WEST-CENTRAL FORAGE ASSOCIATION

2017 Annual Report

Celebrating 40 years in 2018!

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.

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PRESIDENT'S MESSAGE

In 2018, West-Central Forage Association is celebrating its 40th anniversary! Founded in 1978 by a local group of agricultural producers with the desire to learn and share information. This is the basic premise that continues to guide our organization. It would not be here if it were not for the groups of people here today.

The 2017 year was a another busy year for West -Central Forage Association. The quantity and quality of project and extension work completed by our fantastic staff was very impressive. Today we will share some of the highlights from the past year. I would like to take this opportunity to personally thank Melissa, Fito, Jessica, Tammy and our summer students for all of the hard work and dedication they contribute to our organization. They truly make the job of serving on the Board of Directors a positive experience.

This year, the Board of Directors and the staff have tried to really focus on the type of programming and services that we provide. Many of you have had the opportunity to complete the Needs Assessment Survey, and we are thankful for that. I would encourage anyone who has not done so to take the time to complete theirs. As a board, we are constantly trying to help guide the organization to provide useful and relevant forage based business information and services in order to meet the needs of our membership. This is always a challenging task, and the more feedback we receive, the better we feel we can accomplish this. It is important to remember that at the end of the day, the purpose of our organization is to provide our members with what they are looking for.

Each year brings a slightly different group of people to the Board of Directors. Last year's AGM marked the end of terms for Therese Tompkins and Ted Commandeur. The new faces on the Board this year are Brian Dickson and Shayne Horn. Over the past year I have truly grown to respect the opinions and contributions that these two have given at our meetings. This year will mark the end of terms for three of our Directors. Eric Vanderwell, Stacey Meunier and myself, we will be completing our terms and will be replaced by three new members. I want to take this opportunity to thank Eric and Stacey for the time and energy that they have donated to our organization over the years.

As I mentioned above, this years AGM marks the end of two consecutive terms on the Board of Directors for myself. I want to take this opportunity to thank all of the people that I have had the chance to get to know at West-Central Forage Association during this time. I have had the pleasure of getting to know many positive and intelligent individuals that volunteer on our Board in order to see it continue to build success and strengthen our organization. I have learned a great deal from each and every one of them over the years. I believe that WCFA staff, Directors and members are some of the very best people that can be found anywhere in the world. It is because of this that WCFA has been here for 40 years and I am looking forward to seeing what happens in the next 40.

Grant Taillieu

President West-Central Forage Association

MANAGER'S MESSAGE

2017 spring started out posing difficulties due to wet conditions and excess rainfall. We then had a later summer with excess moisture and hail damage, but everything was successfully harvested in the plots.

It was very exciting to add another small plot site in partnership with Brazeau County. With the county's huge economic impact coming from the oil and gas sector they are striving for economic diversification with Industrial Hemp. This was a huge learning year for us as we seeded late, into moisture and then received two hail storms during the summer. We were able to complete our variety trial with plant counts and a very successful Hemp Tour. It was sold out with over 60 attendees joining us for a learning experience from tours of plot tours, Bio-Composites facility and hemp on a field scale.

In August, I had the opportunity to attend the Canadian Beef Industry Conference in Calgary and shared a trade fair booth with Peace County Beef and Forage, Chinook Applied Research Association and Foothills Forage and Grazing Association. This was a huge opportunity for myself to network with the other associations and industry. Fito attended the Canadian Forage and Grassland Association's Annual Conference in Guelph where the message was to focus on improving the organic matter and the importance of taking care of the soil and the land. Jessica attended the Advancing Woman's Conference in Calgary. She felt that it was uplifting, inspiring and empowering messages from all the speakers there.

Towards the end of the year we launched a new website. The new site is now mobile friendly, and more user friendly. We continued to grow our Social media presence, with 473 Facebook followers, 704 Twitter followers, and we're now on Instagram with a small following of 54 followers and growing!

A very influential initiative was started this year; Regionally Connected Agriculture – Apply, Adapt, Adopt. All thirteen ARA's joined together to leverage funds from the Canadian Agricultural Partnership while ensuring the investment will create burgeoning value through our organizations, farm businesses and all supporting industries thought the province. The initiate enabled strong relationships with local MLA's, Minister O'Neil Carlier and other leading industry partners.

WCFA is a producer driven organization, so we always look for feedback and ideas from producers and industry. In 2017 WCFA created our Member Needs Assessment Survey. We looked to our members to give feedback on what we have excelled at in the past and what they would like to see more of in the future. By gaining some insight into their demographics as well, we will be able to create better programming moving forward.

I would like to close by thanking our staff, board of directors, members, co-operating producer partners, municipal, provincial and federal governments and all others who contribute to the success of the association year after year.

Melissa Freeman

General Manager

Meeting with MLA's for the Regionally Connected Agriculture Initiative

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 Opportunity Fund
Agriculture and Agri-Food Canada
Alberta Agriculture and Forestry
Alberta Beef Producers
Alberta Environmental Farm Plan
Alberta Forage Industry Network (AFIN)
Alberta Seed Processors
Alternative Land Use Services (ALUS)
Applied Research & Extension Council (ARECA)
Bart Guyon
Battle River Research Group (BRRG)
Beef Cattle Research Council (BCRC)
Brazeau County
Bouius Custom
Canadian Cattle Identification Agency (CCIA)
Canadian Round Table for Sustainable Beef (CRSB)
CanaMaize
Chinook Applied Research Association (CARA)
Cows and Fish
Ducks Unlimited Canada
Farming Smarter (FS)
Foothills Forage and Grazing Association (FFGA)
Gateway Research Organization (GRO)
Grey Wooded Forage Association (GWFA)
Growing Forward 2/Canadian Agricultural Partnership
Har-De Agri Services
Lac Ste. Anne County
Lakeland Applied Research Association (LARA)
Land Stewardship Centre
Leduc County
Mercer Seeds Ltd.
Mackenzie Applied Research Association (MARA)
North Peace Applied Research Association (NPARA)
Northstar Seeds
Parkland County
Parkland Industrial Hemp Growers
Peace Country Beef & Forage Association (PCBFA)
Performance Seed
Pickseed
Smoky Applied Research & Demonstration Association (SARDA)
TerraMax
Thunder Seed Canada
Union Forage
University of Alberta Breton Plots
Yellowhead County
Woodlands County

2017 BOARD EXECUTIVE

President	Vice-President	Treasurer	Secretary
Grant Tallieu	Grant Chittick	Dale Engstrom	Stacey Meunier

2017 DIRECTORS

Larry Kidd	Shayne Horn	Eric Vanderwell	Greg Malyk
Frank Maddock	Brian Dickson	Brett Byers	

2017 STAFF

Melissa Freeman, BBA
Manager
780-727-4447
manager@westcentralforage.com

Fito Zamudio Baca, BSc., P.Ag.
Forage & Livestock Program Manager
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Jessica Watson, BSc. Ag
Conservation Agriculture & Extension
Program Manager
780-727-4424
conservationag@westcentralforage.com

Tammy Zinyk
Bookkeeper
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acctwcfa@gmail.com

2017 SUMMER STAFF

Rachael Nay
Anna Harapchuk

2017 Annual General Meeting

Reference Documents

2018 ANNUAL GENERAL MEETING SCHEDULE OF EVENTS

MARCH 15, 2018

EVANSBURG ROYAL CANADIAN LEGION

4:00PM Registration

4:30PM 2017 Update Presentations

5:30PM Supper

6:30PM Annual General Meeting

7:30PM John Knapp- '*Global Macro Trends and the Future of Agriculture in Alberta*'

Annual General Meeting

West-Central Forage Association

March 15, 2018

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 2017 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. 2018/19 Budget
8. Appointment of the Auditor
9. Director Election
10. Adjournment

WEST-CENTRAL FORAGE ASSOCIATION
2017 AGM MINUTES

March 29, 2017
Carrot Creek, Alberta

Meeting called to order by Brett Byers at 7:00PM

Motion 2017.03.29-AGM-M01

Motion that members present constitutes a quorum.

Ron Deleuuw /Grant Taillieu Carried

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

Adoption of the Agenda

Motion 2017.03.29-AGM-M02

Motion to adopt the agenda as presented.

Bob Kidd/ Gerry Taillieu Carried

Minutes from the 2016 AGM

Motion 2017.03.29-AGM-M03

Motion to adopt the minutes as presented.

Frank Kreddig/John Fearnley Carried

Reports

Treasurer's Report

Financial Statements presented by Trevor Dodd CPA, CA of Hawkings Epp Dumont.

Motion 2017.03.29-AGM-M04

Motion to accept the financial statements as presented.

Dale Engstrom /Bob Kidd Carried

2017/18 Budget – Dale Engstrom, Treasurer

2017/2018 Budget presented by Treasurer Dale Engstrom.

Discussion regarding Stem Mining Weevils income and expenses

Motion 2017.03.29-AGM-05

Motion to adopt the budget as presented.

Dale Engstrom/ Dale Kaliel Carried

Appointment of the Auditor

Motion 2017.03.29-AGM-06

Motion to re-appoint Hawkings Epp Dumont as the auditor for 2016/17.

Ron Deleuuw/ Bob Kidd Carried

Election of Directors

Call for nominations:

Brian Dickson nominated by Ron Deleuuw

Shayne Horn nominated by Chad Meunier

Grant Chittick nominated by Bruce Churchill

Therese Tompkins nominated by Denver Hoff

Motion 2017.03.29-AGM-07

Motion that nominations cease.

Frank Kreddig/James Birkenhagen Carried

Election Results

Linda Hunt of Alberta Agriculture and Forestry and Ginette Boucher of Grey Wooded Forage Association acted as scrutineers.

The three nominated directors were Brian Dickson, Shayne Horn & Grant Chittick who were elected by secret ballot

Adjournment

Motion 2017.03.29-AGM-08

Motion to adjourn the meeting.

Bob Kidd/Bill Schneider Carried

Meeting adjourned at 7:48 PM

_____

Brett Byers, Vice President

_____

Melissa Freeman, Recorder

Appendix 1. Roll Call

Board of Directors
Brett Byers – Vice President
Dale Engstrom – Treasurer
Grant Chittick
Eric Vanderwell
Greg Malyk
Ted Commandeur
Stacey Meunier
Grant Taillieu
Larry Kidd

Staff
Melissa Freeman
Fito Zamudio
Jessica Watson

Members

Bruce Churchill
Yvonne Churchill
Tom Thompson
Chad Thorson
Janick Thorson
Jennifer Tkachuk
Marilyn Fearnley
Shayne Horn
Denver Hoff
Linda Engstrom
James MacRae
Kris Commandeur
Darren Ohnysty
Peter Bahrynowski
Bill Schneider
David Banks
Ron Deleeuw
Janet Deleeuw
John Fearnley
Frank Kreddig
James Birkenhagen
Bob Kidd
Brian Dickson
Egbert Vogler
Dale Kaliel
Dan Richard
Tim Boender
Nolene Boender
Cheryl Tailieu
Chad Meunier
Victor Sonnenberg
Jillian Byers
Les Schatz
Falon Dickson

Guests
Ginette Boucher, Grey Wooded Forage Association
Linda Hunt, Alberta Ag & Forestry
Matt Robertson & Paige Callaway, Singer/ Entertainment
Mike Nicoletti – Remedy Animal Health
Jennifer Benson – Yellowhead County
Sean Allan – Brazeau County
Laura Duncan – Parkland County
Jenny Arts – ALUS Parkland County
Graeme Finn – Union Forage
Andew Tetz – Alpine
Bruce Avison – Harde-Ag
Shane Menzak – UFA
John Alden -- North Central Co-op

WEST CENTRAL FORAGE ASSOCIATION

Financial Statements

For The Year Ended November 30, 2017

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 Metrix Group LLP, Chartered Professional Accountants. Their report to the Members, stating the scope of their examination and opinion on the financial statements follows.

Grant Taillieu, President

Dale Engstrom, Treasurer

Evansburg, Alberta
March 15, 2018

METRIX GROUP LLP
CHARTERED PROFESSIONAL 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, 2017 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, 2017 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.

METRIX GROUP LLP

Chartered Professional Accountants

March 15, 2018
Edmonton, Alberta

WEST CENTRAL FORAGE ASSOCIATION
Statement of Financial Position
As at November 30, 2017

	2017	2016
ASSETS		
CURRENT		
Cash and cash equivalents	$ 79,709	$ 243,301
Accounts receivable	70,491	51,012
Goods and Services Tax	4,961	2,586
Interest receivable	93	120
Inventory	1,085	1,085
Prepaid expenses	387	3,255
	156,726	301,359
TANGIBLE CAPITAL ASSETS *(Note 3)*	49,693	34,340
	$ 206,419	$ 335,699
LIABILITIES		
CURRENT		
Accounts payable and accrued liabilities	$ 12,494	$ 6,679
Wages payable	14,204	2,586
Deferred revenue *(Note 4)*	65,258	234,963
	91,956	244,228
NET ASSETS		
Unrestricted	114,463	91,471
	$ 206,419	$ 335,699

ON BEHALF OF THE BOARD

_____ *Director*

_____ *Director*

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

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WEST CENTRAL FORAGE ASSOCIATION
Statement of Revenues and Expenditures
For The Year Ended November 30, 2017

	2017	2016
REVENUE		
Grants *(Schedule 1)*	$ 440,505	$ 318,799
Weevils and flies sales	90,151	11,326
Other	7,769	19,577
Member services	7,394	5,495
Donations and sponsorships	6,787	6,888
	552,606	362,085
EXPENDITURES		
Salaries, wages and benefits	255,453	186,420
Weevils and flies	69,586	8,605
Occupancy	35,312	29,975
Office and general	30,706	12,728
Plot and demonstration	30,447	22,616
Extension	19,511	12,083
Travel	19,197	28,049
Staff development	13,492	3,198
Accounting fees	11,917	11,928
Telephone	6,888	6,030
Insurance	6,590	4,960
Audit fees	4,769	5,300
Interest and bank charges	1,821	3,601
Vehicle	1,271	-
Member services	437	1,593
	507,397	337,086
EXCESS OF REVENUE OVER EXPENDITURES FROM OPERATIONS	45,209	24,999
OTHER EXPENSES		
Amortization	22,217	12,999
EXCESS OF REVENUE OVER EXPENDITURES	$ 22,992	$ 12,000

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, 2017

	2017	2016
NET ASSETS - BEGINNING OF YEAR	**$ 91,471**	$ 79,471
Excess of revenue over expenditures	**22,992**	12,000
NET ASSETS - END OF YEAR	**$ 114,463**	$ 91,471

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

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WEST CENTRAL FORAGE ASSOCIATION
Statement of Cash Flows
For The Year Ended November 30, 2017

	2017	2016
OPERATING ACTIVITIES		
Excess of revenue over expenditures	$ 22,992	$ 12,000
Item not affecting cash:		
Amortization	22,217	12,999
	45,209	24,999
Changes in non-cash working capital:		
Accounts receivable	(19,479)	(33,557)
Goods and Services Tax	(2,375)	2,448
Interest receivable	27	-
Prepaid expenses	2,868	(1,205)
Accounts payable and accrued liabilities	5,813	(12,308)
Wages payable	11,618	(19,045)
Deferred revenue	(169,705)	111,450
	(171,233)	47,783
	(126,024)	72,782
INVESTING ACTIVITY		
Purchase of tangible capital assets	(37,568)	-
INCREASE (DECREASE) IN CASH FLOW	(163,592)	72,782
Cash and cash equivalents - beginning of year	243,301	170,519
CASH AND CASH EQUIVALENTS - END OF YEAR	$ 79,709	$ 243,301

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, 2017

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 and accounts receivable.

