



MUNICIPAL DISTRICT OF GREENVIEW NO. 16

"A Great Place to Live, Work and Play"

REGULAR AGRICULTURAL SERVICE BOARD MEETING AGENDA

Wednesday, May 30, 2018

9:30 AM

Council Chambers
Administration Building

#1	CALL TO ORDER		
#2	ADOPTION OF AGENDA		
#3	MINUTES	3.1	Regular Agricultural Service Board Meeting Minutes held April 26, 2018 – to be adopted 3
		3.2	Business Arising from the Minutes
#4	DELEGATIONS	4.1	
#5	OLD BUSINESS	5.1	
#6	NEW BUSINESS	6.1	2018 Agricultural Service Board Summer Tour 6
#7	STAFF REPORT & ASB MEMBERS BUSINESS & REPORTS	7.1	Staff Report 10
#8	CORRESPONDENCE		2018 Wheat Midge Forecast Alberta Crop Condition – May 1, 2018 Alberta Crop Conditions – May 8, 2018 Alberta Crop Conditions – May 15, 2018 Alberta Wheat and Barley Commissions Farm Registration is Now Open for Alberta Open Farm Days Feed Additive Could be a Methane Game Changer Forwarded on Behalf of Dale Chrapko Harsh Weather Takes Toll on Calves In a Bug-Eat-Bug World, Farmers Should Help Out Their Insect Friends Key Sources of Clubroot Resistance Goes AWOL The 'Holy Grail' in Cereal Technology



#9	IN CAMERA	N/A
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#10	ADJOURNMENT
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**Minutes of a
REGULAR AGRICULTURAL SERVICE BOARD MEETING
MUNICIPAL DISTRICT OF GREENVIEW NO. 16**

M.D. Administration Building
Valleyview, Alberta on Thursday, April 26, 2018

**#1
CALL TO ORDER**

Chair Allen Perkins called the meeting to order at 9:32 a.m.

PRESENT

A.S.B. Member – Chair	Allen Perkins
A.S.B. Member - Vice Chair	Warren Wohlgemuth
A.S.B. Member – Councillor	Bill Smith
A.S.B. Member - Councillor	Dale Smith
A.S.B. Member	Larry Smith
A.S.B. Member	Richard Brochu
A.S.B. Member	Stephen Lewis

ATTENDING

Manager, Agriculture Services	Quentin Bochar
Assistant Manager, Agriculture Services	Dave Berry
Agriculture Supervisor Trainee	Kristin King
Recording Secretary	Beverly Spence

ABSENT

**#2
AGENDA**

MOTION: 18.04.10 Moved by: Dale Smith
That the Agenda be adopted as presented.

CARRIED

**#3.1 REGULAR ASB
MEETING**

MOTION: 18.04.11 Moved by: Larry Smith
That the minutes of the January 24, 2018 Regular Agricultural Service Board Meeting to be adopted as presented.

CARRIED

**#3.2
BUSINESS ARISING
FROM MINUTES**

3.2 BUSINESS ARISING FROM MINUTES

**#4.0
DELEGATIONS**

4.1 DELEGATIONS

**#5
OLD BUSINESS**

5.1 OLD BUSINESS

**#6
NEW BUSINESS**

6.1 NEW BUSINESS

**#7 STAFF REPORT & ASB
MEMBERS BUSINESS &
REPORTS**

7.1 STAFF REPORT & ASB MEMBERS BUSINESS & REPORTS

**SUPPORTING SHORTAGE
OF VETERINARIANS**

MOTION: 18.04.12 Moved by: Warren Wohlgemuth
That Greenview lend support to other municipalities to facilitate addressing the known shortage of Alberta veterinarians and report back to the Agricultural Service Board within three (3) months.

CARRIED

**WOLF HARVEST
INCENTIVE PROGRAM
REPORTING PERIOD**

MOTION: 18.04.13 Moved by: Dale Smith
For the Wolf Harvest Incentive reporting on the Managers Report, reduce the totals to include one (1) previous year and the current year total.

CARRIED

Vice-Chair Warren Wohlgemuth vacated the meeting at 10:45 a.m.

Vice-Chair Warren Wohlgemuth re-entered the meeting at 10:46 a.m.

**CLUBROOT AREA
REPORTING**

MOTION: 18.04.14 Moved by: Bill Smith.
That the Agricultural Service Board direct Greenview administration to report positive clubroot infestations down the quarter section.

CARRIED

COUNCILLOR BILL SMITH updated the Agriculture Service Board on his recent activities, which include;

- Attended the Rural Municipalities of Alberta (RMA) Spring Conference
- Attended the Northern Grazing Association Meeting

COUNCILLOR DALE SMITH updated the Agriculture Service Board on his recent activities

VICE CHAIR WARREN WOHLGEMUTH updated the Agriculture Service Board on his recent activities

CHAIR ALLEN PERKINS updated the Agriculture Service Board on his recent activities

MEMBER LARRY SMITH updated the Agriculture Service Board on his recent activities

MEMBER RICHARD BROCHU updated the Agriculture Service Board on his recent activities, which include;

- Attended the Peace Country Beef and Forage Association Annual General Meeting

MEMBER STEPHEN LEWIS updated the Agriculture Service Board on his recent activities, which include;

- Attended FarmTech 2018
- Attended a Production and Marketing Seminar
- Attended the Ag. Drone School

**STAFF REPORT & ASB
MEMBERS BUSINESS**

MOTION: 18.04.15 Moved by: Dale Smith

That the Agricultural Service Board accept the Manager's report and ASB members reports as information.

CARRIED

**#8
CORRESPONDENCE**

8.0 CORRESPONDENCE

MOTION: 18.04.16 Moved by: Warren Wohlgemuth

That the Agricultural Service Board accept the correspondence as presented.

CARRIED

**#9
IN CAMERA**

9.0 IN CAMERA

**#10
ADJOURNMENT**

10.0 ADJOURNMENT

MOTION: 18.04.17 Moved by: Stephen Lewis

That the Agricultural Service Board Meeting adjourn at 11:48 a.m.

CARRIED

Agricultural Service Board Chair

Manager, Agricultural Services



REQUEST FOR DECISION

SUBJECT: **2018 Agricultural Service Board (ASB) Summer Tour**
SUBMISSION TO: AGRICULTURAL SERVICES BOARD REVIEWED AND APPROVED FOR SUBMISSION
MEETING DATE: May 30, 2018 CAO: MANAGER: QFB
DEPARTMENT: AGRICULTURE GM: PRESENTER: QFB
STRATEGIC PLAN: Intergovernmental Relations

RELEVANT LEGISLATION:

Provincial (cite) –N/A

Council Bylaw/Policy (cite) –N/A

RECOMMENDED ACTION:

MOTION: That the Agriculture Service Board accept the 2018 ASB Summer Tour Event Summary as information.

MOTION: That the Agriculture Service Board decide which members will be attending the upcoming ASB Summer Tour being hosted by Strathcona County July 10 – 13, 2018.

BACKGROUND/PROPOSAL:

Greenview Agriculture Service Board members have had an invitation to the 2018 Agricultural Service Board Summer Tour extended to them. This event has a Delegate Tour which will explore interesting and innovative locations and businesses that call Strathcona County home. There is also a Partner Tour and Youth Tour, as well as, a variety of optional events. Previously Greenview has a member of staff, a member of ASB or a combination of both attend the event.

BENEFITS OF THE RECOMMENDED ACTION:

1. Having representatives from Greenview attend this event will show our support for the Alberta Agriculture Industry, increase networking opportunities, as well as learning about agriculture in other areas of the province.
-

DISADVANTAGES OF THE RECOMMENDED ACTION:

1. There are no perceived disadvantages to the recommended motion.
-

ALTERNATIVES CONSIDERED:

Alternative #1: Greenview ASB could choose not to send a representative from the board to attend the event. This alternative is not being recommended, as representation from Greenview ASB would show support for the agriculture industry in Alberta and our municipal partners.

FINANCIAL IMPLICATION:

Funds for this event have been budgeted in the 2018 Agriculture Operating Budget.

Direct Costs: Registration and hotel for delegates.

Ongoing / Future Costs: N/A

STAFFING IMPLICATION:

There are no staffing implications to the recommended motion.

PUBLIC ENGAGEMENT LEVEL:

Greenview has adopted the IAP2 Framework for public consultation.

INCREASING LEVEL OF PUBLIC IMPACT

Inform

PUBLIC PARTICIPATION GOAL

Inform - To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.

PROMISE TO THE PUBLIC

Inform - We will keep you informed.

FOLLOW UP ACTIONS:

Once ASB makes a decision the members attending will be registered and hotel rooms booked.

ATTACHMENT(S):

- 2018 Agriculture Service Board Summer Tour Event Summary

2018 Provincial Agricultural Service Board Summer Tour

Strathcona County
July 10 - 13, 2018

Strathcona County is proud to host the 2018 Provincial Agricultural Service Board Summer Tour. As a municipality, we work to build synergies between rural and urban communities and enjoy sharing our passion for agriculture.



**cultivating
connections**

2018 ASB Summer Tour | Strathcona County

Tours

July 11 & 12 (Wednesday & Thursday) **Early bird pricing**

Each morning, the tours begin with a hot breakfast at our main venue, Millennium Place.

Delegate tour **\$550**

Explore interesting and innovative locations and businesses that call Strathcona County home.

- Multi-purpose agricultural facility drive-by
- Galloway Seed Farms
- Kofo Farm Ltd. (Turkey Producer)
- Moyer Recreational Centre
- RCMP Detachment /Fire Station #6
- Elk Island Spirits
- Delaney Vet Clinic
- Molenkamp Bee Farm
- Strathcona Olympiette Centre
- Stal VDM Equine Facility
- Bev Facey High School Horticulture Program

Partner tour **\$350**

Enjoy local wine, chocolate, crafts and shopping.

- Salisbury Greenhouse
- Jacek Chocolates
- Bremner Heritage Site
- Barr Estate Winery
- Greenland Garden Centre
- West Wind Vet Clinic
- Uhlick Pottery

Youth tour **\$100**

An action-packed tour for kids aged 6 - 15. Lunch and snacks are provided.

- Millennium Place
- Ardrossan Recreation Centre
- Strathcona Wilderness Centre
- RCMP Detachment
- Fun Park Amusement Center
- Bowling
- Magic Lantern Theatre
- Zoo 2 You
- Crooked Lion face painter
- Ag for Life - Rural Safety Unit

While adults wine and dine at the red carpet gala, the kids will enjoy their own dinner and fun.

Late fee of \$75 is applied after May 18

Contact: Kelsey Knott
email: kelsey.knott@strathcona.ca
phone: 780-417-7135
website: asbtour2018.com



Optional Tours

Busing is provided to and from Millennium Place for all optional tours.

Tuesday, July 10

Northern Bear Golf Club Tournament

\$130

6 am - 2 pm

The Northern Bear Golf Club welcomes delegates to a shotgun start at 8 am. Texas Scramble format. Includes power cart, green fees, lunch and prizes.

Alberta Agriculture and Forestry Crop Diversification Centre (CDC) North

\$25

9:15 am - 2:30 pm

Tour Alberta's best research, agronomy and agri-food development facility. Explore their beautiful site and follow along the value chain of the local ingredients that go into your chips and beer. Lunch will be provided.

Friday, July 13

Commonwealth Stadium

\$25

9 am - noon

You'll get to see the media centre, field and locker rooms. Experience one-of-a-kind artifacts and images of the many Eskimo legends.

Beaver Hills Sporting Clays

\$130

9 am - 3 pm

Have fun at this unique, fully-automated self-serve sporting clays course with a five-stand, skeet field and wobble trap. Lunch included. No minors.

Independant Event

Friday, July 13

Edmonton Eskimos vs. Toronto Argonauts

Adult \$32

Youth \$12

Tickets to the football game are available through the registration process. Sales close on Friday, June 1.

Evening Events

Tickets are included with tour package. Additional evening tickets are \$50 each.

Tuesday, July 10 | Welcome night

5:30 - 9 pm

Dueling piano duo Burn 'n' Mahn

Wednesday, July 11 | Acrofusion performance

5:30 - 10 pm

Firefly Theatre & Circus Group

Thursday, July 12 | Red Carpet Gala

6 - 10 pm

Award-winning comedian Ron James

Hotels

Visit the ASB website registration menu to access links to the six hotels that are holding rooms for the ASB tour.

asbtour2018.com/hotel-accomodations

Camping Unit/night

\$25

No-service camping is available in the Millennium Place parking lot. We'll have space for everyone. Camping fees include a wrist band for each family member to enjoy the amenities of the facility.



REQUEST FOR DECISION

SUBJECT: **Manager's Report and ASB Member's Report**
SUBMISSION TO: AGRICULTURAL SERVICES BOARD REVIEWED AND APPROVED FOR SUBMISSION
MEETING DATE: April 30, 2018 CAO: MANAGER: QFB
DEPARTMENT: AGRICULTURE GM: PRESENTER: QFB
STRATEGIC PLAN: Level of Service

RELEVANT LEGISLATION:

Provincial (cite) – N/A

Council Bylaw/Policy (cite) – N/A

RECOMMENDED ACTION:

MOTION: That the Agricultural Service Board accept the Manager's report and ASB members reports as information.

BACKGROUND/PROPOSAL:

The Manager's report contains information pertaining to the departments operations for the time period from the previous meeting to time of writing of the agenda.

The ASB Member's report contains information pertaining to the members activities for the time period from the previous meeting to the current meeting.

BENEFITS OF THE RECOMMENDED ACTION:

Having the ASB vote in favour of the Ag Department Staff report, will allow the ASB to be kept updated on the Ag Department activities.

DISADVANTAGES OF THE RECOMMENDED ACTION:

There are no perceived disadvantages to the recommended motion.

ALTERNATIVES CONSIDERED:

Alternative #1: The ASB may choose to not accept this report as information.

FINANCIAL IMPLICATION:

There are no financial implications to the recommended motion.

