching breeding season. This is particularly an issue for first- and second-calf heifers, that themselves are still growing, never mind trying to meet the requirements of a new nursing calf. Cattle are in a catch-up position and it's very difficult to get caught up.

While there has been plenty of research done over the years, and there are still many questions to be answered, the take-home message is to have cows and heifers in a good body condition score (BCS) heading into winter. If you use the actual scoring system — the five-point Canadian BCS system recommends cattle be in the 2.5 to 3 score range, and on the nine-point American BCS it's about five. There are several good websites that demonstrate proper techniques for condition scoring (www. beefresearch.ca/research/body-conditionscoring.cfm#tool).

And even if you don't do the hands-on, palpated type of body condition scoring, just having a good look at cattle this fall on pasture will provide a good visual assessment of whether some remedial feeding action is needed. If you are relying on a visual scoring, however, make sure a heavy hair coat on animals isn't providing misinformation.

#### LOW CONDITION, HIGH COST

The economic impact of heading into winter, calving and next year's breeding season with cattle in low to poor condition

is considerable. Some U.S. research comparing cattle with the mid-range (recommended) body condition score versus a low body condition score, showed the mid-range cattle had 10 per cent more live calves, calf weaning weights the next fall were 26 per cent higher, and the pregnancy rate among mid-condition cows came in at 92 per cent versus 79 per cent for lower condition females.

Research at the University of Alberta's Ellerslie research station from a few years ago showed it costs more to feed low condition cattle over winter. To move a condition score from two to a three requires about 200 pounds of gain for a 1,450-pound cow, 240 pounds of gain for the same change in an 1,800-pound cow or about 160 pounds of gain for a 1,200-pound cow. On a cost basis, at the time of that study, feeding that lower condition animal to gain 200 pounds cost 42 to 85 cents more per head per day than a good condition cow. Again, that research found it took 20 days longer for the thin cows to come into estrus at breeding time and conception rates were 20 per cent lower. If cows drop even one condition score (go from a BCS of 3 to 2) over winter, the calf crop is reduced by 30 to 35 per cent the following year. Each loss carries a price tag.

So how do you manage against that?

The fall is the most economical time to get cattle into proper condition heading into winter, says Hushton Block, a researcher with Agriculture and AgriFood Canada in Lacombe, Alta. Block, a specialist in beef cattle nutrition and growth, says at weaning the cow's nutrient requirement is about at the lowest point in its production cycle. The calf is weaned and the bred cow (expected to calve in March) is several months away from calving.

"Even low- to moderate-quality pasture or hay will pretty well maintain an animal at this time of year," says Block. "So providing some good-quality hay, or some screenings or a bit of grain will start to put weight on animals." The actual supplement used should be based on a feed analyses for



**Hushton Block** 

deficiencies in the base diet and least-cost nutrient formulation.

Block's approach is to put weight on cattle — improve body condition score — when it is easiest and at the least cost. "Winter is the most expensive feeding period of the year," says Block. "So it's not the time to be trying to put weight on cattle. Summer and fall pasture is the least expensive. Feed costs are relatively low and it is the easiest time for the cow to put on weight."

He suggests there "might be some economic advantage" for producers to aim at bringing cows and heifers into good, perhaps even slightly over condition, heading into winter and then if feed supplies and quality are limited over winter, the animal can afford to lose a bit of condition. It's a fine line. "The cow still needs to be in good or proper condition for calving and through to breeding," he says. "But if she

Continued on page 38



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comes into winter in top condition there might be some room for her to lose just a bit of condition and still be able to deliver a calf and rebreed." It may help to trim over winter feeding costs.

Properly managed, he says the cow's condition can dip a bit over the winter feeding period, and then when lower-cost spring, summer and fall pasture comes along, put the condition back on.

"The overall objective is have cows in a good body condition score so they can calve, rebreed and stay in the herd," says Block.

# **EXTENDED GRAZING NEEDS** TO BE MANAGED

But maintaining cows and heifers at a body condition score of about 2.5 to 3 over winter - so they can calve and later recover to rebreed — doesn't mean producers have to avoid extended grazing systems, says Bart Lardner, senior research scientist at the Western Beef Development Centre (WBDC) in Saskatchewan.

"Sure the risk is there that cattle can lose

condition on swath, bale grazing and other winter feeding systems," he says. "But it is also quite manageable. You have to apply the proper management, but there is no reason these systems can't work, maintain cattle in good body condition and, in fact, we have seen situations where they actually gain weight while winter grazing."

Lardner says the first step, whether it be with barley, oats, triticale swaths, for exam-



**Bart Lardner** 



ple, bale grazing or corn grazing, is to have a feed test analysis completed before cattle start grazing, so producers know if there are any limiting quality factors.

"If you don't trust the quality of that feed stuff, then you could be in a deficient position," says Lardner. "So have it tested." Many forages saved for winter feed might look good but they could be low on protein, or they could be low on energy, which is particularly important heading into those coldest days of winter, he says. So know your feed quality and be prepared to provide a supplement if key nutrients are lacking.

He says also remember cows and heifers need to be on a higher plane of nutrition during the last trimester of pregnancy. "If you have different qualities of stockpiled feed put them on the lowerquality feed, such as straw or chaff, earlier in the winter grazing period and then switch them over to higher-quality feed as they approach calving.

He also recommends first- and secondcalf heifers be fed separately from mature cows. Those heifers have higher nutri-

ent requirements than mature cows so it is important their winter feed is meeting those requirements. "Sometimes producers will manage those replacement heifers really well from weaning until the time they are bred, and as soon as they have that first calf they get moved into and managed with the cow herd," says Lardner. "But that heifer herself is still growing so has higher feed requirements. She needs to be managed properly right through until that second calving. Producers have a lot invested in these heifers and they need to be managed properly."

Lardner did caution against babying replacement and first-calf heifers in a drylot with high-quality feed. He says don't be afraid to put them out on swath or corn grazing or bale grazing with supplements as needed. They can do very well with a well-balanced swath grazing ration, and then become very efficient animals later in the cow herd.

In WBDC research, studies have evaluated all types of extended fall and winter grazing systems. They found cattle did well on all systems, noting in some trials they actually gained weight on winter corn grazing. Producers need to watch as corn protein levels can be low. A low-protein feed can be a concern during the coldest stretches of winter grazing, especially as the pregnant cow nears calving. "Again, it is the importance of a feed test to know the protein and energy density of the feed stuff whether it be corn or a cereal swath," he says. A good mineral supplement should also be provided through the entire year.

In a recent WBDC winter grazing trial, with good-quality feeds, two groups of mature cows did equally well on barley swath grazing and corn grazing compared to a third group fed in a dry lot.

Cows in all three systems were able to maintain a body condition score in the 2.6 to 2.7 range. "Any negative effects on cow reproduction (pregnancy rate) occurs only when the BCS drops below 2.5 during the pre-calving and pre-breeding periods," says Lardner.

The Beef Cattle Research Council has good information as well as videos explaining and showing the proper technique for body condition scoring at www.beefresearch.ca. \*\*



# **ERGOT POISONING:** AN ANCIENT SCOURGE REMAINS A PROBLEM IN MODERN RATIONS

he negative impacts of ergot contamination in food were recognized as early as the fifth century AD. Ergot, a plant parasite, commonly affects rye grass, but wheat, rye, barley, oats, brome, fescue, blue, timothy, western and intermediate wheatgrass and other grasses can also be infected. Environmental conditions associated with a cool wet spring followed by hot early summer temperatures are ideal for the ergot fungus to proliferate. Delayed harvesting of grass hay because of rain also means that late-cut hay may also be at risk of ergotism. The fungus invades plant flowers when young and induces cells to divide abnormally, creating large brown, hard sclerotia that allow the fungus to survive adverse conditions like winter and desiccation. The sclerotia fall to the ground, overwinter, and germinate in the spring, producing spores to continue the life cycle. Extended periods of increased moisture and cold during flowering promote the development of ergot in cereal crops. When the sclerotia inadvertently get mixed with grains and incorporated into food, they cause ergotism in humans and livestock. Although ergotism is now rare in humans, cleaning contaminated grain concentrates ergot bodies in screenings used as livestock feed.

Ergot is found worldwide. Ergot alkaloids (toxic components) are produced by a group of fungi of the genus Claviceps. Even low concentrations of alkaloids in the diet (<100 ppb total) can reduce feed efficiency. Allowable limits for ergot in livestock feed, often determined by the number of ergot bodies or total levels of alkaloids, are confusing and often fail to reflect the true degree of toxicity. Current recommendations on safe levels of ergot in feeds are unreliable. Increasing concentrations of ergot in feed grains pose a challenge.

In 2011, an estimated 20 per cent of the wheat produced in Western Canada showed some degree of ergot infestation. Climate change models predict increased concentrations of ergot in Canadian cereal grains in the future. Susceptibility of grains to ergot (from most to least) include rye, wheat, triticale, barley, and oats. Though ergot reduces yields by five to 10 per cent, the reduction in quality grade accounts for the majority of economic loss.

Unlike other mycotoxins formed post-

harvest as a result of spoilage during storage, ergot only forms pre-harvest, with concentrations of alkaloids remaining relatively constant during storage. Toxic principles do not appear to degrade over time. Distiller processes used for ethanol production retain and concentrate ergot alkaloids.

#### **CLINICAL SIGNS**

Clinical symptoms are highly variable and can appear in as little as a few hours, or may require months to develop. Differences in physiological response to the type and concentration of alkaloids account for the variability and frequent misdiagnosis of ergot toxicity. Symptoms of ergot toxicosis often resemble other conditions, like foot rot, frostbite, and respiratory disease. Toxic levels of ergot in growing and finishing livestock rations affect performance, which may not become apparent for six to eight weeks after contaminated grain is introduced.

Classic signs of ergot poisoning are produced by the effect alkaloids have on peripheral circulation. Sustained intake of ergot causes vasoconstriction, or shutting down of blood supply to the extremities. Over time, poor blood supply to peripheral areas causes gangrene and sloughing of the tail, ear tips and hooves. Blood-starved extremities freeze in cold weather. Gangrenous signs can also appear in hot weather when thermoregulation to extremities is impaired.

Other clinical symptoms may include:

- · Altered endocrine function.
- Staggering, convulsions and muscle spasms.
- · Lack of rigor mortis at slaughter.
- Decreased reproductive performance.
- · Abortions.
- · Feed refusal.

Outside the classic signs of vasoconstriction, symptoms caused by ergot can be vague. Things like heat stress, reduced growth, and feed refusal are a challenge to diagnose. With no universal standard for the safe concentration of ergot in feed, producers must exercise caution with potentially contaminated feed sources, especially grain screenings into feeding programs.

While some livestock tolerate greater concentrations of ergot in feed, potential tissue residues could become an issue. With the prevalence of ergot increasing from 0.01 per cent in 2002 to 0.025 per cent in 2014 (Western Canada), it is evident that monitoring ergot will become more essential for the safety of both livestock and humans.

There seems to be no clear answer to how much is too much. In the view of some nutritionists, the ergot limit for pigs is zero. For all other species, the maximum limit is one kernel per 1,000 or 0.1 per cent by weight (10 ergot bodies per litre of grain). Some feed mills will not accept grain deliveries with ergot levels above 0.04 to 0.06 per cent (four to six ergot-infected kernels per litre of grain). The risk associated with selling contaminated complete feeds and pelleted rations is high.

If swath grazing, there is no easy way to assess the degree of ergot infestation. Producers need to evaluate swaths on a caseby-case, field-by-field basis, pulling swaths apart, calculating how much ergot is present and making a judgment call. If swaths look like they contain borderline toxic levels of ergot, dilute the feed with ergot-free forage.

Unfortunately, there is no silver bullet. Things that help include:

- Use of certified seed with low levels of ergot.
- · Cleaning grain.
- · Control of grasses growing along headlands or roadways adjacent to fields.
- · Blending feeds.
- Harvest and bin headlands separately.
- · Harvesting grain as soon as practically possible, especially when ergot is visually detected.
- Areas highly susceptible to ergot should be harvested as forage prior to heading.
- · Crop rotations between cereals and broadleaf crops like canola.
- Understanding risk and discussing options with a veterinarian.
- Feed testing (Ergovaline assays Oregon State University).

