



**UNION**  
FORAGE

**GRAZE  
YEAR  
ROUND**

# 2023 CROP MANUAL

---

CANADA'S FORAGE SEED INNOVATOR

1 877 COW - CHOW (269-2469)

[unionforage.com](http://unionforage.com)



## FORAGE SELECTION FOR YOUR OPERATION:

Forage- livestock systems involve orchestrating soil, plants, animals, water requirements, management strategies, weather and the list goes on. Knowing when and how to accomplish these steps should influence the whole design of your profitable forage and livestock system on your operation, be it an annual or perennial forage plan. Design it wisely!

When organizing a perennial stand consider a high legume base in the blend to deliver a long growing season of energy and protein for maximum milk production and higher conception rates at breeding time. Using annual cover crops should be looked at for the same reasons as perennials- only if you have a cropping program already on your farm. Getting livestock back onto the soil and utilizing them to improve the soil health of the land is a key step.

Do not over complicate a cover crop blend, make sure all the species will be able to thrive, compete and perform to their max. Many times 2, 4 or 6 wisely chosen varieties of annuals will do the trick for the animals' requirements , economics and soil health. Annuals are also a great tool to help with extended grazing into the fall or graze over winter which will cut your feeding bill by half. Whatever you do, make it cost effective and productive for your farm business; cost and profit first, quality livestock feed second and soil health will follow. As forage quality goes up the forage waste goes down, forage consuming animals have a definite preference regarding what they eat. There is a high correlation between what tastes good to an animal and the nutritional value.

These are just thoughts for you to consider in the future when planning your next pasture program

Happy Grazing- *Union Forage Team*

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# WHO IS UNION FORAGE?

The shareholders of Union Forage own and operate 6 ranches and 5 feedlots in western Canada. From short grass to Parkland regions where we run 5,000 cows and 40,000 head of feedlot capacity on about 50,000 acres. We apply the principles we promote and grow the forages we market. Ensuring these principles and products will also perform for our customers.

50,000 acres   5,000 cows   6 ranches   5 feedlots

- 2018** AAC Glenview Sainfoin introduced to market.
- 2019** Calgary office and warehouse opened.
- 2020** Increased custom blending capacity.  
Began offering grazing and green feed cereal seed (oats, triticale, barley).  
Expanded technical team with addition of Grant Lastiwka (formerly Alberta Agriculture)
- 2021** Began offering grazing and silage corn seed in spring  
Expanded technical team with addition of Amber McNish
- 2022** Launch Enogen Corn from Syngenta in Southern Alberta.  
Addition of supply chain manager Alexandra Strunina.



# WHAT'S NEW?

Custom blending has become a major player in the cover crop and perennial market. We have increased our blending capacity and have a full line of diverse products to suit each of your individual needs!

Now on offer to be purchased in bulk or tote bags:

- Spring Cereals
- Winter Cereals
- Forage Peas

Join in on the discussion this winter via Zoom! We answer YOUR questions and cover relevant topics in the Ag sector.

Did you know?

Our seed bags come with all the information you need to know

	ESTABLISHMENT	DROUGHT TOLERANCE	SEED DEPTH (BY INCHES)	SEEDING RATE (BY ACRE)	PURPOSE	ADDITIONALS
<b>ANNUALS</b>						
1st Year Seed	80%	Medium	1/4 to 1/2	10-15 lbs	seeded with straw for additional nitrogen, growing and to improve quality and forage 2nd stage	40-60 lbs mixed with 100 lbs forage peas
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	seeded with straw for additional nitrogen, seedbed and soil with straw dry down after nitrogen for additional growth	50-75 lbs mixed
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	multiple growing and to improve soil	20-30 lbs mixed with 100 lbs forage peas
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	seeded with straw and nitrogen for high quality cover/crop forage	20-30 lbs mixed with 100 lbs forage peas
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	high nitrogen cover/crop with growing and soil	20 lbs mixed with 100 lbs forage peas
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	the cover growing (100 lbs mixed) to add organic matter and improve soil	40 lbs mixed 2' blend
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	Blended blend with flexible foraging ability	
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	high nitrogen and protein cover/crop for soil to improve growing	20-30 lbs mixed with 100 lbs forage peas
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	growing, stage or hay	seeded with straw and nitrogen for high quality cover/crop forage
1st Year Seed (with straw)	80%	High	1/4 to 1/2	10-15 lbs	growing, stage or hay	
<b>PERENNIALS</b>						
Perennial 1	80%	High	1/4 to 1/2	8-12 lbs	perennial grasses legume mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 2	80%	High	1/4 to 1/2	8-12 lbs	perennial grasses legume mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 3	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 4	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 5	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 6	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 7	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 8	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 9	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 10	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 11	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 12	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 13	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 14	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 15	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 16	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 17	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 18	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 19	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay
Perennial 20	80%	High	1/4 to 1/2	10 lbs	perennial grasses mix	seeded with 100 lbs mixed with 100 lbs of straw or hay



## CUSTOM BLENDING

A blend suitable to each individuals needs, just a phone call away! Give us a call 1 877 COW-CHOW

Be sure to get your custom orders in early!



“Working with Union Forage over the last 5 years has been a great experience. With the different grazing mixtures available we have increased the number of days that we are grazing the cattle without having to start up the tractor. Additionally, we have seen an increase in the weaning weight of our calves.”

Christian G.



## OUR NEWEST TEAM MEMBERS:



### Alexandra Strunina

Alexandra Strunina joined the Union Forage team in September 2022 in the role of Supply Chain Administrator. She recently came to Canada from Ukraine, a country famous for its rich soils and favorable climate making it one of the largest agricultural producers on the European continent. Alexandra has 10 years of extensive experience in Ukrainian agriculture business in the areas of grain export, logistic activities, and client support. Having an enthusiastic and passionate attitude, she will work with our supply chain network including product deliveries. Alexandra will be an important member of our customer service team in Calgary.



### Amber McNish

Amber McNish joined Union Forage in December 2021. She offers support to both our end user customers and dealer network in Manitoba and Saskatchewan. In addition, you will find Amber at your local ag related events and behind the scenes working on media. Amber grew up on a mixed farm in southwest Manitoba and completed an Agribusiness Diploma Honors at Assiniboine Community College. Amber has experience designing and executing intensive grazing plans and managing perennial forages with a focus on soil health.

Field Day  
Hardisty, AB



## BOOK EARLY & ENTER TO WIN A TRIP TO NEW ZEALAND



*Coming back into travel season we are starting up our education tours. Book your seed before January 31st and you will be entered to win!*





**Inoculant  
is always  
included**

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The number of species you choose should come through a sound approach. Science has shown 2-6 species accomplish most of the targeted results. Unfortunately, results vary from year to year as weather and management can make species winners one year and losers the next. We recommend you start with less. Use known producing species as a base. Then add one or two other species to address your concerns. Follow by monitoring and managing for greatest success.



# ANNUAL BLENDS





# COMPLETE ANNUAL BLEND

An annual grazing and soil amendment blend from Union Forage that is a complete blend in a bag. The combination of high-quality forages will give you what you are looking for in a one pass seeding. This year we have added in a blend of C4 species to add more diversity.

