

THE

TAXES ARE DUE

The County of Warner would like to remind everyone that property taxes are due November 30, 2022 in order to avoid penalties. The County office is located at 300 County Road in the Village of Warner. It is important to note that the office hours are Monday through Thursday from 8 a.m. to 4:30 p.m. and on Fridays from 8:30 a.m. to 12 noon.

Cheques can be made payable to the County of Warner

what's in this issue

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clearly postmarked by Canada Post no later than No-
vember 30, 2022 (a postage imprint is not an acceptable
proof for date of mailing).
There is a NIGHT DEPOSIT located just right of the

DUNTY OF WARNER NO. 5

County main entrance doors.

A 6% penalty is added on December 1 to any outstanding balances.

An additional 8% penalty is added on January 1 to any outstanding balances.

Please make arrangements to have your payment reach the County office by November 30.

We look forward to your yearly visit and if you have any questions, please contact our office at (403) 642-3635 or 1-888-642-2241.

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County of Warner No. 5

FALL 2022



County of Warner No. 5 Administration Office 300 County Road, Box 90 Warner, AB TOK 2L0 Phone: 403-642-3635 Fax: 403-642-3631 New Toll Free Number: 1-888-642-2241 Website: www.warnercounty.ca

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> Logan Wehlage, Property Assessor 403-381-0135

County of Warner No. 5

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County Chronicle



Public Works

Public Works had a very busy season with construction and maintenance of our road and gravel pits. We would like to THANK everyone for watching out for our crews while we were repairing culverts, replacing signs, patching, re-graveling roads, upgrading roads for snow storage and drainage.

As Public works get prepared for the winter road conditions, we would like to remind everyone:

Please be patient while district operators make it through their routes while snow plowing. They have a large area to cover and do it as efficiently as possible.

Council has amended policy 320.35 by deleting private laneway snow plowing. This change allows our operators to spend the necessary time plowing and sanding. If your laneway needs clearing, there are local contractors in all areas of the county that will be happy to assist you.

Drive safely for the road conditions, so everyone makes it to their destination.

Preparing Trees and Shrubs For Winter

Harsh winter climates in Alberta can create many damages to trees and shrubs. Some of the most common damages occur due to cold temperature and dry air, winter sun, wildlife damage, salt, deep freeze, heavy snow and ice. There are a few things you can do to reduce potential damages.

Cold winter damage and prevention

Cold winter damages can happen due to tree inability to survive cold weather, lack of snow in some part of Alberta, strong cold and dry wind; heavy snow and ice in late fall or early spring. There are few things you are able to do to avoid cold winter damage.

- Choose hardy trees and shrubs that can withstand cold temperature. Alberta belongs to Canada Cold hardiness zones 1, 2 and 3 and partly zone 4. So choosing trees and shrubs that are hardy enough for our climate is the first step to protect them from cold winter
- Snow is an excellent insulator for trees and shrubs

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Preparing Trees and Shrubs For Winter

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- Planting trees and shrubs in protected area buildings or already established tree shelter to avoid direct exposure to strong wind
- Proper pruning will reduce the number of branch breaks during heavy snow or ice.

Root injuries and protection

Root injuries due to cold are one of the most impactful damages that trees and shrubs can sustain. Roots do not become dormant at the same time as branches, buds or trunk/stems. Several studies are showing that roots remain mostly inactive. Roots can and do function and grow during winter months whenever soil temperatures are favorable, even if the air aboveground is brutally cold. The freezing, heaving and cracking of winter soils physically damages roots - particularly the fine feeder roots in the uppermost organic layers. The root damages can also trigger a range of effects such as reducing a tree's ability to take up water and nutrients, particularly during a spring bud break, and to support stem and branch growth in summer. Severe root damages from winter will greatly contribute to whole tree mortality or part of the trees.

Protecting roots is the most important thing that you can do for trees and shrubs. Here are several recommendations:

 Provide deep watering just before freeze (young or old trees). Frozen water is an excellent insulator and will reduce frost penetration to the root zone. Moist soil holds more energy than dry soil. Once the soil is dry, it is easier for the frost to penetrate deep and dry out roots. The freeze will take moisture from roots and create crystal icicles in the roots which will create



physical damages to the root system. The best way to water is slowly with a soaker hose with approximately at the rate of 10 gallons (around 40 liters) per inch of tree diameter (tree diameter is measured at breast height).

- Good deep and early snowfall will keep soil from freezing even if the air temperature is brutally cold
- If snowfall happened after soil is already frozen, deep snow will protect roots from January or March-early thaws when the temperature fluctuates
- **Mulching** is the most important root protection that you can do. Mulching provides a few key functions: prevents weeds, protects roots from extreme heat and keeps moisture around trees. Create a donut-shaped wood chip cover around your tree to keep water inside. Applying 2-4 inches (5-10 cm) of wood mulch will greatly reduce soil freeze. A layer of 3-4 inch of woodchips mulch will prevent heaving by maintaining more constant soil temperatures.
- For newly planted trees; check if there is a crack in the soil due to planting or dry fall. Filling up these



cracks with soil to prevent cold air from entering the soil. Mulching would also prevent this as well.

- If you have a sandy soil you may **fertilize** in the spring or if you have heavy clay soil you may fertilize in the fall after the leaves have dropped
- Leave leaves. Instead of disposing of autumn leaves, keep leaves on the ground, mulch or blend them into the soil to retain nutrients. Be very aware if you have a leave disease (e.g. Leaf spots, bronze leaf disease, etc) you have to rake leaves to avoid future problems with diseases.

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COUNTY CHRONICLE **Preparing Trees and Shrubs For Winter**



Continued to Page 3 Wildlife damages and prevention

COUNTYOR

As winter is very harsh for many wildlife species, they are looking for food usually on young and recently planted trees. Several wildlife species will create damages to your young trees. Mice, voles, rabbits, deer and moose will griddle and eat the bark, twigs, branches and buds by feeding on them. They can create severe damages- total or partial destruction of trees and shrubs. There are a few things you can do such as erecting physical barriers to prevent damages.