Minimizing the economic losses caused by ergot contamination is complex. Climate change favours ergot-producing fungi and as regulations for human food become stricter, managing ergot-contaminated grain will get more complicated. \*\*

Dr. Ron Clarke prepares this column on behalf of the Western Canadian Association of Bovine Practitioners. Suggestions for future articles can be sent to Canadian Cattlemen (gren@ fbcpublishing.com) or WCABP (info@wcabp.com). Beef Watch is prepared by the staff of Canfax and Canfax Research Services, divisions of the Canadian Cattlemen's Association



▶ The Canadian beef cow herd remained steady on July 1, 2017. The beef cow culling rate is in line with the long-term average, but heifer slaughter is up. The feedlot sector saw impressive profitability in the first half of the year but is also facing larger price risks due to swings in fed cattle prices. Good feedlot profitability has been supporting the feeder market. Feeder prices have been generally running above year-ago levels in the second and third quarter. While cow-calf profitability remains positive on average, it does not appear to be encouraging any substantial heifer retention.

#### **CATTLE INVENTORIES**

#### CANADIAN HERD STEADY

Canadian cattle inventories on July 1, 2017, were steady at 12.95 million head, marking the sixth year of consolidation.

Beef cow inventories were up 0.5 per cent at 3.797 million head. This is the second year with a slight increase. following the 0.6 per cent increase last July. Regionally, beef cow numbers were up in the Atlantic provinces (+4.6 per cent), Manitoba (+2.8 per cent), Saskatchewan (+2.2 per cent), and Ontario (+1.6 per cent); but down in Alberta (-0.5 per cent), Quebec (3.8 per cent), and British Columbia (-3.9 per cent). Some of the rebound in Ontario may be a result of improved pasture conditions after dry conditions last summer.

Beef heifers for replacement were up 0.6 per cent at 673,200 head, to be the highest since 2006 and up 5.0 per cent from the five-year average. Heifer retention was up in the Atlantic provinces (+4.8 per cent), Ontario (+4.4 per cent), Manitoba (+1.6 per cent), Saskatchewan (+1.3 per cent), and Quebec (+1.4 per cent), but down in Alberta (0.5 per cent) and British Columbia (-3.1 per cent). Breeding heifer numbers for July 2015 and 2016 were both revised to be up 4.3 per cent. The revisions show that breeding heifer inventories have been increasing since 2015, with a 4.0 per cent per year growth rate, which slowed down to 0.6 per cent in 2017.

Slaughter heifer numbers were the only category that declined. They were down 5.0 per cent to one million head, to be the lowest level since 1999. The July 1, 2016 slaughter heifer inventories were revised 12 per cent or 147,000 head lower from 1.20 million head to 1.06 million head

The number of calves was up marginally by 0.2 per cent at 4.21 million head. A steady calf crop and a 43 per cent or 104,000-head decline in feeder cattle exports from July 2016 to June 2017 is anticipated to increase fed cattle marketings in 2018. According to the Canfax Cattle on Feed report, Alberta and Saskatchewan feedlot placements from January to August this year are 19 per cent higher than 2016 and 8.0 per cent higher than the five-year average. The September 1 on-feed inventories were up 5.0 per cent from 2016 but only slightly higher than the five-year average.

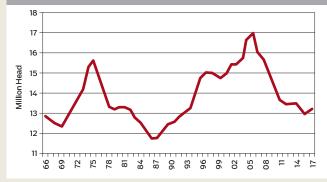
Dairy cow inventories were up 1.6 per cent to 945,000

head, back to the 2014 level. For the last 30 years, dairy cows have decreased on average 2.0 per cent per year as productivity advancements have resulted in fewer cows needed to fill the quota. The increase in inventories was due to additional quota being made available over the last several years. The implication is potentially larger supplies of dairy calves for finishing in the future if this trend continues.

CANADIAN CATTLE INVENTORIES JULY 1 (1,000 HEAD)					
	2016	2017	2017 versus 2016		
Bulls	226.5	226.9	0.2%		
Beef Cows	3,777.0	3,796.7	0.5%		
Dairy Cows	930.3	945.0	1.6%		
Dairy Heifers	447.4	454.3	1.5%		
Beef Heifers (breeding)	669.3	673.2	0.6%		
Beef Heifers (slaughter)	1,055.3	1,002.1	-5.0%		
Steers	1,624.2	1,638.3	0.9%		
Calves	4,205.0	4,213.50	0.2%		
Total	12,935.0	12,950.0	0.1%		

Source: Statistics Canada

# CANADIAN TOTAL CATTLE AND CALVES JULY 1



Source: Statistics Canada

#### **U.S. INVENTORIES LARGEST SINCE 2010**

Total U.S. cattle inventories on July 1, 2017, were 102.6 million head. As there was no July 2016 inventory report issued, yearover-year comparisons are unavailable. Compared to 2015, total inventories on July 1, 2017, were up 4.5 per cent to be the largest since 2010. The beef cow herd at 32.5 million head was up 6.6 per cent from 2015. Breeding heifer inventories at 4.7 million head were down 2.0 per cent from 2015, but remain the second-largest breeding heifer inventory since 2007. While breeding heifer inventories remain large, they imply a move towards a slower rate of expansion.

The 2017 calf crop is estimated at 36.3 million head, and is the largest calf crop in the last 10 years. Compared to the 2014 low, the U.S. calf crop has grown by almost

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2.8 million head. Feeders outside of feedlots are up 4.5 per cent from two years ago at 37 million head, to be the largest since 2010. The calf crop and feeder cattle supplies will drive larger slaughter and beef production over the next two years.

# **CYCLE INDICATORS**

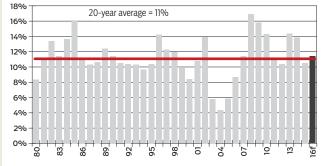
# **CULLING RATES IN LINE** WITH THE LONG-TERM AVERAGE

Cow slaughter is up 16 per cent from January to September, but exports are down 31 per cent, leaving cow marketings down 0.7 per cent year to date. The beef culling rate is estimated at 11.15 per cent. This is slightly down from 11.5 per cent in 2016, and in line with the long-term average of 11 per cent.

Alberta D1,2 cow prices are currently down 29 per cent from the record highs made in 2015, but prices have been running above year-ago levels since April, and above the five-year average since March. Steady cow inventories in Canada and reduced beef imports from Australia this year have been supporting the cow market.

Alberta has traded at a premium to the U.S. market since 2015. The price spread has widened from \$5/cwt in 2015 to \$15/cwt so far in 2017. Higher prices in Canada combined with increased U.S. cow inventories is expected to discourage cow exports.

# ► CANADIAN BEEF COW CULLING RATE



Source: Canfax Research

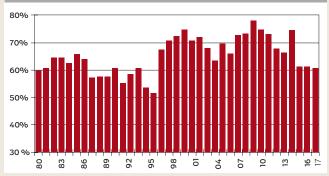
# **HEIFER SLAUGHTER RATIO UP**

Heifer slaughter ratio, also known as the heifer:steer ratio, is at 63 heifers for every 100 steers, compared to 61 in 2016 and the 20-year average of 69. The year-over-year increase in heifer slaughter ratio indicates that a smaller proportion of heifers are entering the breeding herd.

The higher heifer slaughter ratio in 2017 is mainly driven by a larger proportion of heifers in the slaughter mix. From January to September, heifer slaughter was up 9.0 per cent, while steer slaughter was only up 2.0 per cent. Total feeder exports were down a significant 37 per cent in the first nine months, but the percentage of heifers were up from 61 per cent to 76 per cent, leaving feeder heifer exports only down 19 per cent. The larger proportion of heifer slaughter and feeder exports were partly offset by fed exports as slaughter heifer exports were down 2.0 per cent, while slaughter steer exports were up 18 per cent.

From January to August, heifer placements as a percentage of total placement were down from 42 per cent in 2016 to 39 per cent. However, due to larger total placements this year, the number of heifers placed on feed is up 17 per cent from a year ago.

# CANADIAN HEIFER SLAUGHTER RATIO



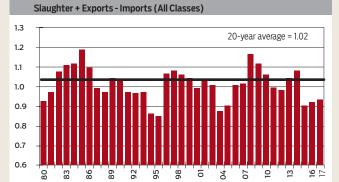
Source: AAFC, CBGA, Canfax, Stats Canada

#### FEMALE:MALE DISPOSAL RATIO

The female:male disposal ratio, which measures the number of females (heifers and cows) disposed for every male (steers and bulls), is the best indicator of whether the herd is declining or growing. Generally speaking, the more the ratio declines below 1:1 the more rapidly the beef cow herd expands, and conversely the further the ratio rises above 1:1 the more rapidly the beef herd contracts.

In 2017 the female:male ratio is at 0.93, slightly up from 0.92 in 2016. The higher ratio comes mainly from larger heifer marketings, while cow marketings are down. Although the current female:male ratio is lower than the ratio seen in the previous expansion year when it was 0.94, the year-over-year increase indicates that the Canadian beef cow herd remains stagnant.

# CANADIAN FEMALE MALE DISPOSAL RATIO



Source: AAFC, CBGA, Canfax, Stats Canada

# PRICES AND PROFITABILITY

# FED CATTLE PRICES AND CUTOUT VALUES

After seeing a strong spring rally, Alberta fed steer prices dropped 25 per cent from the annual high of \$178/cwt in May to \$133/cwt in September; which is only \$2/cwt or 1.5 per cent higher than last year's annual low seen in September, and is \$5/cwt or 4.0 per cent lower than the 2012-16 average.

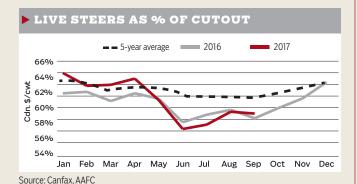


According to the Canfax Cattle on Feed report, Alberta and Saskatchewan cattle marketings were 9.0 per cent to 21 per cent higher than year-ago levels from May to August. Ample supplies have been pressuring fed cattle prices. Feedlots were placing cattle aggressively from February to August with monthly placements ranging from 5.0 per cent to 65 per cent over last year. Placements in August were up 56 per cent, which is the biggest August placements since 2013. September 1 cattle-on-feed numbers were 5.0 per cent higher than a year ago. This is expected to keep marketings large moving into the fourth quarter.

Cutout prices have been trending seasonally lower after a sharp spring rally. The monthly AAA cutout peaked at \$309/ cwt in June before dropping 21 per cent to \$243/cwt in September to be in line with year-ago levels. The AA cutout peaked at \$284/cwt in May, before falling 17 per cent to \$235/cwt in September, also in line with a year ago.

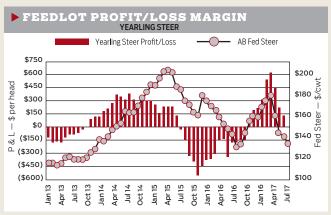
The fed price as a percentage of the AAA cutout is an indicator of feedlot leverage with the packer. It made a low last year of 53 per cent in June and revisited 54 per cent in September before rebounding in the fourth quarter as carcass weights got more current and feedlots regained leverage. This year, feedlot leverage was strong in the first quarter with lighter carcass weights, but deteriorated since then due to ample supplies and made a low of 52% in June. The ratio has rebounded to 55 per cent in August and stabilized in September. The five-year average has a 3.0 per cent improvement from September through December. This is substantially smaller than the 8.0 per cent seen last year.

As on feed inventories remained large, carcass weights will be a key factor affecting packers leverage in the fourth quarter. Steer carcass weights in early October were nine lbs. lighter than a year ago, but this has significantly narrowed from the 30-40 lbs. gap seen in the summer. As carcass weights close in on 2016 levels, there is potential of more sideways movement in fed cattle prices as feedlot leverage is pressured. Look for demand, domestic and international, to be the driving factor of fed cattle prices in the fourth quarter.



