Agricultural
Product Guide

Alfalfa & Clovers | Native & Introduced Grasses
Cover Crops & Annual Forages | Seed Enhancements | Lawn & Turf
Sweet Corn | Twine & Net Wrap | Grain Bags & Bunker Covers

Always on the Grow™

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Mission Statement

Agassiz Seed & Supply and its employees will provide our customers the quality products they expect, at a competitive price, while delivering service that exceeds expectations.

Product Commitment

Agassiz Seed & Supply has developed a product line specifically suited for the Upper Midwest. Our business is located here, we live here, and we know what it means to have products that will perform for you in this environment.

About Us

Agassiz Seed & Supply, a wholesale agricultural distribution company founded in 1985, has grown steadily over the past 35 years. In that time, we have added several new product lines, including sweet corn, forage harvest supplies, DOT seed, and erosion control products. We have grown from three employees in a single location, servicing North Dakota, Minnesota and South Dakota, to more than 45 employees in four locations that service the additional geography of Wisconsin, Iowa, Nebraska and Montana. The customer comes first at Agassiz Seed & Supply; our main objective is to promote long-term, successful partnerships which help our customers and vendors grow their respective businesses. Agassiz Seed & Supply would like to take this opportunity to thank our customers, suppliers and employees for their support over the past 35 years.

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AGASSIZ SEED & SUPPLY 35 YEARS

Alfalfa

Mega-Ton™ Brand Alfalfa
This showy dark green variety is the next generation of alfalfas showing outstanding forage yield and quality. Mega-ton delivers stronger early seedling growth and rapid recovery after each cutting. The high leaf-to-stem ratio and multi-foliate expression allows this variety to produce more tons per acre than other varieties. Mega-ton was selected for its forage yield quality, stand persistence, and its high resistance to all major diseases.

Maxi-Ton Pro™ Brand Alfalfa
For the most progressive alfalfa growers, our proprietary Maxi-Ton Pro stands above the rest. It is an extremely high-yielding variety with the fastest re-growth potential in our alfalfa portfolio. The opportunity for additional cuttings, coupled with an impressive disease package and very fine stem, makes this the best choice for producing a profitable forage.

Versa-Ton™ Brand Alfalfa NEW
For those producers needing a mixture of the top of the line varieties, Versa-Ton Brand Alfalfa is for them. This blend offers the best and highest yielding proprietary alfalfas in our line-up. A combination of our high yielding Maxi-Ton and Mega-Ton Alfalfas, the salt tolerance of Barricade SLT Alfalfa, the sunken crown and prostrate growth of Foothold Alfalfa and the addition of a branch rooted alfalfa variety; this blend will perform under nearly any conditions. Versa-Ton also provides a top quality disease package and rapid recovery after cutting. A must have for the progressive alfalfa grower.

For-Max™ Brand Alfalfa
For-Max Brand Alfalfa is a high-yielding, winter hardy blend of proprietary alfalfas adapted specifically to the Northern Great Plains. The large leaf matter delivered from the For-Max product makes this option an extremely high-quality, palatable forage. With an excellent disease rating, this product will produce powerful tonnage in a variety of environments.

Bail-King™ Brand Alfalfa
Bail-King is a blend of public and proprietary alfalfa varieties developed for planting flexibility, quality, extra tonnage and profitability. A tough, medium-range alfalfa blend product that features extra root mass, great winter hardiness and an adaptability to a wide range of soil types.

Barricade SLT Brand Alfalfa
Barricade SLT Brand Alfalfa is a variety specifically bred for those increased salinity pressures. This increased salinity tolerance, when combined with high-yield potential and an excellent disease package, should allow optimum performance in those areas that are traditionally troublesome to produce.

Foothold Alfalfa
This long-lived alfalfa was bred for its oversized and deep-set crown, making it more tolerant to field traffic. Foothold is great at filling in unseeded and bare ground due to its spreading ability and prostrate growth pattern. Its high disease resistance along with its strong persistence and winter hardiness will provide for longer productivity compared to other varieties.

Multi-F-2™ Brand Alfalfa
An alfalfa with high multi-foliate leaf expression, this product features a great leaf-to-stem ratio, which should allow for better palatability and digestibility as a quality forage. With a solid disease package and great yield capacity, Multi-F-2 will prove to be a solid option for producing a high-quality forage.

Public alfalfa varieties available:
Algonquin • Ranger • Vernal • Ladak • Travois

Comparison Chart

Dormancy: 1 = Most Dormant, 9 = Least Dormant
Winter Hardiness: 1 = Most Hardy, 6 = Least Hardy

HR = Highly Resistant, R = Resistant
MR = Moderately Resistant, LR = Low Resistance
MS = Moderately Susceptible, S = Susceptible, NR = Not Rated

Variety/Brand	Fall Dormancy	Winter Hardiness	Phytophthora Root Rot	Verticillium	Anthracnose	Bacterial Wilt	Fusarium	Aphanomyces Race 1	Aphanomyces Race 2
Mega-Ton™	4.0	1.6	HR	HR	HR	HR	HR	HR	R
Maxi-Ton Pro™	4.0	1.4	HR	HR	HR	HR	HR	HR	R
Versa-Ton™	4.0	1.6	HR	HR	HR	HR	HR	HR	R
For-Max™	4.0	1.6	HR	HR	HR	HR	HR	HR	R
Bail-King™	2.5	1.8	MS	MS	MS	R	MR	S	-
Barricade SLT	4.0	2.0	HR	HR	HR	HR	HR	HR	-
Foothold	2.0	1.7	HR	HR	HR	HR	HR	HR	R
Multi-F-2™	4.0	1.8	HR	HR	HR	HR	HR	HR	R
Algonquin	2.0	2.0	S	S	S	HR	R	S	-
Ranger	3.0	1.0	S	S	S	MR	MR	S	-
Vernal	2.0	1.0	S	S	MS	HR	R	S	-
Ladak	2.0	1.0	S	S	S	MR	MR	S	-

AGASSIZ SEED & SUPPLY 35 YEARS

Clover & Other Legumes

Frosty Berseem Clover

This cool season, annual legume can be used in mixtures with other legumes and grasses in pasture or hay situations.

- A non-bloating legume
- Improve the quality and yield of forage
- Create substantial quantities of nitrogen to improve soil and subsequent crops
- Frosty is approximately 45 days later in maturity than crimson clover, allowing for multiple cuttings and grazing
- Crude protein levels have been measured from 16.5 percent to 22.1 percent with RFV measured as high as 182

FIXatioN Balansa Clover

This cool season, annual legume can serve as a good alternative in multiple cropping scenarios.

- Survived winter temperatures as low as 5 degrees Fahrenheit
- Yield potential as much as 5,250 lbs. per acre in a single cutting
- Can support growth up to 3 feet high with stems 8 feet long
- CP ranges from 22 percent to 28.4 percent and RFV measured as high as 277
- Aggressively produces forage in the spring through early summer months
- Can withstand multiple cuttings and grazing
- Attracts beneficial insects and pollinators

Yellow Blossom Sweet Clover

This biennial sweet clover is well known for its efficiency as a soil builder.

- Vigorous tap root penetrates heavy soils to improve soil drainage
- Excellent nutrient scavenger
- Abundant biomass producer, and excellent N-source as green-manure crop
- Unpalatable to some livestock due to coarse stem and bitter taste
- Not recommended for livestock feed and forage

Dynamite Medium Red Clover

This biennial legume lasts 3-4 years under good management practices. It reaches a height of 12 to 18 inches and is generally used in a hay or pasture setting.

- Rapid spring growth to allow for multiple cuttings and grazing
- Produces excellent forage quality with above average yield
- Shade tolerance allows for use as a cover crop in silage corn
- Excellent winter hardiness

Alsike Clover

This introduced, short-lived perennial legume grows 15 to 30 inches in height. It is typically planted with grasses for hay and pasture, most commonly with Timothy and brome grasses.

- Avoid planting with tall-statured grasses, as it's not shade tolerant
- Similar to red clover, but not as high-yielding
- Preferred for very wet and acidic soils
- Normally a one-cutting clover

Sainfoin

This introduced, non-bloating, perennial legume should be used in a hay or pasture setting. Its high protein, high palatability and drought tolerance make it a good choice for range improvement for livestock or wildlife.

- Typically grows taller than alfalfa
- Produces large amounts of nectar and is highly attractive to honey bees
- Readily eaten by elk, deer and sage grouse
- Greens up earlier in the spring than alfalfa and stays green

Additional Legumes Available

- Berseem Clover
- Birdsfoot Trefoil
- Chickling Vetch
- Cicer Milkvetch
- Common Vetch
- Crimson Clover
- Hairy Vetch
- Ladino Clover
- Mammoth Red Clover
- Medium Red Clover
- White Dutch Clover
- White Sweet Clover

Wildlife Mixtures

Bighorn Deer™ Mix

This blend of selected legumes and grasses is designed to provide optimum forage quality for deer. It should improve health and production of deer populations, improve winter survival rates, attract deer to an area and allow for better spring condition of deer.

Sold in 5 lb. bags Plant 10 lbs. per acre

Mix Formulation

Dwarf Essex Rape Seed	25%
Ladino Clover	20%
Medium Red Clover	20%
Vernal Alfalfa	15%
Frosty Berseem Clover	10%
Alsike Clover	5%
Forage Chicory	5%

Chicory Plus Wildlife Mix

This full season food plot mixture contains high protein and has excellent antler growing nutrition.

Sold in 5 lb. bags Plant 5 lbs. per acre

Mix Formulation

Endure Forage Chicory	80%
Medium Red Clover	10%
Vernal Alfalfa	10%

Wildlife Brassica Mix

This mix is formulated for late season forage as leaves taste bitter until the first or second heavy frost. Leaves become sweet to animals who will consume them until early winter and graze on the bulbs.

Sold in 5 lb. bags Plant 5 lbs. per acre

Mix Formulation

Rut-King Hybrid Brassica	40%
Purple Top Turnip	25%
Forage King Brand Rape Seed	20%
Forage Radish	15%

Annual Food™ Mix

These species of annual crops provide a high-quality food source for various types of wildlife.

Sold in 25 lb. bags Plant 25 lbs. per acre

Mix Formulation

Hybrid Grain Sorghum	50%
Hybrid Sorghum Sudangrass	35%
Foxtail Millet	10%
Proso Millet	5%

Upland Game™ Mix

This habitat mixture is a special selection of grasses and legumes designed to provide excellent cover for all upland game birds. For the sportsman, or the individual who enjoys feeding or watching wildlife, this is an excellent combination.

Sold in 25 lb. bags Plant 15-20 lbs. per acre

Mix Formulation

Tall Wheatgrass	60%
Intermediate Wheatgrass	25%
Alfalfa	10%
Sweetclover	5%

Other Products Available for Custom Mixing

- Barley
- Berseem Clover
- Birdsfoot Trefoil
- Bonar Rape
- Corn
- Crimson Clover
- Faba Beans
- Hybrid Brassicas
- Hybrid Kale
- Millet
- Oats
- Peas
- Rye
- Sainfoin
- Soybean
- Sugar Beets
- Sunflower
- Triticale
- Winter Peas
- Winter Wheat

AGASSIZ SEED & SUPPLY 35 YEARS

Pasture & Specialty Mixtures

G-3 Pasture™ Mix

This widely-adapted pasture mix contains a blend of cool season grasses that perform extremely well under a variety of conditions. G-3 shows drought tolerance, excellent palatability and high forage yield.

