

# 2019 Seed Guide



**Next generation forage seed**



Canadian owned. Canadian grown.



Founded in 1982 by a group of Western Canadian alfalfa seed producers, Northstar Seed has grown to become the premier supplier of quality forage seed in Canada. Our years of experience and focus on forage seed allow us to provide expert knowledge on how to maximize production on your land.

Our expanded seed blending and warehousing facilities in both Okotoks, Alberta and Neepawa, Manitoba enhances our custom seed blending for individual customer requirements. A short turnaround from your order to delivery, even during spring, ensures you receive an unparalleled level of service.

## Expert advice, fast delivery and superior service

Our sales agronomists and dealers understand local growing conditions and challenges, and are able to make custom recommendations based on the best fit for optimal production on your farm operation.

We pride ourselves on quick turnaround on custom blends. Custom blends are ready to ship within 24 hours from when they are ordered. This means getting your seed promptly, when you need it in season.





# REVOLUTION Alfalfa

## ***NEW Max-Digest — High Digestibility Alfalfa***

This is our first alfalfa to carry our MD (MaxDigest) designation. This is a new generation forage for producers requiring increased forage digestibility to maximize dairy production and beef yields.

Bred with the goal of maximum digestibility and RFQ (Relative Forage Quality), Revolution MD has exceptional forage quality, even during periods of delayed harvest.



### ***Leafiness = higher quality***

Alfalfa forage quality is an expression of the leaf to stem ratio and the retention of leaves during the harvest process. Leaves accumulate the highest levels of crude protein and minerals during the growing season, enhancing forage quality.

The fiber content is significantly lower in the leaves as compared to the stem portion of an alfalfa plant, thus the importance of leaf size and the amount of leaf area on a plant.

Revolution MD has this high leafy expression, providing the increased quality and digestibility of the forage sample.



# Alfalfa Selection Guide

	Fall Dormancy	Winter Hardiness	Root Type	Key Features
<b>NEW Revolution MD</b> Maximum Digestibility	3.7	1.7	Tap	Exceptional forage quality <ul style="list-style-type: none"> <li>• High RFQ (Relative Forage Quality) rating and rate of digestion</li> <li>• Large leaf area with an increased leaf to stem ratio</li> <li>• Outstanding disease and pest resistance package</li> <li>• Excellent winter hardiness combined with high yield</li> </ul>
<b>Perfection</b> Rapid Growth	4	2	Tap	The latest advancement in StandFast Technology <ul style="list-style-type: none"> <li>• Selected for high forage DM and NDF levels</li> <li>• High multifoliate expression and fast recovery</li> <li>• Well suited for silage production &amp; dairy producers</li> </ul>
<b>Robust</b> High Yield, Low Dormancy	2	1.5	Tap	High performance synthetic variety. <ul style="list-style-type: none"> <li>• Multi-foliate with high leaf-to-stem ratio</li> <li>• High forage dry matter yield and RFV</li> <li>• Vigorous roots</li> <li>• Dense crowns</li> </ul>
<b>TH2 Alfalfa</b> Top Performer	4	2.5	Tap	A top performing alfalfa that is well suited for the majority of alfalfa growers in Western Canada <ul style="list-style-type: none"> <li>• High multi-leaf expression</li> <li>• Rapid regrowth</li> <li>• Superior disease resistance</li> </ul>
<b>Rugged ST</b> Salt Tolerant	3	2	Tap	A very hardy variety. <ul style="list-style-type: none"> <li>• Large, broad, deep-set crowns</li> <li>• Tolerance to increased salt levels</li> </ul>

## NEW Sidewinder Alfalfa — the next level of creeping root performance

Sidewinder brings a strong disease and pest resistance package, combined with excellent winter hardiness and persistence in the stand. Sidewinder is a creeping rooted alfalfa which enables the rhizomatous stems to fill in void areas in a stand.

Sidewinder comes from an elite parent line selected for high forage yield. Trial results suggest that yields are similar to tap rooted varieties. This variety exhibits a dense, leafy canopy which contributes to forage quality.

Great fit for dryland pasture and hay production. Many producers are also adding a creeping rooted variety as a percentage when seeding under irrigated conditions.

