2016
Annual Report

WEST-CENTRAL FORAGE ASSOCIATION

West-central forage association

"Agriculture is our wisest pursuit, because it will in the end contribute most to real wealth, good morals and happiness"

-Thomas Jefferson

West-Central Forage Association

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West-Central Forage Association (WCFA) is a non-profit agricultural organization based out of Evansburg, Alberta. Since 1978, WCFA has served the needs of forage and livestock producers in the region by demonstrating new agricultural technology and production practices through extension activities, applied research, and knowledge sharing

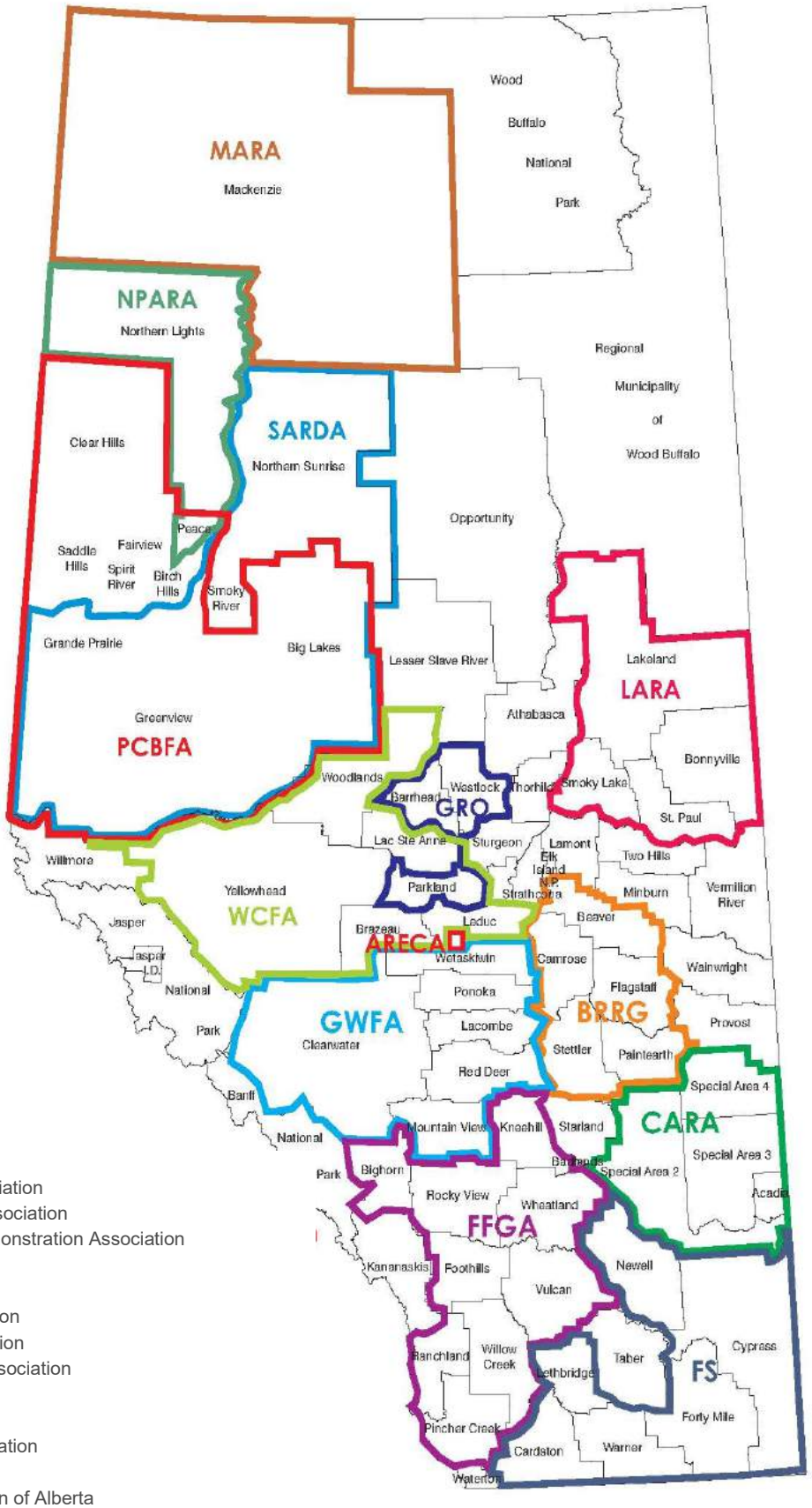
Vision Statement

Expand our capacity to connect and develop our community through information exchange.

Mission Statement

West-Central Forage Association enhances forage system knowledge to enable the achievement of integrated farm management goals.

2016



MARA - Mackenzie Applied Research Association
NPARA - North Peace Applied Research Association
SARDA - Smoky Applied Research and Demonstration Association
GRO - Gateway Research Organization
BRRG - Battle River Research Group
CARA - Chinook Applied Research Association
LARA - Lakeland Applied Research Association
PCBFA - Peace County Beef and Forage Association
WCFA - West Central Forage Association
GWFA - Gray Wooded Forage Association
FFGA - Foothills Forage and Grazing Association
FS - Farming Smarter
ARECA - Agriculture Research and Extension of Alberta

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PRESIDENT'S MESSAGE

Each year, as the annual meeting approaches, the president has the responsibility of summing up the previous year's activity, challenges and progress of your organization in a few concise, clever and, I hope, inspiring paragraphs.

Many of our members will have already met our new General Manager, Melissa Freeman, and Jessica Watson, our Conservation Ag and Extension Co-ordinator. Fito Zamudio Baca continues to drive Forage and Livestock programming forward, while Tammy Zinyk, our bookkeeper, provides the constant financial barometer needed for West Central to serve its growing membership. The energy and enthusiasm of these four individuals has helped make this an organization all our membership may be proud to be a part of.

This past year has seen your association offer a wide range of extension and research opportunities. Winter feeding, to cattle handling, corn to feed and soil sampling, field days and workshops were well attended. This summer's High Legume Pasture Tour, held in co-operation with Alberta Agriculture and Forestry, was a highlight, drawing a bus load of curious producers from through out the area. West Central continues to look at opportunities to partner with local municipal governments as well as other non-governmental organizations to bring information and programming to our farming communities. We, as producers/ members need to remember to support our own organization, by attending extension activities, accessing Association services and making sure, when we are able, that our elected bodies, local, provincial and possibly federally, are made aware of the importance of producer driven research and extension, to the agricultural community.

Every year brings changes to your Board of Directors. Last year we welcomed Larry Kidd to the board, where his insight, experience and good humour added to many of our discussions. After serving with the board for six years, Ted Commanduer is stepping down. His service to the association over this time and many previous years as well, is very much appreciated.

I would like to close by offering a heart-felt thank you to this past year's Board of Directors, for their effort and dedication to this organization, and their patience with me. Each brings a unique quality and set of often untapped skills to the board. I never fail to come away from each meeting, whether filled with witty banter or sombre deliberation, knowing that West Central Forage Association will continue to be a positive, progressive force in our farming communities.

Respectfully;

Frank D. Maddock,
President WCFA

MANAGER'S MESSAGE

I have been with WCFA since May of 2016 and it was a definitely a learning and training year for the organization with Jessica, Conservation Ag & Extension Program Manger, joining us in July of 2016 as well.

2016's focus was reaching producers and bringing awareness of West Central Forage Association to the west central regional. We participated in County agricultural pancake breakfasts, member's bull sales, 6 partnering ASB presentations and meetings. We wanted to uphold our positive reputation and really network with our producers.

WCFA continues to partner with the regional counties. In February 2017 WCFA/ SACA conducted a regional mail out (3600 farms) of our newsletter "Forage Views" in addition to our regular monthly mail out to our partners and members. This is being done to create awareness for the Association and reach out to producers to increase our membership and provide information on current issues in agriculture and notify of upcoming extension events.

As the Manager of WCFA, I am involved in a number of projects and committees. We are members of the Alberta Forage Industry Network (AFIN). AFIN's role is to help the forage industry nationally and internationally and to champion research, education and extension for the management and use of forages. We are members of the Canadian Round Table for Sustainable Beef (CRSB), which is a multi-stakeholder organization focused on advancing sustainability efforts with the Canadian beef industry. I sit on the CRSB Science Advisory Committee, which provides scientific analysis, advice and supporting information regarding beef sustainability to the CRSB. In November Fito was able to attend the AGM for the CRSB and bring information on how our producers are staying leaders in the global market and improving sustainability of the beef value chain through science, multi stakeholder engagement, communication and collaboration.

Throughout 2016 I have had great networking opportunities such as at the CARA Soil health day where I learned about the new Soil health lab that will be available soon and met the other managers of partnering forage associations within Alberta. I was able to attend the annual Lacombe Field Crop Development Centre field day where I learned about new varieties of triticale, oat, barley, ect. Jessica participated in the Alternative Land Use Services (ALUS) Canada launch and Parkland County ALUS tour in July, introducing us to the ALUS program.

The team at WCFA is excited about the future with new projects such as Industrial Hemp plots, training for Weevil collection and relocation, Shining Bank Lake Stewardship (SACA) project, the 2017 Western Canada Conference on Soil Health & Grazing, and the many extension events and research trials.

Melissa Freeman,
Manager West Central Forage Association.

ACKNOWLEDGEMENTS

Operation of West-Central Forage Association depends on support and cooperation from many groups and individuals.

We would like to take a moment to thank you for your support over the last year, and we look forward to working with/for you over the year to come. If there is anything that we can do to help you reach your agricultural goals, please don't hesitate to contact us.

WCFA would like to acknowledge the following, who have contributed to WCFA in a variety of ways by providing funding, donations, inputs or partnered on projects and/or extension events.

A& L Canada Laboratories
Agriculture & Food Council
Agriculture and Agri-Food Canada
Agro-Forestry Woodlot Extension Society (AWES)
Alberta Agriculture and Forestry
Alberta Beef Producers
Alberta Environmental Farm Plan
Alberta Forage Industry Network (AFIN)
Alberta Seed Processors
Alternative Land Use Services (ALUS)
Alpine
Applied Research & Extension Council (ARECA)
Battle River Research Group (BRRG)
Beef Cattle Research Council (BCRC)
BIXS 2.0
Brazeau County
Canadian Cattle Identification Agency (CCIA)
Canadian Round Table for Sustainable Beef (CRSB)
Chinook Applied Research Association (CARA)
Cows and Fish
Ducks Unlimited Canada
Farming Smarter (FS)
Gallagher
Gateway Research Organization (GRO)
Grey Wooded Forage Association (GWFA)
Growing Forward 2
Har-De Agri Services
Lac Ste. Anne County
Lacombe Research Centre
Lakeland Applied Research Association (LARA)
Leduc/Wetaskiwin County
Mackenzie Applied Research Association (MARA)
McDonald's VSB Pilot Project
North Peace Applied Research Association (NPARA)
Organic Alberta
Parkland County
Peace Country Beef & Forage Association (PCBFA)
Pembina Agricultural Recreational Society (PARS)
Pickseed
Remedy Animal Health
Smoky River Applied Research & Demonstration Association (SARDA)
Solar Energy Society of Alberta (SESA)
Thunder Seed
United Farmers of Alberta (UFA)
West Central Airshed Society
Yellowhead County
Woodlands County

2016 BOARD EXECUTIVE

President	Vice-President	Treasurer	Secretary
Frank Maddock	Brett Byers	Dale Engstrom	Therese Tompkins

BOARD DIRECTORS

Larry Kidd	Grant Chittick	Ted Commandeur	Greg Malyk
Grant Tallieu	Stacey Meunier	Eric Vanderwell	

2016 STAFF

Melissa Freeman, BBA
Manager
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Fito Zamudio Baca, BSc., P.Ag.
Forage & Livestock Program Manager
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Conservation Agriculture & Extension Program Manager
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Tammy Zinyk
Bookkeeper
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SUMMER STAFF

Madison Rehm

2017
ANNUAL GENERAL MEETING

REFERENCE DOCUMENTS

"Agriculture is the most healthful, most useful and most noble employment of man"

-George Washington

2017 ANNUAL GENERAL MEETING SCHEDULE OF EVENTS

MARCH 29, 2016
CARROT CREEK HALL

4:00 Registration

4:30 2016 Update Presentations

5:30 Supper

6:30 Annual General Meeting

7:30 Entertainment (Matt Robertson)

Annual General Meeting
West Central Forage Association
March 29, 2017
Agenda

1. Call Meeting to Order
2. Quorum
3. Roll Call – Introductions of the Board and Staff
4. Adoption of the Agenda
5. Minutes from the 2016 Annual General Meeting
6. Business Arising from the Minutes
7. Reports
   A. Directors' Report
   B. Treasurer's Report
      i. Financial Statements (Hawkings, Epp, Dumont)
      Ii. 2017/18 Budget
8. Appointment of the Auditor
9. Director Election
10. Adjournment

WEST-CENTRAL FORAGE ASSOCIATION
2016 AGM MINUTES

March 16, 2016
Carvel Community Hall, Alberta

Meeting called to order by Grant Taillieu at 4:37PM

Motion 2016.03.16-AGM-M01
Motion that members present constitutes a quorum.
Frank Maddock /Eric Vanderwell Carried

Roll Call – Introduction of Board and Staff (see Appendix 1.)