Sold in 25 lb. and 50 lb. bags **Plant 12 to 15 lbs. per acre**

Mix Formulation

Meadow Bromegrass	30%
Intermediate Wheatgrass	30%
Crested Wheatgrass	30%
Tetraploid Ryegrass	10%

A-1 Pasture™ Mix

A-1 is similar to G-3 with the addition of creeping alfalfa for grazing purposes. It is an excellent all-around pasture mix, not recommended for horses.

Sold in 50 lb. bags **Plant 12 to 15 lbs. per acre**

Mix Formulation

Meadow Bromegrass	25%
Intermediate Wheatgrass	25%
Crested Wheatgrass	25%
Spreading Alfalfa	15%
Tetraploid Ryegrass	10%

MN-G Pasture™ Mix

This grass blend responds well to higher rainfall and cooler temperature areas. The tall fescue and ryegrass give quick cover and maximum forage production early in the life of the stand. The balance of the mixture produces good quality and high forage yield for the life of the pasture.

Sold in 25 lb. and 50 lb. bags **Plant 15 to 20 lbs. per acre**

Mix Formulation

Meadow Bromegrass	30%
Orchardgrass	30%
Forage Tall Fescue	30%
Tetraploid Ryegrass	10%

MN-L Hay™ Mix

MN-L is an alfalfa based blend of legumes and grasses for hay production. Mix with MN-G or G-3 if higher percentage of grass is desired.

Sold in 50 lb. bags **Plant 15 to 20 lbs. per acre**

Mix Formulation

Alfalfa	50%
Red Clover	20%
Timothy	20%
Alsike Clover	10%

CHS #4 Pasture™ Mix

This is a low growing ornamental pasture mix ideal for horse pastures in urban areas. This aesthetically appealing mix is used as low maintenance turf on farms and acreages, both versatile and beautiful.

Sold in 25 lb. bags **Plant 20 to 25 lbs. per acre**

Mix Formulation

Forage Tall Fescue	40%
Tetraploid Ryegrass	30%
Timothy	15%
Kentucky Bluegrass	15%

Native Pasture™ Mix

This mixture of northern adapted warm and cool season grasses has been specially selected for optimum forage yields from spring through fall. This unique mixture of native grasses is targeted for the specialty livestock market, and it performs equally well for domestic livestock production.

Sold in 25 lb. bags **Plant 15 to 25 lbs. per acre**

Mix Formulation

Western Wheatgrass	20%
Big Bluestem	20%
Green Needlegrass	15%
Indiangrass	15%
Sideoats Grama	10%
Little Bluestem	10%
Blue Grama	5%
Slender Wheatgrass	5%

Horse Pasture Mix

This is a “horse-friendly” mixture that provides an endophyte-free pasture all season long. The species for this mix were selected to respond well to a variety of soil types and weather conditions and to the close grazing habits of horses. It is well-adapted to the upper Midwest and will produce excellent forage for years to come.

Sold in 25 lb. bags **Plant 20 to 25 lbs. per acre**

Mix Formulation

Orchardgrass	30%
Tetraploid Ryegrass	25%
Meadow Bromegrass	15%
Forage Tall Fescue	10%
Timothy	10%
Kentucky Bluegrass	10%

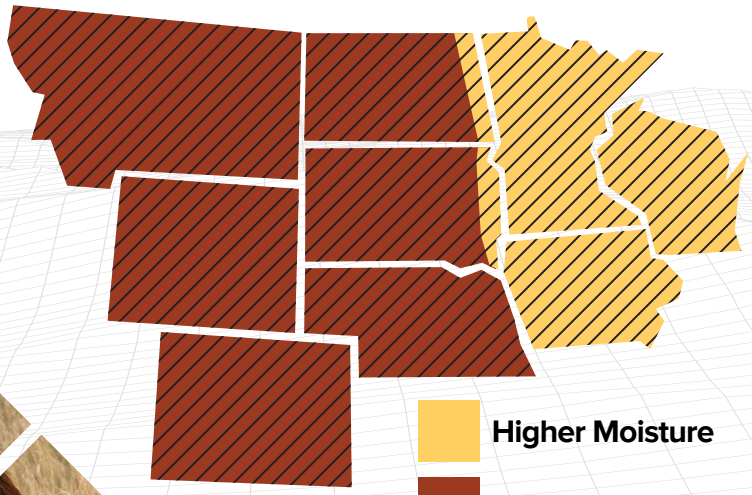
Saline Area™ Mix

Used for either hay or grazing, this blend of native and introduced grasses will grow in those hard-to-establish areas. If a high water table and sour ground are problems, this mixture will do the job.

Sold in 50 lb. bags **Plant 15 lbs. per acre**

Mix Formulation

Western Wheatgrass	20%
Intermediate Wheatgrass	20%
AC Saltlander Wheatgrass	20%
Slender Wheatgrass	20%
Smooth Bromegrass	20%



AGASSIZ SEED & SUPPLY 35 YEARS

Sweet Corn

Agassiz Seed has a complete line of Sweet Corn including the Bt sweet corn varieties.

The Attribute II hybrid varieties provide broader spectrum protection from insect pests and are tolerant to glyphosate and glufosinate herbicides.

Popular Varieties	General Information	Genotype
Peaches & Cream-Early, NK 199, Silver Queen.	Mild sugar levels, creamy corn flavor, good seed vigor and fast establishment. Fastest sugar loss after harvest.	**SU Sugary** (normal)
Ambrosia, Delectable, Jackpot, Peaches & Cream-Mid, Sugarbaby, Trinity, Bodacious, Buttergold, Incredible	Improved sweetness and tenderness.	**SE Sugary Enhancer**
Agassiz Sweet & Tender, Montauk,CloudNine, Serendipity, Bon Jour, Honey Select, *Remedy, *Aspire, *Milky Way.	Very tender, extra sweet, extended shelf life and field holding ability.	**Synergistic**: aka Table Sweet, Triple Sweet, Triple Sweet Plus, Quad Sweets
*Protector, Heavenly.	Very sweet, best sugar holding/shelf life. More difficult to plant and obtain stand. Needs isolation from all other types.	**SH2 - Shrunkin:** a.k.a. Supersweets

*Designates Attribute II Varieties

Attribute II Trait stack

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Native & Forage Grasses

These species are used in both private and public projects including mine reclamation, pastures, landscaping, DOT, game and fish departments, DNR, CRP and many others. For over 35 years, we have specialized in custom mixing of seed to the specifications of each project with the best quality seed available from the required origin. We supply native grasses, introduced grasses, legumes and wildflowers. We remind you to use a reputable, experienced local supplier who will be there long after the sale is made.

The following are descriptions of a small number of the more popular species we stock. Please visit our website for a more extensive listing of the products we handle. We are also able to access many more species than we have listed on our website, and we would be happy to check on availability of any species.

Cool Season Grasses

A plant that is most productive during spring and slows growth or becomes dormant during the summer. Growth resumes in the fall with cool temperatures and moisture.

Warm Season Grasses

A plant which makes most or all of its growth during the late spring and summer, flowering in the summer or autumn.

Big Bluestem

This warm season, perennial bunch grass grows to a height of three to eight feet. It has roots that permeate the top two feet of soil. Big Bluestem is adapted to moist, deep and well-drained soils. It is very palatable and nutritious. Big Bluestem, if continuously grazed closer than six to eight inches, will be replaced by less desirable grasses. It also works well in pure stands or mixed with other grasses. It is used extensively for nesting habitat and reclamation projects.

Green Needlegrass

This cool season, perennial bunch type grass grows from one and a half to three feet tall. It is a native grass, which grows in medium to fine textured soils. Green Needlegrass starts growth early in the spring and is nutritious, palatable and remains green throughout the year. Stand establishment may be slow because of high dormant seed percentage.

Blue Grama

This warm season, short tufted perennial of the mixed grass prairie is widely distributed on medium to heavy soils throughout the Dakotas and Minnesota. It has high drought tolerance on all soil types, and it reaches a height of 12 to 18 inches. It is primarily used in rangeland seed mixes, low maintenance turf areas and roadside.

Indiangrass

This warm season grass spreads by seed and short rhizomes. It grows to a height of three to six feet and will grow on sandy soil. It is better adapted to moist, well-drained bottomlands. Indiangrass exhibits moderate salt tolerance and will withstand occasional flooding. It makes good quality hay and is found primarily in the tall-grass and mixed-grass prairies. Primary uses are in wildlife habitat, native range and pasture mixtures.

Native & Forage Grasses

Intermediate/Pubescent Wheatgrass
This cool season, tall, perennial, sod-forming grass with a vigorous root system is similar to that of bromegrass, which grows three to four feet tall. It is easy to establish, and growth starts in early spring. Though usually dormant during the dry, hot summer months, it resumes growth in the fall. This is a high-yielding grass, which has generally adapted to the Northern Great Plains.

Meadow Bromegrass
This cool season, long-lived perennial, sod-former with short rhizomes reaches a height of two to four feet. It adapts to most sites, but it performs best on moderately deep, well-drained moist soils. Meadow Bromegrass provides excellent forage, and it is often used in blends with legumes and other grasses because of its ability to survive but not compete with them.

Orchardgrass
This cool season, perennial bunchgrass reaches a height of two to three feet. For best results, it should be mixed with other grasses and legumes. It is sometimes used for hay purposes but is preferred for pastures when seeded in a mixture because of its early and late growth in the season. It seems to adapt itself to most types of soil, but it does better in heavy, rich soil. Although not as winter hardy as bromegrass, it will stand more heat, drought and low fertility, and it will make more summer growth.

Slender Wheatgrass
This is a short-lived, cool season, perennial bunchgrass. Slender Wheatgrass is primarily used in seed mixtures of introduced and native grasses due to its excellent seed vigor, ease of establishment and fast growth. Plants lose vigor and decline in abundance within three to four years. Presence in mixtures improves stand productivity, especially during the first production year, until other grasses become better established. It possesses a high tolerance to saline-alkali soils.

Little Bluestem
This warm season, leafy perennial grass grows to a height of one to three feet. It can be grazed and has good forage value when the leaves are tender. It does not cure well and has moderate palatability for fall or winter grazing. Little Bluestem is recommended in a mixture of warm season grasses for erosion control or summer pasture.

Smooth Bromegrass
This cool season, long-lived perennial, sod-forming grass grows two to four feet tall. Smooth Bromegrass spreads by creeping rhizomes and is one of the most productive, nutritious and palatable forage grasses in the north central states. It withstands hot, dry weather and has a long growing season.

Sideoats Grama
This warm season, erect native perennial grass grows in tufts and open bunches to a height of one to three feet. It is more tolerant to drought than Indiangrass or Big Bluestem. It grows fast in late spring and early summer and stays green late into the summer. Sideoats Grama has good forage value, and it is grazed mostly in late summer and fall. It is found primarily on poorly developed shallow soiled, steep slopes and ridgetops. Sideoats Grama's primary use is in grass mixtures for rangeland seeding. Its excellent seedling vigor allows rapid establishment.

Native & Forage Grasses

AC Saltlander Hybrid Wheatgrass
This is a long-lived, cool season grass with a moderate amount of vegetative growth. It was developed as a hybrid between quackgrass and bluebunch wheatgrass. It has a relatively high tolerance to salinity, superior to both Crested and Intermediate Wheatgrass, and similar to Tall Wheatgrass.

Switchgrass
This warm season, perennial grass is often found growing in large clumps to a height of two to five feet. It is found primarily in the tall-grass prairie on good moisture sites and can stand flooding for short periods. Its primary use is in wildlife habitat plantings and in waterways. It has potential for summer pasture on good moisture sites, exhibits rapid growth in late spring and early summer and is readily grazed by livestock. It is high-yielding and produces best if cut early.

