



Nutrient Management

WINTER 2016

- New logo and name but the same great service -

Another year down and all the best for a new one

The weather has been great as of late. Hopefully, you folks with cattle will have these temperatures during calving season. Before long we will all be seeing a new crop of calves running around the pastures. Along with good forage the cattle need a reliable source of water to ensure healthy gains. If you are grazing in the Lower Little Bow area you already know that the amount of sediment in the water does decrease water quality for the cattle. Off-site water systems can increase the water quality by capturing the water in a trough, which allows the sediment to settle out into the bottom of the trough. Many of you know that I have been involved with riparian management practices for the last ten years. I have seen cattle walk a quarter mile along the Lower Little Bow River to drink out of the portable water system.

Lethbridge County has a portable solar/wind watering system that we are going to



lend out to folks this year, available during the frost-free grazing season. So if you have been wondering if an off-site water system will work for your operation, you now have the opportunity to use one, no cost, before you invest in your own. This portable system will be available for two to three weeks for trial periods. Remember before you buy anything, that there are great funding opportunities under the Growing Forward 2

Program that will pay 50% of the cost. Also, do not purchase a system before you have applied for the Growing Forward 2 funding. Please call Dwayne Rogness for more information. Keep in mind that there are great funding opportunities for many of the projects that you are planning for in the future. The only thing you have to do is apply for the related funding before you purchase anything.

I have just finished up a

mad marathon of conferences and workshops that are common from November through to March. So being on the road gives me a great perspective of the trials and tribulations that farmers face every year. I have always said that farmers have the greatest sense of humour in any industry and I don't think I need to list the reasons why. A common message from many of the speakers I have heard in the last 2 months is that agriculture has great things ahead of it. Former Deputy Agriculture Minister John Knap mentioned on two different occasions that the demand for renewable energy will be brought to the farmer's front door. For example, John suggests that in the future many of our marginal agricultural areas will be covered in solar panels. Something to think about for the cow calf guys I guess.

For all of your Environmental Farm Plan and Growing Forward 2 questions please call Dwayne Rogness.

Lethbridge County Agriculture Service Board

**#100, 905 - 4th Avenue South
Lethbridge, AB
T1J 4E4**

Phone: 403-732-5333

Picture Butte

Fax: 403-732-4328

Check out the Lethbridge County website to see current events and up to date agricultural information.

Use the Quick Links section to HIGHLIGHT AG. SERVICES EVENTS & NEWS.

**Gary Secrist
Agriculture Fieldman**

**Dwayne Rogness
Rural Extension Specialist
(RES)
403-380-1598**

**Terry Mrozowich, ASB
Foreman**

**Kevin Virostek,
Foreman/Weed Inspector**

TESTIMONIAL *from Brian Stoutjesdyk*

I approached the Rural Extension Specialist with Lethbridge County, Dwayne Rogness because I needed to complete an Environmental Farm Plan to be eligible for Growing Forward Funding.

Dwayne helped me through the process. He came to the house and we completed the Environmental Farm Plan at my kitchen table. Being that the Growing Forward Funding program was in its early stages there was a lot of paper work to fill out to apply for funding and Dwayne made this process stress-free.

After waiting for a month or so I found out that the application was successful and we were able to receive funding for a solid liquid manure separator.

One thing I liked was his interest in coming to the farm to meet with me. Being a dairy there are not a lot of free moments off farm, it was great to have him come out to the farm.

I found that Dwayne was a good listener and that he really wants to help the agricultural producers in Lethbridge County maintain sustainable operations.

I would recommend meeting with Dwayne to help with Environmental Farm Plans, Growing Forward Applications and any environmentally related agriculture questions you may have.

RAT FREE Alberta

update

For 66 years Alberta has been rat free. We are the only jurisdiction in the world that has this claim. Maintaining a rat free status takes a lot of effort and money but according to the Alberta Research Council 2004 we save \$42.2 million each year by not having an established population of rats that would require control and would cause damage. Municipalities are responsible for eradicating the varmints, but people sometimes don't know where to call to report a sighting.