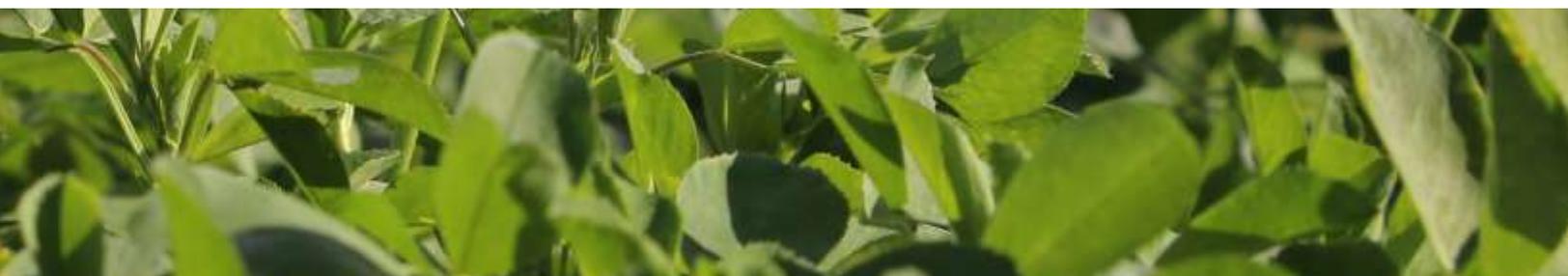
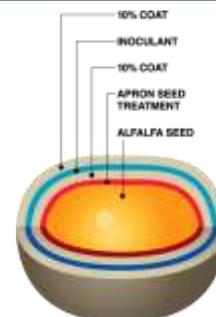




	Fall Dormancy	Winter Hardiness	Root Type	Key Features
<b>NEW Sidewinder</b> Creeping Root	2	1.6	Creeping	Selected for high forage yield with excellent winter hardiness and persistence <ul style="list-style-type: none"> <li>• Later maturity to flower which adds value to a grass blend</li> <li>• Deep set crown with wheel traffic tolerance</li> <li>• Excellent disease resistance package</li> <li>• Multipurpose variety for forage hay or pasture</li> </ul>
<b>Response WT</b> Wet Tolerant	4	2	Branching	Performs well on medium to heavy soils. A high yielding variety that should be considered whether seeding dryland or irrigation. <ul style="list-style-type: none"> <li>• Excellent forage quality</li> <li>• High yielding branch rooted variety</li> <li>• Adjusts its root growth based on level of moisture stress</li> </ul>
<b>AAC Meadowview</b> Acid Tolerant	2	Not Rated	Branching tap	Acid tolerant variety ideally suited for the foothills of AB and Peace region of AB and BC <ul style="list-style-type: none"> <li>• Deep set crowns</li> <li>• Erect spring growth habit</li> <li>• Rapid regrowth after cutting</li> </ul>
<b>Haygrazer</b> Grazing Tolerant	4	2	Branching	A flexible variety that is bred for high hay yields as well as grazing tolerance <ul style="list-style-type: none"> <li>• Aggressive, branching root system</li> <li>• Sunken crown stands up to grazing pressure and high traffic from equipment</li> <li>• Tolerant to defoliation by the Alfalfa Weevil</li> </ul>
<b>Alfalfa Blend 10-5</b> Adapted to Variability	n/a	n/a	Combined creeping, tap and branch	Premium certified blend of five varieties with unique traits that enhance plant population across variable field conditions. <ul style="list-style-type: none"> <li>• Offers the advantage of multifoliate expression, tolerance to salinity and drought, survival in high water table area and most important, high performance.</li> </ul>
<b>Ranchers Choice brand</b> Common #1 Blend	n/a	n/a	Combined creeping and tap	Consistent performing alfalfa blend <ul style="list-style-type: none"> <li>• Combination multifoliate, trifoliate and creeping rooted varieties</li> </ul>

### Layers of protection with our STRATUM™ coating process

Our alfalfa coating process involves layers of protection between the inoculant and Apron® seed treatment. Separating the seed treatment with a 10% coating, then adding the inoculant, and a final 10% coating, will assist with improving germination and reducing seedling diseases.