Adoption of the Agenda

Motion 2016.03.16-AGM-M02
Motion to adopt the agenda as presented.
Larry Kidd/ Darren Kidd Carried

Minutes from the 2015 AGM

Motion 2016.03.16-AGM-M03
Motion to adopt the minutes as presented.
Frank Kreddig/Bob Kidd Carried

Reports

Director's Report – Grant Taillieu, President
Motion 2016.03.16-AGM-M04
Motion to receive the Director's Report as information.
Darren Kidd/Tom Birkbeck Carried

Treasurer's Report
Financial Statements presented by J. Kennedy of Hawkings Epp Dumont.
Motion 2016.03.16-AGM-05
Motion to accept the financial statements as presented.
Dale Engstrom /Bob Kidd Carried

2015/16 Budget – Dale Engstrom, Treasurer
Question & discussion on 2015 deficit and how that will be avoided in 2016.
Motion 2016.03.16-AGM-06
Motion to adopt the budget.
Darren Kidd/Frank Kreddig Carried

Appointment of the Auditor
Motion 2016.03.16-AGM-07
Motion to re-appoint Hawkings Epp Dumont as the auditor for 2015/16.
Frank Kreddig/Bruce Churchill

Election of Directors

Call for nominations:

Larry Kidd nominated by Bob Kidd/Tom Birkbeck
Dale Engstrom nominated by J.P. Pettyjohn/Greg Malyk
Brett Byers nominated by John Fearnley/Darren Kidd

Motion 2016.03.16-AGM-08
Motion that nominations cease.
Frank Maddock/J.P. Pettyjohn Carried

Election Results
The three nominated directors were elected by acclimation.

New Business

The issue of financial support from counties in the area served by WCFA was discussed. Members are encouraged to contact their councilors requesting increased financial support for WCFA.

Adjournment

Motion 2016.03.16-AGM-09
Motion to adjourn the meeting.
Bob Kidd/Bill Schneider Carried

Meeting adjourned at 5:20 PM

_____
Grant Taillieu, President

_____
Dale Engstrom, Recorder

Appendix 1. Roll Call

Board of Directors

Grant Taillieu – President
Frank Maddock – Vice President
Dale Engstrom – Treasurer
John Fearnley –Secretary
Eric Vanderwell
Brett Byers
Therese Thompkins
Greg Malyk
Ted Commandeur
Stacey Meunier
Grant Chittick

Staff

Fito Zamudio
Tina Pulz
Tammy Zinyk

Members:

Bruce Churchill
Linda Engstrom
Doreen Neilley
Jennifer Benson
Brenda Maddock
Marilyn Fearnley
Jennifer Tkachuk
George Greenhough
Tom Thompson
Linda Hunt
George Zinyk
Tom Birkbeck
Kris Commandeur
Larry Kidd
Bob Kidd
Darren Kidd
Les Schatz
Shane Menzak
Frank Kreddig
Duane Movaldi
Lyn Joesting
Earnie Joesting
Bill Schneider
Cathy Tipper
Yvonne Churchill
Victor Sonnenberg
Amanda Sonnenberg
Adrian Vanderwell
Stewart Vanderwell
Irene Vanderwell
Karen Visser
JP Pettyjohn
Warren Strocher
Dan Richard

Guests

Michelle Pompana, AFSC

Linda Hunt, Alberta Ag & Forestry

Darren Haarsma, Parkland County

WEST-CENTRAL FORAGE ASSOCIATION

Financial Statements
For The Year Ended November 30, 2016

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

Management of West Central Forage Association is responsible for the integrity of the accompanying financial statements. The financial statements have been prepared in accordance with Canadian accounting standards for not-for-profit organizations.

To assist in meeting its responsibility, management maintains appropriate systems of internal and administrative controls designed to provide reasonable assurance that transactions are appropriately authorized and accurately recorded, that assets are properly accounted for and safeguarded, and that financial information produced is relevant and reliable.

The preparation of the financial statements necessarily includes some amounts which are based on the best estimates and judgments of management.

Prior to their submission to the Members, the financial statements have been reviewed and recommended for approval by the Board of Directors. The financial statements have been audited by the independent firm of Hawkings Epp Dumont LLP, Chartered Accountants. Their report to the Members, stating the scope of their examination and opinion on the financial statements follows.

Frank Maddock, President

Dale Engstrom, Treasurer

Evansburg, Alberta
March 21, 2017

For 2016, Hawkings Epp Dumont conducted a thorough review of our internal financial procedures and processes, and provided the Board of Directors with a 4 page “Audit Findings Letter-2016 Audit”. Several comments in the letter are noteworthy. The auditors stated that “Our audit procedures did not reveal any significant deficiencies in internal control.” And furthermore, that “We did not encounter any significant difficulties during our audit that should be brought to the attention of the Board.” A copy of this letter is available to any member by contacting our General Manager.

HAWKINGS EPP DUMONT LLP
CHARTERED ACCOUNTANTS

INDEPENDENT AUDITOR'S REPORT

To the Members of West Central Forage Association

We have audited the accompanying financial statements of West Central Forage Association, which comprise the statement of financial position as at November 30, 2016 and the statements of revenues and expenditures, changes in net assets and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of West Central Forage Association as at November 30, 2016 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Hawkings Epp Dumont LLP

Edmonton, Alberta
March 21, 2017

Hawkings Epp Dumont LLP
Chartered Accountants

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HAWKINGS.COM

WEST CENTRAL FORAGE ASSOCIATION
Statement of Financial Position
As at November 30, 2016

	2016	2015
ASSETS		
CURRENT		
Cash and cash equivalents	**$ 243,301**	$ 170,519
Accounts receivable	**51,012**	17,455
Goods and Services Tax	**2,586**	5,034
Interest receivable	**120**	120
Inventory	**1,085**	1,085
Prepaid expenses	**3,255**	2,050
	301,359	196,263
TANGIBLE CAPITAL ASSETS *(Note 3)*	**34,340**	47,340
	$ 335,699	$ 243,603
LIABILITIES		
CURRENT		
Accounts payable and accrued liabilities	**$ 6,679**	$ 14,692
Wages payable	**2,586**	21,631
Employee deductions payable	**-**	4,296
Deferred income *(Note 4)*	**234,963**	123,513
	244,228	164,132
NET ASSETS		
Unrestricted	**91,471**	79,471
	$ 335,699	$ 243,603

ON BEHALF OF THE BOARD

_____ *Director*

_____ *Director*

The accompanying notes are an integral part of these financial statements.

WEST CENTRAL FORAGE ASSOCIATION
Statement of Revenues and Expenditures
For The Year Ended November 30, 2016

	2016	2015
REVENUE		
Grants *(Schedule 1)*	**$ 318,798**	$ 303,464
Other	**21,199**	25,035
Member services	**15,199**	4,145
Donations and sponsorships	**6,888**	16,100
	362,084	348,744
EXPENDITURES		
Salaries, wages and benefits	**186,420**	274,379
Occupancy	**29,975**	58,124
Travel	**27,434**	19,733
Plot and demonstration	**22,616**	20,905
Office and general	**12,728**	34,426
Extension	**12,083**	10,314
Accounting fees	**11,928**	-
Member services	**10,197**	-
Telephone	**6,030**	4,619
Professional fees	**5,300**	3,952
Insurance	**4,960**	4,438
Interest and bank charges	**3,601**	1,935
Staff development	**2,752**	5,605
Meetings and conventions	**1,061**	336
	337,085	438,766
EXCESS (DEFICIENCY) OF REVENUE OVER EXPENDITURES FROM OPERATIONS	**24,999**	(90,022)
OTHER INCOME (EXPENSES)		
Gain on disposal of tangible capital assets	**-**	5,034
Amortization	**(12,999)**	(9,233)
	(12,999)	(4,199)
EXCESS (DEFICIENCY) OF REVENUE OVER EXPENDITURES	**$ 12,000**	$ (94,221)

The accompanying notes are an integral part of these financial statements.

WEST CENTRAL FORAGE ASSOCIATION
Statement of Changes in Net Assets
For The Year Ended November 30, 2016

	2016	2015
NET ASSETS - BEGINNING OF YEAR	**$ 79,471**	$ 173,692
Excess of revenue over expenditures	**12,000**	(94,221)
NET ASSETS - END OF YEAR	**$ 91,471**	$ 79,471

The accompanying notes are an integral part of these financial statements.

WEST CENTRAL FORAGE ASSOCIATION
Statement of Cash Flows
For The Year Ended November 30, 2016

	2016	2015
OPERATING ACTIVITIES		
Excess (deficiency) of revenue over expenditures	**$ 12,000**	$ (94,221)
Items not affecting cash:		
Amortization	**12,999**	9,233
Gain on disposal of tangible capital assets	**-**	(5,034)
	24,999	(90,022)
Changes in non-cash working capital:		
Accounts receivable	**(33,557)**	130,378
Goods and Services Tax	**2,448**	(2,107)
Interest receivable	**-**	44
Accounts payable and accrued liabilities	**(8,012)**	10,254
Deferred income	**111,450**	(54,965)
Prepaid expenses	**(1,205)**	(2,050)
Wages payable	**(19,045)**	13,265
Employee deductions payable	**(4,296)**	4,296
	47,783	99,115
	72,782	9,093
INVESTING ACTIVITIES		
Purchase of tangible capital assets	**-**	(28,387)
Proceeds on disposal of tangible capital assets	**-**	17,234
	-	(11,153)
INCREASE (DECREASE) IN CASH FLOW	**72,782**	(2,060)
Cash and cash equivalents - beginning of year	**170,519**	172,579
CASH AND CASH EQUIVALENTS - END OF YEAR	**$ 243,301**	$ 170,519

The accompanying notes are an integral part of these financial statements.

WEST CENTRAL FORAGE ASSOCIATION
Notes to Financial Statements
For The Year Ended November 30, 2016

The objective of the Association is to serve the needs of forage and livestock producers in the west central area and across the province by conducting extension activities, applied research and agricultural demonstrations.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The financial statements were prepared in accordance with Canadian accounting standards for not-for-profit organizations (ASFNPO).

Measurement uncertainty

The preparation of financial statements in conformity with Canadian accounting standards for private enterprises (ASFNPO) requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the period. Such estimates are periodically reviewed and any adjustments necessary are reported in earnings in the period in which they become known. Actual results could differ from these estimates.