STAFFING IMPLICATION:

There are no staffing implications to the recommended motion.

PUBLIC ENGAGEMENT LEVEL:

Greenview has adopted the IAP2 Framework for public consultation.

INCREASING LEVEL OF PUBLIC IMPACT

Inform

PUBLIC PARTICIPATION GOAL

Inform - To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.

PROMISE TO THE PUBLIC

Inform - We will keep you informed.

FOLLOW UP ACTIONS:

There are no follow up actions to the recommended motion.

ATTACHMENT(S):

- Copy of the Manager/Staff Report from the Agriculture Services Department

**M.D. of Greenview Agricultural Services
Department Activity Report**

For the Period: April 26, 2018 – May 30, 2018

ENQUIRIES – Manager, Asst. Manager, Administrative Assistant and Ag. Supervisor Trainee

Weeds	32
Pests	16
Trees	2
Workshops	14
Rentals	187
Equipment Purchasing	6
Extension	14
employment	0
Miscellaneous	43
TOTAL ENQUIRIES	

MEETINGS / CONFERENCES / TRAINING

Manager

- May 2, 2018 – Co-op meeting – Grande Cache
- May 7, 2018 – All Staff Day – Valleyview
- May 8, 2018 – Weed ID Training for Pembina - Valleyview
- May 8, 2018 – MCI Meeting – Valleyview
- May 9, 2018 – MCI Meeting – DeBolt
- May 15 & 16, 2018 – AAG Training – Valleyview

Asst. Manager Agriculture Services

- April 26, 2018 – ASB Meeting – Valleyview
- April 30, 2018 – Seasonal Staff Starts – Valleyview
- May 1, 2018 – Meeting with SLT regarding STILE – Valleyview
- May 2, 2018 – Co-op meeting – Grande Cache
- May 7, 2018 – All Staff Day – Valleyview
- May 8, 2018 – MCI Meeting – Valleyview
- May 9, 2018 – MCI Meeting – DeBolt
- May 15, 2018 – AAG Training – Valleyview
- May 17, 2018 - Tansy Island Project Preliminary Meeting – County of Grande Prairie
- May 23, 2018 – Applicator Training – Rycroft
- May 24, 2018 – Weed Inspector Workshop – Rycroft
- May 25, 2018 – Authorized Assistant Training – Saddle Hills County

Agriculture Supervisor Trainee Agriculture Services

- May 7, 2018 – All Staff Day – Valleyview
- May 8, 2018 – MCI Meeting – Valleyview
- May 15 & 16, 2018 – AAG Training – Valleyview
- May 17, 2018 – Tansy Island Project Preliminary Meeting – County of Grande Prairie

STAFFING

Seasonal staff start date was April 30, 2018.

Ag Services is still advertising for the Ag. Supervisor Trainee position to fill an upcoming personal leave of absence and for the position of the Administrative Assistant – Agriculture/Fleet/Safety.

RESOURCES, EQUIPMENT, AND FACILITIES

2018 Capital Purchases: AG18001 (Rear Blade) has been ordered, AG18002-AG18003 (Pick-up Trucks) have been ordered, AG18004 (Field Sprayer) has been ordered, AG18005 (Field Sprayer Boomless) has been ordered, AG18006 (Loading Chute) has been ordered, AG18007 (Bale Hauler) has been ordered and delivered, and AG18008 (Portable Wash Unit) has been ordered and delivered.

BUDGET

Agriculture Administration has already started working on budget 2019-2022.

EXTENSION EVENTS

SARDA and PCBFA have been conducting a number of Extension events in partnership with Ag Services and Ag Services has been posting the information to our web page, Facebook, and Twitter accounts.

Please see following list of events (year):

Date	Workshop	Location
January 18, 2018	2018 Peace Agronomy Update	Dunvegan Motor Inn
January 23, 2018	Clubroot Information Session	DeBolt Pioneer Centre
January 23, 2018	Clubroot Information Session	Valleyview Memorial Hall
January 25, 2018	Living With Wildlife	DeBolt Pioneer Centre
January 30 – February 2, 2018	FarmTech 2018	Edmonton Expo Centre
February 9, 2018	Local Vegetable Markets	Sunset House Hall
February 10, 2018	Winter Watering Systems Tour	Wanham

February 20, 2018	<u>SARDA AGM and Extension Event</u>	Falher
February 21-23, 2018	<u>Alberta Beef Industry Conference</u>	Sheraton Red Deer Hotel
February 22, 2018	<u>Hemp Fiber Marketing Info Session</u>	Manning Legion Hall
February 23, 2018	<u>PCBFA Annual General Meeting</u>	TBA
February 28, 2018	<u>Including Sainfoin in Your Pastures</u>	Grimshaw Legion Hall
February 28, 2018	<u>5% Rule on Farm Profitability</u>	Rycroft
March 12, 2018	<u>Crunching Numbers on Biocontrols in Bedding Plant Production</u>	Webinar
March 14, 2018	<u>EFP & Growing Forward 2 Openhouse Workshop</u>	PCBFA Office, High Prairie
March 14, 2018	<u>PRFSA Production and Marketing Seminar</u>	Rycroft Ag. Center
March 14-15, 2018	<u>2018 Livestock Car Conference</u>	Olds, Alberta
March 15, 2018	<u>Forage Seed Agronomy Update</u>	Rycroft Ag. Center
March 15, 2018	<u>Building for the Bumbles Workshop</u>	ENTREC Center, Grande Prairie
March 20, 2019	<u>Buttercup/Burdock Workshop</u>	Little Smoky Community Hall
March 21, 2018	<u>Buttercup/Burdock Workshop</u>	Grovedale Public Services Building
March 26-27, 2018	<u>Advancing Women in Agriculture Conference</u>	Hyatt Regency Calgary, Alberta
March 28, 2018	<u>No Fear Farm Finance</u>	Webinar
March 29, 2018	<u>Tools for Building Soil Health: Livestock and Crop Integration</u>	St. Isidore

April 3, 2018	Shelterbelt Workshop	Grovedale Public Services Building
April 4, 2018	Shelterbelt Workshop	DeBolt Public Services Building
April 16-17, 2018	Ag Drone School	Grande Prairie
April 24, 2018	Soil Information Viewer (becoming an expert) Webinar	
June 5, 2018	Septic Sense	Valleyview
June 6, 2018	Working Wells	Valleyview
June 7, 2018	Climate Express	Bell Petroleum Centre, Peace River
June 7, 2018	Lesser Slave Watershed Council AGM	Elks Hall Downtown, High Prairie
June 15 & 16, 2018	Riparian Management Course	Harmon Valley Hall, Nampa
June 20, 2018	Ranching For Profit: An Introduction with Dave Pratt	Dunvegan Provincial Park Visitor's Center
June 20, 2018	Pasture Rejuvenation Project Field Day with Dave Pratt	Wanham Grazing Reserve
June 23, 2018	More Grass, More Profits & a Better Quality of Life with Kelly Sidoryk	Hanson Ranch, Valleyview
June 27, 2018	CanolaPalooza	Lacombe, AB
July 9 – 11, 2018	NPARA Regenerative Farming & Ranching	NPARA Research Farm, Manning
August 2, 2018	Field Day at the Research Farm	Fairview Research Farm
August 7 – 9, 2018	2018 International Clubroot Workshop	Edmonton, AB

PROGRAMS

➤ VETERINARY SERVICES INCORPORATED

Three (3) new cards have been issued.

➤ **PEST AND NUISANCE CONTROL**

To date, 78 wolves have been presented for payment. Total 2018 incentive expenditures: \$23,400.00

YEAR	WOLVES	AMOUNT
2017	99	\$ 29,700.00
2018	78	\$ 23,400.00
Total	177	\$ 53,100.00

WOLF PREDATION MANAGEMENT PROGRAM

There has been 2 new requests for assistance with verified wolf predation. There has been zero wolves removed.

Problem Wildlife Officer has been requested to come out and visit some farm/ranch operations, and has provided advice and information to the ratepayers. Have also had discussions with another 0 individuals regarding wolves.

COYOTE PREDATION MANAGEMENT PROGRAM

There has been 2 new requests for assistance with verified coyote predation. There has been 0 coyotes removed.

Problem Wildlife Officer has been requested to come out and visit some farm/ranch operations, and has provided advice and information to the ratepayers. Snares were set out for coyote predation, but with the change in weather the snares have been removed.

OTHER PREDATORS MANAGEMENT PROGRAM

There have been 0 new requests for assistance with other predator problems. There has been 0 pests removed.

OTHER PROBLEM WILDLIFE MANAGEMENT PROGRAM

There have been 6 new requests for assistance with other problem wildlife species problems (Skunks). There has been 0 pests removed.

Problem Wildlife Officer has been requested to come out and visit some farm/ranch operations or acreages, and has provided advice and information to the ratepayers. One complaint required assistance with the use of the trap.

There have been 0 new requests for assistance with other problem wildlife species problems (Ravens). There has been 0 pests removed.

PWO gave information and advice to the ratepayer on how to deal with the problem.

There have been 0 new requests for assistance with other problem wildlife species problems (Magpies). There has been 0 pests removed.

PWO gave information and advice to the ratepayer on how to deal with the problem.

INFRASTRUCTURE PROTECTION AND AGRICULTURE FLOODING PREVENTION PROGRAM

There has been 25 new requests for assistance with beaver caused flooding issues (infrastructure). There has been 40 beavers removed to date

WILD BOAR BOUNTY

There have been 0 sets of Wild Boar ears turned in. Total 2018 incentive expenditures \$0.00.

➤ **RENTAL EQUIPMENT**

2018

Loc	Equipment	Equipment Number	S/N	Total Days	Cost/Day	Total Charges
VV	1000 Earth Mover	SOIL3100		0	\$ 150.00	\$ -
CC	1000 Earth Mover	SOIL3101		0	\$ 150.00	\$ -
GD	900 Earth Mover	SOIL3070		0	\$ 150.00	\$ -
GD	425 Earth Mover	SOIL3072		0	\$ 100.00	\$ -
VV	12' Pull-Type Blade	SOIL3099	12502	6	\$ 50.00	\$ 300.00
VV	Vee-Ditcher	VDIT3210	12502	1	\$ 50.00	\$ 50.00
VV	Field Sprayer	ASB0004/SPRY3123	1400151	0	\$ 50.00	\$ -
CC	Field Sprayer	SPRY3076		0	\$ 50.00	\$ -
GD	Field Sprayer	SPRY3121		0	\$ 50.00	\$ -
VV	Boomless Sprayer - 300 Gal	SPRY3124	33262	0	\$ 50.00	\$ -
VV	Estate Sprayer - Pull Type	SPRY3007/3127/3128		0	\$ 20.00	\$ -
CC	Estate Sprayer - Pull Type	SPRY3008		0	\$ 20.00	\$ -
GD	Estate Sprayer - Pull Type	SPRY3206		0	\$ 20.00	\$ -
VV	Estate Sprayer - 3 pt hitch	SPRY3129	312101212	0	\$ 20.00	\$ -
VV	Water Tank and Trailer	TRL18		0	\$ 25.00	\$ -
GD	Water Tank and Trailer	TRL8		0	\$ 25.00	\$ -
VV	Quad Wick Applicator	SPRY3211		0	\$ 10.00	\$ -
CC	Quad Wick Applicator	SPRY3212		0	\$ 10.00	\$ -
GD	Quad Wick Applicator	SPRY3213		0	\$ 10.00	\$ -
VV	Quad Mount Sprayers	SPRY3010		0	\$ 10.00	\$ -
CC	Quad Mount Sprayers	SPRY3011		0	\$ 10.00	\$ -
GD	Quad Mount Sprayers	SPRY3012		0	\$ 10.00	\$ -
VV	Backpack Sprayers	SPRY3083		0	FREE	\$ -
CC	Backpack Sprayers	SPRY3084		0	FREE	\$ -
GD	Backpack Sprayers	SPRY3085		0	FREE	\$ -
VV	Hand Wick Applicator	MISCR98		0	FREE	\$ -
VV	Granular Pesticide Bait Applicator	PEAC3207		0	\$ 30.00	\$ -
VV	Manure Spreader	MANU3209	02104185UMSL75	1	\$ 200.00	\$ 200.00
VV	Fertilizer Spreader	FERT001	AG3W53000FV001001	6	\$ 100.00	\$ 600.00
VV	50' Heavy Harrow c/w Granular Applicator	HARR3113	245514031	8	\$ 150.00	\$ 1,200.00
GD	33' Heavy Harrow c/w Granular Applicator	HARR3082		0	\$ 150.00	\$ -
VV	30' Land Roller	ASB0005		4	\$ 200.00	\$ 800.00
GD	30' Land Roller	ROLL0001	12-1374	1	\$ 200.00	\$ 200.00
VV	14' Heavy Disc	ASB0001	AGCW08420EX035270	5	\$ 400.00	\$ 1,250.00
GD	14' Heavy Disc	DISC1	AGCW084EX035262	0	\$ 400.00	\$ -
VV	Cattle Squeeze	SQUE3099		1	\$ 25.00	\$ 25.00
CC	Cattle Squeeze	SQUE3097		0	\$ 25.00	\$ -
GD	Cattle Squeeze	SQUE3098		0	\$ 25.00	\$ -
VV	Loading Chute with 4 Panels	CHUT3115		6	\$ 25.00	\$ 150.00
CC	Loading Chute with 4 Panels	CHUT3097		0	\$ 25.00	\$ -
GD	Loading Chute with 4 Panels	CHUT3096		0	\$ 25.00	\$ -
VV	Panel Trailer with 20 Panels + 1 Gate	TRL6	SPTBF1627E1019676	1	\$ 25.00	\$ 25.00
GD	Panel Trailer with 20 Panels + 1 Gate	PANL3046/T69		0	\$ 25.00	\$ -
VV	Tag Reader	GALA3117/3118		0	FREE	\$ -
VV	Burdizzo Clamps	MISCR98		0	FREE	\$ -
VV	Dehorner	MISCR98		0	FREE	\$ -
VV	Truck Mount Seeder	SEED3073		1	\$ 10.00	\$ 10.00
VV	Quad Mount Seeder	SEED3074		0	\$ 10.00	\$ -
VV	Hand Seeder	MISCR98		0	FREE	\$ -
VV	Post Pounder	ASB0002		3	\$ 125.00	\$ 375.00
CC	Post Pounder	POST3126		0	\$ 125.00	\$ -
GD	Post Pounder	ASB0003		2.5	\$ 125.00	\$ 312.50
VV	Bale Wagon	ASB0007		2	\$ 150.00	\$ 300.00
VV	No Till Drill	ASB0008		0	\$ 150.00	\$ -
VV	Grain Vacuum	ASBR0011		29	\$ 50.00	\$ 1,450.00
VV	Bin Crane	CRAN2123	09 1473	0	\$ 100.00	\$ -
VV	Water Pump and Pipe - Alberta Ag.	PUMPR99		0	\$ 200.00	\$ -
VV	Survey Equipment	SURV3091		0	\$ 10.00	\$ -
VV	Metal Detector	METL3081		0	\$ 10.00	\$ -
VV	Hay Sampler, Measuring Wheel, Bin Probe	MISCR98		8	FREE	\$ -
VV	Rodent Traps	MISCR98		4	\$ 10.00	\$ 40.00
VV	Barbeque	TRL19		0	\$ 100.00	\$ -
VV	Picnic Tables	PICTABLES		0	\$ 10.00	\$ -
VV	Bag Roller	ASB0006		1	\$ 125.00	\$ 125.00
VV	Scare Cannons	MISCR98		0	FREE	\$ -