# **IMPRESSIVE FEEDLOT MARGINS AND PRICE RISKS**

Feedlot profitability improved significantly in the first half of 2017. The Canfax Trends report shows that the margin for a yearling steer marketed in June was estimated at above \$600/head on a cash basis, which is stronger than the profit levels seen in 2014-15 when prices peaked. However, it should be noticed that the projected margin for September is estimated at -\$6/head.



Source: Canfax Trends

Despite good margins in the summer, feedlots are facing significant price risk due to the big swing in fed cattle prices. A 25 per cent drop from May to September equates to a \$628/head change in the value of a fed steer (assuming 1,400 lbs. live weight).

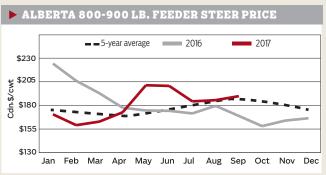
## FEEDER AND FEED GRAIN PRICES

Strong profits in the feeding sector have been supportive to feeder prices. Alberta 850-lb. steer prices jumped 25 per cent from \$162/cwt in February to \$200/cwt in May, which is 14 per cent higher than 2016 and 16 per cent higher than the five-year average. However, the yearling run was disappointing with prices falling 7.0 per cent from \$200/cwt in May to \$185/cwt in July, before strengthening to \$190/cwt in September. This is 11 per cent higher than a year ago and 1.0 per cent higher than the five-year average. The calf market saw a similar trend with prices peaking at \$247/cwt in May before dropping 15 per cent to \$211/cwt in September. While cow-calf profitability remains positive on average this fall, it does not appear to be encouraging any substantial heifer retention.

The 850-lb. feeder basis remained at historically strong levels. Averaging at +\$5.54/cwt in September, it was the strongest on record (since 1983). With strong feeder basis, feeder exports are down 37 per cent from January to September.

Dry conditions in parts of the western and southern half of the Prairie provinces raised concerns about crop production and higher feed prices earlier this summer.

Continued on page 44



Source: Canfax



# Continued from page 43

Encouraging producers to explore alternative feedstuffs particularly for cow herds. Canadian barley production is projected to be down 18 per cent to 7.1 million tonnes with a 10 per cent decline in seeded area and a 14 per cent decline in yield. Lethbridge barley prices rallied 9.0 per cent from \$184/tonne in June to \$199/tonne in July and stabilized at around \$200 in August and September. Lethbridge barley is now 20 per cent higher than a year ago and 3.0 per cent higher than the 10-year average. Agriculture and Agri-Food Canada reported that the Lethbridge market is essentially in the region of the prairies which has been most affected by dry conditions, i.e. southern Alberta and southwestern

Saskatchewan. Harvest price pressure will come as the central and northern regions start bringing barley in from less drought affected areas with higher yields.

## REPLACEMENT RATIOS

The lower the replacement ratio the fewer dollars the feedlot must pay to replace a fed animal with a feeder; conversely, a higher ratio means the feedlot must pay more per pound to replace those animals. Replacement ratios moved higher in the second and third quarter. In the west, replacement ratios exceeded year-ago levels in the second quarter, and ranged 8.0 per cent to 12 per cent higher in the third quarter. In the east, the ratios exceeded year-ago levels in the third quarter to be 4.0 per cent to 12 per cent higher.

	REPLACEMENT PRICE RATIO (Replacement cattle price divided by slaughter price)					
YEAR	QUARTER	Heifer calves (4-5)	Steer calves (5-6)	Yearling heifers (6-7)	Yearling steers (7-8)	Shortkeep steers (8-9)
	Q1 EAST	1.39	1.51	1.32	1.24	1.24
	WEST	1.59	1.61	1.35	1.34	1.25
	Q2 EAST	1.53	1.59	1.40	1.38	1.27
2015	WEST	1.60	1.62	1.37	1.37	1.25
2015	Q3 EAST	1.61	1.65	1.44*	1.42	1.35
	WEST	1.72*	1.75*	1.52*	1.52*	1.43*
	Q4 EAST	1.64*	1.67*	1.39	1.43*	1.37*
	WEST	1.65	1.64	1.40	1.43	1.37
	Q1 EAST	1.39	1.48	1.25	1.30	1.23
	WEST	1.45	1.53	1.25	1.27	1.19
2016	Q2 EAST	1.27	1.40	1.18	1.26	1.19
2010	WEST	1.28	1.39	1.16	1.22	1.12
	Q3 EAST	1.33	1.41	1.21	1.27	1.27
	WEST	1.34	1.42	1.24	1.31	1.25
	Q1 EAST	1.12	1.29	1.08	1.16	1.15
	WEST	1.16	1.27	1.03	1.08	1.03
2017	Q2 EAST	1.16	1.30	1.10	1.16	1.11
2017	WEST	1.31	1.40	1.19	1.22	1.13
	Q3 EAST	1.38	1.53	1.29	1.35	1.31
	WEST	1.42	1.54	1.33	1.43	1.34

<sup>\*</sup> Record highs, east and west

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# **NAFTA TALKS** TAKE A SINISTER TURN



he NAFTA negotiators have completed Rounds 3 and 4 and the progress has been glacial. What we don't know is whether that is just as well, seeing we can't be sure what will satisfy President Trump.

Round 3, held in Canada, was devoted to getting on paper the items the three countries could agree on. Evidently that included unspecified efforts to help small- and medium-sized businesses. All three countries maintained after Round 3 that progress had been made. Some pessimists concluded the snail's pace and the lack of big news would doom negotiations when more difficult issues went on the table.

Round 4, held in Virginia, was when the negotiators submitted the texts of each country's positions. That's when the real worries set in. Some of the U.S. proposals were so far out there that the U.S. press blossomed with stories about the potential damage to the U.S. economy should President Trump attempt to pull the U.S. out of NAFTA.

So many people believed President Trump's threats to pull out of NAFTA were just a negotiating tactic that the research was mostly slanted toward the benefits of a renewed agreement. Now, some of the researchers are looking at what would happen if the U.S. withdrew.

One research firm, ImpactECON LLC, predicts a net loss of 256,000 jobs in the U.S. 951,000 jobs in Mexico and 125,000 jobs in Canada over the next three to five years, according to the Wall Street Journal. Talk about an incentive for Mexicans to enter into the U.S. Overall, the firm's analysis shows a U.S. reversal on NAFTA leads to a decline in real GDP, trade and investment in the U.S., Canada and Mexico. The motor vehicles and services sectors in all three NAFTA countries would decline, along with production of U.S. meat, food and textiles; Canadian chemicals and metals; and Mexican textiles, wearing apparel, electronics and machinery.

The Journal's editorial page was scathing on the possibility of a U.S. pullout.

"It's hard to overstate the damage that ending NAFTA would inflict on the U.S. auto industry," the Journal said."Under NAFTA, companies tap the comparative advantages of all three markets and have created an intricate web to maximize supply returns."

"NAFTA brings scale, it brings competitiveness, it brings efficiency [and] synergies between all three countries and it brings duty-free trade," according to the American Automotive Policy Council. That group said the end of NAFTA would be equivalent to a \$10 billion tax on the U.S. auto industry.

For several weeks, discussion has focused on the Trump administration proposals so likely to be rejected outright by Canada and Mexico that they had to be considered a poison pill, set up to give the administration an excuse to pull out of the negotiations. One is the proposed sunset clause that would end the agreement

every five years unless all three nations agreed to renew it. Another would raise the NAFTA content of autos from the present 62.5 per cent to 85 per cent with 50 per cent being U.S. content. Another is trying to steer more public contracts to U.S. companies. Finally, the U.S. wants to scrap the current dispute resolution process.

"The odd feature of these proposals is that they seem designed to please no one," Phil Levy, a Forbes contributor said.

He's right. As the U.S. Chamber of Commerce's Tom Donahue put it: "They have been met with strong opposition from the [American] business and agricultural communities, Congressional trade leaders, the Canadian and Mexican governments, and even other U.S. agencies."

That was the viewpoint before the last weekend of Round 4, when the U.S. launched an attack on Canada's dairy supply management system.

I'll admit I've hardly ever run across a U.S. dairy farmer who can explain how the U.S. dairy marketing system works. When people down here talk about free market livestock, they're talking about beef, hogs and chickens. So I'm not claiming a "holier than thou" position on our dairy pricing system. I'm simply noting that the Trump administration, and some U.S. dairy farmers, have taken umbrage to Canada's reformulating of the classification for certain milk protein concentrates that shut U.S. dairymen out. Certain border area dairy processors were left without markets, notified dozens of dairy producers their milk was no longer needed and hard feelings resulted.

The administration countered with a proposal which requires the new price classification on concentrates be eliminated and transparency on Canadian pricing decisions — evidently including Canada's supply managed programs, import restrictions and milk price setting, according to Politico's Morning Agriculture, October 16, 2017. I'm not sure how many truckers are required to move milk and dairy products around Canada but the story said 35,000-40,000 teamsters are involved and they are not happy with what they termed a "full assault on Canada's supply management system."

The U.S. team also has made "seasonal anti-dumping proposals" to Mexico that its officials said would never fly. If they were enacted, Mexico would expect other industries to request for seasonality with grains, soy, corn, meat and all products.

Gary Hufbauer, a senior fellow at the Peterson Institute for International Trade, told the Associated Press that while President Trump could probably legally pull the U.S. out of NAFTA, congress could fight back. Congress could pass a resolution calling on the president to obtain congressional approval before pulling out or threaten to block the president's agenda unless he gets congressional approval to pull out. \*\*

Steve Dittmer is the CEO of Agribusiness Freedom Foundation. a non-profit group promoting free market principles throughout the food chain. He can be reached at steve@agfreedom.ag.







# **BIXS BUILDS A PLATFORM FOR PROGRESS**

# Integrated model designed to harvest opportunity

There's a lesson for Canada's beef industry in the Japanese auto industry according to Hubert Lau. The biggest opportunity is to tackle the world first, each other second.

The CEO of the Beef InfoXchange System (BIXS) says years ago Japanese auto makers, fierce competitors in their domestic market, got together, branded themselves as the Japanese automaker group and tackled the world.

They grew dramatically to become a global trade force. They still battle it out in those markets, but by working together their market went from the island of Japan to the world.

Lau thinks a very similar opportunity exists if the beef industry can get past the notion of scarcity, that if one industry sector wins some other loses. The opportunity is in collaboration.

## **BIXS MODELS COLLABORATION**

BIXS started down this path as a data collector says Lau, who spent several decades in the IT industry. The idea was to do a better job of harvesting and managing carcass data in the system.

It wasn't the smoothest start. "A lot of people were talking about big data, its importance,

how it will make money," says Lau. "But no one was able to show producers how. For BIXS, that meant even though our intentions were sincere there was a lot of skepticism about our model.

"We redesigned BIXS with a goal of being the trusted neutral data platform. Today we focus less on carcass data, more on how to leverage it."

# LEADERSHIP OPPORTUNITY

There are many data players in the cattle industry. Aside from BIXS, none can quickly integrate multiple data sources from different organizations into a single platform, says Lau.

BIXS melds technology, business processes and strategic agreements together to create a platform for collaboration between competitors, companies and countries often with concerns of protecting competitive advantages, privacy and intellectual property.

The BIXS core is a software platform that enables big data applications to be interoperable with many existing databases. Operational security and ethics provide assurance of privacy and protection of intellectual property and encourages data sharing.

Lau believes without such a system, collaborative opportunities such as genetic improvement, health management, export potential, risk management, product differentiation and many others could be lost or made more difficult.

## **PILOT PROGRAMS**

The simplest and fastest way to reach many thousands of producers across Canada is to demonstrate value using pilot programs with major industry partners, says Lau. These are designed to directly show producers the economic benefits of collaboration.

"We don't have all the answers and working with industry leaders on projects allows us to figure things out," he says.

The first example is the Canadian Beef Sustainability Acceleration Pilot with Cargill. Producers with cattle in a fully verified sustainable chain, registered with Verified Beef Production Plus, and who sign on to the pilot with BIXS, receive a payment with support from McDonald's and Swiss Chalet.

