



Product Guide 2023

Next Generation Forage Seed



Innovation for
your growth

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Introducing DSV Northstar

The Northstar team is excited to announce that Northstar Seed has joined the DSV group of companies, creating DSV Northstar.

DSV began in Germany as a grass breeding company over 100 years ago. Since its conception, it has become an innovative plant breeder and marketer with subsidiaries in Denmark, Great Britain, France, the Netherlands, Poland, Argentina and Ukraine.

Northstar Seed began working with DSV over 30 years ago, producing many DSV varieties here in Western Canada. During this strategic partnership, Northstar has introduced several of these varieties into the North American market, including ELUNARIA annual ryegrass, NABUCCO and FABIO Italian ryegrass, NOVIO timothy, PREVAL meadow fescue, and more.

As DSV Northstar, the newest member of the DSV family, our customers will benefit from access to a deeper pool of genetics across a broad range of species of perennial and annual forages. In addition, DSV has an industry leading cover crop program that we are excited to introduce and offer to our customers. For Western Canadians, the familiar Northstar Seed brand and commitment to quality will continue to live on here in Western Canada.

There truly are great things happening here at DSV Northstar, and we look forward to working with you as our valued customers.

New Products for 2023

NEW!



EXCEED Alfalfa

Our new branch root alfalfa, with high forage yield and quality attributes. EXCEED has very large multifoliate and trifoliate leaves that contribute to higher forage quality.

EXCEED will perform well under high moisture conditions compared to tap root varieties, with the branch root and great disease package.



VALERIO Perennial Ryegrass


VALERIO is a new tetraploid perennial ryegrass introduction from DSV. It combines strong yield with excellent persistence.



DOLOMIT Italian Ryegrass

Our second introduction this year from DSV. DOLOMIT is a tetraploid variety with similar yield and maturity to NABUCCO, as well as an improved disease package.

Alfalfa Selection Guide

Variety	Fall Dormancy	Winter Hardiness	Root Type	Key Features
REVOLUTION MD Maximum Digestibility	3.7	1.7	Tap	Exceptional forage quality – High RFQ (Relative Feed Quality) rating and rate of digestion – Large leaf area with an increased leaf to stem ratio – Outstanding disease and pest resistance package – Excellent winter hardiness combined with high yield potential
PERFECTION Rapid Growth	4	2	Tap	The latest advancement in StandFast Technology – Selected for high forage DM and NDF levels – High multifoliate expression and fast recovery – Well suited for silage production & dairy producers
ROBUST High Yield, Low Dormancy	2	1.5	Tap	High performance synthetic variety – Multifoliate with high leaf to stem ratio – High forage dry matter yield and RFV (Relative Feed Value) – Vigorous roots – Dense crowns
RUGGED ST Salt Tolerant	3	2	Tap	A very hardy variety – Large, broad, deep set crowns – Tolerance to increased salt level
SIDEWINDER Creeping Root	2	1.6	Creeping	Selected for high forage yield with excellent winter hardiness and persistence – Later maturity which adds value to a grass blend – Deep set crown with wheel traffic tolerance – Excellent disease resistance package – Multipurpose variety for forage hay or pasture
EXCEED Branch Root 	4	1.8	Branching	Very high forage quality with large multifoliate and trifoliate leaves – Excellent forage quality – High yielding branch rooted variety – Strong disease resistance package combined with branch root technology for all soil moisture conditions
RESPONSE WT Wet Tolerant	4	2	Branching	Performs well on medium to heavy soils. A high yielding variety that should be considered in areas of high water table – Excellent forage quality – High yielding branch rooted variety – Adjusts its root growth based on level of moisture stress
AAC MEADOWVIEW Acid Tolerant	2	Not Rated	Branching tap	Acid tolerant variety ideally suited for the foothills of AB and Peace region of AB and BC – Deep set crowns – Erect spring growth habit – Rapid regrowth after cutting
HAYGRAZER Grazing Tolerant	4	2	Fibrous	A flexible variety that is bred for high hay yields as well as grazing tolerance – Aggressive fibrous root system – Sunken crown stands up to grazing pressure and high traffic from equipment – Tolerant to defoliation by the Alfalfa Weevil