- Use mesh wire (1/4 inch in size) to protect trunk bark from mice, rabbits, voles and to some extent deer and moose. Deer and moose will strip bark either by eating or using their antlers
- Use plastic tree guards for small animals
- Properly install mesh wires of plastic tree guards with no gaps between the bottom of the mesh cylinder and the ground where animals could crawl under the fencing
- Build a large fence for deer or moose. Use some repel-





Salt damages and prevention

Various salt (chlorides) are used to prevent ice from forming on the road in Alberta. Among them, sodium chloride is one of the most damaging agents on trees and shrubs according to some studies. There are several things you may be able to do:

- Avoid or reduce the amount of salt used for de-icing
- Plant salt-tolerant trees and shrubs in the area with high use of salt
- Use other alternative de-icing material such as sand or small gravel



- You may put some trees under burlap tto prevent salty particles spraying onto the trees
- Move trees and shrubs further away to avoid salt damages

Pruning

After leaves drop (Sept and Oct) you may consider pruning dead, diseased and damaged (3D) branches. Any infested branches dispose of or burn any infested branches. Perform proper 3-way cut pruning techniques and do not damage the branch collar during this process. Otherwise, avoid pruning this time of year as this may create additional stress to the tree.

FOR MORE INFORMATION: Toso Bozic P.Ag, ISA Certified Arborist • CERT ID: PR 5356A Phone (780) 712-3699 • bozict@telus.net • www.yardwhispers.ca or www.attsgroup.ca

Spraying with pesticides

or 2023 we need to be aware that when we spray our fields with pesticides, staying away from the ditches is essential. We are continuously re-seeding ditches that have been sprayed out along the field adjacent to the road. Most times this is a mistake, which of course can happen. We just need to be aware of the negative impact to the road. The problem is when we get a rainfall event it erodes the roads because there is no vegetation on the slope of the ditch, once this begins it is very hard to establish grass on these slopes again. The erosion of the ditches creates hazards for all of us that travel these roads. Not to mention the added cost of reestablishing the grass in the ditches. It is up to all of us to make sure we are not spraying the ditches out.



Stored Grann Detecting Infestations

Each year there is the potential for producers to have an insect infestation once the grain is off the fields and into the bins. Bins should be checked every couple of weeks to make sure the temperature of the grain is not too high and to see if there are any bugs present. There are two major types of grain beetles that farmers need to be aware of; the Rusty Grain Beetle and the Red Flour Beetle. Most of the damage is caused by the larvae of the beetles eating the germ of the kernels. Here are some tips and commonly asked questions that can help you out!

What conditions would make stored product more susceptible to stored grain damage?

Warm, moist or weedy crops would be most susceptible to damage. Warm or moist grain will contribute to moisture migration within a bin. These conditions can cause locations within the bin where grain will spoil and result in insect infestation, mite and mold development. In fall the outside of the bin cools quickly. The cool heavy air associated within the bin wall drops, while the warmer air, located in the interior rises, causing a circular flow within the bin. This air pattern deposits moistre, through condensation, at the top center of the bin. In spring the reverse occurs, where warming from the sun warms the outside layer, causing a circular air movement depositing moisture at the bottom of the bin. Moulds that develop give off additional heat and moisture, resulting in a microclimate more favorable for stored grain insect populations. Mold byproducts can be toxic if fed to farm animals. The more moisture in the grain, the more likely it is to have a zone with enough moisture to start a stored grain insect problem if the pests are present.

Weed seeds, which often have higher moisture content than the harvested crop, can be concentrated in the central core as the grain when binned. This situation can cause more moisture to buildup in this area. If the stored grain is particularly weedy and/or moist, cleaning or drying the grain may reduce insect problems in storage at a later date.

What can I do to prevent insect infestation during fall grain storage?

Proper preparation and care before and after you store your grain can prevent insect infestations. Here's how:

1) Decide which bin you will use for each crop.

• How you clean and prepare an empty bin depends on what type of crop you plan to store in it.

• Avoid using chemical insecticides, for example, malathion, on bins in which you plan to store canola and flax. These oilseed crops absorb this type of pesticide and the residue remains in the seed.

• When you plan to store cereal grains, there are many approved chemical insecticides you can use to treat the interiors of empty grain bins.

2) Clean your bin thoroughly before you store grain in it. • Insects in grain bins feed on debris, dockage and leftover cereal grain.

• Clean the bin with high-pressure water or air, a heavy broom and/or a vacuum. Don't forget to clean aeration systems.

3) When you add clean grain to the bin, make the grain as level as you can.

• Aeration is more effective when the grain pile is level.

• Grain is a very good insulator. If warm grain is stored and left undisturbed, convection currents may develop and cause hot spots and condensation.

4) Bring the temperature of the grain down to +15°C as soon as possible.

 \cdot If you lower moisture content below 14.5 % and cool the grain below +15°C you can prevent insect pest problems in the stored product.

 \cdot Most stored product pests do not feed or reproduce below + I 5°C.

• Large amounts of grain that are stored above 14.5 % moisture content can develop heated regions.

• Heat encourages fungal growth. Fungi and heat attract insects to stored grain.

5) Monitor the temperature of stored grain and aerate the grain bulk.

• Check the temperature of the bin every 2 weeks. Aerate stored grain as soon as possible after harvest particularly if aeration can reduce the bulk temperature below + 1 8°C.

• When the ambient temperature falls below that of the grain bulk (during the early evening, night and early morning), you can use aeration to reduce the temperature of the grain.

• Aeration systems preserve stored grain and keep it dry by reducing the temperature of the grain and reducing moisture migration.

• Always ensure that temperature fronts have moved fully through the grain bulk prior to stopping the aeration.

6) If you need to temporarily store grain on the ground, prepare the site properly.

- Make sure the ground is hard and the site is concave.
- Determine how you will aerate the grain while storing it.
- Cover the grain to the best of your ability.