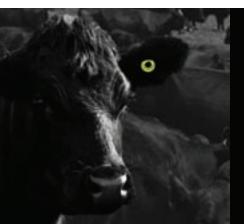
# **FUTURE STRONG**

"We have focused on Canada first because we have the progress here already and want Canadian producers and their industry to benefit first," says Lau.

"Based on our first efforts, there is interest in our model from other countries and companies. The same model could work for other livestock too."



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# THERE IS ROOM FOR US ALL



am excited. The passion and commitment of our young cattlemen and cattlewomen is catching, encouraging, and fills me with great pride.

An active follower of social media, I watch with delight the posts that range from personal to professional. The topics and stories are amazing and the beef industry most certainly has been fortified with these vignettes on the benefits of beef, the challenges and science in raising it, and the pure joy of being part of a dynamic industry.

Often funny, always truthful — our Canadians are showcasing the industry they love and respect. Not a day goes by in which I am not amazed at the breadth and scope of the knowledge that these young men and women share and the reach they have into the public domain. Technically savvy and armed with resources, the videos are engaging and shine a positive light on what we do and the importance of growing food.

Most impressive is the men and women themselves. Those that I have had the privilege in meeting astound me with their understanding, commitment and passion. Not everyone thinks the same way and that is the beauty of the conversation. It is this diversity of thought that sparks the imagination.

As these men and women take leadership roles, the industry itself will be challenged and it is important to listen for these persons are closer to the consumer: the singles, the families, the millennials and the new Canadians that we hope to be in food partnerships with. Many men and women of agriculture today have a global perspective and may share a first-hand experience while others are looking at law, science, soil, medicine, nutrition, animal welfare, food processing, marketing or genetics. Whatever their passion, they are needed as the industry continues to grow. There is room for us all.

Setting the stage so they may have an impact is the responsibility of those of us who have been here for the decades of change — who embrace these persons — our talented human capacity.

To the young men and women of the beef cattle industry I humbly share these thoughts. Not from the perspective of a person who always got it right, but from my humble beginnings in the cattle pen to my thirst for lifelong learning.

Never give up on your dream whether that is a new ranch horse or international trade representation, raising children to follow in your footsteps or an advocate for human rights in meat processing. Whatever your passion — follow it with courage and conviction.

Set boundaries for your time for the sake of your family and your personal health. Use your down time to think, pray and imagine. The greatest ideas are often "discovered" on a road trip or spending some quiet time on horseback, on the golf course or during coffee with an urban friend. Do not be enslaved to what you do. Learn something new every day.

Be open to those outside of the industry for they will challenge you and bring a diverse perspective to the conversation. It is these perspectives that are needed in any business.

Seek a mentor. I fully appreciate the value of the Canadian Young Leaders program and as an international mentor, I am also witness to the growth of persons when they are encouraged to be all that they were born to be. This confidential relationship is good for business and even better for the soul. Mentorship is meant to liberate, encourage, inspire and empower you and that is critical in success and happiness.

Strong enough to bend, I too need the same encouragement and seek out the solid footing of a mentorship team that keeps me grounded, laughs with me at my ridiculous mistakes and pushes me on. Some of my advisers are half my age.

They say money can't buy happiness and that may have been written by someone who has never been without it. Money is more than important — it is why you are in the business. Financial literacy is your friend. Understand tax. You can't afford not to be financially literate.

Think critically. Change was never brought about by group think — it has historically been sparked by independent thought that challenged the status quo. Be okay in your unique self and your unique approach to business. There is no play book — only possibility.

Believe in yourself. You were born perfect and totally capable. Trust yourself and that amazing internal compass. Trust also the opinion of your family members who are on your team.

For the women of the beef industry you do not need someone to tell you at a conference or meeting what you can do. With your investment, intelligence, grace, dedication and conviction — you already are doing it! Be confident, seek out higher levels of business acumen, set boundaries and support other women. Live your purpose. Go where you are respected.

I have every confidence in the boys and girls and the young men and women who are woven into the fabric of the beef cattle industry. Their willingness and ability to reach the public both personally and through social media, their confidence in bringing forward transformative solutions and their depth of knowledge is mirrored in their constant participation. It is this presence that sets them apart as world-class persons, be that from the back forty or the boardroom, science lab or marketing team.

Yes, I am excited, but more so I am proud of the people in this industry, as we fill the boots from one generation to the next with young talented men and women.

Contact Brenda through her website: www.brendaschoepp.com. All Rights Reserved. Brenda Schoepp 2017



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# STORY OF THE DECADE



A North American view of the meat industry. Steve Kay is publisher and editor of Cattle Buyers Weekly.

est anyone in the North American livestock industry forget, all wealth to the industry comes from consumers at home and abroad. Cattle and hog producers might feel far removed from those consumers. But they are the people who determine whether producers can make a living or not.

The industry to its credit has recognized this more and more in the last 20 years. A huge amount of effort has gone into understanding better what consumers prefer and producing beef and pork products that satisfy those preferences. That's why, for example, the beef industries in both Canada and the U.S. focused heavily on producing a more consistent product and why beef processors moved rapidly to producing cuts with minimal outside fat.

All this has meant that consumers in North America now enjoy the highest-quality beef and pork products, fresh or further processed, in history. They also have the largest array of meats to choose from in terms of how they were produced. For example, consumers can buy conventionally produced beef, beef produced without the use of growth promotants or antibiotics, 100 per cent grass-fed beef and organic beef either grain- or grass-fed. Consumers are spoiled for choice compared to 20 years ago.

Red meat consumption is thus on a solid footing. But because the beef industry is still cyclical by nature, consumption is affected by availability. Those outside the industry often claim consumers are eating less beef for dietary or other reasons. This simply isn't correct. Consumers eat more or less beef purely because of availability, which determines per capita consumption. The equation that determines consumption is: domestic production plus imports minus exports, divided by the

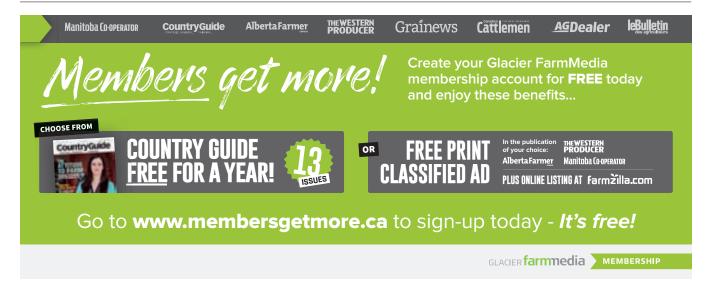
The U.S.'s severe droughts from 2010 to 2012 sharply

reduced cattle numbers and therefore domestic beef production. The result was that consumption fell to 54.2 pounds per person in 2014 and to a record low of 54.0 pounds in 2015. Herd rebuilding had begun in 2014 and production increased. Consumption thus rose to 55.6 pounds per person in 2016. It will increase to 57.6 pounds this year and to 58.5 pounds in 2018. That's all because of increased domestic production. I'm amused that those same people outside the industry haven't noted that Americans are eating a lot more beef.

Consumers have stepped up to the plate even more in 2017. The year began with dire predictions, mostly from financial analysts, that the U.S. was going to be buried in a wall of protein, as forecasts were for year-over-year increases in red meat and poultry. The impending wall was going to imperil profits for producers and meat processors and drive down everything from livestock futures prices to companies' stock prices.

Almost the opposite has occurred. U.S. beef and pork processors continue to enjoy record large operating margins, and chicken processors are having an excellent year. Cattle feeding margins held up well until recently when they dipped into the red. They are currently recovering as live cattle prices began to rally in mid-September. Cowcalf producers have also enjoyed a fall rally in prices for calves and yearlings.

The U.S is still on target to produce a record 100.5 billion pounds of red meat and poultry this year. Beef production so far this year is up 4.2 per cent on the same period last year. Pork production is up 3.0 per cent and broiler production is up 1.2 per cent. But fears of a meat wall have evaporated. That's because strong demand for all the proteins at home and abroad has cleared all that extra meat. In fact, demand is on its strongest footing in years and has become the story of the decade. \*\*





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**CCA REPORTS** By Dan Darling

# TAX AND NAFTA



Dan Darling is president of the Canadian Cattlemen's Association.

t has been a busy and productive month for the Canadian Cattlemen's Association (CCA). Tax policy has been one of the top domestic policy issues for the CCA since the Government of Canada's mid-summer announcement. We welcomed the government's revisions to the tax change proposal announced in October, as their original plan had the potential to have a negative impact on family farms.

The CCA had earlier submitted written comments to the Department of Finance that reflected our concerns about the proposed changes to three specific areas of tax planning: income sprinkling, holding passive investments inside a private corporation, and converting income into capital gains. CCA's submission was informed by an analysis conducted by agriculture tax experts at Meyers Norris Penny (MNP) on the impact of the proposed changes, if implemented, on beef cattle operations in Canada.

The government has since decided that it will not implement changes to rules concerning lifetime capital gains exemption and will work with farmers to ensure farm succession can take place. The CCA appreciates that the government heard our concerns and acted on them by not moving forward with this aspect of the proposal. We are eager to continue our work with the government to ensure that farms can be passed down to the next generation.

Starting January 2018, the income sprinkling proposal will move forward but it will be "simplified" from the original proposal, ensuring that a family member who contributes to the company will not be affected. The CCA is encouraged by this move and we look forward to reviewing the technical changes to the proposal.

We will continue to monitor additional announcements on the revised tax proposal and analyze any technical changes that are made to the original proposal to ensure that any shortcomings in tax policy are addressed without unfairly targeting independent businesses such as incorporated farms and ranches.

The announcement was part of the news delivered by Prime Minister Justin Trudeau that the government intends to lower the small business tax rate to 10 per cent, effective January 1, 2018, and to nine per cent, effective January 1, 2019.

Agriculture was the focal point of the fourth round of the North American Free Trade Agreement (NAFTA) negotiations in Arlington, Virginia, near Washington, D.C. Despite some overall frustrations over a lack of concrete and viable proposals from the U.S. overshadowing the increasingly tenuous talks, Prime Minister Trudeau remained focused on modernizing NAFTA.

Canada tabled a proposal on our meat issues. The CCA's priorities for the beef sector include continued duty-free access for the beef trade, maintaining dispute settlement mechanisms, both within NAFTA (Chapters 19 and 20)

and external dispute settlement tools at the World Trade Organization, and improved bilateral cattle and beef trade through greater regulatory co-operation.

However, as anticipated, the U.S. tabled several proposals that are unacceptable. These include making Chapter 11 (dispute settlement mechanism) voluntary and allowing countries to opt out, eliminating the Chapter 19 panels that examine anti-dumping and countervailing duty cases, and making Chapter 20 dispute settlement panels an advisory body with non-binding recommendations.

There remains the constant threat of the U.S. withdrawing from NAFTA. Should that process be started, the agreement requires the U.S. (or any of the signatories) to provide six months' notice that it wishes to do so. Talks continue under the uncertainty of these issues and the entire tone is more somber. Still, Canada and Mexico are staying at the table and will continue to negotiate.