Variety	Fall Dormancy	Winter Hardiness	Root Type	Key Features
ALFALFA BLEND 10-5 Adapted to Variable Conditions	Mix of 2-4	Mix of 1.5-2	Creeping, tap, branch and fibrous	Premium certified blend of five varieties with unique traits that enhance plant population across variable field conditions – Now contains Robust and Sidewinder alfalfas, as well as Response, Rugged, and Haygrazer alfalfa
RANCHERS CHOICE BRAND Common #1 Blend	n/a	n/a	Combined creeping and tap	Consistent performing alfalfa blend – Blend of multifoliate, trifoliate and creeping root varieties that are consistent performers

Legume Selection Guide

Species	Hay	Pasture	Flood Tolerance	Drought Tolerance	Key Features
AAC MOUNTAINVIEW Sainfoin	•	•		•	– Non bloating – Similar maturity and regrowth to alfalfa – Suited for multi cut hay or grazing with alfalfa
Cicer Milkvetch		•		•	– Non bloating – Very competitive once established
Birdsfoot Trefoil		•	•		– Non bloating – Reseeds itself – Excellent feed quality
Yellow Blossom Sweet Clover	•			•	– Biennial – Improves soil drainage – Harvest early for best quality
Red Clover	•	•	•		– Tolerates wetter and more acidic soils than alfalfa
Alsike Clover	•	•	•		– Tolerates wet soils with poor drainage
White Dutch Clover		•			– Good for grazing – Good regrowth, also spreads by rhizomes and reseeding itself
Berseem Clover	•				– Annual crops only – Low bloat – Tolerates wet soils
Crimson Clover	•				– Annual crops only – Grows on many different types of soil

Forage Grass Selection Guide

Variety	Hay	Pasture	Saline Tolerance	Flood Tolerance	Drought Tolerance	Key Features
AAC MAXIMUS Meadow Bromegrass	•	•			•	<ul style="list-style-type: none"> – Taller than Fleet meadow bromegrass – More upright growth habit than Fleet
CARLTON Smooth Bromegrass	•	•	•	•	•	<ul style="list-style-type: none"> – Widely adaptable – Sod forming – Moderate saline, moisture and drought tolerance
AC KNOWLES Hybrid Bromegrass	•	•	•	•	•	<ul style="list-style-type: none"> – Smooth and meadow bromegrass hybrid – Yields like smooth brome with a longer growing season similar to meadow brome – Improved leaf expression compared to smooth brome
EARLY ARCTIC Orchardgrass	•	•	•	•		<ul style="list-style-type: none"> – Exceptional orchardgrass that demonstrates above average winter hardiness – Excellent companion when blended with alfalfa – Moderate drought and flooding tolerance – Selected for high quality (leafy)
ELUNARIA Annual Ryegrass	•	•		•		<ul style="list-style-type: none"> – Westerwold type – Suitable for hay, haylage or pasture – High yield opportunity – Very good quality with broad leaves
DOLOMIT Italian Ryegrass NEW!	•	•		•		<ul style="list-style-type: none"> – Tetraploid variety – Similar yield and maturity to NABUCCO – Improved disease package
FABIO Italian Ryegrass	•	•		•		<ul style="list-style-type: none"> – Tetraploid variety – Very high yield, especially first cut
VALERIO Perennial Ryegrass NEW!	•	•				<ul style="list-style-type: none"> – Tetraploid variety – Late maturity – Strong yield – Excellent persistence

