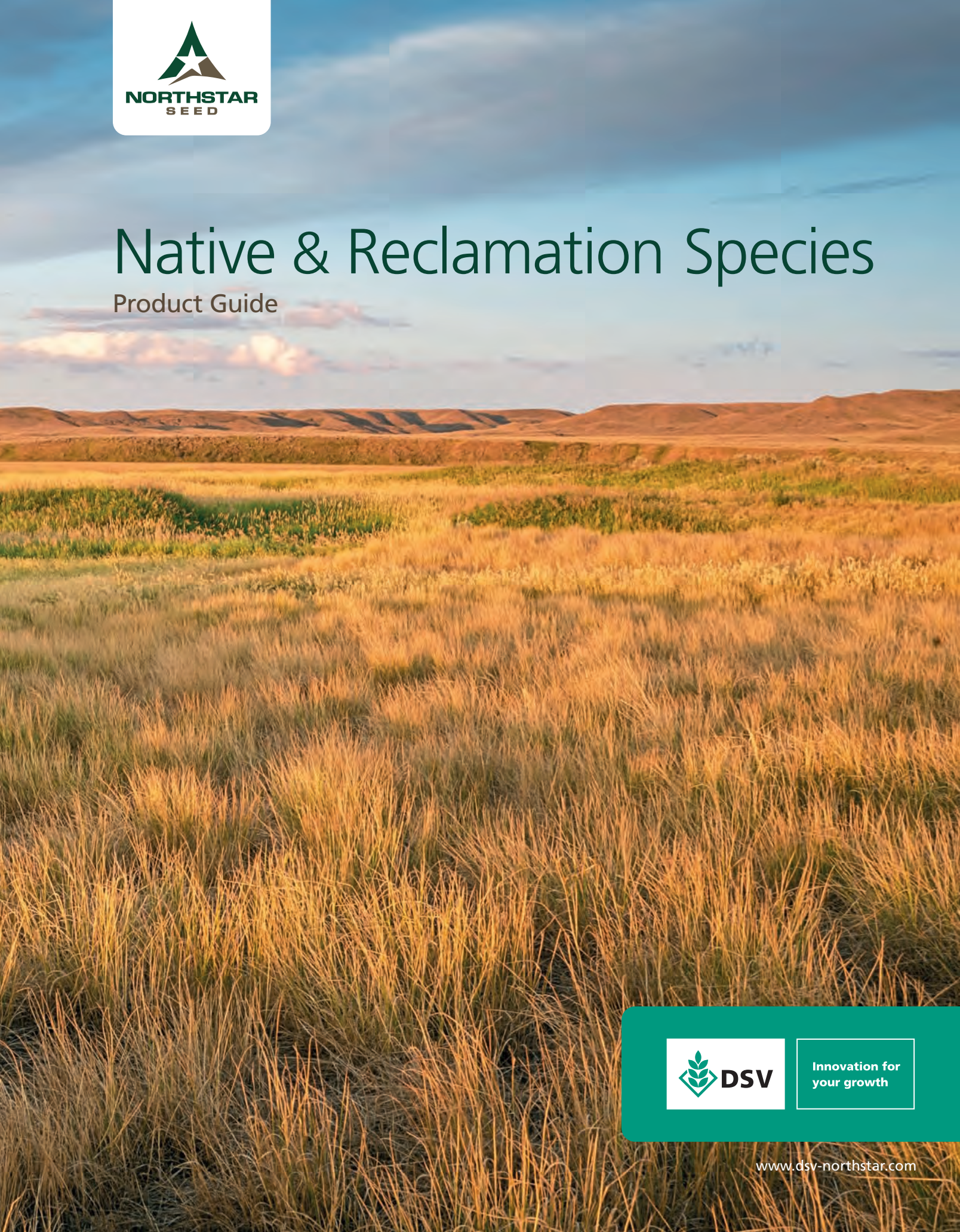
NORTHSTAR SEED

Native & Reclamation Species

Product Guide



DSV

Innovation for your growth

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DSV Worldwide

As a worldwide breeding and seed company with 100 years of experience, Deutsche Saatveredelung AG (DSV) offers its customers innovative varieties and complex cultivation methods. 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 programs 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

Native & reclamation 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

Awned wheatgrass *Agropyron subsecundum*

Preferred Conditions

Prefers moderately sandy to loam soils with good moisture and drainage. Found in moist flats, meadows and among low growing bushes.