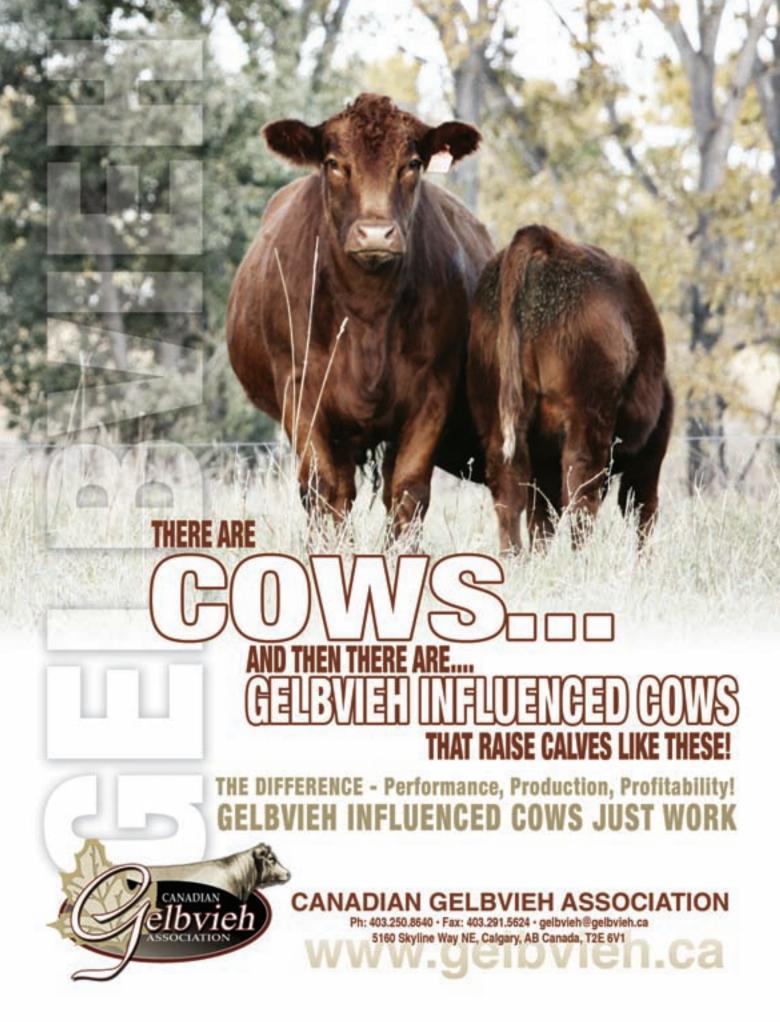
The CCA's representation at each of the NAFTA rounds supports the Government of Canada's negotiations in the agriculture sector. The CCA continues to ensure that the interests of Canadian beef producers are well represented throughout the process.

In early October, an amendment to the export certificate requirement that live cattle exported to the U.S. must be born after March 1, 1999, came into effect. This change reflects CCA's position that this strict certification requirement is no longer necessary given the number of cattle born prior to March 1999 has dwindled to virtually none. Recently, the CCA presented statistical analysis to U.S. Department of Agriculture (USDA) and Canadian Food Inspection Agency regulators indicating that there would no longer be any dairy or commercial beef cattle born prior to March 1999 in Canadian herds as of 2017, and fewer than 20 head of purebred cattle, with the latter expected to be gone by 2020.

USDA's Animal and Plant Health Inspection Service agreed that individual ages of animals destined for immediate slaughter in the U.S. will no longer be required to be indicated on the export certificate. While it remains a requirement that the cattle be born after March 1, 1999, the export certificate will no longer have to state the age of the cattle. Certification is to be based on the professional judgement of the accredited veterinarians who examine the animals and various records prior to export.

The CCA is eager to hear producers' feedback on whether the amended export document requirement has resulted in an improvement in the obtaining certification for live cattle exports. The revised requirement should resolve a related impact: the depressed prices many producers selling cull cows have experienced in recent years. In instances where producers could not document the age of cattle, even animals born after the March 1999 requirement could not be certified as such, and were devalued in the market.

Until next time. \*



# NewsRoundup

# **IDENTIFICATION**

We're sure that's Ontario beef

It sounds like something straight out of a CSI episode and in some ways it is. Oritain, a New Zealand company specializing in scientific traceability to fight food fraud, is seeking a distinct fingerprint for Ontario beef.

Both Beef Farmers of Ontario (BFO) and the Ontario Independent Meat Processors (OIMP) have invested in the project.

BFO's interest started with a regional marketing initiative to enhance consumer confidence in beef. Part of that was to address the negative consequences mislabelling has on public perceptions of beef products and by extension farmers, abattoirs and the entire beef sector.

A quick and accurate test to differentiate

beef raised in Ontario from other sources, the thinking goes, would go a long way toward discouraging anyone trying to cut some corners with a branded Ontario beef product.

This initiative has been underway since January but the reasons behind it gained some added credibility in August with the publication of a University of Guelph study commissioned by the Canadian Food Inspection Agency (CFIA) that revealed 20 of 100 sausages collected from stores across Canada were not made from the single ingredient stated on the label. Seven beef sausages contained turkey, five turkey sausages were all chicken, and while some pork sausages contained beef, one contained horse meat.

The horse-meat scandal in Europe a few years ago has encouraged CFIA to be more

watchful for mislabelling of meat and food products.

An investigation by the CFIA landed an Ontario meat packer in court in September on charges of mislabelling. The company was fined \$200,000 for offences under the Food and Drugs Act and 4,557 cases of beef trim worth \$613,572 ordered disposed by rendering.

BFO was making a final push last month to collect more samples from western and central Ontario abattoirs. Project co-ordinator Susan Fitzgerald of Fitzgerald & Co. at Elmira, Ont., was anticipating that by the end of October they would have over 200 samples of inch-thick lean beef from provincial abattoirs. That's less than the 300 to 400 they had hoped for when they started

Continued on page 56



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# News Roundup

Continued from page 54

collecting samples back in June, but she says this could be sufficient for their analysis because the samples were diverse enough to meet their target of sampling 120 to 150 farms from across the province.

Oritain is analyzing the samples to identify isotope ratios and trace elements in the beef. Those results will then be run through the company's statistical models to create a composite fingerprint for Ontario beef.

Examples of the isotope ratios they are looking for are oxygen-18 to oxygen-16 and hydrogen-2 to hydrogen-1. These ratios naturally differ from region to region and country to country because of temperature, altitude and precipitation. The ratios of carbon isotopes and nitrogen isotopes, as well as the trace elements in the samples, vary due to soil characteristics and the feed consumed by livestock.

The Ontario beef fingerprint would then be tested against beef samples from elsewhere to determine whether the samples are consistent or inconsistent with the Ontario beef fingerprint.

Oritain's work to date has been for primary producers marketing branded honey dairy, lamb, fruit, egg, fish and fibre products as well as producers of wine, beer, chocolate, and pharmaceuticals aiming to maintain consumer trust in their wellknown brands.

In the case of some branded products that follow specific production protocols, it is possible to pin the origin fingerprint to a specific farm.

If an imitation product is marketed as being from New Zealand or even containing an ingredient from New Zealand, for example, samples of the suspect product obtained from anywhere along the supply chain, including the retail outlet, can be tested against the product's origin fingerprint to prove fraud.

Having Oritain's unique fingerprint logo on the packages of products certified as being origin-verified can in itself be a deterrent to would-be imitators.

"Our project may be a bit more challenging as we are looking for a fingerprint that represents all Ontario beef. Given the very different geographies within our province, this may be more difficult to do," Fitzgerald says.

The decision as to what comes next will be up to BFO and OIMP after they receive the results from Oritain, expected December 1.

## TRADE

#### Another BSE irritant bites the dust

Anyone dinged with discounts on cull cows headed to the U.S. because they couldn't document the animal was born after March 1, 1999, will have reason to rejoice over an easing of this export policy last month.

The Canadian Cattlemen's Association has long argued that it no longer makes sense to require the individual age of slaughter cows on the export certificate since the number of cattle born prior to March 1999 has dwindled to virtually zero today.

A statistical analysis done by the CCA and presented to the U.S. Department

Continued on page 58



# <u>AG</u>Dealer 🚾

AgDealerTV is a new video series that will both show and tell people what's new in the world of agricultural machinery and technology. Host Spencer Myers along with Grainews' Scott Garvey are interviewing machinery and tech experts, reviewing specific pieces of machinery, and travelling around the world to showcase new machinery and technology from different parts of the ag industry.

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# Expert advice that's good for business

By Trudy Kelly Forsythe

There's always work to be done on the farm, although once the rush of harvest is over, hopefully it's not as hectic. That makes fall and early winter the perfect time to start planning for next spring. The last growing season is still top of mind and it may be easier to find some down time for an overall farm assessment.

"It's a good time to review what they saw in the summer that they liked and didn't like and what they may want to change moving forward," says Dale Cowan, senior agronomist sales manager with AGRIS and Wanstead Cooperatives.

To help, it makes sense to bring in experts for some targeted areas.

# **SOIL TESTING**

A soil test is a good first step.

"There is no other way to assess the productivity of your soil," Cowan says. "In the laboratory, with approved methodologies tied to the local area, they can determine the essential nutrients, pH levels and, if producers provide the crop they are going to grow, the lab has access to calibration information for recommendations."

Information from soil tests can help producers save money, or spend money wisely, to get a desired outcome. For example, if the test shows the soil is deficient or low on a particular nutrient, producers know they need to add fertilizer



Soil testing helps producers assess the productivity of their soil. PHOTO COURTESY OF FERTILIZER CANADA

and at what rate; if it's high, there's no economic gain to adding fertilizer.

While fall is a good time for conducting soil testing, Cowan says it can be done any time of year. He does recommend, however, doing it every three to five years at the same time of the year.

"Sampling once is just a single point in time, sampling on a regular basis gives them a trend over time," he explains. "If nutrient levels are going up, they're over applying; if they're going down, they need to apply more. There's value in regular testing."

#### **EXPERT ADVICE**

Working with an agronomist is also a good idea.

"An agronomist understands soil nutrient levels, crop requirements and what zone they are in so they can interpret the organic matter, essential nutrients and pH," says Cowan. "For example, they can look at the results of the fall soil test and see if a producer needs to do anything to prepare for spring."

Producers need not just work with an agronomist when they have soil tests to interpret. In the fall, they can also help evaluate the condition of the forage stand, in early spring, they can give an assessment of winter kill to see if there's a need to re-seed and in summer, they can help with nutrient application decisions.

"Producers should work with an agronomist year round," says Cowan. "They can evaluate their production management and lay out their production plan. They can help them make the right decisions at the right time and avoid costly mistakes."















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# News Roundup

Continued from page 56

of Agriculture (USDA ) and Canadian Food Inspection Agency (CFIA) regulators during the annual Pacific North-West Economic Region conference demonstrated that the Canadian herd would be rid of these commercial pre-March 1999 beef and dairy cows as of 2017.

A review of the Canadian Angus, Hereford, Simmental and Charolais herd books determined that as of 2016, 27 purebred cattle born in 1999, and 18 purebred animals born prior to 1999, were still alive in Canada. As many of those 27 head would have been born after March 1, 1999, the total number of cattle prior to March 1999 in Canada was likely less than 30 in 2016.

By the end of this year the CCA anticipates the number of elderly purebreds will be below 20, and all should be dead by 2020.

Last month the USDA Animal and Plant Health Inspection Service (APHIS) agreed with this argument and dropped the requirement that an export certificate must contain individual ages of cattle destined for immediate slaughter in the U.S.

It's important to note, the USDA did not remove the requirement that cattle be born after March 1, 1999, only that the export certificate must state the age of the cattle. Certification is to be based on



the professional judgement of the accredited veterinarians who examine the animals and various records prior to export.

The CCA is offering to share its cow age analysis with accredited veterinarians who are responsible for clearing these cattle for shipment to the U.S.

It is also anxious to hear from producers to find out if this change has made it easier for them to have their culls certified for export.

## **FORAGES**

# Giving birth to new native grasses

Native forage breeders at Swift Current Research and Development Centre spend their careers attempting to capture and transfer the diversity of native forages into new composite varieties that offer better health and productivity than the originals.

"It takes multiple years to identify what we want and then make sure that a characteristic we are highlighting isn't a one-off because of the growing year," explains program lead Mike Schellenberg, who is looking forward to having a new forage plant breeder on board to help advance some of the most promising native forages for grazing and reclamation.

Agriculture and Agri-Food Canada currently holds the rights to native plant material collected by Ducks Unlimited across the Prairies in the early 2000s, and other native and introduced species added since then.

They work collaboratively with other

AAFC research centres and the Universities of Saskatchewan and Manitoba.