# Forage Grass Selection Guide

	Hay	Pasture	Saline Tolerance	Flood Tolerance	Drought Tolerance	Key Features
Cache Brand Meadow Bromegrass	★	★			★	<ul style="list-style-type: none"> <li>• More upright growth habit</li> <li>• Improved quality and performance</li> </ul>
Carlton Smooth Bromegrass	★	★	★	★	★	<ul style="list-style-type: none"> <li>• Widely adaptable</li> <li>• Sod forming</li> <li>• Moderate saline, moisture and drought tolerance</li> </ul>
AC Knowles Hybrid Bromegrass	★	★	★	★	★	<ul style="list-style-type: none"> <li>• Smooth x meadow bromegrass hybrid</li> <li>• Yields like smooth brome with a longer growing season, similar to meadow brome</li> <li>• Improved leaf expression compared to smooth brome</li> </ul>
Early Arctic Orchardgrass	★	★	★	★		<ul style="list-style-type: none"> <li>• Exceptional orchardgrass that demonstrates above average winter hardiness</li> <li>• Excellent companion when blended with alfalfa</li> <li>• Moderate drought and flooding tolerance</li> <li>• Selected for high quality (leafy)</li> </ul>
Elunaria Annual Ryegrass	★	★		★		<ul style="list-style-type: none"> <li>• Westerwold type</li> <li>• Suitable for hay, haylage or pasture</li> <li>• High yield opportunity</li> <li>• Very good quality with broad leaves</li> </ul>
NEW Jungle Italian Ryegrass	★	★		★		<ul style="list-style-type: none"> <li>• Excellent feed quality with high sugar content</li> <li>• Very high yield</li> <li>• Extremely fast regrowth</li> </ul>
Nabucco Italian Ryegrass	★	★		★		<ul style="list-style-type: none"> <li>• Tetraploid variety that delivers improved quality over annual ryegrass.</li> <li>• Quick regrowth</li> <li>• Wider, more succulent leaves than diploid annual ryegrass</li> <li>• Excellent palatability/digestibility</li> </ul>
Intrada Perennial Ryegrass	★	★				<ul style="list-style-type: none"> <li>• Wide adaptability, prefers high moisture</li> <li>• Very high levels of sugar with increased fiber digestibility over other grass</li> <li>• Medium – Late maturing variety</li> </ul>
Toronto Perennial Ryegrass	★	★				<ul style="list-style-type: none"> <li>• For short term pasture with excellent yield and digestibility</li> <li>• Very high levels of sugar</li> </ul>





	Hay	Pasture	Saline Tolerance	Flood Tolerance	Drought Tolerance	Key Features
<b>Preval Meadow Fescue</b>		★		★		<ul style="list-style-type: none"> <li>• Tolerates wet soils</li> <li>• Withstands close grazing, excellent for rotational grazing</li> <li>• Use in hay and pasture blends</li> </ul>
<b>Courtney Tall Fescue</b>	★	★	★	★	★	<ul style="list-style-type: none"> <li>• Good flood and saline tolerance</li> <li>• Large basal leaves, high quality</li> <li>• Exceptional yield potential</li> </ul>
<b>Boreal Creeping Red Fescue</b>		★		★		<ul style="list-style-type: none"> <li>• Great performance in pastures under high moisture conditions</li> <li>• Tolerates close grazing</li> <li>• Good quality in fall to freeze up</li> </ul>
<b>Express Timothy</b>	★	★		★		<ul style="list-style-type: none"> <li>• Excellent winter survivability</li> <li>• Medium maturity</li> <li>• Very good regrowth</li> <li>• Great, leafy variety for domestic hay production</li> </ul>
<b>Novio Timothy</b>	★	★		★		<ul style="list-style-type: none"> <li>• Export quality with medium maturity</li> <li>• Large, soft leaves</li> <li>• Extremely winterhardy</li> </ul>
<b>Kirk Crested Wheatgrass</b>	★	★			★	<ul style="list-style-type: none"> <li>• Fibrous root system provides good drought tolerance and winterhardiness</li> <li>• Excellent early spring pasture grass</li> <li>• Great fit for high traffic areas</li> </ul>
<b>Greenleaf Pubescent Wheatgrass</b>	★	★			★	<ul style="list-style-type: none"> <li>• Suited for dryland production</li> <li>• Very good drought tolerance</li> <li>• Good winterhardiness</li> </ul>

Northstar Seed carries a complete line of certified and common grasses. See next pages for a complete list of species available.



# Max Seed Blends

## Hay

### Premium Hay Max

A very hardy mixture that includes Express Timothy, our high quality leafy timothy and Alfalfa Blend 10-5, our premium alfalfa blend. This blend delivers a multi-cut hay stand under good management and variable soil conditions.

- 65% Alfalfa Blend 10-5
- 30% Fleet Meadow Bromegrass
- 5% Express Timothy

### Maxi

High production blend for producers wanting a high quality alfalfa and timothy hay. Express Timothy has increased tolerance to low lying areas, and will assist in curing the swath.

- 90% Alfalfa Blend 10-5
- 10% Express Timothy

### Rancher's Hay Max

Very adaptable. A blend that will deliver high yield potential under good fertility and moisture conditions.

- 50% Rancher's Choice Brand Alfalfa
- 30% Fleet Meadow Bromegrass
- 20% Carlton Smooth Bromegrass

### Saline Hay Max

Suited for productive soils that are demonstrating early signs of salt stress. Has tolerance to increased moisture conditions.