Positive Features

- Highly nutritious before heading
- Moderate fertility requirements
- Useful for erosion control in reclamation mixes

Considerations

- Awns on seed head can be an irritant when fed to livestock
- Sensitive to overgrazing

Use	Hay or pasture
Longevity	Medium
Winterhardiness	Good
Drought Tolerance	Moderate
Flood Tolerance	Moderate
Salinity Tolerance	Low to moderate
Alkalinity Tolerance	Low
Acidity Tolerance	Low to moderate
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	160,000

Big bluestem *Andropogon gerardi*

Preferred Conditions

Grows under a wide range of conditions. Best suited for fertile, moist but well drained loam soil.

Positive Features

- Good mid-summer growth as cool season grasses go dormant
- Highly nutritious when vegetative
- Crude protein levels of 7 – 12 % during summer

Considerations

- Light, fluffy seed
- Becomes unpalatable in the fall

Use	Pasture and reclamation
Longevity	Long-lived
Winterhardiness	Good
Drought Tolerance	Low to moderate
Flood Tolerance	Moderate
Salinity Tolerance	Low to moderate
Alkalinity Tolerance	Low to moderate
Acidity Tolerance	Tolerates soil pH as low as 6
Bloat Risk	No
Root	Weakly sod forming
Seeds per Pound (lb.)	165,000

Blue grama *Bouteloua gracilis*

Preferred Conditions

Is suited to well drained sandy to clay soils in the brown and dark brown soil zones. Found in native pastures on well drained and dry soils on hillsides and hilltops and south facing slopes.

Positive Features

- Stabilizes soil with thick, sod forming root structure
- Very drought tolerant
- Digestibility of 50 % in July to 40 % in October
- Cures well for winter grazing

Considerations

- Slower establishment
- Takes 14 months to recover from grazing

Use	Reclamation and pasture
Longevity	Long-lived
Winterhardiness	High
Drought Tolerance	Very high
Flood Tolerance	Tolerates one week of flooding in spring
Salinity Tolerance	Low
Alkalinity Tolerance	Moderate
Acidity Tolerance	Tolerates soil pH as low as 6.6
Bloat Risk	No
Root	Sod forming
Seeds per Pound (lb.)	750,000

Creeping foxtail *Alopecurus arunidinaceus*

Preferred Conditions

Is adapted to sandy, loamy, clay, peat or muskeg soils that remain moist or wet throughout the growing season.

Positive Features

- Quick regrowth
- Very competitive once established
- Thrives in wet conditions
- Able to displace foxtail barley in wet areas
- Becomes sod-bound as stand ages

Considerations

- Slower establishment
- Requires wet or water-logged soil year-round

Use	Reclamation, hay or pasture
Longevity	Long-lived
Winterhardiness	Good
Drought Tolerance	Low
Flood Tolerance	Tolerates four weeks of flooding in spring
Salinity Tolerance	Moderate
Alkalinity Tolerance	Moderate
Acidity Tolerance	Tolerates soil pH as low as 5.1
Bloat Risk	No
Root	Rhizomatous root system
Seeds per Pound (lb.)	750,000

Green needlegrass *Stipa viridula*

Preferred Conditions

Performs best on medium to heavy textured soils. Prefers moist sites with good drainage. Requires 12–18 inches of precipitation per year.