Development of a new variety begins by growing out material from all collections of a species to create a base population. Next, the researchers select and propagate the best plants for natural crossings in a greenhouse and in the field. Once they have their potential progeny lines in sufficient quantity they are grown outdoors in comparative trials. When all this material is collected and analyzed they select the best progeny line to register as a variety, produce the breeder seed and licence it to a foundation seed grower or company for commercial production.

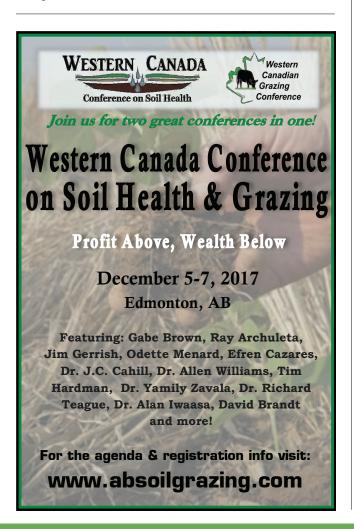
Continued on page 60



# News Roundup

Continued from page 59

The best line, in this case, is determined by scoring each line for seedling and regrowth vigour, plant health, biomass and seed yield. A single index based on correlations between these characteristics



has been developed to compare the value of selected progeny lines to the original population.

During the comparative study phase, they assess additional characteristics such as feed quality, drought tolerance and winter hardiness.

Another part of the work is developing a fact sheet with agronomic tips for producers to have ready when a variety is released.

The "Winterfat — packed with protein for fall and winter grazing" fact sheet is available online as Schellenberg works through the process of registering a winterfat variety. He hopes to soon put out a call to license it to a grower who can start producing seed on a commercial scale in 2018. (*Canadian Cattlemen*, April 2015).

The project to improve overall yield of purple prairie clover and white prairie clover has advanced to the seed-increase stage in preparation for their comparative studies. Both are warm-season perennial legumes offering excellent protein and digestibility throughout the growing season coupled with high levels of condensed tannins that safeguard animals from bloat.

A bluebunch wheatgrass, known for its drought tolerance and as a season-long producer, is at a similar stage of development.

Sometimes it's a matter of screening out unwanted characteristics from the original, which has been the priority for improving Canadian milkvetch. Low-toxicity selections are now in the seed-increase stage prior to moving forward with the comparative study.

Continued on page 62



The Canadian milkvetch nursery as seen during a tour of the Swift Current forage trials this summer.

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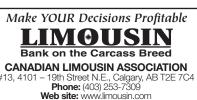


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# News Roundup

Continued from page 60

This low-bloat native legume from the pea family offers advantages similar to its tame counterpart, cicer milkvetch, so the key for producers will be to plant it at an appropriate rate in a mix, Schellenberg adds.

On the other hand, slender milkvetch was the last plant grazed by cattle during the preference trial, yet its quality is very similar to alfalfa. A chemical analysis is next in line to try to identify why animals don't like this drought-tolerant species.

The nurseries for initial screening of American vetch and sweet vetch germplasm struggled through an extremely dry growing season in 2017. Further evaluation will be necessary to screen for drought tolerance in combination with forage quality and yield.

Some of these native forages may be available from suppliers in Canada and the U.S.; however, Schellenberg cautions producers to find out where the wild seed was collected because it may not be adapted to northern climates, and to ask for a current germination test. Stored seed can lose its viability fairly quickly.

# TRADE

## CETA at the starting gate

As of October, about 72,000 head of cattle and calves were enrolled in the Canadian Food Inspection Agency program for certifying freedom from growth-enhancing products for export to the European Union at varying stages of production.

If they should all arrive at the same time, they would take up a week and a half of Western Canada's federally inspected slaughter capacity, but such an event is highly unlikely for the foreseeable future.

As a starting point, however, these numbers are probably higher than many in the industry expected.

It is a number more suited to the current slaughter capacity in Canadian plants willing or able to meet the EU ban on antimicrobial baths commonly used on carcasses entering North American plants.



# **ANSWER OUR SURVEY** — and have a go at winning one of our caps

We have a goal to be the best beef cattle magazine in the business. But we need your help. If you could just fill in this survey and return it to me, you would be helping us set the future editorial direction for Canadian Cattlemen. All you have to do is tell me what you like about the magazine, and what you don't like. There's also some space for you to tell us what you would like to see in future issues.

CLIP AND ENCLOSE YOUR MAILING LABEL. Each month, we will draw one name from all the surveys sent in and send that person a CATTLEMEN cap. It could be you!

We'd appreciate it if you could tell us a little about yourself. It makes it easier for us to keep your main interests in focus

☐ I'm ranching or farming

Enterprise	# of head
Total beef cattle	
Yearlings on feed/pasture	
Registered cows	
Fed cattle (sold yearly)	
Commercial cows	
Horses	
Calves on feed/pasture	
Other livestock	

☐ I no longer take an active part in farming

If not an owner/operator of a farm, are you:

☐ In agribusiness (bank, elevator, ag supplies, etc.)

☐ Other (please specify)

My approximate age is:

□ a) Under 35 □ b) 36 to 44

☐ d) 55 to 64 ☐ e) 65 or over

Nhat do y	you think	<b>of:</b> 0	ı a	scale	of 1	to	5,	how	do	
ou and v	our family	like th	nes	e feat	ures	?				

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#### News Roundup Purely Purebred 1 - I don't want it; get rid of it The Markets Regular Columns 4 3 2 1 Market Talk Comment Sales and Events 5 4 3 Newsmakers Special features 2 Letters Calving Issue (Jan.) Our History Custom Feedlot Guide (Sep.) Nutrition Stock Buyers' Guide (Aug.) Vet Advice Animal Health Special (Sep.) Beef Watch (May & Nov.) Research Free Market Reflections

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# **NEWS ROUNDUP**

Research to confirm the safety of the baths is underway and the results will in time form the basis of Canadian submissions to EU food regulatory agencies to lift this ban. The Canadian Cattlemen's Association estimates it will probably take two years before we see any relaxation of this regulation in the EU.

In the meantime, a number of cow-calf producers who already have clients booked or have decided to get in on the ground floor have registered their calves in the birth-to-slaughter certification program making them eligible for delivery to the EU. There seems to be plenty of feedlot capacity to handle the current numbers.

As of last month the numbers by province were:

#### **Ontario:**

- Total cattle (cows and calves) enrolled in the program: 345
- Number of enrolled feedlots/backgrounders: 1
- Number of enrolled cow-calf operations: 1

#### Saskatchewan:

- Total cattle (cows and calves) enrolled in the program: 10,260
- Number of enrolled feedlots/backgrounders: 6
- Number of enrolled cow-calf operations: 9

## Alberta:

- Total cattle (cows and calves) enrolled in the program: 58,070
- Number of enrolled feedlots/backgrounders: 19
- Number of enrolled cow-calf operations: 24

## **British Columbia:**

- Total cattle (cows and calves) enrolled in the program: 3,537
- Number of enrolled feedlots/backgrounders: 1
- Number of enrolled cow-calf operations: 3 \*\*







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**NEWS ABOUT YOU** By Mike Millar

# **PurelyPurebred**

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Rob Holowaychuk

■ The Canadian Angus family along with the entire purebred sector has lost a true ambassador and friend of the industry. Rob Holowaychuk of Optimum Bovine Inc. (OBI) passed away October 4

doing what he loved, around the cattle and people he loved. Holowaychuk purchased the family farm in the early '70s and started Ajax Angus. With a keen eye and a real passion for cattle, it wasn't long before he started a cattle management company RNH Livestock which was renamed OBI. Working with seed stock breeders Holowaychuk had a real talent in helping them build exceptional cow herds.

He enjoyed sharing his opinion on good cattle and was a well respected member of the cattle fraternity. Holowaychuk especially had a soft spot for youth and in keeping with his wishes, Holowaychuk's family has asked that donations be made in lieu of flowers to the Canadian Angus Foundation. Go to //canangusfoundation.ca/ for more information or to donate.

- The Canadian Junior Limousin Association (CJLA) is once again fundraising in a novel way. They are holding a clothing raffle with the winner of the grand prize being named the official clothing sponsor of the 2018 Limousin Impact Show, this year being held in Great Village, N.S. As the grand prize winner, your name and logo will appear on the show clothing. One thousand tickets priced at \$20 will be made available at the National Limousin Show at Farmfair, with the draw being made March 24, 2018. For more information contact Laura Ecklund, CJLA co-ordinator at cila@ limousin.com or 403-559-9849.
- The Canadian Angus Foundation has an exciting platform of reinvestment following the success of extraordinary support of the "Building the Legacy" annual fundraiser auction sale. Among their new initiatives is a bursary attached to the intermediate-aged youth (predominantly Grades 7 to 9, ages 13 to 15) exhibiting at "Showdown," the breed's national junior show. They have also established a pool of investment funds for use by regional associations wanting assistance toward member value and education.

More details will be coming out in the final months of 2017. The board also set the deadline April 30, 2018, for Angus breeders to submit their own history chapter for the breed's ongoing history book project.

- The Canadian Limousin Association commercial committee is hosting a tour of the Ontario feeding and processing industry January 10-15, 2018. This tour will give producers an opportunity to see where their top-end Limousin-influence calves are being sold and meet some of the individuals who are buying them. The tour will also include time at the Ontario Cattle Feeders annual convention. Contact the Canadian Limousin Association for further details.
- Deadlines are fast approaching to be part of the Canadian Simmental Association's 50th Anniversary Celebrations, and National Simmental Show and Sale at Canadian Western Agribition! This will be a great time of socializing and reminiscing as Simmental breeders from around the world gather to celebrate the 50th year of Simmental in Canada.

A limited amount of tickets are available



■ The Charolais Banner reports Cornerview Charolais, Cobden, Ont., won Supreme Pair of Bulls honours. The pair were Cornerview Express 2E, sired by SVY Monument Pld 159Y, and Cornerview Hemi 42E, sired by McTavish Hallelujah 79B. Charolais breeders Sharodon Farms, Omemee, Ont., took Grand Champion Female honours with Sharodon Charlize 16C at Expo Boeuf, in Victoriaville, Que., in early October and Grand Champion Bull honours with Sharodon Empire 1E.

# Sales results

18th Annual Justamere "Sale of the Year" October 16, 2018

- 3 Herdsire prospects, av. \$26,000
- 9 Heifer calves, av. \$16,600
- 24 Bred heifers, av. \$5,815
- Cow-calf pairs, av. \$13,160
- 6 Embryos, \$1,050/embryo
- 64 Units semen, \$325/unit
- 41 Live lots, av. \$10,550

# High sellers:

Lot #5 Justamere 1877 Barbara 309E, \$47,000 Sold to: Nielson Land & Cattle

Lot #15 Exar Envious Blackbird 6674, \$40,000 Sold to: Tuckaway Angus

Lot #3 Justamere 1023 Doc Holiday 344E,

1/2 interest sold to: Glen Gabel Angus

Volume buyer: Still Meadows Farm purchasing 10 head and one embryo lot

for the Tuesday evening anniversary banquet at a cost of \$50/ticket. Contact Rae-Lee Erickson at rerickson@simmental.com or Carolyn MacCormack at sasksimmental@yourlink.ca to order your tickets.

- Mark your calendars as the Young Canadian Simmental Association (YCSA) is hosting its 2nd Annual Leadership Conference to be held in Calgary on February 22-24. It is open to all youth 16-25 years of age as of January 1, 2018. Like last year, expect excellent speakers and topics at this year's conference. Check out the YCSA Facebook page (@Young Canadian Simmental Association) for more details and registrations over the next couple months!
- Four candidates have applied to replace Lorrain Sanford, the B.C. director of the Canadian Angus Association, who will retire from the board at the Angus annual meeting next June in Comox, B.C. The candidates are John Appleby of Coldstream, Tanya Belsham from Houston, Tom deWaal of Prince George and Jim Moon from Vanderhoof. Candidates to replace former CAA president David Sibbald as Alberta director were announced earlier. The Saskatch-

ewan Angus Association will determine its candidates at its annual meeting in January and then each of these three regions — B.C., Alberta and Saskatchewan — will vote next March. Members were sent a bylaws amendment in October that, if passed, would allow electronic voting of CAA candidates so breeders could select their representative by paper ballot or their computer, phone or tablet.