This blend can be grazed or stockpiled for swath grazing or fall/winter grazing. The species selection delivers high feed quality and regrazing capabilities all summer long- weather permitting. This blend combination will stay palatable long into the fall. It is available in 55 lb bags or mini bulk bags for your convenience of handling.

**SEEDING RATE:** 65 - 75 lbs/acre

- FORAGE OATS
- LUOMA WINTER TRITICALE
- C4 BLEND
- 4010 FORAGE PEAS
- T RAPTOR LEAFY TURNIP
- BARSICA FORAGE RAPE
- BARKANT TURNIP



**“ It was pretty amazing! Keep in mind we are in year six of drought and I will definitely be seeding more”  
Beau S.**



# REGRAZE BLEND

The Regraze blend is designed to be seeded along with a cereal to create a high quality feed. This blend can be grazed multiple times throughout the growing season and seeded early because there are no C4's. The forages that make up this blend deliver high feed quality and regrazing capabilities- weather permitting. This blend combination will stay palatable long into the fall. It's available in 55 lb bags or tote bags for your convenience of handling.

**SEEDING RATE:** 12-15 lbs/acre. Add 30-40 lbs of Cereal along with 10+ lbs of 4010 Forage Peas.

- LUOMA WINTER TRITICALE
- HAIRY VETCH
- BARKANT TURNIP
- GREEN SPIRIT RYEGRASS
- T RAPTOR LEAFY TURNIP
- BARSICA FORAGE RAPE



# DRYLAND BLEND

+ SUPER G COATING

The Dryland Blend is designed with a higher percentage of warm season forages (C4's) and drought tolerant forage rape that is better adapted to hotter dryer areas. This blend can be used for multiple summer grazing's or stockpiled forage. Biodiversity gives varied species expression as climate and nutrient availability impact results every year. Fertility is important for best results.

**SEEDING RATE:** 10 – 12 lbs/acre.

Option to include 20 – 30 lbs of cereal and 10+ lbs of 4010 Forage Peas.

PROSO MILLET

SORGHUM SUDAN

HAIRY VETCH

BARKANT TURNIP

BARSICA FORAGE RAPE

PEREDOVIK SUNFLOWER

*Dryland Blend 2022  
Lyleton, MB*



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# DOUBLE DOWN REGEN BLEND

## BI-ANNUAL GRAZING BLEND

The Double Down Regen Blend is a versatile two year bi-annual grazing, silage or swath grazing crop. It is designed to stand up to a wider range of moisture conditions across the prairies. In the first year it can be sown early spring and grazed or utilized as green feed, silage or swath grazing and then grazed in the fall/early winter. As the Sweet Clover, Winter Triticale and Red Clover come back in the spring of year two it can be utilized as an early grazing or silage option. Available in 55 lb bags or tote bags for your convenience of handling. Add in 10+ lbs of a cereal to increase early grazing production.

**SEEDING RATE:** 30 – 40 lbs/acre.



- LUOMA WINTER TRITICALE
- WINFRED/GOLIATH
- HAIRY VETCH
- CHICORY
- SWEET CLOVER
- RED CLOVER

# ULTIMATE ANNUAL BLEND

## + SUPER G COATING

The Ultimate Annual Blend is a balance of grasses, legumes and brassicas. Our field trials show that these species work together to yield exceptional nutritional quality and agronomic benefits for grazing and soil health. This makes for high-quality annual grazing, where performance may be maximized in a rotational grazing system.

When combined and seeded with cereal and peas it can be grazed 2–3 times throughout the summer, followed by a total graze off in October/November. This blend is ideal for improving body condition on all classes of livestock entering winter.

*Stocking Rate examples:*

*In Oct-Nov of 2016: 96 pairs grazed Ultimate on 45 acres for 40 days at Sceptre, SK.*

*In 2016: 150 pairs grazed Ultimate on 50 acres for 19 days at Madden, AB.*

**SEEDING RATE:** 10 – 12 lbs/acre. Add 30 – 40 lbs Cereal and 10+ lbs 4010 Forage Peas.



- CRUSADER RYEGRASS
- HAIRY VETCH
- CRIMSON CLOVER
- WINFRED/GOLIATH
- HUNTER LEAF TURNIP
- GRAZA FORAGE RADISH

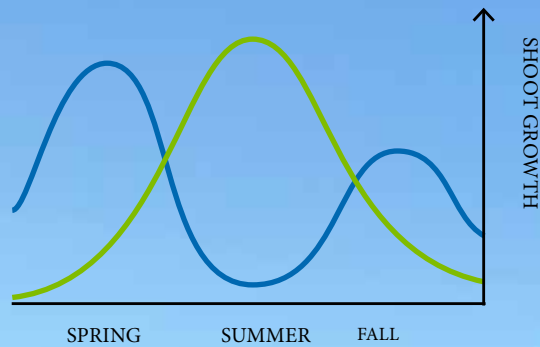


*Did you know?*

## COOL SEASON VS. WARM SEASON PLANTS

SHOOT GROWTH VS. SEASON

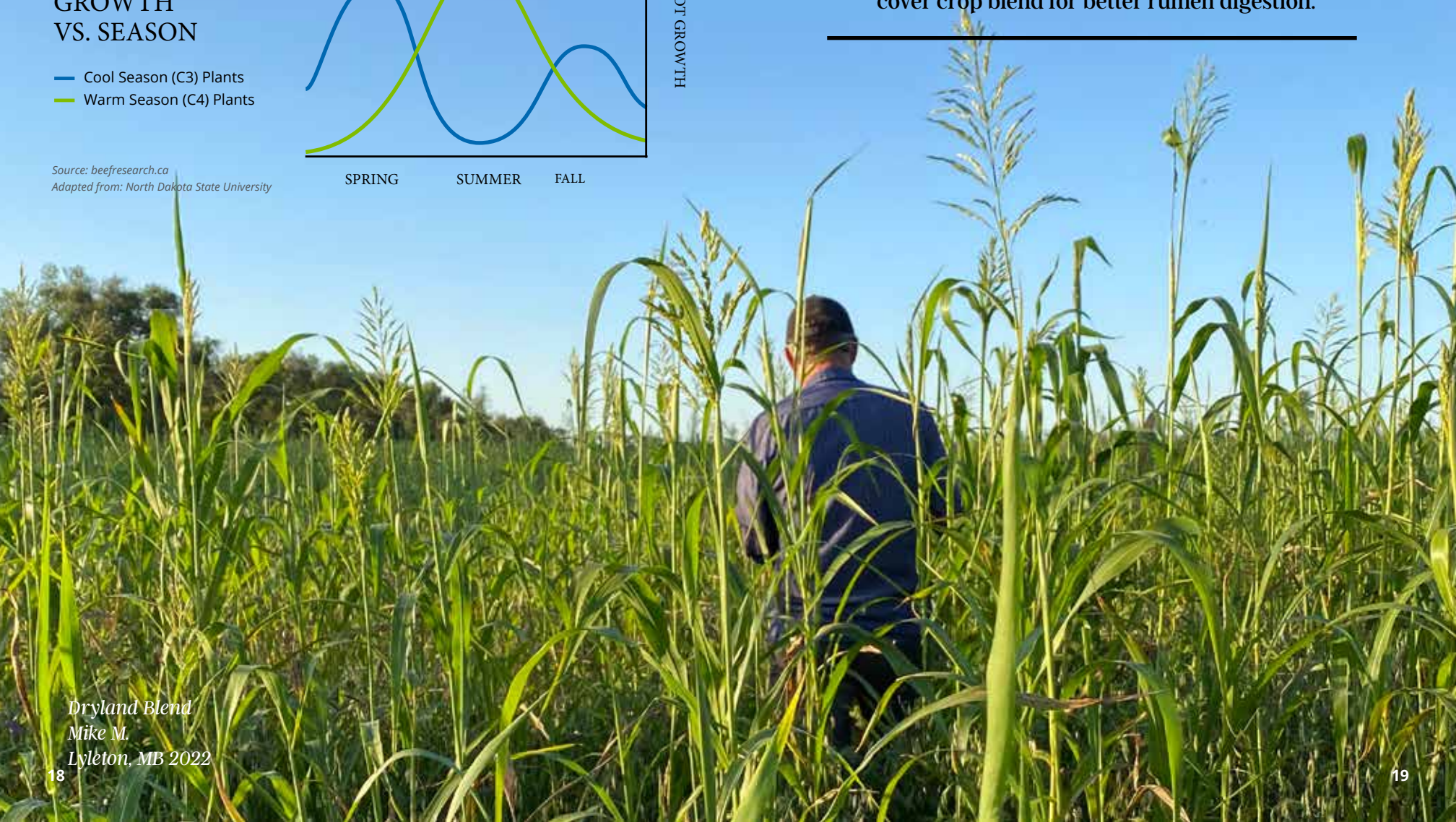
- Cool Season (C3) Plants
- Warm Season (C4) Plants