Farming this year ...

Average yields for major crops are estimated to be above average, and of good quality. The storage of a crop is critical, even outdoor piles need to be checked regularly for infestations and grade decreases. If the pile crusts over, heat cannot escape and air cannot circulate properly to dry and cool the grain. These hot spots are where infestations of the Rusty Grain Beetle and Red Flour Beetles occur. Grain bins and ground piles should be checked at least once a month, if not more to ensure that hot spots are cooling and moisture levels are not too high within the piles. If an infestation is noticed, treatment of the grain may be required to prevent any further damage. If a quick drying/ cooling method is not available, such as moving the grain, then an application of the restricted chemical Phostoxin may be required.

The Ag Service Board is available to provide this service for the cost of labour and chemical, or producers can obtain their own **Farmer Pesticide Certificate** to purchase and apply this restricted chemical on their own through courses offered through the Ag Service Board.

If you have any questions about grain storage or are interested in attending a Farmer Pesticide Course, which will be offered several times throughout the winter, please contact the Ag Service Board at 403-642-2255.



FARMER PESTICIDE CERTIFICATE COURSE



UPCOMING DATES:

December15, 2022 January 19, 2023

January 26, 2022

LOCATION & TIME: COUNTY OF WARNER AG SERVICE BOARD MEETING ROOM

8:30 A.M. - 5:00 P.M.

The Cost is \$65 - this covers the course materials and lunch.

The Farmer Pesticide Certification course is a tool intended to help farmers to reduce risks associated with pesticide use and is mandatory for farmers who wish to use restricted pesticides that require a certificate. Pesticides play a vital role in modern farming in Alberta. Used properly, they are an effective method of protecting crops and livestock. However, if used incorrectly, these chemicals have the potential to cause serious harm to people and the environment. It is therefore essential that farmers use pesticides in the most professional manner, to ensure that unintended adverse effects are kept to a minimum.

Who Needs to be Certified?

- Any farmer that wishes to apply restricted chemicals to their grain or land. i.e. Phostoxin
- Any farmer who has a certificate that was issued prior to 2017 wishes to continue using restricted chemicals needs to retake the course.

Why do I need to re-take the course?

Under new priorities and legislation, the Farmer Pesticide Course is no longer under direction of Lakeland or Olds Colleges. A new course has been designed that expires 5 years after the date the certificate is issued. There is not a condensed re-certification course, only the original core course that needs to be re-taken every 5 years.

PLEASE REMEMBER TO CHECK YOUR BINS REGULARLY TO PREVENT INSECT INFESTATION. FUMIGATION IS A LAST RESORT; HOWEVER, THE FARMER PESTICIDE COURSE GIVES YOU THE CERTIFICATE TO APPLY FUMIGANTS.

If you have any questions about the new Farmer Pesticide Certificate Course, please contact the County of Warner Ag Service Board at 403-642-2255.

Pre-registration is required for this course; please call the Ag Service Board.



SECURING A HOME FOR BATS IN THE MILK RIVER WATERSHED: Summer Project Updates



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Project Background

"Securing a Home for Bats in the Milk River Watershed" was initiated at the start of 2022, with the goal of determining bat species presence and distribution on private lands across the watershed. Prior to this project, there were significant knowledge gaps regarding bat species distribution and presence across the watershed, specifically on private properties.

By creating an inventory of bat data across this area, the MRWCC hopes to formally document important roosting and hibernacula sites used by bats in Alberta, with a special emphasis in detecting the Little Brown Myotis, an endangered bat species. This will aid in future monitoring efforts to better understand the changes in populations and species distribution, and potentially allow for the identification of White Nose Syndrome, a serious disease amongst hibernating bats, once it enters the watershed from surrounding areas

Summer Research Results

After a successful summer field season, the MRWCC is pleased to report that we deployed monitoring equipment at 40 properties throughout the watershed. By far, the most common recording was made by bat species that call at the 40 kHz frequency, with over 6,500 recorded calls. This likely indicates a very high population of the Little Brown Myotis, as they are one of the species to call at this frequency. However, it should not be dismissed that calls of other



Spectrogram of an individual bat calling at the 40 kHz frequency level from a property east of the town of Milk River.

frequencies and patterns were also recorded as well, which demonstrates that there is a wide variety of species living within the watershed.

Next Steps: We Still Need Your Help!

We want to extend a huge thank-you to all the landowners who offered to participate in the study so far. While we are no longer conducting passive acoustic monitoring, we are still in search of potential bat hibernacula to identify where bats are spending their time during the winter

months! If you think you might have bats hibernating on your property, please contact Allison Choquette at allison@mrwcc.ca to learn more about how you can participate in this project.



Partially funded by Environment and Climate Change Canada



County Chronicle

ON FARM CLIMATE ACTION FUND

Producer Dollars Available

First announced in Budget 2021, the \$200-million On-Farm Climate Action Fund is an initiative to help farmers tackle climate change. The Fund is part of the Government of Canada's Agricultural Climate Solutions initiative, which falls under the \$4 billion Natural Climate Solutions Fund, a program managed by Natural Resources Canada, Environment and Climate Change Canada, and Agriculture and Agri-Food Canada.

The objective of the Fund is to support farmers in adopting beneficial management practices (BMPs) that store carbon and reduce greenhouse gases, specifically in the areas of:

1. Nitrogen management: Nitrogen management strategies ensure optimum productivity, reduce nitrogen losses, reduce greenhouse gas emissions, and enhance economic profitability and environmental quality. Farmers in Alberta make key decisions on formulation, rate, timing, and placement of fertilizer nitrogen that are suitable for soils, climate change, and farming operations within which they operate.

2. Cover cropping: A cover crop is grown for the protection and enhancement of the soil and provides a number of ecological services. These may include: (i) to reduce greenhouse gas emissions, (ii) to reduce leaching, (iii) to provide nitrogen to the next crop, (iv) to reduce erosion, (v) to improve soil structure and soil hydric properties (vi) to reduce parasite pressure on crops, (vii) to prevent weed growth, (viii) to increase the biodiversity of the farming landscape and environment.