Variety	Hay	Pasture	Saline Tolerance	Flood Tolerance	Drought Tolerance	Key Features
SATIN Soft Leaf Tall Fescue	•	•	•	•	•	<ul style="list-style-type: none"> – Satin provides excellent forage quality combined with a strong disease package – Very compatible in a stand with other legumes – Very adaptable to high moisture stress and early signs of salinity
COURTNEY Tall Fescue	•	•	•	•	•	<ul style="list-style-type: none"> – Good flood and saline tolerance – Large basal leaves, high quality – Exceptional yield potential – Improved winter hardiness
PREVAL Meadow Fescue	•	•		•		<ul style="list-style-type: none"> – Tolerates wet soils – Withstands close grazing, excellent for rotational grazing – Use in hay and pasture blends
BOREAL Creeping Red Fescue		•		•		<ul style="list-style-type: none"> – Great performance in pastures under high moisture conditions – Tolerates close grazing – Good quality in fall to freeze up
NOVIO Timothy	•	•		•		<ul style="list-style-type: none"> – Export quality with medium maturity – Large soft leaves – Extremely winter hardy
KIRK Crested Wheatgrass	•	•			•	<ul style="list-style-type: none"> – Fibrous root system provides good drought tolerance and winter hardiness – Excellent early spring pasture grass – Great fit for high traffic areas
SPRING GREEN Festulolium	•	•		•	•	<ul style="list-style-type: none"> – Meadow fescue x perennial ryegrass cross – Improved tolerance to dry conditions and cold stress due to its deep root system – Very good winter hardiness for a festulolium

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 %	AAC Maximus Meadow Bromegrass
5 %	Express Timothy

Maxi

High production blend for producers wanting a high quality alfalfa and timothy hay. Express Timothy performs well in low lying areas, and will assist in holding up the swath.

90 %	Alfalfa Blend 10-5
10 %	Express Timothy

Saline Hay Max

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

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

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 %	AAC Maximus Meadow Bromegrass
20 %	Carlton Smooth Bromegrass

Lowland Max

Ideally used for hay or pasture in areas with poor drainage. Has tolerance to increased moisture conditions.

50 %	Courtenay Tall Fescue
30 %	Palaton 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 or haying systems. Prefers medium to heavy soils.

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

Western Grass Max

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

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

Equine Pasture Max

An all grass blend for horse owners providing a palatable grazing option from spring to late fall. This blend can also be used as baled forage to provide a nutritious feed source for all classes of horses.

40 %	AAC Maximus Meadow Bromegrass
20 %	Early Arctic Orchardgrass
10 %	Preval Meadow Fescue
10 %	Luscious Perennial Ryegrass
10 %	Boreal Creeping Red Fescue
10 %	Express Timothy

Bloat Free Max

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

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

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 %	AAC Maximus Meadow Bromegrass
15 %	Kirk Crested Wheatgrass
15 %	Pubescent Wheatgrass
5 %	Sidewinder Alfalfa

Saline Pasture Max

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

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



Forage Adaptation Guide

Grasses

Species	Use	Longevity	Winter Hardiness	Root	Seeds/lb.*	Growing Period
Altai Wild Ryegrass	Pasture	Long	Excellent	Bunch grass	60,000	Early Spring-Mid Summer
Creeping Foxtail	Pasture	Long	Good	Sod forming	750,000	Early Spring-Fall
Dahurian Wild Ryegrass	Pasture	Short	Good	Bunch grass	80,000	Spring-Fall
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
Russian Wild Ryegrass	Pasture	Long	Excellent	Bunch grass	175,000	Early Spring-Mid Summer
Tall Fescue	Pasture	Medium	Good	Bunch grass	225,000	Late Spring-Fall
Creeping Red Fescue	Pasture/Lawn	Long	Excellent	Sod forming	615,000	Spring-Fall
Kentucky Bluegrass	Pasture/Lawn	Long	Excellent	Sod forming	2,180,000	Spring-Fall
Crested Wheatgrass	Pasture/Hay	Long	Excellent	Bunch grass	175,000	Early Spring
Annual Ryegrass (Italian)	Hay/Pasture	Annual	Poor	Bunch grass	230,000	Spring-Fall
Intermediate Wheatgrass	Hay/Pasture	Short/Medium	Good	Sod forming	88,000	Late Spring-Mid Summer
Meadow Bromegrass	Hay/Pasture	Long	Good	Bunch grass	80,000	Early Spring-Late Summer
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
Smooth Bromegrass	Hay/Pasture	Long	Excellent	Sod forming	136,000	Mid Spring-Mid Summer
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
Western Wheatgrass	Hay/Pasture	Long	Excellent	Sod forming	110,000	Late Spring-Summer