Source: [beefresearch.ca](http://beefresearch.ca)  
Adapted from: North Dakota State University

Warm season (C4) plants have a competitive edge over cool season (C3) grasses like oats, wheat, barley. C4 plants use less water but are not as cold tolerant as the C3 plants and will be affected by early frosts and die off. C4 plants can typically stand high temps, drought and can be grazed multiple times. Prussic acid in sorghum sudan can be a concern so it should not be grazed under 2 ft. tall. C4 plants produce large biomass and can add high fiber to a cover crop blend for better rumen digestion.

---



Dryland Blend  
Mike M.  
Lyleton, MB 2022



# SWATH GRAZING BLEND

+ SUPER G COATING

Our swath grazing blend is designed to be an additive to your own cereal swath grazing. The blend is created to increase protein, energy levels, and digestibility, all while allowing you to graze more animals and produce more lbs/acre. When managed with break fencing, it ensures a good swath clean up. The root system left behind adds more organic matter to your soil.

**SEEDING RATE:** 5 – 7 lbs/acre. Add 30 – 40 lbs of cereal and 10+ lbs of 4010 Forage Peas.

GOLIATH FORAGE RAPE

GREEN GLOBE TURNIP

HUNTER LEAF TURNIP

*Chad K. at Chamberlain, Saskatchewan ran 360 cows for 143 days along with 160 heifer calves for 84 days on 220 acres with total cost per acre before labor of \$168 including rent, seed, fertilizer, herbicide, custom seeding and swathing.*

*Splitting out the costs based on an AUM calculation, estimated costs per cow day was \$0.62/day and estimated calf cost per day was \$0.37/day. This was one of our best years for swath grazing in the last four years.*



*Winter Swath Grazing  
Airdrie, AB  
-25 Celsius*



# GEMSTONE CATTLE COMPANY

## 100% Forage Developed Genetics

The goal of our breeding program has long been to produce efficient, productive brood cows – deep ribbed cattle that are naturally easy fleshing, structurally correct and have superior udder quality. In our experience, the cows that thrive on pasture and consistently wean a high percentage of their body weight, produce the cattle that are most efficient through the rest of the beef production cycle.

## THICKNESS BRED IN NOT FED IN



Daniel & Kimberly  
Gradey, Bowden, Kyleah Doerksen  
PO Box 13, Gem, Alberta T0J 1M0  
Cell: (403) 633 0530  
Email: daniel@gemstonecattle.com

Arno & Wanda Doerksen  
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Chicory Root  
White Lake Colony  
Southern Alberta

**CRUSADER RYEGRASS**

**CHICORY**

**TONIC PLANTAIN**

## ROCKET FUEL BLEND

+ **SUPER G COATING**

The Rocket Fuel Blend is designed for irrigation and high moisture regions. Rocket Fuel is a versatile seed blend to fuel your animals. A combination of chicory, plantain and Italian ryegrass can deliver excellent animal performance. This blend produces a leafy, high-quality feed that can be utilized throughout the grazing season, whenever your perennial pastures begin to decline in feed value. It can be sown with the intent of finishing or backgrounding, or as a high protein feed for lactating beef or dairy cows. Rocket Fuel can be grazed within 50 days if grown under irrigation and seeded in early spring.

When compared to other annual grazing crops, this blend delivers more energy, soluble sugars and pectin's. Less fiber means more rapid and complete digestion. Choice Chicory has a very large tap root system that will add a large amount of organic matter to the soil along with the shorter fibrous roots of the other plants. Clover or oats can be added if desired.

**SEEDING RATE:** 12 - 15 lbs/acre.

## CERTIFICATE OF ANALYSIS

PAGE: 1 / 1

LAB NUMBER:2933009  
SAMPLE ID:PLANTAIN,CHICORY, ITALIAN RYEGRASS  
SAMPLE MATRIX:Other  
SAMPLE CUT:  
METHOD ID:Wet Chemistry

DATE RECEIVED:2020-10-19  
DATE REPORTED:

DATE PRINTED:2020-10-22

PARAMETER	RESULTS		
	AS FED	DRY	UNIT
Acid Detergent Fibre	3.70	19.65	%
Ash	2.45	12.99	%
Crude Protein	4.88	25.92	%
Starch	0.57	3.01	%
Neutral Detergent Fibre	5.55	29.48	%
NFC	6.24	33.10	%
Crude Fat	0.8	4.14	%
Moisture	81.16	0.00	%
Dry Matter	18.84	100.00	%
Total Digestible Nutrients	13.86	73.59	%
Calcium	0.16	0.87	%
Phosphorus	0.05	0.28	%
Magnesium	0.08	0.42	%
Potassium	0.62	3.29	%
Sulphur	0.05	0.29	%
Sodium	0.16	0.83	%
Copper	2.33	12.35	mg/kg
Manganese	10.44	55.41	mg/kg
Zinc	4.88	25.88	mg/kg
Molybdenum	BDL		mg/kg
Iron	29.04	154.12	mg/kg
NE Lactation	0.32	1.69	MCal/Kg
NE Gain	0.21	1.13	MCal/Kg
NE Maintenance	0.35	1.85	MCal/Kg

\* Feed test taken October 17, 2019

## Rocket Fuel Blend

Bassano, Alberta  
Dwayne H.







Rumsey, AB



## ROOTMASTER BLEND

+ SUPER G COATING

The Rootmaster Blend is a low-cost combination of tillage radish and brassicas, intended for a plow down cover crop or grazing if applicable. These species have been selected to provide a protective canopy over the soil and complex root structures below. If the blend is utilized as a plow down cover crop, it can add organic matter and conserve moisture in the soil. Not recommended for grazing in high sulfur conditions.

