




2019



Annual Crop Guide

Western
Canada's
Trusted
Forage
Seed
Advisor





UNION FORAGE now offers a complete support system to extend the duration and quality of grazing, for all growing regions in Alberta. Our strategic partnership with leading global forage researchers provides years of practical agronomic and technical advice from around the world.

"Pastoral Farming" integrates crops and livestock into a sustainable, profitable system. Annual grazing crop rotations are an important aspect of this system. Annuals or "short rotation" crops extend quality grazing, as they produce large amounts of biomass. These crops also act as a "break crop", for interruption of disease weed cycles in both conventional crops and perennial pasture.

PGG Seeds Forage Brassicas are known throughout North America for their ease of establishment, biomass production and palatability. This plant material is a complement to traditional cool and warm season forage systems.

UNION FORAGE offers annual grazing systems for summer growth and winter stockpile for both irrigation as well as dryland production. Let us put together the system that fits you farm.

Use more sunlight--- it's free!---, tap into the inherent wealth of your soil, complement your low cost perennial pasture, lower your cost of production per acre and capitalize on regrowth potential. Livestock grazing is a most direct use of Sunlight, if not one of the most efficient. The animal's rumen links sustainability and profit in managed grazing.

Union Forage is an Alberta based Forage Seed Company created with an objective of innovation, partnership, local testing, expertise, and customer support.

PGG Seeds is a distributor of top performing proprietary forage products. PGGWrightsonseeds, the parent of PGG Seeds has been a world leader in development of cultivars for pastoral farming for over 150 years. This is proprietary, certified seed encompassing brassicas, forbs, legumes and grasses. Research and development is driven by animal performance.

PGG Seeds has partnered with Union Forage to provide profitable annual grazing programs for growers in Western Canada.

Union Forage in partnership with PGG Seeds has developed several blends for Alberta producers.

At UNION FORAGE'S CORE are three Seed mixtures to fit your locale and stock. These mixtures incorporate proprietary cultivars developed specifically for palatability, biomass production and, most importantly for profit. When regrowth is capitalized the soil biota benefits from increased soil Carbon, water and nutrient cycling. When you grow more you leave more for the soil. When you leave more for the soil you capture wealth.

Union Forage in partnership with PGG Seeds has developed several blends for Alberta producers.

At UNION FORAGE'S CORE are three very basic Seed mixtures to fit one's locale and stock. These mixtures incorporate proprietary cultivars developed specifically for palatability, biomass production and, most importantly for profit. When you grow more you leave more for the soil. When you leave more for the soil, you capture wealth.

Featured in these blends are some key annual species including:

Winfred Forage Brassica

(Brassica napus ssp. biennis)

Winfred is a unique selection of forage brassica comprised of a cross of Kale and Turnip. The result is a drought tolerant and winter hardy cultivar useful in a broad range of grazing regions.

Winfred is suited to multiple grazings for summer and early-autumn feed requirements. It is also a stockpile winter feed complementary to winter cereals.

Winfred reaches maturity, as a stockpile feed, in 90 days.

Winfred is capable of surviving significant summer drought, without loss of forage quality

Sowing Guide:

- Sow in spring at 2-4 lb/acre
- Time until first grazing 6 to 8 weeks
- Sow with 10 lb. **Italian Ryegrass** (as well as 2 lb. **HUNTER Forage Brassica**) for extended grazing, from summer through fall.

Goliath Forage Brassica

(Brassica napus ssp. biennis)

Goliath, as a traditional forage rape, supplies summer through early winter feed.

Goliath produces maximum tonnage in 90 days. It is a great stockpile winter feed complementary to winter cereals.

Goliath production can be as high as 12,000 lb. DM/acre.

Goliath has been shown to withstand some summer drought, without loss of forage quality.

Sowing Guide:

- Sow in spring to the end of summer, with adequate moisture at 2-4 lb/acre.
- Time until first grazing 6 to 8 weeks
- Sow with 10 lb. **Italian Ryegrass** (as well as 2 lb. **HUNTER Forage Brassica**) for extended grazing, from summer through fall.





Hunter Forage Brassica

(Brassica rapa syn.B.campestris)

Hunter is developed by crossing turnips with related Asiatic leaf vegetables of the same species. The result is a quick-growing, leafy turnip with minimal bulb development.

It is best suited to multiple grazings for summer and early-autumn feed requirements.