Financial liabilities 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 or 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.

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.

(continues)

WEST CENTRAL FORAGE ASSOCIATION
Notes to Financial Statements
For The Year Ended November 30, 2017

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

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
Motor vehicles	30%	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, 2017

2. FINANCIAL INSTRUMENTS

The Association is exposed to various risks through its financial instruments and has a 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, 2017.

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	**2017 Net book value**	2016 Net book value
Equipment	$ 90,336	$ 64,366	**$ 25,970**	$ 34,084
Furniture and fixtures	7,121	7,071	**50**	256
Motor vehicles	23,962	3,594	**20,368**	-
Computer equipment	9,475	6,170	**3,305**	-
	$ 130,894	$ 81,201	**$ 49,693**	$ 34,340

4. DEFERRED REVENUE

	2016	Additions	Used	2017
Agriculture Opportunity Fund	$ 171,821	$ 175,000	$ 306,467	$ 40,354
Stewardship Alliance for Conservation Agriculture	23,885	48,980	59,172	13,693
Lac Ste Anne County	-	6,000	-	6,000
Stem Gall Flies	25,194	34,304	54,557	4,941
Memberships	510	3,990	4,230	270
Woodlands County	8,598	-	8,598	-
Yellowhead County	4,955	-	4,955	-
	$ 234,963	$ 268,274	$ 437,979	$ 65,258

WEST CENTRAL FORAGE ASSOCIATION

Grants ***(Schedule 1)***

For The Year Ended November 30, 2017

	2017	2016
Agricultural Opportunity Fund	$ 306,467	$ 198,354
Stewardship Alliance for Conservation Agriculture - Matched Funds	59,172	42,405
Ducks Unlimited Canada	18,251	18,251
Woodlands County	16,500	3,302
Brazeau County	15,150	-
Other	11,181	19,362
Human Resources Development Canada Student Funding	8,784	-
Parkland County	4,000	4,000
Leduc County	1,000	1,250
West Central Airshed Society	-	26,000
Yellowhead County	-	3,445
Alberta Biodiversity Monitoring Institute	-	2,230
County of Wetaskiwin	-	200
	$ 440,505	$ 318,799

Please note: Yellowhead County contributed Grant Funding in 2017 for $8,000 for Agriculture Service Board Grant and $5,640 grant funding for SACA. Cheques were deposited after November 15, 2016 and November 24, 2017, but due to the year end of November 30 the funding does not show here.

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

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WCFA OPERATING BUDGET 2018:	Budget
Revenue	**2018**
Government Grants:	
AOF AG	$ 100,000.00
AOF Environmental	$ 75,000.00
AOF Supplementary	
SACA	$ 33,000.00
HRDC Student funding	$ 8,460.00
SACA matching	$ 13,140.00
Counties	$ 45,000.00
	$ 274,600.00
General Revenue	
Sales/Advertising	$ 500.00
Corporate Sponsorship	$ 6,000.00
AGM	$ 3,000.00
Corn	$ 7,000.00
Cover Crops	$ 7,000.00
Fee for Service	$ 600.00
Hay/Silage/Soil Testing	$ 2,500.00
Interest	$ 300.00
Weevil/Fly Interest/SC	$ -
Memberships	$ 4,500.00
Newsletter Advertising	$ 1,000.00
Donations (Private)	$ 1,000.00
Building Rent	$ 150.00
Equipment Rent	$ 1,000.00
Stem Flies	$ 49,920.00
Weevils	$ 90,000.00
Land Stewardship Centre	$ 2,500.00
ALES	$ 4,000.00
ARECA - Sanfoin	
other	
In Kind	
Seed Growers Cooperative	$ 1,500.00
Winter Cereals Trial/Ducks	
Workshop Registrations	$ 10,000.00
	$ 192,470.00
Revenue Total	**$ 467,070.00**

WCFA OPERATING BUDGET 2018:	Budget
Revenue	**2018**
Government Grants:	
AOF AG	$ 100,000.00
AOF Environmental	$ 75,000.00
AOF Supplementary	
SACA	$ 33,000.00
HRDC Student funding	$ 8,460.00
SACA matching	$ 13,140.00
Counties	$ 45,000.00
	$ 274,600.00
General Revenue	
Sales/Advertising	$ 500.00
Corporate Sponsorship	$ 6,000.00
AGM	$ 3,000.00
Corn	$ 7,000.00
Cover Crops	$ 7,000.00
Fee for Service	$ 600.00
Hay/Silage/Soil Testing	$ 2,500.00
Interest	$ 300.00
Weevil/Fly Interest/SC	$ -
Memberships	$ 4,500.00
Newsletter Advertising	$ 1,000.00
Donations (Private)	$ 1,000.00
Building Rent	$ 150.00
Equipment Rent	$ 1,000.00
Stem Flies	$ 49,920.00
Weevils	$ 90,000.00
Land Stewardship Centre	$ 2,500.00
ALES	$ 4,000.00
other	
In Kind	
Seed Growers Cooperative	$ 1,500.00
Workshop Registrations	$ 10,000.00
	$ 192,470.00
Revenue Total	**$ 467,070.00**

Board Expenses		
Meetings/Travel	$	500.00
Training	$	500.00
Total Board Expenses	**$**	**1,000.00**
Total Adminstrative Expenses	**$**	**185,749.75**
Project Expenses		
Plots Expenses		
Hauling & Custom Work	$	1,000.00
Equipment rep & maint	$	2,000.00
Soil/Feed/Water Testing	$	10,000.00
Tools & Supplies	$	2,000.00
Fuel	$	700.00
Total Plots Expenses	**$**	**15,700.00**
Extension Expenses		
Consultant/Professional Fees	$	3,500.00
Extension materials	$	300.00
Registration		
Facilities	$	1,500.00
Newsletters	$	3,000.00
Meals	$	4,000.00
Travel	$	1,500.00
Website	$	1,500.00
Total Extention Expenses	**$**	**15,300.00**
Total Plots & Extension	**$**	**31,000.00**
Total Expenses	**$**	**505,125.19**
	$	**(38,055.19)**

EXTENSION EVENTS

WCFA & SACA

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

West-Central Forage Association

@WestCentralFor

@westcentralforage


Sustainable Beef Field Day
January 25, 2017
Planning Committee for WC
Conference on Soil Health & Grazing
Jim Gerrish Grazing School
June 30, 2017
Corn 101
February 22, 2017
2017 AGM
March 29, 2017
Industrial Hemp Field Day
August 30, 2017

JANUARY

Extensive Winter Feeding Workshop (January 19, 2017)

Held at Glen Park Hall in partnership with Leduc County. Karin Lindquist with Alberta Agriculture discussed various methods of winter feeding, advantages & disadvantages, etc. Tom Thompson, Larry Kidd and Darren Frank formed the producer panel and they each discussed the methods they employ in their operations and the benefits they see. 29 attendees.

Sustainable Beef Field Day (January 25, 2017)

Held at WCFA board member Eric Vanderwell's in partnership with Parkland County. Mike Nicoletti demonstrated the Tru-Test scale head and RFID wand on live cattle. Go 360/ BioTrack talked about their management software and demonstrated its smart phone capabilities. AgCon Aerial Corp demonstrated their drone technology live and CCIA presented on the importance of age verifying your cattle. 28 attendees.

Go 360/ Bio Track seminar (January 26, 2017)

Held at the WCFA office. Jasper Munro walked producers though the system and how to input and track all information in the herd management software. 2 attendees.

FEBRUARY

Corn 101 (February 22, 2017)

Held at the WCFA office in partnership with Brazeau County. Dr. Bart Lardner with the WBDC discussed managing winter grazing systems and Patrick Fabian with Thunder Seed discussed different low heat varieties and seeding techniques. Bruce Avison from local Har-De Agri Services discussed fertilizer and strategies for maximizing profit with corn grazing. Andrew Tetz with Alpine discussed liquid fertilizer and it's benefits. 56 attendees.

MARCH

Annual General Meeting (March 29, 2017)

Held at the Carrot Creek Hall with a number of producers and industry representatives present. Updates were provided on WCFA's activities for 2016 by the staff. We featured a mini Ag trade fair and had Matt Robertson Country Music close out the evening. 62 attendees.

APRIL

Generating Electricity from the Sun & Planning for Wet & Dry Years (April 5, 2017)

Held at the Sand Hills Hall in partnership with Parkland County. Rob Harlan from the Solar Energy Society of Alberta covered solar electric system siting, installation and the permitting process. Parkland County ALUS explained how to prepare for wetter and drier years by enhancing wetlands. 15 attendees.

Managing Unharvested Crops (April 25, 2017)

Hosted at the Wildwood Community Hall by Yellowhead County, WCFA was invited to participate in the day. Representatives from AFSC, Alberta Ag & Forestry and Alberta Environment & Parks were present to discuss options for producers with crop still out in the field.

Classroom Agriculture Presentations (April 19, May 31, June 16, 2017)

Presentations were delivered at the Evansburg, Wildwood and a Drayton Valley school to Gr. 4/5's. Students were introduced to various aspects of agriculture and the roles of West-Central Forage in the industry.

MAY

Setting up for Farm Business Success (May 24, 2017)

Held in the Blue Ridge Hall in partnership with Woodlands County. Dave Horner with Farm Succession Solutions discussed farm transitions and the "cost of doing nothing". Joel Bokenfohr with Alberta Agriculture discussed succession planning and business structure and Rick Dehod with Alberta Agriculture talked about buying farmland . AFSC and Feeder Associations of Alberta Ltd. gave financing options presentations. 16 attendees.

JUNE

Jill Clapperton (June 6, 2017)

Held at Lakeland College in Vermillion. WCFA sponsored the event in partnership with LARA, BRRG, GRO and CARA. Staff from WCFA attended the field day.

Western Beef Development Summer Field Day (June 19-21, 2017)

2 WCFA staff and 2 WCFA members attended the WBDC Field Day in Lanigan, SK. They toured the University of Saskatchewan's Dairy Research Facility in Saskatoon, and then attended the field day at the Termuende Research Ranch the following day. Presentations were given at the ranch in the morning, with field tours in the afternoon.

Pond Days (June 6, 9, 14, and 15, 2017)

4 Pond Days were hosted in partnership with Yellowhead, Woodlands and Parkland Counties. Days were hosted at various lakes throughout the area for Gr. 4/5 students to learn about riparian health, soil and other lake and environmental topics.

Jim Gerrish Grazing School (June 30, 2017)

Held at Cherhill Legion Hall. Jim gave a classroom presentation on grazing management concepts, followed by some hands-on learning in the field in the afternoon (hosted at WCFA board member Meunier Farms). 47 attendees.

AUGUST

Hemp Field Day (August 30, 2017)

Held in partnership with Brazeau County. Stops included: WCFA's Brazeau County Research Site, where presentations were given by Bart Guyon, Stephen Lindop and Fito Zamudio; BioComposites Group facility, which processes hemp fibre in to a number of different products; Hughes Farm hemp field, where Byron James with Innotech presented on growing hemp; and the final stop was the University of Alberta Breton Plots to view their variety trial (the same trial as WCFA). 61 attendees.

SEPTEMBER

WCFA Producer Appreciation/Plot Tour (September 21, 2017)

Held at the Yellowhead County office/WCFA Plots in partnership with Yellowhead County. Clair Langlois, Cereal Extension specialist discussed winter wheat options. Neil Blue gave forage and crop market information and Grant Lastwika presented information on cover crops for soil health. Pickseed talked about corn varieties and grazing corn. Attendees were able to walk through our plots following lunch. 25 attendees.

OCTOBER

Tools to Build your cowherd (October 27, 2017)

Held at the Warburg Community Centre in partnership with Alberta Agriculture and Leduc County. John Basarab discussed genetic and genomic tools to develop a productive cow herd. Barry Yaremcio talked about variability in feed supply and quality and vets form the .Bluffton clinic gave options for scour problems and vaccination protocols. 32 attendees.

NOVEMBER

Shelterbelt Workshop (November 22)

Yellowhead County hosted, WCFA was invited to be a part of the workshop and present on stem-mining weevils and stem-gall flies for Canada thistle control.

DECEMBER

Western Canada Conference on Soil Health & Grazing (Dec 5-7, 2017)

Held in Edmonton in partnership with the other applied research and forage associations. WCFA staff sat on the planning committee, promotional committee and website committee. The Key Note Speaker was Gabe Brown. Other speakers included Jim Gerrish, Richard Teague, David Brandt, JC Cahill, among a number of others.

Antimicrobial Lunch & Learn (December 15, 2017)

Held at the WCFA office in partnership with Yellowhead County. Dr. Keith Lehman, Chief Provincial Veterinarian, discussed antimicrobial resistance and the upcoming changes in legislation that will affect the administration of antibiotics in livestock. Boehringer-lingelheim presented on their LONGRANGE produce for parasite management. 56 attendees.

STEWARDSHIP ALLIANCE FOR CONSERVATION AGRICULTURE

SACA
Stewardship Alliance for Conservation Agriculture

"IF YOU CAN'T BE IN AWE OF MOTHER NATURE, THERE IS SOMETHING WRONG WITH YOU"

CANADA THISTLE BIOLOGICAL CONTROL AGENTS

STEM-GALL FLIES

346 releases were ordered through WCFA in the fall of 2016 for (approximate) mid June 2017 delivery. Due to the larger number of releases required, two trips were made to facilitate the distribution of the flies. The first delivery was made on July 3 &4 with the second delivery happening a couple of weeks later on July 12 & 13. As we had ordered early in the fall, and the flies are overwintered in a green house setting, we were able to bring in all the trays we needed, as well as a few extra to run our own trial with.

Feedback to this point has been very positive. Many of those that had made releases were able to see galls forming on the plants by the end of the growing season, and we are optimistic that these will be a great alternative or complement to the weevils. We were unable to check our release sites in the fall, due to a number of scheduling conflicts, but we will be following up with them during the 2018 growing season. WCFA will be bringing in flies again in 2018.

STEM-MINING WEEVILS

578 releases were ordered through WCFA for 2017. WCFA had agreements with multiple suppliers in 2017 in the hopes that they would collectively be able to supply us with the large number of releases we required. Unfortunately, one of our suppliers experienced a number of issues during the collection season (smoke, cold weather, etc.) and they were unable to supply any releases. One of our other suppliers was able to get us 219 releases and these were distributed throughout the province on September 23 & 24. The hope was that there would be another large shipment to follow, but unfortunately the weather turned in Montana, and due to the snow the second shipment did not occur. An effort was made to get every individual that had ordered weevils at least one tray. Due to the short notice we received of the shipment being ready to go, this was unfortunately not achieved, as some individuals were unable to make it to their pick-up.