**SEEDING RATE:** 4 – 6 lbs/acre. Seed with 40 lbs of cereal if desired.

BARKANT TURNIP

BARSICA FORAGE RAPE

DAIKON RADISH

T -RAPTOR LEAFY TURNIP

“Union Forage does not just sell you seed, they provide real world advice based on your operations goals, budget and environmental conditions”

*Kent H.*

## BREAK CROP BLEND

+ SUPER G COATING

The Break Crop Blend is designed to give you an option of keeping a brassica out of your crop rotation. This blend does not include a brassica, helping to lower the risk of clubroot disease and flea beetle pressure. This blend can be grazed or used as a plow down crop.

**SEEDING RATE:** 10 – 12 lbs/acre.

CRUSADER RYEGRASS

HAIRY VETCH

CRIMSON CLOVER



Southern Cross Livestock  
Madden, AB  
Winter Swath Grazing 2022

# RELAY BLEND

+ SUPER G COATING

The Relay Blend combines the nutrient dense brassica varieties along with Italian ryegrass and hairy vetch. This blend is designed to be used with oats and/or barley for silage, or for swath grazing. It is important to reduce the seeding rate of the cereal to manage competition and allow for growth under the canopy. Seeding this blend with silage offers improved quality and late season grazing-weather permitting. The addition of forage peas for nitrogen fixation is recommended whether it be for silage or grazing.

**SEEDING RATE:** 12 -15 lbs/acre. Add 40 -50 lbs of cereal and 10+ lbs of 4010 Forage Peas.

CRUSADER RYEGRASS

HUNTER FORAGE RAPE

HAIRY VETCH

WINFRED/GOLIATH

# GREEN FEED RELAY BLEND

+ SUPER G COATING

This relay blend is designed to increase the quality of green feed. The addition of hairy vetch provides a legume component, fixing nitrogen in the soil. Weather permitting, it can be grazed post-harvest. In order to speed up the dry down time when laying in a swath, no brassicas have been added to this blend.

**SEEDING RATE:** 12 – 15 lbs/acre. Add 50 lbs of cereal.

ANNUAL RYEGRASS

CRUSADER RYEGRASS

HAIRY VETCH

## Did you know?

The idea of a relay crop is to seed something with the principal crop that will establish within or under its canopy. This will give you a rapidly growing crop that covers the soil and provides late season grazing after harvesting silage or green feed hay.

There are many considerations that play into the decision of which relay crop and seeding rates to use. A relay blend that includes nutrient dense annual forage varieties may boost the nutritional profile of your principal green feed or silage crop while also providing late season grazing and soil armour.

It's usually not possible to use in-crop herbicides when growing a relay blend with your cereal, so we recommend seeding after a glyphosate burn off. Green Spirit or Crusader Italian Rye Grass may be seeded with a cereal that is expected to require an in-crop herbicide. Always consult with your Agronomist to be confident in your herbicide decisions.

Another consideration is whether you are able to seed the larger cereal seeds and the smaller relay blend seeds in one pass. In areas where rainfall is usually not an issue, you may choose to seed everything shallow. However, in other areas where it is desirable to seed the cereal into moisture at 2 inches and the relay mix at ¼ to ½ inch, then two passes may be necessary for best results, but you run the risk of the cereal germinating first and outcompeting the small seeds. So, seeding everything shallow is an important consideration.

Anticipated moisture in your area is another consideration. Best results will be achieved when seeding the relay mix at the same time as the cereal crop. This is usually not an issue if you start with good soil moisture and are in an area where rainfall is decent or if it's growing under irrigation. In drought prone areas where spring moisture is poor, you can always wait until later and seed the relay crop after harvesting the silage or green feed (if moisture is adequate at that time).

Another option is to seed 2-3 lbs of a more drought tolerant brassica with the cereal to reduce the overall cost. Winfred, Goliath Forage Rape, and Barsica are good options in this scenario. If you are baling green feed and dry down is important, then the best options are the Green Feed Relay Blend or the Break Crop Blend. The Break Crop Blend is a good option if you're concerned about the Annual Rye Grass in the Green Feed Relay setting seed and becoming an issue in subsequent crops.





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 DECEMBER 31, 2023

[canadiancattlemen.ca](http://canadiancattlemen.ca)

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Don't see something listed?  
 Give us a call- We can help!  
 1 877 COW CHOW



## FORAGE BRASSICAS:

- Winfred Forage Rape
- Goliath Forage Rape
- Hunter Leaf Turnip
- Graza Forage Radish
- Green Globe Turnip
- Barkant Turnip
- Purple Top Turnip
- T Raptor Forage Brassica
- Barsica Forage Rape
- Daikon Radish

## LEGUMES:

- Hairy Vetch
- 4010 Forage Peas
- Berseem Clover
- Crimson Clover
- Balansa Clover
- Persian Clover
- Subterranean Clover
- Yellow Blossom Sweet Clover (bi-annual)
- AAC Glenview Sainfoin (perennial)
- Alfalfa (perennial)
- Cicer Milk Vetch (perennial)
- Red Clover (perennial)
- White Clover (perennial)
- Alsike Clover (perennial)
- Birdsfoot Trefoil (perennial)

## FORBS & FORAGES:

- Choice Chicory
- Tonic Plantain
- Phacelia

## C4 FORAGES:

- Teff Grass
- Buckwheat
- Sunflowers- Black Oil
- BMR Sorghum x Sundangrass
- Red Proso Millet
- Japanese Millet
- Hybrid Pearl Millet



Don't see something listed?  
Give us a call we can help!  
1 877 COW CHOW





Here are some ideas for the grazing operations that have irrigation or in a high moisture area. We have proven that livestock and forage rotations improve soil health, as high-quality grazing for backgrounding, breeding and high milk yields.

# IRRIGATION & HIGH MOISTURE

## HUNTER LEAF TURNIP

+ SUPER G COATING

## RELAY BLEND

+ SUPER G COATING

## ROCKET FUEL BLEND

+ SUPER G COATING

## CRUSADER ITALIAN RYEGRASS

+ SUPER G COATING

Crusader Italian Ryegrass is a dense, fast growing, high-quality diploid Italian ryegrass for forage or hay production. Crusader can be a low-cost alternative annual that will persist in hot, dry climates and will perform optimally under irrigation. When planted in the spring it can be grazed multiple times and grows well into the fall for extended grazing and silage production. Crusader flourishes in a single stand, but also is great interseeded with cereals, forbs and/or clovers for a more diverse forage. This blend is suitable for multiple grazing or silage passes.

SEEDING RATE: 15 – 20 lbs/acre with adequate moisture.

## GREEN SPIRIT ITALIAN RYEGRASS

+ SUPER G COATING

Green Spirit Italian Ryegrass provides excellent quality forage for summer and late fall, depending upon weather and available moisture. Due to its quick regrowth, early development in the spring and prolonged growing period in the fall, it makes a great forage option. Green Spirit is the perfect blend of diploid and tetraploid Italian ryegrasses. The combination of tetraploid and diploid varieties maximizes the advantages each has to offer. Our tetraploid varieties provide high dry-matter production and improved palatability. Our diploid varieties are added for improved persistence for high traffic areas and disease resistance. This blend is suitable for multiple grazing or silage passes.

SEEDING RATE: 15 – 35 lbs/acre.