Tall Wheatgrass
This is a cool season, tall, perennial bunchgrass with coarse foliage. It has good tolerance to alkali and does best in areas with a high water table, but it also has good drought tolerance. Tall Wheatgrass is used widely in nesting mixtures for wildlife habitat.

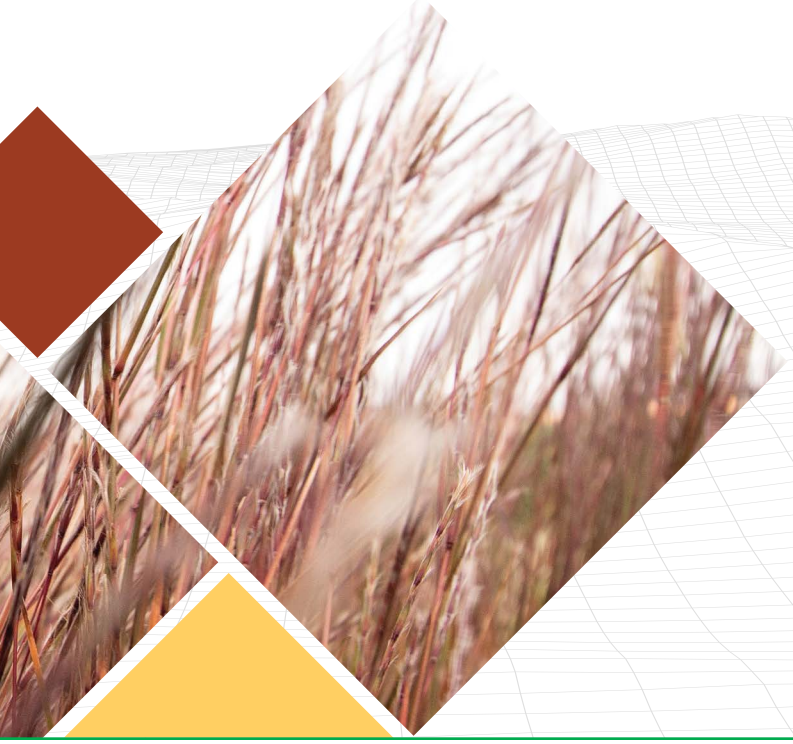
Timothy
This is a cool season, short-lived, perennial bunchgrass. It is tall and late maturing. Timothy is valuable in pasture mixtures, but it is not suited for permanent pasture, except in combination with other grasses and legumes. It is an ideal grass to plant with Alsike Clover, and Timothy is adapted to a considerable range of soil conditions but is adversely affected by high acid soils.

Western Wheatgrass
This is a native, cool season, sod-forming, perennial grass, which reproduces from underground rhizomes and seeds. Western Wheatgrass spreads rapidly and forms a dense sod, making it valuable for erosion control. It produces nutritious forage early in the season that is readily eaten by livestock until late summer when it becomes harsh and fibrous. Western Wheatgrass makes good quality hay if cut during the late bloom. It will do well on a wide range of soils and is tolerant to alkali.

Other Species Available for Custom Mixing:

- Buffalograss
- Canada Wildrye
- Crested Wheatgrass
- Forage Perennial Rye
- Forage Tall Fescue
- Garrison Creeping Foxtail
- Great Basin Wildrye
- Meadow Fescue
- Needle-and-Thread
- Prairie Cordgrass
- Prairie June Grass
- Prairie Sandreed
- Reed Canarygrass
- Russian Wildrye
- Sand Bluestem
- Sand Dropseed
- Streambank Wheatgrass
- Thickspike Wheatgrass
- Virginia Wildrye

For descriptions visit agassizseed.com



Wildflowers & Pollinators

Yellow Coneflower
The beginning of summer coincides well with the blooming of coneflower. This plant can be found throughout the Great Plain states. Coneflower prospers best on light and moderately grazed prairie.

Maximilian Sunflower
Maximilian Sunflower needs full sunlight, and it has fair drought tolerance. It is an aggressive perennial wildflower native to the central plains states. This plant produces showy, yellow ray flowers. Because of its height, this warm-season flower is often used as a privacy screen. It is common on deep or heavy soils. This plant is rhizomatous and very competitive in mixes. This perennial blooms late, from July to October.

Purple Prairie Clover
This tap-rooted legume features a unique, red to purple cylindrical flower head. The Purple Prairie Clover is very attractive to butterflies, bees and other pollinators. It is native to the tall and mid-height prairie of the central United States. Purple Prairie Clover blooms June to August along dry banks, hillsides and prairies. This plant has low to moderate moisture requirement.

Common Milkweed
This perennial herb grows from deep rhizomes and usually features a single stem growing one and a half to five feet tall. This is a host plant for the Monarch Butterfly. Its milk serves as a natural defense for monarch caterpillars. Milkweeds are the only plant family on which monarchs will lay eggs.

Lead Plant
This shrubby legume features small purple flowers clustered in four to six-inch spikes atop two to three foot stems. This plant is a slow growing forb that is adapted to a wide range of soil types. It is a favorite for livestock, deer and other wildlife. Lead Plant is an ideal ornamental species because it has showy flowers, is drought tolerant and shade tolerant. It forms nodules on its roots to fix nitrogen and can be used for prairie restorations.

Black-Eyed Susan
Black-Eyed Susan, biennial or perennial, is a highly adaptable species found on a wide range of soil types. It has low to moderate water requirements and adapts well in full sun to partial shade. Yellow sunflower-like blossoms are found May to October in fields, prairies or open woods.

Purple Coneflower
Native to the Midwest and Southeast United States, it does best in full sun. It has a long stem leading to a single flower head with a half to one-inch domed, golden-spined head surrounded by purple petals.

Wildflowers & Pollinators

Common Ox-Eye/False Sunflower
This perennial forb is found throughout the United States in meadows, edges of woods and thickets. The plant prefers moist, well-drained soils, sun to partial shade and does not compete well in dense populations. Ox-Eye will grow to five feet, and it flowers from June into September.

Wild Bergamot
This herbaceous perennial grows from creeping rhizomes. It is also known as Bee Balm for its fragrance attracting bees. It grows two to three feet in clumps, and its lavender flowers bloom from June to September.

Stiff Goldenrod
Stiff Goldenrod can be used for roadside plantings, wildlife food and habitat and wildflower gardens. Because of its attractive bright yellow flowers, it is also used as a small component of seeding mixtures for prairie restoration. Also known as Rigid Goldenrod, it has bright yellow flowers in small clusters atop stiff stems. This plant prefers full sun and well-drained soil but can tolerate rocky ground. Goldenrod grows in prairies and dry woods and is infrequently grazed. It behaves as a prairie invader, meaning it tends to come into pastures in a greater amount when the prairie has been weakened by grazing.

Western Yarrow
Native Western Yarrow has fern-like foliage with white compact flowers. It is best to use at very low rates, since it spreads aggressively by seed and rhizomes and is very drought tolerant.

Other Species Available:
For a complete list of wildflowers and pollinators please refer to page 34 of this guide or our website.

For descriptions visit agassizseed.com

Agricultural
Product Guide

Cover Crops & Annual Forage

Nitro Brand Cover Crop Mix

This is a good all-around cover crop mix designed for those growers whose main goal is to improve soil health. These species were selected for their ability to grow in a wide range of conditions and their soil improving characteristics. This mix will improve soil organic matter, reduce erosion, aid in weed suppression, fix nitrogen, scavenge for nutrients and help with water infiltration. If you are a first time cover cropper, or just looking for a good mix that covers the bases, this would be a good mix for you.

Mix Formulation

Forage Pea	35%
Lentil	14%
Foxtail Millet	14%
Forage Oats	14%
Cowpea	7%
Frosty Berseem Clover	3.5%
Common Vetch	3.5%
Forage Radish	3.5%
Forage Turnip	3.5%
Sunflower	2%

Plant 28.5 lbs. per acre

Grazing Brand Cover Crop Mix

This mix is one of the best options for livestock producers. It offers soil health benefits for improved soil compaction, water infiltration, nutrient scavenging, nitrogen fixation and increased organic matter. This mix provides an excellent source of forage, with species selected for their palatability, high-forage production and superior forage quality, giving livestock producers a great fall grazing option.

Mix Formulation

Forage Oats	53%
Forage Pea	14%
Common Vetch	7%
Foxtail Millet	7%
BMR Sorghum/Sudan	7%
Frosty Berseem Clover	4%
Forage Radish	4%
Sunflower	2%
Hybrid Brassica	2%

Plant 28.5 lbs. per acre

Salty Brand Cover Crop Mix

This mix was developed for high-salt areas that have formed throughout the region as a result of the extended wet cycle. These species were selected for their high salt tolerance, high water usage and their ability to poke holes in the soil, which improves water absorption. Establishing this mix should help mellow out that tough ground and allow you to get it back into production.

Mix Formulation

Forage Barley	86%
D.E. Rape Seed	6%
Sugar Beet	4%
Forage Turnip	2%
Forage Radish	2%

Plant 28.5 lbs. per acre

Radish/Turnip Blend

This blend is simple, yet effective and very popular. Usually planted following small grains or peas, this is a relatively inexpensive and effective blend for nutrient scavenging, water infiltration and improving soil compaction.

Mix Formulation

Forage Radish	60%
Forage Turnip	40%

Plant 4-6 lbs. per acre

Fall Grazing Cover Crop Mix

For those producers looking to extend fall grazing using cover crops, this is the mix for you. It provides an excellent source of forage as the temperatures start to drop in the fall/winter months and will also provide some spring forage for livestock to graze on. This mix will allow the producer to maximize output on every acre planted with cover crops.

Mix Formulation

Willow Creek Forage Winter Wheat	50%
Winter Pea	20%
Italian Ryegrass	10%
Common Vetch	5%
Frosty Berseem Clover	5%
Forage Radish	3%
Forage Turnip	3%
Hybrid Brassica	2%
DE Rapeseed	2%

Plant 25 lbs. per acre

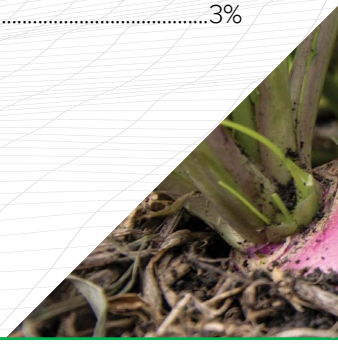
Fall Nitro Cover Crop Mix

This is a great all-around mix with species selected to improve soil health through the entire growing season, even in the colder months of fall and winter. The species selected for this mix provide for all the soil health benefits as the Nitro Cover Crop Mix, but it will continue providing those same benefits well into fall and through the early parts of spring. If you are looking to maximize your soil health benefits through the fall, this is the mix for you.

Mix Formulation

Winter Pea	40%
Lentil	20%
Willow Creek Forage Winter Wheat	15%
Common Vetch	5%
Italian Ryegrass	5%
Frosty Berseem Clover	5%
Flax	4%
Forage Radish	3%
Forage Turnip	3%

Plant 25 lbs. per acre



Cover Crops & Annual Forage

Agassiz Seed specializes in the custom mixing of all of our cover crop products. We've been providing custom mixes for over 35 years, and recommend that growers start with one of our stock mixtures as a base. Turning one of these stock mixtures into a custom mix will help address farmers' unique soil health needs. We also carry all of the traditional forage seeds that many farmers use for hay, silage, haylage and rotational uses.