Our new 310-RATS (310-7287) hot line has been a great improvement in receiving and recording rat sightings in Alberta. You can dial 310-RATS anywhere in Alberta 24/7 and your call will be responded to. Although 95% of our calls are misidentified rodents, we did have several confirmed rat reported through this hot line. Muskrats and pocket gophers are the rodents that residents most often misidentify as rats. 310-RATS can be called at any time of the day or weekends and when an operator is not available your message left on the answering machine will be responded to shortly by on-call staff checking messages. During office hours you get direct call assistance with your rat report.

We had no rat infestation in our Rat Control Zone along the Saskatchewan border this year but we did have

a small trying, infestation on an acreage in the Bon Accord area. In April we received a 310-RATS call from an acreage owner in Sturgeon County who had trapped a rat in his chicken coop. Further investigation found a small number of roof rats under a feed bin on the acreage. The owner had a flock of show chickens and a pair of rats found their way into his feed. We suspect the rats arrived from the West Coast via a recreation vehicle finding refuge under his shed used to store chicken feed. We eradicated at least 6 rats at the site and thought we had the infestation cleaned up. Single rat sightings continued in the area during the summer and we knew we had missed some rats somewhere. The Rat Control Zone staff were called in to help search the area to try to locate a site that might have food and shelter for rats. Sturgeon County in the Hewitt Estates area is not a very rat friendly neighborhood with limited food sources.

On Sept 30, 2015 a second rat infestation in Bon Accord was found 500 yds south of the 1st nest found earlier in the spring. About 20 roof rats were eradicated at this site. This infestation had eluded PCO's all summer and is thought to be connected



Livestock Pen *Floor Alternatives*

TOWN HALL DISCUSSION

February 9, 2016 at the Picture Butte Elks Hall
(112-4th Street South)

Doors open at 1 p.m. ■ Discussion starts at 1:30 p.m.

Are you looking for a pen floor alternative that may improve animal welfare conditions and reduce annual repair and maintenance costs?

If so, you are invited to attend this session specifically discussing rolled compacted concrete, soil cement, and traditional concrete as a pen floor alternative. Producers are encouraged to learn about the opportunities and uncertainties regarding the long-term use of these products.

**Hosted by Lethbridge County and Alberta
Agriculture and Forestry.**

Call
**Cody Metheral at
(403) 381-5885
for a meeting
agenda or regis-
ter at the door**

Lethbridge County SOLAR ENERGY WORKSHOP

March 15, 2016 • 10:00 a.m. to 4:00 p.m.

Coyote Flats Pioneer Village, Picture Butte, Alberta

This is a free workshop and lunch hosted by Lethbridge County. There are 50 seats available, pre-register soon to ensure you do not miss this informative event 403-732-5333.

DIRECTIONS FROM PICTURE BUTTE TO COYOTE FLATS PIONEER VILLAGE

When entering the town of Picture Butte from the west entrance. Immediately upon entering Picture Butte, turn south (right) onto Rogers Avenue (secondary highway 843). Follow until you reach Butte Avenue. Turn south (right) onto Butte Avenue. Travel past the church and waste station. Watch for Coyote Flats on your left.

It is becoming increasingly profitable for Alberta farmers to generate their own electricity and sell it to the grid, utilizing the renewable energy sources on available right on their property. This one-day workshop will cover solar electric system siting, installation, permitting process and economics.