## GW- 400 BMR SWEET MS SORGHUM

**NEW**

## BMR SORGHUM SUDAN GRASS GRAZING BLEND

“ We tried a small 10 acre plot of BMR Sorghum-Sudangrass Grazing Blend at Round Rock Ranching this year. We were interested due to it's drought tolerance and potential to yield forage in a tough year. Germination was excellent. We came through the third week of July and cut the crop down to approximately 1 foot high. The taps shut off in July (had 1/10" the remainder of the year) Due to heat and lack of moisture we decided to swath the end of August. Based on our experience the crop looks like 160 cow day swaths. We are waiting on our feed test results.

After this year's extreme test, BMR Sorghum-Sudangrass will become part of our feeding and risk mitigation strategies going forward and we are excited to see what it does under proper agronomics and hopefully some moisture! “

*Sean M.*



*GW - 400 BMR Sweet Sorghum  
Rapid City, MB 2022*



*C4 Multi Species Blend  
Anola, MB 2022*



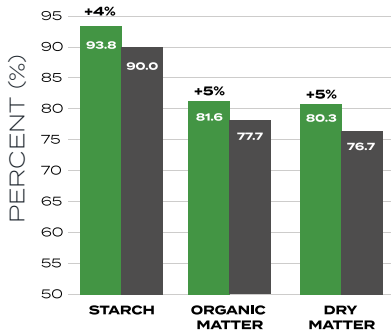
# ENOGEN FOR BEEF OPERATIONS

The α-amylase technology in the Enogen trait makes starch easier for your cattle to digest. Improved starch digestibility means more available energy for your beef cattle with improved total tract digestion.

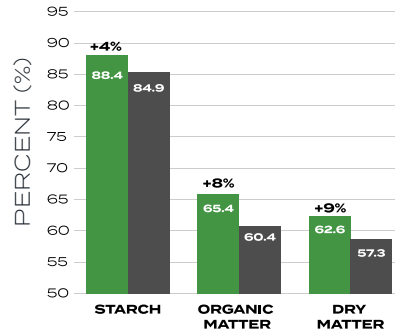
## TOTAL TRACT DIGESTIBILITY

■ ENOGEN ■ CONTROL

### UNL FINISHING BEEF CATTLE<sup>1</sup>



### KSU BEEF STOCKER CATTLE<sup>1</sup>



<sup>1</sup> University of Nebraska-Lincoln Research Studies, 2013-2017; Kansas State University Research Study, 2017

**WITH THE FLEXIBILITY TO BE HARVESTED AS SILAGE, GRAIN OR HIGH-MOISTURE CORN, ENOGEN CORN ALLOWS FOR SIGNIFICANT EASE OF USE AND MINIMIZED MANAGEMENT NEEDS COMPARED TO ALTERNATIVE SILAGE-SPECIFIC HYBRIDS FOR BEEF OPERATIONS.**

**HIGHER VALUE IN THE CORN YOU FEED MEANS YOU'RE GETTING MORE OUT OF YOUR RATION AND INCREASING THE POSSIBILITY FOR PROFIT IN YOUR OPERATION.**

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# “BENEFITS OF ENOGEN CORN GO FURTHER THAN JUST YOUR FIELD”

**FINISHING BEEF CATTLE**

**5%↑**

Feed efficiency improved by approximately 5% when fed Enogen Feed Corn (EFC) as either dry rolled corn, steam flaked corn or silage.<sup>1</sup>

**GROWING BEEF CATTLE**

**5.5%↑**

Feed efficiency improved by approximately 5.5% when fed EFC as whole shelled corn or dry rolled corn<sup>1</sup>

**DAIRY COWS**

**6%↑**

Feed efficiency improved by 6% in several University studies<sup>2</sup>

<sup>1</sup>University of Nebraska-Lincoln, Kansas State University 2013-2018  
<sup>2</sup>Syngenta contract research 2016-2017, 2019



# PERENNIALS

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<b>HQ Hay Blend</b>	<b>page 40</b>
<b>Grazemaster</b>	<b>page 41</b>
<b>Barricade</b>	<b>page 42</b>
<b>HY Power Pasture Blend</b>	<b>page 42</b>
<b>Grazemaster HQ</b>	<b>page 43</b>
<b>Nitromaster V</b>	<b>page 44</b>
<b>Nitromaster SA</b>	<b>page 44</b>
<b>AAC Glenview Sainfoin</b>	<b>page 45</b>
<b>Algonquin Alfalfa</b>	<b>page 46</b>
<b>SW4618S Alfalfa</b>	<b>page 46</b>
<b>SW3407 High Yield Alfalfa</b>	<b>page 48</b>
<b>SW4107 High Yield Alfalfa</b>	<b>page 48</b>

*Holt Colony  
Irma, Alberta*





SW4107 & Grazemaster  
Alberta, 2022

## HQ HAY BLEND

+ **YELLOW JACKET COATING**

This high-quality hay blend will be your one stop shop for your hay shed. Our HQ Hay Blend is comprised of high leaf to stem ratio grasses which provides more leaves for improved digestibility and energy. The alfalfa provides longevity in the stand that you can rely on for many years to come. This blend will produce a high tonnage stand that can be fed to any livestock type.

**SEEDING RATE:** 15 – 20 lbs/acre.

STF 43 TALL FESCUE

HLR ORCHARD GRASS

AAC GLENVIEW SAINFOIN

UF RANCHER ALFALFA

## GRAZEMASTER

+ **YELLOW JACKET COATING**

Grazemaster blend is a very adaptable pasture mix for Western Canada. Several leading-edge grass varieties are incorporated from the world-class Barenbrug breeding program. These grasses provide excellent yield, digestibility and longevity. Grazemaster is formulated to provide a high protein forage for your livestock and can be seeded in combination with a legume blend such as alfalfa or Nitromaster.

**SEEDING RATE:** 15 lbs/acre for a pure grass stand.  
10 lbs/acre when mixed with 8 lbs/acre of a legume blend.

ARSENAL MEADOW BROME

STF 43 TALL FESCUE

HLR ORCHARD GRASS

SLENDER WHEAT GRASS

## BARRICADE

+ **YELLOW JACKET COATING**

Barricade is a grass blend designed for new planting or inter-seeding into pastures. The grass varieties chosen for this blend can be used in low rainfall areas. Barricade is designed for use in combination with legumes on more marginal dryland. The Yellow Jacket seed coating (see page 51) absorbs nearly 600 times its weight in water, enhancing germination in dry conditions.

**SEEDING RATE:** 10 – 15 lbs/acre in combination with a legume blend or alfalfa at 5 lbs/acre.

ARMORY TALL FESCUE

ARSENAL MEADOW BROME

INTERMEDIATE WHEATGRASS

ARTILLERY SMOOTH BROME

HAKARI ALASKA BROME

## HY POWER PASTURE BLEND

+ **YELLOW JACKET COATING**

This is our complete blend of our most frequently recommended grasses and legumes. The combination of 4 grasses and 3 legumes makes for a top of the range grazing forage blend. AAC Glenview is the latest non bloating, quick growing Sainfoin from Ag Canada.

This blend is best suited for medium to high moisture regions and ideally suited for rotational grazing management. The diversity of legumes will improve soil health and add above average feed quality to your pastures. It can be harvested as a high protein, high energy stand.