* Seeds/lb. may vary

Legumes

Species	Use	Longevity	Winter Hardiness	Root	Seeds/lb.*	Growing Period
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
Sainfoin	Pasture	Long	Fair	Tap rooted	18,000 unhulled	Spring-Summer
White Clover	Pasture	Short/Long	Good	Rhizomatous	800,000	Spring-Fall
Alfalfa	Hay/Pasture	Long	Good	Tap, branch, creeping rooted and sunken crown	200,000	Spring-Fall
Alsike Clover	Hay/Pasture	Short	Fair	Branched	700,000	Spring
Red Clover	Hay/Pasture	Long	Poor	Tap rooted with side branches	275,000	Spring
Sweet Clover	Hay/Silage	Short	Fair	Tap rooted	260,000	Spring of 2nd Year

* Seeds/lb. may vary



Lawn Seed Blends

Mixture	Components	Moisture Requirement	Key Features
DELUXE BLEND	70% Kentucky Bluegrass 20% Creeping Red Fescue 10% Perennial Ryegrass	••••	– Contains the highest percentage of Kentucky Bluegrass – For homeowners wanting a lush, vibrant green lawn
SUN AND SHADE	50% Kentucky Bluegrass 30% Creeping Red Fescue 20% Perennial Ryegrass	•••	– Best suited for sunny areas and will tolerate partial shade
INSTAGREEN	40% Kentucky Bluegrass 40% Creeping Red Fescue 20% Annual Ryegrass	•••	– Very quick to establish – Most economical blend for general use
ECO-GROW	25% Sheep's Fescue 25% Hard Fescue 20% Gibraltar Creeping Red Fescue 15% Boreal Creeping Red Fescue 15% Chewings Fescue	•	– Low maintenance blend of premium fescues – Low growing – Less mowing – Ideal for small acreages or for securing ground cover for livestock habitat
PLAYGROUND BLEND	30% Creeping Red Fescue 30% Hard Fescue 20% Sheep's Fescue 10% Corsair Kentucky Bluegrass 10% Turf Type Perennial Ryegrass	••	– A low maintenance, easy to manage blend that will last for years – Stands up to heavy foot traffic

Moisture requirement: •••• = high • = low

Reclamation & Native Species

DSV Northstar is proud to offer a full line of high quality native cool and warm season grass species, legumes, and wetland grasses across Western Canada.

We provide native blends for all types of projects; from reclamation sites and wetland habitats to major infrastructure projects and national parks.

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	Smooth Wildrye
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 Wheatgrass
Bluejoint Reedgrass	Inland Saltgrass	Sandberg Bluegrass	American Vetch
Canada Bluegrass	Little Bluestem	Side Oats Grama	Canadian Milkvetch
Canada Wildrye	Little Bluestem	Sheeps Fescue	Hairy Vetch
Common Sedge	Mountain Brome	Slender Wheatgrass	Lewis Blue Flax
Fowl Bluegrass	Northern Wheatgrass	Slough Grass	Purple Prairie Clover

Other species may become available



Annual & Cover Crop Program

DSV Northstar has been involved in cover crops for over a decade, and have developed our product lineup to meet the demand of this diverse and growing market.

We can provide various cover crop blends for double cropping under irrigation, summer/fall grazing, stored forage, nitrogen fixation, and soil health improvements. We have also recommended annual legumes as a part of intercropping with cereal grain production.

Please contact your DSV Northstar sales agronomist or DSV Northstar 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
- Collards
- Jumbo Ladino Clover
- Driller brand Radish
- Vivant Hybrid Forage Brassica
- Gorilla Forage Rape
- Kale
- Purple Top Turnips
- Appin Turnips
- Sugar Beets
- Hairy Vetch
- Chicory
- Austrian Winter Peas
- Forage Peas
- Plantain
- Beehappy Phacelia
- Buckwheat
- Sunflowers
- NS Brand Sorghum Sudangrass
- NS Drystalk brand BMR Sorghum Sudangrass
- Golden German Millet
- Japanese Millet
- Proso Millet
- Dolomit Italian Ryegrass (NEW)
- Nabucco Italian Ryegrass
- Fabio Italian Ryegrass
- Elunaria Annual Ryegrass



Annual Forage Selection

The use of annual forages as cover crops continues to grow with a strong focus on improving soil health. The integration of livestock into a cover cropping system assists in the efficiency of the nutrient cycling ecosystem.

