
NORTHSTAR
SEED
Product Guide 2027
Next Generation Forage Seed
SEED
INTELLIGENCE
DSV
Innovation for
your growth
www.dsv-northstar.com
AI-generated

DSV

As a breeding and seed company with 100 years of experience, we offer our customers innovative varieties and complex cultivation methods. Deutsche Saatveredelung AG (DSV) is a full-service provider for the entire agricultural crop rotation and turf grasses. We are a successful breeder of oilseed rape and cereals, as well as grasses and small-seeded forage legumes. Furthermore, we are specialists in cover crops and offer a wide-ranging maize portfolio as well as sorghum. We provide turf customers with several solutions, beginning with single varieties for all kind of turf use, high quality mixtures for professional or private use up to complete programmes for the do-it-yourself market. Our activities encompass not only the breeding and production of new varieties with the properties and combinations of features desired by our customers, but also expert advice, high-quality service and extensive marketing through a global distribution network. Working on the 'one-stop shop' principle, we are a full-service supplier in the seed sector.

RESEARCH • BREEDING • PRODUCTION • CONSULTING • DISTRIBUTION
IQ INTEGRATED QUALITY

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Seed Intelligence: Innovation in Every Seed

At DSV Northstar, we believe every successful forage stand begins long before the seed reaches the field. It starts with decades of research, continuous testing, and a commitment to plant breeding excellence. That philosophy is at the heart of DSV's global Seed Intelligence initiative.

Seed Intelligence is the combination of genetics, research, testing, and agronomic expertise that transforms seed into on-farm performance. It is how DSV develops varieties that help producers maximize yield potential, improve forage quality, strengthen persistence, and adapt to changing environmental conditions.

Plant breeding is more than what we do; it is who we are. DSV stands for Deutsche Saat-veredelung, which translates to German Seed Breeding. For generations, breeding has been the foundation of our company and remains the driving force behind every new variety we develop. Today, DSV combines global breeding expertise with local market knowledge to create forage genetics that meet the challenges of modern agriculture.

Our breeding programs focus on the traits that matter most to producers, including yield, forage quality, digestibility, persistence, disease resistance, winter hardiness, and stress tolerance. Every new variety must demonstrate measurable value before earning a place in the DSV Northstar portfolio.

Seed Intelligence is built on evidence. DSV varieties are evaluated through extensive testing at DSV research locations, DSV Northstar trial sites, and through collaborations with respected institutions such as Michigan State University, Penn State University, and the University of Kentucky. Independent testing helps verify performance across diverse environments, management systems, and production regions.

Closer to home, DSV Northstar works alongside forage and grassland associations, Living Labs initiatives, researchers, and producers across Western Canada. These partnerships allow us to evaluate genetics under real-world conditions and gain valuable insights into performance across varying soil types, moisture zones, and production systems.

The same intelligence that drives our breeding programs also supports our agronomic recommendations. By connecting breeders, researchers, agronomists, and producers, knowledge continuously moves from the field back into the breeding process, helping ensure future varieties address the evolving needs of forage producers.

At DSV Northstar, Seed Intelligence means combining global breeding leadership with local expertise, rigorous research, and proven performance. Because innovation doesn't start in the field. It starts in every seed.

Top Highlighted Products for 2027

REVOLUTION MD Alfalfa

The digestibility advantage

Seed Intelligence is about turning advanced genetics into measurable results in the field. REVOLUTION MD is a perfect example of that philosophy in action. Developed through an intensive breeding program focused on forage quality, rapid regrowth, winter survival, disease resistance, and yield potential, REVOLUTION MD delivers the digestibility and feed value producers need to maximize livestock performance.

REVOLUTION MD was developed specifically to push the boundaries of forage quality. The result is a revolutionary non-GMO alfalfa designed to maximize digestibility and Relative Forage Quality (RFQ) while maintaining the persistence and agronomic strength producers expect from a premium alfalfa variety.