LEARNING OBJECTIVES

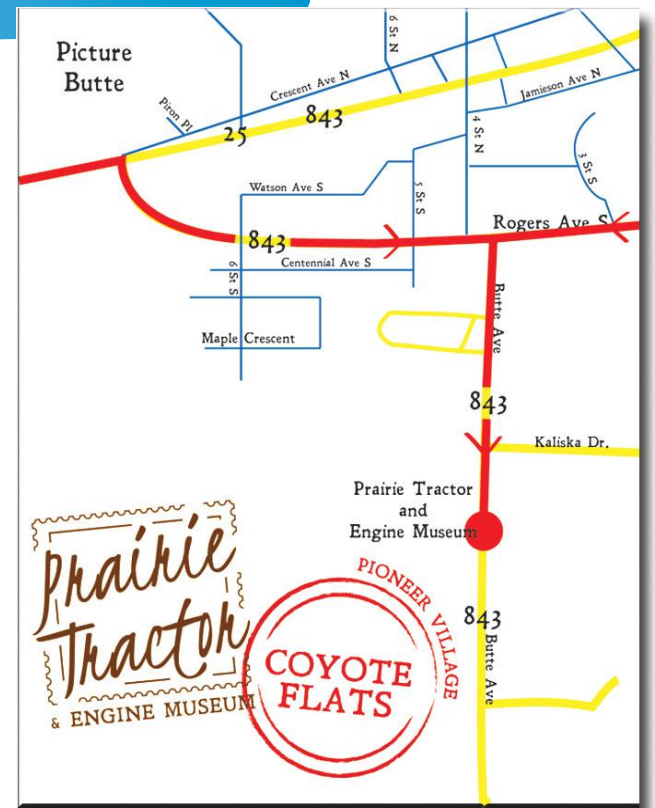
Participants will:

- Understand how utility-intertie solar systems work
- Learn how to evaluate their site for equipment location and optimal productivity

- Understand the steps to a completed installation including interfacing with a contractor, permitting agencies and utilities.
- See examples of equipment
- Be introduced to case studies of successful farm-based solar systems including actual performance data.
- Examine the economic viability of a farm-based solar system
- Be provided with information on sources for equipment, installers and further resources



Generating Electricity From the Sun
A one-day workshop on grid-tie solar options for Alberta farmers



Class Outline

- Alberta's solar resource
- Overview of farm applications for solar energy
- Alberta's Micro-Generation regulation
 - How grid-tie solar systems work
 - Equipment options
 - The role of battery storage
- Microinverters vs. string inverters
 - Determining site viability
 - System design
 - Economics
- Permits and utility interconnection agreements
 - Working with a contractor
- Case studies of successful Alberta systems
- Growing Forward 2 On-Farm Energy Management Program
 - Tour of applicable web and print resources
- The class includes equipment demonstrations.

Lethbridge County SOLAR ENERGY WORKSHOP

March 15, 2016 • 10:00 a.m. to 4:00 p.m.

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HANDOUT MATERIALS

Best Practices to Select and Work with a Solar Contractor
Managing Expectations with Solar Photovoltaic Technology
Wire Service Providers in Alberta - Contact Information for Micro-Gen. Applications
Website Resources

DEMONSTRATION EQUIPMENT

Solar module
Micro inverter
String inverter
DC Disconnect
Racking options
Metering options
Solar site evaluation tool

INSTRUCTOR:

Rob Harlan

Rob Harlan is the Executive Director of the Solar Energy Society of Alberta. He has taught workshops and classes in solar technologies in both the United States and Canada including courses in solar energy at MacEwan University and the Northern Alberta Institute of Technology. Mr. Harlan has provided renewable energy policy consulting to the City of Edmonton and the province of Alberta. Mr. Harlan managed the 2013 Edmonton Federation

of Community Leagues Solar and Energy Savings program, which installed solar PV systems on eight community league buildings. He served as the solar site assessor for the Alberta Agriculture's Growing Forward Solar PV Equipment Pilot Program in 2012. In this capacity he visited over 50 Alberta farms to facilitate their process of going solar.

Mr. Harlan is not affiliated with any product or installation company. He has been a NABCEP certified Solar PV Installer, Electrical Contractor and General Building Contractor with twelve years experience designing and installing over 150 solar electric and solar hot water installations.

ORGANIZATION:

Solar Energy Society of Alberta
The Solar Energy Society of Alberta (www.solaralberta.ca) is a non-profit, educational organization, which serves as a resource for governments, educational institutions and the public at large. To this end SESA has partnered with MacEwan University, the University of Alberta, the Northern Alberta Institute of Technology, the Telus World of Science, the Edmonton Federation of Community Leagues, the Electrical Industry Training Centre, the Canadian Solar Industries Association, Alberta Agriculture, the City of Edmonton, and a num-



ber of Alberta elementary and high schools. The Solar Energy Society of Alberta offers seminars, workshops, classes, exhibits and public demonstrations and provides a solar technology demonstration trailer for public events in the Northern Alberta area.