As we explore the benefits of Regenerative Agriculture, the use of cover cropping with annual forages combined with the use of perennial forages are key to improving soil health. The focus of Regenerative Agriculture is to increase biodiversity, improve the water cycle, and strengthen the health and vitality of the soil. This means protecting the soil with armour, and keeping root activity alive for an extended period.

Cool Season			Warm Season		
GRASS	BROADLEAF			GRASS	
			LEGUMES		
Barley				Pearl Millet	
Oats			Jumbo Ladino Clover	Soybeans	Japanese Millet
Ryegrass	Phacelia	Turnip	Forage Peas	Chickpeas	Golden German Millet
Wheat	Kale	Radish	Berseem Clover	Buckwheat	Proso Millet
Cereal Rye	Canola	Beets	Sweet Clover	Sunflowers	Sorghum Sudangrass
Triticale	Mustard	Forage Brassica	Hairy Vetch	Chicory	Corn

The use of annual forages in your rotational program allows you to increase biodiversity within your cropping systems. The overall goal is to increase soil carbon through vegetative growth with moisture being the caveat.

Producers use many different prescriptions to achieve biodiversity and their ability to affect soil health on their operation. Regenerative Agriculture is most often unique to an individual operation requiring site specific recommendations.

Improving soil health will require using the Five basic principles of Regenerative Agriculture:

- Create soil armor by keeping the soil covered, with no bare ground.
- Minimize soil disturbance by utilizing reduced/no till practices on cropland and adaptive grazing strategies on grazing lands.
- Increase plant diversity; rotate crops and include warm and cool-season grasses and forbs in pastures.
- Keep living roots in the ground all year.
- Integrate livestock grazing.

Growing Low Lignin Alfalfa

Alfalfa is widely used as forage for livestock due to its high nutrient content. Alfalfa is superior to other legume crops in that it is high in crude protein and energy. The intake potential of an alfalfa based diet, allows for increased performance in dairy herds and the ability to balance rations in a TMR beef ration as well.

The nutrient requirements of an animal depend on age, sex, and production requirements of the animal being fed. Maximum profit results from matching forage quality to animal needs during the feeding program. Feeding a low quality forage will reduce animal performance or increase supplement costs. Conversely, feeding a higher quality forage that an animal requires results in unused nutrients and increased costs associated with production.

The industry has moved to a measurement of Relative Feed Value and Relative Feed Quality as a way to evaluate like forages. The Relative Feed Value is a value that is associated with acid detergent fibre and neutral detergent fibre to predict digestible dry matter and dry matter intake. The Relative Feed Value of full bloom alfalfa would have a Relative Feed Value of 100. Protein is not considered in the calculation but higher Relative Feed Values are usually associated with higher protein levels. Relative Feed Quality is similar to Relative Feed Value except Neutral Detergent Fibre digestibility is used which allows for a more precise estimate of energy in the feed.

However, the crop's lignin content of a forage reduces the animals' ability to digest a portion of the forage. Lignin is a complex structure that makes up part of the plant's fibrous portion and provides the plant with the strength and rigidity necessary to stand upright. Lignin is the indigestible plant component that reduces the fiber digestibility of forages.

Fortunately, new alfalfa varieties such as REVOLUTION MD with reduced-lignin concentrations have the potential to increase the feeding value of alfalfa and widen the optimal harvest window. Using an alfalfa variety like REVOLUTION MD allows producers to harvest reduced-lignin alfalfa at the same time as conventional varieties to get more digestible forage. Producers can also delay their cutting schedule and maintain forage quality across a wider harvest window. The upside would allow for increased yields while maintaining a high forage nutritive value. At any given maturity stage, reduced-lignin alfalfa will have greater cell wall digestibility and greater feeding value than conventional varieties. We have seen Relative Feed Quality ratings of over 200 with Revolution.