Rotational grazing practices: Rotational grazing is the practice of containing and moving livestock through pastures to allow forage plants time to recover, deepen their root systems and improve soil health between periods of grazing. Rangelands managed under rotational grazing practices have also been found to have higher soil carbon sequestration rates than continuous grazing and may, therefore, serve as an effective carbon mitigation option. Importantly, ranchers see rotational grazing as an effective way to improve the profitability of their cattle operations while benefiting overall ecosystem health.

OFCAF provides financial support to producers to accelerate adoption of beneficial management practices (BMPs) that reduce greenhouse gas emissions and support increased production efficiency, sustainability, and resiliency on their farm operations. These practices also provide other environmental benefits such as improved biodiversity and

soil health.

Alberta producers will have access to these on farm implementation funds through several provincial and national programming bodies. The Canadian Forage and Grasslands Association (CFGA) is providing funding to producers to improve their understanding of grazing management, soil health, and extending grazing season. CFGA is offering resources and funding to promote the on-farm implementation and development of grazing plans, fencing, remote watering systems, and improving pastures. Results Driven Agricultural Research (RDAR) has grants available for producers to implement changes on farm under all three categories and is accepting applications to the program already with a deadline of November 7, 2022 for this fiscal year. Producers applying for RDAR and CFGA grants will need to work with a Professional Agrologist or Certified Crop Advisor as these applications require signoff of the on farm BMP changes. Producers also need to agree to a post project inspection to ensure implementation.

Individuals interested in these programs should reach out to their local Applied Research Associations for more information regarding eligibility, plans, and applications.



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Funding Opportunities

Just an update in regards to the new funding programs that are being offered related to the On Farm Climate Action Fund through the various funding partners. Total amount available for producers is \$75,000 from all sources

RDAR <u>https://rdar.ca/wp-content/uploads/2022/01/OF-</u> CAF-Program-Guide-final.pdf_

- Nitrogen, Cover Crop, and Grazing Rotation
- 1 application per legal entity
- Applications open August 4, 2022 retroactive to April 2022
- \$75,000 over life of program (85:15 match no inkind)
- BMP new to farm or field
- Sign off by PAg or CCA
- Post project audit
- Taxable income

Canadian Canola Council: <u>https://www.canolacouncil.</u> org/4r-advantage/program-guidelines/

- Nitrogen only
- 1 application per farm

Applications open August 17, 2022 retroactive to Feb 2022

• \$6,000 per year max \$12,000 over life of program (85:15 match no inkind)

- BMP must be new to farm or field
- Sign off by 4R certified PAg or CCA
- Post project audit
- Taxable income

Canadian Forage and Grasslands Association <u>https://www.</u> canadianfga.ca/projects-projets/advanced-grazing-systems/ farm-program/

- Rotational Grazing
- 1 application per project
- Applications not open yet
- \$20,000 per project (70:30 match in kind eligible)
- BMP must be new to farm or field
- Sign off by PAg or CCA
- Post project audit
- Taxable income
- Mentorship and training available as additional support

Farmers for Climate Solutions <u>https://farmersforclimateso-</u> lutions.ca/mentorship

- Nitrogen, Cover Crop, and Rotational Grazing
- Training and peer to peer learning only



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Grade 7 students at Raymond Junior High took part in the Great Canadian Shoreline Clean-Up at Milk River Ridge Reservoir Thursday, September 22, 2022. This is an initiative of the Vancouver Aquarium as part of International Coastal Cleanup, a global program managed by the Ocean Conservancy. Items collected will be sorted, tallied, and submitted to the GCSC as part of their on-going data

collection.

The Great Canadian Shoreline Cleanup became a national conservation initiative in 2002 and cleanups started appearing in every province and territory. By 2003, more than 20,000 volunteers were taking part. Public support grew as Canadians became more aware of the harmful effects of shoreline litter on ecosystems, wildlife and people. In 2010,

the Vancouver Aquarium began delivering the program with WWF-Canada, a strong partnership that continues today.

The Shoreline Cleanup is now recognized as one of the largest direct action conservation programs in Canada. The Vancouver Aquarium and WWF-Canada are committed to growing the program to achieve our mission: to inspire Canadians to keep all shorelines free of litter.

In 2022, volunteers coordinated 1,326 cleanups and collected 17,558 kg of litter on 2,040.176 km of Canadian shoreline.



TO SCHEDULE A DROP OFF AT THE COUNTY OF WARNER AG SERVICE BOARD BUILDING COLLECTION SITE



403-642-2255

warnercounty.ca

The pilot project is led by the multi-stakeholder Agricultural Plastics Recycling Group; funds were granted by the Government of Alberta and are administered by Alberta Beef Producers.

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Sustainable Canadian Agricultural Partnership (SCAP) - Key Facts

General

Alberta is currently a signatory to a pan Canadian five-year agricultural policy framework known as the Canadian Agricultural Partnership (CAP) that is set to expire March 31, 2023.

The development of the new framework was kicked off November 2021 during the annual Federal-Provincial-Territorial (FPT) Agricultural Ministers' conference where the Ministers endorsed the <u>Guelph Statement</u>.

The Guelph Statement outlines the shared vision, guiding principles and five priority areas for the new framework, which include:

- Building Sector Capacity and Growth;
- Climate Change and Environmental Protection;
- Science, Research and Innovation;
- Market Development and Trade; and
- Resiliency and Public Trust.

The framework negotiations provide the opportunity for strategic discussion on the direction for the sector across Canada. From Alberta's perspective, this includes:

• Finding a balance between profitability and addressing the challenges of climate change;

- Acknowledging the importance of innovation and technology in developing products and practices for both primary producers and processors;

- Increasing market share and international trade; and

- Capitalizing on opportunities for sector growth, especially in the value-added sector.