Where Seed Intelligence meets forage quality

- **Maximum feed value**
  REVOLUTION MD was bred specifically to improve forage digestibility and overall feed quality. With a large leaf area, increased leaf-to-stem ratio, and exceptional digestibility, it helps producers get more performance from every tonne harvested.
- **Fast recovery and consistent production**
  Selected for rapid regrowth following harvest, REVOLUTION MD supports intensive cutting schedules while maintaining excellent yield potential throughout the life of the stand.
- **Protection that lasts**
  A strong disease resistance package provides protection against many of the most significant alfalfa diseases, helping maintain stand density, forage quality, and long-term productivity.

Agronomic Highlights		
Fall dormancy	3.7	Excellent winter survival with strong yield potential
WSI Rating	1.7	Outstanding winterhardiness and stand persistence
Recovery after cutting	super fast	Supports intensive harvest schedules

Aphanomyces resistance: race 1 – HR



Grow REVOLUTION MD Alfalfa!

Dr. Tarlok Singh Sahota CCA

'This is a revolutionary non-GMO alfalfa bred with the goal of maximum digestibility and RFQ (Relative Forage Quality). It has exceptional forage quality, even during periods of delayed harvest. This is DSV Northstar's first alfalfa to carry MD (Max-Digest) designation. This high performance alfalfa is for producers seeking increased forage digestibility to increase milk and beef yields.

REVOLUTION MD is an alfalfa variety from the DSV Northstar Company. It is touted by the company as a revolutionary new alfalfa for maximum digestibility. The company claims following qualities in REVOLUTION MD:

- *High RFQ (Relative Forage 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*

REVOLUTION MD (L-447 HD) was Grand Champion in the haylage division at the World Dairy Expo's World Forage Analysis Superbowl in Wisconsin. It was also GRAND Champion in the 'Quality Counts' Division for fastest rate of digestibility of all hay/haylage entered.

The LUARS (Lakehead University Agricultural Research Station) tested REVOLUTION MD along with other alfalfa varieties (135, Shockwave BR, Dynasty, Evermost and SW 4107) during 2021-2024. Averaged over all the years, REVOLUTION MD produced the highest dry matter yield (5,547 kg/ha) and the highest protein yield (1,176 kg/ha). I would encourage Ontario producers to grow REVOLUTION MD on their farms for better dry matter and protein yield and ultimately for better milk and meat yields.'



Top Highlighted Products for 2027



JACKKNIFE Alfalfa

Combines exceptional yield, premium forage quality, and long-term persistence in one versatile package. Developed through a non-GMO breeding program, its unique combination of branching, tap, and creeping root characteristics delivers outstanding adaptability and stand longevity. With a 34/35 Disease Resistance Index, strong winter survival, and excellent digestibility, **JACKKNIFE** is built to help forage producers maximize productivity year after year.



ENFORCER Alfalfa

Lives up to its name with an exceptional combination of yield, forage quality, and stand persistence. Developed through a non-GMO breeding program, its tap and branch root system supports strong regrowth, stand longevity, and adaptability across a wide range of growing conditions. With a 34/35 Disease Resistance Index, excellent winter survival, and very high multi-leaf expression, **ENFORCER** delivers the performance and reliability forage producers demand from every acre.



PASADO Orchardgrass

Combines exceptional forage yield, season-long productivity, and excellent palatability in a dependable orchardgrass variety. Its strong regrowth, winter hardiness, and persistence make it well suited for both hay and grazing systems. With outstanding forage quality and reliable performance across a range of growing conditions, **PASADO** helps producers maximize feed production and stand longevity year after year.



BRONSON Soft leaf tall fescue

Combines outstanding forage production, exceptional persistence, and improved livestock acceptance through its soft leaf texture. Its deep-rooted growth habit provides excellent drought tolerance and season-long productivity, while delivering high-quality forage for both grazing and hay systems. With strong regrowth, adaptability, and long-term stand durability, **BRONSON** is a dependable choice for producers focused on performance and persistence.



OASIS Brand tall wheatgrass (soft leaf)

Delivers excellent forage production, outstanding drought tolerance, and season-long performance in challenging environments. Its soft leaf trait improves palatability while maintaining the persistence and resilience that tall wheatgrass is known for. With strong adaptability to dry, saline, and marginal soils, **OASIS** is a dependable choice for producers seeking productive, high-quality forage and exceptional stand persistence.