SESA's website provides a number of services including listings of Alberta installers and equipment suppliers, a gallery of Alberta solar systems, as well as a library of educational videos and PowerPoint presentations. Alberta's highest environmental honour, the Emerald Award was bestowed upon SESA in 2014.

There will be an opportunity to hear John Kolk talk about the trials and errors in establishing renewable energy on your farming operation.

For those that attended the workshop in 2014, there will be much more economic analysis and more detail. The basics will still be covered and needed for a portion of the attendees. Questions throughout the workshop are encouraged but it is basically a presentation on grid-tie solar electric systems.

There is no cost and lunch is provided.

Hosted by Lethbridge County - Call 403-732-5333 to Register or for more information

SOIL: Our eroding resource

The Soil Conservation Act empowers each municipal soil conservation officer to work with landholders, either cooperatively or by issuing a legal notice, to stop or prevent erosion. Lethbridge County has knowledgeable staff that can assist in any way to prevent or reduce lands blowing as a result of wind erosion. Please do not hesitate to call us if such assistance is needed.

The sustainability of the whole farm is dependent on living, vibrant topsoil. Agriculture producers that recognize this will do everything in their power to retain this vital resource. When we have the freeze-thaw effects that winter has given us thus far, it does set our soils up for erosion events. The best way to protect your soil is to have sound rotations that consider using cereals after a row crop situation to add residue to the soil. In Southern Alberta wind has shaped our landscape for many years. The best way to plan a sound rotation is to also understand that the wind is a very important feature to consider when you plan your rotation.

A healthy soil is full of life. The organisms living in the soil play an important role in the health of the soil and of plants. Soil life includes bacteria, fungi, algae, protozoa, nematodes, earthworms, insects (ants, beetles, millipedes, etc.), larger animals (moles, rabbits, snakes, etc.) and plant roots.

Soil organisms play an important role:

- in the breakdown of organic residues and their incorporation into the soil. As organic materials are decomposed, nutrients become available to plants, humus is produced and soil aggregates are formed.



"The nation that destroys its soil destroys itself"

(Roosevelt 1937)

- creating channels for water infiltration and better aeration
- in moving surface residues deeper into the soil
- in nitrogen fixation
- in fighting plant pests, such as weeds, insects, nematodes and diseases
- stimulating root growth with substances produced by microorganisms

The term soil tilth is used to describe a soil that is in a favourable condition for crop growth. Soil with good tilth is porous and allows water to enter easily, instead of running off the surface, which makes it more available to plants and results in less erosion. A porous soil allows roots to exchange oxygen and eliminate carbon dioxide more easily, which aids root

growth.

The active organic matter in a soil, the decomposing residues and the soil life play a significant role in soil structure development and maintenance. Soil structure is developed from soil particles held together with clay, humus and the glues released from living and decomposing organisms. Good soil aggregation or structure can only be maintained with a continuous supply of organic materials, roots of living plants and soil organisms.

Agriculture in southern Alberta has become very diverse and intensive. A variety of commercial vegetable/row crops are available, which remove almost all of the plant matter from the field. These crops can leave the soil bare and vulnerable to degradation, decreasing soil tilth. Soils that are degraded are usually the

result of soil erosion and a decline in organic matter levels. Soils in this state often end up on a downward spiral. Further loss of topsoil due to erosion reduces the nutrient content of the soil. The lost soil carries nutrients with it so the topsoil layer becomes less fertile. Tillage of the soil begins to incorporate less fertile soil from below. As organic matter levels decline, the soil becomes less resistant to erosion.

There is a wealth of information available for producers on soil erosion. If you have any questions please contact the Lethbridge County Agriculture Service Board at (403)732-5333.

*Adapted from Food and Agriculture Organization of the United Nations and the Ontario Ministry of Agriculture and Food
Agdex#: 572/751*



Green Certificate Program

The Green Certificate Program is an industry driven agriculture training program. Its apprenticeship style delivery ensures that participants learn through actively performing the skills required. This means learning hand-on in the barn, field or corral with a trainer who is knowledgeable and interested in the trainee's success.