- 40% Courtenay Tall Fescue
- 40% Rugged ST Alfalfa
- 20% Carlton Smooth Bromegrass

### Lowland Max

Ideally used for hay or pasture in areas with poor drainage.

- 50% Courtenay Tall Fescue
- 30% Marathon Reed Canary Grass
- 20% Express Timothy





# Dual Purpose: Hay or Pasture

## Dual Max

High quality grasses that have very good regrowth habits. This blend is suited to most grazing systems. Prefers medium to heavy soils.

- 50% Fleet Meadow Bromegrass
- 25% Carlton Smooth Bromegrass
- 20% High Arctic Brand Orchardgrass
- 5% Alfalfa Blend 10-5

## Dryland Dual Max

For dryland pasture production. Meadow Bromegrass offers a long grazing season with very good quality and regrowth. Crested Wheatgrass has excellent early season growth.

- 65% Fleet Meadow Bromegrass
- 15% Kirk Crested Wheatgrass
- 15% Pubescent Wheatgrass
- 5% Runner Alfalfa

## Western Grass Max

High quality all grass blend. If properly managed can be a very productive pasture blend. No concerns with bloat.

- 45% Fleet Meadow Bromegrass
- 25% High Arctic Brand Orchardgrass
- 15% Courtenay Tall Fescue
- 10% Express Timothy
- 5% Creeping Red Fescue

## Bloat Free Max

Utilizes non-bloating legumes AAC Mountainview sainfoin and Cicer Milkvetch combined with highly palatable grasses.

- 40% Fleet Meadow Bromegrass
- 25% AAC Mountainview Sainfoin
- 25% Cicer Milkvetch
- 10% Courtenay Tall Fescue

## Saline Pasture Max

High quality all grass blend designed for saline areas in the low to mid EC levels.

- 30% Courtenay Tall Fescue
- 30% Carlton Smooth Bromegrass
- 20% Slender Wheatgrass
- 20% Dahurian Wildrye



# Forage Adaptation Guide

## Legumes

Forage	Use	Longevity	Winter hardiness	Root	Seeds/lb.*	Growing Period
Alfalfa	Hay/Pasture	Long	Good	Tap, Branch, Creeping rooted	200,000	Spring-Fall
Alsike Clover	Hay/Pasture	Short	Fair	Branched	700,000	Spring
Birdsfoot Trefoil	Pasture	Long	Good	Tap Rooted with Branches	370,000	Spring-Fall
Cicer Milkvetch	Pasture	Long	Good	Creeping rooted	130,000	Late Spring-Fall
Red Clover	Hay/Pasture	Long	Poor	Tap rooted with side branches	275,000	Spring
Sainfoin	Pasture	Long	Fair	Tap rooted	18,000 unhulled	Spring-Summer
Sweet Clover	Hay/Silage	Short	Fair	Tap rooted	260,000	Spring of 2nd Year
White Clover	Pasture	Short/Long	Good	Rhizomatous	800,000	Spring-Fall

\*Seeds/lb. may vary



### AAC Mountainview Sainfoin

AAC Mountainview sainfoin was selected for its ability to regrow in mixed stands along with alfalfa in a multi cut or multi graze system. Previous sainfoin varieties had poor winter hardiness and regrowth, where AAC Mountainview has excellent winter survival and provides multiple cuts per season.

AAC Mountainview is best suited for multi cut hay or grazing with alfalfa. The tannins in sainfoin reduce the incidence of legume bloat when seeded at a minimum of 15% of the plant population with alfalfa.

Ask your Northstar Seed sales agronomist about seeding options with AAC Mountainview sainfoin with alfalfa or other grasses.