TOTAL REVENUE 90.5 \$ 7,412.50

CROOKED CREEK TOTALS	0	\$ -
GROVEDALE TOTALS	3.5	\$ 313.50
VALLEYVIEW TOTALS	55	\$ 6,900.00

➤ **VEGETATION MANAGEMENT****ROADSIDE VEGETATION MANAGEMENT**

The program is projected to spray approximately 2200 Km of MD roads.

SPOT SPRAYING / ATV / UTV

The program is projected to spray approximately 75 Ha.

BRUSH SPRAYING

The program is projected to spray approximately 300 Ha of brush.

PESTICIDE CONTAINER STORAGE

Empty jugs were shredded and hauled away by the Clean Farms contractor on September 6, 2017.

FENCELINE AND PRIVATE LAND SPRAY PROGRAMS

No new agreements have been signed.

SPRAY EXEMPTION AGREEMENTS

Deadline of April 27, 2018. For 2018 there are 143 Agreements signed at this time.

BUTTERCUP/BURDOCK INCENTIVE PROGRAM

One (1) agreements has been signed to date for 2018.

WEED CONTROL

White Zone

#	Re-Inspections	Weeds Present	Personal Contact	Phone Calls	Weed Alerts	Weed Warnings	Notices	Enforce

Greenzone

#	Re-Inspections	Weeds Present	Personal Contact	Phone Calls	Weed Alerts	Weed Warnings	Notices	Enforce

Town	#	Weeds Present	Personal Contact	Weed Letters
Valleyview				
Fox Creek				

➤ **AGRICULTURAL PESTS**

Greenview will continue to conduct enhanced monitoring for Clubroot, now that it has been confirmed within the municipal boundaries. An electronic map has been posted showing the affected townships.

➤ SEED CLEANING PLANT

Verbal Report on Progress will be given by Assistant Manager.

2018 Wheat Midge Forecast

[Management tools for dealing with midge](#) | [Further information links](#) | [How the survey was done](#) | [Who helped](#)

The [wheat midge forecast](#) for 2018 shows an overall lower level of wheat midge across Alberta. There is very little risk of midge in the Peace Region, with the lowest level of midge found in the survey since the outbreak in 2013. Individual fields or small pockets of wheat midge may still exist so it is important to remain vigilant.

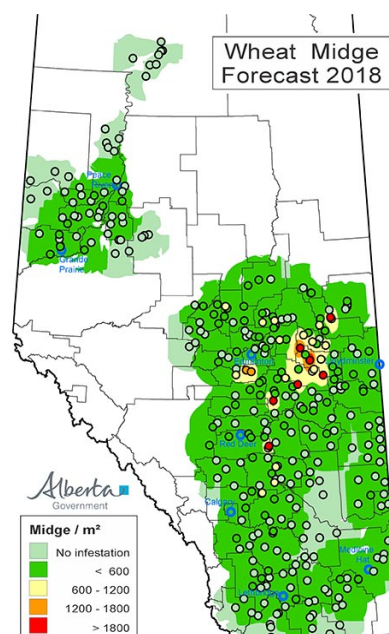
The midge population in central Alberta east of Edmonton appears to be lower but this may be in part due to increase in midge tolerant wheat. Wheat midge in that area in that area will remain a concern, especially if there is late seeding and higher than average rainfall in the spring. Areas west and south of Edmonton have seen individual fields with midge numbers at levels of concern as far south as Red Deer county.

The population remains low in southern Alberta and the only midge found was associated with irrigated fields.

Over the past several years the field to field variation has been very considerable throughout the province, especially in those areas with higher counts.

Individual fields throughout Alberta may still have economic levels of midge.

Each producer also needs to assess their risk based on indicators specific to their farm. Specifically, producers should pay attention to midge downgrading in their wheat samples and use this as an indication of midge risk in their fields.



This forecast is not intended to take the place of individual field monitoring. The forecast for Alberta shows areas of **risk** for midge damage in 2018. It is important to note that over such a wide range, populations in individual fields can be and often are highly variable. Producers should plan to monitor their fields when the midge adults are flying and their wheat is in the susceptible stage. In all areas of the province growers are urged to monitor their wheat fields from wheat **head emergence to anthesis** for the presence of midge adults. Regular field scouting on multiple nights in succession is important in understanding the population in a particular field.



Although a number of factors influence the overwintering survival of the midge, the survey and map provide a general picture of existing densities and the potential for infestation in 2017. Weather conditions, specifically temperature and moisture will ultimately determine the extent and timing of midge emergence during the growing season. Temperature and wind also play critical roles in egg laying activities of the female wheat midge. **The level of damage from wheat midge is determined by the synchrony of wheat midge emergence and wheat and the number of wheat midge present.** Look for the results of our wheat midge pheromone trapping in June and July to help track the emergence of adult midge.

Parasitism



Macroglenes penetrans

Parasitism of midge larvae by a small wasp species (*Macroglenes penetrans*) has been important in keeping wheat midge populations below the economic threshold in many areas. These beneficial wasps tend to thrive in warm, dry conditions. Parasite populations increase and decrease with changes in the midge population and are very important in moderating population levels in Alberta.

It is important to understand that once midge has established in an area it unlikely to ever completely disappear. Low lying and moist areas in a field provide a refuge, enabling the population to survive even when conditions are not favorable in the rest of the field. These low population levels, however, also help sustain a population of natural enemies.

Management tools for dealing with midge

[seeding earlier](#)

[crop rotation](#)

[scouting](#)

higher seeding rates

Important links

[Diagnostic guide](#)

[Life cycle information](#)

[Midge tolerant wheat varieties](#)

[Scouting for wheat midge video](#)

[Economic thresholds](#)

[Frequently Asked Questions](#)

[Insect Pest Monitoring Network - Wheat midge monitoring](#)

How the survey was done

The 2017 fall survey included wheat growing areas throughout Alberta. In total 323 samples were taken from 63 counties. The survey involves taking soil samples from wheat fields after harvest using a standard soil probe. Larval cocoons are washed out of the soil using a specialized series of screens. Larvae are counted, and then dissected to determine if they are parasitized. The midge density displayed on the forecast map is based on viable (live, non-parasitized) midge larvae.



Wheat midge cocoon compared to canola seed



Wheat midge larva



Wheat midge larva compared to canola seed

Who helped

The wheat midge survey was conducted by Alberta Agriculture and Forestry with assistance from:

[Battle River Research Group](#)
[Farming Smarter](#)

[Mackenzie Applied Research Association](#)

[Smoky Applied Research and Demonstration Association](#)

[Parkland County](#)

[Mountain View County](#)

[Chinook Applied Research Association](#)
[Lakeland Applied Research Association](#)

[Northern Peace Applied Research Association](#)

[County of Two Hills](#)

[MD Wainwright](#)

Alberta Agriculture and Forestry staff

Our map was produced by Agriculture and Agri-Food Canada, Saskatoon SK. A special thank you to David Giffen for building the map.

Thank you to the many producers for permission to survey their fields. If you are interested in taking part in the Alberta 2018 wheat midge survey contact [Shelley Barkley](#).

[For a printable version of the 2018 wheat midge forecast map follow this link.](#)

Updates of current conditions and wheat midge emergence will be available through the Ag-Info Centre (310 FARM) during the 2018 growing season and at the [Alberta Insect Pest Monitoring Network](#).

[Historical wheat midge forecast maps from 2006 - 2015](#)

For more information about the content of this document, contact [Scott Meers](#).

This document is maintained by [Shelley Barkley](#).

This information published to the web on November 29, 2017.

Last Reviewed/Revised on February 5, 2018.

Alberta Crop Report



Crop Conditions as of May 1, 2018

A late spring has delayed seeding in all regions. Daily average temperatures in the first half of April were 8-10 degrees below long term normals postponing snow melt. Warm temperatures during the second half of the month has melted all the snow though soil dry down and warming have been negatively impacted by the late disappearance. Seeding could be further delayed if producers wait for the first weed flush to occur. To date, less than 1% of crops have been seeded with a small number of acres completed in the South and Central regions (**See Table 1**). Seeding progress is the worst since 2011 when only 0.1% of the province was completed. That year, 90% of crops were seeded by June 2.

Hay and pasture crops have been slow to initiate growth due to delays in thawing of the frost layer. Only 46% of hay and pastures are rated in good or excellent condition. The delays continue to force cattle producers to feed their livestock, drawing down further on tight supplies which had been negatively affected by the colder than normal winter temperatures.

Overland flooding has been an issue in many areas of the province. 73% of the province is rated good or excellent for surface soil moisture with a further 21% rated excessive (**See Table 2**). Soil moisture reserves are below long term averages in much of the South and Central regions, and the north portion of the Peace region (**See Map**).

84% of fall seeded crops are rated in good or excellent condition.

Table 1: Alberta Seeding Progress as of May 1, 2018

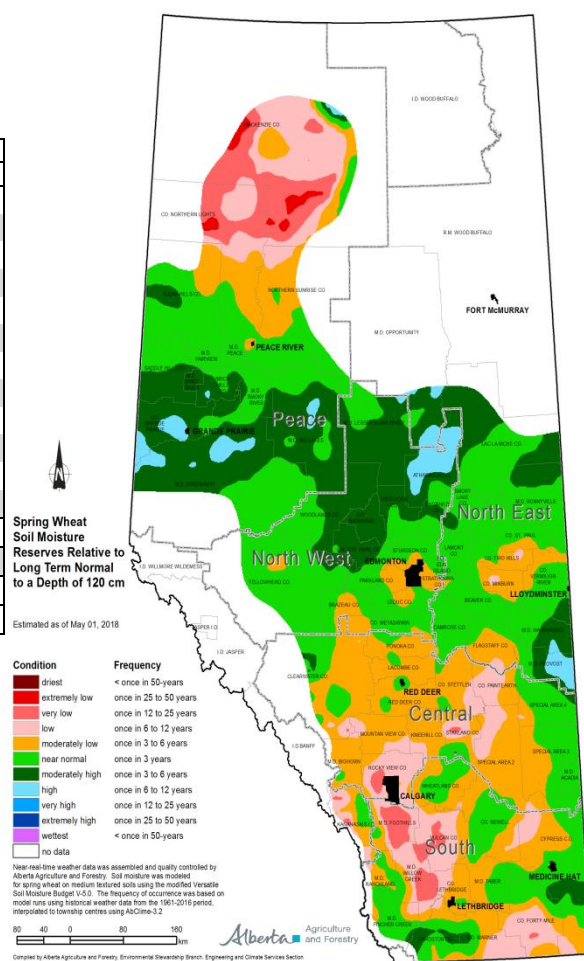
	% Seeded					
	South	Central	N East	N West	Peace	Average
Spr. Wheat	1.6%	0%	0%	0%	0%	0.4%
Dur. Wheat	1.6%	0.6%	---	---	---	1.4%
Barley	1.9%	0.1%	0%	0%	0%	0.6%
Oats	1.8%	0%	0%	0%	0%	0.1%
Canola	0.3%	0%	0%	0%	0%	0.1%
Dry Peas	1.3%	0.6%	0%	0%	0%	0.6%
Mustard	0.9%	0%	---	---	---	0.6%
Flax	0%	0%	0%	---	---	0%
Potatoes	1.0%	0%	0%	0%	---	0.9%
Sugar Beets	20.0%	---	---	---	---	20.0%
Lentils	1.4%	1.5%	---	---	---	1.4%
Corn	0.8%	0%	0%	---	---	0.3%
Average	1.4%	0.1%	0%	0%	0%	0.4%
Last Year	19.5%	0.5%	0%	0%	0%	5.7%
5 Year Ave	31.8%	8.5%	1.5%	1.1%	2.8%	11.9%
LTerm Ave	33.2%	11.9%	4.0%	3.9%	8.7%	14.8%

Source: AF/AFSC Crop Reporting Survey

Table 2: Surface Soil Moisture Ratings as of May 1, 2018

	Poor	Fair	Good	Excellent	Excessive
South	2.1%	11.4%	63.9%	14.4%	8.1%
Central	0%	7.8%	51.2%	36.5%	4.6%
N East	0%	0%	20.2%	41.4%	38.5%
N West	0%	0%	2.6%	55.9%	41.4%
Peace	0%	3.1%	46.2%	25.0%	25.8%
Average	0.6%	5.5%	41.3%	31.9%	20.7%
Last Year	0.4%	6.6%	25.8%	44.4%	22.8%

Source: AF/AFSC Crop Reporting Survey



Visit weatherdata.ca for additional maps and meteorological data

Our thanks to Alberta Agricultural Fieldmen, staff of AFSC and the Alberta Ag-Info Centre for their partnership and contribution to the Alberta Crop Reporting Program.