Hunter reaches its growth potential in summer under irrigation.

Hunter matures quickly with the first grazing possible at 4-6 weeks.

Hunter is an excellent quality forage capable of providing extremely high liveweight gain in animals.

Hunter was bred for tolerance to turnip mosaic virus and cauliflower mosaic virus. This, combined with selecting for vigorous regrowth has provided a variety with fast recovery from grazing and excellent ability to yield in the second, third and sometimes fourth regrowth cycle. Plants are best suited to heavier soil conditions with periodic summer moisture or irrigation.

When given moisture, Hunter recovers very quickly from multiple grazings for excellent subsequent yields.

HUNTER is an integral component of diverse annual crop mixtures.

Sowing Guide:

- Sow in spring to the end of summer, with given moisture. Sow at 1- 4lbs/acre
- Time until first grazing 4-6 weeks
- Sow with 10 lb. **Italian Ryegrass** for extended grazing, from summer through fall.

Corinne Ethiopian Cabbage

(Brassica carinata)

With origins in Africa, Corinne is a unique, multipurpose Brassica cultivar. Corinne was bred for use in bio fumigation systems but has proven valuable in many cover crop scenarios.

Corinne germinates quickly and grows to maturity in 40 days, when spring planted in continental climates. It is drought and heat tolerant.

As the fastest growing Brassica in the PGG Seeds portfolio, Corinne is effective for erosion control and quick feed in summer and fall. Corinne generally flowers in 60 days, after producing an effective taproot and up to 5000 lb. DM /acre in top growth.

Corinne contains the appropriate glucosinilate compounds to make it a most effective "biofumigant" cover crop.

Summer planted Corinne can add a "snowfence" component to diverse annual mixtures. Mature, lignified plants reduce soil erosion as they contribute to stable plant decomposition.

Corinne will produce significant cool season quality and biomass in warm summer conditions.

Sowing Guide:

- Sow in late spring a 2-4 lb./acre
- Compatible with **GRAZA Forage Radish** and **HUNTER Forage Brassica** in a diverse annual blend for bio fumigation.

Graza Forage Brassica

(*Raphanus sativa ssp. maritimus*)

Graza is a fast growing, drought tolerant fodder radish. Graza is the only certified fodder radish variety presently available on the market - the culmination of 17 years of plant selection.

Graza is fast to graze and rapidly regrows for multiple grazing opportunities through summer.

During summer when milk production and weight gains are difficult, graza offers a palatable solution. This means that all animals, not specific to any class, will consume more feed of higher quality.

Graza survives hotter drier summers than most brassicas. It is a complement to traditional warm season forages.

This radish has a remarkable digestible dry matter and metabolisable energy level.

Graza is cost effective cultivar to grow, easy to sow and quick to germinate. It also does not need special tillage or planting equipment as it's easy to drill into stubble.

Sowing Guide:

- Sow at 2-7 lbs/acre; 1-2 lb. /acre in a mixture
- Ready to graze in 40-50 days

Italian Ryegrass

(*Lolium multiflorum*)

Italian Rye Grass is a flexible and forgiving forage species that has a place in many Western Canadian forage zones. Italian Rye Grass performs well under adequate moisture although it is not drought tolerant.

Union Forage has selected Italian Ryegrass varieties with rapid establishment and vigorous growth to provide early grazing opportunities and maximum yield potential for annual or winter feed.

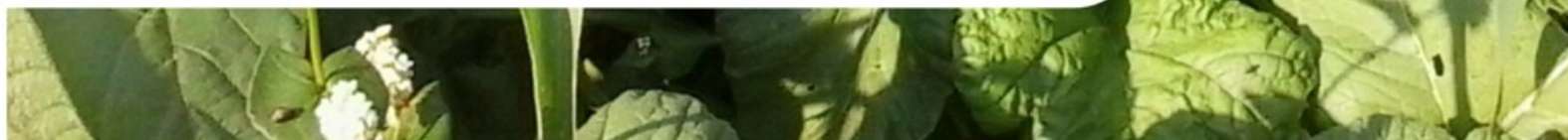
Italian rye grass can provide exceptional winter feed, whatever the farm system.

We have selected varieties with reduced ability to produce seed – a negative attribute of Italian rye grass.

For more information on high performance Italian rye grass varieties – please contact Union Forage.

Sowing Guide:

Sow in spring or mid-late summer at 10-15 lbs per acre.