Plant Type	Growth Habit	Water Use	Growth Cycle	Season of Growth
= Grass	= Upright	= Low	A = Annual	= Cool
= Broadleaf	= Upright Spreading	= Medium	WA = Winter Annual	= Warm
= Legume	= Prostrate	= High	B = Biennial	
			P = Perennial	

Agassiz Brand Pea-Oat Mix
This high-quality, high-yielding blend contains 60 percent peas and 40 percent oats. It is blended specifically for forage production in the upper Midwest. This excellent forage producer delivers high protein and palatable forage for livestock. For best results, plant early and harvest when the oats reach boot stage, approximately 65 to 80 days after planting.

Piper Sudangrass
Popular for annual hay and late summer pasture, this annual forage is low in prussic acid content and has good drought and disease tolerance. Piper is a Wisconsin release that has good regrowth after pasturing and is the leading Sudangrass hybrid.

BMR Sweething
Brown Midrib Hybrid Sorghum-Sudangrass
The Brown Midrib gene reduces the lignin content in this hybrid, which increases fiber digestion in livestock. With the nearly 20 percent increased feed value, increased palatability and increased tonnage and leafiness, this is the choice of cattlemen. For maximum production with multiple cuttings, take the first cut when the plants are approximately 36 inches in height.

Sweething
Hybrid Sorghum-Sudangrass
This is a fast growing, highly palatable hybrid. It is widely adaptable and dependable since it produces good quality forage in varying conditions. Sweething is well-suited for greenchop or haylage and is an excellent cover crop. Sweething produces a sweet, leafy, fine stemmed plant for high-value feed. For maximum production with multiple cuttings, take the first cut when the plants are approximately 36 inches in height.

Sweething MAXX
Hybrid Sorghum-Sudangrass
With its wider harvest window and greater drought tolerance than other Sorghum Sudangrass varieties, Sweething MAXX Hybrid Sorghum Sudangrass allows for the greatest amount of dry matter production per acre. Because of its higher crude protein values and taller stature than regular Sweething, Sweething MAXX is an upgrade producers will want to try.

Siberian Foxtail Millet
Siberian Foxtail Millet is the most commonly grown hay millet in the upper Midwest. Siberian is an early maturing hay millet that is ready for harvesting 55 to 65 days after planting. It is extremely hardy and drought tolerant, which produces excellent hay. It is not recommended for horses, after heading.

Cover Crops & Annual Forage

German Foxtail Millet
This crop matures more slowly than Siberian and is ready to harvest 65 to 70 days after planting. German Millet is taller with a coarser stem than Siberian. It can also produce more forage than Siberian. Because of its increased stem size, it requires better management than other foxtail millets. It is not recommended for horses, after heading.

Hybrid Pearl Millet
This high-yielding pearl millet hybrid is recommended for greenchop, grazing or hay. Our Hybrid Pearl Millet has a massive root system, which enables it to stand up to heat and drought, particularly on light soils. It shows good tolerance to leaf and stem diseases and produces well on low pH soils with low fertility. Hybrid Pearl Millet has no prussic acid and is recommended for both horses and cattle.

Italian Ryegrass
Forage Type/Tetraploid Annual Ryegrass

Due to its rapid establishment, quick regrowth and prolonged growth into fall, Italian Ryegrass is an excellent forage. It does not go to seed the establishment year, producing better quality forage than many other annual forage crops. It works well as a cover crop for establishing alfalfa when using a low seeding rate.

BMR Sweetie
Brown Midrib Hybrid Forage Sorghum x Sudan Grass

BMR Sweetie offers a "cane type" forage with sweet stalks and nutritious leaves that livestock relish. This prolific growing sorghum with lush, green, broad leaves and sugar-sweet stalks has become a favorite sweet forage. It ranks high as silage and makes excellent hay if cut early before stalks get too heavy. BMR Sweetie provides prolonged pasturing often into late fall.

WGF Grain Sorghum
Grain Sorghum is a grass similar to corn in vegetative appearance, but sorghum has more tillers and more finely branched roots than corn, growing two to four feet. The grain is highly palatable to livestock. Sorghum is more tolerant of wet soils and flooding than most of the grain crops — an interesting phenomenon in relation to its drought tolerance.

Silage Corn
Picker silage corn is a dual-purpose blend of three-way and single-cross hybrids. It was developed specifically as either a silage corn or grain corn. The extended pollination period of these blended varieties gives very good grain yields, even in dry conditions. It has an excellent grain to forage ratio with tall, leafy plants, which makes this the ideal choice for silage.

Teff Grass
Teff Grass is a warm season annual that produces multiple cuttings of high-quality forage. Shallow seeding depth, one-eighth to one-fourth inch, in a firm seed bed is needed to ensure establishment.

Winter Triticale
Triticale is a grain species which is developed by crossing rye and wheat. Originally a grain crop, triticale is gaining immense popularity as a cereal forage in the West. In general, for maximum forage yield and feed quality, growers are encouraged to harvest cereal forages prior to seed-fill stage. Allowing for an early harvest, this crop would fit into a double cropping system.

Spring Triticale
Spring Triticale is a cross between rye grain and spring wheat. Taller and much leafier than wheat or oats, Spring Triticale has higher protein and feed value.

Forage Oats
This cool season spring annual offers fast establishment and has an extensive root system that helps build soil structure, suppress weeds and capture excess nutrients from the soil. When harvested at the boot stage, oats make excellent quality haylage with very good protein levels.

Winter Rye Grain
Rye is grown widely as a grain crop, cover crop and forage crop. A winter annual, it is planted in the fall and provides winter cover then starts growing again in the spring. It is used to suppress weeds, as spring forage or for seed production. Producers either terminate the rye and then plant a cash crop, or plant directly into the living foliage and then terminate the rye.

Forage Barley
Forage Barley is a cool season spring or winter annual crop that emerges early and has fast competitive growth, along with good yield and quality potential. With relatively low water usage, barley has been utilized as the cereal of choice for a quick emergence hay crop in times of drought. It also has the highest salinity and pH tolerance of all the cereals.

Cover Crops & Annual Forage

Clovers & Other Legumes

Common Vetch
This annual nitrogen-fixing legume often grows as green manure or livestock fodder. It can be seeded in early spring or late summer depending on use. Horses thrive on Common Vetch, and it is great for fattening cattle.

Hairy Vetch
This low-growing, nitrogen-fixing legume is used to improve soil quality, especially on marginal soils. It is mildly winter hardy and may survive less severe winters given sufficient ground cover.

Forage Pea
This cool season, annual legume is primarily used for forage production and mixed with other species.

Austrian Winter Pea
This low-growing vine-type legume offers extremely good nitrogen-fixing capabilities. It can survive winters if seeded with plenty of ground cover and has sufficient snow cover.

Lentil
The Lentil is a drought tolerant, annual legume. It can be used for livestock feed due to a high protein content and low digestive inhibitors. Lentils will provide some nitrogen fixation and excellent green manure.

Faba Beans
Faba beans are a cool season annual with one of the highest nitrogen-fixing capabilities of all legumes. With a vigorous taproot of up to 4 feet and its ability to regrow after grazing, faba beans are a great choice as a cover crop. Seed size must be considered when mixing with other cover crop species.

Crimson Clover
This is an annual clover that performs well on a wide range of soil types that have good drainage. It prefers moist soil for germination, performs very well in cool conditions and does not tolerate extreme heat or drought well. It is primarily used in cover crops in the upper Midwest for its ability to establish quickly and fix nitrogen efficiently.

Berseem Clover
This annual clover is used throughout the Midwest in soil building mixtures because of its nitrogen producing characteristics. When planted early, it can give more than one cutting and is a low bloat forage when used for grazing.

Brassicas

Forage Radish
Forage Radish is an annual, cool season brassica, that is an excellent option for cover crop. The tuber can reach 12-18 inches deep, with the tap-root reaching up to seven feet. This radish will help with soil compaction, make nutrients more available and provide incredible biomass. It is also a great component in fall grazing. With great cold tolerance, cattle will graze the leaf matter first and the bulb later.

Pasja or Vivant Hybrid Brassica
These are an early maturing, 50 to 70 days, hybrid-forage brassica. They have been bred for rapid growth with a high leaf-to-tuber ratio. They have excellent regrowth ability and will provide good leafy summer feed. They have been used in mixtures with Sorghum Sudan for soil building and grazing.

Forage Turnip
Turnip is a fast-growing crop that reaches near maximum production 80 to 90 days after seeding. Turnip does best in well-drained soils with roots, stems and leaves all being grazed.

Nematode Radish
Nematode Radish provides quick cover during cool weather. It has deep, branching roots that break up the soil and scavenge nitrates. When seeded as a mono culture, it is 90 percent effective on control of specific nematodes.

Dwarf Essex Rape Seed
This is a member of the cabbage and brassica family. It has excellent heat and cold tolerance, good salt tolerance and provides excellent forage qualities, especially during summer stress.

Other Species Available for Custom Blending:

- BMR Pearl Millet
- Buckwheat
- Chickpea
- Cow Peas
- Flax
- Forage Collards
- Forage Winter Wheat
- Guar
- Hybrid Kale
- Japanese Millet
- Mung Beans
- Phacelia
- Plantain
- Proso Millet
- Rutabaga
- Sugar Beet
- Safflower
- Soybeans
- Sunflower
- Sunn Hemp
- Yellow Mustard

AGASSIZ SEED & SUPPLY 35 YEARS

Forage Harvest Supplies

Founded in 1975, Bridon has been pioneering, developing and perfecting polypropylene twine since the introduction of the mechanical baler, earning a reputation as the industry's front-runner.

The Integra Series™ Premium Netwrap is the culmination of more than 25 years of experience in baling across America. Our available options include the following widths with a variety of lengths: 48 inches, 51 inches, 64 inches and 67 inches.

Industry leaders estimate that the net wrap market is growing 10 percent per year. Agassiz has partnered with the leaders in this industry to bring you the best products on the market. Our available options include the following widths with a variety of lengths: 48 inches, 51 inches, 64 inches and 67 inches.

This unique twine is designed to give the user the benefits of both plastic and sisal twines. The advantage of Clearfield™ Twine is a combination of sisal twine's degradability and plastic twine's durability.

Brazilian Sisal Twine has long been recognized as the finest sisal twine. Every bale is treated to guard against mildew, rodents and rot. Brazilian sisal twine is manufactured with pure natural sisal fibers that guarantee the only true biodegradable product, safe for animals and the environment.

We understand that every operation is different, so we have several other options for our customers on all of our twines and net wraps. Reach out to Agassiz Seed to find out which product best suits your needs. It is our promise that we can supply you with the best product for your application.

Silo Guard® is a unique approach to improving the quality of silage and hay. Silo Guard® is a sulfur-based product that scavenges oxygen from the forage, so molds and yeast are diminished. This helps to speed along fermentation and improve the quality of the forage. Silo Guard® contains no acid and is safe to handle.

Hay Guard® is the new way to treat hay, with no acid or bacteria. Hay Guard® allows hay producers and contractors to bale their hay with up to 25 percent moisture. This allows for greener and more nutritious hay.

University research proves that Hay Guard® improves milk production and keeps hay from heating. Hay Guard® is proven safe for all livestock, including horses. Hay Guard® makes application easy with just one application rate regardless of moisture.