Positive Features

- Palatable and nutritious
- Very good longevity
- Tolerant to drought and grasshopper damage
- Average digestibility of 52 % in May to 45 % in September
- Crude protein levels ranging from 11 % in May to 7 % in September
- Good for erosion control once established

Considerations

- Seed has high level of dormancy
- Easily overgrazed

Use	Pasture, reclamation and stockpiling – should be grazed between early summer and fall
Longevity	Long
Winterhardiness	Good
Drought Tolerance	High
Flood Tolerance	Low, takes saturated soils for 1 week in spring
Salinity Tolerance	Low to moderate
Alkalinity Tolerance	Low to moderate
Acidity Tolerance	Tolerates soil pH as low as 6.6
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	180,000

Junegrass *Koeleria gracilis*

Preferred Conditions

Is suited to a wide range of soils (sandy through clay). It thrives on dry, well drained upland areas.

Positive Features

- Grows quickly in spring
- Has fair competitive ability
- Attractive and used as an ornamental

Considerations

- Requires full season to recover from grazing
- Low germination and weak seedlings when they emerge
- Low forage production

Use	Reclamation or pasture
Longevity	Long-lived
Winterhardiness	Good
Drought Tolerance	Very high
Flood Tolerance	Withstands 1–2 weeks of saturated soil in spring
Salinity Tolerance	Moderate
Alkalinity Tolerance	Low to moderate
Acidity Tolerance	Tolerates soil pH as low as 6.0
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	2,300,000

Little bluestem *Andropogon scoparius*

Preferred Conditions

Sandy, gravelly soil with shallow water table or where no snow accumulates. Common on prairie upland.

Positive Features

- Highly nutritious and palatable in early stages
- Deep rooted
- Can grow in thin and gravelly soils
- Yields approximately 1,500 lbs./acre

Considerations

- Poor competitor
- Unpalatable when mature
- Prone to becoming wolf plants
- Seedlings have low vigour

Use	Pasture and reclamation
Longevity	Long
Winterhardiness	Good
Drought Tolerance	High
Flood Tolerance	Low
Salinity Tolerance	Moderate
Alkalinity Tolerance	Low to moderate
Acidity Tolerance	Tolerates soil pH as low as 5.5
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	255,000

Meadow foxtail *Alopecurus pratensis*

Preferred Conditions

Is best suited to wet areas with heavy textured soils (clay-loam and clay soils). Ideal areas to seed it include peat and muskeg sites, sloughs, flood plains with very high water tables and other wet areas.

Positive Features

- Useful for stabilizing waterways and banks
- Very competitive and strongly creeping rooted
- Excellent recovery, can graze or hay two times per season
- Average digestibility of 70 %

Considerations

- Poor drought tolerance
- Plant nutrition declines as it matures

Use	Reclamation, hay or pasture
Longevity	10 to 20 years
Winterhardiness	Good
Drought Tolerance	Poor
Flood Tolerance	Withstands 2 – 5 weeks of spring flooding
Salinity Tolerance	Low
Alkalinity Tolerance	Moderate
Acidity Tolerance	Tolerates soil pH as low as 5.0
Bloat Risk	No
Root	Fibrous root system
Seeds per Pound (lb.)	490,000

Needle & thread grass *Stipa comata*

Preferred Conditions

Is suited to coarse sandy to loamy soils. It grows best on dry, well drained sites.

Positive Features

- Excellent winterhardiness and drought tolerance
- Can help with erosion control
- 40–50 % average digestibility
- Crude protein of 6–10 % during grazing season

Considerations

- Low seedling vigour
- Needs up to two years for full establishment

Use	Reclamation or pasture
Longevity	Long-lived
Winterhardiness	Excellent
Drought Tolerance	Excellent
Flood Tolerance	Withstands saturated soil for 1 week in spring
Salinity Tolerance	Not tolerant
Alkalinity Tolerance	Low
Acidity Tolerance	Tolerates soil pH as low as 6.6
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	115,000

Northern wheatgrass *Agropyron dasystachyum*

Preferred Conditions

Prefers medium to course textured soils.