Financial instruments policy

Financial instruments are recorded at fair value when acquired or issued. In subsequent periods, financial assets with actively traded markets are reported at fair value, with any unrealized gains and losses reported in income. All other financial instruments are reported at amortized cost, and tested for impairment at each reporting date. Transaction costs on the acquisition, sale, or issue of financial instruments are expensed when incurred.

Financial assets measured at amortized cost include cash and cash equivalents, accounts receivable and investments.

Financial liaibilities measured at amortized cost include accounts payable and accrued liabilities.

The Association has no financial assets or liabilities measured at fair value.

When there is an indication of impairment and such an impairment is determined to have occurred, the carrying amount of financial assets measured at fair value or amortized cost is reduced to the greater of the discounted future cash flows expected of the proceeds that could be realized from sale of the financial asset. Such impairments can be subsequently reversed if the value subsequently improves.

Cash and cash equivalents

Cash and cash equivalents are comprised of items that are readily convertible to known amounts of cash, are subject to an insignificant risk of change in value, and have a maturity of one year or less at acquisition. Cash and cash equivalents consists of cash on hand and balances with the bank net of outstanding cheques.

(continues)

WEST CENTRAL FORAGE ASSOCIATION
Notes to Financial Statements
For The Year Ended November 30, 2016

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Other investments

Investments for which there are quoted prices in an active market are carried at fair value. Unrealized gains or losses are reported as part of net income. Investments for which there is not an active market are carried at amortized cost except when it is established that their value is impaired. Impairment losses, or reversal of previously recognized impairment losses, are reported as part of net income.

Inventory

Inventory is valued at the lower of cost and net realizable value with the cost being determined on a first-in, first-out basis. Net realizable value is defined as estimated selling price less estimated selling costs.

Tangible capital assets

Tangible capital assets are stated at cost less accumulated amortization. Tangible capital assets are amortized over their estimated useful lives at the following rates and methods:

Equipment	20%	straight-line method
Furniture and fixtures	20%	straight-line method
Computer equipment	55%	straight-line method

In the year of acquisition, half rates are applied.

Revenue recognition

The Association follows the deferral method of accounting for contributions and recognizes revenues when they are earned, specifically when all the following conditions are met:

a) Restricted contributions are recognized as revenue in the year in which the related expenditures are incurred.

b) Unrestricted contributions are recognized when received or receivable if the amounts to be received can be reasonably estimated and collection is reasonably assured.

c) Revenue from sales of products is recognized when title passes to the customer, which generally coincides with the delivery and acceptance of goods.

d) Revenue from memberships is recognized on the first day of the year to which they relate, or on the day received if during the applicable year.

Donated services

A portion of the Association's activities is carried out by services donated by individuals. These financial statements do not reflect the value of those contributed services.

WEST CENTRAL FORAGE ASSOCIATION
Notes to Financial Statements
For The Year Ended November 30, 2016

2. FINANCIAL INSTRUMENTS

The Association is exposed to various risks through its financial instruments and has a comprehensive risk management framework to monitor, evaluate and manage these risks. The following analysis provides information about the Association's risk exposure and concentration as of November 30, 2016.

Credit risk

Credit risk arises from the potential that a counter party will fail to perform its obligations. The Association is exposed to credit risk from customers. In order to reduce its credit risk, the Association reviews a new customer's credit history before extending credit and conducts regular reviews of its existing customers' credit performance. An allowance for doubtful accounts is established based upon factors surrounding the credit risk of specific accounts, historical trends and other information. The Association has a significant number of customers which minimizes concentration of credit risk.

Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Association is exposed to this risk mainly in respect of its receipt of funds from its customers and other related sources and accounts payable.

3. TANGIBLE CAPITAL ASSETS

	Cost	Accumulated amortization	**2016 Net book value**	2015 Net book value
Equipment	$ 81,288	$ 47,204	**$ 34,084**	$ 45,461
Furniture and fixtures	7,121	6,865	**256**	1,680
Computer equipment	4,917	4,917	**-**	199
	$ 93,326	$ 58,986	**$ 34,340**	$ 47,340

WEST CENTRAL FORAGE ASSOCIATION
Notes to Financial Statements
For The Year Ended November 30, 2016

4. DEFERRED REVENUE

	2015	Additions	Used	2016
Agriculture Opportunity Fund	$ 85,546	$ 284,629	$ 198,354	$ 171,821
Other	7,917	29,695	37,612	-
Stewardship Alliance for Conservation Agriculture	30,050	36,240	42,405	23,885
Yellowhead County	-	8,400	3,445	4,955
Woodlands County	-	11,900	3,302	8,598
Parkland County	-	4,000	4,000	-
County of Wetaskiwin	-	200	200	-
Leduc County	-	1,250	1,250	-
Alberta Biodiversity Monitoring Institute	-	2,230	2,230	-
West Central Airshed Society	-	26,000	26,000	-
Memberships	-	2,950	2,440	510
Stem Gall Flies 2017	-	25,194	-	25,194
	$ 123,513	$ 432,688	$ 321,238	$ 234,963

5. COMPARATIVE FIGURES

Some of the comparative figures have been reclassified to conform to the current year's presentation.

WEST CENTRAL FORAGE ASSOCIATION

Grants *(Schedule 1)*

For The Year Ended November 30, 2016

	2016	2015
Agricultural Opportunity Fund	**$ 198,354**	$ 218,222
Stewardship Alliance for Conservation Agriculture - Matched Funds	**42,405**	44,679
Other	**37,612**	22,563
West Central Airshed Society	**26,000**	-
Parkland County	**4,000**	4,000
Yellowhead County	**3,445**	8,000
Woodlands County	**3,302**	6,000
Alberta Biodiversity Monitoring Institute	**2,230**	-
Leduc County	**1,250**	-
County of Wetaskiwin	**200**	-
	$ 318,798	$ 303,464

The accompanying notes are an integral part of these financial statements.

WCFA OPERATING BUDGET 2017:		Budget
Revenue		**2017**
Government Grants:		
AOF AG	$	100,000.00
AOF Environmental	$	75,000.00
AOF Supplementary	$	80,000.00
SACA	$	30,600.00
HRDC Student funding	$	8,460.00
SACA matching	$	13,140.00
Counties	$	23,000.00
ARECA		
	$	**330,200.00**
General Revenue		
West Central Airshed Socity	$	-
Sales	$	500.00
Corporate Sponsorship	$	-
ABPI	$	-
Corn	$	7,000.00
Fee for Service	$	500.00
Hay/Silage/Soil Testing	$	2,000.00
Interest	$	275.00
Memberships	$	3,000.00
Newsletter Advertising	$	500.00
Donations (Private)	$	1,200.00
Buiilding Rent	$	1,000.00
Equipment Rent	$	2,500.00
Stem Flies	$	52,000.00
Weevils	$	120,000.00
Other (AFC, ARECA),		
Seed Growers Cooperative	$	1,500.00
Winter Cereals Trial/Ducks	$	26,303.21
Workshop Registrations	$	5,000.00
	$	**223,278.21**
Revenue Total	**$**	**553,478.21**

Expense	Budget 2017
Core Function Expenses	
Manpower	
Full-Time Staff (Manager & Staff)	**$ 205,250.00**
Contractors	**$ 1,000.00**
Employee Benefits	$ 12,466.24
Professional Development & Fees	**$ 5,000.00**
Staff Registration/Fee/Grazing	**$ 5,000.00**
Staff Training	**$ 3,000.00**
Staff Meals/Accomodations	**$ 4,500.00**
Australia	**$ -**
Vehicle Purchase	
Staff Travel/Vehicles	**$ 14,000.00**
Manpower total	**$ 250,216.24**
Office Expenses	
Advertising	$ 500.00
Audit/Accounting Fees	$ 16,100.00
Building Maintenece & Repairs	$ 1,000.00
Computer Maintenance	$ 2,000.00
Dues & Memberships	$ 1,500.00
Furniture & Equipment	$ 2,500.00
Insurance	$ 6,200.00
Interest & Bank Charges	$ 1,000.00
Office Supplies	$ 5,500.00
Permits	$ 700.00
Postage & Freight	$ 3,000.00
Printing & Copying	$ 5,000.00
Extension materials	$ 500.00
Rent	$ 24,600.00
Resources	$ 200.00
Utilities	$ 6,000.00
Telephone	$ 6,000.00
Member Services	
Bad Debt	$ -
Volunteer Recog/Gifts & Donations	$ 200.00
Equipment Rental	$ 100.00
Weevils	$ 100,000.00
Stem Gall Fly	$ 40,800.00
Total Office Expenses	**$ 223,400.00**

Board Expenses		
Meetings/Travel	$	1,000.00
Training	$	1,000.00
Total Board Expenses	**$**	**2,000.00**
Total Adminstrative Expenses	**$**	**225,400.00**
Project Expenses		
Plots Expenses		
Consultant/Professional Fees	$	1,000.00
Equipment rep & maint	$	5,500.00
Soil/Feed/Water Testing	$	5,000.00
Tools & Supplies	$	3,500.00
Fuel	$	700.00
Total Plots Expenses	**$**	**15,700.00**
Extension Expenses		
Consultant/Professional Fees	$	3,500.00
Extension materials	$	300.00
Facilities	$	1,500.00
Newsletters	$	3,000.00
Meals	$	5,000.00
Travel	$	1,500.00
Website	$	1,500.00
Total Extention Expenses	**$**	**16,300.00**
Total Plots & Extension	**$**	**32,000.00**
Total Expenses	**$**	**507,616.24**

EXTENSION EVENTS
WCFA & SACA

Don’t miss an event, follow us to stay up to date!

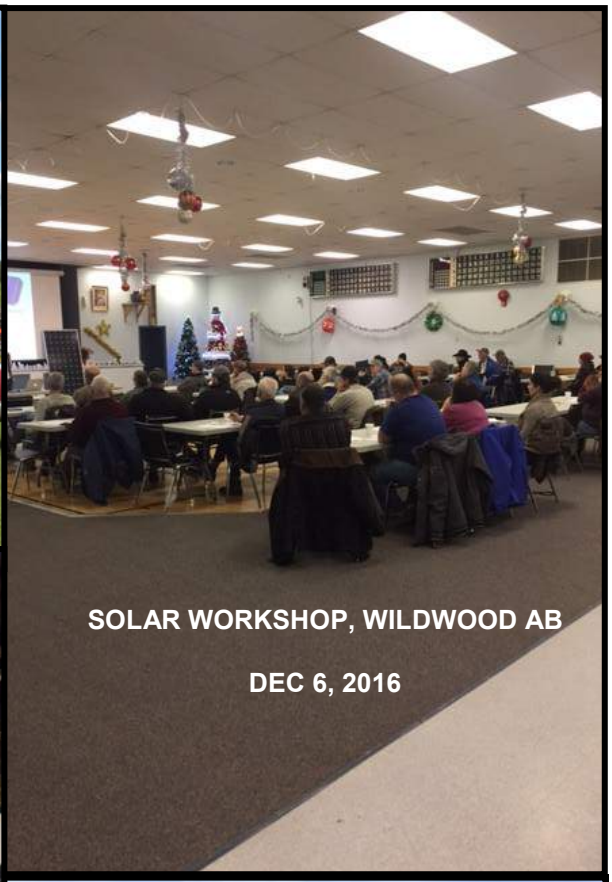
West-Central Forage Association

@WestCentralFor

@westcentralforage

HIGH LEGUME FIELD DAY

AUG 11, 2016



SOLAR WORKSHOP, WILDWOOD AB

DEC 6, 2016

3 TOOLS WORKSHOP, MAYERTHORPE AB

OCT 25, 2016

BILL CHAPMAN CROP WALK

JUY 14, 2016

HIGH LEGUME FIELD DAY

AUG 11, 2016

JANUARY

Aerial Photos: Planning for your place (January 19, 2016)

Held at the Lac Ste. Anne County office in Sangudo, AB with 22 attendees. This was workshop #1 of the 4 part 2016 Sustaining Ag Series in partnership with Lac Ste. Anne & Parkland Counties.