Net Wrap Compatibility Chart

HESSTON / MASSEY FERGUSON	555T, 845, 846A, 945, 946, 2745, 2746, 2746A, 5446, 5545, 5546	48”
	845, 846A, 945, 946, 5446, 5545, 5546, 1746, 2846	51”
	560, 565A, 565T, 814, 855, 856, 856A, 955, 956, 5456, 5556, 1756, 2756, 2756A, 2856A	64”
	855, 856, 856A, 955, 956A, 5456, 5556	67”
WHITE-NEW IDEA	4844, 4854, 6345, 6364, 6464	48”
	6345, 6364, 6454	51”
	484, 486, 4665, 4845, 4855, 4865, 6365, 6465	64”
	6365, 6465	67”
CASE IH AGRICULTURE	8450, RS451, RBX461, RBX452, RBX462, RBX453, RBX463, RB454, RB455, RB455A, RB465	48”
	RBX461, RBX452, RBX462, RBX453, RBX463, RB465, RB454, RB464, RB455, RB455A, RB465	51”
	8460, 8465A, RS551, RS561, RS561A, RBX561, RBX552, RBX562, RBX553, RBX563, RB564, RB565	64”
	RBX561, RBX552, RBX562, RBX553, RBX563, RB565	67”
Challenger	RB453, RB453 Silage, RB463, RB463 Silage, RB463A	48”
	RB453, RB453 Silage, RB463, RB463 Silage, RB463A	51”
	RB563, RB563A	64”
	RB563, RB563A	67”
CLAAS	44, 46, 62, 66, 45, 46RC, 160, 180, 180RC, 240, 250RC, 260, 280, 280RC, 375RC, 340, 350RC, 455RC, 360RC, 380RC	48”
	250RC, 260, 280, 280RC, 375RC, 340, 350RC, 455RC, 360RC, 380RC	51”
JOHN DEERE	435, 456, 448, 458, 466, 468, 582, 960, 990, 449, 459, 459E, 459 Silage, 854 Silage	48”
	457, 448, 458, 467, 468, 582, 960, 990, 449, 459, 459E, 459 Silage, 469 Premium, 469, 469 Silage, 854 Silage	51”
	535, 556, 558, 566, 568, 559, 559 Silage, 569, 569 Silage, 569 Premium	64”
	557, 558, 567, 568, 569, 569 Silage, 569 Premium	67”
DEUTZ FAHR	GP2.30N, GP2.50N	48”
GEHL	1470, 1475, 2480, 2580, 2680	48”
	1870, 1875, 2780, 2880	64”
KRONE	KR125, KR130, KR160, KR260, RP1250, RP1250MC, F125, F130, VP1500, VP1800, KR181, KR280	48”
	KR181, KR280	51”
M&W	1500, 4497, 4590	48”
	5596, 5690	51”
NEW HOLLAND AGRICULTURE	RB450, RB460, 640, 644, 650, 654 (Belt), 648, 658, 848 (Chain), BR740, BR740A, BR750, BR750A, BR7050, BR7060, BR7070	48”
	BR740, BR740A, BR750, BR750A, BR7060, BR7070, RB450, RB460	51”
	660, 664 (Belt), 688, 678, BR770, BR770A, BR780, BR780A, BR7080, BR7090, RB550, RB560	64”
	855 (Chain), BR770, BR770A, BR780, BR780A, BR7080, BR7090, RB550, RB560	67”
Vermeer	435, 456, 448, 458, 466, 468, 582, 960, 990, 449, 459, 459E, 459 Silage, 854 Silage	48”
	457, 448, 458, 467, 468, 582, 960, 990, 449, 459, 459E, 459 Silage, 469 Premium, 469, 469 Silage, 854 Silage	51”
	535, 556, 558, 566, 568, 559, 559 Silage, 569, 569 Silage, 569 Premium	64”
	557, 558, 567, 568, 569, 569 Silage, 569 Premium	67”
KUHN	VB 2160, VB 2190	48”
	VB 2160, VB 2190	51”
Vicon	All	48”
WELGER	All	48”

AGASSIZ SEED & SUPPLY 35 YEARS

Forage Harvest Supplies

AgFlex® Commodity Bags

AgFlex® Grain, Silage and Commodity Bags represent the best in field storage solutions. These bags feature the industry's first 7 layer SmartStructure® technology. Choosing an AgFlex storage bag to protect grain and silage assures a high-performance storage solution offering increased strength, greater puncture and tear resistance and the utmost in peace of mind.

AgFlex bags are compatible with all silage baggers, grain baggers and high-capacity grain bag extractors. They are also guaranteed to withstand 24 months of ultraviolet exposure under normal circumstances.

Stock sizes are listed in the chart. Other 6.5', 8', 9', 10', 11', 12' and 14' sizes are available by special order.

Product Size	Bags/Pallet
8' x 150'	12
8' x 200'	10
9' x 150'	12
9' x 200'	10
9' x 250'	6
9' x 300'	6
10' x 200'	10
10' x 250'	6
10' x 300'	6
10' x 400'	4
10' x 500'	4
11' x 300'	6
12' x 300'	6
12' x 500'	2
14' x 500'	2

Bag Capacity Chart

	Tons Hay Silage	Tons Corn Silage	Bushels Corn Silage	Bushels Ground/Shelled Corn	Bushels Grain
8' x 150'	120-140	140-150	3,200	4,500	4,600
8' x 200'	170-180	190-200	4,300	6,200	6,350
9' x 150'	150-170	160-190	3,900	5,500	5,650
9' x 200'	190-210	220-240	5,300	7,500	7,680
9' x 250'	260-280	280-300	6,600	9,500	9,730
9' x 300'	315-335	340-360	8,000	11,500	11,780
10' x 200'	280	300	6,100	8,700	8,900
10' x 250'	355	380	7,700	11,000	11,275
10' x 300'	430	460	9,400	13,400	13,730
10' x 400'	580	620	12,700	18,100	18,550
10' x 500'	730	780	16,000	22,800	23,370
11' x 300'	480	510	N/A	N/A	N/A
12' x 300'	570	630	11,500-13,950	16,530-19,950	16,530-19,950
12' x 500'	970	1,070	19,650-23,800	28,100-33,950	28,100-33,950
14' x 500'	1,300	1,360	N/A	N/A	N/A

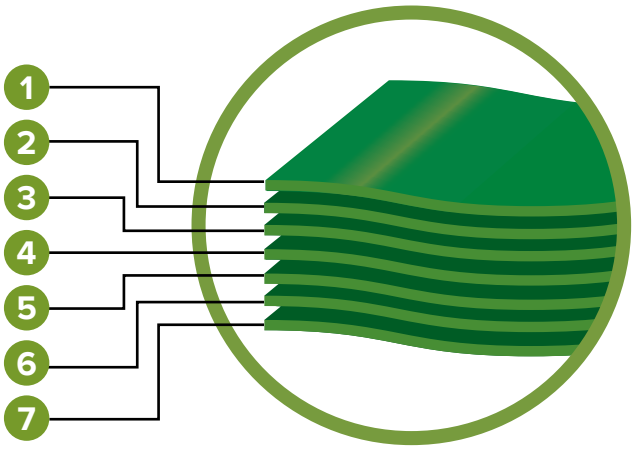
NOTE: All bag capacities are approximate. Capacities will vary based on many factors, including type of forage or grain, moisture content, bagging machine, etc. Each bag capacity assumes 15 feet of the bag is used for tie-off. When storing grain, a rounder bag will have a greater capacity. A bag will stay rounder when filled with wheat, barley or corn, and will slump more with durum, peas, lentils or canola.

Premium®
Silage Sheeting

Premium® Silage Sheeting by RPC BPI Agriculture features the SmartStructure® 7 Layer Advantage, designed to provide a highly durable bunker cover with increased puncture and tear resistance. Protect valued feed in silage pits or bunkers while it ferments and converts to a highly nutritious and easily digestible premium feed for livestock. The white/black film's white surface reflects light energy and the black layer provides 100% opacity.

Premium® is guaranteed to provide 12 months of UV stabilization under normal circumstances.

7 Layer Smart Structure Technology



1. **Temperature Reduction**
2. **Tear Resistance**
3. **Puncture Resistance**
4. **Stiffness (No Slump)**
5. **Puncture Resistance**
6. **Tear Resistance**
7. **Sunlight Blocking**

WidthxLength Feet	Rolls/Pallet
White/Black - 5.0 mil gauge	
24 x 100*	30
32 x 100*	20
32 x 150	12
40 x 100*	20
40 x 150*	12
40 x 200	6
50 x 100*	12
50 x 150*	9
50 x 200*	6
60 x 100*	12
60 x 150*	9
60 x 200*	6
60 x 1000*	1
80 x 150	4
80 x 200	2
80 x 250	2
80 x 1000*	1
120 x 150	4
120 x 200	2
120 x 250	2
120 x 500	1
160 x 150	4
160 x 200	2
160 x 250	2
160 x 500	1
White/Black - 6.0 mil gauge	
24 x 100	24
32 x 100	12
40 x 100	16
40 x 200	9
50 x 100	12
50 x 150	6

*** Bold = Most common sizes**

Lawn Seed Mixtures

Premium Sunny Brand™ Lawn Mixture

This mixture will respond well to a medium to low maintenance schedule of fertilization and grooming, plus it gives you drought tolerance where lack of moisture may be a problem. This mixture is versatile, tough and attractive.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 5 lb., 25 lb. and 50 lb. bags

Mix Formulation

Kentucky Bluegrass(2)	60%
Fine Leaf Perennial Ryegrass	30%
Creeping Red Fescue	10%

Classic Shade/Sun Brand™ Lawn Mixture

This blend of grasses gives you the persistence and versatility needed in a low to medium maintenance grooming schedule. Classic has the drought, shade and traffic tolerance to perform well in a wide variety of planting areas and soil types.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 5 lb., 25 lb. and 50 lb. bags

Mix Formulation

Kentucky Bluegrass(2)	35%
Creeping Red Fescue	35%
Fine Leaf Perennial Ryegrass	30%

Endure Brand™ Lawn Mixture

The deep tap root of Tall Fescue helps this mix stay green when others have gone dormant. Strides have been made recently in developing finer stemmed lawn type Tall Fescue. A higher seeding rate will help this blend maintain its finer leaves.

Plant 10 to 12 lbs. per 1,000 sq. ft. | Available in 50 lb. bags

Mix Formulation

Fine Leaf Turf Type Tall Fescue	70%
Kentucky Bluegrass	10%
Fine Leaf Perennial Ryegrass	10%
Creeping Red Fescue	10%

Elite Brand™ Lawn Mixture

This executive mix was developed to respond well to a high maintenance schedule of grooming, irrigation and fertilization. The Elite varieties we have selected will give you the combination of color, disease resistance and traffic tolerance the quality-conscious homeowner needs.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 5 lb. and 25 lb. bags

Mix Formulation

Elite Bluegrasses(3)	60%
Fine Leaf Perennial Ryegrass	30%
Improved Fine Fescue	10%