# Forage Grasses

Forage	Use	Longevity	Winter hardiness	Root	Seeds/lb.*	Growing Period
Altai Wild Ryegrass	Pasture	Long	Excellent	Bunch grass	60,000	Early Spring-Mid Summer
Annual Ryegrass (Italian)	Hay/Pasture	Annual	Poor	Bunch grass	230,000	Spring-Fall
Creeping Foxtail	Pasture	Long	Good	Sod Forming	750,000	Early Spring-Fall
Creeping Red Fescue	Pasture/Lawn	Long	Excellent	Sod Forming	615,000	Spring-Fall
Crested Wheatgrass	Pasture/Hay	Long	Excellent	Bunch grass	175,000	Early Spring
Dahurian Wheatgrass	Pasture	Short	Good	Bunch grass	80,000	Spring-Fall
Intermediate Wheatgrass	Hay/Pasture	Short/Medium	Good	Sod Forming	88,000	Late Spring-Mid Summer
Kentucky Bluegrass	Pasture/Lawn	Long	Excellent	Sod Forming	2,180,000	Spring-Fall
Meadow Bromegrass	Hay/Pasture	Long	Good	Bunch grass	80,000	Early Spring-Late Summer
Meadow Fescue	Pasture	Short/Medium	Good	Bunch grass	230,000	Early Spring-Late Fall
Meadow Foxtail	Pasture	Long	Good	Bunch grass	575,000	Early Spring-Fall
Orchardgrass	Hay/Pasture	Short	Fair	Bunch grass	650,000	Spring-Fall
Perennial Ryegrass	Hay/Pasture	Short 2-3 yrs.	Poor	Bunch grass	330,000	Spring-Fall
Pubescent Wheatgrass	Hay/Pasture	Medium	Good	Sod Forming	100,000	Early Spring-Mid Summer
Russian Wild Ryegrass	Pasture	Long	Excellent	Bunch grass	175,000	Early Spring-Mid Summer
Smooth Bromegrass	Hay/Pasture	Long	Excellent	Sod Forming	136,000	Mid Spring-Mid Summer
Tall Fescue	Pasture	Medium	Good	Bunch grass	225,000	Late Spring-Fall
Tall Wheatgrass	Hay/Pasture	Long	Excellent	Bunch grass	79,000	Late Spring-Mid Summer
Timothy	Hay/Pasture	Medium	Good	Bunch grass	1,230,000	Spring-Summer



# Lawn Seed Blends

Eco-Grow lawn seed is an environmental friendly choice for low maintenance grass areas where moisture or irrigation is limited. Eco Grow is our number one selling grass blend for small acreage areas or for securing ground cover for livestock habitat.

## Eco-Grow

A blend of premium fescues that is lower maintenance, with lower moisture requirements as well as reduce the frequency of mowing your lawn.

- 25% Sheep's Fescue
- 25% Hard Fescue
- 20% Gibraltar Creeping Red Fescue
- 15% Boreal Creeping Red Fescue
- 15% Chewings Fescue



**Call for more information on premium turf and lawn mixes such as Dryland Lawn, Rough and Ready or Playground mixes. Custom lawn and turf blends can also be made for your specific conditions.**





### Instagreen

A very good general use blend where a rapid catch is desired.

- **40% Kentucky Bluegrass**
- 40% Creeping Red Fescue
- 20% Annual Ryegrass

### Deluxe Blend

Our best blend containing the highest percentage of Kentucky Bluegrass. Ideally suited to those areas with full sun when a rich, vibrant green turf is desired.

- **70% Kentucky Bluegrass**
- 20% Creeping Red Fescue
- 10% Perennial Ryegrass

### Sun & Shade

A premium blend that is ideally suited to sunny areas and will tolerate partial shade.

- **50% Kentucky Bluegrass**
- 30% Creeping Red Fescue
- 20% Perennial Ryegrass

### Playground Blend

This is a tough, easy to manage blend that will last for years.

- 30% Creeping Red Fescue
- 30% Hard Fescue
- 20% Sheep`s Fescue
- 10% Corsair Kentucky Bluegrass
- 10% Turf Type Perennial Ryegrass



**Northstar Seed sells environmentally friendly, untreated lawn seed that is safe for the whole family. Our uncoated seed means more live seeds per pound and higher seeds per square foot based on the same seeding rate compared to coated seed.**



# Reclamation & Native Species

Northstar Seed is proud to offer a full line of native cool and warm season grass species, legumes, and wetland grasses. We provide native blends for all types of projects; from reclamation sites and wetland habitats to major infrastructure projects and national parks. Northstar Seed is proud to be a supplier of high quality native seed across Western Canada.

Our team of sales agronomists work closely with contractors, engineers and conservation districts to meet the specification requirements for purity and germination for projects, large or small.