As discouraging as it has been, we did make progress in 2017, bringing in substantially higher numbers of releases when compared to years previous (50 releases in 2017, no releases in 2016). The demand for weevils has drastically increased over the last few years as they gain popularity, and it has put a strain on our suppliers, but we continue to work with multiple suppliers on strategies to ensure we can deliver weevils in the large numbers we require for our customers, while remaining cost-effective. We are committed to continuing to offer weevils for those who are interested, so we continue to work closely with our suppliers on strategies to mitigate the risk of non-delivery.

POLLINATOR MIX DEMONSTRATION

One of the sustainable approaches in conserving our native pollinators is active research for the purpose of developing suitable Pollinator Mixes for specific agro-climatic zones in the country; that can help in establishing Pollinator Gardens or Pollinator Habitats or Pollinator Sanctuaries at suitable sites. Such sites could be farm perimeters, hard to access farm areas, agronomically non-productive or unsuitable wasteland areas, wetlands, city, municipal and rural parks, gardens and lawns, kitchen gardens, avenues, boulevards, golf courses, suitable parts of highways etc. Pollinator Mixes could include mixtures of specific wildflowers, native grasses as well as different annual/perennial forage crops that can actively attract insect pollinators in large numbers. --S.K. Basu

In 2017 WCFA planted the Performa Pollinator Mix at both our Wildwood and Brazeau County Forage Research Sites. Plots were seeded using our small plot Fabro disc seeder at a rate of 12 lbs/acre and 24 lbs/acre. Sites were monitored throughout the growing season for pollinator activity and establishment of species within the mix. Throughout the season we noticed quite a lot of pollinator activity at the sites, and we had good establishment of all species in the mix.

SHININGBANK COMMUNITY STEWARDSHIP INITIATIVE

The Shiningbank Lake Community Stewardship Initiative officially launched in 2017. The Stewardship Alliance for Conservation Agriculture, a partnership between WCFA, Yellowhead County and Woodlands County assumed the lead role in the planning and implementation of the project.

This initiative aims to bring awareness to producers, community members and recreational lake users on the importance of Riparian health, biodiversity, wildlife habitat, water quality, and how they can all work to maintain or improve many of these features. The project also aims to conduct some data collection in order to benchmark the current state of the health of the lake (in terms of water quality, riparian health, etc.) and to inform decisions on the types of activities that will best improve the health of the lake.

In early 2017 SACA secured funding through the Land Stewardship Centre's Watershed Stewardship Grant program to begin work on the project. The funding will be in effect until September 1, 2018, and allows SACA to begin activities to launch the initiative.

In the summer of 2017 two baseline Riparian Health Assessments were conducted on county owned property directly on the lake. One site rated as {insert rating} and the other site rated {insert rating}. As the project progresses more detailed, in-depth assessments will be conducted on a more representative sampling of sites along the lake (likely in cooperation with Cows and Fish).

In late summer and early fall, two water sampling trips were conducted to begin assessing the water quality of the lake, looking at a number of parameters. More water sampling will be conducted in 2018, with the intent to sample earlier in the season as well to monitor changes in quality throughout the season.

PULP MILL SLUDGE FOR SOIL HEALTH

In 2017 WCFA began a five year demonstration trial to assess growth differences, as well as soil health effects when applications of either pulp mill sludge or dry fertilizer were applied to established perennial forages at our Woodlands County Forage Research Site. Each forage variety received 5 treatments of pulp mill sludge, 5 treatments of dry fertilizer and 5 control treatments (no application).

Pulp mill sludge was applied at a rate of 25 tonnes/ha, as per the recommendation, and will be reapplied every two years. Dry fertilizer was applied at the recommended rate from the soil tests for both the legume species and the grass species, and will be applied yearly. Both treatments were applied on July 24, 2017.

Soil tests were done prior to the application, and will be continued throughout the duration of the project. Yield and quality analysis were also completed in August, and will continue throughout the duration of the project. 2017 served as the establishment year, and all data collected will act as the baseline for future comparison.

2017
FORAGE TRIALS

2017 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
Chinook Applied Research Association, Oyen, AB
Gateway Research Organization, Westlock, AB
Lakeland Agricultural Research Association, Bonnyville, AB
Mackenzie Applied Research Association Fort Vermilion, AB
North Peace Applied Research Association, Manning, AB
Peace Country Beef and Forage, Fairview, AB
Smoky Applied Research and Demonstration Association, Falher, AB
West-Central Forage Association, Evansburg, AB

MAJOR SPONSORS

A & L Canada Laboratories Inc.
Doug McCaulay, AOF Coordinator
Davidson Seeds, Degenhardt Farms, Dyck Seed Farm, Kevin Elmy, Fabian Seeds, Lindholm Seed Farm, Mastin Seeds, Solick Seeds, H. Warkentin

TRIAL INFORMATION

Silage yield and nutritional information was collected by seven applied research associations in 2017 at sites from Oyen in the south to Fort Vermilion in the north. Data from additional sites grown during the past six years has been included in the variety summaries below.

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 tables below show a summary of data from 2012 through 2017 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 which did not meet minimum quality standards and variance levels were excluded.

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 allows for comparison with the check when growing conditions, management regimes and/or target yields are anticipated to be of low, medium or high productivity. 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 those from small plot trials, which can be 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 also 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 macronutrient assessments and wet chemistry for the micronutrients. Full nutritional analysis was done on each sample, however, only six nutritional categories are reported: crude protein (CP), total digestible nutrients (TDN) which is an estimation of energy, calcium (Ca), phosphorus (P), potassium (K) and magnesium (Mg).

BARLEY

Variety	Overall Station Years of Testing	Overall Yield	Yield Category: Low < 9.0 (t/ac)	Medium 9.0 - 12.0 (t/ac)	High > 12.0 (t/ac)	Nutritional Data: CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2017 trials (Yield and agronomic data only directly comparable to CDC Austenson)											
CDC Austenson (t/ac)		**10.7**	**6.8**	**11.4**	**14.8**	**10.3**	**67.2**	**0.3**	**0.2**	**1.4**	**0.2**
CDC Austenson	**41**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Altorado	22	102	107	98	102	98	99	101	103	100	92
Amisk	29	91-	90-	91-	92-	103	102	130	106	104	108
CDC Coalition	33	94-	96	91-	XX	101	100	104	108	105	100
CDC Cowboy	33	101	102	100	XX	96	99	117	110	108	117
CDC Maverick	35	104	106	102	102	96	99	122	108	95	116
CDC Meredith	22	100	102	99	101	95	98	99	101	102	94
Canmore	22	99	101	95	101	99	99	118	102	98	102
Champion	22	102	107	99	102	99	100	103	100	102	99
Claymore	22	100	100	93	105	93	97	119	97	96	99
Conlon	27	86-	82-	88-	XX	97	102	125	113	97	103
Gadsby	33	99	101	98	XX	96	100	127	100	96	101
Ranger	19	94-	91-	96	XX	99	99	161	105	122	128
Sundre	33	93-	91-	94-	XX	102	100	132	106	112	113
Previously tested varieties (Yield and agronomic data only directly comparable to CDC Austenson)											
Busby	19	93-	87-	97	XX	100	99	128	100	100	103
Chigwell	19	90-	90-	91-	XX	101	99	152	101	105	116
Muskwa	13	90-	89	90-	XX	104	100	167	107	121	127
Ponoka	19	96	95	97	XX	97	99	148	103	104	115
Seebe	19	96-	95	98	XX	103	96	136	109	113	103
Trochu	18	88-	82-	92-	XX	99	101	139	107	109	119
Vivar	19	93-	90-	94	XX	103	100	144	99	104	123
Xena	19	95-	95	95	XX	101	99	111	105	102	106

OAT

Variety	Overall Station Years of Testing	Overall Yield	Yield Category: Low < 8.0 (t/ac)	Medium 8.0 - 11.0 (t/ac)	High > 11.0 (t/ac)	Nutritional Data: CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2017 trials (Yield, significant differences and agronomic data only directly comparable to CDC Baler)											
CDC Baler (t/ac)		**9.9**	**5.9**	**9.9**	**13.3**	**9.5**	**61.4**	**0.3**	**0.2**	**1.8**	**0.2**
CDC Baler	**39**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
AC Juniper	29	93-	103	78-	93	101	101	94	107	103	106
AC Morgan	38	101	105	96	101	98	101	100	111	100	97
AC Mustang	39	98	99	97	99	101	99	99	103	101	99
CDC Haymaker	34	100	105	97	98	98	100	98	101	103	98
CDC Seabiscuit	12	98	97	96	101	99	100	88	99	95	97
CDC SO-1	39	96-	100	93-	95-	102	102	95	103	98	104
Murphy	33	103	105	101	103	92	95	94	96	103	98
Waldern	32	103	104	107	98	94	99	105	102	95	98
Previously tested varieties (Yield, significant differences and agronomic data only directly comparable to CDC Baler)											
Derby	6	96	XX	XX	XX	89	100	98	99	100	110
Everleaf	5	94	XX	XX	XX	96	98	105	97	110	92
Foothills	21	99	99	97	102	99	98	103	103	102	100
Jordan	20	100	103	100	94	97	100	96	105	97	112

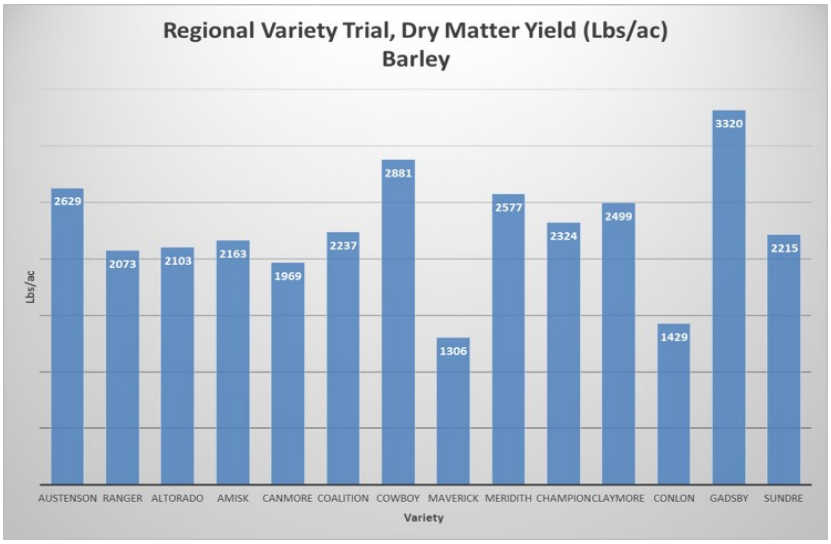
TRITICALE

Variety	Overall Station Years of Testing	Overall Yield	Yield Category: Low < 10.0 (t/ac)	Medium 10.0 - 12.5 (t/ac)	High > 12.5 (t/ac)	Nutritional Data: CP (%)	TDN (%)	Ca (%)	P (%)	K (%)	Mg (%)
Varieties tested in the 2017 trials (Yield and agronomic data only directly comparable to Taza)											
Taza (t/ac)		**10.9**	**7.5**	**11.3**	**14.7**	**9**	**62.7**	**0.2**	**0.2**	**1.4**	**0.1**
Taza	**44**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
AAC Chiffon	15	104	XX	102	XX	107	100	87	94	109	111
Bunker	36	99	102	98	98	103	99	109	94	95	115
Sunray	37	100	100	102	99	104	103	106	102	103	109
Tyndal	43	99	100	99	99	103	101	100	103	96	105
Previously tested varieties (Yield and agronomic data only directly comparable to Taza)											
AAC Innova	8	104	XX	XX	XX	108	100	87	106	109	107
AAC Ryley	8	97	XX	XX	XX	103	100	95	106	89	117
AC Ultima	7	103	XX	XX	XX	110	100	101	93	97	122
Pasteur	8	94	XX	XX	XX	107	103	96	99	107	117
Pronghorn	21	102	105	8	XX	103	100	102	99	109	106
Sadash	8	102	XX	XX	XX	99	99	88	91	110	105

The information in the next graphics shows 2017 data from WCFA's site only.
Location: WCFA Forage Research Site, Wildwood Ab.
Soil type: Gray wooded soil zone 0-1 % slope
Fertilizer: Blend N-78, P-50, K-0, S-1.9 lbs/ac
Seeding date: June 5th, 2017
Herbicide applications: Pre-burn Glyphosate, MCPA Anime 600

BARLEY
The varieties that showed highest dry matter (DM) yield are as follows:

1. Gadsby with 3320 lbs./acre DM
2. Cowboy with 2881 lbs./acre DM

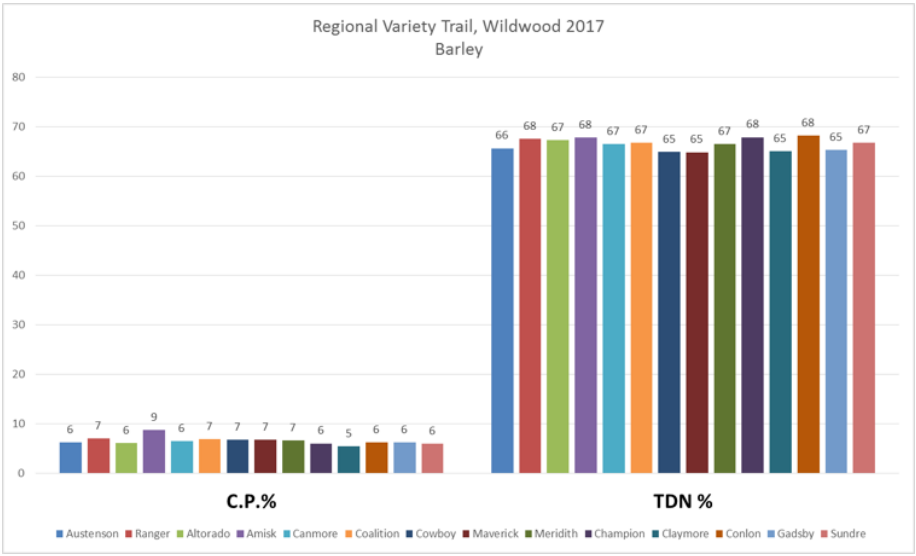


The varieties that showed highest crude protein (CP %) are listed below:

1. Amisk with 9%
2. Ranger, Coalition, Cowboy, Maverick and Meridith all with 7%

The varieties that showed highest Total Digestible Nutrients (TDN %) are listed below:

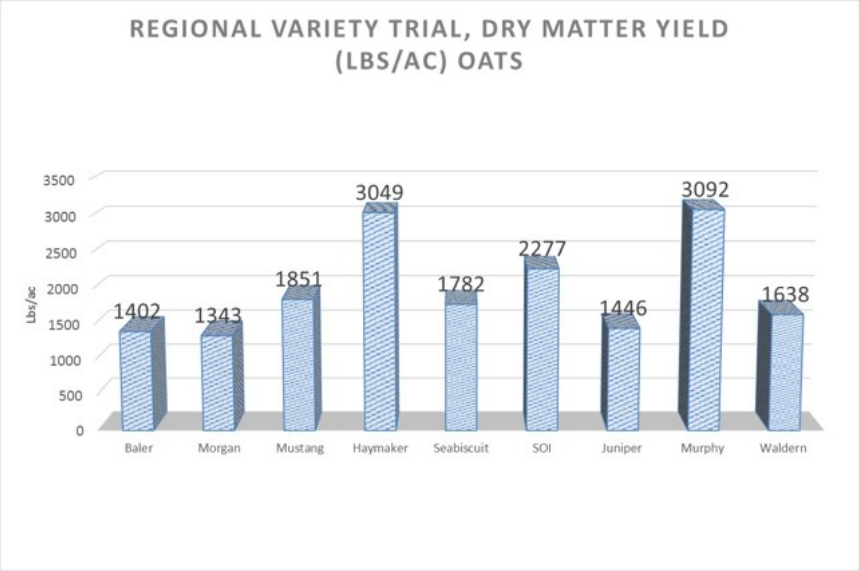
1. Ranger, Amisk, Champion and Conlon all with 68%
2. Altorado, Canmore, Coalition, Meridith and Sundre all with 67%



OATS

The varieties that showed highest dry matter (DM) yield are as follows:

1. Murphy with 3092 lbs./acre DM
2. Haymaker with 3049 lbs./acre DM

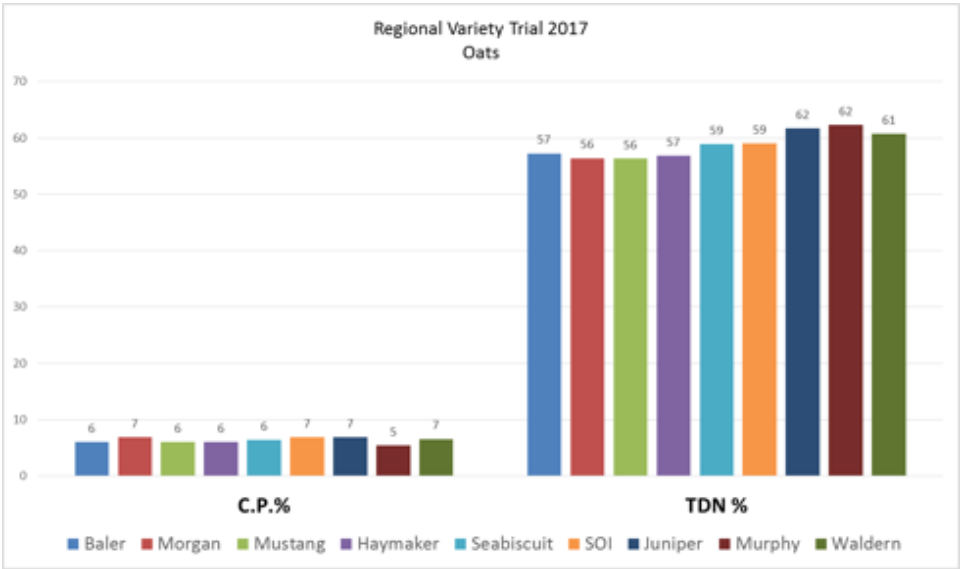


The varieties that showed highest crude protein (CP %) are listed below:

1. Morgan, SOI, Juniper and Waldern all with 7 %
2. Baler, Mustang, Haymaker and Seabiscuit all showed 6%

The varieties that showed highest Total Digestible Nutrients (TDN %) are listed below:

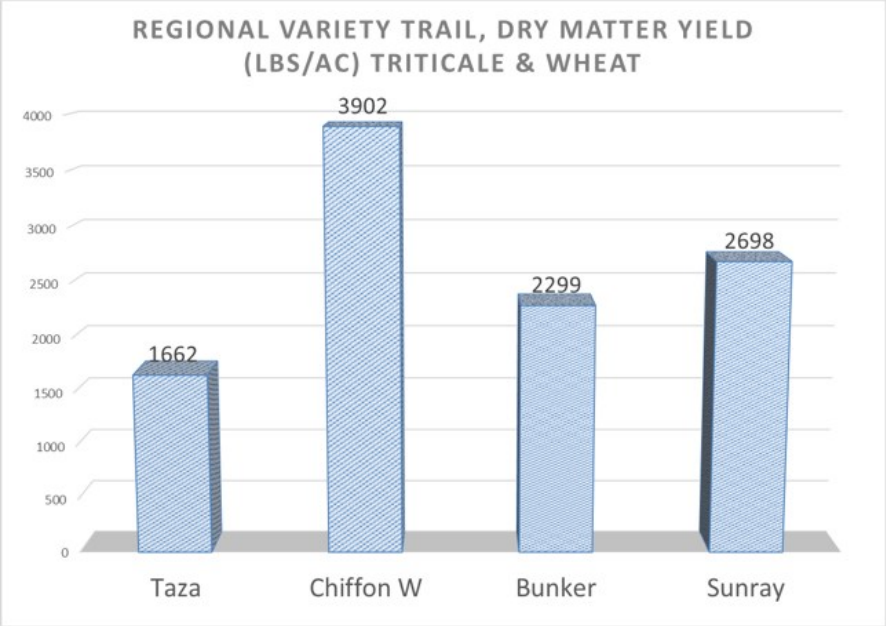
1. Juniper and Murphy with 62%
2. Waldern with 61 %



TRITICALE

The varieties that showed highest dry matter (DM) yield are as follows:

1. Chiffon (soft wheat) with 3902 lbs./acre DM
2. Sunray with 2698 lbs./acre DM

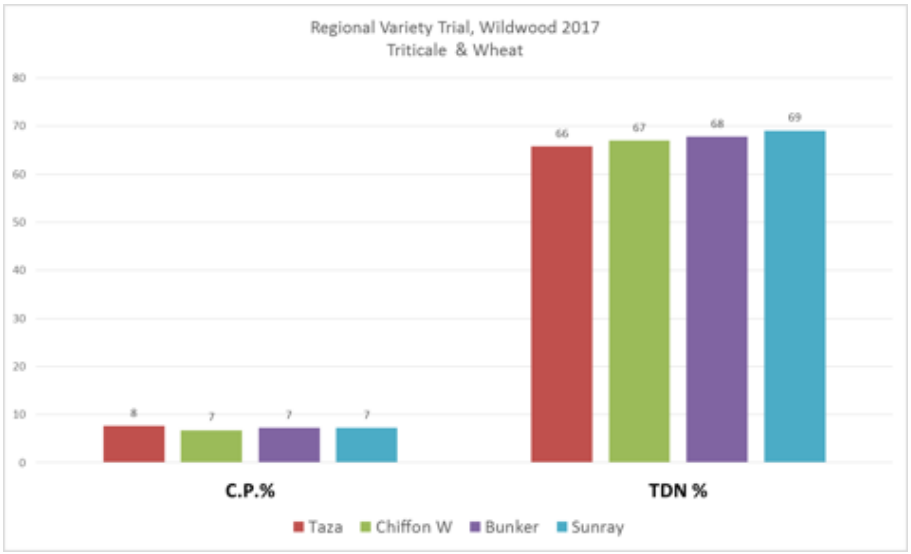


The varieties that showed highest crude protein (CP %) are listed below:

1. Taza with 8 %
2. Chiffon, Bunker and Sunray all showed 7%

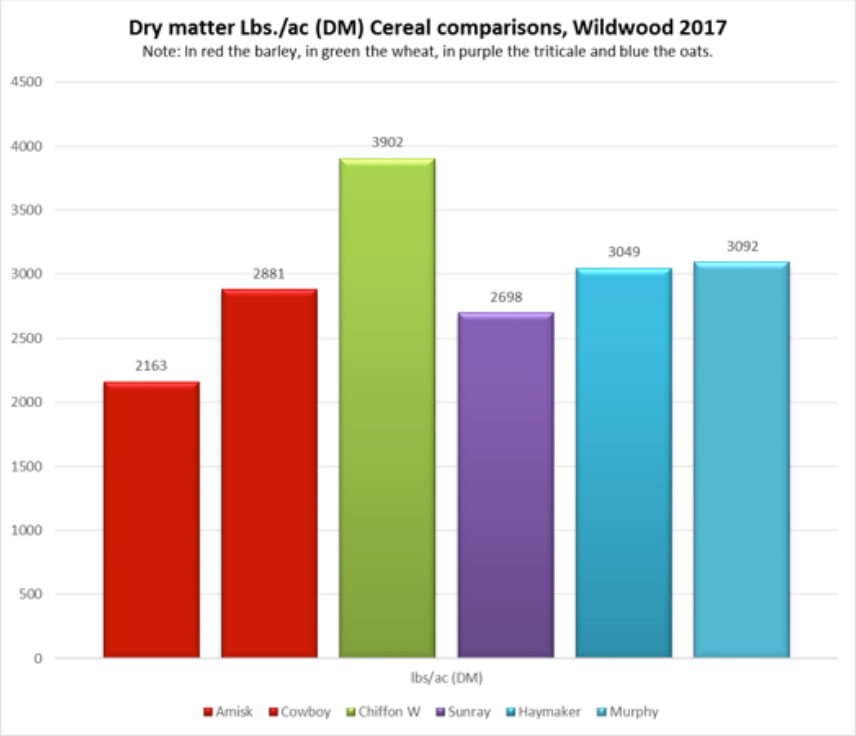
The varieties that showed highest Total Digestible Nutrients (TDN %) are listed below:

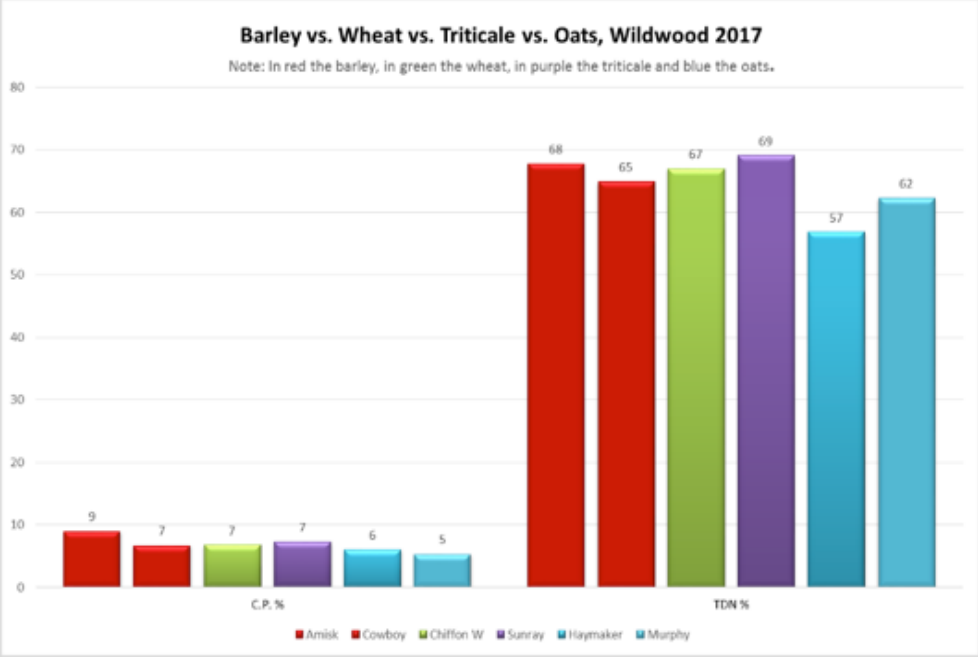
1. Sunray, with 69%
2. Bunker with 68%



Comments

The next figures show varieties that observed higher values based on biomass yield lbs./ac DM, C.P. (%), and TDN (%) that participated in the trial In red the barley, in green the wheat, in purple the triticale and blue the oats. This was a small research trial and results are not statistically significant. Results should be treated with caution as they are from only one year (2017).





EVALUATION OF CORN VARIETIES IN THE WEST CENTRAL REGION

PARTNERS

Thunder Seed Canada
CanaMaize Seed Inc.
Northstar Seed Ltd.
Pickseed Canada
Yellowhead County
Bouius Custom Work

INTRODUCTION

Corn is a high energy feed with protein levels that will normally match the nutritional needs of a dry cow in mid and late pregnancy. It also has the potential to produce more dry matter than tame hay or forage cereals. By replacing other forms of feed with standing corn, labour time and machinery use, associated costs are reduced as no summer feed harvesting is required and winter supplemental feeding is limited. (Growing Opportunities, May 2006).

SUMMARY

This Corn Variety demonstration trial was conducted in 2017 to evaluate the performance of several varieties and their potential in the West Central region of Alberta. Four varieties were tested at the Wildwood Site. By evaluating the agronomics of Thunder Seed /TH4126 RR, CanaMaize/CM440 conventional, Pickseed/PS2219 RR and Northstar with Legend Seed/LR9473 it is expected that the producers will gain more knowledge and ultimately, with the adoption of standing corn grazing in winter, they are able reduce their overall feed cost.s

OBJECTIVES

To evaluate four different corn varieties for maturity, quality and yield grown

To demonstrate the different varieties that can grow in the west central area

To make recommendations to beef cattle producers in the area that intend to winter feed their cattle with standing corn.

TREATMENTS

Company	*Variety*	*CHU*
Thunder Seed	TH 4126 RR	2250
CanaMaize	CM440 Conventional	2100
Pickseed	PS 2219 RR	2175
Northstart/Legend Seed	LR 9473	2150

METHODOLOGY

Demonstration plots were planted at the West-Central Forage Association Forage Research Site (SE 27-53-9- W5th) near Wildwood Alberta, in the gray wooded soil zone. Plots were seeded in a prepared seedbed on May 31 with a John Deere corn planter (20 m long 12 rows at 30 inch spacing), at a rate of 30,000 seeds per acre and (20 m long 12 rows at 15 inch spacing), at a rate of 62,000 seeds per acre for CanaMaize variety.

Glyphosate treatments were administered prior to seeding and when the crop was three leaf stage. For CanaMaize conventional variety 2,4D Ester 700 + Dual ll Magnum treatments were administered and MCPA Amine 600 when the crop was three leaf stage.

Once established, rows where trimmed 20 m for uniformity. At harvest, plant and cob population counts were conducted along 17.5m length of 2 rows per treatment. Above ground plant matter was harvested, weighed and subsampled to determine moisture content, dry matter and feed quality.

Weather data was collected from the (Alberta Agriculture) weather station in Evansburg AB and used to determine Corn Heat Units (CHU) which are calculated using maximum and minimum growing season temperatures, and precipitation levels.