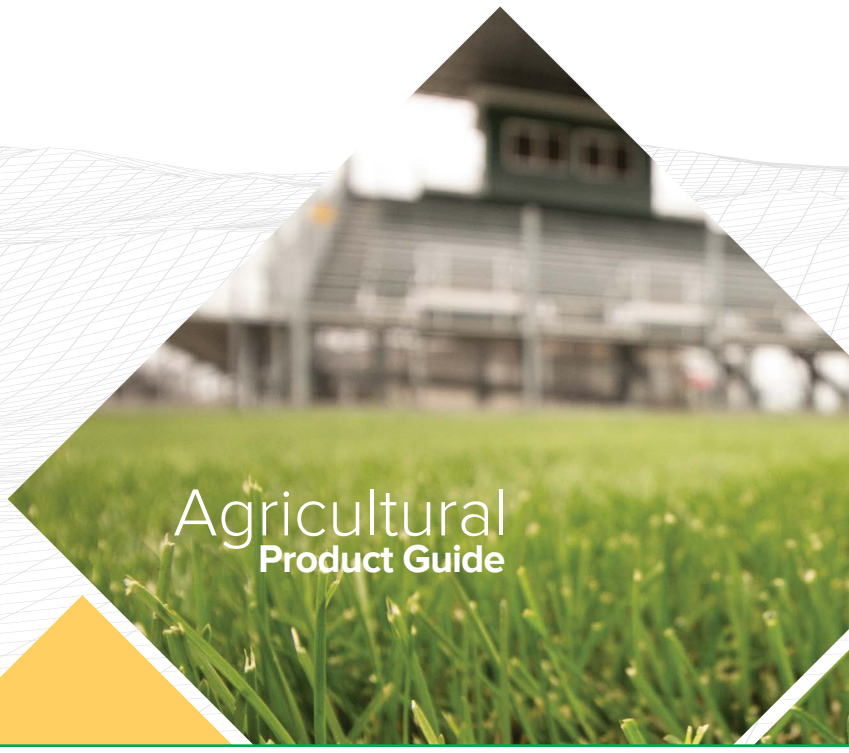
Executive Shady Brand™ Lawn Mixture

This executive mix was developed with the same standards as the Elite Brand Lawn Mixture. It responds well to a high maintenance schedule of grooming, irrigation and fertilization, with a high percentage of shade tolerant grasses to perform better in high shade areas.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 5 lb. and 25 lb. bags

Mix Formulation

Shade Tolerant Elite Bluegrass	35%
Improved Fine Fescue	35%
Fine Leaf Perennial Ryegrass	30%



Turf Seed Mixtures

LM Turf™ Mixture

This low-maintenance mixture will perform well in those areas you can't get to with water or fertilizer, including rural airstrips, cemeteries, ditches and many others. These cool season grasses will green up in the spring, go dormant in the summer and green up again in the fall with cooler, moist conditions.

Plant 3 to 4 lbs. per 1,000 sq. ft. | Available in 25 lb. bags

Mix Formulation

Kentucky Bluegrass	40%
Ephraim Crested Wheatgrass	20%
Fairway Crested Wheatgrass	20%
Perennial Ryegrass	20%

Athletic Turf Mixture

Formulated for athletic fields and playgrounds, this mixture is a blend of tough and durable Bluegrass and Ryegrasses. It is developed for constant use, medium maintenance and high-traffic areas. This mixture will provide a durable, high-quality athletic turf for many years.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 50 lb. bags

Mix Formulation

Elite Bluegrasses (2)	50%
Fine Leaf Perennial Ryegrass (2)	50%

Green Lawn™ Development Mixture

Ryegrass provides rapid development with Bluegrass and Fescue, filling in for a durable lawn. Annual Ryegrass has a lighter green color and its rapid regrowth gives an uneven height requiring frequent mowing for both appearance and establishment of the other grasses. This mix is used where rapid stand is required and is not recommended for premium lawns.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 25 and 50 lb. bags

Mix Formulation

Perennial Ryegrass	40%
Creeping Red Fescue	30%
Annual Ryegrass	15%
Kentucky Bluegrass	15%

Tour Star Perennial Ryegrass Blend

This blend of Fine Leafed Perennial Ryegrass varieties was developed for quality and consistency. We use varieties that provide a consistent disease package, color and winter survivability from year to year. For quick and temporary cover, this blend will do an excellent job for you.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 50 lb. bags

Mix Formulation

Fine Leaf Perennial Ryegrass (3)	100%

Low Grow Fescue Mixture

This mixture is a combination of improved Fine Fescues. Low Grow was developed for low maintenance areas such as thick tree stands with heavy shade and hillsides. The stand will thrive where mowing is difficult or impossible, and it will reach a maximum height of 10 to 12 inches when not mowed.

Plant 5 to 8 lbs. per 1,000 sq. ft. | Available in 50 lb. bags

Mix Formulation

Creeping Red Fescue	25%
Chewings Fescue	25%
Hard Fescue	25%
Sheeps Fescue	25%

ST Turf Mix

This salt tolerant mixture uses varieties that have been selected for their hardness and ability to tolerate shade, drought and salt while still maintaining good color scores. This mix is uniquely adapted to tolerate the harsh conditions that high-salt soils produce while still maintaining residential turf appearance.

Plant 4 to 6 lbs. per 1,000 sq. ft. | Available in 50 lb. bags

Mix Formulation

Slender Creeping Red Fescue	20%
Strong Creeping Red Fescue	20%
Kentucky Bluegrass	20%
Hard Fescue	20%
Sheeps Fescue	20%

AGASSIZ SEED & SUPPLY 35 YEARS

Lawn and Turf Grasses

Kind of Seed	Lbs./Acre	Planting Date	Seeds/Lb.	Season	Planting Depth (inch)
Kentucky Bluegrass	100-200	Spring or Fall	2,000,000	Cool	.25
Perennial Ryegrass	250-350	Spring or Fall	240,000	Cool	.25
Creeping Red Fescue	100-200	Spring or Fall	600,000	Cool	.25
Annual Ryegrass	200-250	Spring or Fall	225,000	Cool	.25
Chewings Fescue	150-250	Spring or Fall	600,000	Cool	.25
Hard Fescue	150-250	Spring or Fall	550,000	Cool	.25
Sheep Fescue	150-250	Spring or Fall	650,000	Cool	.25
Tall Fescue	400-500	Spring or Fall	225,000	Cool	.25

Bluegrass

Bluegrass is very durable. It bounces back well from drought and heavy traffic. Bluegrass spreads through underground rhizomes to develop a thick, tough root system and requires moderate care to maintain its beauty. It takes approximately 14-28 days for germination.

Plant 2 to 4 lbs. per 1,000 sq. ft.

Creeping Red Fescue

Creeping Red Fescue is used extensively in lawn mixtures for its ability to produce in shaded areas. Fescue spreads by underground runners and makes a good, uniform sod. It does well on most types of soil, maintains a good color and can withstand wear. It takes approximately 7-14 days for germination.

Plant 2 to 4 lbs. per 1,000 sq. ft.

Annual Ryegrass

Annual Ryegrass is a light green, rapid growing, cool season annual. Its coarse leaf texture, short life and clumping growth make it a poor choice for turf grass. It is best suited for highly erodible ground cover on poor or compacted soils. It takes approximately 5-10 days for germination.

Plant 4 to 6 lbs. per 1,000 sq. ft.

Fine Leafed Perennial Ryegrass

Fine Leafed Perennial Ryegrass has the ability to produce a tough turf that resists wear and tear, recovers rapidly from damage and increases the versatility of lawns for recreational purposes. Vigorous root growth penetrates even compacted soil and makes these grasses ideal for overseeding old and thin lawns. It takes approximately 5-10 days for germination.

Plant 4 to 6 lbs. per 1,000 sq. ft.

Turf Type Tall Fescue

Turf Type Tall Fescue has made improvements in leaf texture and color. It is coarser than Perennial Ryegrass, Kentucky Bluegrass or Fine Fescue. Tall Fescue has a deep tap root system keeping it green, while some other cool season grasses have gone dormant. It requires less fertilizer and water than either Kentucky Bluegrass or Perennial Ryegrass. It has very little rhizome growth and should be planted with Bluegrass and/or Perennial Ryegrass for this reason. It takes approximately 7-12 days for germination.

Plant 10 to 12 lbs. per 1,000 sq. ft.

Lawn Care

Starting A New Lawn

The best seasons for starting a lawn are early fall or as early in the spring as possible. Annual weeds are much less aggressive in the early fall. The following are tips to start a new lawn.

1. **Work and Level Soil**
   Prepare a seedbed of approximately six inches of topsoil and slope it away from the buildings to allow for drainage.
2. **Allow Soil to Settle**
   Periodic soaking and drying will naturally settle the soil and provide a good firm seedbed.
3. **Prepare Soil Surface for Seeding**
   Loosen the top half to one inch of the soil to a course texture. (Soil particle from pea to golf ball size.)
4. **Fertilize**
   To ensure the soil contains all the nutrients the lawn will need, fertilize with a quality lawn fertilizer.
5. **Apply Seed at Recommended Rate**
   Fertilizer spreaders work well to apply lawn seed. Distribute evenly, applying half the seed in one direction and the other half in a perpendicular direction. To check the application rate, seed a small area and measure the amount of seed applied.
6. **Work Seed into Top ¼ Inch of Soil**
   This may be accomplished by dragging the back of a leaf rake, old carpet remnant or piece of chain link fence. Do not cover seed too deeply. Some seed should stay on the surface. Roll or pack soil to conserve moisture.
7. **Water Lightly and Frequently**
   After seeding, thoroughly water the area. Keep the surface damp by sprinkling the surface three to four times daily. A very light covering of weed-free clippings will help keep the soil surface moist.
8. **Mow at 2 to 3 Inches**
   Set the mower height at about two inches. Mowing often will reduce weed competition.

Renovating Your Lawn

A tired lawn can be restored to its original health and vigor. Healthy grass plants have the ability to increase the density of your lawn and produce a high-quality turf condition. The following are some tips for renovating your lawn.

1. **Mow Lawn Short**
   Mow the lawn as short as possible and remove clippings.
2. **Remove Dead Thatch**
   Use a mechanical or hand rake to remove the dead thatch allowing seed to contact the soil.
3. **Loosen Soil Surface**
   Use a mechanical or hand rake to loosen the soil surface to a depth of one-fourth inch.
4. **Apply Seed at Recommended Rate**
   From this point, care for the seeding the same as you would a new lawn.

Maintaining Your Lawn

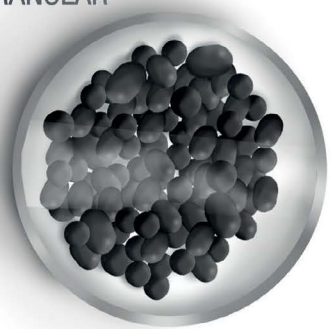
1. **Remove debris early**
   Mow at one to one-and-a-half inches as soon as the lawn begins to green up.
2. **Mow frequently**
   Mow in different directions.
3. **Water as needed**
   Water as weather conditions dictate, allowing for approximately one inch per ten days. Do not over water.
4. **Fertilize 2 to 3 times per year**
   This is based on lawn grass needing half to one pound of actual nitrogen per 1,000 sq. ft. per month of growing season.
5. **Mow to 1½ to 2 inches in late fall**
   Tall dormant grass will harm lawn if left over winter months.
6. **Aeration**
   A core aerator should be used on your lawn when the ground becomes compacted. Aeration will allow water and nutrients to reach the grass roots and should be done at least every other year.

Inoculant

LAL FIX SPHERICAL

SPHERICAL GRANULAR | INOCULANT | SOYBEAN | PEA & LENTIL

TECHNOLOGICALLY ADVANCED SPHERICAL GRANULE CARRIER.



- Consistent granule size
- Better flowability and efficiency through equipment
- Low dust
- Accurate inoculant placement
- Package sizes for customer to handle
- Two strains of highly effective Rhizobia/Bradyrhizobia

OTHER PRODUCTS:

LIQUID

LAL FIX PROYIELD LIQUID SOYBEAN

SOYBEAN

- Designed to provide growers with the proven nitrogen-fixing power of *Bradyrhizobium elkanii* and *Delftia acidovorans* to boost soybean yields.
- Easy to use formulation. One package to open (no mixing).
- On-seed life of 90 days. 120 days with BioProtector Add-It®.

BioBoost® + ENHANCED FORMULATION

SOYBEAN

- Enhanced formulation providing a higher concentration of the patented plant growth promoting rhizobacteria (PGPR) - *Delftia acidovorans* and *Bradyrhizobium japonicum*.
- Easy to use formulation. One package (no mixing required).
- On-seed life of 60 days. 90 days with BioProtector Add-It®.