Available Native Species			
Awned Wheatgrass	Fringed Brome	Nodding Brome	Spike Trisetum
Alpine Bluegrass	Fults Alkaligrass	Prairie Cordgrass	Streambank Wheatgrass
Beaked Sedge	Green Needlegrass	Prairie Sandreed	Tall Mannagrass
Baltic Rush	Hairy Wildrye	Red Top	Ticklegrass
Big Bluestem	Idaho Fescue	Rocky Mountain Fescue	Tufted Hairgrass
Blue Grama	Indian Grass	Rough Fescue	Violet Wheatgrass
Bluebunch Wheatgrass	Indian Ricegrass	Sand Dropseed	Western Porcupine
Bluejoint Reedgrass	Inland Saltgrass	Sandberg Bluegrass	Western Wheatgrass
Canada Bluegrass	Junegrass	Side Oats Grama	American Vetch
Canada Wildrye	Little Bluestem	Sheeps Fescue	Canadian Milkvetch
Common Sedge	Mountain Brome	Slender Wheatgrass	Hairy Vetch
Fowl Bluegrass	Needle and Thread	Slough Grass	Lewis Blue Flax
	Northern Wheatgrass	Smooth Wildrye	Purple Prairie Clover





# Extended Grazing Opportunities

As margins tighten in the beef industry, more producers are looking to alternatives for grazing into the late fall and winter to reduce daily feeding costs. By extending the grazing season, producers are able to cut costs while returning nutrients back to the land base for future crop growth.

There are a number of opportunities to extend your grazing season and the most obvious is perennial stored forage. For those producers where land base is limited, other options to consider are the use of annual cereal and cover crops, crop residue, corn, millets, sorghum sudangrass, and swath or bale grazing.

Each of these options may require a management change in your operation. You should evaluate and select the management option that adds value and reduces your daily operating cost. Contact your Northstar Seed sales agronomist to review your options and develop a grazing plan for your operation.



# Annual & Cover Crop Program

Demand for annual cover crops is growing, with interest in building soil health and supplementing perennial forage use. Northstar Seed has been involved in cover crops for more than seven years, and have developed our product lineup to meet the demand of an increasingly sophisticated market.

At Northstar Seed, we have created cover crop blends for double cropping under irrigation, summer/fall grazing, stored forage, nitrogen fixation, and soil health improvements. We have also used annual legumes as a part of intercropping with cereal grain production.

Please contact your Northstar Seed sales agronomist or Northstar Seed dealer, and let us assist you in your perennial and annual forage planning.

## Available annual and cover crop species and varieties:

- Berseem Clover
- Crimson Clover
- Balansa Clover
- Jumbo Ladino Clover
- Driller brand Radish
- Vivant Hybrid Forage Brassica
- Gorilla Forage Brassica
- Kale
- Purple Top Turnips
- Appin Turnips
- Licapo Forage Rape
- Hairy Vetch
- Chicory
- Austrian Winter Peas
- Forage Peas
- Boston Plantain
- Beehappy Phacelia
- NS Drystalk brand BMR Sorghum Sudangrass
- Sorghum Sudangrass
- Golden German Millet
- Japanese Millet
- Proso Millet
- NEW Jungle Italian Ryegrass
- Nabucco Italian Ryegrass
- Elunaria Annual Ryegrass



# Northstar Seed Max Annual Blends

Premium Cover Crop Blends to Maximize Production

## D.C. Grazer Max (Double-Crop)

A fall grazing/double-crop blend with premium varieties. This mix of high feed value, rapid growth brassicas featuring a low glucosinolate forage rape, and Nabucco Italian Ryegrass brings phenomenal fall grazing without breaking the bank.

### Mix Contains:

- Gorilla Forage Brassica
- Licapo Forage Rape
- Nabucco Italian Ryegrass
- Vivant Hybrid Forage Brassica



Innovation for your growth



**NORTHSTAR**  
SEED

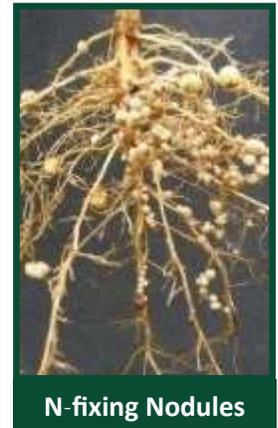
Grow with us

## Max N Blend

The ultimate blend for fixing N, including varieties to extend the growing season and maximize your N fixation. Reduce your N inputs by maximizing your N output.

### Mix contains:

- Hairy Vetch
- Berseem Clover
- Balansa Clover



## Swath Graze Max

Superior quality blend of leafy brassicas, legume and grass with high feed value and low glucosinolate, providing maximum cattle gain and improved return per acre. Great companion with cereals for swath grazing.

### Mix Contains:

- Japanese Millet
- Licapo Forage Rape
- Berseem Clover
- Appin Turnip



Innovation for your growth



## NS Soil Health Max

All the beneficial soil improvement characteristics: deep roots to capture nutrients and penetrate hardpan, improve soil tilth, N fixing, as well as hosting a beneficial nematode environment.

