

Agricultural Service Board Bulletin

FOUR REASONS TO CONSERVE TREES IN AGRICULTURAL LANDSCAPES

In farmland, the value of wooded areas is remarkable, thanks to ag-environmental benefits like drought protection, carbon storage and climate change mitigation, as well as pollination and pest control services.

While the inconvenience and loss of production associated with farming around a bluff or shelterbelt are clear, here are four reasons why the environmental benefits provided by trees may tip the balance in favour of viewing wooded areas as less of an obstacle, and more of a resource to manage.

1. Trees improve the micro-climate for crops

Particularly important during times of drought, tree bluffs and shelterbelts catch snow, protect crops from harsh summer sun, and slow down drying winds. Additional organic matter associated with these areas extends into the field, and the soils here exhibit better moisture absorption, nutrient cycling, soil organic carbon and earthworm activity.

And while there is a narrow zone in which trees compete with crops for water and nutrients, this effect is limited; the zone in which crops are bolstered by trees is significantly wider and the overall impact greater.

2. Trees support beneficial insects and birds

Some of the most compelling research around the value of wooded and other natural areas, involves the smaller, lesser-known species like insects and birds; and it turns out, these wee dynamos are shouldering a disproportionate workload in the form of pollination and pest control services. In some study locations, the beneficial insect population was up to 20 times higher in field boundary habitats compared to open field sites. Wild bee numbers were also up. And bird populations were four times greater in natural hedgerows than in open fields. Given the critical agro-ecosystem roles these organisms perform, higher numbers mean good things for crop production.

3. Conserving wooded and other natural areas opens trade opportunities

There's another potential economic upside to maintaining natural areas like tree bluffs in agricultural landscape: loss of biodiversity can hurt sustainability scores central to trade agreements. As we endeavour as a country to grow our agricultural exports, supporting and maintaining habitats can help improve these scores, strengthen our position in global markets, and provide a direct benefit to producers.

4. Trees help combat climate change

Like other natural land covers, trees in agricultural landscapes store carbon. Thanks to the process of photosynthesis, trees absorb CO₂ from the atmosphere, and convert it into biomass such as trunks, stems and roots, squirreling it away for the lifetime of the tree. This simple act on the part of a tree improves our resilience to climate change. As researchers continue to explore how this carbon storage can be measured—and monetized through the creation of anticipated carbon markets—trees and other areas of natural cover will have even more discernible value to the landowner.

The above article was adapted from the Ducks Unlimited Canada's May 29, 2023 article titled "Four compelling reasons to conserve trees in agricultural landscapes". To view the full article and more from Ducks Unlimited Canada, visit <https://tinyurl.com/vur7xza5>.



**Conserving
Canada's
Wetlands**



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DID YOU KNOW?

- The first Soil Conservation Act in Alberta was passed in 1935 in response to the "dust bowl" conditions.
- Canadian cultivated farmland values rose an average of 6% in the 1st half of 2025 according to Farm Credit Canada.
- In some areas of Alberta, like in the Camrose-Drumheller economic region, primary agriculture accounts for about 10% of total employment.
- Cannabis is a major crop in New Brunswick, topping the farm cash receipt list (2020-24) at \$232 million (Ag Can.)
- 80% of Canada's farmed bison population is in AB & SK.
- Prior to 1987, the only alpacas in Canada were in zoos or on game farms.
- Alberta has the largest bee-keeping industry in Canada, representing approximately 40% of honey bees in the country.
- A researcher at the University of Rhode Island designed a green laser-light shooting scarecrow to keep birds from destroying crops at a range of 600ft.
- Flood irrigation can waste up to 2/3 of the water used.



CELEBRATING EXCELLENCE: WOMEN IN AG AWARDS NOMINATIONS OPEN

Every woman in agriculture has a unique story to tell. And each year, Agriculture Financial Services (AFSC) celebrates these stories through our Women in Ag Award. Nominations for the 2026 Women in Ag Award opened October 15 and close November 17.

Through our Women in Ag Award, Agriculture Financial Services (AFSC) looks to shine a light on the amazing achievements of women in our industry. Now in its fifth year, the Women in Ag Award celebrates the passion, resilience, and innovation that women bring to agriculture, often behind the scenes and in the fields.