The precipitation map is compiled by Alberta Agriculture and Forestry, Environmental Stewardship Division, Technology and Innovation Branch.

REGIONAL ASSESSMENTS:

The 2018 Alberta Crop Report Series continues to provide summaries for the following five regions:

Region One: Southern (Strathmore, Lethbridge, Medicine Hat, Foremost)

- Average winter precipitation. Below average temperatures in February, March & first half April left more snow to melt in late April causing delayed disappearance and exacerbated overland flooding
- Seeding approximately 10 days behind the 5 year average of 32% complete.
- Small amount of seeding occurring in all municipalities with the exception of the NW corner (Vulcan, Wheatland, Foothills). Seeding progress rivals 2011 when only 0.2% was seeded.
- Surface soil moisture rated 78% good/excellent; 8% rated excessive. All counties reporting excessive moisture.
- 88% of fall seeded crops rated in good or excellent condition.
- Drying prospects are high. Temperatures over next 7 days ranging from low to mid 20's.

Region Two: Central (Rimbey, Airdrie, Coronation, Oyen)

- Average to below average winter precipitation. Below average temperatures in February, March & first half April delayed snow melt into late April.
- Small amount of seeding was reported in municipalities along the Alberta/Saskatchewan border.
- Seeding behind the 5 year average of 8% complete.
- Surface soil moisture rated 88% good or excellent; Less than 5% rated excessive. Excessive moisture reported principally in western portion of region @ 10% excessive.
- Drying prospects are high. Temperatures over next 7 days ranging from high teens to lower 20's.

Region Three: North East (Smoky Lake, Vermilion, Camrose, Provost)

- Below average winter precipitation. Below average temperatures in February, March & first half April delayed snow melt into late April exacerbating overland flooding issues.
- No seeding reported in any municipality. Historically, only 1-2% seeded by this date in most years.
- Small amount of 2017 crop remains outstanding to harvest.
- Surface soil moisture rated 61% good or excellent; remaining 39% rated excessive. Municipalities located NE of Edmonton reporting 100% excessive soil moisture. Municipalities east of Edmonton reporting 10-20%.
- Drying prospects are high. Temperatures over next 7 days ranging from high teens to mid 20's.

Region Four: North West (Barrhead, Edmonton, Leduc, Drayton Valley, Athabasca)

- Average to below average winter precipitation. Below average temperatures in February, March & first half April delayed snow melt into late April exacerbating overland flooding issues.
- No seeding reported in any municipality. Historically, less than 3% seeded by this date in most years
- Small amount of 2017 crop remains outstanding to harvest.
- Surface soil moisture rated 59% good or excellent; remaining 41% rated excessive. Most municipalities reporting excessive moisture at 20-30%, with a few well above that.
- Drying prospects are high. Temperatures over next 7 days ranging from high teens to mid 20's.

Region Five: Peace River (Fairview, Falher, Grande Prairie, Valleyview)

- Average winter precipitation. Below average temperatures in February, March & first half April delayed snow melt into late April exacerbating overland flooding issues.
- No seeding occurring in any municipality. In 5 of last 8 years, seeding in early May reported as 0%. In 10 of last 12 years, seeding progress was reported as less than 3%.
- Surface soil moisture rated 71% good or excellent; 26% rated excessive. All municipalities reporting excessive moisture, lowest in north (5%), highest in south (35%). Central Peace ranges from 10-35% excessive.
- Drying prospects are high. Temperatures over next 7 days ranging from mid teens to lower 20's.

**Agriculture Financial Services Corporation
Pricing Unit, Research & Product Development
Lacombe, Alberta
May 4, 2018**

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The 2018 Alberta crop reporting series is available on the Internet at: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sdd4191](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sdd4191)

Alberta Crop Report



Crop Conditions as of May 8, 2018 (Abbreviated Report)

Warm, dry weather throughout the province during the reporting period dried soils sufficiently to allow producers to start spring operations in all regions. Seeding progress is approaching 10% completed as compared to the 5 year average of near 30%, approximately 7-10 days behind normal (**See Table 1**). Standing water is disappearing but remains a significant issue in all regions as many of these acres will likely remain unseeded. Due to the late start to seeding, less than 1% of crops have emerged thus far, all in the South region.

Surface soil moisture ratings have improved in the northern regions but declined in the South and Central. Provincially, the area rated good or excellent is virtually unchanged at 74% (**See Table 2**). Excessive moisture ratings dropped an average of 7 percentage points from last week, principally in the north but poor/fair surface soil moisture ratings have rose in the South, Central and the North East as drier conditions have expanded further north, now reaching Edmonton. After the dry conditions experienced last year across much of Southern and Central Alberta, sub soil moisture levels should be carefully watched as there has been little time for moisture recharge which would seriously affect its ability to carry another crop should another dry year occur (**See Map**).

Hay and pastures have reacted well to the warm temperatures of the past week and are greening up. We should see further improvement to forage crop conditions as showers and light rain have fallen over the past several days in all regions with the exception of the Peace region since the latest survey. Precipitation amounts are expected to be light which should cause minimal delays to the seeding of annual crops.

Warm, dry weather is forecast for the province starting this weekend and early next week.

Table 1: Seeding Progress as of May 8, 2018 (Abbreviated)

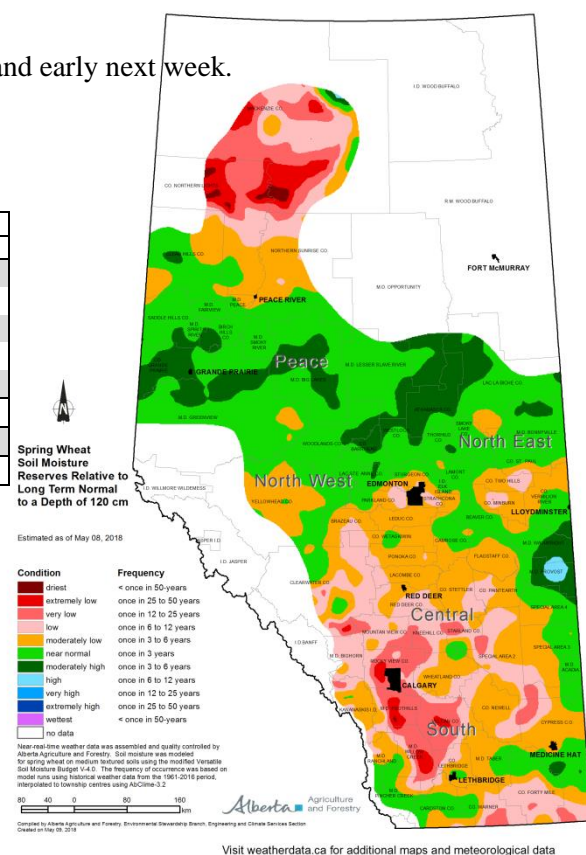
	% Seeded					
	South	Central	N East	N West	Peace	Average
Spr. Wheat	25.3%	6.0%	2.2%	1.5%	1.5%	8.7%
Barley	24.3%	1.6%	0.4%	0.6%	1.4%	8.4%
Oats	17.9%	0.1%	0%	0%	0.9%	1.5%
Canola	22.7%	1.7%	0.3%	0.5%	0.6%	4.6%
Dry Peas	28.8%	16.0%	12.2%	2.5%	0%	16.9%
Average	24.8%	4.1%	1.6%	0.9%	0.9%	7.7%
Last Week	1.4%	0.1%	0%	0%	0%	0.4%
5 Year Ave	53.4%	30.2%	15.1%	14.1%	11.4%	28.5%

Source: AF/AFSC Crop Reporting Survey

Table 2: Surface Soil Moisture Ratings as of May 8, 2018

	Poor	Fair	Good	Excellent	Excessive
South	3.7%	17.5%	44.8%	25.6%	8.4%
Central	4.1%	15.4%	56.8%	22.5%	1.2%
N East	1.5%	4.6%	18.1%	51.2%	24.5%
N West	---	---	3.6%	66.1%	30.4%
Peace	---	3.1%	52.3%	32.3%	12.3%
Average	2.4%	10.1%	37.4%	36.5%	13.7%
Last Week	0.6%	5.5%	41.3%	31.9%	20.7%

Source: AF/AFSC Crop Reporting Survey



Our thanks to Alberta Agricultural Fieldmen, staff of AFSC and the Alberta Ag-Info Centre for their partnership and contribution to the Alberta Crop Reporting Program.

The precipitation map is compiled by Alberta Agriculture and Forestry, Environmental Stewardship Branch, Engineering and Climate Services Section.

REGIONAL ASSESSMENTS:

The 2018 Alberta Crop Report Series continues to provide summaries for the following five regions:

Region One: Southern (Strathmore, Lethbridge, Medicine Hat, Foremost)

- Warm, dry weather got seeding progressing across the entire region
- Seeding at 25% complete compared to 1.4% last week but 10 days behind the 5 year average near 55%.
- Surface soil moisture ratings declined to 70% rated good or excellent from 78% last week. The area rated poor or fair rose to 21% from 14%. Excessive moisture ratings were near unchanged.
- Sub soil moisture ratings declined 10 percentage points to 62% good or excellent while 34% of the region is rated poor or fair.
- Hay and pastures greening up and showing signs of growth.

Region Two: Central (Rimbey, Airdrie, Coronation, Oyen)

- Warm, dry weather has seeding operations starting in all municipalities.
- Seeding at 4% completed, up from 0.1% last week but 7 days behind the 5 year average of 30%.
- Surface soil moisture ratings declined to 79% rated good or excellent from 88% last week. The area rated poor or fair rose to 19% from 8%. Positively, excessive moisture ratings declined to 1%.
- Sub soil moisture dropped to 75% rated good or excellent from 83% last week.
- Hay and pastures greening up.

Region Three: North East (Smoky Lake, Vermilion, Camrose, Provost)

- Warm, dry weather has seeding starting but many municipalities need a little more time for dry down.
- Seeding near 2% completed, less than 7 days behind the 5 year average of 15%.
- Surface soil moisture ratings improving. Excessive moisture dropped to 25% from 38%. The good or excellent rating rose to 69% of the region from 62% last week.
- Hay and pastures are starting to green up and will benefit from any precipitation received.

Region Four: North West (Barrhead, Edmonton, Leduc, Drayton Valley, Athabasca)

- Warm, dry weather has dried up field conditions to get seeding operations underway.
- Seeding at 1% completed versus 5 year average of 14% (less than 1 week behind).
- Surface soil moisture ratings improving. Excessive moisture rating declined to 30% from 41% last week. The portion of the region rated good or excellent rose to 70% from 59%.
- Hay and pasture crops showing signs of growth due to the warm weather.

Region Five: Peace River (Fairview, Falher, Grande Prairie, Valleyview)

- Dry windy weather enhanced soil drying allowing a small amount of seeding to get underway. Some fields remain too wet to access at this time as spr. temperatures have been cooler than in the rest of the province.
- 1% seeded compared to 5 year average of 12%.
- Excessive surface moisture ratings declined by 14 percentage points to 12%. The percentage of the region rated good or excellent rose to 85% from 71% last week.
- Hay and pastures have been slow to get started due to the cooler temperatures.

Agriculture Financial Services Corporation
Pricing Unit, Research & Product Development
Lacombe, Alberta
May 11, 2018

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Alberta Crop Report



Crop Conditions as of May 15, 2018

In the first half of May, temperatures have been the warmest since 1961 in most parts of the province, with most areas receiving less than 10 mm of moisture. This has provided the ideal weather for quick ground thaw and allowed for seeding operations to be in full swing across the province. Provincially, as of May 15, about 38 per cent of crops have been seeded (see Table 1), compared with the five-year average (2013-2017) of 60 per cent and the long term normal (2004-2017) of 68 per cent by this time. Producers are almost a week behind. Regionally, seeding progress is most advanced in the Southern Region at 54 per cent, followed by the North West Region with 36 per cent, Peace Region at 32 per cent and the North East and Central Regions, both at 30 per cent.

Soil moisture reserves are highly variable across the province (see map). Although a large percentage of wet areas have dried, making seeding possible, there is still standing water in some areas across the province. Provincially, surface soil moisture is rated (sub-surface soil moisture ratings shown in brackets) at three (four) per cent poor, 18 (17) per cent fair, 42 (44) per cent good, 31 (31) per cent excellent, and six (four) per cent excessive (see Table 2 for Regional rates).

Pasture and tame hay conditions improved from a week ago, due to warmer temperatures. However, the lack of moisture has caused a slow start to pasture and tame hay growth in some areas. Rain will soon be needed to improve pasture and tame hay conditions, as well as for the fall seeded crops. Pasture conditions (tame hay conditions are in brackets) across the province are reported as six (five) per cent poor, 30 (32) per cent fair, 57 (56) per cent good and seven (seven) per cent excellent. Some of the fall seeded crops have reported winter kill and will need to be re-seeded. Provincially, fall seeded crop conditions are rated as three per cent poor, 22 per cent fair, 66 per cent good and nine per cent excellent.