UNION FORAGE ANNUAL BLENDS

UNION FORAGE 2016 RELAY MIXTURE

This blend combines the nutrient dense brassica varieties Hunter and Winfred along with Green Spirit Brand Italian Rye Grass – a highly nutritious grass. We have added Hairy Vetch as a soil building component and to provide additional and diverse feed. This blend is well suited to use along with oats or barley for silage (designed to improve silage nutritional value with potential for regrowth once silage is harvested), in combination with a cereal for swath grazing (designed to provide nutrient dense complement to the cereal after swathing), or in combination with a cereal for rotational grazing in season.

| | |
|-------------------|--------------------------------|
| Italian Rye Grass | 60% - Cool Season Annual Grass |
| Hairy Vetch | 20% - Annual Legume |
| Hunter | 10% - Turnip/Asiatic Leaf Veg |
| Winfred | 10% - Kale/Turnip Cross |

Suggested sowing Rate: 8-12 lb. /acre

Add oats or barley at a rate of 50-75% of normal pure stand rate.

Plant in spring for rotational grazing or as silage additive, late spring for swath grazing

UNION ULTIMATE ANNUAL BLEND

Our premiere annual forage mixture, Ultimate Annual Blend from Union Forage is designed to combine warm and cool season grasses along with annual legumes and annual brassica. Our field experiences provides insight into how these species work together to provide exceptional nutritional quality and agronomic benefit for both grazing and soil health. This makes for very high quality annual grazing targeted in a high performance rotation system.

| | |
|-------------------|------------------------------|
| Hairy Vetch | 30% - Annual Legume |
| Italian Rye Grass | 25% - Cool Season Grass |
| Sorghum | 15% - Warm Season Grass |
| Crimson Clover | 10% - Annual Legume |
| Winfred | 10% - Kale/Turnip Cross |
| Hunter | 5% - Turnip/Asiatic Leaf Veg |
| Graza | 5% - Forage Turnip |

Suggested planting rate – 7-10 lbs/acre combined with cereal (oat/barley)

Consider to add 10-20lbs per acre of forage peas.

Combine with annual cereals to create an appropriate blend balance with cereal forage.

Because of the nutrient dense nature of brassicas, it is recommended that they comprise a max of 50% of the forage intake for most production programs.



UNION FORAGE ALL BRASSICA BLEND

This blend is designed as a combination of our 4 premium brassica varieties. This blend provides flexibility to be used in combination with cereals, annual grasses (cereals/Italian rye), annual legumes, and even warm season grasses as required in each specific pasture blend.

| | | |
|---------|-----|-------------------------|
| Winfred | 25% | Kale/Turnip Cross |
| Goliath | 25% | Forage Rape |
| Hunter | 25% | Turnip/Asiatic Leaf Veg |
| Graza | 25% | Forage Radish |

Suggested planting rate – 1-4 lbs/acre.

This is our most flexible blend – combine with your preferred complimentary annual grazing products including grasses/forbs/legumes as well as cereals. Because of the nutrient dense nature of brassicas, it is recommended that they comprise a max of 50% of the forage intake for most production programs.

Unproductive Soil means an Unproductive Crop

These are high performance plants that depend on and respond to adequate soil 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. We appreciate our customers. If you provide a feed sample, we will test it for you – no charge, no problem.

Right Crop at the Right Time in the Right Condition

Choose the crop type and variety to fit the type of livestock. Grazing brassica are an essential component of high production annual grazing systems. Agronomically, be sure to rotate your brassica plantings to avoid disease considerations. Flea beetles can be a pest of forage brassica. Watch for damage for the first 3-4 weeks after planting. Remedy may be required to prevent crop damage. (refer to product descriptions for best pairings & contact Graeme or John for more info).

Launching Success: Getting Grazing off to a Good Start

Acclimate cattle to this high quality feed:

Feed test and discuss with your Union Forage representative to maximize potential and manage any feeding issues.

Keeping Crop and Cattle in Shape and in Balance to Maximize Value

We can help you to develop a grazing strategy that optimizes cattle performance and crop production.

Forage brassica provides exceptional nutritional quality. As a general rule, to optimize animal health, balance the brassica component of animal intake to a 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.



It is important that we help you to have a great experience growing annual forages with Union Forage and PGG Seeds.

Contact our technical support team to maximize your experience using our products - prior to planting, prior to grazing.

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