RESULTS

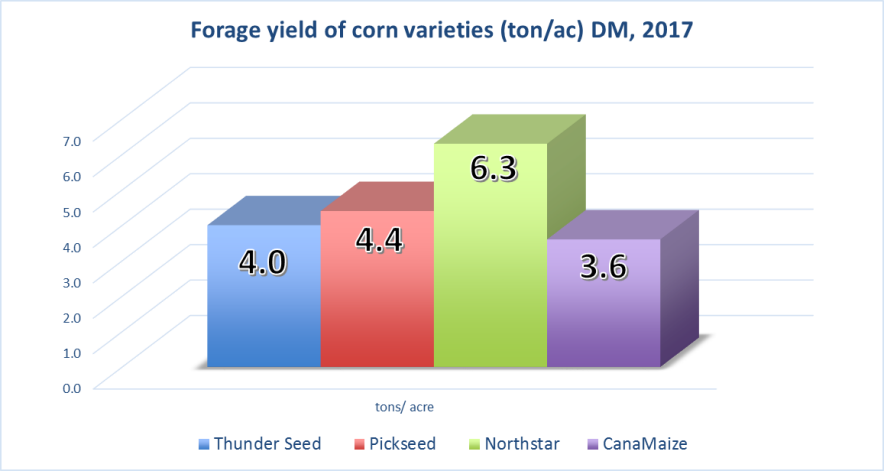
Plant count: Plant count and maturity summaries are shown in Table 1. Note: At the time when the samples were collected none of the cobs reached maturity.

Variety	# Plants	immature cobs	mature cobs	Total cobs	Moisture %
Thunder Seed					
Sample 1	27	30	0	30	77
Sample 2	30	30	0	30	79
Pickseed					
Sample 1	27	26	0	26	80
Sample 2	28	29	0	29	76
Northstar					
Sample 1	32	34	0	34	75
Sample 2	33	43	0	43	79
CanaMaize					
Sample 1	57	55	0	55	87
Sample 2	54	49	0	49	73

Table 1. – Samples were collected form 17.5 feet on two different spots at Wildwood Site

Yield:

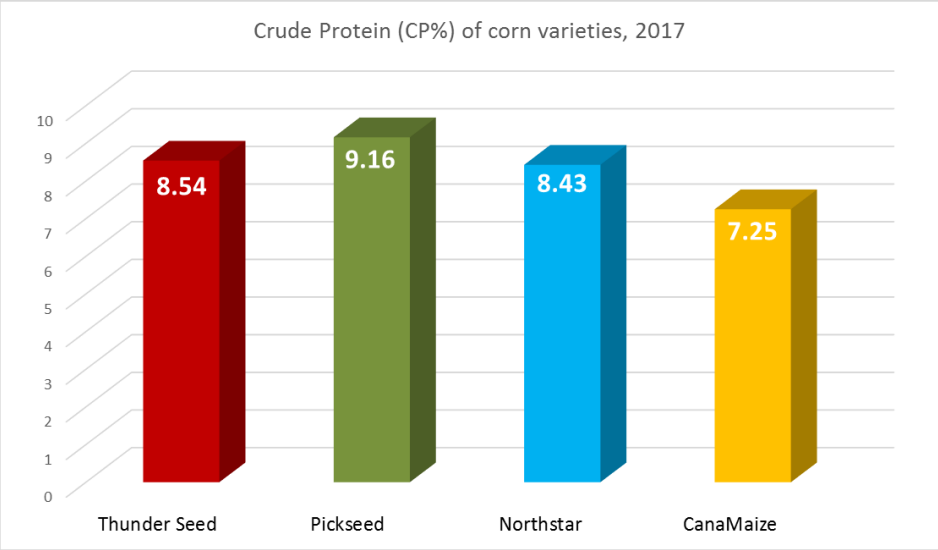
Two samples were taken from each treatment to determine yield. The highest yielding variety was Northstar with 6.3 tons per acre, followed by Pickseed with 4.4 tons, followed by Thunder Seeds with 4.0 tons and CanaMaize had the lowest yield at 3.6 tons per acre. Yield results are illustrated in Graphic 1 below.



Graphic 1. –Dry Matter (Tons/ac) for corn varieties grown in Wildwood Alberta, Corn Variety Trial 2017

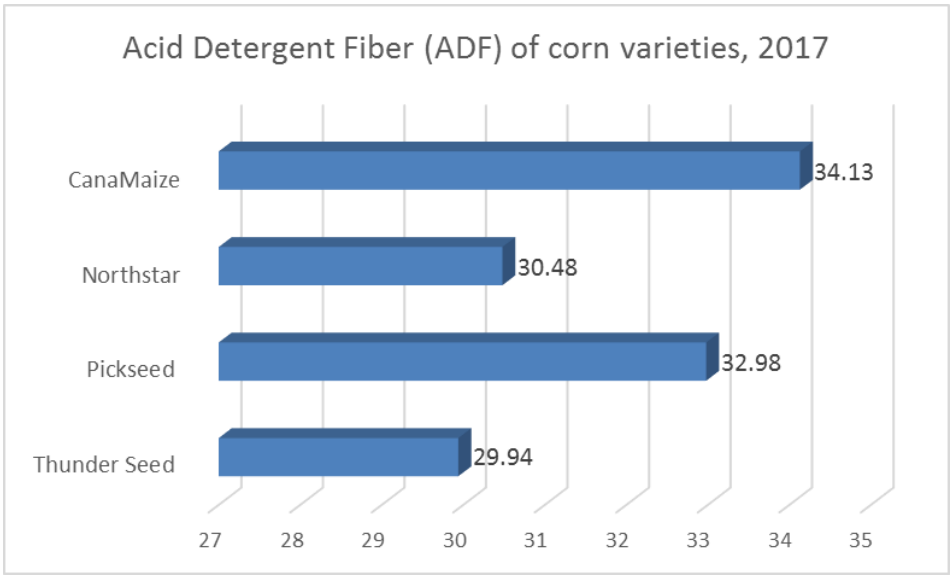
Feed quality:

Crude Protein. - Pickseed variety showed the highest crude protein percentage at 9.16%, Thunder Seed and Northstar varieties showed 8.54% and 8.43% respectively and CanaMaize with the lowest at 7.25%. This can be seen in Graphic 2.



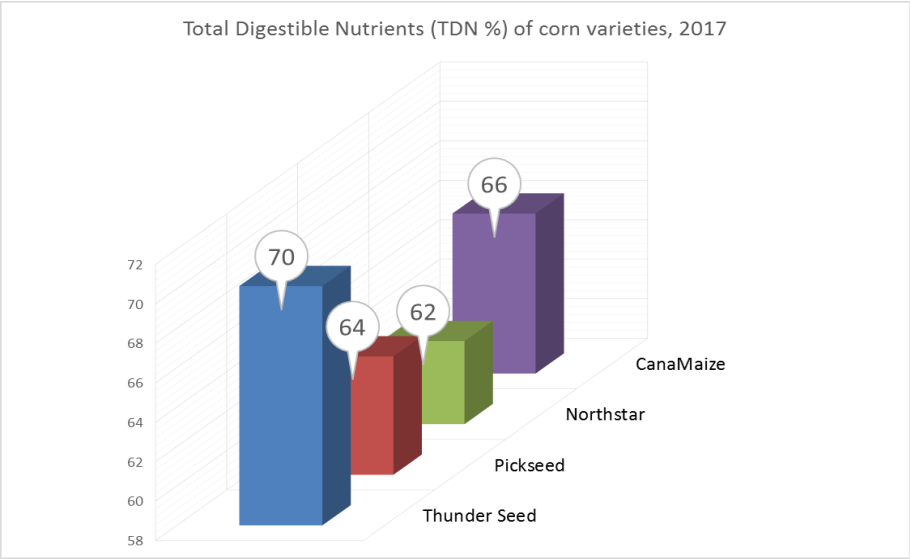
Graphic 2. - Crude protein percentage in corn varieties grown at Wildwood Alberta. Values reported on Dry Matter basis.

Acid Detergent Fibre (ADF). –Thunder Seed was the variety with the lowest ADF with 30% ADF value followed by Northstar with 30% and Pickseed and CanaMaize showed the highest ADF values with 33% and 34%, respectively.



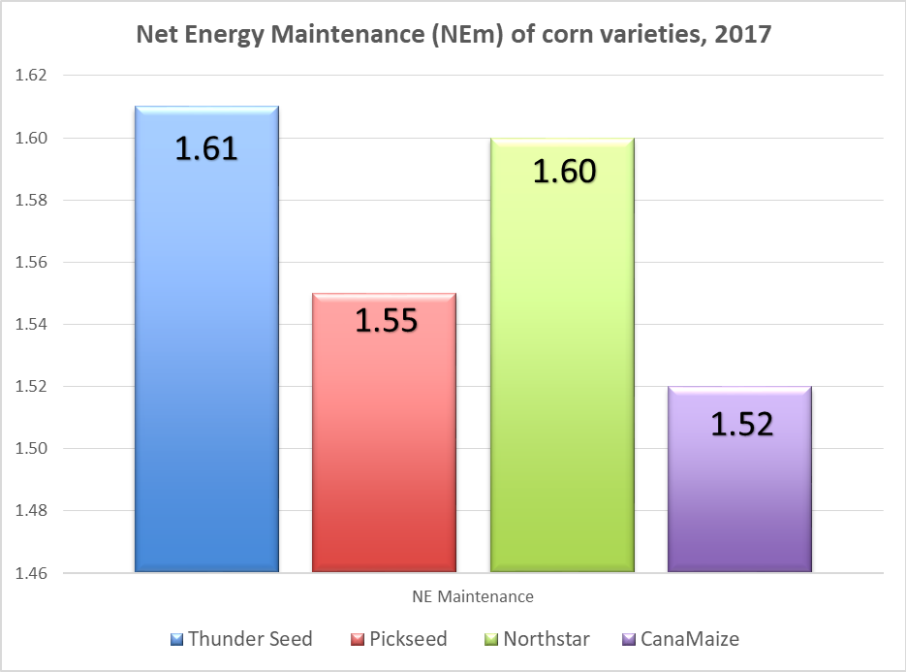
Graphic 3. - Corn varieties graph showing (ADF) comparison Corn Variety Trial 2017, Wildwood AB. Values reported on Dry Matter basis.

Total Digestible Nutrients (TDN). -Thunder Seeds was the variety that shows the higher TDN with 70% followed by CanaMaize with 66% and the lowest TDN value were Pickseed and Northstar with 64% and 62% ,respectively.



Graphic 4. - Corn varieties graph showing (TDN) comparison Corn Variety Trial 2017, Wildwood AB
*Note: TDN value calculated using the Weiss Formula by A&L Labs. Values reported on Dry Matter basis.

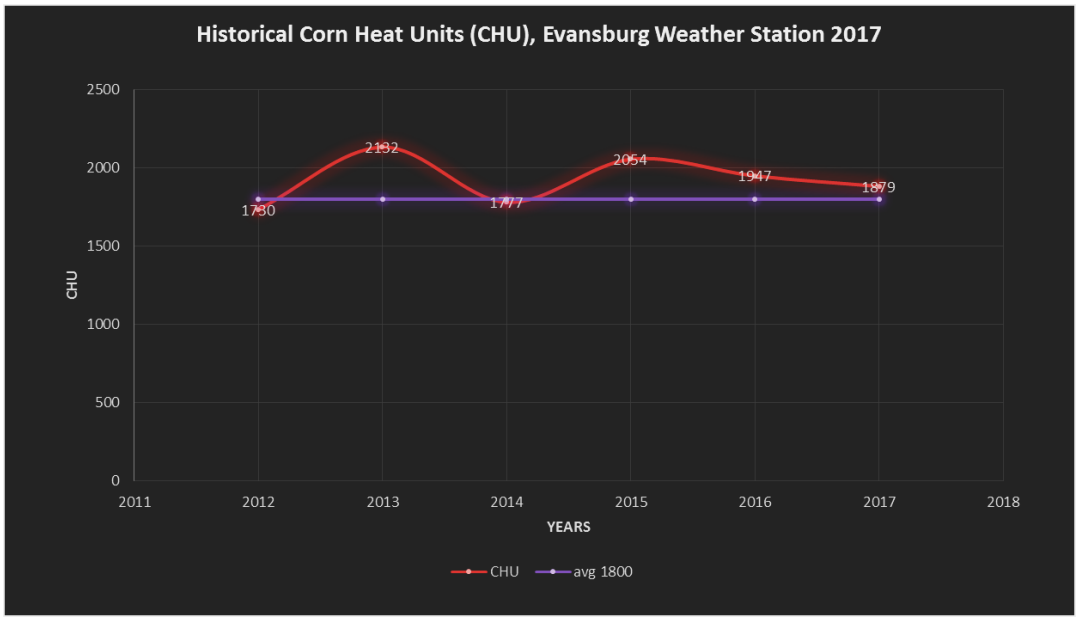
Net Energy Maintenance (NEm). - Thunder Seed variety showed the highest (NEm) with 1.61 NEm Mcal/kg followed by Northstar with 1.60 NE Mcal/kg and Pickseed with 1.55 NEm Mcal/kg and the lowest was CanaMaize with 1.52 NEm Mcal/kg value. The NEm values are seen in Graphic 5.



Graphic 5. – Energy (NE Mcal/kg) for all treatments at Wildwood AB. Values reported on Dry Matter basis.

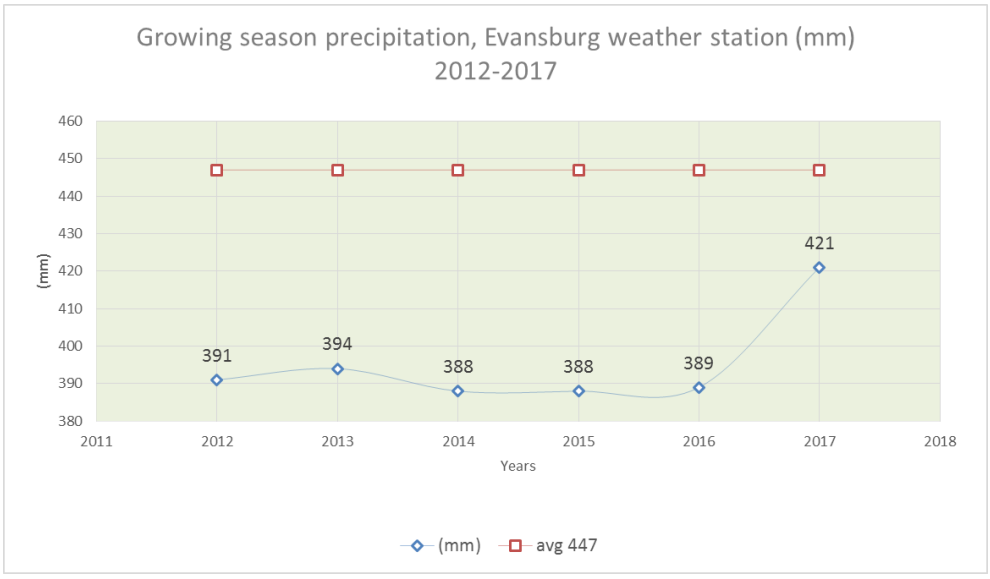
Environmental Records

Corn Heat Units (CHU): CHU is an energy term calculated for each day and accumulated from planting to the harvest date. CHU was calculated from May 1st to October 31st using data from the Evansburg weather station.