At the July 2022 FPT conference, Ministers agreed in principle to the new Sustainable Canadian Agricultural Partnership (SCAP) framework, which will take effect April 1, 2023 and run until March 31, 2028.

The total value of the new agreement is \$2.5 billion (representing federal, provincial and territorial dollars), up from \$2 billion under the current CAP framework.

The increase of \$500 million represents a 25% increase in the cost-shared portion of the partnership compared to the current CAP framework.

• Half of the increased envelope is earmarked for the de-

velopment and implementation of the cost-shared Resilient Agriculture Landscapes Program (RALP). FPT governments will work over the coming year to define the RALP details.

Over the coming year Agriculture, Forestry, and Rural Economic Development expects to continue dialogue with stakeholders about the development of the new SCAP framework to position Alberta's agriculture, agri-food and agri-products industry for greater success.

Business Risk Management (BRM) programs

• Business risk management (BRM) programs, like any programs, require ongoing evaluation of policy rationale and performance to ensure they are helping the sector rise to challenges and be resilient in the face of uncertainty.

• In FPT discussions, Alberta continues to advocate for both short and long-term changes to the current BRM suite, so that government BRM programs are responsive, simple, equitable, and timely.

• At the recent FPT meeting, July 20-22, Ministers of Agriculture agreed to implement new measures to the suite of BRM programs, which will make them more timely, equitable and easy to understand, as well as to better protect producers against climate risk going forward. These changes will be implemented for or during the next policy framework (SCAP) that comes into effect on April 1, 2023.

• Beginning in 2023, FPT governments will engage in a oneyear review on the implications of climate change and how to integrate climate risk and readiness in BRM programs, along with opportunities to enhance producers' resilience to climate risk.

AgriStability

- AgriStability provides support when producers experience a large decline in farming income for reasons such as production loss, increased costs and market conditions.

- To enhance economic sustainability under SCAP, the AgriStability compensation rate will rise from 70% to 80% beginning in 2023, bringing up to an additional \$72 million per year to better support farmers across Canada in times of need.

- There is also continued work on a new AgriStability model

for SCAP to improve the timeliness and predictability of the program. The administrative changes within the new model are targeted to be implemented in 2024 after further consultation with industry.

Agrilnsurance

- The Agrilnsurance program will now include the option for provinces to offer a premium cost-sharing arrangement where producers could purchase insurance coverage for their total farm production. Over the coming year, AFRED and AFSC will dialogue with stakeholders on whether implementing this option would benefit producers in Alberta.

- After the BRM and climate change review in the first year of SCAP, provinces are expected to conduct a pilot in their Agrilnsurance program for producers who adopt environmental practices that also reduce production risks.

Agrilnvest

- The Agrilnvest program is administered by the federal government. As of 2025, in order to receive a government contribution under the Agrilnvest program, large farms will need to have an agri-environmental risk assessment in place (e.g. an environmental farm plan). Large farms are defined as producers with allowable net sales (ANS) of at least \$1 million. *AgriRecovery*

- The AgriRecovery framework will continue to be part of the BRM toolkit under SCAP to mitigate and address disaster situations that impact the agriculture and agri-food sector.

Livestock Price Insurance (LPI)

- The federal government has assured Alberta, Saskatchewan, British Columbia and Manitoba the LPI program will continue to be an available and viable tool for the livestock industry to manage risk over the course of SCAP.

BRM Long Term

- Over the course of SCAP and beyond, FPT governments agreed to enable the exploration and development of new revenue insurance or alternative insurance programming to further improve the equity, timeliness, predictability and simplicity of BRM programs and ensure BRM programs adequately protect producers against existing and emerging risks.



Farm Technology Program (FTP) Program Funding List

The Canadian Agricultural Partnership (CAP) **Farm Technology Program** supports the adoption of innovative technology that minimizes agricultural waste, optimizes farm efficiency and results in the digitalization of an operation and sensors for the purpose of data collection. The farm security component of the program encourages the adoption of security devices that help protect farms.

The 2021-2023 program-funding maximum is **\$48,000** for Farm Technology and **\$2,000** for Farm Security. The maximum amount is \$50,000 over the program term. Grant funding cost share is 50% of eligible expenses.

PLEASE NOTE: Purchases made before the program receives the application are ineligible for reimbursement. All purchases must meet the requirements as stated in the Programs Terms and Conditions. Applications will be assessed based on the criteria in Section 3 (Program Eligibility). All application information and supporting documents must be included to facilitate this assessment (e.g., quotations, spec sheets, or letters of support).

The funding list will be updated periodically over the course of the program. Please subscribe to the Farm Technology website to be notified of any Funding List changes (<u>https://cap.alberta.ca/CAP/Programs</u>).

CANADIAN AGRICULTURAL PARTNERSH P Alberta

Canada

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FARM TECHNOLOGY FUNDING LIST

Eligible Criteria

With some exceptions, many components of 'Smart systems' are eligible

- Smart systems can feature:
 - Digital sensors
 - Data collection
 - Connectivity
 - Automated data analysis
 - Efficiency improvement
- Any system, item, or equipment that is considered to be business as usual for a given farm type is ineligible under the program.

Digital Sensors are electrical input instruments for measuring or monitoring conditions with the ability to transmit data to data logs or to other applications. They differ from analog sensors (i.e. non-electrical measurement devices that use physical components like dials).

Data Collection refers to the logging and storage of measurements and conditions. Once collected, datasets can be analyzed to assist in decision making, often in real time.

Connectivity allows various components within the smart system to communicate with each other. Connections may be hard-wired, or wirelessly, through Bluetooth, Wi-Fi, radio frequency, or cellular service. When systems utilize the internet for connectivity, they increase the potential for automation and digital intelligence capacity.

Automated Data Analysis is what allows smart systems to make real time decisions and adjustments. Data collected by sensors is analyzed by a computer and new outputs are generated. Outputs could be recommendations, information for decision making, or automated action.