Milk Index – the award for forage quality

NEW!

DSV is a leader in the breeding of high-quality forage crops, such as forage grasses and legumes, as well as maize and sorghum.

For decades, we have been selecting new varieties not only for yield and tolerance to diseases and abiotic stress factors, but have also placed a special focus on forage quality – as the foundation for high-performance and cost-effective milk and meat production. The Milk Index quality award is given exclusively to varieties with above average forage quality.

Alfalfa Selection Guide

Variety	Fall dormancy	Winter hardiness	Root type	Key features
JACKKNIFE All-in-one	4.2	1.6	Branching Tap Creeping	The triple threat in forage performance – Combines branching/tap/creeping root systems – Complete disease package – Sunken crown
ENFORCER Stand strong	3.8	1.5	Branching Tap	The name says it all – Very high multi-leaf expression – Tap/branching root architecture – Excellent yield potential and premium digestibility – Complete disease packages
AAC MEADOWVIEW Acid tolerant	2	3	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
EXCEED MI 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
REVOLUTION MD MI 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
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
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

Fall dormancy: 1–4 dormant, 5–7 semi-dormant, 8–11 non-dormant | Winter hardiness: 1 extremely hardy – 6 non winter hardy

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 blend of five certified varieties with unique traits that enhance plant population across variable field conditions – Now contains AAC MEADOWVIEW, HAYGRAZER, EXCEED, RUGGED, and SIDEWINDER 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

Fall dormancy: 1–4 dormant, 5–7 semi-dormant, 8–11 non-dormant | Winter hardiness: 1 extremely hardy – 6 non winter hardy

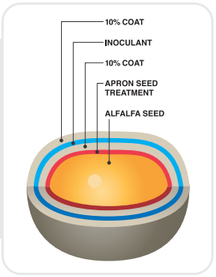
Legume Selection Guide

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

Stratum protective coating

Stratum creates a protective barrier that separates the Apron® fungicide treatment from the inoculant, safeguarding the viability of nodule-forming bacteria. This intelligent formulation ensures effective nitrogen fixation and supports vigorous plant development.

Key Feature:
20% total coating by weight for optimal protection and performance.



Forage Grass Selection Guide

Variety	Hay	Pasture	Saline tolerance	Flood tolerance	Drought tolerance	Key features
AAC MAXIMUS Meadow bromegrass	•	•			•	– Taller than FLEET meadow bromegrass – More upright growth habit than FLEET
CARLTON Smooth bromegrass	•	•	•	•	•	– Widely adaptable – Sod forming – Moderate saline, moisture and drought tolerance
AC KNOWLES Hybrid bromegrass	•	•	•	•	•	– 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
FALLADINO Annual ryegrass	•	•		•		– Tetraploid variety – Outstanding rust resistance – Good option for inter & intra cropping
DOLOMIT Italian ryegrass	•	•		•		– Tetraploid variety – Perfect yield especially in the first cut – Improved disease package
VALERIO Perennial ryegrass	•	•				– Tetraploid variety – Late maturity – Strong yield – Excellent persistence
BRONSON NEW! Soft leaf tall fescue	•	•	•	•	•	– BRONSON 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
COURTENAY Tall fescue	•	•	•	•	•	– Good flood and saline tolerance – Large basal leaves, high quality – Exceptional yield potential – Improved winter hardiness
PASADO NEW! Orchardgrass	•	•		•		– Exceptional palatability – Outstanding regrowth for multi-cut hay systems – Excellent winter hardiness and long term persistence – High forage yields with superior feed quality