LAL FIX LIQUID SOYBEAN

SOYBEAN

- High quality, single-action inoculant for the grower focusing solely on the benefits of good nitrogen fixation.
- Applied on-seed or in-furrow.
- On-seed life of 30 days. 60 days with BioProtector Add-It®.

LAL FIX LIQUID PEA & LENTIL

PEA & LENTIL

- Contains two strains of *Rhizobium leguminosarum* biovar *viciae* selected for enhanced performance and competitiveness in Pea & Lentil production.
- Applied on-seed or in-furrow.
- In-furrow application delivers a large quantity of *Rhizobium* directly to the soil.

BioBoost® Liquid

CANOLA

- The active ingredient is *Delftia acidovorans*, which is active in the soil and rapidly colonizes the root zone of the canola plant.
- One package to open.
- Tank mixable with herbicide-resistant canola systems. Applied pre-emerge through the six leaf stage.

STERILE POWDER

LAL FIX PEAT SOYBEAN

SOYBEAN

- High quality, two-strain sterile powder peat inoculant that contains a sticking agent that aids in the adhesion of the inoculant to the seed.
- Based on a sterile peat powder media which allows for an elevated delivery of *Bradyrhizobium elkanii* cells directly to the seed.
- Two unique strains of *Bradyrhizobium elkanii* for early and aggressive nodulation as well as balanced performance in a range of environments.

LAL FIX PEAT PEA & LENTIL

PEA & LENTIL

- High quality, two-strain sterile powder peat inoculant that contains a sticking agent that aids in the adhesion of the inoculant to the seed.
- Based on a sterile peat powder media which allows for an elevated delivery of *Rhizobium leguminosarum* biovar *viciae* cells directly to the seed.

LAL FIX PEAT CHICKPEA

CHICKPEA

- High quality, two-strain sterile powder peat inoculant that contains a sticking agent that aids in the adhesion of the inoculant to the seed.
- Based on a sterile peat powder media which allows for an elevated delivery of *Mesorhizobium ciceri* cells directly to the seed.

LAL FIX PEAT DRY BEAN

DRY BEANS

- High quality, two-strain sterile powder peat inoculant that contains a sticking agent that aids in the adhesion of the inoculant to the seed.
- Based on a sterile peat powder media which allows for an elevated delivery of *Rhizobium tropici* cells directly to the seed.

LALLEMAND

LALLEMAND PLANT CARE

Bio-Enhancers

ACCELERON® BIOAG

Bio-Enhancers make nutrients available to plants, helping maximize yield potential. While benefits vary by crop, these products can also enhance functional root volume and increase nutrient uptake, protecting plants from moisture or nutrient stress.

AcceleronSAS.com

TagTeam® LCO XC Technology

- Combines a specially selected rhizobia inoculant with the proven performance of LCO (lipo-chitooligosaccharides) molecules and the phosphate-solubilizing benefits of *Penicillium bilaiae*.
- Together, they can work to improve access to nutrients and maximize yield potential of soybeans.
- Increases nitrogen fixation through nodule formation and improves phosphate availability, which supports roots and shoot growth
- The extra-concentrated formulation can deliver the power of our triple-action inoculant in the industry's lowest application rate: 0.75 fluid ounces per unit of seed.*

Optimize® XC Technology

- Dual-action inoculant for soybeans that delivers the benefits of a specially selected *Bradyrhizobium japonicum* inoculant along with LCO (lipo-chitooligosaccharide) molecules.
- More space on your seed for additional treatments.
- The extra-concentrated formulation can deliver breakthrough performance in the industry's lowest application rate: 0.75 fluid ounces per unit of seed.*

TagTeam® Technology

- Dual-action inoculant combines the phosphate-solubilizing microbe *Penicillium bilaiae* with a specially selected nitrogen-fixing rhizobia.
- It can create more fixed nitrogen and improve access to the relatively immobile phosphate in the soil, helping to provide the best yield potential.
- Crops: **Soybean, pea, lentil and chickpea**

Cell-Tech® Technology

- Contains specially selected rhizobia that can provide highly effective nodulation to enhance nitrogen fixation, even in cooler soils, increasing yield potential as planting conditions change.
- Convenient liquid formulation for on-farm or commercial application.
- Crops: **Soybean, pea, lentil and chickpea**

QuickRoots® Technology

- Helps maximize yields – especially in fields with limitations in moisture or nutrient availability.
- The microbes in QuickRoots increase the availability and uptake of nitrogen, phosphate and potassium.
- The availability of additional N, P and K supports development of bigger roots, which helps increase uptake of moisture and nutrients to enable better plant growth and increased yield potential.
- Crops: **soybean, corn, wheat, canola, alfalfa, pulse, sunflower, sugar beet, cotton and sorghum**

JumpStart® Technology

- Contains the naturally occurring soil fungus *Penicillium bilaiae*. It grows along plant roots releasing nutrients like phosphate bound in the soil, making them more available for the crop to use.
- *Penicillium bilaiae* does not replace the need for phosphate fertilizer, but does provide crops access to more nutrients for higher yield potential.
- Crops: **wheat, peanut, alfalfa, canola, chickpea, dry bean, lentil, mustard, pea, soybean, sugar beet, sunflower and sweet clover**

*0.75 fl oz per unit of seed with minimum of 1.5 fl oz total volume with water when applied alone **Performance may vary** from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. **ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Acceleron® TagTeam®, Optimize®, Cell-Tech®, QuickRoots®, and JumpStart® are registered trademarks of Monsanto Technology LLC. ©2018 Monsanto Company. All Rights Reserved.

Inoculant

BASF
We create chemistry

Vault® HP
Biological Seed Treatment

- Multi-component, yield-boosting biological seed treatment system for soybeans
- Combination of a robust rhizobial inoculant, patented rhizobia growth enhancer and Integral Biofungicide (extends suppression of Rhizoctonia and Fusarium)
- Fresh, one-year dated product
- Ultra-low application rate of 2.0 oz. per cwt.

Vault® NP
Inoculant

- Easy-to-use, multi-strain rhizobial inoculant for improved nodulation and yield
- Organic Materials Renew Institute certified for organic production
- Seed-applied or in-furrow application flexibility

Vault® SP
Inoculant

- Delivers very high counts of rhizobia in an easy-to-apply, sterile peat carrier

Rhizo-Flo®
Inoculant

- Scientifically selected rhizobia strain in a convenient granular formulation

Nodulator®
Inoculant

- Increase pea and lentil yield potential with an improved and proven rhizobia strain
- Available in liquid, granular and sterile peat form
- Liquid formulation is Organic Materials Renew Institute listed for organic production

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VERDESIAN
THE NUTRIENT USE EFFICIENCY PEOPLE™

PRESIDECL®

- Four times more nitrogen-fixing rhizobia to better supply the needs of high-yielding soybeans
- Helps soybeans produce up to 65% more nodule mass
- Faster canopy closure to capture more light

FLEXCONNECT®

- First closed transfer system for soybean inoculant

PRIMOULTRA

- Multi-action, premium soybean inoculant that boasts a high-quality strain of rhizobia for consistent nitrogen fixation.
- Can be used via traditional application or with the FlexConnect inoculant delivery system

PRIMOGX2

- In-furrow, multi-action granular inoculant that brings more nitrogen to the plant
- Crops: soybean, pea, vetch, lentil, garbanzo, chickpea and dry bean

N-CHARGE®

- Peat-based inoculant specially formulated to increase seed adhesion over traditional peat inoculants by as much as 150%
- Crops: soybean, pea, vetch, lentil, garbanzo, chickpea, dry bean and cowpea

N-DURE™

- One of the most economical peat-based inoculants on the market
- Crops: birdsfoot trefoil, crownvetch, dry bean, garbanzo, chickpea, lupine, pea, vetch, cowpea, sanfoin, soybean and subterranean clover

N-TAKE

- Single action inoculant designed for custom application
- Enhances soybean nitrogen uptake from early to final life stages

Seed Treatment

PRO-TECT™ Seed Treatment

Protecting Crops for Optimal Yields

Pro-Tect™ custom seed treatment blends are created with customer-specific needs in mind that are tailored to your individual conditions. Our line of fungicides, insecticides and mold suppression options provide growers with the protection you need, while our colorants and polymers ensure even treatment for soybean, dry bean, field peas, lentils and chickpeas, as well as cereals, including barley, oats and wheat.

Growers can choose from Pro-Tect Branded Custom Blended Seed treatments, to suppress common forms of root rot, Pythium, Phytopthora, Rhizoctonia, Fusarium, Common Bunt and White Mold, as well as insects, nematodes and other diseases.

Our product line includes the following Pro-Tect blends:

- Pro-Tect and Pro-Tect MTF Fungicide
- Pro-Tect Plus F&I and ProTect MTF F&I
- Pro-Tect Cereals Fungicide and Pro-Tect IM Cereals F&I

Our BIOst VPH 100 bio-stimulant and BIOst Nematicide 100 provides multiple modes of action with enzymes and toxins that kill nematodes. Our products provide the amino acids, peptides and essential minerals you need for healthy crops. They also provide the seedling protection you need with multiple modes of action to eliminate nematodes.

	PRO-TECT™ Fungicide	PRO-TECT™ Plus F&I	PRO-TECT™ MTF F&I	CruiserMaxx Vibrance Beans	Acceleron F&I
Wireworms, Seedcorn Maggots, Bean Leaf Beetle and Thirps	N/A	Good	Good	Good	Good
Pythium spp.	Good	Good	Good	Good	Fair
Pytophthora spp.	Good	Good	Good	Good	Fair
Rhizoctonia solani	Good	Good	Excellent	Excellent	Excellent
Fusarium spp.	Excellent	Excellent	Excellent	Excellent	Excellent
Seed-borne phomopsis	Excellent	Excellent	Excellent	Excellent	Fair
Seed-borne Sclerotinia	Excellent	Excellent	Excellent	Excellent	N/A

Always read and follow label directions. Ratings are based on observations and/or research. Pro-Tect custom blended seed treatments are a combination of separate, individually registered products. Syngenta and Monsanto ratings based on Syngenta and Monsanto tech sheets. CruiserMaxx® Vibrance® is a registered product of the Syngenta Ag Group. Acceleron® is a registered product of the Monsanto company.