- Agriculture-specific drones (e.g. Multispectral imaging drones; Thermal imaging drones)
- Farm/Barn/Herd management software or apps first year of subscription eligible (on-going subscription costs are ineligible)
- Digitally connected weather stations (and first year subscription costs of weather station analysis software or apps)
- ISOBUS Universal Terminals for connecting to any ISOBUS-equipped implement, as an interface
- ISOBUS Task Controllers goes on the implement, stores settings, and sends info to the Universal Terminal



Farm Technology Program (FTP) Program Funding List

Ineligible Expenses

- Equipment eligible under the Efficient Grain Handling Program & the Irrigation Efficiency Program
- Agronomy services and consultation services
- Equipment that is business-as-usual for the specific farm category (*e.g., auto steer, sectional control, GPS systems i.e. GPS for auto steer, autotrac, etc.*)
- Items purchased prior to submitting a program application
- Items that are commonly used for recreational or non-agricultural purposes (*e.g., iPads, TVs, and recreational drones*)
- Labour, training, installation, travel, and accommodation costs
- Leasing costs
- Maintenance and repair costs

Category	Eligible Expenses	Ineligible Expenses
1	Electronic soil sensors Electromagnetic 	Analog soil sensors
	 Salinity, organic matter, moisture data Electrochemical 	Example: sensors with dial read-outs; sensors without a digital signal that stores data.
	 Nitrate, potassium, hydrogen ion (pH) data Soil compaction sensors 	
	Solar powered soil sensors	
2	 Farm equipment-mounted sensors and cables Vegetative index data Grain protein, oil, starch content data Drone-mounted agriculture specific sensors & lenses (e.g., thermal imaging; multispectral imaging) 	iPads, TV'sRecreational drones
	 Sensor based fertilizer spreader components that optimize granule distribution 	
	 Yield sensors retrofitted onto equipment to gather real-time data for yield maps. <i>Including hay bale</i> 	
	 Including hay bale Weed detection and elimination systems (<i>e.g., precision weed sprayers</i>) 	
3	 Farm equipment-mounted data collection and data storage units for: Accelerometers Gyroscopes Magnetometers Altimeters Remote monitoring cameras (<i>i.e. remote monitoring for existing water sites</i>) 	Recreational mobile cameras (<i>e.g., GoPros</i>)
4	 Electronic livestock ID readers that allow data collection for individuals animals E.g. ID reader wands that are linked to weigh scales E.g. Herd management handheld devices 	 Mandatory RFID tags Structural parts of weigh scales
5	Other sensors Leaf wetness sensors Bee hive temperature, humidity, audio and movement set Livestock body movement and body temperature sensor 	



FARM SECURITY FUNDING LIST				
Eligible Expenses	Ineligible Expenses			
GPS Equipment Tags and Trackers	Bluetooth Trackers			
Remote Monitoring for Fixed Cameras	Regular Fuel Tank Monitors			
Remote Fuel Tank Monitors	Installation Costs			
Wireless Base Stations (Gateways)	Lighting Systems			
Motion Detectors/Driveway Alert Systems	➢ Alarms			
Door Sensors				

Efficient Grain Handling Program Funding List

The Efficient Grain Handling Program is an energy efficiency program intended to assist producers with reducing the overall energy use on their operations. The program can only fund equipment that shows a significant energy efficiency improvement over standard practice. Aeration fans and ducts, grain elevators and conveyors, hopper bins, and standard grain dryer configurations, are all important tools in managing grain storage. Unfortunately, however, these are standard equipment and none of them are premium-efficiency options and therefore DO NOT meet the requirements of the program on their own. Installation and labour costs are also not eligible under this program.

Grain handling system components that significantly improve energy efficiency above standard configuration are eligible under the program. These components can be factory options on new equipment or retrofits installed on existing equipment.

Eligible Costs

- ✔ Enclosed Dryer Roof, or Enclosed Dryer Top Cover
- ✓ Automatic Moisture-based Controllers
- High-Efficiency Burners
- ✔ Variable Speed Drives (VSD) for Electric Motors
- ✔ Grain dryer PTO to Electric Motor Conversion
- Insulated Plenums
- ✔ Exhaust Air Recirculation Systems
- ✓ Heat Exchangers
- Gravity-Fill Roofs
 Electrical or gas submeters on Drvers
- Temperature and moisture monitoring cables for in-bin drying systems
- Thermostats or thermometers for plenum or burner temperature control on in-bin drying systems
- Adapter plates for efficiently fitting external heaters to in-bin drying systems
- ✓ Indirect-fired high-efficiency portable aeration dryers
- ✓ Automated bin fan control systems
- ✔ Pipeline to grain dryer for costs incurred over and above those paid for by the Rural Gas
- Program to a maximum of \$20k/applicant. A quote must be provided by the natural gas provider.

Ineligible Costs

- × Aeration Fans and Ducts × Grain Elevators and Conveyors
- × Grain Legs or Grain Pumps
- × Hopper Bins
- \times Conversion from Propane to Natural Gas
- \times Standard Grain Dryer Configurations
- imes Additional Tiers
- \times Software, or data subscriptions for interfacing with moisture and temperature cables \times Equipment that is leased
- × Equipment that is leased
- \times Motors that are not for converting PTO to Electric \times Installation and labour costs are not eligible under this program.

If you are interested in applying for an item that is not listed as eligible, and is not listed or indicated to be ineligible, please call 310-FARM or email <u>CAP.EGDP@gov.ab.ca</u> to see if this item could be considered in an application.

Please note that this Funding List is subject to change, for the most current version please see our website: www.cap.alberta.ca

Program Funding is 50% of Eligible Expenses

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Agronomy update: Controlling glyphosate-resistant kochia in chemical fallow

By Bruce Barker, P.Ag CanadianAgronomist.ca

In 2011, the first cases of Group 9 glyphosate-resistant (GR) kochia in Canada were confirmed in chemical fallow fields located in Warner County, Alta. Previously, all populations were considered resistant to Group 2 herbicides. Since then, GR kochia has rapidly spread across Alberta, increasing from an estimated five per cent of kochia populations in 2012 to 50 per cent in 2017.