Positive Features

- Easy to establish
- Produces good ground cover
- Extensive root system
- Suitable for erosion control
- 45 % digestibility year round
- 20 % crude protein in May, but drops to 4 % in September

Considerations

- Tends to get sod bound
- Wiry and unpalatable in the fall

Use	Pasture, hay and reclamation
Longevity	Long
Winterhardiness	Good
Drought Tolerance	Very high
Flood Tolerance	Moderate
Salinity Tolerance	Moderate
Alkalinity Tolerance	Moderate
Acidity Tolerance	Low
Bloat Risk	No
Root	Sod forming
Seeds per Pound (lb.)	155,000

Prairie cordgrass *Spartina pectinata*

Preferred Conditions

Wide range of soils, sandy to clay. Does best on seasonally dry areas such as marsh edges, wet meadows, and drainage ways.

Positive Features

- Useful for wetland restoration and enhancement, streambank stabilization or wind strip barrier
- Excellent flooding tolerance
- Moderate fertility requirements

Considerations

- Poor palatability and feed value after spring
- Less drought tolerant than big bluestem
- Intolerant of prolonged flooding
- Not very competitive

Use	Hay, riparian and reclamation
Longevity	Long
Winterhardiness	Good
Drought Tolerance	Low to moderate
Flood Tolerance	High
Salinity Tolerance	Low to moderate
Alkalinity Tolerance	Low to moderate
Acidity Tolerance	Low
Bloat Risk	No
Root	Sod forming
Seeds per Pound (lb.)	183,000

Pubescent wheatgrass *Agropyron trichophorum*

Preferred Conditions

Requires at least 12 inches (300 mm) of annual precipitation for productivity and longevity. It is suited to all soil textures and has lower fertility and moisture requirements than intermediate wheatgrass.

Positive Features

- Easy to establish
- Dense basal leaves, excellent hay when combined with alfalfa
- Competitive, high yielding
- Average of 57 % digestibility

Considerations

- Needs higher levels of annual precipitation to remain productive
- Very low tolerance to acidic soil

Use	Reclamation, hay or pasture
Longevity	4 to 10 years
Winterhardiness	Good. Better than intermediate wheatgrass
Drought Tolerance	Good. Better than intermediate wheatgrass
Flood Tolerance	Withstands saturated soil for about 1 week
Salinity Tolerance	Moderate
Alkalinity Tolerance	Moderate
Acidity Tolerance	Low. Tolerates soil pH as low as 6.5 to 7
Bloat Risk	No
Root	Sod forming
Seeds per Pound (lb.)	95,000

Purple prairie clover *Dalea purpurea*

Preferred Conditions

Is adaptable to a wide range of soil types, including sandy, sandy loam and other moderately drained soils.

Positive Features

- Highly palatable and nutritious
- Fixes nitrogen
- Soil stabilizer
- Adapted to slopes along hillsides, prairies and plains
- Attracts pollinators

Considerations

- Stand should be well established before livestock grazing
- Does not tolerate continuous grazing or heavy overuse

Use	Pasture and reclamation
Longevity	Long
Winterhardiness	Good
Drought Tolerance	High
Flood Tolerance	Low
Preferred pH levels	Prefers soil pH 6.2–7.5
Bloat Risk	No
Root	Tap root with branches near the surface
Seeds per Pound (lb.)	292,000

Sheep fescue *Festuca ovina*

Preferred Conditions

Is suited to all soil textures in well drained areas but produces especially well in sand or other coarsely textured soils. Requires approximately 12 inches (30 cm) of annual precipitation.

Positive Features

- Very effective for erosion control
- Withstands high degree of animal traffic
- Very competitive with weeds
- Stabilizes eroding soil and cutbanks with dense root system

Considerations

- Seldom selected by cattle or horses
- Will not tolerate flooding

Use	Reclamation or pasture
Longevity	10 to 20 years
Winterhardiness	Good
Drought Tolerance	Good once established
Flood Tolerance	Not recommended for areas of water saturation
Salinity Tolerance	Low
Alkalinity Tolerance	Moderate
Acidity Tolerance	Tolerates soil pH as low as 5.5
Bloat Risk	No
Root	Dense, bunch roots
Seeds per Pound (lb.)	680,000

Side oats grama *Bouteloua curtipendula*

Preferred Conditions

Adapted to a range of soils. Performs best on fine textured soils. Found on rocky ridges, open grasslands and hillsides.