Variety	Hay	Pasture	Saline tolerance	Flood tolerance	Drought tolerance	Key features
PREVAL Meadow fescue	•	•	•	•		– Tolerates wet soils – Withstands close grazing, excellent for rotational grazing – Use in hay and pasture blends
TETRAX Meadow fescue	•	•	•	•		– Extremely robust tetraploid variety – Winter hardy – High digestibility values
BOREAL Creeping red fescue		•		•		– Great performance in pastures under high moisture conditions – Tolerates close grazing – Good quality in fall to freeze up
ATURO Timothy	•	•		•		– Good yielding and persistent – Low tendency for lodging – Large soft leaves
NOVIO Timothy	•	•		•		– Export quality with medium maturity – Large soft leaves – Extremely winter hardy
RADDE Timothy	•	•		•		– High-yielding with superior forage quality – Ideal for hay & pasture systems – Winter hardy
AAC RENEGADE Crested wheatgrass	•	•			•	– Excellent persistence – Performed well in all soil zones in Canadian Prairies – Outperforms KIRK
SPRING GREEN Festulolium	•	•		•	•	– 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 ATURO 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 %	ATURO Timothy
Seeding rate 10 – 12 lb/ac*	

MAXI

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

90 %	ALFALFA BLEND 10-5
10 %	ATURO Timothy
Seeding rate 10 – 12 lb/ac*	

SALINE HAY MAX

This salt tolerant blend is suited for productive soils that are showing the early signs of salt stress.

40 %	COURTENAY Tall fescue
30 %	RUGGED ST Alfalfa
20 %	CARLTON Smooth bromegrass
10 %	Tall wheatgrass
Seeding rate 10 – 12 lb/ac*	

RANCHER'S HAY MAX

A very adaptable 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
Seeding rate 12 – 14 lb/ac*	

LOWLAND MAX

The ideal blend for hay or pasture in areas with poor drainage as it has tolerance to increased moisture conditions.

50 %	COURTENAY Tall fescue
30 %	PALATON Reed canary grass
20 %	ATURO Timothy
Seeding rate 10 – 14 lb/ac*	

MEADOW MAX

Designed for its robust winter hardiness, with fast spring regrowth, high digestibility, recovery time after grazing or cutting, and its ability to adapt to a wide range of soil types and growing conditions.

50 %	TETRAX Meadow fescue
50 %	PREVAL Meadow fescue
Seeding rate 10 – 12 lbs/ac*	

FORCE MAX

High yielding, exceedingly palatable, and digestible blend combining the strengths of diploid and tetraploid genetics.

50 %	SENDERO Italian ryegrass
50 %	DOLOMIT Italian ryegrass
Seeding rate 12 – 14 lb/ac*	

Varieties subject to change due to availability

Dual Purpose: Hay or Pasture

DUAL MAX

This blend of high quality grasses, that have very good regrowth habits and prefer medium to heavy soils, is suited to most grazing or haying systems.

50 %	AAC MAXIMUS Meadow bromegrass
25 %	CARLTON Smooth bromegrass
20 %	HIGH ARCTIC BRAND Orchardgrass
5 %	ALFALFA BLEND 10-5
Seeding rate 12 – 14 lb/ac*	

WESTERN GRASS MAX

When managed properly, this high quality all grass mix, can be a very productive hay and pasture blend that has no concerns with bloat.

45 %	AAC MAXIMUS Meadow bromegrass
25 %	HIGH ARCTIC BRAND Orchardgrass
15 %	COURTENAY Tall fescue
10 %	ATURO Timothy
5 %	Creeping red fescue
Seeding rate 14 – 16 lb/ac*	

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 %	HIGH ARCTIC BRAND Orchardgrass
10 %	PREVAL Meadow fescue
10 %	VALERIO Perennial ryegrass
10 %	BOREAL Creeping red fescue
10 %	ATURO Timothy
Seeding rate 12 – 14 lb/ac*	

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
Seeding rate 16 – 18 lb/ac*	

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 %	AAC RENEGADE Crested wheatgrass
15 %	Pubescent wheatgrass
5 %	SIDEWINDER Alfalfa
Seeding rate 10 – 12 lb/ac*	

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
Seeding rate 12 – 14 lb/ac*	

* On the above Max seed blends seeding rates need to be adjusted if coated seeds are used.