Table 1: Alberta Seeding Progress as of May 15, 2018

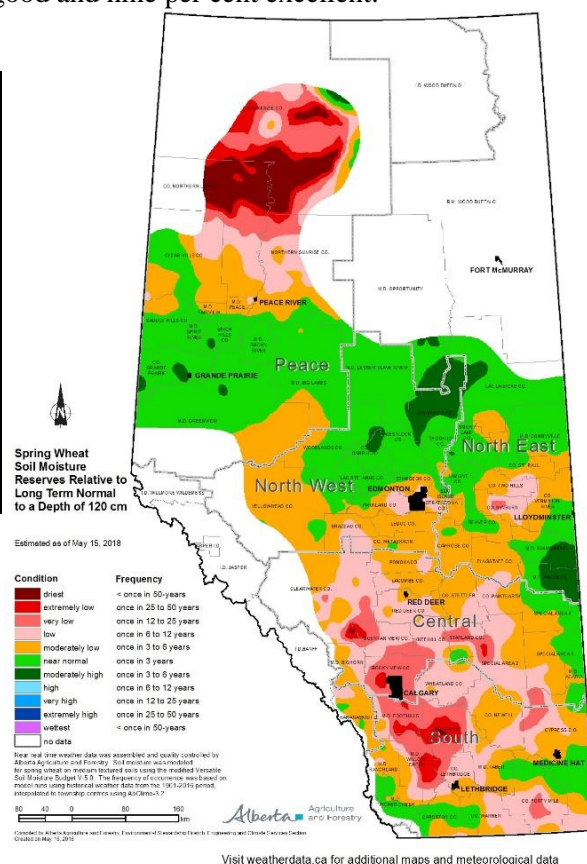
	% Seeded					
	South	Central	N East	N West	Peace	Average
Spring Wheat	53.7%	38.7%	39.8%	50.7%	37.2%	43.9%
Durum Wheat	52.8%	29.0%	---	---	---	49.5%
Barley	50.9%	22.9%	11.1%	17.5%	26.3%	29.0%
Oats	42.5%	11.0%	7.9%	16.4%	24.8%	16.3%
Canola	51.3%	20.6%	21.5%	27.5%	29.2%	28.8%
Dry Peas	67.5%	58.2%	82.7%	76.5%	34.7%	63.0%
Mustard	54.3%	19.4%	---	---	---	42.7%
Flax	30.0%	11.8%	0.0%	---	---	22.0%
Potatoes	75.0%	0.0%	---	10.0%	---	65.3%
Dry Beans	0.0%	---	---	---	---	0.0%
Lentils	60.0%	33.4%	---	---	---	55.8%
Corn	56.0%	36.3%	---	---	---	30.8%
Average	53.8%	29.6%	30.2%	35.5%	32.0%	37.7%
Last Week	24.8%	4.1%	1.6%	0.9%	0.9%	7.7%
5 Year Ave	75.8%	61.8%	49.5%	51.7%	49.3%	59.9%
Long-term Ave	78.7%	68.4%	60.9%	62.5%	57.8%	67.5%

Source: AF/AFSC Crop Reporting Survey
5-year average refers to 2013-2017; Long term average refers to 2004-2017

Table 2: Surface Soil Moisture Ratings as of May 15, 2018

	Poor	Fair	Good	Excellent	Excessive
South	6.2%	24.1%	48.1%	15.6%	6.0%
Central	5.3%	31.5%	54.4%	7.9%	0.9%
North East	1.5%	3.5%	30.2%	55.2%	9.5%
North West	---	8.2%	13.9%	64.4%	13.4%
Peace	---	19.2%	48.1%	29.1%	3.6%
Average	3.4%	18.3%	41.4%	30.7%	6.2%
Last Week	2.4%	10.1%	37.4%	36.5%	13.7%

Source: AF/AFSC Crop Reporting Survey



Our thanks to Alberta Agricultural Fieldmen, staff of AFSC and the Alberta Ag-Info Centre for their partnership and contribution to the Alberta Crop Reporting Program. The precipitation map is compiled by Alberta Agriculture and Forestry, Environmental Stewardship Branch, Technology and Innovation Section.

REGIONAL ASSESSMENTS:

The 2018 Alberta Crop Report Series continues to provide summaries for the following five regions:

Region One: Southern (Strathmore, Lethbridge, Medicine Hat, Foremost)

- Warm and mostly dry weather conditions over the past week have been favorable for seeding progress. While there are still some low fields with standing water, rain is still needed in some fields for even germination and spur pasture and hay growth. Overall, seeding is estimated at 54 per cent completed, up 34 per cent from a week ago, with about eight per cent of crops emerged.
- About 54 per cent of spring wheat, 53 per cent of durum, 51 per cent of barley, 51 per cent of canola, 68 per cent of dry peas, 56 per cent of corn, 89 per cent of sugar beets and 75 per cent of potatoes have now been seeded.
- Pasture and tame hay fields are in good condition, but more moisture is needed. Pasture conditions are rated as 13 per cent poor, 15 per cent fair, 64 per cent good and eight per cent excellent, with similar ratings reported for tame hay.
- Fall seeded crops conditions are reported as one per cent poor, 15 per cent fair, 68 per cent good, and 16 per cent excellent.

Region Two: Central (Rimbey, Airdrie, Coronation, Oyen)

- Seeding is progressing well in the Region, with 30 per cent now completed (up 26 per cent from last week), despite some rain shower activities which slowed down seeding progress.
- About 39 per cent of spring wheat, 29 per cent of durum wheat, 23 per cent of barley, 21 per cent of canola, 58 per cent of dry peas and 36 per cent of corn are reported as seeded. Also, three per cent of crops have emerged.
- Forages, pasture and hay fields are in good shape. Pasture conditions are now rated as 74 per cent good to excellent (compared to 57 per cent from a week ago) and 26 per cent poor to fair (compared with 43 per cent last week), with similar ratings reported for tame hay.
- Regionally, fall seeded crops are rated as three per cent poor, 18 per cent fair, 69 per cent good, and 10 per cent excellent.

Region Three: North East (Smoky Lake, Vermilion, Camrose, Provost)

- Warm and dry weather contributed to seeding progress at 30 per cent, up 28 per cent from a week ago. However, there are still parts of some fields with standing water. Surface and sub-surface soil moisture is rated at 10 and nine per cent excessive, respectively.
- Nearly 40 per cent of spring wheat, 11 per cent of barley, 22 per cent of canola and 83 per cent of dry peas are reported as seeded.
- Both pasture and tame hay conditions have improved from last week. Pasture conditions (tame hay conditions shown in brackets) are now rated as three (four) per cent poor, 50 (52) per cent fair, 43 (41) per cent good and four (three) per cent excellent.
- For fall seeded crops, conditions are reported as five per cent poor, 35 per cent fair and 60 per cent good.

Region Four: North West (Barrhead, Edmonton, Leduc, Drayton Valley, Athabasca)

- Favorable warm and dry weather over the past week has allowed for a seeding progress of 35 per cent, with now 36 per cent of seeding completed.
- About 51 per cent of spring wheat, 18 per cent of barley, 28 per cent of canola, 77 per cent of dry peas and 10 per cent of potatoes are reported as seeded.
- Although hay and pasture conditions have improved from a week ago, growth is still somewhat slow. Rainfall and warmer weather is needed to promote good growth. Pasture conditions (tame hay conditions shown in brackets) are rated as three (three) per cent poor, 53 (63) per cent fair and 44 (34) per cent good.

Region Five: Peace River (Fairview, Falher, Grande Prairie, Valleyview)

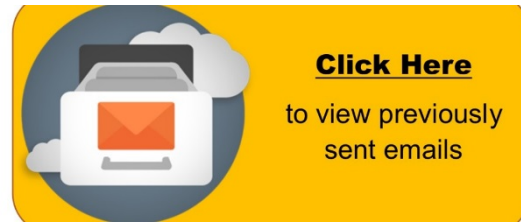
- While dry hot and windy days have facilitated seeding, the down side has been some diminished surface soil moisture reserves. Seeding for the Region is now 32 per cent completed, compared to one per cent from a week ago.
- Almost 37 per cent of spring wheat, 26 per cent of barley, 29 per cent of canola and 35 per cent of dry peas have now been seeded.
- Pasture and tame hay conditions are rated as 21 per cent fair, 67 per cent good and 12 per cent excellent.

Alberta Agriculture and Forestry
Economics and Competitiveness Branch
Statistics and Data Development Section
May 18, 2018

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The 2018 Alberta crop reporting series is available on the Internet at: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sdd4191](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sdd4191)



Alberta
Barley



better together.

Alberta Wheat and Barley Commissions say Minister Garneau's endorsement of key amendments to Bill C-49 shows commitment to farmers

(Calgary, Alberta) April 30, 2018 – The Alberta Wheat Commission (AWC) and Alberta Barley say that Federal Transport Minister Marc Garneau's move to endorse key amendments to Bill C-49 in the House of Commons, as recommended by the Commissions, is good news for farmers.

Now with spring seeding just days away, the Commissions urge the House of Commons to pass Bill C-49 with amendments as swiftly as possible. Once passed, the Commissions urge quick passage of the amended legislation in the Senate to pave the way for royal assent so that Canada's freight rail system has permanent solutions in place in advance of the new crop year.

Key amendments include improved access to longhaul interswitching, a measure that will increase shippers' competitive access to a second rail carrier. The legislation also includes reciprocal penalties, which both commissions pressed hard to see for several years.

"We see the news from Minister Garneau as an excellent show of support for the agriculture industry and for farmers," said Kevin Bender, AWC Chair. "The amendments to longhaul interswitching are an extremely important competitive mechanism and we firmly believe they should be included in the legislation."

Minister Garneau's Friday announcement that he tabled a motion in the House of Commons to make several amendments also signals the likeliness that Bill C-49 could be debated as early as

next week. The movement on Bill C-49 is especially welcomed news since many areas in Western Canada continue to experience significant delays in grain movement due to poor rail service. The Commissions also thank Agriculture and Agri-Food Minister Lawrence MacAulay for his support of the legislation.

“Along with support from Minister MacAulay, Minister Garneau’s commitment to the amendments we pressed for is promising news,” said Jason Lenz, Alberta Barley Chair. “With grain still backlogged across several regions in Western Canada, we strongly encourage the House to pass the amended legislation as quickly as possible so we can avoid similar circumstances this harvest. Bill C-49 as amended offers the mechanisms we need to see that happen.”

Once passed, historic Bill C-49 will in-fact pave the way for a more competitive, reliable and accountable rail transportation system in Canada.

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Subject: Farm Registration is now open for Alberta Open Farm Days

FORWARDED ON BEHALF OF COLIN GOSSELIN



Alberta Open Farm Days returns this August 18-19, and farms have until May 31 to [register](#) online. Last year's event broke records with 101 host farms; 20,000 visits; 22 farm-to-table culinary events; and over \$146,000 in on-farm sales. Farm recruitment was featured in a recent Western Producer article [here](#).

Open Farm Days contributes to building public trust in agriculture, growing the local food sector, and increasing ag-tourism by directly connecting consumers with producers right on the farm. Farms can choose which day (or both days) they wish to open their gates,

and are provided insurance specific for the event at no cost to them.

I would encourage you to promote this initiative through your organization's communication channels, directly recruit farms to represent your county or region, and consider supporting farms during the event as appropriate. Additional information is available by contacting openfarmdays@gov.ab.ca or 780-638-4302.

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Feed additive could be a methane game changer

Feed additive that can halve emissions while boosting feed efficiency is now undergoing a large-scale study

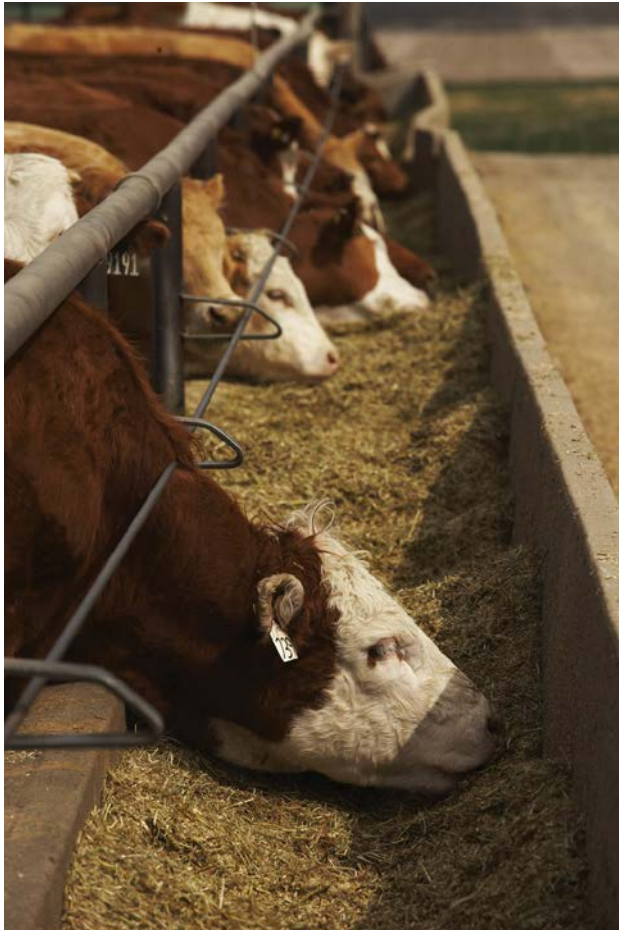


By **Alexis Kienlen**

Reporter

Published: April 30, 2018

Beef Cattle, Livestock



Two-thirds of greenhouse gases produced by Canadian agriculture comes from beef production, with methane produced by digestion accounting for a portion of that. *Photo: Canada Beef Inc.*

There's pressure on the beef industry to be more sustainable, and some of that pressure falls on scientists like Karen Beauchemin.

The Agriculture and Agri-Food Canada ruminant nutritionist and her team at the Lethbridge research station are looking for ways to reduce enteric methane — gas produced when digesting feed — from beef cattle.

One area of promise is an experimental compound that inhibits methane.



Karen Beauchemin.

photo: Supplied

“Essentially, it’s a feed additive when you feed it to cows,” said Beauchemin. “It blocks the biochemical formation of methane in the rumen and it reduces methane from about 30 to 50 per cent depending on the type of diet, the type of animals, and the dose.”

The compound, known as 3NOP (short for nitrooxypropanol), is not currently available for sale in Canada, but studies have found it reduces methane emission but not performance.