FEBRUARY

Fostering Sustainability from Field to Fork (February 10, 2016)

Held in Wildwood with 24 attendees (staff, speakers & producers). Brian Luce, of Lucends Ranch, covered drought planning & pasture management during drought conditions. Shawn Elgert, water specialist with Alberta Agriculture covered dugout construction and dugout issues that occur during drought conditions. There were representatives from the McDonald's Verified Sustainable Beef (VSB) pilot project present, along with local producers who were part of the pilot project, to present information on the project. WCFA partnered with Yellowhead County, McDonalds, and Alberta Agriculture & Forestry to bring this event to producers.

Economic Opportunities in Sustainable Beef (February 11, 2016)

Held in Carvel with 36 attendees (staff, speakers & producers). Information was provided on the Growing Forward 2 programming/available funding and the Alberta Environmental Farm Plan (EFP) program. An ALUS representative was present to relay information on ALUS programming and how the program could help producers meet some of the requirements of the McDonalds VSB program. Representatives from the McDonalds VSB pilot project were present, along with local producers who were part of the project, to present information on the project. This was workshop #2 in the 4 part 2016 Sustaining Ag Series in partnership with Lac Ste. Anne & Parkland Counties.

MARCH

Annual General Meeting (March 16, 2016)

Held at the Carvel Hall with a number of producers and industry present. Updates were provided on WCFA's activities for 2015.

Innovative Solutions to Fencing & Watering (March 23, 2016)

Held at Magnolia Hall with 23 attendees. This event featured a tradeshow with booths from Solar Works, UFA, RH Services, WCFA and ALUS. The event included an ALUS project design exercise and a Q&A session with the experts. This was workshop #3 in the 4 part 2016 Sustaining Ag Series in partnership with Lac Ste. Anne & Parkland Counties.

Soil Sampling 101 (March 30 & 31, 2016)

Held in Leduc County and at the WCFA office with 11 attendees in Leduc and 5 attendees at the WCFA office. This workshop covered the Why, When, Where and How of soil sampling.

APRIL

Drought 2016? Managing your Cattle, Pasture & Feed Resources (April 19, 2016)

Held in Thorsby with 10 attendees. Dr. Ed Bork, Range and Ecology Management, University of Alberta, and Grant Lastiwka, Livestock & Forage Business with Alberta Agriculture were present to discuss practical tips and ideas on managing through a drought. A producer panel was put together to share their experiences and tips for drought management as well. WCFA partnered with Leduc/Wetaskiwin County and Grey Wooded Forage Association to bring this event to producers.

Mature Shelterbelt Restoration & Pruning Trees

Held in Lac Ste. Anne County with 13 attendees. The Alberta Woodlot Extension Society (AWES) joined us to deliver presentations for part of the day. This was the fourth and final workshop in the 2016 Sustaining Ag Series in partnership with Lac Ste. Anne & Parkland Counties.

Classroom Agriculture Program

Presentations were scheduled to be given to Gr. 4 students at local schools on Agriculture.

MAY

No events were held in May as we were busy preparing for the busy summer season.

JUNE

Pond Days

Two Pond Days were held in 2016: June 7 at Chip Lake with Yellowhead County and June 3 in Keephills with Parkland County. Pond Days brings Gr. 4/5 students out to educate them on topics such as soil & soil organisms, riparian health, aquatic insects, fish, and water quality. A Family Pond Days at Chip Lake was planned for July 13, but was cancelled due to weather.

JULY

Crop Walk—*Featuring Bill Chapman* (July 14, 2016)

WCFA & Yellowhead County were honored to have Bill Chapman with Alberta Agriculture and Forestry walk us through the West-Central plots in Wildwood scouting for pests, diseases and weeds.

Promoting Safety & Sustainability of Farm Production (July 20, 2016)

Held at the WCFA office with 8 attendees. Speakers included: Mike Rappel, Government of Alberta, who covered enhanced protection for farm & ranch workers, Shannon Argent who covered the new additions to the Verified Beef Production program that have lead to Verified Beef Production Plus (VBP+), and Jolene Noble, Extension Coordinator, introduced the Alberta Farm Sustainability Extension Working Group. WCFA partnered with the Pembina Agricultural Recreational Society (PARS) to bring this event to producers.

Woodlands County Plot Tour (July 21, 2016)

WCFA presented at Woodlands County Annual Plot Tour and informed numerous producers on the perennial variety trial and research results from the last three years.

AUGUST

Annual Plot Tour: Featuring High Legume Field Day (August 11, 2016)

43 attendees (staff, speakers and producers) spent the day travelling around to visit the Sainfoin-Alfalfa Mixtures Variety trial plots in Wildwood, a Kura clover site in Sangudo, and a sainfoin-alfalfa sheep grazing demonstration site in Tiger Lily. Speakers for the day included: Frank Maddock (2016 WCFA Chair), John Mochniuk (2008 WCFA Chair), Leon Specht, Graeme Finn (owner of Southern Cross Livestock; Madden, AB), Gene & Jeannette Brown (Kura Clover site, Sangudo), Darlene Stein (sainfoin/alfalfa grazing site; Tiger Lily, AB), Grant Lastiwka and Karin Lindquist (Alberta Agriculture).

SEPTEMBER

City Slickers (September 23, 2016)

WCFA/SACA was given the opportunity to attend City Slickers at the Multicultural Heritage Centre in Stony Plain. Throughout the day we were able to give presentations to over 100 Gr. 4/5 students on agriculture and what we do as WCFA and SACA.

OCTOBER

Beef Cattle Research Council (BCRC) Webinar (October 18, 2016)

Held at the WCFA office with a few producers in attendance. The BCRC webinar on Managing Cows for Improved Cow & Calf Performance was broadcast on the projector screen. We were also able to screen a few of the Managing Risk in Winter Grazing Systems videos.

3 Tools to Improve Farm Productivity (October 25, 2016)

Held at the Diamond Centre in Mayerthorpe with 39 attendees. This workshop covered three key tools for improving farm productivity: Soil Health, Electric Fencing and Protein & Mineral Supplementation. Speakers for the day included: Dr. Yamily Zavala, Chinook Applied Research Association's soil health specialist, Garh Hein, Territory Manager with Gallagher, and Shane Menzak with the UFA Livestock Production Team. WCFA partnered with Gateway Research Organization (GRO) and Lac Ste. Anne County to bring this event to producers.

NOVEMBER

Environmental Farm Plan (EFP) & Growing Forward 2 (November 23, 2016)

Held at the Yellowhead County office in Wildwood with 13 attendees. With the assistance of Mike Hittinger, Alberta Agriculture & Forestry Growing Forward Extension Specialist, attendees were walked through how to begin & complete their own EFPs, and received updates on Growing Forward 2 programming. WCFA partnered with Yellowhead County to bring this workshop to producers.

DECEMBER

Generating Electricity from the Sun: *Opportunities for Alberta Farmers* (December 6, 2016)

Held at the Wildwood Community Hall with 37 attendees. This workshop covered grid-tie solar options for Alberta Farmers. We were pleased to have Rob Harlan with the Solar Energy Society of Alberta (SESA) cover topics such as solar electric systems siting, installation, permitting processes, economics, and many other valuable topics on solar options. WCFA/SACA partnered with Yellowhead County to bring this workshop to producers.

Environmental Farm Plan (EFP) & Growing Forward 2 (December 14, 2016)

Held at the Clean Energy Technology Centre (CETC) in Drayton Valley with 14 attendees. Attendees were walked through how to begin & complete their own EFPs, and received updates on GF2 programming. WCFA partnered with Brazeau County to bring this workshop to producers.

STEWARDSHIP ALLIANCE FOR CONSERVATION AGRICULTURE

SACA
Stewardship Alliance for Conservation Agriculture

"The care of the Earth is our most ancient and most worthy, and after all our most pleasing responsibility."

2016 ACTIVITIES REPORT

2016 was quite the year for extension and environment at WCFA/SACA, despite all the changes and challenges the year brought with it. I joined the organization in mid-July, in the height of the weevil ordering and spent most of my first few months with WCFA fielding weevil calls & orders and the many challenges that came along with this project. It's certainly been a challenging year, but it has also been exceptionally exciting, full of many positives and a lot of learning.

We were kept quite busy throughout the year with delivery of the Alberta Environmental Farm Plan (EFP) program. We worked with Yellowhead County, as well as Brazeau County to deliver two EFP/Growing Forward workshops, allowing us to assist 17 farms in starting their EFPs (27 individuals attended these workshops). In total we assisted with the initiation of 42 EFPs in 2016. We were also able to assist a number of people with accessing and applying for funding through the Growing Forward 2 grant program.

Perhaps the greatest undertaking of 2016 was in accepting orders for the delivery of Canada-Thistle Stem-Mining Weevils. Over 170 different organizations and producers throughout the entire province of Alberta (and some from BC and Saskatchewan) placed orders for these biological control agents with us. This brought the total number of releases ordered in 2016 to an all-time high of 790.

Unfortunately, our supplier ran into a collection issue (uncooperative weather), and was unable to collect any weevils for us, for the second consecutive year. After some effort, we were able to find a different supplier who was able to get us 50 releases of weevils. These were delivered to 50 sites/producers in early October, with the priority given to those that had placed weevil orders with us in 2015 as well as 2016. Any order that was not delivered was refunded in full, and anyone wanting to order weevils in 2017 will be required to re-order beginning in April 2017.

Continued on next page

As we gear up to take orders for weevils in 2017, we have come up with what we believe to be a viable strategy to help mitigate the risk and reduce the chance of us not being able to supply weevils for all those that would like them in 2017. The decision has been made to source weevils from multiple suppliers, limiting the number of releases to be supplied by an individual supplier. The number of releases we have required in the last few years has been a little too large to be able to supply all at once, due to the nature of the emergence curve of the weevils. It is quite possible that we will have to make a couple of trips to Montana to pick-up and deliver weevils, and we are prepared for this possibility (and hope that this will also increase our odds of being able to deliver). Ordering will be occurring earlier in 2017 (April & May vs. July) in the hopes that if we have final numbers to our suppliers earlier in the year, we will be higher on their priority list to fill orders. Moving in to the future we are looking to begin our own collection sites and hope to be able to distribute/relocate weevils locally, reducing the numbers we would need to import each year.

Another biological control agent, the Canada Thistle Stem-Gall Fly, will now be offered by WCFA/SACA in addition to the weevils. The hope is that offering these as well will give producers more options and flexibility in accessing biological control agents for controlling their Canada Thistle. Orders for this agent were taken in the fall of 2016 (up to the end of November). 63 organizations and producers placed orders for a total of 342 releases to be delivered in June 2017. This will be the first summer WCFA/SACA will be involved with the flies, but we expect that they will do as well as the weevils have in the past.

SACA became involved with 2 major groups in 2016: the Athabasca River Basin Initiative (ARBI) Working Group, and the Brazeau County Alternative Land Use Services (ALUS) Partnership Advisory Committee (PAC).

The ARBI is a basin wide collaborative effort to inform decision-making and create a common understanding of the issues and opportunities across the Athabasca River Basin for proactive (sustainable) water management. The project uses integrated modeling tools to assess the current and future water management issues in the basin.

Continued on next page

WCFA/SACA's involvement in this project occurs at the working group level, which allows us to represent the agriculture industry in the basin and share interests/ideas for water management as well as share perspectives on challenges/opportunities (offer input on which challenges/ opportunities to explore with the modeling tools). As a part of this working group, we will actively participate in approximately eight working group meetings, which began in September 2016 and will continue into February 2018 (As of March, 2017 four working group meetings have been held, and WCFA/SACA has been present at all four).