A partnership between Alberta Agriculture and Forestry and Alberta Education has made the Green Certificate program an approvable complimentary program of study available to all Alberta High Schools. Students must be fifteen years of age or older and be enrolled in grades 10, 11 or 12. They can choose from one of the nine specialties of study, cow-calf, feedlot, sheep, swine, dairy, field crop, irrigated crop, beekeeping and equine.

Once completed participants receive a Green Certificate.

The Green Certificate Program not only provides students practical, hands-on training to add to their resume, they also will receive 16 grade twelve diploma credits.

For more information please contact your school off campus coordinator or your Regional Green Certificate Coordinator
BECKY DOMOLEWSKI at
403-634-6308 or becky.domolewski@lethbridgecollege.ca

Confirmed rat sightings result in rat eradication

Continued from Page 2

with the original infestation. This infestation was hidden in a small domestic garbage pit near the edge of a coulee in the bush. This garbage pit was not expected to exist in an estate acreage complex.

We had 22 single confirmed rat sightings in the Province in 2015 that were exterminated. In Addition 4 landfills (Stettler, Edmonton NE, Llyodminister, Lac LaBiche,) reported finding rats but all of these dumps managed to eradicate the infestations before the rats could multiply.

A home in Morinville was found to have 26 pet rats brought in from BC being raised

for snake food and pets. Our Investigation Branch staff meet with the resident to ensure the rats were destroyed.

Rats were being sold from BC to a Grande Prairie advertising site. The local Pest Control Officer (PCO) called the add and requested they take off the Alberta listing. Kudos to our sharp PCO in Grande Prairie.

The Globe and mail did a story on Alberta's rat control program. Justin Giovannetti met with PCO's in the Sibbald area and reported his findings on Nov 25th. Read the article at http://.mywebmemo.com/top-stories/on-the-frontlines-of-albertas-war-against-rats_437966.html.



Lethbridge County has a **PORTABLE SOLAR/WIND WATERING SYSTEM**

that we are going to lend out to folks this year, available during the frost-free grazing season. So if you have been wondering if an off-site water system will work for your operation, you now have the opportunity to use one, no cost, before you invest in your own. This portable system will be available for two to three weeks for trial periods.

Contact Dwayne Rogness for more information, 403-380-1598

Confined Feeding Operations (CFO) Extension Services

“ To reach your nearest CFO Extension Specialist, dial 310-FARM, contact them directly or call your local NRCB office. Dial 310.0000 to be connected toll free. ”

CFO Extension Specialists
Deanne Madsen, Morinville
780.939.1218

Chris Ullmann, Red Deer
403.755.1475

Cody Metheral, Lethbridge
403.381.5885

NRCB Offices

Lethbridge: 403.381.5166

Red Deer: 403.340.5241

Morinville: 780.939.1212

Fairview: 780.835.7111

Alberta



NRCB

Natural Resources
Conservation Board

CFO Extension Specialists with Alberta Agriculture and Food (AF) provide technical expertise to livestock producers, consultants, municipalities, and other interested parties. CFO extension services ensure Alberta's livestock industry grows in a competitively and environmentally sustainable manner.

Working in cooperation with the Natural Resources Conservation Board (NRCB), Approval Officers and Inspectors, AF CFO Extension Specialists provide clients with information and tools to support the NRCB application process. They also provide clients information on the regulatory requirements of the Agricultural Operation Practices Act (AOPA) and other relevant legislation.

What services are available?

Extension services are available to anyone requiring information about the technical requirements and application process for existing, new and expanding CFOs in Alberta.

For producers and their consultants, additional services will be provided specific to the application process.

Extension staff assist clients with the following:

- Assist with determining if a permit is required.
- Understanding the application process and regulatory requirements.
- Collecting information to determine potential site risks and initial site evaluation.
- Providing information on management options to meet regulatory requirements and address potential site risks.
- Directing clients to information and tools to help complete the application process.

Referral service

CFO Extension Specialists can refer clients to people with other areas of expertise to help them make decisions about their operation.

How can services be accessed?

AF CFO Extension Specialists provide services across the province and are located in Morinville, Red Deer and Lethbridge.