“Producers want to maintain the growth of their animals,” she said. “We’ve looked at the impact on animal performance — what effect it has on intake and growth. We found that there was no effect on animal gain, but animals were more efficient.”

Earlier studies have found cattle can achieve the same gain with three to five per cent less feed and Beauchemin’s team is now running a large-scale study at a commercial feedlot in Alberta. It is examining feed corn, barley and high-forage backgrounding diets with and without the compound.

“We’re looking at the effects on methane, animal performance, and carcass characteristics,” she said.

The feedlot study began in December and will run through the fall.

“It will take about a year, because we have to go through a lot of different cattle and a lot of different diets,” she said. “The study is being run with the approval of Health Canada since this is an experimental compound.”

It’s estimated agriculture generates about eight per cent of greenhouse gases in Canada, with two-thirds of that coming from livestock production, including manure and enteric methane.

“Enteric methane is the big one. That’s why we’re focused on that one,” she said.

However, beef cattle are unique, since they are maintained on a forage-based diet and consume a lot of high-fibre waste from the food industry.

“They don’t compete directly with grain that would be fed to humans or other livestock,” she said. “Beef cattle have an important role in keeping the land healthy. So the question we’ve been asking is, ‘Can we have beef cattle in Canada that produce less methane?’

“That’s very important. If you look at methane production from producing meat, methane is about half of the greenhouse gas emissions.”

Over the past 30 years, Canadian producers have done a lot to increase production efficiency, but there was also a 15 per cent reduction in the carbon footprint from beef production from 1981 to 2011.

“Anything a producer does to improve performance lowers the carbon footprint,” said Beauchemin. “We have better reproductive performance, better health, better weaning weight, and heavier carcass weights at slaughter.

“All of those management factors have reduced the carbon footprint of beef. Our carbon footprint of beef is one of the lowest globally. We’re already at a high standard, but there’s always room for improvement.”

A The research group has looked at other feed additives, but has learned that sometimes reducing the methane emissions of cattle isn’t sustainable over a long period. In a recent experiment, they found feeding wheat to cattle instead of corn or barley greatly reduces emissions, but micro-organisms in the animal’s rumen quickly adapt.

“You can have a short-term reduction of three to five weeks, but when you look at it in eight to 12 weeks, in many of those animals, the methane will rebound.”

One of the challenges with reducing methane is finding a method that lasts for a long time.

“We’ve also found that if you add fat to a diet, any source of fat will reduce methane emission and that is reduced over a long period of time,” she said.

This article was first published at AGCanada.com.

FORWARDED ON BEHALF OF DALE CHRAPKO

Synopsis

Province wide, winter snows lingered well into the third week in April, under the presence of unusually cold air that dominated the skies over the past several weeks (**see map 1**). April 20th marked an abrupt end to the cold spell, with overnight lows finally remaining above the freezing mark. On April 28th, day time temperatures had soared into the high 20's, laying the land largely snow free. Since then, above average temperatures and persistent winds have prevailed, helping to dry the land quickly and warm up the soils, ahead of seeding.

While the snowpack melted a few weeks later than usual, over winter precipitation accumulations were not considered to be excessive, with most of the province seeing near to below normal accumulations since late October (**see map 2**). Some exceptions include parts of southern Alberta, and portions of the Peace Region, where accumulations were above normal in some areas.

For southern Alberta, the lingering snows were very unusual. But this was a result of cooler than normal temperatures that arrived in late January and persisted until mid-April (see map 3). In contrast, most years will experience periodic warm episodes during the winter, with melt episodes significantly reducing the spring snowpack's, ahead of the final melt. This simply did not happen this year and a sudden rise in temperatures in late April resulted in a rapid melt, leading to overland flooding in many locals.

In the wake of retreating snows, soil moisture reserves are variable across the province, ranging from very low in pockets between Calgary and Lethbridge and also through parts of the Northern Peace Region and up to high, across parts of the North East, North West and Southern Peace regions (see map 4). Where reserves are well below normal, rain will be needed soon to encourage vigorous pasture growth, following a delayed start to this year's grazing season.

Perspective

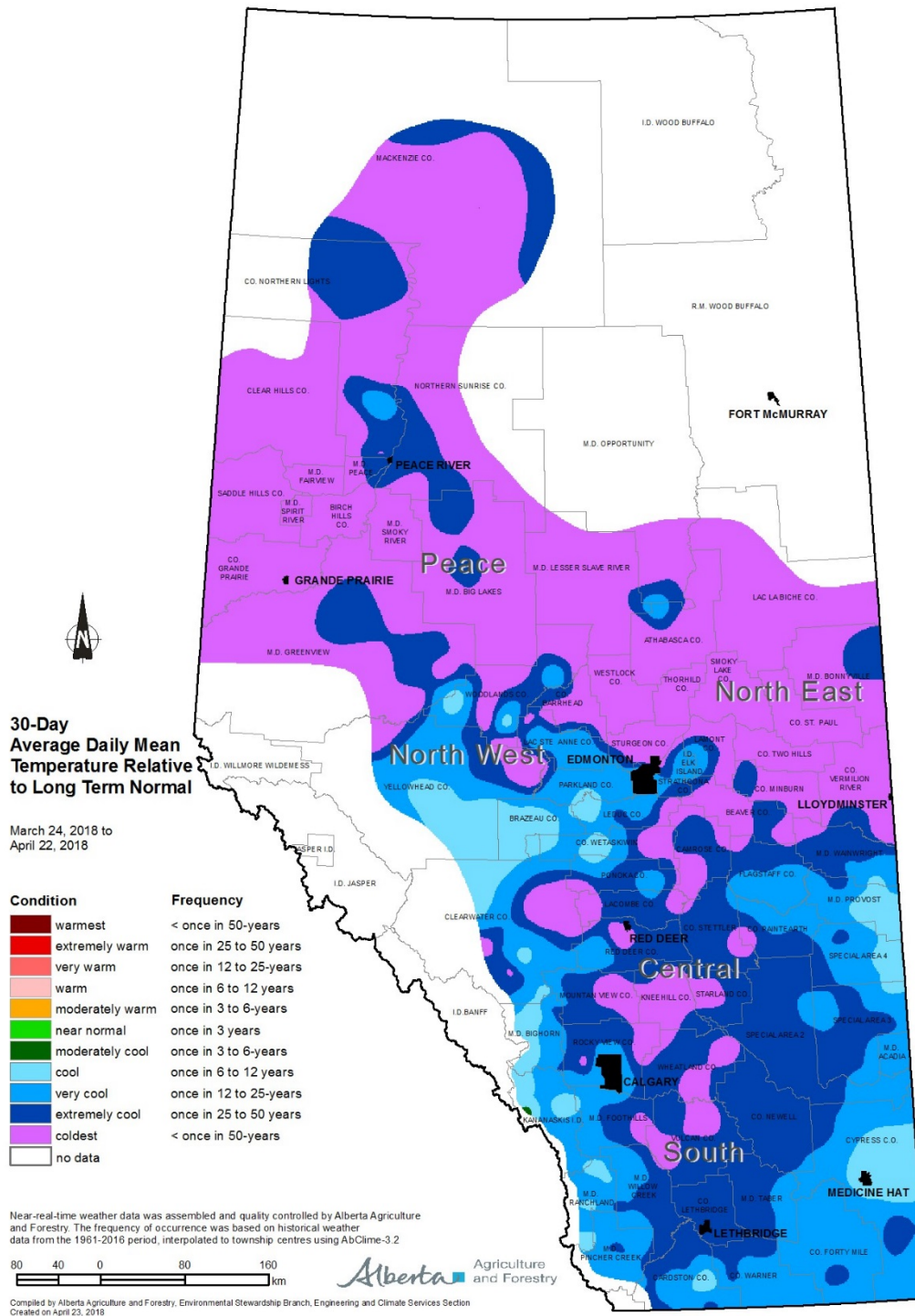
Looking back as far as 1961, on several occasions, much of the north-half of the province has experienced snow packs that persisted well into the third week in April. And in fact, during the 60's and 70's many areas saw eight out of 20 years with snow packs lingering into the last week of April. For most, 1974 was the highest snow fall year, with up to 3 times more snow accumulating over winter as compared to 2018 levels. Interestingly enough in these years, just like 2018, snows retreated rapidly on or about the 20th of April.

Ralph Wright

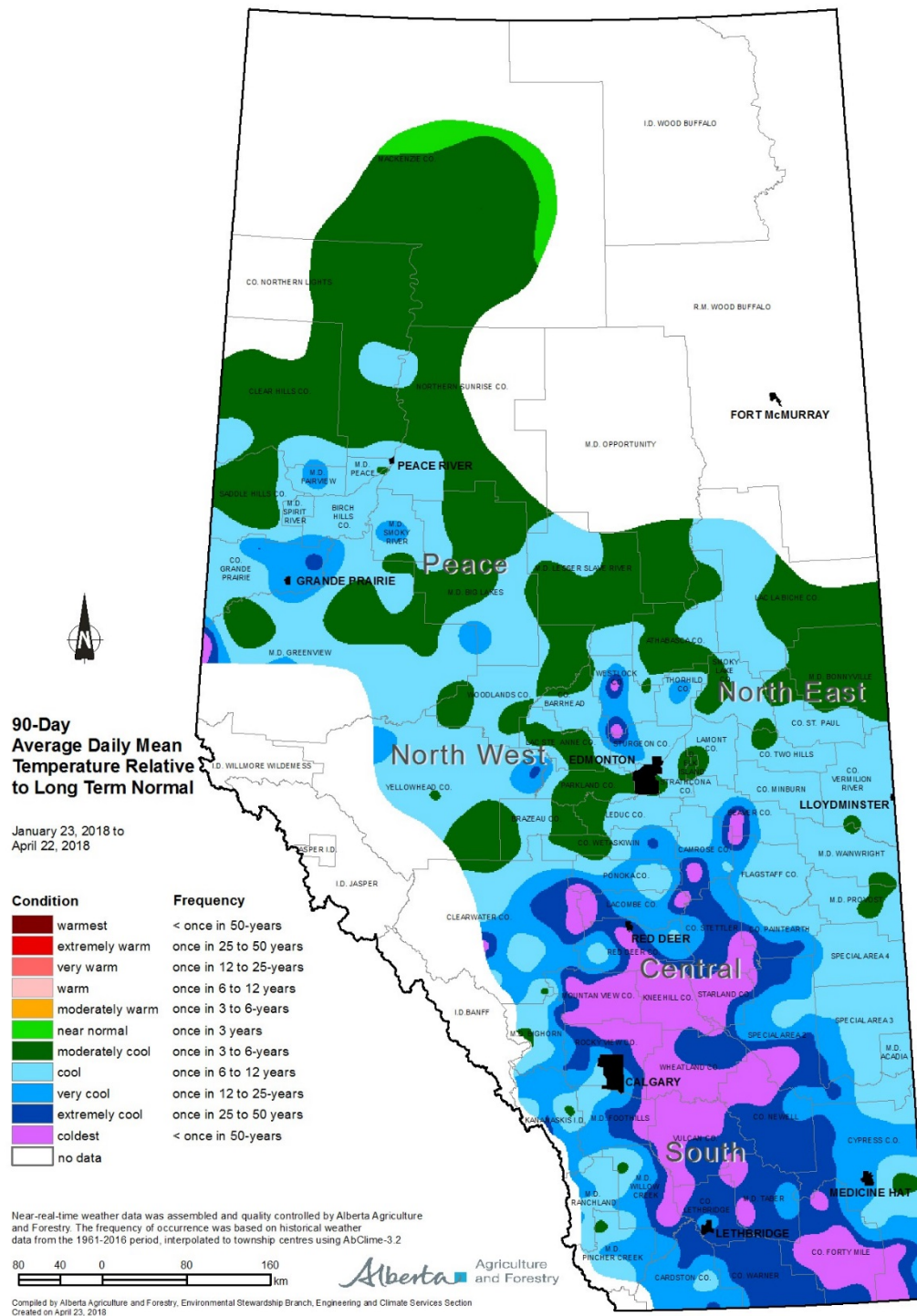
Manager, Agro-meteorological Applications and Modelling Section