Varieties subject to change due to availability

Forage Adaption Guide

Grasses

Species	Use	Longevity	Winter hardiness	Root	Average seeds/lb.	Growing period
Creeping foxtail	pasture	long	good	sod forming	750,000	early spring – fall
Dahurian wildrye	pasture	short	good	bunch grass	80,000	spring – fall
Meadow fescue	pasture	short/ medium	good	bunch grass	230,000	early spring – late fall
Russian wildrye	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	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
Reed canary grass	hay/pasture	long	medium	sod forming	534,000	spring – summer
Tall wheatgrass	hay/pasture	long	excellent	bunch grass	79,000	late spring – mid summer
Slender wheatgrass	hay/pasture	short	good	bunch grass	160,000	mid 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

Legumes

Species	Use	Longevity	Winter hardiness	Root	Average 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

Lawn Seed Blends

Turf solutions that work for you

Whether you are managing a lawn, sports field, golf course, or roadside project, our turf options are designed to perform. Choose from premade stock blends or work with us to create a custom blend tailored to your soil, climate, and usage needs.

We offer a diverse lineup of certified and common turf species, including Kentucky bluegrass, Creeping red fescue, Perennial ryegrass, and Annual ryegrass. Our portfolio also features specialty options like turf clover for added nitrogen and resilience, and Sheep/Hard fescue for low-maintenance, drought-tolerant turf that thrives in challenging conditions.

Unlike many other suppliers of lawn seed, DSV Northstar provides bare turf seed that is uncoated and completely free of fillers – ensuring every bag is composed of pure seed and essential components, with no coatings or added bulk. This leads to consistent germination, more uniform establishment, and eliminates unnecessary additives that can compromise performance. By starting with pure seed, turf professionals and managers retain full control over soil amendments and treatments, making it the ideal solution for those who prioritize precision, consistency, and long-term results. With over 50 years of experience in turfgrass breeding and seed production in Europe, choosing us means investing in a trusted partnership dedicated to growing your success.



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
NITROGREEN	40 % Kentucky bluegrass 35 % Creeping red fescue 15 % Annual ryegrass 10 % EUROMIC Small leafed turf clover	• • •	– Provides natural nitrogen – Increase wear qualities – Reduced weed invasion – Improved drought tolerance
ECO-GROW	35 % BOREAL Creeping red fescue 25 % Sheep fescue 25 % Hard 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 fescue 10 % TIREM 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			
Alpine bluegrass	Creeping foxtail	Little bluestem	Sandberg bluegrass
American vetch	Fowl bluegrass	Mountain brome	Sheeps fescue
Awned wheatgrass	Fringed brome	Needle & thread grass	Side oats grama
Baltic rush	Fults alkaligrass	Nodding bromes	Slender wheatgrass
Beaked sedge	Green needlegrass	Northern wheatgrass	Slough grass
Big bluestem	Hairy vetch	Prairie cordgrass	Smooth wildrye
Blue grama	Hairy wildrye	Prairie sandreed	Streambank wheatgrass
Bluebunch wheatgrass	Idaho fescue	Pubescent wheatgrass	Switchgrass
Bluejoint reedgrass	Indian grass	Purple prairie clover	Tall mannagrass
Canada bluegrass	Indian ricegrass	Red top	Ticklegrass
Canada wildrye	Inland saltgrass	Rocky mountain fescue	Tufted hairgrass
Canadian milkvetch	Junegrass	Rough fescue	Violet wheatgrass
Common sedge	Lewis blue flax	Sand dropseed	Western wheatgrass

Other species may become available



Annual Cover Crop Program

DSV Northstar has been involved in cover crops for over a decade, and has 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 cover crop species and varieties:

- Berseem clover
- Crimson clover
- Collards
- Ladino clover
- GROUNDHOG BRAND radish
- TWISTER Hybrid forage brassica
- GORILLA Forage rape
- Kale
- Purple top turnips
- APPIN turnips
- Sugar beets
- Hairy vetch
- Chicory
- Austrian winter pea(s)
- LIVIOLETTA field pea(s)
- Persian clover
- Serradella
- Faba beans
- Plantain
- Buckwheat
- Sunflowers
- NS BRAND Sorghum sudangrass
- NS DRYSTALK BRAND BMR Sorghum sudangrass
- Golden German millet
- Japanese millet
- Proso millet
- FALLADINO Annual ryegrass
- DOLOMIT Italian ryegrass
- Forage soybean (conventional & ROUNDUP ready)



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			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.