**SEEDING RATE:** 15- 25 lbs/acre.

ARSENAL MEADOW BROME

STF 43 TALL FESCUE

HLR ORCHARD GRASS

SLENDER WHEAT GRASS

AAC GLENVIEW SAINFOIN

UF RANCHER ALFALFA

CICER MILKVETCH



Hy Power Pasture Blend  
Madden, AB

## GRAZEMASTER HQ

+ **YELLOW JACKET COATING**

Grazemaster HQ is a formulation of forage grass for beef and dairy operations. STF 43 soft leaf tall fescue increases overall dry matter intake compared to rough-leaf tall fescue. The HLR- high leaf ratio orchard grass varieties maintain their productivity even under tight grazing/ haying rotations. The varieties are chosen to provide rapid weight gain in beef and lactating dairy cows. This blend can also work well in situations where reseeding grass is needed to extend an alfalfa hay stand. Mixed in with Glenview Sainfoin it will provide a high-quality cattle feed to suit most operations. It should be grown in moderate to higher rainfall areas and performs excellent under irrigation across Western Canada.

**SEEDING RATE:** 15 – 25 lbs/acre. Adjust seeding rate if adding legumes to the blend.

STF 43 TALL FESCUE

HLR ORCHARD GRASS

## SELF SEEDER BLEND

This is a blend of non-coated, non-inoculated legumes such as: AAC Glenview Sainfoin, Yellow Blossom Sweet Clover, Alsike Clover, Birdsfoot Trefoil and Cicer Milkvetch.

The idea is to allow the cows to distribute the seed on pastureland that is too rough for the use of conventional seeding equipment.

\*Available in 55LB bags. Give us a call to arrange pick up at a local tradeshow this winter!

For more information visit our website [unionforage.com/articles](http://unionforage.com/articles). "Let cattle do the seeding"



## NITROMASTER V

+ *INOCULANT*

The sainfoin and cicer in Nitromaster V are non-bloating legumes that fix nitrogen and allow for extended grazing, as they hold their leaves after freezing. The addition of legumes provides longevity into a grass stand. It is a blend of perennial drought tolerant legumes that improve protein production in pasture and fix nitrogen in the soil, reducing the need for nitrogen fertilization. Nitromaster V is a great addition to any grass seed blend.

**SEEDING RATE:** 5 – 8 lbs/acre. Recommended establishment is with 10 lbs/acre of a grass blend like Barricade or Grazemaster.

AAC GLENVIEW SAINFOIN

ALGONQUIN ALFALFA

CICER MILKVETCH

## NITROMASTER SA

+ *INOCULANT*

Nitromaster SA is a legume blend of alfalfa and AAC Glenview Sainfoin. This blend can be used in a mix with other grass varieties to establish an excellent perennial pasture. Nitromaster SA can also be used to improve an existing pasture stand when drilled in. You may establish a pure legume stand for haying or grazing. The combination of sainfoin and alfalfa is effective for managing bloat when grazing. Increase seeding rates if establishing a pure stand.

**SEEDING RATE:** 6 – 10 lbs/acre. Add 8 – 10 lbs/acre of a grass blend like Barricade or Grazemaster for a more diverse forage stand.

AAC GLENVIEW SAINFOIN

ALGONQUIN ALFALFA



## AAC GLENVIEW SAINFOIN

+ *INOCULANT*

AAC Glenview Sainfoin is a non-bloating legume that may be used for grazing or hay production. A 15% plant population with alfalfa can prevent bloat when grazed. AAC Glenview has higher yields than Nova and higher grazing tolerance than other sainfoin cultivars. AAC Glenview Sainfoin delivers on the breeding goals of a 10 year development project to (i) increase survival in mixed stands vs. older varieties; (ii) adaptable frequent cutting; (iii) improved regrowth over older varieties; (iv) improved forage yield.

Research on AAC Glenview Sainfoin concluded that it can produce higher biomass yields than Nova and sometimes produce as much yield as high yielding alfalfa cultivars. It can also stay in alfalfa pasture in higher proportions than Nova for 3-4 years and the mixed stands out-yield pure alfalfa stands. Unlike alfalfa, AAC Glenview Sainfoin will hold onto its leaves and nutritional value post freeze up. Periodically leave AAC Glenview to mature for some seed set to guarantee greatest longevity.

**SEEDING RATE:** 20+ lbs/acre. Sow with other grasses or legume blends or, use as a perennial pasture legume for haying and grazing.

## ALGONQUIN ALFALFA

+ **INOCULANT**

Algonquin Alfalfa is a cultivar of alfalfa developed at the Agriculture Canada Research Station, in Ottawa, Ontario. It is tap rooted, winter hardy and resistant to bacterial wilt. Algonquin plants have wide crowns and fine stems. It has been evaluated in all regions of Western Canada and Algonquin performs well and persists in pastures and hay land. Primary use is in mixed pastures for grazing or hay production in long term stands.

**SEEDING RATE:** 4 – 10 lbs/acre. Dependent on blend and irrigation vs. dryland.



## SW4618S ALFALFA

\***SALT TOLERANT** + **INOCULANT**

SW4618S is a high-yielding, fall dormancy four variety, bred in saline growing conditions and selected for the ability to maintain improved production of hay. Suitable for saline soils where irrigation water and/or soil contains MODERATE salt concentration · Maintains good yield in saline growing conditions, of high quality and quantity of hay or haylage.

Fall Dormancy – 4 | Winter Hardiness – Hardy

**SEEDING RATE:** 5 – 20 lbs/acre.

## DORMANT SEEDING

Dormant seeding is the practice of broadcast seeding or sod seeding in the fall or early spring when the soil is already frozen or below 2 degrees C. To ensure the seed does not germinate before spring, there must be a constant soil temperature below 2 degrees Celsius. Winter chinooks may warm soil above this temperature allowing seed to germinate and subsequently freeze. The advantage of dormant seeding is the availability of spring moisture critical to germination and establishment.

The alternative is to seed early in the spring and where grasses are already established, using glyphosate to suppress the grass. Legumes also germinate at lower temperatures and will begin growth early in the spring. Species such as birdsfoot trefoil, cicer milk vetch, Glenview sainfoin, alfalfa, and clovers tend to be successful because of their harder seed coat. Cicer Milkvetch seed is scarified to improve germination, but this can cause it to die during winter. Legumes should still be inoculated prior to seeding.

- If dormant seeding into sod, the seed needs to be shallow or it will not survive
- Fertility is critical, phosphate is usually deficient and should be banded vs. added with seed
- Recommend increasing seeding rates by 25% when dormant seeding





## SW3407 HIGH YIELD ALFALFA

+ INOCULANT

SW3407 is a dormancy 3 alfalfa. It is a high-yielding, high quality variety with excellent pest resistance. Grow this variety in wet soils because of its exceptional resistance to both races of Aphanomyces root rot. Expect consistent top yields for quality hay. This variety has excellent forage quality when coupled with moderate lodging tolerance not only improves yield, cutability and quality but also improves timing of each cut to ensure good quality crop is obtained.

Fall Dormancy – 3 | Winter Hardiness – Very Hardy

SEEDING RATE: 5 – 20 lbs/acre.