The ALUS program provides a financial incentive for producing valuable ecological services on Canadian farmland. ALUS helps farmers and ranchers restore wetlands, reforest, plant windbreaks, install riparian buffers, manage sustainable drainage systems, create pollinator habitat and establish other ecologically beneficial projects on their properties. ALUS also provides annual payments to ensure the ongoing stewardship of each ALUS project. The PAC oversees the management and administration of the ALUS program in the community. PAC members provide advice and input on various elements of the program including: annual payment rubric, project monitoring and program direction. The PAC is also responsible for reviewing and approving individual project proposals. The Brazeau County ALUS PAC (formed in the spring of 2016) consists of five local producers (Duane Movald, Graham Kathol, Henry Hughes, Cliff Whitelock, Lawrence Strocher,), representatives from four external agencies (North Saskatchewan Watershed Alliance, Cows & Fish, Agriculture & Agri-Food Canada, West -Central Forage Association) and one Councillor (Shirley Mahan).

2016 was a busy and exciting year, and we are certainly hoping that 2017 continues to follow in its footsteps. We can't wait to see what the next year has in store as we have some exciting projects and events on the horizon and I look forward to continuing to work with everyone in the future.

See you on the trail,

Jessica Watson BSc. Ag
Conservation Ag & Extension Program Manager

FORAGE TRIALS

2016 REGIONAL SILAGE VARIETY TRIAL

An important component of the annual feed supply for Alberta's cattle producers comes in the form of silage, green feed and swath grazing. It could be argued that there is more grain forage than cereal grain fed to take many market animals from conception to plate.

Selection of annual crop varieties that produce the highest forage yield and/or nutritional quality becomes increasingly important.

PARTICIPATING ORGANIZATIONS
Battle River Research Group, Forestburg, AB, (780) 582-7308
Chinook Applied Research Association, Oyen, AB, (403) 664-3777
Gateway Research Organization, Westlock, AB, (780) 349-4546
Lakeland Agricultural Research Association, Bonnyville, AB, (780) 826-7260
Mackenzie Applied Research Association Fort Vermilion, AB (780) 927-3776
North Peace Applied Research Association, Manning, AB, (780) 836-5230
Peace Country Beef and Forage, Fairview, AB, (780) 836-3354
Smoky Applied Research and Demonstration Association, Falher, AB, (780) 837-2900
West-Central Forage Association, Evansburg, AB, (780) 727-4447

MAJOR SPONSORS
Government of Alberta, Agriculture and Forestry
-Doug McCauley, Agriculture Opportunity Fund Co-ordinator
Davidson Seeds, Degenhardt Farms, Dyck Seed Farm, Kevin Elmy, Fabian Seeds, Lindholm Seed Farm, Mastin Seeds, Solick Seeds and H. Warkington

TRIAL INFORMATION
Applied research and forage associations performed regional silage trials at 8 locations throughout the province in 2016. Data from additional sites grown during the past five years has been included in the variety summaries below. The trials are intended to determine yield and nutritional values of various cereal crops and cereal/pea combinations.
The tables below show a summary of data from 2012 through 2016 as compared to the control variety (in bold). Yield of the test varieties are expressed as wet tons/acre (i.e. 65% moisture; typical of silage production). Data sets that did not meet minimum quality standards and variance levels were excluded.

Varieties of barley, oats, triticale and peas commonly used for silage, green feed and swath grazing were included in the trial. The cereal trials (barley, oats and triticale) were seeded at recommended seeding density rates with recommended fertility.

The pulse mixture trial looked at increasing the nutritional value of silage, with a potential side benefit of decreasing future nitrogen costs. The pulse mixture plots were seeded with 50 pounds of 11-52-0-0, while the monoculture cereal comparison plots were fertilized with 50 percent of the recommended fertilizer rates. Peas were seeded at 75 percent of their recommended seeding rate and cereals at 50 percent when in mixtures. Growing conditions at the trial sites in 2016 ranged from dryer than normal to excessive moisture.

TEST YIELD CATEGORIES

The defined range for each test yield category is provided in tons per acre. Variety yields are reported as average yields in low, medium and high test yield categories. This presentation allows for comparison with the check when growing conditions, management regimes or target yields are anticipated to be of low, medium or high productivity.

Varieties that are statistically higher (+) or lower (–) yielding than the standard check are indicated. No symbol after the yield figure indicates that there is no statistical difference. Caution is advised when interpreting the data with respect to new varieties that have not been fully tested.

It should also be noted that the indicated yield levels are from small plot trials, which are often 15 to 20 per cent higher than yields expected under commercial production. As yield is not the only factor that affects net return, other important agronomic and disease resistance characteristics should be considered. The genetic yield potential of a variety can be influenced by various management and environmental factors.

NUTRITIONAL ANALYSIS

Nutrition was assessed using NIRS for macro-nutrient assessments and wet chemistry for micro -nutrients. Full nutritional analysis was done on each sample; however, only six nutritional categories are reported:

- crude protein (CP)
- total digestible nutrients (TDN), an estimate of energy
- calcium (Ca)
- phosphorus (P)
- potassium (K)
- magnesium (Mg)

BARLEY

			Area:					Yield Category:			Nutritional Data:					
Variety	Over-all Yield	Overall Station Years of Testing	2	3	4	5	6	Low < 8.0 (t/ac)	Medium 8.1 - 12.0 (t/ac)	High > 12.1 (t/ac)	CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2016 trials (Yield and agronomic data only directly comparable to CDC Austenson)																
CDC Austenson (t/ac)	**10.8**		**11.8**	**12.1**	**11**	**11.5**	**8**	**6.7**	**9.3**	**12.8**	**10.1**	**67.9**	**0.3**	**0.2**	**1.3**	**0.2**
CDC Austenson	**100**	**35**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Amisk	90-	23	102	92-	91	88-	83-	85	93	90-	104	99	132	106	107	109
CDC Coalition	92-	27	92	93	92	86-	102	92	92	92-	102	100	104	107	106	99
CDC Cowboy	102	27	102	103	98	103	100	106	99	100	95	98	117	107	110	115
CDC Maverick	103	29	105	96	96	104	108	111+	102	101	95	98	123	106	96	116
CDC Meredith	102	16	114	106	93	99	103	111	102	100	95	97	97	98	101	91
Canmore	98	16	105	99	93	99	97	101	93	99	100	99	119	103	98	104
Champion	102	16	104	97	100	102	106+	106	101	101	98	99	105	97	104	100
Claymore	100	16	114	102	97	100	94	106	87	103	93	96	122	93	98	100
Conlon	86-	21	82	95	86	79-	92	80-	80-	91-	99	101	128	111	101	104
Gadsby	100	27	103	106	94	100	101	104	101	98	95	99	129	99	100	103
Sundre	92-	27	97	93	87-	88-	96	86-	96	93-	102	99	134	104	114	115
TR13740	100	16	103	92	99	99	107	95	99	101	99	97	105	97	104	92
Previously tested varieties (Yield and agronomic data only directly comparable to CDC Austenson)																
Busby	93-	19	91	98	71	96	88	86-	95	97	105	99	128	100	100	103
Chigwell	90-	19	80	95	87	86-	97	91-	82-	91-	106	99	152	101	105	116
Muskwa	90-	13	101	93	XX	86-	91	86-	91	91-	114	100	167	107	121	127
Ponoka	96	19	90	100	100	96	95	96	94	97	101	99	148	103	104	115
Ranger	95	13	104	99	XX	96	88	85-	97	99	109	98	171	101	128	131
Seebe	96-	19	95	103	92	95-	95	95	96	97	109	96	136	109	113	103
Trochu	88-	18	XX	91	73	91-	85-	82-	89	92-	103	101	139	107	109	119
Vivar	93-	19	95	99	78	92-	93	90-	98	93	108	100	144	99	104	123
Xena	95-	19	87	101	84	92-	101	96	90	95	106	99	111	105	102	106

OATS

Variety	Overall Yield	Overall Station Years of Testing	Area: 2	3	4	5	6	Yield Category: Low < 7.0 (t/ac)	Medium 7.1 - 10.0 (t/ac)	High > 10.1 (t/ac)	Nutritional Data: CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2016 trials (Yield, significant differences and agronomic data only directly comparable to CDC Baler)																
CDC Baler (t/ac)	**10.1**		**12.4**	**10.7**	**8.6**	**10.8**	**8**	**5.8**	**9.1**	**12.9**	**9.3**	**61.7**	**0.3**	**0.2**	**1.8**	**0.2**
CDC Baler	**100**	**33**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
AC Juniper	94-	23	91	98	98	87	103	111	84-	93	101	102	92	112	102	106
AC Morgan	100	32	102	100	92-	96	114	108	96-	101	99	101	100	114	99	97
AC Mustang	98	33	99	97	95	100	97	95	97	100	103	99	99	106	102	99
CDC Haymaker	99	28	105	96	100	97	99	105	94	100	97	100	98	100	104	98
CDC Seabiscuit	94	6	91	XX	108	78	96	78	96	99	96	100	89	94	100	100
CDC SO-1	94-	33	84	102	88	93-	96	92	94	95-	103	102	96	105	97	104
Derby	96	6	100	XX	106	89	94	89	93	101	89	100	98	99	100	110
Murphy	103	27	106	104	102	103	103	104	104	102	91	95	95	96	102	99
Waldern	104	26	100	104	98	101	115	101	112+	99	93	99	105	106	94	99
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to CDC Baler)																
Everleaf	94	5	XX	113	106	72	XX	108	76	67	96	98	105	97	110	92
Foothills	99	21	103	95	101	99	103	99	96	102	99	98	103	103	102	100
Jordan	100	20	107	92	88	100	121	102	102	96	97	100	96	105	97	112

TRITICALE

Variety	Overall Yield	Overall Station Years of Testing	Area: 2	3	4	5	6	Yield Category: Low < 8.0 (t/ac)	Medium 8.1 - 12.0 (t/ac)	High> 12.1 (t/ac)	Nutritional Data: CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2016 trials (Yield and agronomic data only directly comparable to Taza)																
Taza (t/ac)	**10.7**		**12.3**	**12.3**	**8.8**	**10.4**	**9.5**	**6.3**	**10.7**	**14.5**	**8.8**	**62.8**	**0.2**	**0.2**	**1.3**	**0.1**
Taza	**100**	**37**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
94I043057	100	7	103	XX	110	93	101	89	103	100	106	102	91	102	90	108
Bunker	99	29	99	93	111+	99	100	106	98	98	103	99	111	96	97	115
Sunray	101	30	97	100	105	100	105	99	102	100	104	104	105	103	103	109
Tyndal	99	36	98	105	109	96-	96	100	98	99	103	101	101	102	97	105
Previously tested varieties (Yield and agronomic data only directly comparable to Taza)																
AAC Chiffon	111	8	124	123	118	92	126	105	113	114	97	101	88	97	106	108
AAC Innova	104	8	121	119	123	83	102	95	107	107	108	100	87	106	109	107
AAC Ryley	97	8	108	104	87	87	110	86	100	101	103	100	95	106	89	117
AC Ultima	103	7	104	98	120	100	XX	109	100	104	110	100	101	93	97	122
Pasteur	94	8	110	96	97	84	103	91	99	91	107	103	96	99	107	117
Pronghorn	102	21	107	103	114	99	101	108+	99	103	103	100	102	99	109	106
Sadash	102	8	111	102	109	91	121	101	108	97	99	99	88	91	110	105

PERENNIAL FORAGE VARIETY TRIAL

SITES

The Perennial forage evaluation trial is replicated at 8 sites.