Women have always been an integral part of agriculture – working as equipment operators,

gardeners, cooks, and bookkeepers. In recent years, their roles have evolved significantly with a growing number of women becoming farm operators, ag leaders and innovators.

To nominate a deserving individual, visit AFSC's Women In Ag Award page at <https://tinyurl.com/2eu5c6db>. To learn more about the award and 2025's recipients, visit <https://tinyurl.com/53x8jnj3>.

Award recipients will be honoured with a unique AFSC-branded trophy, full attendance at the Advancing Women in Agriculture Conference (AWC West), and hotel accommodations at the Hyatt Regency in Calgary.

The 2026 AFSC Women in Ag Awards nomination period is open from October 15 to November 17.

TALK ASK LISTEN WORKSHOP—CASTOR

Join the Do More Agriculture Foundation for their Talk Ask Listen workshop at the Castor Community Hall on October 23, 2025 from 5-9 pm!

The Talk Ask Listen workshop is an interactive 3 hour session designed to foster and support people across agricultural communities, from producers right through industry and community, to increase mental health knowledge, become comfortable with mental health conversations, and learn how to take action. Talk Ask Listen helps participants to build skillsets and knowledge; it is not therapy. Our workshops help communities, business, industry and farms cultivate a culture of well-being.

Visit <https://tinyurl.com/s5brjr6k> to register and visit <https://www.domore.ag/programs-workshops> to learn more about the workshop.

**The
Do More
Agriculture
Foundation**

CONVERTING ANNUAL CROPLAND TO NATIVE OR TAME FORAGES—B.M.P.S

The following is from the RALP factsheet of the same name. To learn more about RALP and other S-CAP programs, visit <https://www.alberta.ca/sustainable-cap>.

The conversion of cropland into native or tame forages is a sustainable agricultural practice that offers numerous environmental, economic, and ecological benefits. This practice reduces inputs, such as fertilizer and fuel in areas of marginal return, reduces erosion, and increases soil carbon. RALP provides additional support for conversion to native forages because they can be more costly and difficult to establish.

Key Considerations

Site Assessment

- Conduct a thorough assessment of soil types, climate, and water availability.
- Identify native forage species adapted to the local conditions or choose appropriate tame forages.

Species Selection

- Select forage species based on their adaptability, nutritional content, and compatibility with the intended use, e.g. grazing and hay production.
- Consider a mix of grasses, legumes, and other forbs.

Crop Rotation and Transition Period

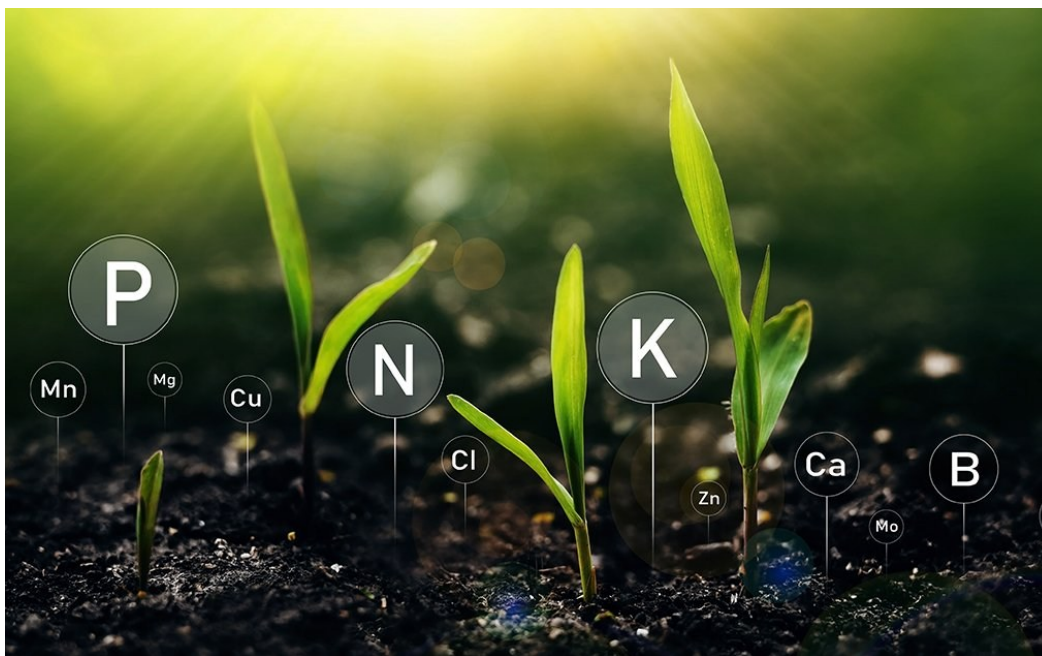
- Plan for a gradual transition to forages, incorporating them into crop rotation cycles.
- Allow a transition period to establish the forage, manage weeds, and optimize soil fertility.