- The Canadian Limousin Association is offering free promotion of Limousin-influence calves through their Commercial Calf Listing service on their website. List your own Limousin-influence calves and help your bull customers to do the same. These listings will be shared on a regular basis with order buyers, as well as on CLA social media pages. Calves can be listed at: limousin.com/sale-barn/listcommercial-calves/.
- Cattlemen Young Leaders for 2017-18: Alecia Karapita is a commercial account manager with the Royal Bank of Canada in Kamloops, B.C., who specializes in serving the agriculture sector. She works closely with her clients in all areas of their business including financial analysis, suc-



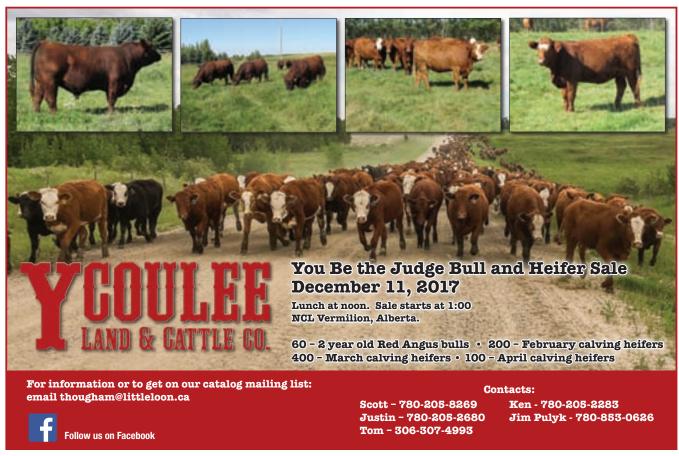
Alecia Karapita

cession planning, business development and, of course, financing options. She obtained a degree in agriculture business and a degree in marketing and moved to B.C. in 2002 with her husband Wallace.

They reside on his family's ranch, known as the Willow Ranch, where they run 400 Angus cows and run yearlings in the summer. Wallace runs the ranch on a full-time basis while Alecia works for RBC and assists when she can. They have three children — Ty is seven, Callie is five, and Lexi is three.

Alecia grew up on a family farm near Foam Lake, Sask. Throughout those years she developed an interest in raising and showing purebred Angus cattle. She was involved in the Saskatchewan Junior Angus Association, the Canadian Junior Angus Association, and 4-H. It was through those organizations that she was provided opportunities to meet new people, travel North America, and develop leadership capabilities that continue to serve her well.

Continued on page 66



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# **PURELY PUREBRED**

Continued from page 65

She is still involved with 4-H in judging and presenting, as well as Ag in the Classroom. She hopes to use the knowledge she gains from this year with CYL to better serve her clients and act as an advocate for the beef industry.



Andrea Haywood Farmer

Andrea Haywood Farmer was born and raised in rural British Columba, and has a passion for land, natural resources and the ranching sector. Daughter of a biologist and social worker, Andrea is equally captivated by science and natural process, and stories of human experiences and history. Taken together, these passions have made marrying into her husband's family ranch a wonderful fit, for which

she is extremely grateful.

Andrea holds a masters degree in public policy from Simon Fraser University and over the past decade has worked extensively in the natural resource and conservation sectors across Canada in both policy analysis and government relations. She has worked as national policy analyst for Ducks Unlimited Canada in Ottawa, at a provincial level and, most recently, in supporting conservation objectives through land use planning in northern Canada. Additionally, Andrea is an instructor at Thompson Rivers University where she teaches policy and planning to natural resource science students.

A proud mother of two young daughters, Andrea currently balances motherhood, assisting her husband Ted on the ranch, continued work in conservation and teaching, and is committed to being part of a bright future for this industry. She believes that tomorrow's leaders in the cattle industry will be smart, creative, attentive and solution-focused individuals who build bridges and connection between each other, other land users, consumers and the public.



**Ashley Gaudet** 

Ashley Gaudet is a first-generation cattle producer from Prince Edward Island who has called the foothills of southern Alberta home since 2009. She has been involved in the cattle industry for the last 20 years, having gotten her start at an early age by taking an interest in helping her neighbours with their cattle. She eventually joined 4-H and began showing commercial steers and purebred

Charolais cattle across Eastern Canada, while taking full advantage of everything the program had to offer along the way.

She attributes her decision to pursue a career in veterinary medicine to the rewarding experiences caring for her 4-H animals. Knowing that she wanted to work with cattle, she sought employment in that area following completion of her veterinary technician diploma. She recently completed a technician specialty in the field of clinical practice specific to production animal medicine and is currently the only technician in Canada with that designation. That drive to work with beef cattle resulted in her moving to Alberta. She is now actively growing her own commercial herd and currently raises Angus/Simmental cross cows east

Ashley is excited to be selected for the Cattlemen's Young Leaders program and is looking forward to connecting with the other CYL finalists and mentors. Through mentorship she hopes to gain a better understanding of the business of beef production and strategies that might make her operation more economically viable and sustainable in years to come. \*\*

► MARKET SUMMARY

By Debbie McMillin

# **TheMarkets**



# **FED CATTLE**

Fed cattle prices dropped to a low of \$131.63/cwt at the start of October. Since then the cash steer average climbed \$5.91/cwt to a mid-October average of \$137.56/cwt, which is \$7.82/cwt higher than the same week in 2016. A tighter cash-to-cash basis levels has increased U.S. buyer interest in recent weeks. The current cash-to-cash basis is -\$1.24/cwt which has moved from the positive position seen through much of September. Fed cattle exports to the U.S. are up six per cent over last year at 241,247 head. Fed marketings have been timely and cattle feeders are current. Beef demand and movement remains strong and processors through 2017 have been profitable. Beef exports are up in 2017 and fed steer slaughter is up one per cent at 1,217,139, but heifer kill is up 10 per cent at 652,343 head.

Cattle-on-feed on October 1, was up 10 per cent from a year ago at 634,951 head. Feedlot placements in September were up 15 per cent at 202,084 head due to some early movement off pastures and fewer calves moving into the export market. The majority of the placements were made up of feeders over 800 lbs.

# FEEDER CATTLE

A smaller Canadian cow herd and a profitable feeding sector mixed with good overall demand in the cattle complex helped hold the Canadian feeder cattle market well above prices seen just a year ago. While feeder cattle placements have been larger over the past month, most cattle have stayed in Canada. Exports of feeder cattle are 37 per cent smaller than the same period in 2016, with a current year-to-date total of 101,081 head. Demand has been steady for lightweight cattle as the freshly weaned calves continue to come to market. The average on 550-lb. feeder steers is \$233.22/cwt which is nearly \$29/cwt higher than just six weeks ago and over \$65/cwt stronger than the same week in 2016.

Feeder basis levels remain historically

strong, the basis is currently +\$11.94/cwt on 850-lb. feeder steers, which compares to -\$9.01/cwt the same time last year, a difference of \$20.95/cwt. The 850-lb. steer price has increased over the past several weeks, up nearly \$21/cwt since mid-August, resulting in a current 850-lb. feeder steer price of \$203.11/cwt. When compared with a year ago, the current market is up 34 per cent, or \$51.18/cwt for the same week.

## **NON-FED CATTLE**

Cull cattle numbers on offer have remained manageable through the fall run. Prices seemed to find a bottom at \$85.71/cwt five weeks ago. The average price at mid-October was \$89.88/ cwt, which was up \$4.17/cwt from the low posted in September, and \$2.78/cwt better than the same week in 2016. Cow slaughter numbers to date are 329,861, which is 16 per cent more than a year ago; however, at the same time higher priced Canadian slaughter cows and a stronger Canadian dollar have kept more cows in the Canadian system as exports are down 31 per cent to 104,822 head in 2017. This is the time of year when management decisions are made. Cows destined for the cull pen will either be sold now or if producers have pen space and ample feed cows may be kept over to the new year. Based on the long-term average, cow prices will increase moving into the first quarter. Volumes at auction this year vary greatly on forage supplies and overall market prices.

Bull prices have increased in recent weeks to \$102.05/cwt, which is stronger when compared to recent weeks, but down from \$107.30/cwt posted during the same week in 2016, and down from the \$136/cwt the market two years ago. Bull slaughter in Canada is up 40 per cent at 14,145 head; however, exports are down two per cent at 41,208 head.

Debbie McMillin is a market analyst who ranches at Hanna, Alta.

More markets >

# ▶ DEB'S OUTLOOK

#### **FED CATTLE**

Fed cattle prices seemed to find a solid bottom in early October and will move higher towards the end of the year. Tightened supplies of front-end market-ready cattle coupled with increased holiday seasonal beef demand will support higher prices. Processors will be looking to secure inventory moving forward to upcoming middle meat demand. Prices on rib and loin primal will continue to strengthen which supports the fed market as we move into December.

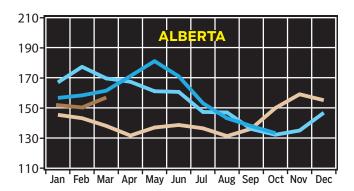
#### **FEEDER CATTLE**

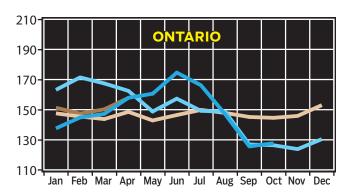
Many factors come into play this time of year: the technical markets when looking at risk management opportunities, feed costs and availability as well as the Canadian dollar and feeder cattle sale volumes. Typically, a positive basis level this time of year is a signal to sell as the market will quite often correct to a more historically normal level. However, a smaller Canadian cow inventory equals tighter supply of available calves; as well, the profitability seen in 2017 should continue to create buyer competition locally. Exports should remain smaller through the rest of the year, as volumes are expected to increase south of the border; however, volumes in Canada will be manageable and local demand ample to support the market. Of course, weekto-week variations will be seen based on local volumes and quality but overall good demand should remain for feeder cattle moving forward.

# **NON-FED CATTLE**

Cull cattle volumes generally peak in October and then decrease heading towards the end of the year. Prices seasonally will start to follow the beef market where strength in seasonal demand will equate to support in the cull cattle market. Beef demand has been good, and in general, when calf prices remain strong cull rates will be smaller which will keep supply manageable moving forward. Expect prices to remain steady to higher as we move towards the end of 2017.