Peace Lowland: Fairview (PCBFA/SARDA), Fort Vermilion (MARA) and Manning (NPARA)
Boreal Transition: Fort Kent (LARA)
Aspen Parkland: Evansburg (WCFA) and Sedgewick (BRRG)
Mixed Grassland: Lethbridge (AAFC) and Oyen (CARA)

BACKGROUND

Forage producers in Alberta have had limited access to information on new perennial crops in recent years. This trial is intended to demonstrate the establishment in the first year and forage quality and yield in subsequent years. Visual records has been collected and results will be available to producers to help them make management decisions. Total entries in the trial include approximately 18 grasses and 18 legumes.

This trial will fill the gap in the perennial forage production knowledge that currently exists in Alberta and will also serve as a valuable extension tool. Information related to improved yield and quality of perennial forage crops will reduce the risk producers are faced with related to producing forage for their cattle operation. This project will deliver unbiased data from sites across the province, allowing producers to use results representative of their particular region.

OBJECTIVES

To provide unbiased, current and comprehensive regional data regarding the establishment, winter survival, yield and economics of specific species and varieties of perennial forage crops.

To identify perennial crop species/varieties that demonstrate superior establishment, hardiness, forage yield and nutritional quality characteristics in different eco-regions of Alberta.

To assess any benefits from growing mixtures of selected species.

METHODOLOGY

Trials are located in Yellowhead County at the West Central Forage Association Forage Research Site (SE 27-53-9- W5th) near Wildwood Alberta, which is located 120km west of Edmonton. They were seeded to a prepared seedbed on June 7, 2016.Prior to seeding the soil was tested for nutrients in the fall of 2015 and this information was used to prescribe fertilizer applications.

METHODOLOGY CONTINUED

They were seeded using a small plot Fabro disc seeder in 5 rows with 22.5 cm spacing (9m by 1.14m plot area) in the gray wooded soil zone. Moisture is not as limiting as elsewhere in Alberta, but the growing season is shorter. A glyphosate treatment was administered prior to seeding, followed by Sodium and Potassium salts application and a gentle mowing on a later date.

Grasses	Legumes	Mixtures	
Fleet Meadow Brome	Assalt ST Alfalfa	Mix 1	Fleet / Yellowhead
Ac Admiral Hybrid Brome	Dalton Alfalfa		
Success Hybrid Brome	20-10, Alfalfa	Mix 2	Success / Yellowhead
Knowles Hybrid Brome	Halo Alfalfa		
Greenleaf Pubsecent Wheatgrass	Rugged Alfalfa	Mix 3	Admiral / Yellowhead
Kirk Crested Wheat Grass	Spredor 4 Alfalfa		
Ac Saltlander Green Wheatgrass	Spredor 5 Alfalfa	Mix 4	Fleet / Spredor 5
Tom Russian Wilde Rye	Yellowhead Alfalfa		
Killarney Orchard Grass	PV Ultima Alfalfa	Mix 5	Success / Spredor 5
Grinstad Timothy	44-44, Alfalfa		
Fojtan Festulolium	Mountainview Sainfoin	Mix 6	Admiral / Spredor 5
Courtney Tall Fescue	Nova Sainfoin		
	Veldt Cicer Milk Vetch	Mix 7	Fleet / Mountainview
	Oxley 2 Cicer Milk Vetch		
		Mix 8	Success / Mountainview
		Mix 9	Admiral / Mountainview

Table 1. Perennial forages seeded in the trial. Wildwood, AB.

RESULTS

No emergence counts were taken due to the excessive amount of weeds present. No yield or quality data was taken on the trial in the establishment year; samples will be taken in 2017.

SAINFOIN-ALFALFA MIXTURE TRIAL

PARTNERS

Alberta Agriculture and Forestry
Agriculture and Agri-Food Canada (Lethbridge)
Yellowhead County

BACKGROUND

Old sainfoin cultivars do not have tolerance for frequent cutting or grazing. Although easy to establish and seed, plants lack competitive ability to grow with other forages. Older sainfoin lines are not able to survive in mixed stands with alfalfa or regrow at the same rate and therefore cannot be used with alfalfa for reducing pasture bloat.

Sainfoin has previously only been grown for the purpose of research in the brown soil zones of the province, so one of the main reasons for this research trial is to determine suitability in the gray wooded soil zone. Beyond determining the suitability of this crop for this region, varieties are being tested for yield and winter survivability over a number of years to assess and compare the new and old sainfoin varieties, the trial was established in the 2013.

There were four varieties grown with Nova “the older variety” used as a check. Three experimental sainfoin lines have been developed by Dr. Surya Acharya and are designated LRC05-3900, LRC05-3901, and LRC05-3902.

OBJECTIVES

To compare the establishment, growth and winter survival of new and old sainfoin varieties
To compare the forage yield and quality of new and old sainfoin varieties

METHODOLOGY

Soil was tested for nutrients in the fall of 2012 and this information was used to prescribe fertilizer applications. Plots were seeded to a prepared seedbed on June 11, 2013 using a small plot Fabro disc seeder in five rows at 22.5cm spacing (10.5m by 1.14m plot area) with a seeding rate of 15 lbs./ac of sainfoin and 6 lbs./ac of alfalfa. All seed was inoculated. A glyphosate treatment was administered prior to seeding and Gladiator was applied four weeks following seeding. In 2013 hand weeding was performed twice, along with one gentle mowing, and twice in each of the consecutive years. Samples were taken when sainfoin was at 40-50% bloom and alfalfa at 20-30% bloom to determine percent composition of both components immediately prior to each cut. Biomass was calculated and quality samples were sent to Agriculture and Agri-Food Canada (Lethbridge) for wet chemistry analysis.

TREATMENTS

Treatments	Sainfoin	Alfalfa
1	LRC05-3900	AC Grazeland
2	LRC05-3901	AC Grazeland
3	LRC05-3902	AC Grazeland
4	Nova	AC Grazeland

PROPORTION (%)

All three experimental sainfoin lines LRC05-3900, LRC05-3901, and LRC05-3902 have comprised 30% or more of the stand over the duration of the trial. In an alfalfa stand, 15% sainfoin is needed to aid in the prevention of bloat. The proportions of sainfoin and alfalfa in the mixtures are displayed in Table 1. Populations of all the new sainfoin lines consistently maintained higher proportions than Nova. It is noteworthy to mention that LRC05-3902 and Nova showed a constant increase year after year.

	2014		2015		2016	
Treatments	Sainfoin (%)	Alfalfa (%)	Sainfoin (%)	Alfalfa (%)	Sainfoin (%)	Alfalfa (%)
LRC05-3900	38	62	51	49	48	52
LRC05-3901	39	61	37	63	50	50
LRC05-3902	37	63	42	58	46	54
Nova	31	69	33	67	41	59

Table 1. - Proportion of sainfoin (%) and alfalfa (%) in the mixtures. Sainfoin-Alfalfa Mixture Trial 2013-2016. Wildwood, AB.

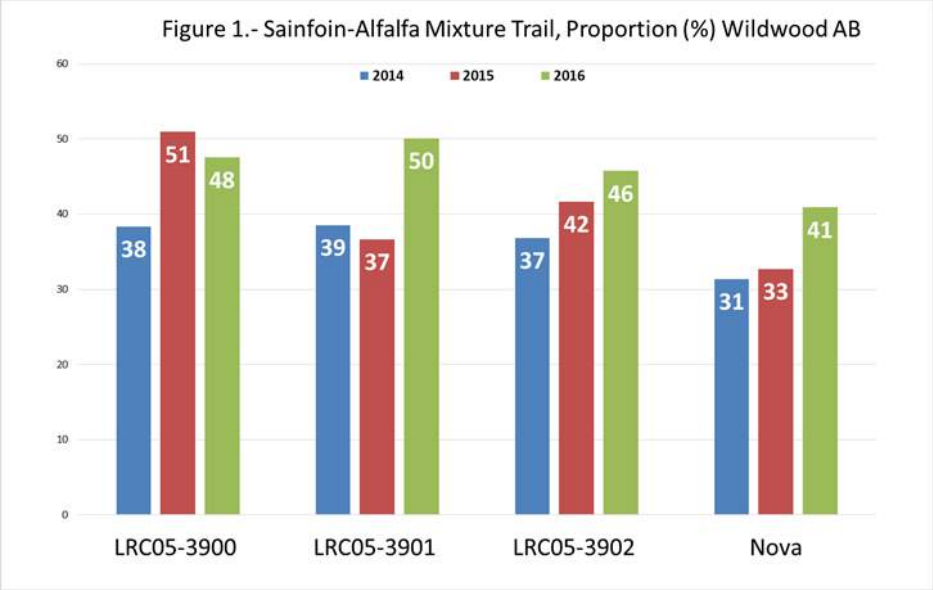


Figure 1. - Sainfoin-Alfalfa Mixture Trial 2013-2016. Proportion (%) of sainfoin in the mixture.

YIELD

Treatments	2014		2015		2016	
	Kg/Ha	lbs/ac	Kg/Ha	lbs/ac	Kg/Ha	lbs/ac
LRC05-3900	2081.7	1858.9	3107.8	2775.2	3500.0	3125.5
LRC05-3901	3728.3	3329.4	4726.4	4220.7	4722.2	4216.9
LRC05-3902	3858.9	3446.0	4152.2	3707.9	10944.4	9773.4
Nova	3093.6	2762.6	3955.8	3532.6	6222.2	5556.4

Table 2. Dry matter yield of sainfoin in the mixtures per year. Sainfoin-Alfalfa Mixture Trial 2013-2016.Wildwood, AB.

In 2014 and 2016 LRC05-3902 yielded highest with 3446 and 9773.4 lbs/acre dry matter, respectively. In 2015 LRC05-3901 yielded highest with 4220.7 lbs/acre dry matter. Table 2 shows the dry matter yield of sainfoin in the mixtures per year. When looking at the three year yield average (Figure 2) the overall highest yielding was LRC05-3902 with 5642 lbs/ acre dry matter.

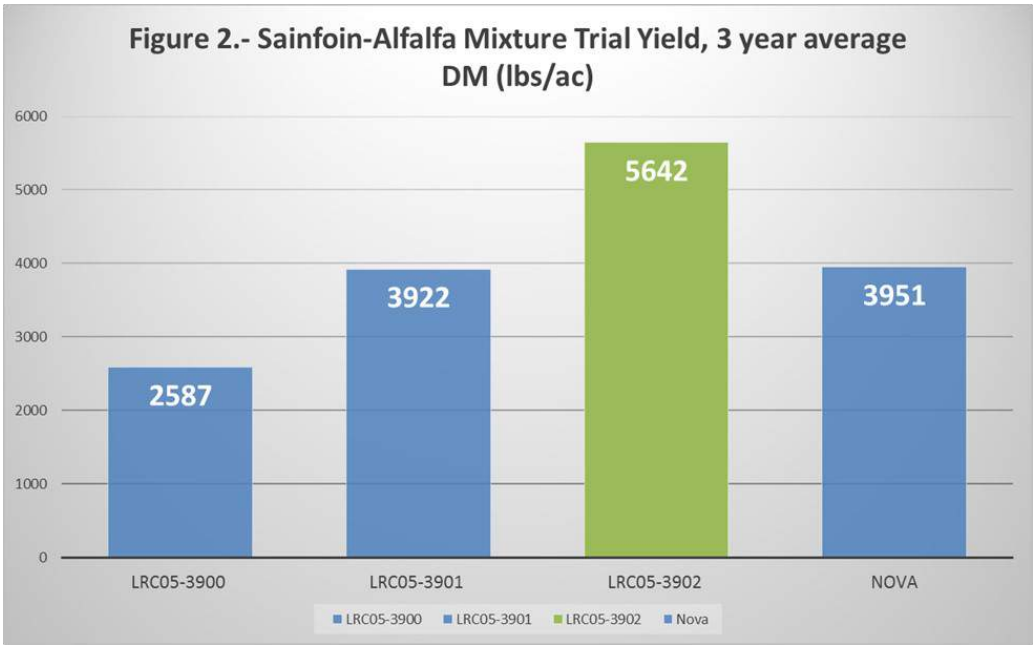


Figure 2. Sainfoin-Alfalfa Mixture Trial 2013-2016. Sainfoin 3 Year yield average. Wildwood AB.