Weed Control Strategies

- Implement effective weed control measures during the establishment phase.
- Cover crops or smother crops can suppress weed competition.

Infrastructure Investment

- Invest in necessary infrastructure, such as fencing and watering systems ..
- Plan for efficient rotational grazing/harvesting systems.
- Regular Monitoring
- Monitor forage stand health, weed presence, and soil conditions regularly.
- Adjust management practices based on observed performance.



Soil testing results will help set fertilizer rates specific to the needs of each field—a key step in implementing the “right rate principle” of 4R Nutrient Stewardship. To learn more about 4R Nutrient Stewardship, visit <https://tinyurl.com/4ftzkepk>.

SOIL SAMPLING—TIMING, TECHNIQUE, INTERPRETATION

The following is adapted from the Canola Council of Canada’s article of the same name. To view the full article, visit <https://tinyurl.com/57vn7f2b>.

Soil samples indicate soil nutrient reserves available for crop uptake. This is useful any year, and especially after low-yielding or high-yielding years when reserves may be more difficult to predict. Test results will help farms set fertilizer rates specific to the needs and yield potential of each field—a key step in implementing the right rate principle of 4R Nutrient Stewardship practices.

1. Timing

Late fall sampling is nearly as accurate and offers practical advantages, such as less time pressure, more time for fertilizer planning (including variable rate maps) and the potential for lower fertilizer prices. For fall sampling, it’s best to sample after the soil cools to below 10°C to reduce microbial activity, ensuring results more closely reflect spring nitrate levels. Sampling immediately after combining can assess the effectiveness of the current year’s fertilizer program for future planning.

2. Technique

Composite samples offer a general impression of nutrient levels, suitable for a blanket rate across the field and consist of 15-20 sub-samples from “average” areas. Targeted samples from specific problem areas (e.g., hill tops, low spots, lodged areas) can identify localized issues that the composite sample misses, allowing for targeted fertilizer adjustments. Precision Sampling involves taking many samples per field, often guided by productivity zones, to create prescription maps for variable-rate fertilizer applications. Cost is a factor to consider when deciding which sampling method will best fit your goals.

3. Interpretation

Lab results provide soil characteristics, actual nutrient levels, and fertilizer rate guidelines based on the crop and target yield. Canola has a high N requirement. Fall application is risky in areas prone to spring waterlogging (denitrification risk). Applying “starter Phosphorous” is often recommended due to slow root growth in cold soils. Long-term practice should aim to match crop removal if soil test P is low/medium. Potassium deficiency is uncommon for canola unless levels are below 100 ppm. Banding K is up to 6 times more efficient than broadcasting. Sulphur is critically important for canola. S deficiency can occur in sandy or black clay soils. Elemental S must be converted to sulphate by microbes and is best used in a long-term program.

EFP VIRTUAL PRODUCER WORKSHOP

Join the Alberta EFP program for a virtual producer workshop on October 29, 2025 at 9:30 a.m.

Walk through the first 2 chapters of your EFP workbook with the help of an EFP Technician. Join us for this interactive virtual workshop! Registration required. You may want to joining the workshop on one device, and having a separate device to complete your EFP workbook on.

Visit <https://tinyurl.com/4cefu7e9> to register for the virtual workshop today!

The Environmental Farm Plan (EFP) is an opportunity to assess areas of strength and potential environmental risks on a farming operation. It provides a farm with increased awareness of areas of potential environmental concern and helps outline site-specific, individualized plans to address, monitor or compensate these risks.

Completing an EFP is also a prerequisite for a number of grants and funding opportunities, including the Sustainable Canadian Agricultural Partnership (S-CAP).

The EFP program is voluntary and free, and it considers the farming operation as a whole. The EFP program offers all of this in an easy to use, flexible, online format.

The EFP began in 2003 and has been delivered by the Agricultural Research and Extension Council of Alberta (ARECA) since 2013.