Graphic 6. - Historical CHU at the Evansburg weather station from 2012 to 2017

Precipitation: Growing Season precipitation of the gray wooded soil zone from 1971 to 2000 was 447mm (Agroclimatic Atlas of Alberta, 2003)



Graphic 7. – Growing Season precipitation in the Evansburg weather station from 2012 to 2017

EVALUATION OF COVER CROP YIELDS UNDER DIFFERENT SEEDING TECHNIQUES

PARTNERS

Union Forage
Performance Seeds
Northstar Seed Ltd
Pickseed
Yellowhead County

BACKGROUND

Cover crops have traditionally been used to help hold the soil when transitioning between different types of cash crops, and are often plowed under before planting the next crop to add organic material and fertility to the soil. Farmers with livestock often select cover crops that can be grazed, adding an additional benefit as feed and the advantage of animal manure *(Canadian Cattlemen June 13, 2016).*

Seeding is one of the most important aspects of cover crops and there has been a lot of work done on different seeding methods (i.e. drill, air seeding, sod, and no-till drill), however not as much on broadcasting seed with incorporation. This one year trial demonstrated the yield of different blends and pure stands of cover crops when two seeding systems are used, Disc Drill and Broadcast.

OBJECTIVE

Determine yield and quality differences on cover crops utilizing two different seeding systems (broadcasting and disc drilling)

METHODOLOGY

In 2017 plots were seeded at WCFA Forage Research Site, Wildwood, AB on June 5 with a small plot Fabro disc drill in 5 rows at 22.5cm spacing (9m by 1.14m plot area). The Broadcast plots used the same Fabro disc drill but the hoses were removed and detached from seeder to allow seed to fall onto soil and be incorporated with the packer wheels.

Soil testing was done and used to prescribe fertilizer applications. We targeted the recommended seeding rate for each seed company (Table 1) A pre-seed herbicide application was applied. 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

The seed for this demonstration trial were donated by Union Forage, Pickseed, Northstar Seeds and Performance Seed.

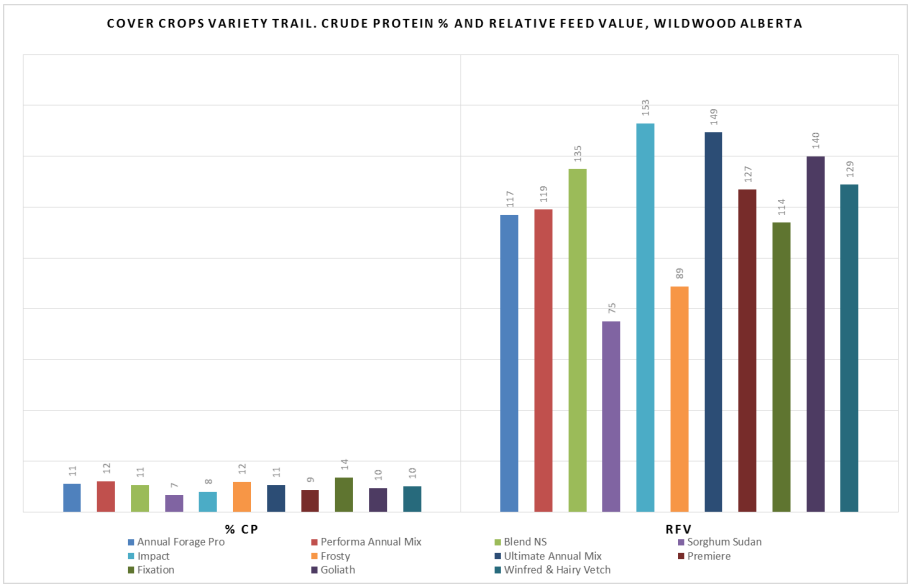
Treatment	Company	Variety	seed rate lbs/ac
Winfred & Hairy Vetch	Union Forage	Forage Brassica and Legume	3
Goliath	Union Forage	Forage Brassica	3
Ultimate Annual Mix	Union Forage	Green Spirit Italian Rye Grass 60%	10
		Hairy Vetch 18%	
		Hunter Brassica 11%	
		Winfred Brassica 11%	
Annual Forage Pro	Pickseed	Forage Kale 5%	12
		Firkin Italian Ryegrass 20%	
		Crimson Clover 12%	
		Tillage Radish 13%	
		Crown Millet 20 %	
		Purple Trop Forage Turnip 10%	
		Hairy Vetch 20%	
Sorghum Sudan	Northstar Seed Ltd.	Sorghum Sedan	10
Blend NS	Northstar Seed Ltd.	Nabucco Italian Rygrass 50 % Vivan Forage Brassica 14% Licapo Forage Rape 14% Fixation Balanse Clover 10% Appin Turnips 5% Frosty Beseem Clover 7%	12
Frosty	Performance Seed	Berseem Clover	6
Impact	Performance Seed	Forage Brassica	5
Fixation	Performance Seed	Balansa Clover	5
Premiere	Performance Seed	Forage Kale	4
Performa Annual Mixture	Performance Seed	Nabucco Italian Rye Grass 20 % Spring Green Festulolium 10% Premiere Forage Kale 5 % Impact Forage Brassica 20 % Frosty Berseem Clover 20 % Purple Bounty Hairy Vetch 10 % Fixation Balansa Clover15 %	8

Table 1. - Treatments and seeding rates Cover Crops Variety Trial 2017, Wildwood AB. For the broadcast treatments, the seeding rate was double.

Discussion

Forage Quality

Graph 1 shows the quality values for all treatments that were seeded in Wildwood in 2017. The highest crude protein CP (%) was Fixation with 14% and the lowest was Sorghum Sudan with 7%. The highest relative feed value RFV was Impact with 153 and the lowest was Sorghum Sudan with 75.

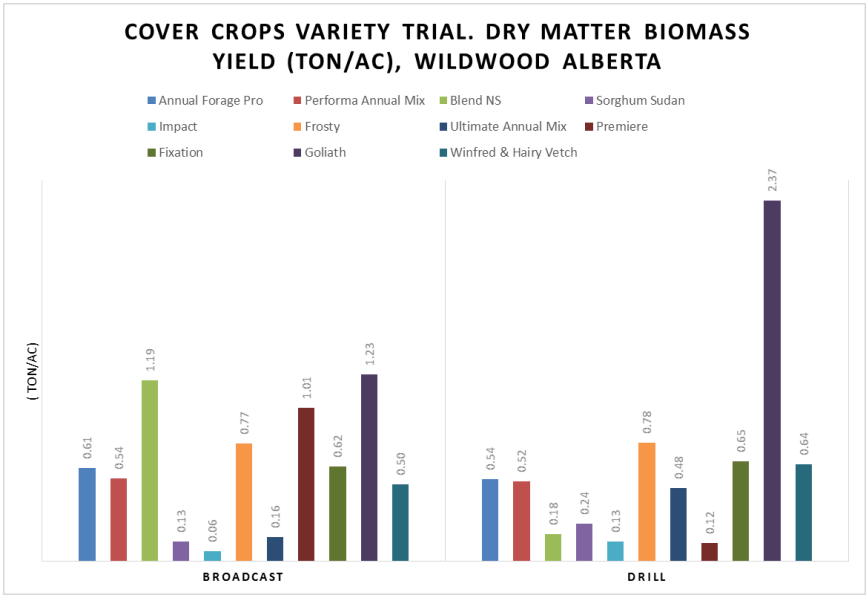


Graph 1. – Cover Crop Variety Trial, 2017 Relative Feed Value (RFV) and Crude Protein (CP %). Wildwood AB.

Dry Matter Yield

Graph 2 shows the comparison of Dry matter (ton/acre, 1 ton = approximately 2204 pounds) for both seeding techniques, Broadcast and Drill. For Broadcast plots the highest being Goliath with 1.23 ton/ac and the lowest being Impact with 0.06 ton/ac. On the Disc Drill plots Goliath showed the highest with 2.37 ton/ac and Premiere the lowest with 0.12 ton/ac.

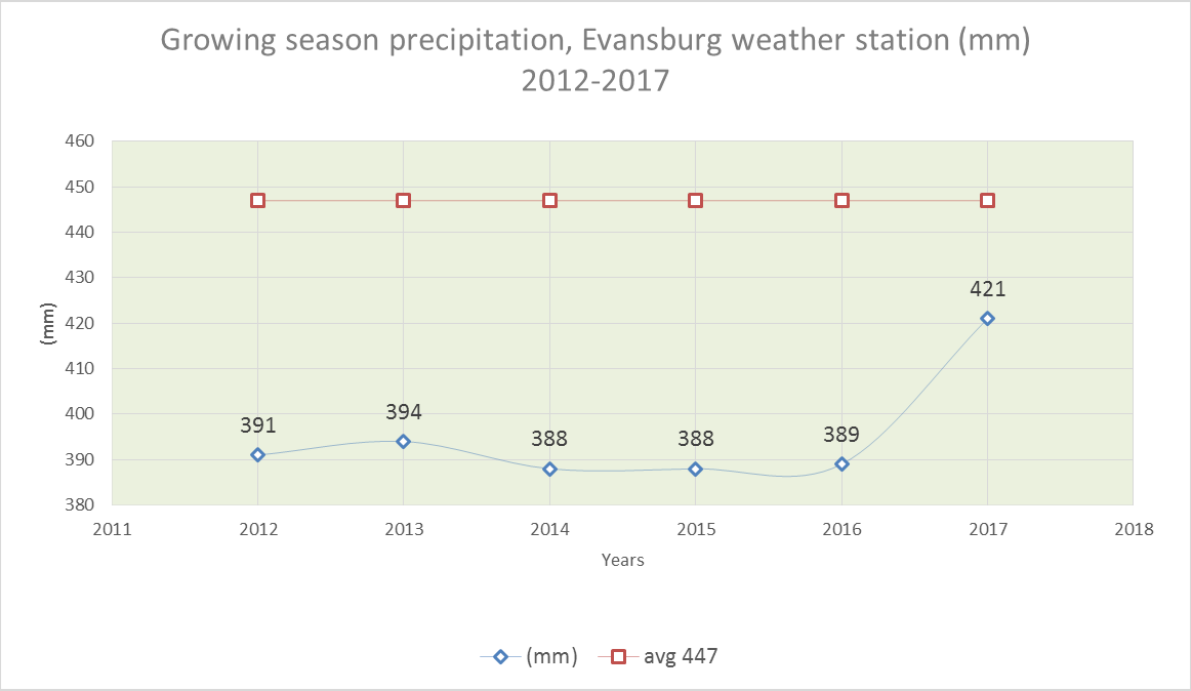
A related point to consider is that, in general for both seeding techniques yields (tons/ac) were not significant different, with the exception of three drill treatments yielding higher; Goliath with 1.14 ton/ac, Premiere with 0.89 ton/ac and Blend NS with 1.01 ton/ac compared to the broadcast treatments.



Graph 2. – Cover Crop Variety Trial 2017, DM yield (tone/acre, 1 ton = approximately 2204 pounds) from Wildwood AB.

Environmental Conditions

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 3 shows the accumulative precipitation for the growing season from the Evansburg weather station.



Graphic 3. – Historic growing season precipitation for the Evansburg weather station from 2012 to 2017

HIGH LEGUME PASTURE PROJECT (SAINFOIN-ALFALFA)
2016-2017

PARTNERS:

Agricultural Research and Extension Council of Alberta
Alberta Agriculture and Forestry
Battle River Research Group
Chinook Applied Research Association
Farming Smarter
Foothills Forage Association
Gateway Research Organization
Grey-Wooded Forage Association
Lethbridge Research and Development Centre / Agriculture and Agri-Food Canada
Mackenzie Applied Research Association
North Peace Applied Research Association
Peace Country Beef and Forage Association
Peace River Forage Association of British Columbia
West-Central Forage Association

High Legume Pasture Project Co-operators

1. Battle River Research Group / Holden / Elgar Grinde
2. Chinook Applied Research Association / Consort / Gould Ranching Ltd.
3. Foothills Forage Association / Gleichen / Steve Gleichen
4. Foothills Forage Association / Longview / Alex Robertson
5. Gateway Research Organization / Fort Assiniboine / Greg Thompson
6. Grey-Wooded Forage Association / Lacombe / Murray Abel
7. Mackenzie Applied Research Association / La Crete / Dicky Driedger
8. North Peace Applied Research Association / Manning /Bob Noble
9. Peace Country Beef and Forage Association / Fourth Creek / Conrad Dolen
10. Peace River Forage Association of British Columbia / Fred Schneider
11. West-Central Forage Association / Tiger Lily /Rudy and Darlene Stein

BACKGROUND

Feed costs and their systems are the single greatest expense to a cattle operation, so feed is almost always the primary factor that determines the profitability of that operation. There are management practices that can help livestock producers optimize production through feeding/grazing management which include enhancing pasture productivity and extending the grazing season. Both of these strategies can be addressed through grazing higher legume forages. "*Alberta Agriculture and Forestry, Grazing High Legume Pastures, March 2017".*

New sainfoin varieties have shown promise for persistence under grazing in alfalfa-sainfoin mixtures, with comparable yields to alfalfa/grass mixes and are bloat mitigating. The threat of bloat in grazing livestock has stymied efforts by the livestock industry to use higher producing forage crops like alfalfa which could reduce the acres required to support livestock production and provide competitive gain opportunities for feeder cattle. The new emerging sainfoin cultivars will offer the livestock industry the opportunity to take advantage of the productivity, flexibility and profitability of legume based pastures. Sainfoin contains tannins that bind with the soluble proteins and inhibit the activity of rumen microbes; thus slowing the rate of digestion of the forages. A rapid rate of forage digestion has been determined to be a major cause of bloat.

By managing the pasture to ensure the sainfoin remains, animals will consume the tannins from the sainfoin and therefore reduce the chances of a bloat incident. The grass also present in the pasture gives another non-bloat grazing forage that when consumed will reduce the amount of alfalfa consumed, and therefore also reduce potential for animal bloat. The new sainfoin variety, AC Mountainview, that has been developed at the Lethbridge Research Centre is proving to be competitive in forage stands and has higher regrowth than previous varieties, allowing it to regrow at the same rate as alfalfa. Livestock producers could now use AC Mountainview as a natural bloat control and graze higher legume pastures confidently.

In cooperation with eleven forage and applied research associations, thirteen producers across Alberta, in consultation with high legume grazing mentors with financial and economic analysis, Alberta Agriculture and Forestry staff, coordinated a two year field trial to demonstrate the potential of sainfoin in a high-legume pasture mix on a field scale level. WCFA partnered with Rudy and Darlene Stein from Tiger Lily, located in the County of Barrhead for this project. The Stein's had a 10 acre pasture previously cultivated for two years. The goal of this project was to provide producers with the opportunity to experience establishing a high legume pasture (60+ % legumes) and with grazing that pasture in the second year.