QUALITY

There was no significant difference between the new lines and Nova in the Sainfoin-Alfalfa Mixture Trial.

Figure 3. Sainfoin-Alfalfa Mixture Trial 2013-2016.CP (%), NDF (%) and ADF (%) for sainfoin new cultivars and Nova. Wildwood, AB.

RESULTS

This was a demonstration and results are not statistically significant. Results should be treated with caution as they are from only three years of field testing, and there was low precipitation in 2015.

Good stand establishment was achieved in all treatments. There was weed pressure in 2014 and grasshoppers due to the dry season in 2015. In years 2015 and 2016 only one cut was obtained due to low moisture.

New sainfoin line LRC05-3902, now registered as AC Mountainview, showed a consistent increase in the plant population and yielded the highest overall. Therefore, the establishment of AC Mountainview sainfoin in an alfalfa mixture is recommended to prevent bloat.

NEW SPRING TRITCALE VARIETY TRIAL 2015-2017

PARTNERS

Lacombe Research Centre

Mazen Aljarrah (Wheat and triticale breeder)

Yellowhead County

BACKGROUND

A diversity of spring triticale varieties with high grain and forage yield potential are available to producers. The number of adapted winter varieties is fewer than for the spring types. These varieties also allow a greater diversity of crop rotational options for improved protection from disease and insect damage. As well, the potential biomass production capability for these varieties exceeds that of most other cereal crop options under Western Canadian conditions.

Registered triticale varieties have an excellent disease resistance profile. Although they are more resistant than some other cereals, the late maturity of the spring varieties limits suitability for grain production in some areas. This is a three year applied research trial with the intent to collect information on growth pattern (yield) and quality parameters for newer spring triticale varieties. This will provide data on new and existing varieties for the purpose of grazing.

OBJECTIVE

Determine yield and quality of newer and older spring triticale lines to compare and determine the improvements in the newest lines.

METHODOLOGY

In 2015 plots were seeded at WCFA Forage Research Site, Wildwood, AB on May 26 and on June 21 in 2016 with a small plot Fabro drill in 5 rows at 22.5cm spacing (9m by 1.14m plot area). Soil testing was done and used to prescribe fertilizer applications. In 2015 seed was treated with Raxil MD fungicide. We targeted 370 plants/m² seeding rate. A pre-seed herbicide application was applied each year. Samples were taken to determine yield and sub samples were collected for nutritional quality and sent to A & L Laboratories for quality analysis with wet chemistry.

TREATMENTS

New Lines Spring Triticale	Older Varieties Spring Triticale
04L066001	Taza
09P030	Bunker
04L064010	Tyndal
10P154	Pronghorn
09P141	
09P144	
09P161	
94L043057	
04L066001	

2015 PRELIMINARY FINDINGS

DM Yield and quality

No significant difference between new lines and older lines is shown in the samples from 2015 (Table 1. Quality values for all treatments seeded in Wildwood in 2015). The highest crude protein CP (%) was Tyndal with 11.2% and the lowest was Bunker with 8.4%. Figure 1. shows DM (ton/ac) with the highest being 09P161 with 6.5 ton/ac and the lowest being 10P154 with 4.4 ton/ac. Is worth mentioning that, in general, the newer lines yield one to two tons/ac less than the older varieties. The newer varieties averaged 10.2 CP (%) and the older triticale varieties averaged 9.9 CP (%).

No data was collected in 2016 due to excessive moisture conditions in the fall at the site making it impossible to access the plots. WCFA will extend the project for one more year to gather more meaningful data.

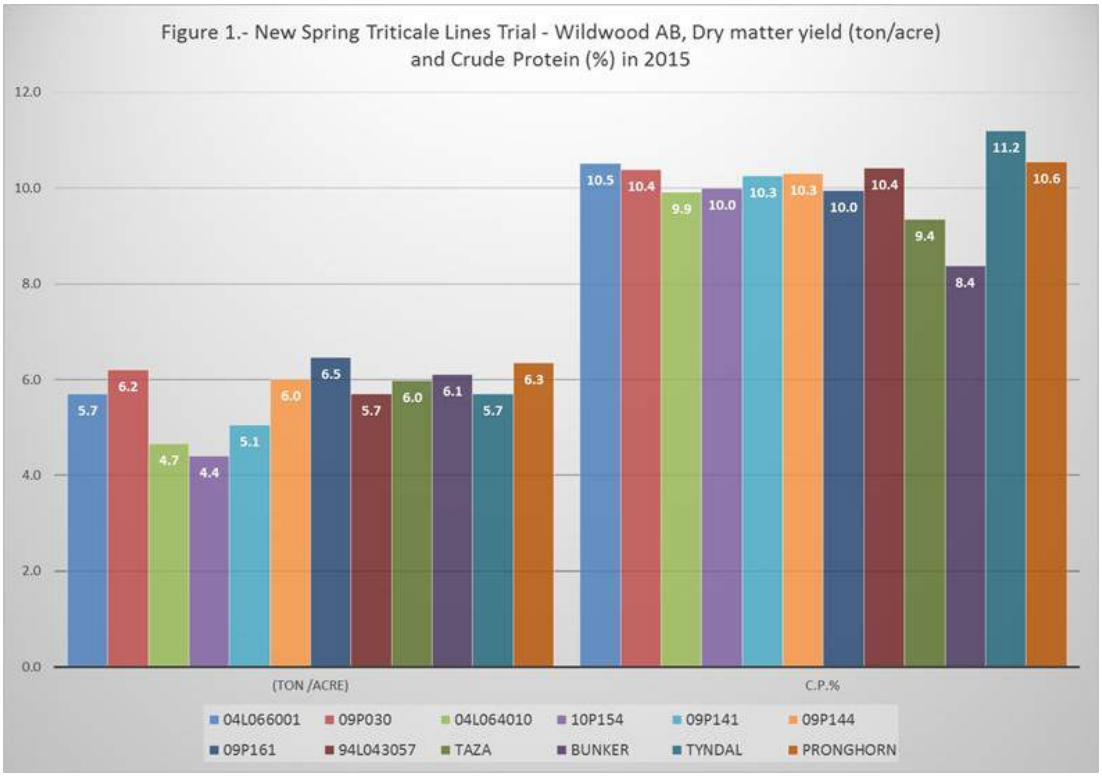


Figure 1. - New Spring Triticale Variety Trial, 2015 DM yield (ton/acre, 1 ton =2000 lbs) and CP (%).

TRITICALE	C.P.%	TDN	Ca	P	K	MG
04L066001	10.5	69.7	0.1	0.2	1.0	0.1
09P030	10.4	67.3	0.2	0.2	1.3	0.1
04L064010	9.9	66.3	0.2	0.2	1.2	0.1
10P154	10.0	62.9	0.1	0.2	1.1	0.1
09P141	10.3	67.4	0.2	0.2	1.3	0.1
09P144	10.3	67.7	0.2	0.2	1.3	0.1
09P161	10.0	63.3	0.2	0.2	1.3	0.1
94L043057	10.4	66.2	0.2	0.2	1.3	0.1
TAZA	9.4	62.8	0.2	0.2	1.2	0.1
BUNKER	8.4	65.9	0.2	0.2	1.1	0.1
TYNDAL	11.2	68.4	0.2	0.2	1.3	0.1
PRONGHORN	10.6	65.5	0.2	0.2	1.6	0.1

Table 1. - New Spring Triticale Variety Trial quality values for all cultivars seeded in Wildwood in 2015.

WINTER GRAZING VARIETY TRIAL
2014-2017

PARTNERS

Ducks Unlimited Canada
Yellowhead County
Farming Smarter
A & L Canada Laboratories

BACKGROUND

Cultivars have better winter hardiness, improved disease resistance and higher yield potential. Also, improved agronomic management such as higher seeding rates, use of seed treatments, better weed control and optimized fertility creates a new profit opportunity for producers. McCartney (2004a) found that swath grazing annual crops is more cost effective than bale fed or silage systems. This means that if it is possible to fall graze and still see sufficient growth in the following season to bring in income, a fall-planted crop may increase land productivity.

This project researches a system that involves early August seeding of winter cereals, grazing fall growth during the winter and harvesting a silage or grain crop the following year. This dual purpose practice is common in the south-west United States (Winter, 1990) but Canada's much shorter growing season discourages adoption here (Baron et al. 1999, Salmon et al. 1996). However, studies suggest that winter cereals may extend annual crop production from four to six months (Baron, 1993).

This trial explores the agronomic and economic impacts of fall grazing through small plot studies in Alberta (one near Evansburg and two near Medicine Hat under irrigation) and field scale information from a local producer using the system.

OBJECTIVES

To evaluate the effect on biomass (silage) and yield production with fall grazing of cattle on winter wheat, fall rye, winter triticale and blends of each.

To evaluate the differences in crop type and varietal suitability to this practice.

Quantify potential differences in winter survival with the application of a seed treatment.

Complete an economic analysis of silage value following grazing vs. ungrazed and the potential to carry the crop through to yield.

TREATMENTS (WITH AND WITHOUT CRUISER MAXX)

Fall Rye – Hazlet
Fall Rye – Prima
Winter Triticale – Fridge
Winter Triticale – Luoma
Winter Wheat – Moats
Winter Wheat – Ptarmigan
Blend – Prima + Fridge
Blend – Prima + Ptarmigan
Blend – Fridge + Ptarmigan

METHODS

Location	Wildwood: winter wheat Mayerthorpe: fall rye and winter triticale
Co-operators	Wildwood: Yellowhead County Mayerthorpe: Kidd's Bros Farms.
Treatment size	5 rows, 9 inch, spacing 1.14 x 9 m, 4 replicates
Previous crop	Forage Grasses
Fertilizer	Wildwood: 19 lbs/ac of Nitrogen, 24 lbs/ac of Phosphate Mayerthorpe:43 lbs/ac of Nitrogen, 27 lbs/ac of Phosphate
Tillage	Pre-seed burnoff,
Seeding date	Wildwood: generally Aug 22, Sep 8 and Sep 29 Mayerthorpe: generally Sep 15
Seeding method	Small plot drill /equipped with 5 disc openers
Seeding rate	400 seeds/m²
Weed control	Wildwood: Round up Weather Max Aug 20/2014, CrushR Plus July 27/2015, Mayerthorpe: Round up + Express Pro July 25/2015 Both site received a pre-seed application of Roundup
Harvest method	Sickle mower
Harvest date	Wildwood: generally in July Mayerthorpe: generally in July

DISCUSSION

WCFA continued to collect data in 2017, from both the Wildwood and Mayerthorpe sites. WCFA will conduct plant counts this spring and collect samples for yield and quality at the end of the growing season. Final report will be issued early in 2018.

WINTER CEREALS VARIETY TRIAL
2015 - 2017

PARTNERS
Lacombe Research Centre
Mazen Aljarrah (Wheat and triticale breeder)
Yellowhead County

BACKGROUND
A diversity of spring triticale varieties with high grain and forage yield potential are available to producers. The number of adapted winter varieties is fewer than for the spring types. These varieties also allow a greater diversity of crop rotational options for improved protection from disease and insect damage. As well, the potential biomass production capability for these varieties exceeds that of most other cereal crop options under Western Canadian conditions. Registered triticale varieties have an excellent disease resistance profile. Although they are more resistant than some other cereals, the late maturity of the spring varieties limits its suitability for grain production in some areas. This is a three year applied research trial with the intent to collect information on growth pattern (yield) and quality parameters for newer spring triticale varieties. This will provide data on new and existing varieties for the purpose of grazing.