Positive Features

- Vigorous seedlings
- Very palatable and nutritious all season
- Cures well on stem
- Good for winter grazing
- Low to moderate fertility required

Considerations

- Less palatable than blue grama
- Sensitive to overgrazing
- Best not to graze until second growing season

Use	Hay or pasture, reclamation
Longevity	Long
Winterhardiness	Good
Drought Tolerance	Moderate to high
Flood Tolerance	Low
Salinity Tolerance	Low to moderate
Alkalinity Tolerance	Low to moderate
Acidity Tolerance	Low
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	191,000

Slender wheatgrass *Agropyron trachycaulum*

Preferred Conditions

Adapted to a wide range of soils but prefers sandy loams.

Positive Features

- Vigorous seedlings and fast establishment
- High salinity tolerance
- Cures well on stem
- Yields 3,290 to 4,550 lbs./acre
- Effective erosion control due to rapid establishment
- Average digestibility of 55 %

Considerations

- Less competitive and persistent than other wheatgrasses
- Easier to overgraze

Use	Hay or pasture, reclamation
Longevity	3 to 4 years
Winterhardiness	Good
Drought Tolerance	Moderate
Flood Tolerance	Moderate
Salinity Tolerance	High
Alkalinity Tolerance	High
Acidity Tolerance	Low to moderate, tolerates as low as soil pH 5.6
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	160,000

Switchgrass *Panicum virgatum*

Preferred Conditions

Grows best on loam and sandy soils. Potential for good summer pasture with sufficient moisture.

Positive Features

- Can be used for summer pasture when cool grasses go dormant
- A hardy, deep-rooted, perennial rhizomatous grass
- Often used as an ornamental grass

Considerations

- Slower establishment
- Shouldn't be harvested the first year
- Unpalatable after maturity

Use	Pasture or reclamation
Longevity	Medium
Winterhardiness	Fair
Drought Tolerance	Low
Flood Tolerance	Moderate
Salinity Tolerance	Moderate
Alkalinity Tolerance	Moderate
Acidity Tolerance	Low
Bloat Risk	No
Root	Bunch grass
Seeds per Pound (lb.)	389,000

Western wheatgrass *Agropyron smithii*

Preferred Conditions

Widely adapted and tolerates periodic flooding. Prefers moderately alkaline heavy soils.

Positive Features

- Salt tolerant and long lived
- Nutritious, productive and increases under moderate grazing
- Good for erosion control

Considerations

- Slower establishment
- Sensitive to overgrazing

Use	Pasture, hay or reclamation
Longevity	Long
Winterhardiness	Excellent
Drought Tolerance	High
Flood Tolerance	Moderate to high
Salinity Tolerance	High
Alkalinity Tolerance	High
Acidity Tolerance	Low
Bloat Risk	No
Root	Sod forming
Seeds per Pound (lb.)	110,000

Native seed custom blending

DSV Northstar offers a complete line-up of Native Seed with custom blending:

- Year round blending services
- Industry leading custom blending turnaround
- Blending of large and small orders
- Ability to meet specific field and project requirements
- Extensive offering of native grass species

Hydroseeding

Rainier Fiber™ product features:

- Made from fresh cut, clean, western softwood chips
- Fiber stays in uniform suspension and blends with seed and fertilizer
- High loading and goes into slurry quickly
- Forms stable mulching mat and holds the seed in place
- Provides favorable micro-climate for faster germination
- Helps establish grasses for erosion control, as well as fine turf
- Green dye assists in even application, dye is non-toxic
- Mulch has no growth inhibiting factors
- High temperature steam processing sterilizes the fiber
- Fibers decompose after plants have established

Our variety of products make DSV Northstar your one-stop-shop for reclamation projects. For expert guidance on your reclamation projects, and new ideas for agricultural production speak to one of our sales agronomist and reclamation specialists.

NORTHSTAR SEED

For additional information or to place an order please contact:

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