OBJECTIVES

Primary goal of the project is to mitigate bloat while grazing high legume pastures.
To determine establishment and longevity of high legume pasture stands.
To determine high legume pasture stands performance under grazing pressure.

METHODOLOGY

Soil was tested for nutrients in the spring of 2016 and results were used to prescribe fertilizer applications. The trial was seeded to a cultivated, harrowed and packed field on May 16, 2016 using a Brillon Seeder to a depth of ½ inch. 60% of the mixture was legumes (Sainfoin 70% and Alfalfa 30%) and the remaining 40% was grasses (Orchard Grass 33 %, Meadow Brome 33% and Tall Fescue33%).

Name	Percentage of varieties on the pasture (%)	Percentage of the mixture (%)	Pounds per acre (lbs/ac)
Ultimate Pasture *(Legumes)*	60	100	33
AAC Mountain View Sainfoin		30	9.9
Hay Grazer Alfalfa		70	23.1
Grass Seed Mixture *(Grasses)*	40	100	2.64
Orchardgrass Orca		33	0.66
Meadow Bromegrass Common No. 1		33	1.32
Tall Fescue Common No. 1		33	0.66

Table 1. High Legume Pasture Project 2016/2017, Pasture Mixture seeded at Tiger Lily Alberta. *Note: No herbicide treatment was administered prior to seeding.*

2016 Observations

Despite the lack of precipitation at the time of the seeding in May (28mm), the subsoil moisture was moderate and the soil temperate was 22°C. Aggressive weed growth was observed due to the moisture conditions in early June (41mm) and July (141mm). For weed control, sheep were allowed to graze from June 23 to 27. A single cut and rake occurred on July 26 and the baling and wrapping was done on July 28. The weeds identified at that time were: Buckwheat, Pigweed, Wild oats, Hemp nettle, Quackgrass and greater population of Wild mustard plants.

On August 8, to determine germination and stand establishment, plant counts were conducted on an area of ¼ meter squared at 10 locations (Table 2) throughout the field. 5 locations had moderate grazing pressure (moderate grazing pressure) and the other 5 had low grazing pressure (light grazing pressure). One additional grazing took place in the fall after frost.

Plant counts at Tiger Lily Alberta

Location	Sainfoin (plants/.25 m²)	Alfalfa (plants/.25 m²)	Grass (plants/.25 m²)
Moderate Grazing Pressure			
1	1	7	7
2	9	12	16
3	7	15	26
4	4	10	10
5	5	12	2
total	**26**	**56**	**61**
Light Grazing Pressure			
6	2	7	1
7	6	16	14
8	8	12	3
9	6	13	5
10	10	14	12
total	**32**	**62**	**35**

Table 2. High Legume Pasture Project 2016/2017, Plant counts at Tiger Lily Alberta. *Note: Grazing pressure is the demand/supply ratio between dry matter requirements of livestock and the quantity of forage available in a pasture at a specific time.*

2017 Observations

May

Over all the snow cover all winter was good. At the start of the growing season there was an extreme amount of volunteer clover.

June

Four pasture cages were placed on the field to determine the percentage of each variety by weight. On June 29, clippings were taken, fresh weight and dry weight were measured and the percentage of each species was calculated for each cage. Species composition percentage average in the field was calculated in July (See Graph 1). The weeds identified at that time were: Canada thistle, Quackgrass and Dandelion.

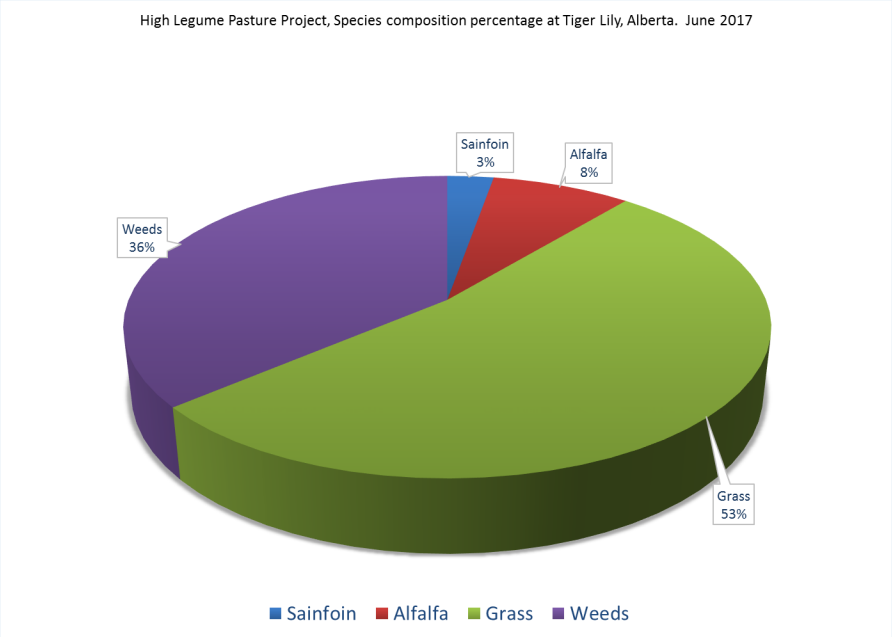
July
On July 10, the field was grazed with 500 head of sheep. Alfasure® was administered to the flock 24 hours prior to grazing (just one treatment). Alfasure® is a non-ionic surfactant that reduces the stability of the foam. When added to cattle's drinking water, it works like the anti-foaming agents that are added to hot tubs to eliminate foam buildup. When the foam bubbles in the rumen burst, the released gas collects as free gas, which stimulates a normal burping reflex.

August
On August 29, cutting, baling and wrapping was completed. The weeds identified at that time were: Dandelion, White clover and Quack grass. Species composition percentage average in the field was calculated in August (See Graph 2). NOTE: White clover was considered a weed in this trial due to the pressure to sainfoin; typically it's not considered a weed. Some observations on the filed prior to the cutting were:

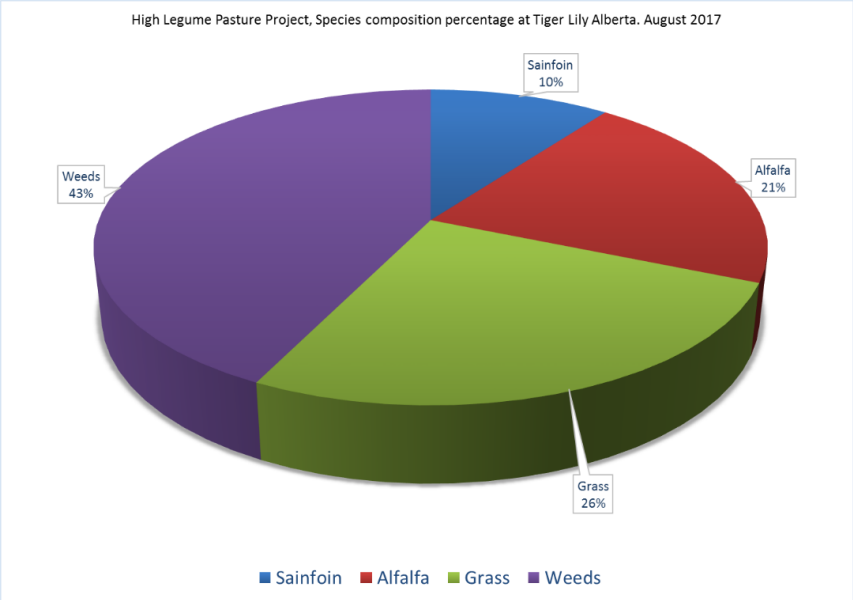
- More sainfoin plant present where grass was not seeded
- Sainfoin plants just starting to set seed
- On the lower parts of the field there were less sainfoin plants (Unsure if due to soil, moisture or both)
- Uneven distribution of the sainfoin plants, but zero cases of bloat reported during 2017
- Suspected that grass and clover suppressed the sainfoin population

September
Late September clippings were collected. More Sainfoin plants were observed on the north and south sides of the test field where there was less pressure from grass and weeds. There was a great amount of volunteer clover, likely due to the extreme moisture during the growing season. The weeds Identified were: White clover, Dandelion, Sow thistle, Canada thistle and Pigweed

October
All the areas with sainfoin plants present were left standing to allow them to set seed for the next growing season. The remainder of the field was cut and baled.



Graph 1. High Legume Pasture Project, proportion of each variety collected on June 2017 by weight on the experimental field at Tiger Lily Alberta.

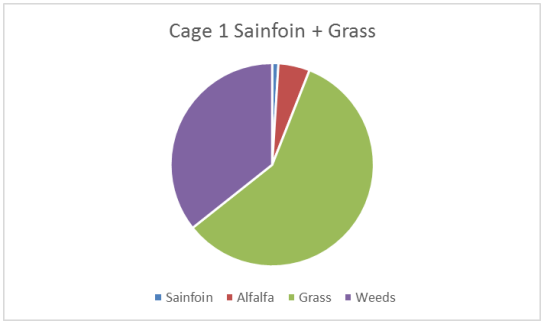


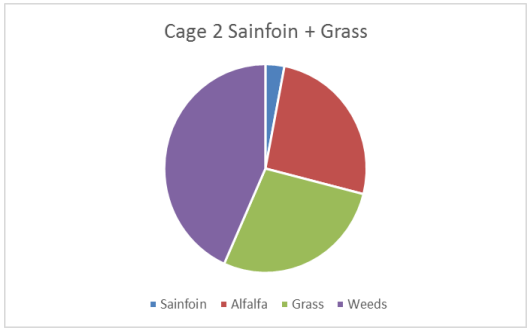
Graph 2. High Legume Pasture Project, proportion of each variety collected on August 2017 by weight on the experimental field at Tiger Lily Alberta.

Other Observations:

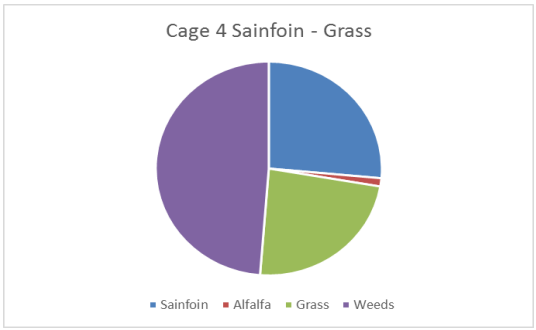
Fewer sainfoin plants were observed in the samples that were taken from where sainfoin and grass were seeded, and more sainfoin plants were observed in the samples were sainfoin and no grass were seeded. Note: In the graphics below the blue colour represents the percentage of sainfoin.

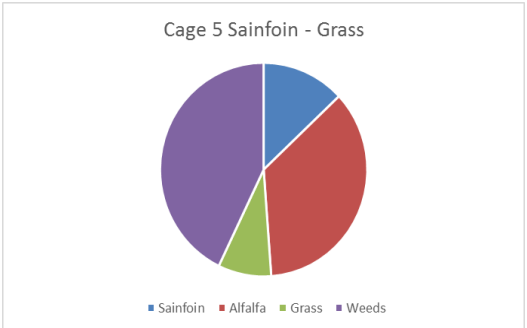
Sainfoin + Grass





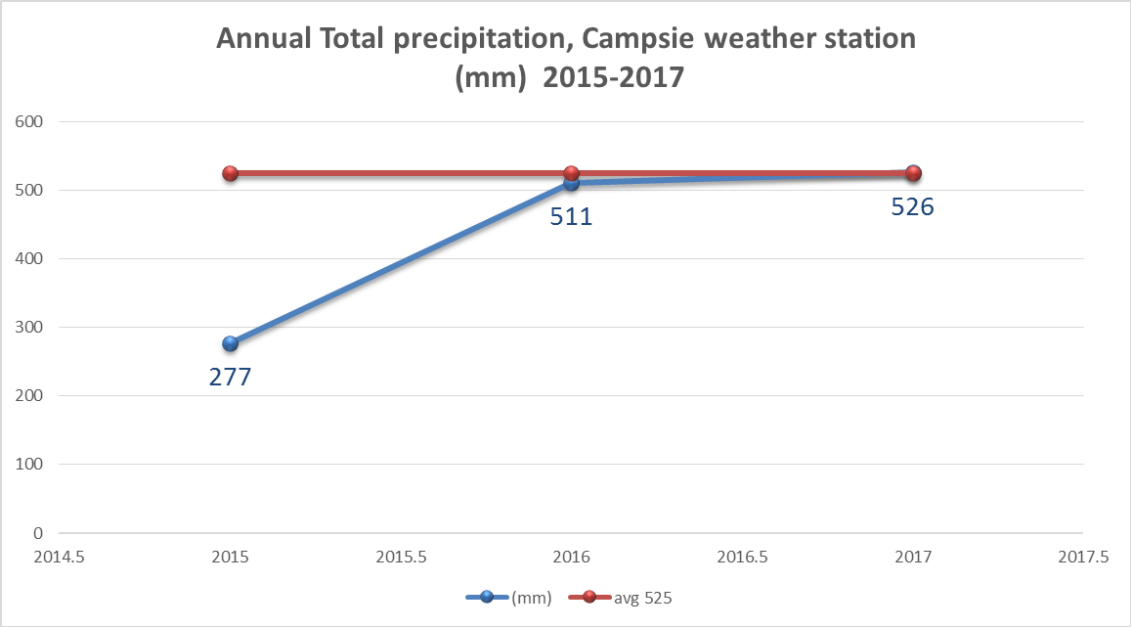
Sainfoin – Grass



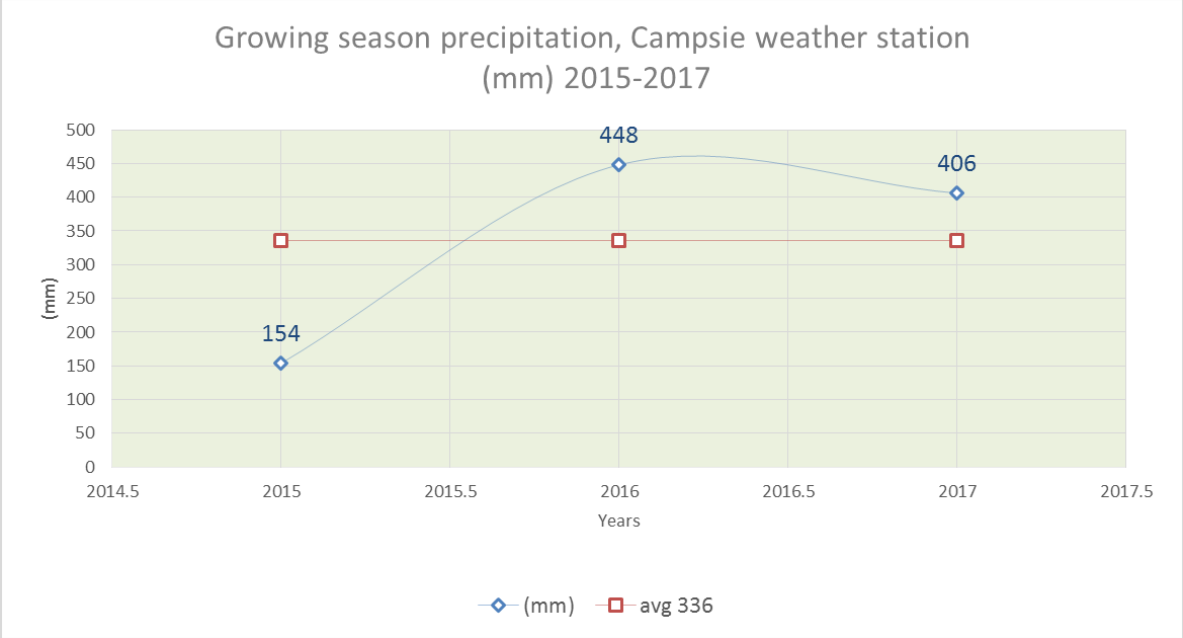


Environmental Conditions

Campsie Weather Station is the closest to the experimental field within the County of Barrhead, reported 525mm on average and the growing season precipitation May until October just (336mm) on average *"Alberta Weather Data Viewer, 2017"*. Graphic 1 shows the Historic annual precipitation for the Campsie weather station. Graphic 2 shows the accumulative precipitation for the growing season from the Campsie weather station.