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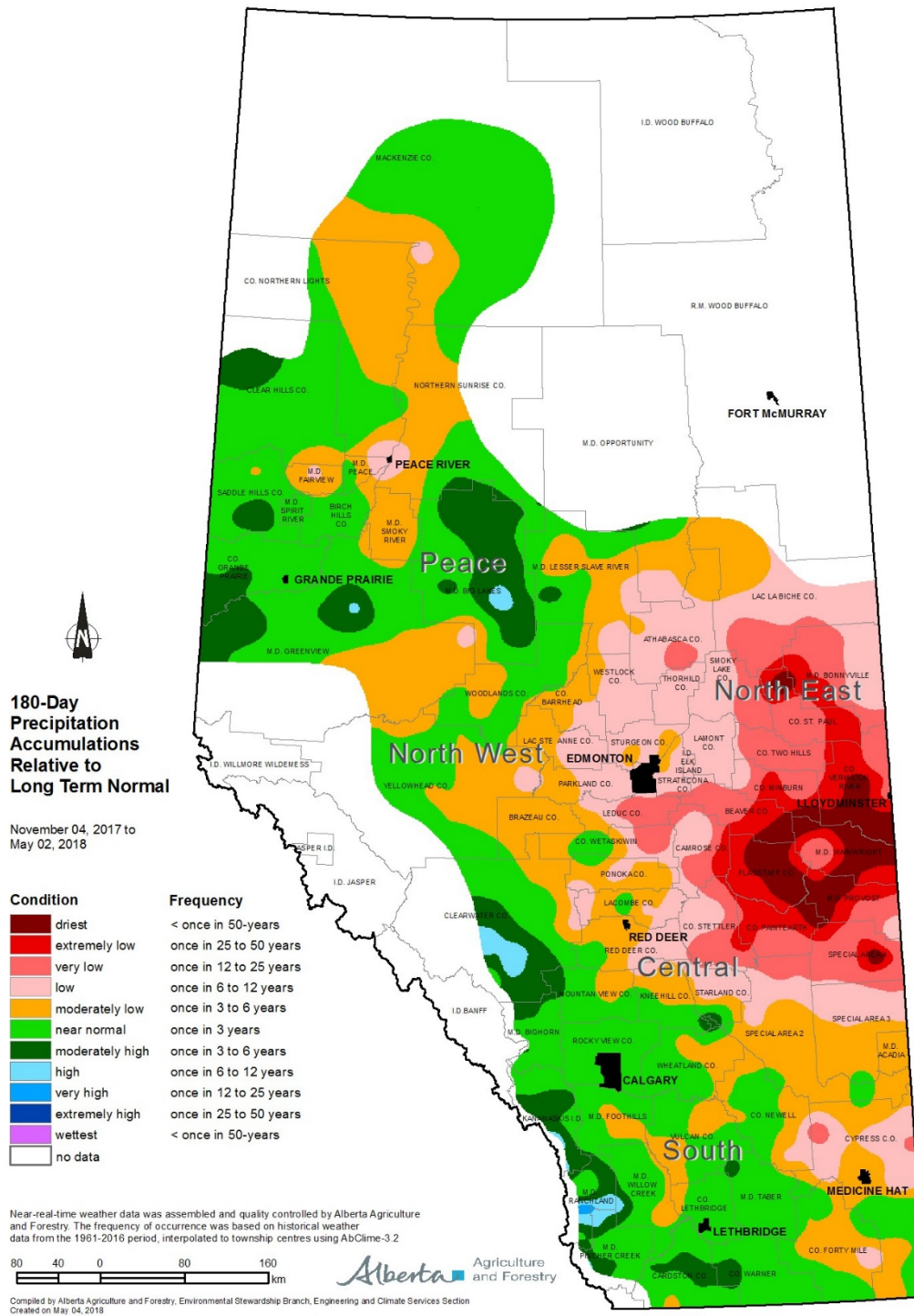
Phone: 780-446-6831



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Spring Wheat Soil Moisture Reserves Relative to Long Term Normal to a Depth of 120 cm

Estimated as of May 02, 2018

Condition	Frequency
driest	< once in 50-years
extremely low	once in 25 to 50 years
very low	once in 12 to 25 years
low	once in 6 to 12 years
moderately low	once in 3 to 6 years
near normal	once in 3 years
moderately high	once in 3 to 6 years
high	once in 6 to 12 years
very high	once in 12 to 25 years
extremely high	once in 25 to 50 years
wettest	< once in 50-years
no data	

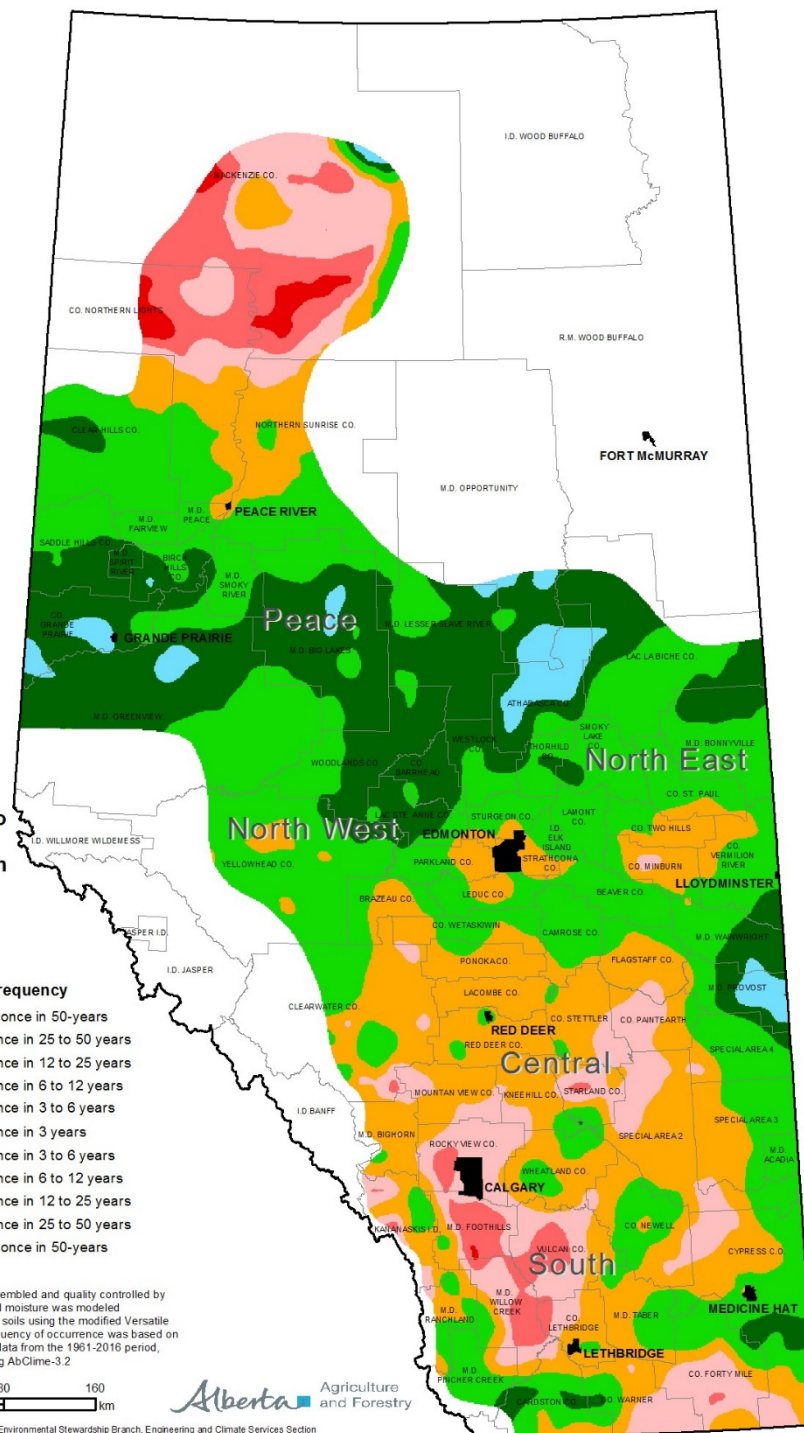
Near-real-time weather data was assembled and quality controlled by Alberta Agriculture and Forestry. Soil moisture was modeled for spring wheat on medium textured soils using the modified Versatile Soil Moisture Budget V-4.0. The frequency of occurrence was based on model runs using historical weather data from the 1961-2016 period, interpolated to township centres using AbClime-3.2



Compiled by Alberta Agriculture and Forestry, Environmental Stewardship Branch, Engineering and Climate Services Section
Created on May 04, 2018

Alberta Agriculture and Forestry

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Harsh weather takes toll on calves

By Barb Glen

Published: April 19, 2018



A calf on the Cervo ranch near Fort Macleod, Alta., finds one of the few snowless spots in the calving pasture in which to take a nap. | Barb Glen photo

Some dry spots finally free of snow were just beginning to appear in David Cervo's calving pasture.

Then came another 10 centimetres of overnight snow.

That's how it's been during calving season in southern Alberta and across much of the Prairies, resulting in higher calf losses, shortages of hay and straw, and increased stress on cow-calf producers intent on keeping newborn calves alive.

Cervo and his brother, Dennis, calve about 430 cows on their ranch near Fort Macleod. They time the calving season to begin in early April when conditions are usually mild.

But this year is anything but mild, with frequent snowfall and both daytime and nighttime temperatures well below average.

“Normally we have 300 (calves) on the ground by now that haven’t seen snow. This year we’ve got 150 that have seen snow. And I see it’s snowing again,” sighed Cervo April 12.

Their calving area along the Oldman River is usually bare and dry at this time of year, providing shelter to the cows and their newborns. This year, drifts are still caught among the trees and dry ground is almost nonexistent.

Though Cervo said calf losses have been about average, that isn’t the case for many other producers in the region.

Judy Nelson, who ranches near Maycroft, Alta., with her husband, Einar, son, Logan, and daughter-in-law, Emily, describes this calving season as “a nightmare.”

Calf losses are well above average because of snow, cold and wind chill.

“We intentionally calve in April so that we can calve on open range, so we’re not set up with any infrastructure for, particularly, the cold,” said Nelson.

“It was so cold for the first 10 days of calving.”

Even with frequent checks day and night, some newborns succumb to the cold before they are found. Nelson spoke of one calf, found at 3 a.m. that seemed fine.

“He was frozen by six in the morning.”

Nearly every calf has had to be brought into the warming shed, which is built to hold four but sometimes had to accommodate eight at a time.

“Every calf you bring in, you have to take back out and mother up, and when you have eight in there, they mix their scents up and it just makes for so much extra work.”

The Nelsons’ calving area on a south-facing slope, usually an ideal place for the 450 cows and their calves, remained covered in snow as of April 11. Cold east winds have been the norm instead of the mild western chinooks for which the region is known.

Snow and cold brings the need for more feed and bedding, and both are in short supply.

“We had to start buying feed in January, because we just never got any of those chinooks from November on, and we’ve been sourcing it from all over,” said Nelson.

“We’ve spent about twice what we usually do on feed already this year.”

Straw is difficult to find and expensive when it is found, she added.

Bob Balog of Balog Auction Services in Lethbridge said hay is selling for \$230 to \$240 per ton and straw for \$130 to \$140. The feed shortage has already brought more cattle to market than might otherwise be the case.

Balog talks to cow-calf producers every day and they’ve told him this calving season has been hard.

“I believe that this will be the toughest calving season that Western Canada has ever experienced, for a couple of reasons,” said Balog.

“Number one, because it’s extremely widespread. It’s not just one little pocket in a 100-mile radius where they’re losing calves. They’re losing calves in St. Walburg. They’re losing calves in Saskatoon. They’re losing calves in Mannville. They’re losing calves in Milk River. They’re losing calves in Pincher Creek. It’s a big, big, big area.”

Though snowstorms are common in April, multiple nights of -20 C or colder are not, and they’ve wreaked havoc on calves.

“On those cold days, if you weren’t to the cow within 10 to 12 minutes, your calf was frozen,” said Balog. “The death losses are big. I’m scared to predict.

“A lot of people weren’t ready with feed. A lot of people don’t have the facilities to calve in this tough of weather. The cold has lingered on. There’s no dry spots. It’s just made people really, really work hard.”

Calves are coming thick and fast on Charlie Christie’s ranch near Trochu. The chair of Alberta Beef Producers is calving out 390 head and they started giving birth at the end of March.

The cold in that region has taken its toll as well, he said.

“Usually we start calving towards the end of the thaw. We don’t have this cold weather or this much snow left. Usually the nights are -5 C or -10 C maybe, and the days are plus 5 C, plus 10 C. Instead this year, our days were -5 C or -10 C and our nights were -25 C to -30 C.”

Christie credits his calving crew for keeping losses to a minimum but even so, they’ve been higher than average. And most calves have to be brought in, dried off and warmed after birth, so the labour and animal handling has been intense.

“This year, every calf went through the barn to get them out of the cold and the wind and get them started, and then the poor guys, we had to kick them out and bring another guy in, so they never got to stay very long,” said Christie.

His herd has gone through more feed as a result of the cold, and he has also noted the shortage of straw as many producers sought bedding to combat the extra snow and wet conditions.

Those same conditions are keeping cow herds closer together and usually closer to home, which increases the risk of illnesses like scours and pneumonia.

Balog said this difficult calving season is taking an emotional as well as financial toll on producers and the persistent bad weather isn’t helping.

“When you try so hard and when you lose so many calves, it just takes the fight out of you, the soul out of you,” he said. “When these guys go out and they find five dead calves in the morning and they’re trying so hard, it just takes so much out of them. Mother Nature is still the boss.”

The one silver lining is that the snow has vastly improved the moisture situation in an area that suffered drought last year.

“It’s too bad we’ve got to pay for it in sweat and tears,” said Christie, “but you’ve got to have grass to feed these guys too and we were in no shape to grow grass.”

Added Nelson: “It will be a few years to pay for this winter, but we’ll hope for good prices. And we’ll hope for good moisture. That will help a lot if we have good grass, when it comes. And it has good potential.”

In a bug-eat-bug world, farmers should help out their insect friends

Beneficial insects are tiny killing machines that can significantly reduce crop pests, says entomologist



By **Alexis Kienlen**

Reporter

Published: April 18, 2018

Crops



All of these bugs are your friends. Clockwise from upper left are a lacewing on a canola flower, hoverflies on a flower, a ground beetle, and the alligator-like larvae of an Asian lady. *Photo: Courtesy John Gavloski*

Beneficial insects can be an unpaid workforce on your farm by killing pest species.

And if you don't help out the good ones, then you're favouring those you don't want, says an entomologist with Manitoba's Agriculture Department.



John Gavloski.

photo: File/Allan Dawson

“Nature does not like a void,” said John Gavloski. “If you had no insects in a field or in an area, it will fill up with insects. And if you don’t have a good mix, it’s easy for us to get into a situation where pests become problems.”

‘Beneficials’ include pollinators, insects that prey on other insects, parasitoids, and ones that eat weed seeds. Others compost stubble or animal dung, or improve the soil.

Having these bugs in abundance can have a major impact on the pest insects in crops, said Gavloski, who gave a rundown of several types of beneficials during a recent Alberta Agriculture webinar.

- **Read more: [Website identifies your insect friends](#)**

Minute pirate bugs — just two to five millimetres long — are a “valuable seasonal predator” that feed on aphids and insect eggs. Sleek and thin damsel bugs are quick and ferocious predators.

“When they do find a diamondback moth caterpillar or an aphid, they put their beak in and inject their saliva into their potential food and then they suck the juice out,” said Gavloski. Damsel bugs can be especially beneficial because they sometimes kill more prey than they consume. They generally like small caterpillars, but also kill flea beetles and lygus bugs.