### Mix Contains:

- Balansa Clover
- Beehappy Phacelia
- Purple Top Turnip
- Driller brand Radish



Innovation for your growth

## NEW Max Buzz Blend

This pollinator blend will provide season long flowering for beneficial pollinators, and will look beautiful too!

### Mix Contains:

- Crimson Clover
- Berseem Clover
- Balansa Clover
- Beehappy Phacelia



# Successful Forage Establishment

Careful planning and attention to detail are essential to ensure successful forage establishment. A successful forage stand depends on the selection of species and cultivars that are adapted to your environment and for the intended use of the forage. Your decision to plant a forage should be made with consideration of the following:

**Weed Control:** Consider the herbicides used in the last couple of years to ensure no herbicide residue as some products may inhibit or reduce seedling survival. Plan for a weed control program on the forages that you are seeding to control and reduce weed competition.

**Seedbed Preparation:** The seedbed should be firm and weed-free prior to seeding. It is important to achieve close seed to soil contact to allow for accurate seed placement which means a firm, solid seedbed. Walking or driving across a seedbed should only leave a faint imprint. A clean stubble field makes for a perfect environment.

**Seeding Date:** Spring seeding is ideal when soil temperatures have reached 8-10 degrees C and moisture levels are good for ideal germination to occur. Moisture deficiency is often a cause of poor stand establishment, so seeding with anticipated precipitation in the spring is most successful. If you choose to dormant seed, plant when the soil temperature is below 2 degrees C to prevent germination until the following spring.

**Select the Correct Species:** When selecting your forage species, plan for the length of time the stand will be in production. Longevity and the yield of your forage stand starts with choosing the correct species adapted to your soil and field conditions. Select a quality seed that has a high level of germination and has an excellent seed purity with modern genetics for high production levels. Purchasing cheap seed may compromise yield and quality, and persistence of the stand due to lack of disease resistance and winter hardiness. Cost of the seed input in forage production accounts for less than 5%, so selection of the best species for your operation is critical to the success of your stands.

**Seeding Rate and Equipment:** Producers have used various equipment to successfully seed and establish forages. What is most important is the ability to control the seeding depth and accurately meter small amounts of seed and avoid bridging when using chaffy seeds. Having an agitator in the seed box or mixing in an inert carrier or phosphate fertilizer with a ratio of 1 to 3 by weight will eliminate bridging and result in good seed flow.

Using equipment such as double disc drills, hoe drills, or air seeders and drills provide for excellent seed to soil contact, but the exception may be the use of a broadcast applicator. With a broadcast applicator, it is recommended that you increase seeding rate by 20% to adjust for seed that remains on the top of the ground following incorporation after seeding. Broadcast seedings are more reliant on rainfall for germination than any other seeding method.

Seeding rates should be determined based on a combination of factors such as: the end use requirement, the predicted survival rate of the seedlings, moisture conditions, and most importantly the seeds per square foot in the field rather than percent by weight. Contact your Northstar Seed sales agronomist for the ideal seeds per square foot for the various soil zones.





**Seeding Depth:** Seed your forages shallow with the maximum seeding depth on clay type soils at  $\frac{1}{4}$  to  $\frac{1}{2}$  inch deep with some seed evident on top of the ground. If you are seeding into loam or sandy-type soil, depth may increase to a maximum of  $\frac{3}{4}$  inch on sandy to loam type soil, but keep the importance of a firm seedbed in mind.

**Fertility:** Plan for a fertility program when seeding legumes and grasses. You may wish to bank your Phosphorus requirements for a period of 3-4 years as we understand that Phosphorus is not very mobile with annual applications. Soil testing prior to seeding and fertilizing to those requirements is strongly recommended.

**Companion Crop Management:** If you choose to use a companion crop, seed the companion crop at 30-40% of normal rate to reduce competition in your forage establishment. If possible, seed at right angles to reduce in-row competition with your forages, and under ideal conditions, harvest as a silage crop. The goal is to reduce the length of time the swath lays on the ground. Remember to use recommended herbicides to control weed growth and reduce competition. Avoid using a competitive crop such as barley or wheat and look to crops like flax, millet or oats as a companion crop.





# Become a part of the Legend

Northstar Seed has partnered with Legend Seeds to provide a full portfolio of grain, silage, dual purpose, and grazing corn options.

We are working together to ensure the products we bring forward will meet the unique feed requirements of Western Canadian cattle producers.

Trial evaluations across the Prairies are ongoing, proving these hybrids can meet the challenges of our growing conditions; including essential traits such as early maturity and drought tolerance.