Graphic 1. – Historic annual precipitation for the Campsie weather station from 2015 to 2017



Graphic 2. – Growing season precipitation in the Campsie weather station from 2015 to 2017

WINTER GRAZING VARIETY TRIAL PROGRESS REPORT

2014-2017

INVESTIGATORS: Project Lead, M.Sc. B.Sc. P.Ag Ken Coles (Farming Smarter)
Dr. Jamie Larson (AAFC Lethbridge)
B.Sc. P.Ag Fito Zamudio Baca (WCFA)
Sr. Economist Dale Kaliel (AAF)
Dr. Surya Achyria (AAFC)
Dr. Adil Akbar (Kihsaar Land Resources)
Dr. Bart Lardner (WBDC-PAMI)

FUNDING: Ducks Unlimited / AOF

LOCATIONS: Medicine Hat (Farming Smarter), Forage Research Site, Wildwood (WCFA) and Kidd Bros. Farms, Mayerthorpe AB. (WCFA)

DESIGN: Four replicate, randomized complete block with a factorial arrangement of treatments
Two trials side by side (same randomization).

TREATMENTS:
Factor 1: Crop (6)
- 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

Factor 2: Fungicide Treatment: (2)
- Check – untreated seed
- Cruiser Maxx Vibrance Cereals

OBJECTIVE: Evaluate the economic and agronomic potential of winter grazing systems on winter cereal production.

LOCATIONS: Kidd Bros. Farms, Mayerthorpe AB. / WCFA Forage Research Site, Wildwood AB.

2017 ACTIVITY
Weed management at the sites included mowing and hand weeding. Plant counts were collected on early spring and yield plus quality samples were collected at the end of the growing season. Final Report will be published in the fall of 2018.

PERENNIAL FORAGE VARIETY EVALUATION AND DEMONSTRATION PROGRSS REPORT

INVESTIGATORS

Project Lead: Dianne Westerlund, Chinook Applied Research Association (CARA)
Co-Investigators:

- *(Vicki Heidt),* Battle River Research Group (BRRG)
- Jennifer Duckering *(Laura Gibney, Cassie Kirkpatrick)*, Foothills Forage and Grazing Association (FFGA)
- Sandeep Nain *(JP Pettijohn)*, Gateway Research Association (GRO)
- Alyssa Krone, Lakeland Agricultural Research Association (LARA)
- Dr. Jacob Marfo, Mackenzie Applied Research Association (MARA)
- Nora Paulovich, North Peace Applied Research Association (NPARA)
- Dr. Akim Omokanye and Monika Benoit, Peace Country Beef and Forage Association (PCBFA)
- Dr. Kabal S. Gill, Smokey Applied Research and Demonstration Association (SARDA)
- Fito Zamudio Baca *(Carla Rhyant)*, West-Central Forage Association (WCFA)
- Barry Yaremcio, Beef Nutrition Specialist (Alberta Agriculture and Forestry)

  ** (were with the team for a portion of the year)*

PURPOSE & OBJECTIVES

A. The species/variety trials will target the following objectives:

1. 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.
2. To identify perennial crop species/varieties that demonstrate superior establishment, hardiness, forage yield and nutritional quality characteristics in different eco-regions of Alberta.
3. To assess any benefits from growing mixtures of selected species.

B. The demonstration component will target the following objectives:

1. To demonstrate the regional adaptability of various forage species and varieties.
2. To demonstrate the regional adaptability of various grasses and legumes when planted in mixed stands.

BACKGROUND

The majority of the annual feed requirement of Alberta's cow herd comes from perennial forages, including both grass and legume. Two thirds of the total cost of maintaining the cow herd is comprised of pasture, stored feed and bedding (Alberta Agriculture's Agriprofits Benchmarks). Therefore managing the supply of perennial forage is very important. Identification of high yielding varieties for different areas of the province will contribute to a positive economic return.

Forage producers in Alberta have had limited access to information on new perennial crops in recent years. This project is intended to bridge the information gap by evaluating a number of species and varieties at several locations in Alberta. It includes test cultivars which have been developed in recent years but have had limited regional evaluation beside varieties which are commonly grown in the province. Producers will have access to data applicable to regional conditions from the eight test sites in the province.

The project partners will distribute the information to producers across Alberta using both traditional methods and various electronic means. Final project results will also be shared with producers at a future Western Canadian Grazing Conference.

2017 ACTIVITY SUMMARY

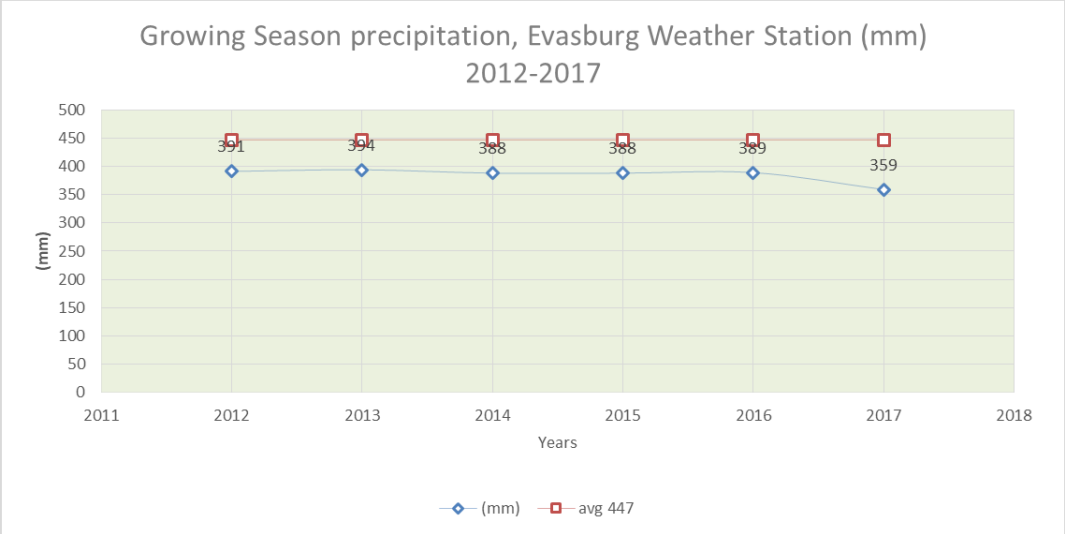
Weed management at the site included mowing and hand weeding. Yield and quality samples were collected during the summer (July) of perennial grasses and grass/legume mixes.

OBSERVATIONS

Stand establishment was good for the perennial grasses and grass/legume mixes despite pest and weed pressure and lack of moisture early in the summer.

ENVIRONMENTAL CONDITIONS

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 3 shows the accumulative precipitation for the growing season from the Evansburg weather station.



Graphic 1. – Historic growing season precipitation for the Evansburg weather station from 2012 to 2017

Additional Information

Industrial Hemp Variety Trial

Brazeau County, WCFA, and the University of Alberta Breton Plots collaborated and began an applied research trial on industrial hemp in 2017. WCFA's plot was established at NW 14-049-09-W5M. Since the plant has typically been coming out of the eastern United States, there were some doubts about viability in the west-central region of Alberta, with our gray wooded soil type and short growing season. Brazeau County strongly encouraged this research trial to better assist their producers and industry in the region.

The objective of this variety trial was to determine the viability of hemp as a crop to be grown within Brazeau County. It was also intended to demonstrate hemp to stakeholders in the area and educate producers on hemp production and how it could potentially fit into their operation.

2017 Trial Summary
The trial was seeded using a small plot Fabro disc seeder. Seed was either placed directly using the seed drill to a depth of one inch (disc drill treatment) or were 'broadcast' on by undoing the hoses on the seeder and allowing the seeds to fall on the ground (broadcast treatment). Seeding rates were: 30 lbs/acre for the disc drill treatment and 60 lbs/acre for the broadcast treatment.

Five varieties were tested during the trial (each variety was replicated three times for each of the seeding methods). The varieties used were:

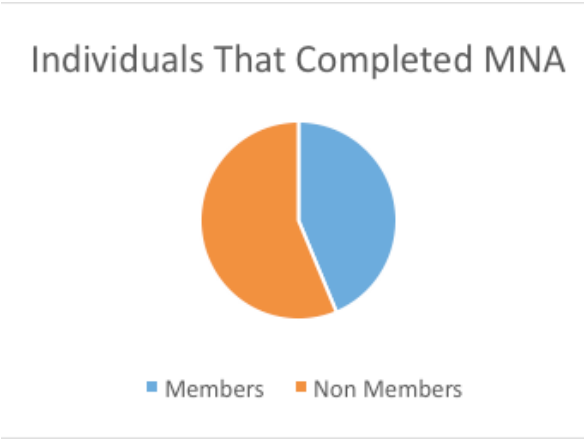
- X-59 (Hemp-Nut)
- Finola
- Canda
- Delores
- Joey

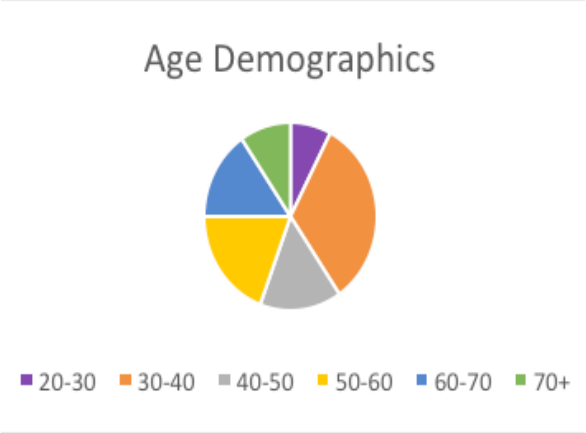
Seeding was unable to be conducted until June 19 due to the weather and the excessive moisture present at the site. Applications of chemical for weed control were made twice during the season, but the trial still faced significant weed pressures throughout the season.

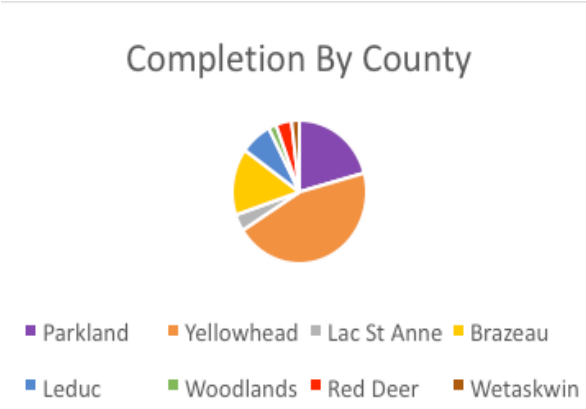
The 2017 trial ultimately performed very poorly, but did provide us with a number of learning opportunities and recommendations to implement moving forward. WCFA will be seeding another Industrial Hemp Trial in 2018.

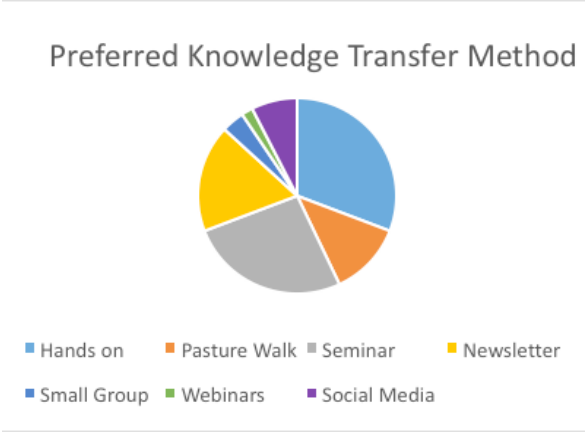
Member Needs Assessment (2017)

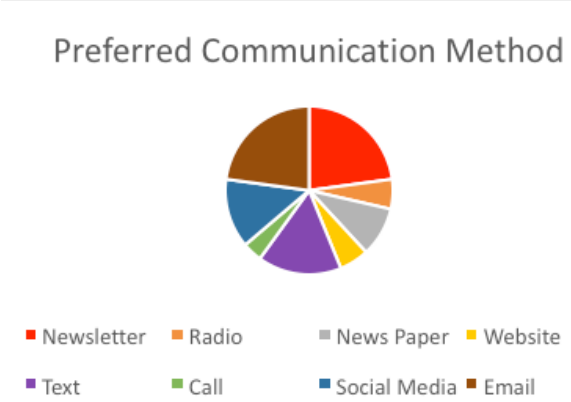
In 2017 WCFA conducted a Member Needs Assessment (MNA) asking for feedback on our programming. WCFA plans to use the results to direct future programming at WCFA to ensure we continue to provide opportunities that are of relevance to you, our producers, industry partners and stakeholders. Some of the results are presented below.











Three Most Successful and Valuable Past Projects
1. Perennial Forages
2. Triticale Swath Grazing
3. Cover Crop Variety Trial

Three Most Attended Extension Topics
1. Winter Grazing
2. Grazing Management
3. Nutrition/ Supplementation

Three Least Attended Extension Topics
1. Succession Planning
2. GF2/EFP
3. Technology Adoption

Focus Areas

Forage Research and Development - Top Three
1. Improve Perennial Forage Varieties For Pasture
2. Pasture Mixes
3. Best Management Practices for forage

Pasture & Grazing Management Techniques -Top Three
1. Grazing Best Management Practices
2. Extended Winter Grazing Systems
3. Rotational Grazing Systems

Livestock Improvements
1. Consumer Education/ Social License
2. Feed/ Mineral Management
3. Reproductive Management

Business & Financial Management
1. Reducing overwintering costs
2. Calculating cost of production
3. Whole farm economics

One on One with WCFA Staff
1. Feed tests and ration balancing
2. GF2/ CAP
3. Soil Sampling

SACA
Enhance on Farm Environmental Stewardship
1. Water Quality
2. Alternative power sources for water systems
3. Riparian area health, restoration and grazing management