Cover Crop Blends

Planting cover crops is becoming a common and very rewarding farming practice across the prairies. There is no silver bullet when it comes to cover cropping. At DSV Northstar we offer tailored solutions and custom blending capabilities for your desired outcome.

D.C. GRAZER MAX

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 Italian ryegrass brings phenomenal fall grazing without breaking the bank.

60 %	DOLOMIT Italian ryegrass
20 %	VIVANT Hybrid forage brassica
20 %	GORILLA Forage rape
Seeding rate 10 – 12 lb/ac*	

SOIL HEALTH MAX

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

35 %	Berseem clover
25 %	Purple top turnip
25 %	GROUNDHOG BRAND Radish
15 %	Phacelia
Seeding rate 8 – 10 lb/ac*	

SWATH GRAZE MAX

Most popular cover crop blend.
Superior mix of leafy forages, legume and grass, providing high feed value and maximum rate of gain for cattle. Great companion with cereals for swath grazing. Cut for silage or graze in summer and graze regrowth in the fall.

60 %	Japanese millet
20 %	Berseem clover
10 %	GORILLA Forage rape
10 %	APPIN Forage turnip
Seeding rate 10 – 12 lb/ac*	

MAX BUZZ

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

34 %	Crimson clover
33 %	Phacelia
33 %	Berseem clover
Seeding rate 8 – 10 lb/ac*	

* seeding rates reflect no companion crop



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 a weed control program for newly seeded forage to 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. Most important is the ability to control 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 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 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.



One Mix Does Not Fit All

SEED
INTELLIGENCE

Designing Forage Mixtures for Specific Goals

Forage producers face a unique challenge. Every farm is different, every field is different, and every feeding program has different requirements. Yet many forage decisions still begin with the question, 'What's the best mix?' The reality is that there is no single forage mixture that fits every situation. The best forage mixture is the one designed to achieve a specific goal. Whether the objective is maximizing milk production, extending the grazing season, increasing drought resilience, improving soil health, or producing large volumes of economical feed, the species selected should match the desired outcome.

At DSV Northstar, we believe this is where **Seed Intelligence** creates value. By understanding how individual forage species and genetics contribute to a forage system, producers can build mixtures that are tailored to their operation rather than relying on a one-size-fits-all approach.

Start with the End Goal

Before selecting species, producers should first define what success looks like.

Questions to consider include:

- Is forage quality or tonnage the primary objective?
- Will the crop be harvested as hay, silage, greenfeed, or pasture?
- Is the operation dairy, beef, sheep, or mixed livestock?
- Are drought tolerance and stand persistence priorities?
- Is soil improvement part of the objective?
- How long should the stand remain productive?

➡ The answers often determine which species belong in the mixture and which do not.

Dairy Systems: Focus on Quality

High-producing dairy cows require highly digestible forage with strong protein content and excellent feed intake characteristics. In dairy-focused mixtures, alfalfa typically forms the backbone of the stand because of its exceptional yield potential and protein production. Pairing alfalfa with high-quality grasses such as orchardgrass or soft-leaved meadow bromegrass can improve fiber digestibility while helping create a more balanced ration.

The goal is simple:

- High Relative Feed Value (RFV)
- High protein production
- Strong digestibility
- Multiple cut potential
- Fast regrowth

➡ In dairy systems, forage quality often takes priority over maximizing total tonnage.

Beef Cow-Calf Operations: Emphasize Persistence and Flexibility

Cow-calf producers frequently prioritize reliability, stand longevity, and seasonal production over maximum forage quality. Species such as meadow bromegrass, orchardgrass, tall fescue, and selected legumes often provide an ideal balance of production and persistence. These mixtures must tolerate grazing pressure while maintaining productivity across varying environmental conditions.

The objective becomes:

- Reliable forage production
- Seasonal grazing distribution
- Winter hardiness
- Long stand life
- Reduced reseeding costs

➡ A stand that remains productive for many years often delivers greater long-term profitability than one that achieves maximum yield in its first season.