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Trevor Kerr

Test Your Knowledge

1. Beneficial insect populations were up to ___ times higher in field boundary habitats compared to open fields.
2. The Talk Ask Listen workshop is happening in Castor on what date?
3. Composite soil samples usually consist of how many sub-samples?
4. Where is the Oct 29 EFP workshop being held?
5. What is the recommended feeding period on an area in a bale grazing system?
6. When is the grain aeration webinar being held?

1. 20 times
2. October 23, 2025
3. 15-20 sub-samples
4. Online! Don't wait to register!
5. Two to five days.
6. November 4, 2025

Answers

County of Paintearth No. 18
Box 509
Castor, AB T0C 0X0
Phone: (403)882-3211
www.countypaintearth.ca

Have an event or article suggestion for the next ASB Bulletin? Email tkerr@countypaintearth.ca to have it included in the next issue!

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No. 18

BALE GRAZING BENEFITS AND MANAGEMENT

The following is adapted from the Beef Cattle Research Council's article titled "Extended Grazing". To view the full article with additional extended grazing information and techniques, visit <https://tinyurl.com/4nuvsh7u>.

Bale grazing is an effective winter feeding practice where livestock graze bales on pastures or hayfields, saving the labor and cost of stacking bales, hauling feed, and removing manure.

Key Benefits

- Boosts Forage Yield: The distribution of manure and leftover feed acts as fertilizer, significantly increasing subsequent forage production (up to 4.7 times greater than control sites in Western Canada research). This is linked to improved soil nutrients (N, P, K) and better soil physical conditions.
- Reduces Costs: Eliminates the costs associated with manure hauling and reduces overall yardage costs. Economic analysis suggests a potential reduction of up to 54% in total annual production costs (feed, yardage, bedding) compared to conventional feeding.

Management and Environmental Focus

- Rationing: Bales are rationed usually using an electric fence. The recommended feeding period is two to five days to minimize feed wastage.
- Site Selection: Bale grazing is best on seeded perennial fields and should be avoided on native rangeland and environmentally sensitive areas like riparian zones, high water tables, or sandy/gravelly soils.
- Preventing Nutrient Hot Spots: Concentrated nutrients can cause environmental risk. Management must focus on uniform distribution to prevent "hot spots." A maximum of approximately 800 cow days/acre (about 25 bales/acre) is recommended. 30-35 feet between bales is recommended for uniform coverage. Rotate fields so bale grazing occurs on a given site no more than every fifth year. Conduct annual soil testing to monitor nutrient build-up and guide site rotation.
- Twine/Net wrap removal is essential to prevent animal ingestion, compaction, and death. Plastic twine/net wrap must be removed before feeding. Bale placement (on end or side) depends on climate (drier vs. moist) to manage freezing or rotting.

GRAIN AERATION MANAGEMENT WEBINAR—BRRG

Join Battle River Research Group on November 4 at 11:00 a.m. for a Zoom webinar on Grain Aeration Management for Long-Term Storage! Learn how to effectively manage and utilize grain aeration systems on your farm.

Date: November 4, 2025

Time: 11:00 a.m.

Where: Online Webinar

Register by calling the Battle River Research Group at (780)582-7308 or visit <https://conta.cc/42M6eJU>.



ZOOM WEBINAR GRAIN AERATION MANAGEMENT FOR LONG TERM STORAGE



Dr. Chandra Singh

Dr. Chandra Singh, RDAR Research Chair and Director of the Advanced Post-harvest Technology Centre at Lethbridge Polytechnic, is advancing Alberta agriculture through innovative technologies that reduce crop losses and improve sustainability. He leads the development of cost-effective, AI-assisted crop testing methods that deliver fast, accurate, and non-destructive quality assessment. His groundbreaking work recently earned him the prestigious John Ogilvie Research Innovation Award, recognizing his national leadership in agricultural research.

Topics to be discussed include:

- Importance of aeration in grain storage
- Key principles of aeration systems
- Moisture migration in bins
- Strategies for long-term storage
- Technology and sensors in aeration
- Common storage challenges & solutions
- Cost-effective aeration practices

**NOVEMBER 4**

11 AM MDT

REGISTER ONLINE AT
CALL AT

[www.battleriverresearch.com](https://conta.cc/42M6eJU)
(780) 582 7308