Lacewings are green insects that get their name from their large lacy wings while their larvae look like little brown alligators that quickly move through crops looking for aphids and caterpillars.

“Anything that moves, including their siblings, they will feed on,” said Gavloski. “They’re not too picky.”

There are more than 390 species of beetles in Alberta with ground beetles being especially good predators.

“They’re a very diverse group,” he said. “They will feed on any invertebrate they can overpower.”

These bugs often get overlooked because they are nocturnal, feeding at night and hiding during the day. Beetle larvae are predators too, with a taste for cutworms, root maggots and diamondback moth larvae.

“There are a few species that will climb plants and some of the ones that feed on the ground will consume wheat midge larva during their overwintering stage,” said Gavloski.

- **Read more: [Want to keep pollinators and beneficial species on your land? Build an eco-buffer](#)**

Rove beetles are a large family of bugs living in the soil — Alberta is home to about 265 species, which feed on flies, maggots, pupa, and insect eggs. The small brown beetles have two brown pads in the middle of their body that are actually their wings.

“They’re known to be good predators of root maggots — both the flies and the larva,” he said.

There are about 160 species of lady beetles, also known as ladybugs, in the province and they have a fondness for aphids.

Flies can also be beneficials and are distinguished by their one set of wings (most other insects have four wings).

Hoverflies mimic bees and wasps and, as their name suggests, move around like little helicopters. The adults lay eggs in aphid colonies and when the larvae hatch, they eat aphids and constantly consume prey.

Tachinid flies are parasitoids, laying their eggs on bertha army worms. The worms die when the flies bust through their skin. The same technique is used by many wasps — which are often tiny and never sting humans. They lay eggs right into caterpillars and the larva eat them from inside and eventually kill them.

Helping your insect friends

Collectively, beneficials can have a significant impact on reducing crop pests — and there are several things farmers can do to help them out.

“Flowering plants around the edge of the field can help parasitoids live longer, lay more eggs, and kill more things,” said Gavloski.

And since insecticides can kill good bugs and bad ones alike, producers should be judicious when it comes to spraying. Only use insecticides when pest insect populations are above economic thresholds, he said.

“You can inadvertently do more harm than good when spraying insecticides when they are not needed.”

Tank mixing insecticides isn’t always a good idea and can also do more harm than good. It’s a good idea to use selective insecticides that target certain pests such as aphids and don’t kill beneficials, he added.

“Sometimes you only need to spray patches of a field, or an edge. Sometimes that will save a reservoir of natural enemies,” said Gavloski.

He also recommends rotating crops and leaving natural habitat for the beneficials. Spraying as late in the day as possible will help avoid excess pollinator damage.

Key source of clubroot resistance goes AWOL

‘Grandparent’ can defeat new mutated clubroot strains but somehow it doesn’t get passed down



By **Jennifer Blair**

Reporter

Published: April 27, 2018

Canola, Crops



In this video from the Canola Council of Canada, Angela Barnes, the council's agronomist for southern Alberta, holds what appears — from the ground up — to be a fairly healthy canola plant. But the roots of the same plant (inset photo) show it is heavily infected with clubroot galls. This hidden spread of clubroot illustrates why a breakdown in resistance may not be immediately obvious in a canola field. *Photo:*

VIDEO: www.canolawatch.org

The ‘grandparent’ of clubroot resistance in most Canadian canola varieties is resistant to new virulent strains of clubroot — but its offspring aren’t.

“It’s possible that, in the course of breeding, some of the resistant genes were lost,” said provincial research scientist Rudolph Fredua-Agyeman.

European clubroot differential (ECD) 04 is a key source of clubroot resistance for canola-breeding programs around the world, including in Canada, Fredua-Agyeman said at Alberta Canola’s Science-O-Rama last month.

Because of its resistance to all the clubroot strains found in Canada so far, ECD 04 has been bred into most clubroot-resistant canola varieties, including Mendel — a European winter canola cultivar that has also been used as a source of resistance for Canadian varieties.

- **Read more: [Building a stronger wall to keep out clubroot](#)**

“When clubroot was found in Alberta, the natural source of resistance was ECD 04 and Mendel, which were resistant to most of the strains of clubroot that we had at the time,” said Fredua-Agyeman.

But in 2013, clubroot strains started to shift to overcome the resistance, and new, more virulent strains of the disease began to appear in Alberta canola fields. As of 2017, these new strains have been confirmed in at least 104 fields in Alberta — a conservative estimate, as researchers only test fields that have been brought to their attention. Most notable of these strains is 5x, which can cause disease severity of up to 90 per cent.

“We’ve found that these strains are causing much more severe disease on canola than the other strains,” said Fredua-Agyeman, adding at least nine other strains have also been identified.

“The challenge posed to the canola industry by these new strains is real and very aggressive.”

The good news is that ECD 04 still shows complete resistance to these new strains, including 5x. Unfortunately, Mendel — and the commercial varieties that were spawned from it — are not.

“We went from ECD 04 — complete resistance — to Mendel, where we’re getting resistance to only 50 per cent of the new strains, and then to the commercial varieties, none of which are resistant to these new strains,” he said. “Not all the resistant genes were passed on from ECD 04 to Mendel, and from Mendel to the commercial varieties.”

“The loss of this gene has contributed significantly to the breakdown of resistance.”

Integrated approach needed

Until new resistant varieties can be developed and new resistant sources found, canola growers will need to take a more “integrated” approach to clubroot management.

“Our resistance is very good, but it’s not a magic bullet,” said Stephen Strelkov, a plant pathologist and professor at the University of Alberta.

“Resistance is vulnerable, and we need proper resistance stewardship.”

When clubroot was first discovered in Alberta in 2003, producers were interested in finding a variety of tools to manage the disease. But when the first clubroot-resistant canola variety came online in 2009, farmers began to rely heavily on resistance instead of integrated disease management (which includes equipment sanitation and extended rotations).

“Clubroot resistance was such a strong tool that the extension messaging probably fell on deaf ears a little bit, and farmers grew resistant varieties in very short rotations,” said Strelkov, who also spoke at Science-O-Rama.

“People thought, ‘We have resistant varieties that do so well now — why should we worry about it?’”

But that reliance on resistant varieties has caused resistance to break down in record time. It only takes about two crops of a resistant variety for the pathogen to start to shift to overcome the resistance, and if those two crops are seeded back to back, it takes less than three years for the resistance to break down — not nearly enough time to find new sources of resistance or breed new resistant varieties.

“Resistance is the most widely used management strategy — nothing really compares to genetic resistance,” said Strelkov. “But these new strains highlight that our crop is still at risk from clubroot.”

Researchers are exploring other tools for clubroot management — including soil fumigants, liming, and bait crops — but until producers have more tools to add to their tool box, they need

to take care of the ones they already have. That means using resistant varieties, rotating sources of resistance, sanitizing equipment, and (yes) extending rotations to four years.

If they don't, they risk finding themselves in the same boat if and when new sources of resistance are found.

"It's not a stable situation. The pathogen is changing and evolving," said Strelkov.

"We'll need a more integrated way of thinking to sustainably manage clubroot. Resistance will need to be used in conjunction with other tools."

The 'Holy Grail' in cereal technology

Can wheat and barley really be taught to act like pulses, and produce their own fertilizer?

By [Ron Friesen](#)

Published: April 25, 2018

Cereals, Crops

1 Comment



If you could convince wheat or barley to form nodules like these, you might be able to skip your annual nitrogen purchase. *Photo: Terraprima/Creative Commons*

A new research project funded by the Alberta Wheat Commission and the Saskatchewan Wheat Development Commission will try to answer a question that has bedevilled plant scientists for years: can cereal crops be made to fix their own nitrogen the way legumes do?

The AWC is spending \$100,000 to have Agriculture and Agri-Food Canada scientists at Lethbridge, Alta., isolate triticale cells that fix atmospheric nitrogen and then regenerate entire nitrogen-fixing plants from those cells.

The ultimate goal is to produce nitrogen-fixing wheat, said Alicja Ziemienowicz, one of the AAFC researchers.

“Once we obtain nitrogen-fixing triticale, we will transfer this trait into wheat, using inter-species breeding techniques,” Ziemienowicz said in an email.

If successful, the project could have a significant dual benefit. It would be a money saver for farmers who currently spend up to 20 per cent of their cereal production costs on synthetic nitrogen fertilizer. (That’s not counting expenses for fuel, machinery and labour for applying it.) Also, reducing nitrogen fertilizer use would benefit the environment by reducing emissions of nitrous oxide (N₂O), a greenhouse gas connected to global warming.

“Generation of nitrogen-fixing cereal crops will contribute to increasing farmers’ income and agricultural sustainability,” Ziemienowicz said.

Can cereals act like pulses?

At first glance, the idea of getting cereal plants to partner with bacteria to create usable nitrogen seems a contradiction in terms, like turning a sheep into a goat or putting photosynthesis into a cow.

But Ziemienowicz said the technology is partially available now and she believes additional technologies can be developed to produce plants with this new trait.

There are three biotech approaches for achieving biological nitrogen fixation (BNF) in cereals. All require genetic engineering of bacteria, plants or both:

- Convincing rhizobia (nitrogen-fixing bacteria in the soil) to interact with cereals the way they do with legumes.
- Improving bacteria living inside cereal plants (endophytes) or in the vicinity of plant roots (rhizosphere) to form associations with cereals.
- Transferring bacterial nitrogen fixation (nif) genes directly into the plant.

Ziemienowicz acknowledges the numerous scientific challenges in generating a nitrogen-fixing cereal.

“The first one is to deliver and successfully express in plants at least 16 bacterial nif genes; usually we deliver just one to two genes,” she said. “Second, to make nitrogenase (the enzyme which converts atmospheric nitrogen into ammonia) active in plants.

“Third, cereals are not as easy to transform as (some other) plants, especially if we want to deliver nif genes to the place where nitrogenase will be active. Fourth, most gene-delivery procedures require regeneration of plants from cells or tissues. These procedures have been developed for many cereal crops but they don’t work equally well in all species.”

For that reason, researchers are working with triticale because these procedures “work better in triticale than in wheat,” Ziemienowicz said.

The GMO problem

Even if Ziemienowicz’s team manages to overcome all these barriers, there’s another challenge to nitrogen-fixing cereals involving, not science, but politics.

To achieve N-fixing cereals, scientists must use transgenesis (introducing a new gene into an organism to exhibit a new property). Transgenic wheat is currently not grown in Canada (witness Roundup Ready wheat) because of widespread opposition by customers. But Ziemienowicz hopes that may change by the time an N-fixing cereal gets generated and commercialized.

Nitrogen-fixing cereal crops have been a Holy Grail for plant scientists ever since the discovery in 1917 of the symbiosis (interaction) between nitrogen-fixing bacteria and legumes. The idea of weaning cereals off nitrogen fertilizer has intrigued researchers ever since, although progress in that direction has been limited.

Kevin Vessey, a professor of plant biology at St. Mary’s University in Halifax, did some research on N-fixation several years ago when he was at the University of Manitoba. He says scientists have learned a lot about nitrogen fixation in the last 50 years. The actual advances toward nitrogen-fixing cereals? Not so much.

“I’m not sure we’re any closer to achieving nitrogen fixation in cereals,” Vessey said. “But, like I say, never say never.”

There is, of course, a way for farmers to take advantage of nitrogen fixation right now through crop rotation. That involves planting cereal crops after alfalfa or other legumes to utilize residual soil nitrogen. This is a technology that has existed for centuries. Even the ancient Romans, without understanding what nitrogen fixation was, found that planting a cereal crop after fababeans helped the cereal grow better.

GM not a magic solution

The main reason for the slow progress in breeding nitrogen-fixing cereals is that the process is a lot more complicated than originally thought, said Vessey. When molecular biology was coming of age in the 1970s, people thought all they had to do was take genes from bacteria that fix nitrogen, put them in the plant, have them expressed in the plant and, presto... nitrogen-fixing wheat.

Turns out it's not that simple.

“Back in the '70s and '80s, we thought all we'd have to do was a little genetic engineering and everything would work. Well, it doesn't,” Vessey said.



Wheat is so far a stubborn candidate for incorporating N-fixing bacteria, but Agriculture and Agri-Food scientists at Lethbridge think triticale may be a more willing first step.

photo: Mazen Aljarrah

Vessey did have some initially promising results back in 2001. He and his colleagues at the University of Manitoba looked at the potential of a nitrogen-fixing bacterium called *Gluconacetobacter diazotrophicus*, discovered in sugar cane by Brazilian scientists in 1988. It was hoped that some strain of wheat might be able to adapt to that bacterium because sugar cane and wheat are both grass plants.

Vessey's team used bacteria from sugar cane, including *Gluconacetobacter*. They learned a lot about how the bacterium worked. Ultimately, however, efforts to get it to work in wheat were largely unsuccessful.

Studies show that *Azospirillum*, another free-living nitrogen-fixing bacterium also found in many plants, can have some effect in wheat. Identified in the 1970s and widely used in South America as a seed treatment, *Azospirillum* can produce a yield increase of 9.5 per cent in summer cereals and up to 14 per cent in winter cereals.

A U.K. company, Azotic Technologies, is marketing the use of these so-called "associative N₂ fixers" in a variety of crops, including cereals.

But although these bacteria have been shown to fix some amount of N₂ in cereals, it's nothing compared to the levels seen in legumes, said Vessey.

"So we do have nitrogen-fixing wheat but the benefits are small," he said. "It makes some difference. It just doesn't go the whole way."

So what happens now?

Although progress is slow and success so far is limited, Vessey said research will definitely continue because the potential payoffs are major. Scientists will continue to look for different strains of associative fixing bacteria to find one that works efficiently on a range of plants.

"I can guarantee people will continue — and it's happening today — to look for these plant growth-promoting rhizobacteria," Vessey said.