## SW4107 HIGH YIELD ALFALFA

+ INOCULANT

SW4107 is a dormancy 4 alfalfa with high yield potential, good forage quality and agronomic character. It is unmatched in the industry. It is a broadly adapted seed with a wide germplasm base and well-suited to fields with variable drainage where root rot resistance is needed. It is highly resistant to seven major alfalfa pests and has an above-average performance and forage quality. It can be planted on a wide range of soils to extend farm production of hay.

Fall Dormancy – 4 | Winter Hardiness – Very Hardy

SEEDING RATE: 5 – 20 lbs/acre.



## Your best yields start with Alfalfa Partners™ elite varieties

S&W's Alfalfa Partners brand combines strong defensive characteristics with aggressive yield outputs to maximize your returns. Bred from industry leading genetics, Alfalfa Partners elite varieties offer award winning high yields, salt tolerance, winter-hardiness, and the disease resistance you need in Western Canada. Ask Union Forage for Alfalfa Partners winterhardy **SW4107** or **SW3407**, or new **SW4618S** for saline soils.

Available at Union Forage 1.877.269.2469 | [AlfalfaPartners.com](http://AlfalfaPartners.com)



**Alfalfa Partners™**  
A BRAND OF S&W SEED COMPANY



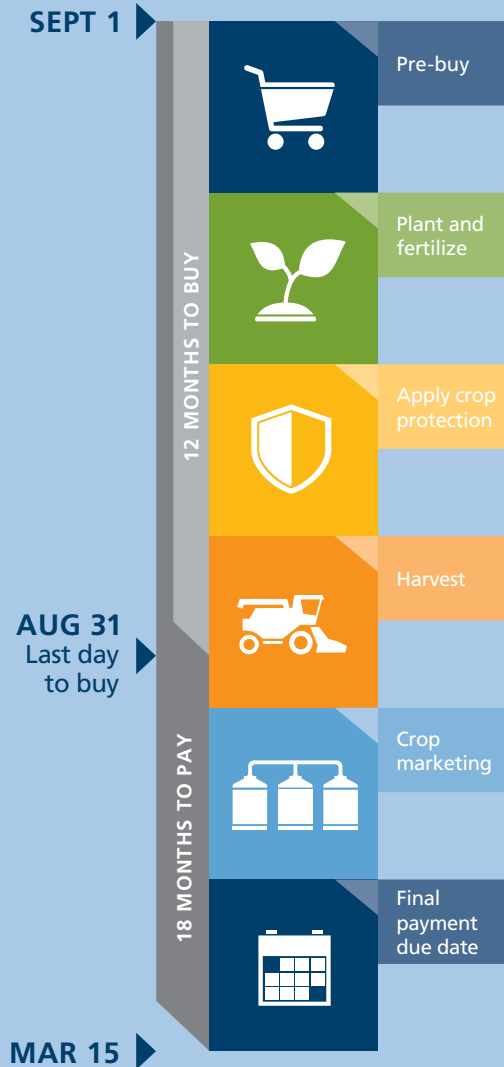


# FCC Input Financing

With up to 18 months to pay, it's the simple and flexible way to free up your cash flow. Get pre-approved and take the guesswork out of managing your crop input and fuel purchases.

[fcc.ca/Inputs](http://fcc.ca/Inputs)

## 18-MONTH CROP CYCLE



Contact Union Forage for further information.  
**1 877 COW CHOW**

# FORAGE FOR EVERY GRAZING NEED.

**BARENBRUG**

**The Yellow Bag Promise**

In partnership with Union Forage at Barenbrug, we give you the solutions you need when you need them. We provide forage seed backed by years cutting edge research and a team of experienced professionals to go above and beyond your needs.

Learn more at [barusa.com](http://barusa.com)



## SEED COATINGS

Seed coatings like Yellow Jacket and Super G protect the seed and attract and hold moisture to ensure seedling establishment. These coatings also include micro nutrient packs to ensure early plant health. Colour is added to help you more easily establish seed depth. Legumes in Union Forage seed blends are coated and inoculated with rhizobia, the nitrogen fixing organisms that live in a symbiotic relationship with the plant roots. Nitrogen fixing rhizobia increase soil fertility for future crop rotations and provide nutrients to support the grasses usually grown in combination with legume annual and perennial pasture mixtures. Union Forage Super G coatings and Barenbrug Yellow Jacket coatings are also inoculated with mycorrhizal fungi which directly infects plant roots. 90% of plant species benefit from the symbiotic relationship with mycorrhizal fungi which provide them with soil derived nutrients like Phosphate and Zinc. The plant returns the favour by providing the fungi with its sole source of nutrition in the form of liquid carbon sugars.

## SUPER G COATINGS

Super G Seed Coating includes: a super absorbent to absorb moisture and aid in germination, micro nutrients including zinc to provide instant fertilizer which will be readily available for early growth, mycorrhizal fungi depending on the seed blend, nitrogen fixing rhizobia in the legume blends, and finally, a green colorant to aid in confirming proper seed depth.

Barenbrug is an international leader in innovative seed coatings. Its scientists are involved in research facilities world-wide to further enhance seed coating technology and bring solutions to the forage industry. Yellow Jacket seed coating is available exclusively on all Barenbrug products.

Yellow Jacket is a proprietary seed coating containing a totally natural product made from starch. This active ingredient in Yellow Jacket holds up to 600 times its weight in water and nutrients. Research at New Mexico State University, North Carolina State University, and Texas A&M has proven that seed coated with Yellow Jacket established faster under less water and produced more forage than uncoated seed. Yellow Jacket seed greatly increases seeding establishment under dry land conditions where irrigation is not available and provides higher yields while preserving our precious water resources. Yellow Jacket is like having an absorbent sponge or water reservoir around each individual seed. Once water is applied or moisture is available from rain, the coating holds both moisture and nutrients around the seed, making it available as needed for germination and establishment. Without Yellow Jacket, raw seed can quickly dry out, resulting in a need for more frequent irrigation or reliable rains.





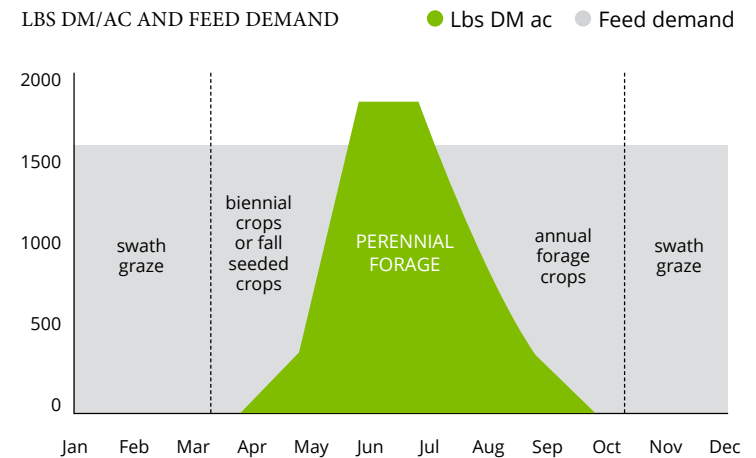
The return on investment and productivity of a well-managed perennial forage stand is difficult to beat. A perennial pasture requires a significant upfront investment, but when you amortize that investment over 10 or more years, it is an excellent option.