# **Break-even Prices on A-Grade Steers**







Break-even price for steers on date sold

2017 2016 2018 2016

# October 2017 prices\*

# **Alberta**

Yearling steers (850 lb.)	\$193.21/cwt
Barley	4.44/bu.
Barley silage	55.50/ton
Cost of gain (feed)	68.31/cwt
Cost of gain (all costs)	100.68/cwt
Fed steers	133.23/cwt
Break-even (March 2018)	156.86/cwt

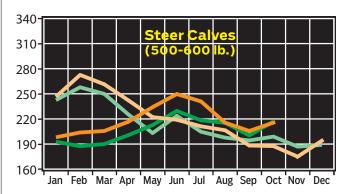
# **Ontario**

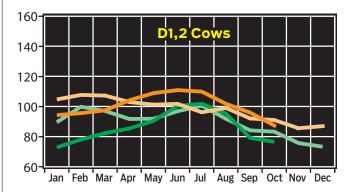
Yearling steers (850 lb.)	\$191.75/cwt
Grain corn	4.51/bu.
Corn silage	38.08/ton
Cost of gain (feed)	71.76/cwt
Cost of gain (all costs)	106.96/cwt
Fed steers	127.72/cwt
Break-even (April 2018)	157.83/cwt
*Mid-month to mid-month prices	

Breakevens

East: end wt 1,450, 183 days West end wt 1,325 lb., 125 days

# **Market Prices**





Ontario	Alberta
2017	2017
2016	2016
Ontario prices based on a 50/50 east/west mix	

# Market Summary (to October 6, 2017)

	2017	2016
Total Canadian federally inspected slaughter	2,103,670	1,976,054
Average steer carcass weight	886 lb	916 lb.
Total U.S. slaughter	24,310,000	22,974,000

# **TRADE SUMMARY**

EXPURIS	2017	2016
Fed cattle to U.S. (to September 30)		226,714
Feeder cattle and calves to U.S. (to September 30)		161,167
Dressed beef to U.S. (to August)	403.28 mil.lbs	390.89 mil.lbs
Total dressed beef (to August)	547.56 mil.lbs	507.29 mil.lbs
IMPORTS	2017	2016
Slaughter cattle from U.S. (to August)	0	0
Slaughter cattle from U.S. (to August)*  *Dressed beef from U.S. (to August)		
	166.04 mil.lbs	162.00 mil.lbs
*Dressed beef from U.S. (to August)	166.04 mil.lbs 26.29 mil.lbs	162.00 mil.lbs 49.91 mil.lbs

# Canadian Grades (to October 21, 2017)

% of A			Yield	
grades	+59%	54-58%	-53%	Total
Prime	0.1	0.4	1.1	1.6
AAA	14.5	21.2	22.0	57.7
AA	20.6	11.0	5.0	36.6
Α	1.7	0.3	0.1	2.1
Total	36.9	32.9	28.2	
			Total A g	grade 98.0%
	Total graded	Total ungraded	% c	arcass basis
EAST	504,838	20,947		81.6%
WEST	1754 864	12 530		86.6%

Only federally inspected plants

MARKET TALK By Jerry Klassen

# CANADIAN DOLLAR OUTLOOK



■ he Canadian dollar experienced a sharp rally from May through September as the Bank of Canada implemented a tighter monetary policy. This was somewhat negative for fed and feeder cattle prices. However, since early September, the Canadian dollar has deteriorated and I've received many inquiries over the past few weeks with regard to future market direction. Feedlot margins are quite snug and, therefore, operators need to be shrewd when marrying their currency positions to their balance sheets. I thought this would be an opportune time to discuss the factors influencing the market direction over the next four to six months.

Canadian government fiscal policy is negative for the Canadian dollar. Tax increases, ongoing government deficits and overall left leaning policies do not bode well longer term. Recently, the cancellation of the "Energy East" pipeline has also set a negative sentiment for Canadian dollar ownership amongst investors. The elimination of a \$15 billion direct injection from private enterprise along with the multiple spinoffs removes the floor of the currency. This erodes confidence in future development of other infrastructure projects for Canada's major industry. The Canadian dollar has no friends when major negative news such as "Energy East" comes to the forefront.

Canada's trade deficit widened in August from the previous month to the fifth largest on record. Exports have fallen for the third consecutive month and are now down on a year-on-year basis. The merchandise trade deficit stood at a seasonally adjusted \$3.41 billion, up from a revised \$2.98 billion shortfall in July. This data suggests that the pace of economic growth has dropped sharply. It would not be a surprise if manufacturing sales continue to decline in upcoming months. Third-quarter GDP will probably come in near 2.5 per cent compared to the second quarter growth of 4.5. The unemployment rate will be relatively stagnant for the remainder of the year. There is no major stimulus from the government coming forward and government construction season is coming to an end. Canada added 10,000 jobs in September and the unemployment rate stood at 6.2 per cent. While there was a 102,000 loss in part-time jobs, there was a gain of 112,000 full time jobs. On a positive note, wages showed a year-over-year increase of 2.2 per cent. Given the current environment, it is hard to justify further strength in the economy over the next four to six months.



The Bank of Canada has cooled its talk of further rate hikes with widening trade deficit, stagnant inflation and tempered growth projects. The wage increases are positive but this is the only factor that would warrant further interest rate hikes.

In the U.S., the trade deficit narrowed to US\$42.4 billion on a pickup in exports. It is important to note that when merchandise and services are incorporated into the data, the U.S. runs a slight surplus with Canada. For the most part, if Canadian oil and gas exports improve, then the trade balance would be about equal. Trump and the Republicans are on the road for major tax cuts which will put U.S. businesses at a major advantage and this will cause the U.S. trade deficit to narrow further. Lower taxes will bolster inflation and enhance job growth. If we use the New Zealand example, lower taxes will also result in greater government revenue due to the spinoffs in the private sector and greater consumer spending. The U.S. unemployment rate fell to 4.2 per cent in September, although non-farm employment fell by a seasonally adjusted 33,000; average hourly earnings rose 2.9 per cent from a year earlier. The U.S economy is at the latter end of an expansionary phase but until economic data suggests slower growth, there's no reason to expect a cooling period.

It appears that Federal Reserve Chair Yellen is leaning towards a rate hike in December and then two or three consecutive rate hikes in 2018. This should coincide with the Trump tax cuts and temper the upside in the equity markets. At the same time, the Federal Reserve is starting to liquidate its balance sheet of longer-term bonds. Talk in the industry suggests it will liquidate about 10 billion per month and build this up to 50 billion per month. Demand for long-term bonds is quite strong so this should not significantly affect the bond markets. Selling bonds drives down the price and increases the yield, which is actually somewhat positive for the U.S. greenback against other major currencies.

U.S. crude oil inventories appear to be declining. Longer term, if we continue to see stocks decline, the crude oil market could continue to strengthen and thereby support the Canadian dollar. Amongst world traders, the Canadian dollar has once again become a resource-based currency with price direction related to crude oil, metals and other commodities. Monetary policy has taken a back seat for the time being.

In conclusion, the current environment suggests that the Canadian dollar will have a difficult time sustaining any rally. Our largest trading partner appears to be pulling the Canadian economy along despite the left-leaning fiscal policy of the federal and Alberta provincial governments. Further rate interest rate hikes by the Bank of Canada and positive economic data would be needed to warrant any strength. I'm looking for the Canadian dollar to trade in a range from \$0.78 to \$0.815 over the next four to six months. I have a weaker bias in the next two-month timeframe. \*\*

Jerry Klassen manages the Canadian office of Swiss-based grain trader GAP SA Grains and Produits Ltd., and is president and founder of Resilient Capital specializing in proprietary commodity futures trading and market analysis. Jerry consults with feedlots on risk management and writes a weekly cattle market commentary. He can be reached at 204-504-8339.

# Sales&Events

# **EVENTS**

# **NOVEMBER**

- 3-17 The Royal Agricultural Winter Fair, Toronto, Ont.
- BeefTech. Farmfair International, Edmonton, Alta.
- Farm Fair International, Edmonton,
- 14-16 Canadian Forage and Grassland Association Conference, Delta Guelph Hotel and Conference Centre, Guelph, Ont.
- Maritime Bull Test Station AGM and handling workshop, Nappan, N.S.
- 18-21 Canadian Bison Association annual convention, Delta Regina, Regina, Sask.
- 20-25 Canadian Western Agribition, Regina, Sask.
- 20-25 Simmental Federation of America's Conference, Regina, Sask.
- 21-23 AgEx, Agricultural Excellence Conference, Brookstreet Hotel, Ottawa, Ont.
- 22-23 People's Choice Gelbvieh Bull Futurity, Agribition, Regina, Sask.
- 23 Gelbvieh Sweetheart Classic Sale, Agribition, Regina, Sask.
- Western Canadian Gelbvieh Sale

# **DECEMBER**

- Alberta Beef Producers annual meeting, Sheraton Cavalier Hotel, Calgary, Alta.
- Western Canada Conference on Soil Health and Grazing, Radisson Hotel Edmonton South, Edmonton, Alta.
- Canadian Roundtable for Sustainable Beef (CRSB) Annual Meeting, Delta Edmonton South, Edmonton, Alta.

#### **JANUARY 2018**

- 11-13 20th Ontario Beef Industry Convention, Best Western Lamplighter Inn, London, Ont.
- 24-25 Saskatchewan Beef Industry Conference 2018, Saskatoon Inn, Saskatoon, Sask.
- National Cattlemen's Beef Association
- Feb. 2 annual convention, Phoenix, Arizona

# **FEBRUARY**

- Manitoba Beef Producers annual meeting, Victoria Inn Hotel and Convention Centre, Brandon, Man.
- Advance Agricultural Leadership Program Dream Auction gala, Delta Guelph Hotel and Conference Centre, Guelph, Ont.

- 11-25 Foothills Forage and Grazing Association, Spain and Portugal Ag Tour
- 21-23 15th Annual Alberta Beef Industry Conference, Sheraton Hotel, Red Deer, Alta.

#### **MARCH**

17-18 Cody Sibbald Legacy Classic, at Exhibition Grounds, Medicine Hat, Alta.

# SALES

# **NOVEMBER**

- Speckle Park Presort Feeder Sale, Heartland Livestock Services, Lloydminster, Sask.
- Fenton Hereford Ranch Fall Production Sale, Irma, Alta.
- 21 Alberta Shorthorn Assoc. 7th Annual All Star Classic Shorthorn Female Sale, at Ag Society, Lacombe, Alta.
- Bar Pipe Hereford Ranch Sale, at the ranch, Okotoks, Alta.

#### **DECEMBER**

- Brost Land & Cattle Co. "When the Smoke Clears" 49th Annual Sale, at the ranch, Irvine, Alta.
- Gemstone Cattle Co. 3rd Annual Hereford & Angus Bull & Female Sale, at Bow Slope Shipping, Brooks, Alta.
- 6 17th Annual Cudlobe Bull Sale, Foothills Livestock Auction, Stavely, Alta.
- McMillen Ranching Ltd. Herdbuilder17, at the ranch, Carievale, Sask.
- Diamond K Cattle Co. "Buy Em Red, 11 Breed Em White" Bred Heifer Sale, at the Bircham ranch, Piapot, Sask.
- 11 Y Coulee Land & Cattle Co. "You Be the Judge" Bull & Heifer Sale, at NCL Vermilion, Alta.

# **JANUARY 2018**

- Lazy S Ranch Bull Power Sale, at the ranch, Mayerthorpe, Alta.
- M.C. Quantock "Canada's Bulls" Bull Sale, Lloydminster Exhibition Grounds, Lloydminster, Alta.
- Moose Creek Red Angus 2-Year-Old Bull Sale, at the ranch, Kisbey, Sask.

## **FEBRUARY**

Hill 70 Quantock Ranch, Barn Burnin' Bull Sale, at the ranch, Lloydminster, Sask.

Belvin Angus 5th Annual Bull Sale, at the ranch, Innisfail, Alta. 🚕

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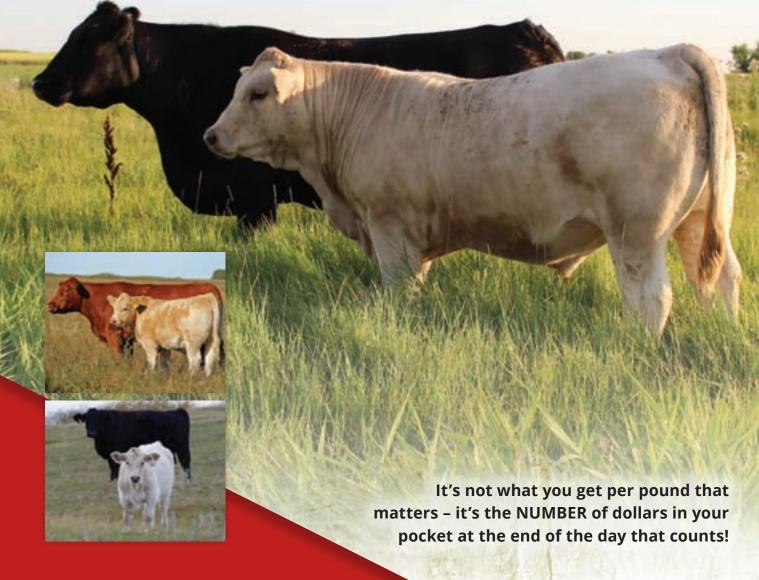
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\* Leblanc MM. 1986. Passive transfer of immunity in calves. In: Morrow DA, ed. Current Therapy in Theriogenology. 2nd ed. Philadelphia; WB Saunders; 224-26.





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