In chemfallow, glyphosate is heavily relied upon for weed control, but with GR kochia spreading across the Prairies, alternative herbicide control options are required. A study was recently conducted in southern Alberta to assess herbicide mixtures with multiple modes of action to manage GR and glyphosate-susceptible (GS) kochia in chemfallow fields.

Field experiments were conducted near Lethbridge and Coalhurst, Alta. Plots were split between GR kochia and GS kochia. Kochia was seeded in early spring at a rate of 30 seeds per square foot (300 viable seeds/m2) in all environments, with the exception of Lethbridge in 2015, where it was seeded at 40 seeds/ft2 (400 viable seeds/m2).

The herbicide treatments tested included an untreated control and glyphosate applied alone or in mixture with 13 other herbicide combinations, which were either registered for kochia management in chemfallow, or to determine whether they would be effective for this usage. In all glyphosate mixtures, the rate was equivalent to the 0.33 litres per acre (L/ac) of Roundup Weathermax (450 g ae/ha). Herbicide treatments were applied post-emergence when kochia plants reached four inches (10 centimetres (cm)) in height.

The best glyphosate mixture treatments that resulted in acceptable (greater than or equal to 80 per cent) control and biomass reduction of GR kochia were Roundup + Banvel II (Groups 9+4), Roundup + Distinct (Groups 9+4/14), Roundup + Heat (Groups 9+14), and Roundup + Aim + Authority (Groups 9+14).

The label rate of Banvel II plus glyphosate suppressed GR kochia with less than 80 per cent control at the Lethbridge location but had excellent GR kochia control (94 per cent visual control) at Coalhurst in both years. Two times the label rate of Banvel II provided excellent control of GR Kochia, averaging 91



per cent visual control at all four site years. The GR Kochia did not have any Group 4-resistant biotypes.

The label rate of Distinct plus glyphosate provided acceptable control at two of four site years. Two times the label rate of Distinct showed excellent control with an average of 90 per cent, resulting in an up to 90 per cent reduction of GR kochia biomass at Coalhurst.

The low label rate of Heat plus glyphosate showed acceptable (greater than or equal to 80 per cent) visual control in three out of four environments, and reduced GR kochia biomass by 84 per cent. The high label rate of Heat plus glyphosate showed excellent GR kochia control with 91 per cent control among environments. This herbicide tank mixture provided an excellent, effective option for control of GR kochia in chemical fallow.

Glyphosate + Aim + Authority at the label rates resulted in an average of 90 per cent visual control but only a 72 per cent reduction in biomass in 2014. Doubling the rate of Authority in this mixture resulted in excellent visual control of GR kochia at an average of 96 per cent control and a 98 per cent reduction in kochia biomass in 2014. This combination was among the best mixture options for controlling GR kochia, in part because it included a quick contact herbicide resulting in rapid necrosis and plant cell death, in addition to extended residual activity to help control subsequent emergence of kochia seedlings. However, Authority is not registered for chemfallow application. Glyphosate + 2,4-D (Group 4) did not provide acceptable

control of GR or GS kochia in Lethbridge.

Glyphosate + Optica Trio (Group 4) provided acceptable control at three of four site years, with suppression rated at 79 per cent control for the fourth site year. This resulted in a 90 per cent biomass reduction in 2014. Optica Trio was applied at the label rate for post-emergent application in cereals but is not registered as a chemfallow treatment.

Blackhawk (Group 14/4) plus glyphosate did not achieve commercially acceptable control of GR kochia at either site in 2015.

Due to the confirmation of triple-resistant kochia in Alberta (Group 2+4+9), glyphosate mixtures utilizing a Group 14 mode of action are required for successful and sustainable kochia management.

For this reason, farmers are urged to adopt a proactive approach to integrated weed management, with herbicides playing an important role supported by several other non-chemical tools. The use of cover crops, strategic spot tillage, mowing and patch management are all tools that could help prolong the efficacy of these herbicide mixtures by mitigating seed production and limiting the number of kochia seeds returned to the soil seedbank.



Bruce Barker divides his time between CanadianAgronomist. ca and as Western Field Editor for Top Crop Manager. CanadianAgronomist.ca translates research into agronomic knowledge that agronomists and farmers can use to grow better crops. Read the full Research Insight at CanadianAgronomist.ca.

NARNER COUNTY CHRONICLE

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Photos courtesy of Farming Smarter

ITALIAN RYEGRASS: (Left) and HAIRY VETCH: (Middle) Corn is on 60" rows with intercrop. Growing hairy vetch between wide rows of corn increases the nutritional value of the forage and provides late season soil protection. CORN ON 30" ROWS WITH NO INTERCROP: (Right) Traditionally, growers plant corn in rows 30 inches apart. This leaves bare ground exposed during the growing season where weeds can flourish.

On-farm innovation and adaptation essential *Agriculture Innovation Hubs can lead BMPs*

By Farming Smarter

griculture can contribute to Canadian carbon emission reductions, but farmers need Best Management Practice (BMPs) recommendations upheld by science. Most farmers cannot afford to do multiple research trials themselves and definitely can't prioritize on-farm research during the growing season.

Will Van Roessel of Specialty Seeds, a family owned and operated seed farm in Bow Island, AB, points out the scientific method is important so that farmers can rely on regional research results.

"I think the biggest advantage is that Farming Smarter can compare a number of different scenarios at the same time, side by side. Whereas on the farm, I might try one thing, but I'm probably not going to try five or six different things at the same time," Van Roessel says.

Crop growers need tested agronomic solutions before they invest the time, money, and effort it takes to incorporate a new management practice into an existing cropping system.