OBJECTIVES
To observe and document winter survivability on different varieties.
Determine yield and quality of newer and older winter cereal lines and determine the improvements in the newest lines.

METHODOLOGY
Trials were seeded on August 14 the first year (2015) and August 18 the second year (2016) using a small Fabro drill with 5 row disc openers at 22.5 cm spacing. Target seeding rate was 370 plants /m². The site was sprayed with Glyphosate prior to seeding. Plots were harvest by sickle mower and samples collected and wet and dry weights were recorded to determine dry matter content. Quality samples were taken from a compilation of the dried yield samples and sent to the A & L Laboratories in Ontario. In the spring of 2016 plant counts were taken to determine the winter survivability of each treatment. MCPA amine 600 was applied on May 13, 2016.

TREATMENTS

Variety	Specie	Variety	Specie	Variety	Specie
Hazlet	**Fall Rye**	Louma	**Triticale**	06A051	**New Triticale**
Prima	**Fall Rye**	Metzger	**Triticale**	02D004008	**New Triticale**
Radiant	**Wheat**	Bobcat	**Triticale**	02D005007	**New Triticale**
Emerson	**Wheat**	Pika	**Triticale**	02D006005	**New Triticale**
Pintail	**Wheat**	Louma	**Triticale**	03D005004	**New Triticale**
Moats	**Wheat**	Metzger	**Triticale**	06D013002	**New Triticale**
Ptarmigan	**Wheat**	Bobcat	**Triticale**	11B012	**New Triticale**
				11B019	**New Triticale**
				06A051	**New Triticale**
				02D004008	**New Triticale**
				02D005007	**New Triticale**

RESULTS

Winter survival

This is a demonstration and so the results are not statistically significant. The trial was to test the winter hardiness of new winter cereal lines. Samples were collected in the spring of 2016. Table 1 shows the percentage of the plant population from each treatment that survived the winter. From the eight new lines only two: 03D005004 and 06D013002 show less than 80% survival with 54 and 50 (%) respectively. From the older varieties 5 out of 14 were lower than 80% survival: Radiant with 67%, Ptarmigan and Louma with 67%, Metzger with 38% and Pika with 71%.

Variety	% survived
Hazlet	100
Prima	100
Radiant	67
Emerson	104*
Pintail	88
Moats	83
Ptarmigan	67
Louma	67
Metzger	38
Bobcat	100
Pika	71
06A051	88
02D004008	100
02D005007	104*
02D006005	83
03D005004	54
06D013002	50
11B012	113*
11B019	96

Table 1. – Winter Cereal Variety Trial. Winter survival (%) seeded at Wildwood AB in 2015

* The number of plants counted in spring 2015 were greater than the amount counted in fall 2016

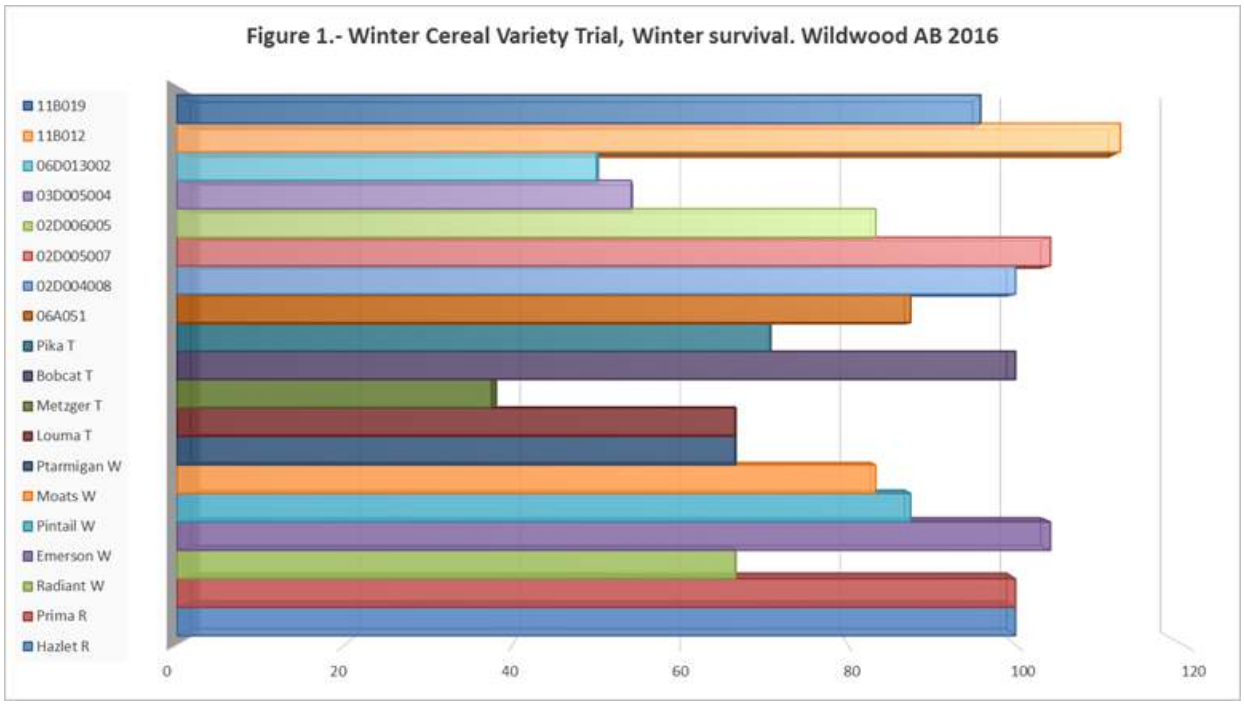


Figure 1. – Winter Cereal Variety Trial. Winter survival (%) seeded at Wildwood AB in 2015

DM YIELD AND QUALITY

Crude Protein CP (%) levels that are needed to maintain a pregnant cow in late pregnancy to calving are 9 to 11 CP (%). Only two varieties were equal to or higher than these values: Radian with 9 and Emerson with 10 CP (%). Total Digestible Nutrients (TDN) is another value that measures the available energy of feeds. A pregnant cow in her last trimester will require 60% TDN to maintain her body condition. 4 out of 19 of the treatments show less than 60 % TDN: Moats with 58.1 %, and Metzger, Pintail and Louma all with 59.1 % (Figure 2).

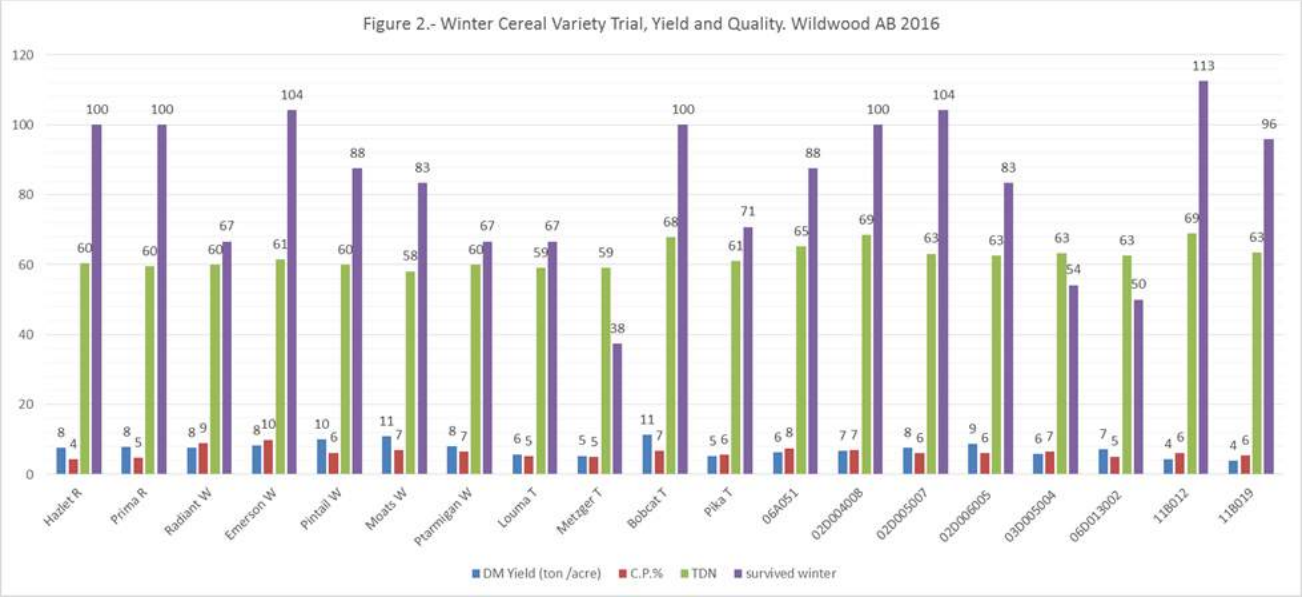
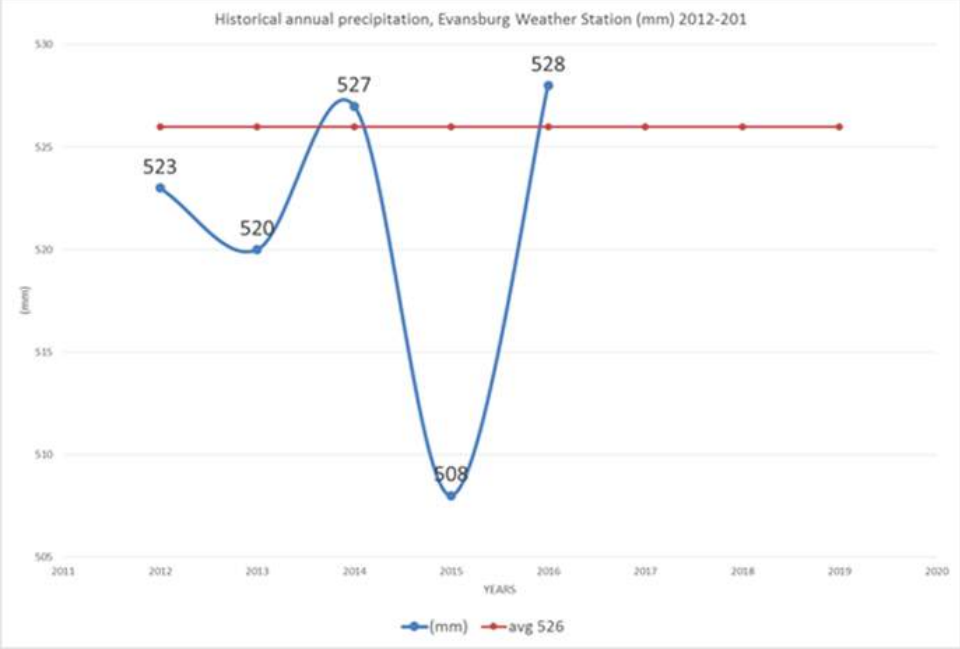


Figure 2. – Winter Cereal Variety Trial yield and quality. Wildwood, AB, 2016

ENVIRONMENTAL CONDITIONS

The historical annual total precipitation of the gray wooded soil zone from 1971 to 2000 was 526mm on average and the growing season precipitation (May until October) is 447mm on average (Alberta Weather Data Viewer, 2016). Graphic #2 shows the Historic annual precipitation for the Evansburg weather station. Graphic #1 shows the accumulative precipitation for the growing season from the Evansburg weather station.



Graphic #1.Historic annual precipitation for the Evansburg weather station from 2012 to 2016

Graphic #2. Growing season precipitation in the Evansburg weather station 2012-2016