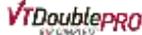
***Also ask us about Yield More Financing on your corn purchases, available now!***

	Days to Maturity	CHU	Grain or Silage	Grazing Option	Key Features
<b>LR 9474</b> 	74	2225	DUAL	YES	<ul style="list-style-type: none"> <li>• Strong plant health package</li> <li>• Excellent yield potential</li> <li>• Determinate ear type</li> </ul>
<b>LR 9676</b> (Available as RR2 or VT2PRIB) 	75	2275	DUAL	YES	<ul style="list-style-type: none"> <li>• Early flowering</li> <li>• Great stalk strength</li> <li>• Fast root development</li> <li>• Great test weight</li> </ul>
<b>NEW LR 99S77</b> 	77	2310	SILAGE	YES	<ul style="list-style-type: none"> <li>• Early silage option</li> <li>• Medium-tall to tall with excellent agronomics</li> <li>• Great choice for drought regions</li> <li>• Adapted to a wide range of soil types</li> </ul>





## GRAIN, SILAGE AND GRAZING CORN HYBRIDS

	Days to Maturity	CHU	Grain or Silage	Grazing Option	Key Features
<b>LR 9579</b> 	79	2350	SILAGE	YES	<ul style="list-style-type: none"> <li>• Rapid early growth</li> <li>• Lateral branching root style</li> <li>• Good plant health package</li> <li>• Semi-flex ear type</li> </ul>
<b>NEW LR 9980</b> 	80	2400	SILAGE	YES	<ul style="list-style-type: none"> <li>• Medium-tall leafy hybrid</li> <li>• Great standability</li> <li>• Handles light to heavy soils</li> <li>• Fits corn-on-corn rotations</li> </ul>
<b>LR 9583</b> 	83	2450	SILAGE	YES	<ul style="list-style-type: none"> <li>• Early flowering with rapid grain set up</li> <li>• Exceptional standability</li> <li>• Semi-flex ear type with high test weight</li> <li>• Excellent yield in low production environment</li> </ul>
<b>LR 9885 GTCBLL</b> 	85	2625	SILAGE	NO	<ul style="list-style-type: none"> <li>• Determinate ear type</li> <li>• Excellent disease package</li> <li>• High test weight</li> <li>• Requires a 20% Roundup Ready hybrid as refuge</li> </ul>
<b>NEW LR 9090</b>  	90	2800	SILAGE	NO	<ul style="list-style-type: none"> <li>• Semi-flex ear type</li> <li>• Excellent early vigour</li> <li>• Good drought tolerance</li> <li>• Exceptional standability</li> </ul>

Please contact your Northstar Seed sales agronomist for more Legend corn hybrid options that are not shown.



# Grow with us

Northstar Seed is known in the global forage and turf seed industry as a supplier of pure, clean, high quality seed. We are proud to export forage and turf seed, produced in Western Canada, around the world. Currently, Northstar Seed ships to countries within Europe, East Asia, Latin America, the United States, Africa and the Middle East.

As a forage or turf seed producer, you are an integral part in helping increase Canadian exports and developing our ability to be a primary source of quality seed production.

Northstar Seed is looking for leading-edge farmers to **Grow with Us**. If you are interested in finding out about grower opportunities, please contact one of our local production agronomists.

**Gerry Duynisveld**  
(204) 476-0644

**Brett Wilson**  
(204) 476-6828

**Darrel Theroux**  
(204) 212-0991





## OUR DEALERS - LOCAL FORAGE EXPERTS

### Who are Northstar Seed Dealers?

They are people from your community who are passionate about the forage and turf industry, and customer service. They are your local seed retailers based on-farm, independent farm supply companies with multiple sites, feed dealers, auction marts, landscape suppliers and many others!

### What are the benefits to you?

Northstar Seed's sales agronomists work with your local retailer to combine information on cutting edge varieties and agricultural practices used across Western Canada, with knowledge of your local climate and soil conditions. Many of our dealers are also producers who have experience growing the varieties we offer.

### Want to start a conversation?

Simply work with your local dealer — they can engage their Northstar Seed agronomist to help answer your questions and provide innovative ideas. Forage is our passion, and we would love to help improve your production.

To find out who your nearest Northstar Seed dealer is, call us toll free at 1-800-430-5955.

## NEW DEALER OPPORTUNITIES

**Northstar Seed is continuing to expand its presence in Manitoba, Saskatchewan, Alberta and B.C. If you are have a passion for forage, turf or native seed, speak to one of our sales agronomists about the possibility of becoming a dealer.**

**Call us today for more information: 1(800) 430-5955**

**Email: [info@northstarseed.com](mailto:info@northstarseed.com)**



**For additional information or to place an order please contact:**

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