A good perennial pasture should include a mixture of nutrient dense grass varieties suited to your geography and soil type, plus a combination of legumes to fix nitrogen and improve the stand longevity. The legumes should include sainfoin and vetch in the mix to reduce the risk of bloat from alfalfa. Ideally, you should rotate cattle through paddocks allowing rest periods after grazing. Avoid overgrazing a perennial pasture going into fall, as this will kill most of your legumes and reduce the lifetime and productivity of the stand.



## a systems approach to: CATTLE GRAZING & MANAGEMENT

To effectively graze year round, it takes more than forage production. Summer and winter watering systems and use of electric fencing to manage stocking density are critical elements required to maximize the innate grazing ability of cattle. Then we can consider where we have excess feed that may be stockpiled and where we need to fill the feed demand gap with other forage options. Planning, creating flexible options, monitoring results, and management are key ingredients to successful outcomes to extended grazing.



### AN EXAMPLE FOR A COW/CALF ENTERPRISE

**GOAL** The average full year cost/cow/day for feed, pasture and water will be less than \$1.50 (includes calf with cow from May to November). *How?*

- 1 Minimize use of equipment
- 2 Minimize hauling feed to cows
- 3 Maximize cow's ability to graze
- 4 Use annual and perennial forages, fall seeded crops, stubble grazing and biennial crops to help fill the early spring and late fall feed demand gap
- 5 Use combination of stockpiled perennials/annuals, bale grazing, silage, swath grazing or corn grazing in winter months





**PHOTO  
CONTEST**



**We want to hear from you!**

Email [amber@unionforage.com](mailto:amber@unionforage.com) to submit photos of your Union Forage Crops!

Enter to win your photo in the 2024 Crop Manual & we will give you a free bag of seed on your next order.

## **Six Basic Principles of Soil Health**

- I. Context of your operation and economics.
- II. Ensure minimal to zero disturbance.
- III. Keep soil covered with soil armour.
- IV. Keep roots growing in the soil as long as possible.
- V. Increase plant diversity and crop rotations.
- VI. Integrate livestock.

While housing millions of microbes in a nutrient cycling ecosystem, healthy soil filters and stores water. This reduces the impact of flooding and drought. Mycorrhizal fungi play an important role in soil health. These fungi seek out phosphates and other nutrients to bring back to the plants. They also connect plants together, allowing for a nutrient exchange among them. Mycorrhizal fungi protect plants from fungal diseases and other root-feeding microorganisms, all while producing glomalin, which is important in creating soil structure and increasing space for air and water.

## **Keep in mind?**

### **AGRONOMY**

These are high performance plants that depend on and respond to adequate nutrients. Test soil before planting. If irrigated, maintain soil moisture during stand establishment; back off to promote deep rooting. Fertilize to meet crop needs. High nitrogen rates and manured soils can require additional management considerations to avoid potential nitrate toxicity, especially under fall grazing regimes. Work with your agronomist to ensure adequate fertility. Whether a perennial or annual, both require adequate soil nutrition. Consult with your local agronomist to identify the best solution for your farm.

### **RIGHT CROP, RIGHT TIME, RIGHT CONDITION**

Choose the crop type and variety to fit the type of livestock. Grazing brassicas are an essential component of high production annual grazing systems, Agronomically, be sure to rotate your brassica plantings to avoid disease. Flea beetles can be a pest of a forage brassica. Watch for damage for the first 3-4 weeks after planting. A pesticide may be required to prevent crop damage. Consult your agronomist to find the right pairings for you.

### **GRAZING: OFF TO A GOOD START**

Acclimate cattle slowly to this high quality feed. Feed test and discuss with your Union Forage specialist to maximize potential and manage feeding issues.

### **SHAPE AND BALANCE TO MAXIMIZE VALUE**

We can help you to develop a grazing strategy that optimizes cattle performance and crop production. Forage brassicas provide exceptional nutritional quality. As a general rule to optimize animal health, balance the brassica component of animal intake to maximum of 50%.

### **BUILD SOIL PRODUCTIVITY**

Brassica species require adequate crop rotation to avoid disease build up. Use best management practices/rotation as you would for canola.

# What Drives Your Regenerative System?

- Diversity
- Crop Residue
- Cover & Companion Crops (annual or perennial)
- Soil Health
- Nutrient Recycling
- Livestock Integration
- Livestock Husbandry
- Water Infiltration
- Moisture Efficiency
- Solar Panel (forages)
- Rest & Recovery (soil and pastures)
- Family Time
- Financial Management- focuses family as top priority to make regenerative ag work.
- Allowing the System to Work





# the details...

## BRASSICA & FORBS

**BRASSICA RAPA** Hard, round, white-fleshed, leafy top, late maturing, very good keeping ability, single grazing.  
TURNIP, HARD TYPE



CULTIVARS		<b>Green Globe</b>					
PLANTING		Spring, early summer					
GRAZING		From 120 days after sowing					
LEAF : BULB RATIO		56 : 44					
USE		Forage grazing, grazing cover crop					
FORAGE QUALITY		Average Green Globe					
DM%	MJ ME	DOMD	CP	ADF	NDF	WSC	
10.4	11.4	87.8	14.3	18.9	23.2	26.3	

**BRASSICA RAPA** Leafy top, early maturing, very good regrowth ability, multiple grazings.  
TURNIP, LEAFY TYPE



CULTIVARS		<b>Hunter</b>					
PLANTING		Spring, summer, early fall					
GRAZING		From 42 days after sowing					
LEAF : BULB RATIO		76 : 24					
USE		Forage grazing, cattle, sheep, grazing cover crop					
FORAGE QUALITY		Average hunter 1st grazing					
DM%	MJ ME	DOMD	CP	ADF	NDF	WSC	
13.4	13/1	87.8	23	13.9	15.9	19.8	

**BRASSICA NAPUS** Leafy, fine stemmed, regrowth ability, tall type, multiple grazings.  
FORAGE RAPE



CULTIVARS		<b>Goliath (pictured), Winfred</b>					
PLANTING		Spring, early summer					
GRAZING		From 90 days after sowing					
LEAF : BULB RATIO		70:30 (type dependent)					
USE		Late summer/fall grazing, swath grazing, grazing cover crop					
FORAGE QUALITY		Goliath					
DM%	MJ ME	DOMD	CP	ADF	NDF	WSC	
14.2	12.9	88	10.2	21.9	24.6	27.1	



### PLANTAGO IANCELOTA PLANTAIN

Grazing herb, leafy, highly palatable, summer active, excellent forage quality.

CULTIVARS		<b>Tonic</b>	
PLANTING		Late spring	
GRAZING		From 42 days after sowing	
USE		Forage grazing, food plot	



### CHICORIUM INTYBUS CHICORY

Grazing herb, leafy, drought tolerant, highly palatable, summer active, excellent forage quality.

CULTIVARS		<b>Choice</b>	
PLANTING		Spring	
GRAZING		From 45 days after sowing	
USE		Forage grazing, food plot	



### RAPHANUS SATIVUS RADISH

Soft leafed, leafy regrowth type, typically non-tuber forming type, late bolting, palatable.

CULTIVARS		<b>Graza fodder radish</b>	
PLANTING		Spring, summer	
GRAZING		From 42 days after sowing	
USE		Forage grazing, food plot, swath grazing	







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