Contact your DSV Northstar dealer or sales agronomist for more information on growing low lignin alfalfa as a feed source or as an income driver on your operation.

REVOLUTION MD field near Ste Anne MB



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 there are no herbicide residue issues 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 to 10°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°C to prevent germination until the following spring.

Seeding Rate and Equipment: 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 DSV Northstar Seed sales agronomist for the ideal seeds per square foot for the various soil zones.

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, 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.

Companion Crop Management: If you choose to use a companion crop, **seed the companion crop at 20 to 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.

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 low value seed may compromise yield and quality, and persistence of the stand due to lack of disease resistance and winterhardiness. 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 Depth: Seed your forages shallow with the maximum seeding depth on clay type soils at ¼ to ½ 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 ¾ inch, keeping 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 to 4 years as we understand that Phosphorus is not very mobile with annual applications.

Soil testing prior to seeding and fertilizing to the required nutrient levels is recommended.



Intercropping versus Intracropping

Intercropping is a seeded crop composed of various species of cover crops and cereals, while intracropping is a crop seeded with a crop. Often producers will do both. For example, this drill allows producers to seed a combination of a cereal and forage peas on a 15" spacing and then put a cover crop of ryegrass, clovers, brassica's, turnips, or what ever species blend prescribed between the cereal rows.

The drill is adapted to provide for different seeding depths, deeper for the large seeds such as peas with the cereals, and for a shallow seed for the cover crop blend. This practice allows for the cover crop species to germinate quickly and eliminate the strong competition from the cereal crops that are deep seeded. The larger seeded species will provide a micro environment for the cover crop and allow for some synergism when mature.

With this method of intracropping on a 15" row spacing, the cereals do not shade the cover crop material and allows for full expression of the cover crop species.



Drill is a 30' John Deere 1990 CCS on 7 1/2" spacing with an APV PS800 pneumatic seeder intercepting into the JD primary hoses. The PS800 allows for precision metering of seeds from 200 down to 1/2 lb per acre. Also easily configures to Intracropping- cereals on 15" spacing through JD tank, covercrop seed through APV sown between cereal on 15" spacing at shallower depth. Eco Valley Equipment is an authorized dealer for APV specialized equipment, and manufactures kits to integrate the APV pneumatic seeders onto JD box and air drills.

Cereal intercrop with cover crops



Seed Production Opportunities

DSV Northstar contracts with producers across Western Canada for most of the forage and turf species that we sell. Seed produced across the prairies is not only sold locally but also exported around the world.

Seed Production of forage and turf species in your rotation can have many advantages. While dependant on crop kind many are perennial crops that need to be seeded once but can have multiple harvest years

Harvest is also earlier than many traditional crops which can ease harvest time pressure. Looking for more feed? Straw from many of the species can be baled and fed with post harvest regrowth providing a second cut or fall grazing. A big advantage of forage and turf species is adding a profitable crop to your rotation. Currently there is strong demand for these crop kinds with excellent competitive pricing.

DSV Northstar is actively looking for producers to work with

Our production advisors are highly knowledgeable and will be able to assist you every step of the way. Your success is our success. If you are interested in finding out about grower opportunities please contact our office to be put in touch with your area's production advisor for more information.



Alfalfa production field



Tall Fescue production field

Our Dealers – Local Forage Experts

Who are DSV 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?

DSV Northstar 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 DSV Northstar agronomist to help answer your questions and provide innovative ideas. Forage is our passion, and we would love to help improve your production.

New Dealer Opportunities

DSV Northstar is continuing to expand its presence in Manitoba, Saskatchewan, Alberta and B.C. If you 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




For additional information or to place an order please contact:

DSV Northstar Ltd.

Manitoba/Eastern Saskatchewan
Box 2220
Highway 16 East
Neepawa, Manitoba
R0J 1H0
Ph: 204-476-5241
Fax: 204-476-3773
Toll Free: 1-800-430-5955

Alberta, Western Saskatchewan, and B.C.
64053 393 Ave. E
Okotoks, Alberta
T1S 0L1
Ph: 587-757-8981
Fax: 587-757-8986
Toll Free: 1-800-805-0765

www.dsv-northstar.com

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