Designing for Drought Resilience

Weather variability continues to challenge forage producers across Western Canada. Drought tolerant mixtures have become increasingly important for managing production risk. The most resilient stands often combine species that utilize different parts of the soil profile. Deep rooted legumes such as alfalfa can access moisture reserves far below the surface, while fibrous rooted grasses efficiently capture rainfall in the upper soil layers.

Diverse rooting systems allow forage stands to:

- Capture water more efficiently
- Improve drought tolerance
- Reduce production variability
- Recover more quickly following stress

➡ Seed Intelligence is not only about selecting productive species. It is about combining complementary genetics that work together under challenging conditions.

Grazing Mixtures Require Different Thinking

Pasture systems place different demands on forage plants than harvested forage systems. When designing mixtures for grazing, tolerance to traffic, defoliation, and regrowth become essential considerations. Species selection should focus on persistence and recovery rather than maximizing first-cut yield.

A successful grazing mixture often includes species that offer:

- Rapid regrowth after grazing
- Excellent seasonal distribution
- Strong persistence
- High animal acceptance
- Resistance to trampling

➡ The goal is to provide a consistent forage supply throughout the grazing season while maintaining stand productivity year after year.

Building Soil While Producing Feed

Many producers are increasingly interested in improving soil health alongside forage production. Multi-species mixtures can help achieve both objectives. Legumes contribute nitrogen through biological fixation. Grasses provide extensive root systems that improve soil structure and organic matter levels. Deep rooted species help create channels for water movement and root penetration.

When forage mixtures are designed with both production and soil improvement in mind, producers can benefit from:

- Improved water infiltration
- Increased organic matter
- Enhanced soil biology
- Better nutrient cycling
- Greater long-term field productivity

➡ Every forage species contributes something different both above and below ground.

Continue on the next page.

The Power of Diversity

Nature rarely relies on a single species, and forage systems can benefit from the same principle. Diverse forage mixtures often provide greater resilience because different plants respond differently to environmental pressures. Some perform best during cool conditions. Others excel during summer heat. Some explore deep soil moisture, while others utilize surface nutrients more efficiently. This diversity helps spread risk and stabilize production. The objective is not simply to grow more plants. The objective is to create a forage system capable of performing across a wide range of conditions.

Seed Intelligence Creates Better Mixtures

The most successful forage mixtures are not random combinations of species. They are carefully designed systems built around specific production goals.

Through Seed Intelligence, DSV Northstar evaluates the traits that matter most to producers, including yield potential, forage quality, persistence, disease resistance, drought tolerance, and root development. These insights help create forage solutions that perform not only in ideal conditions, but under the realities producers face every season.

Because the best forage mixture for a dairy farm may be completely different from the best mixture for a rotational grazing operation or a drought-prone hay field.

The most productive forage stands begin with clear objectives. By matching species selection to specific production goals, producers can build mixtures that deliver improved performance, greater resilience, and stronger long-term profitability. When it comes to forage mixtures, one size does not fit all.

CROP INSURANCE FORAGE ESTABLISHMENT BENEFIT OPTION

The Forage Establishment Benefit Option is available to protect newly seeded forage acres intended for hay, grazing or seed production against the risk of an establishment failure.

For more information about this option and other forage coverage available through the Saskatchewan Crop Insurance Corporation, visit scic.ca.

Scan for more information.

Contact us: 1-888-935-0000 | customer.service@scic.ca | SCIC.ca

Sustainable Canadian Agricultural Partnership

SCIC Saskatchewan Crop Insurance Corporation

Canada

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 dependent on crop kind, many are perennial crops that need to be seeded only once but can provide 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

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.

Our Dealers – Local Forage Experts

DSV Northstar dealers 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!

DSV Northstar sales agronomists work with the dealer 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.

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.



NORTHSTAR SEED

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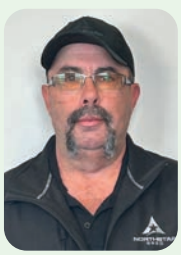


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