"Two of the biggest concerns are soil erosion and carbon sequestration. We want to reduce soil erosion and promote organic matter content. Increasing organic matter helps improve soil structure and helps regulate other properties like soil pH, and nutrient availability. It also aids in nutrient uptake," says Gurbir Dhillon Ph.D. Soil Science and Farming Smarter Research Scientist.

Three potential soil health improvement methods

Cover crops, relay cropping and intercropping

Dhillon explains, "Cover crops can help us reduce soil erosion. They keep soils covered during shoulder seasons and provide vegetative and root biomass that can increase soil organic matter content. In case of legumes, they can incorporate atmospheric nitrogen into the soils through nitrogen fixation."

Van Roessel finds relay cropping intriguing.

"Relay cropping," he describes, "for example the US, farmers seed winter wheat in September or October, and then go into the winter wheat in the spring and plant soybeans."

Intercropping plants two crops at the same time in alternate rows. They harvest the crops together and separate the seed.

"Canola and peas are a local favorite because the seeds are

easily separated because of size difference," Coles says.

SARDA Ag Research (SARDA) manager Vance Yaremko shares that his organization led the Peace River region on intercropping.

"In 2006, prior to anybody even wanting to talk about intercropping, SARDA tried it. We take ideas that might seem to be far out there and try these practices prior to people realizing it's a new trend coming down the pipeline," he says.

SARDA also moved into a novel crop at the request of regional farmers.

"We're doing some Lupin trials based on farmer feedback because they read a Western Producer article and were really excited about this opportunity and possibly having Lupins in the county," he says.

SARDA also introduced hemp to the region and played a small part in bringing a hemp processing plant to the region.

"SARDA was indirectly a part of the Economic Development Group for a bit discussing industrial hemp and we believe that we were a key role in it coming here," Yaremko says.

Novel crops offer growers crops they can insert into cropping systems to reap various benefits.

Dhillon explains "we're doing a project with winter pulses, camelina, and winter barley to see if there are good options. Some of those crops may be useful as cover crops if we can establish them. They may not have potential to provide much income but may have ecological benefits and may improve soil health in the long run."

Ben Ellert, Ph.D. Biogeochemistry with Agriculture and Agri-Food Canada (AAFC) applauds the regional organizations for the work with new technology.

"I think the Hubs are a good place to do that. I can see lots of success stories such as the biobed treatment facility," he says. Farming Smarter partnered with AAFC Lethbridge and built a demonstration site and mobile biobed to introduce the concept to southern Alberta.

"Another example is the precision planter, the Monosem planter Ken Coles has been using for the past five years. Those address a real need," he adds.

For his own purposes (and that of many others), Ellert enjoys the interaction he can access with experts, other researchers and farmers.

"For me to go to a Farming Smarter event and interact with, not just the producers, but Ken Coles, Lewis Baarda, Gurbir Dhillon and professional agronomists, that's why I think you're doing a good job," he says.

He adds that it's important that someone explore what seem like crazy ideas at the outset. This is the nature of innovation and some of those ideas hugely benefit our agriculture economy.

Van Roessel thinks Alberta farmers are up to the coming challenges.

"I think farmers have always been adaptable and willing to do what it takes to get the best crops possible. If they find out that winter wheat, soybeans, and relay cropping work here, it won't take long before they do it."





Alberta Environmental Farm Plan

PRODUCERS REASONS TO COMPLETE AN EFP

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Maintaining a healthy environment is essential to the success of Alberta's agricultural producers. The Environmental Farm Plan (EFP) program helps you identify and address environmental risks in your operation. It will also increase your understanding of legal requirements related to environmental issues. Protecting water, air and soil quality is key to the sustainable production of crops and livestock and to leaving a healthy and productive farm for the next generation. An EFP will identify what you are already doing well and pinpoint where improvements can be made. By addressing these risks you increase operational efficiency while reducing farm costs, which results in increased profit for you. With your EFP completion certificate, you become eligible for some funding under the Canadian Agricultural Partnership. Pairing environmental stewardship with agricultural production is also crucial in the marketing of your products. Consumers are increasingly concerned about the safety and quality of the food they eat and how that food is grown/ raised. Sustainable sourcing is becoming a requirement of many major food purchasers, from manufacturers to restaurants. Having an EFP demonstrates to the public, government, lenders and/or investors that you are managing your environmental risks.

CONNECTING TO EMERGING MAR-KETS: EFP+ MOVING TOWARDS A SUSTAIN-ABLE FUTURE

Consumers are increasingly wanting to purchase their food from sustainable sources. While there have always been benefits to farming using sustainable practices, the food industry is beginning to reward farmers that continue to adopt best management practices. Alberta EFP wanted to be able to showcase the outstanding work that farms with current EFPs are doing and link these farmers to new and growing markets. In the past few years, the Alberta EFP has worked with a global standard for those wishing to source their agricultural products sustainably.

EFP+ PROGRAM CONNECTS INDUSTRY AND FARMERS TO THE SAI PLATFORM

As of March 2021, the Alberta EFP program has launched a new feature to our platform where industry groups and agribusiness can take advantage of this program to be able to make a claim of FSA Silver. We call it EFP+. This is an additional component to an EFP which includes a few additional questions for those farmers



part of an established Farm Management group. Alberta EFP has met all the required conditions to help Farm Management groups in Alberta and the farmers that supply them, to align themselves with this global standard. Learn more on our FAQ page. The FSA is widely recognized as a food

and drink industry reference for sustainable crop farming. It was created to encourage the industry-wide adoption of better management practices that improve farm performance and sustainability outcomes.

SUSTAINABLE SOURCING IN ALBERTA

Canadian food giant McCain's will only purchase produce from farms with a completed EFP. As a result, the Potato Growers of Alberta make EFP completion a requirement of membership. The beef industry is planning to include EFP as part of their Verified Beef program and the dairy industry have added an EFP for each farmer to their proAction program.

These impending market requirements around sustainable production mean Alberta producers will increasingly be called upon to demonstrate that our food is produced sustainably. It will mean having standards to adhere to and documentation to demonstrate our actions.