Seed Treatment

VALENT®

Products That Work, From People Who Care®

INTEGO SUITE SEED PROTECTANT

- Provides a complete zone of protection against a wide spectrum of Phytophthora and Pythium species both above and below the ground, plus broad spectrum insect control
- Now packaged as a convenient premix
- Offers consistent coverage and smooth flowability at a low 3.37 oz. per cwt. use rate

AVEO EZ NEMATICIDE

- Highly concentrated formulation contains more colony forming units (CFU) per ml than the competition for consistent performance
- Flexibility to be used when needed
- Low use rate of 0.1 fl. oz./140,000 seeds, requiring minimal treater adjustment

NipsIt SUITE CEREALS OF SEED PROTECTANT

- Unsurpassed cereal seed protection against diseases including Rhizoctonia and Fusarium, as well as insects such as wireworms and aphids
- Thanks to Valent's Lock Tight Technology, there is outstanding product retention, planter flowability, less buildup and improved seed coverage

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syngenta®

Clariva® Elite Beans

- Combines a nematicide with the insecticide and three fungicides of CruiserMaxx® Beans with Vibrance™
- Offers season long activity against Soybean Cyst Nematode as well as a broad range of early-season insects and diseases
- Complements Soybean Cyst Nematode-resistant varieties and crop rotation by adding another mode of action

CruiserMaxx® Beans Vibrance™

- CruiserMaxx® Beans with Vibrance™ offers best-in-class insect protection and delivers systemic root protection against certain seedborne, soilborne and foliar diseases

ApronMaxx® RFC

- Rhizobia friendly formulation provides outstanding disease protection in a concentrated formulation
- Inhibits fungal growth, prevents spore production and penetrates the soybean seed coat to protect the developing seedling

CruiserMaxx® Vibrance® Cereals

- Insecticide and fungicide seed treatment combines the power of four chemistries to deliver a boost to rooting power in wheat and barley
- Safeguards seeds, seedlings and roots from a broad range of seedborne and soilborne diseases and insects

Planting Guide

Grasses

Kind of Seed	Lbs./Acre	Planting Date	Seeds/Lb.	Height (ft.)	Season	Planting Depth (in.)
Blue Grama	3-5 PLS	Late Spring or Fall	725,000	1-2	Warm	0.25-0.5
Bluestem, Big	8-10 PLS	Late Spring or Fall	145,000	5-8	Warm	0.25-0.5
Bluestem, Little	8-10 PLS	Late Spring or Fall	250,000	2-3	Warm	0.25-0.5
Bluestem, Sand	14-16 PLS	Late Spring or Fall	120,000	4-8	Warm	0.25-0.5
Brome, Meadow	12-15	Spring or Fall	95,000	2-4	Cool	0.25-0.5
Brome, Smooth	12-15	Spring or Fall	140,000	2-4	Cool	0.25-0.5
Buffalograss	45-80 PLS	Late Spring or Fall	45,000	0.5-1	Warm	0.25-0.5
Climax Timothy	12-15	Spring or Fall	1,200,000	2-4	Cool	0.125-0.25
Creeping Foxtail	6-8	Spring or Fall	750,000	1-3	Cool	0.25-0.5
Dropseed, Prairie	5-6 PLS	Late Spring or Fall	240,000	1-2	Warm	0.125-0.25
Dropseed, Sand	1-2 PLS	Late Spring or Fall	5,300,000	1-3	Warm	0.25-0.5
Fescue, Meadow	15-20	Spring or Fall	230,000	2-4	Cool	0.25-0.5
Fescue, Tall - Forage	20-25	Spring or Fall	227,000	3-5	Cool	0.25-0.5
Festulolium	35-40	Spring or Fall	150,000	1-3	Cool	0.25-0.5
Green Needlegrass	8-10	Spring or Fall	170,000	1.5-3	Cool	0.25-0.5
Indiangrass	8-10 PLS	Late Spring or Fall	175,000	3-6	Warm	0.25-0.5
Kentucky Bluegrass - Forage	20-25	Spring or Fall	1,400,000	1-3	Cool	0.125-0.25
Orchardgrass	12-15	Spring or Fall	600,000	2-3	Cool	0.25-0.5
Prairie Cordgrass	8-10 PLS	Late Spring or Fall	150,000	5-7	Warm	0.25-0.5
Prairie Junegrass	2-4	Spring or Fall	2,250,000	0.5-2	Cool	0.125-0.25
Prairie Sandreed	4-6	Late Spring or Fall	250,000	3-4	Cool	0.25-0.5
Reed Canarygrass	5-10	Spring or Fall	530,000	2-6	Cool	0.25-0.5
Ryegrass, Italian - Forage	30-40	Early Spring or Fall	225,000	2-3	Cool	0.25-0.5
Ryegrass, Perennial - Forage	25-30	Spring or Fall	230,000	1-3	Cool	0.25-0.5
Sideoats Grama	8-10 PLS	Late Spring or Fall	180,000	1-3	Warm	0.25-0.5
Switchgrass	6-8 PLS	Late Spring or Fall	375,000	2-5	Warm	0.25-0.5
Teff Grass	10-12	Late Spring or Summer	1,300,000	1-2	Warm	0.25-0.5
Wheatgrass, AC Saltlander	5-10	Spring or Fall	110,000	1-3	Cool	0.25-0.5
Wheatgrass, Bluebunch	8-10	Spring or Fall	125,000	1-3	Cool	0.25-0.5
Wheatgrass, Crested - Forage	8-10	Spring or Fall	175,000	1-2	Cool	0.25-0.5
Wheatgrass, Ephriam Crested	8-10	Spring or Fall	250,000	1-2	Cool	0.25-0.5
Wheatgrass, Fairway Crested	8-10	Spring or Fall	250,000	1-2	Cool	0.25-0.5
Wheatgrass, Intermediate	10-12	Spring or Fall	95,000	3-4	Cool	0.25-0.5
Wheatgrass, Pubescent	10-12	Spring or Fall	95,000	3-4	Cool	0.25-0.5
Wheatgrass, Slender	8-10	Spring or Fall	135,000	2-3	Cool	0.25-0.5
Wheatgrass, Streambank	8-10	Spring or Fall	155,000	2-3	Cool	0.25-0.5
Wheatgrass, Tall	10-12	Spring or Fall	75,000	3-10	Cool	0.25-0.5
Wheatgrass, Thickspike	8-10	Spring or Fall	150,000	2-3	Cool	0.25-0.5
Wheatgrass, Western	10-12	Spring or Fall	113,000	1-3	Cool	0.25-0.5
Wildrye, Beardless	7-10	Spring or Fall	172,000	2-4	Cool	0.25-0.5
Wildrye, Canada	10-12	Spring or Fall	115,000	3-4	Cool	0.25-0.5
Wildrye, Dahurian	10-15	Spring or Fall	80,000	1-3	Cool	0.25-0.5
Wildrye, Russian	7-10	Spring or Fall	163,000	3-4	Cool	0.25-0.5
Wildrye, Virginia	10-15	Spring or Fall	90,000	2-3	Cool	0.25-0.5

Legumes

Alfalfa	10-20	Spring to Fall	225,000	1-2	Cool	0.25-0.5
Alsike Clover	6-8	Spring to Fall	700,000	1-3	Cool	0.25-0.5
Berseem Clover	10-20	Spring	205,000	1-2	Cool	0.25-0.5
Crimson Clover	15-25	Spring	140,000	0.5-1	Cool	0.25-0.5
Fixation Balansa Clover	5-8	Spring to Fall	750,000	1-2	Cool	0.125-0.25
Ladino Clover	8-10	Early Spring or Fall	750,000	1-2	Cool	0.25-0.5
Mammoth Red Clover	10-12	Early Spring	275,000	1-3	Cool	0.25-0.5
Medium Red Clover	10-12	Early Spring or Fall	275,000	1-3	Cool	0.25-0.5
Sweetclover	8-10	Spring to Fall	200,000	1-5	Cool	0.25-0.5
White Dutch Clover	3-6	Early Spring or Fall	800,000	0.5-1	Cool	0.25-0.5
Birdsfoot Trefoil	6-10	Early Spring or Fall	375,000	1-2	Cool	0.25-0.5
Cicer Milkvetch	20-25	Spring or Fall	145,000	1-2	Cool	0.25-0.5
Common Vetch	20-30	Spring to Fall	20,000	1-2	Cool	0.25-0.5
Hairy Vetch	20-30	Spring to Fall	20,000	1-2	Cool	0.25-0.5
Sainfoin	25-30	Spring or Fall	25,000	2-3	Cool	0.25-0.5

Planting Guide

Wildflowers

Kind of Seed	Lbs./Acre	Seed/Lb	Height (ft.).	Life Span	Flowering Period	Flower Color
American Vetch	40-45	33,000	1-2	Perennial	M	Purple
Aster, Heath	0.5-1	2,500,000	1-3	Perennial	L	White
Aster, New England	1-3	1,200,000	3-4	Perennial	L	Purple
Aster, Smooth Blue	4-5	880,000	3-4	Perennial	L	Blue
Big Flower Penstemon	7-10	275,000	2-3	Perennial	E	Purple
Black Samson	10-12	115,000	1-2	Perennial	M	Purple
Black-Eyed Susan	1-3	1,500,000	1-2	Perennial	ML	Yellow
Blanket Flower	7-10	155,000	1.5-2	Perennial	M	Yellow/Red
Blue Flax	8-10	293,000	1-2	Perennial	M	Blue
Blue Vervain	1-3	1,400,000	2-6	Perennial	M	Blue
Boneset	2	2,500,000	2-4	Perennial	L	White
Canada Milkvetch	6-10	270,000	1-3	Perennial	M	Cream
Canada Tick Trefoil	15-18	80,000	3-5	Perennial	M	Purple
Common Oxeye	20-25	60,000	3-4	Perennial	M	Yellow
Coneflower, Grey-Headed	2.5-3.5	600,000	2-4	Perennial	M	Yellow
Coneflower, Purple	13-15	115,000	2-3	Perennial	M	Purple
Coneflower, Yellow	3-4	737,000	1-2	Perennial	ML	Yellow
Culver's Root	0.2-0.5	800,000	3-4	Perennial	M	White
Dotted Blazingstar	8-10	112,000	1-3	Perennial	ML	Purple
Evening Primrose	4-5	865,000	2-4	Perennial	ML	Yellow
Foxglove Beardtongue	2-3	400,000	2-4	Perennial	E	White
Fragrant Giant Hyssop	1-3	1,500,000	2-4	Perennial	M	Purple
Golden Alexanders	8-10	192,000	1-2	Perennial	E Y	Yellow
Goldenrod, Showy	1-2	1,500,000	3-4	Perennial	ML	Yellow
Goldenrod, Stiff	5-6	770,000	1-5	Perennial	L	Yellow
Hoary Vervain	2-3	448,000	1-3	Perennial	ML	Blue
Illinois Bundleflower	20-25	60,000	2-4	Perennial	ML	White
Ironweed	4-6	384,000	3-6	Perennial	ML	Purple
Joe Pyeweed	1-3	1,500,000	4-6	Perennial	ML	Pink
Lance Leafed Coreopsis	1-2	200,000	1-2	Perennial	E	Yellow
Leadplant	6-10	123,000	2-3	Perennial	ML	Purple
Maximilian Sunflower	5-10	150,000	4-6	Perennial	ML	Yellow
Meadow Blazing Star	8-10	150,000	3-5	Perennial	M	Purple
Milkweed, Butterfly	22-30	67,000	1-2	Perennial	M	Orange
Milkweed, Common	22-30	70,000	3-4	Perennial	M	Purple
Milkweed, Marsh	15-20	72,000	2-4	Perennial	M	Red
Milkweed, Showy	6-8	85,000	2-4	Perennial	EM	Pink
Partidge Pea	20-25	50,000	1-2	Annual	ML	Yellow
Plains Coreopsis	1-3	1,650,000	2-3	Annual	E	Yellow
Prairie Cinquefoil	0.5-1	3,500,000	2-3	Perennial	ML	Yellow
Round Headed Bushclover	10-12	125,000	2-4	Perennial	L	White
Sneezeweed	0.5-1	130,000	3-4	Perennial	L	Yellow
Stiff Sunflower	10-15	85,000	3-5	Perennial	ML	Yellow
Tall Blazingstar	10-15	136,000	2-4	Perennial	ML	Purple
Western Yarrow	1-2	2,800,000	1-2	Perennial	ML	White
Wild Bergamot	2-3	1,200,000	2-5	Perennial	M	Purple
Yarrow	1-2	2,800,000	1-2	Perennial	ML	White

Planting Guide

Cover Crops

Kind of Seed	Lbs./Acre	Planting Date	Seeds/Lb	Season	Planting Depth (in.)	Growth Type	Growth Habit
Annual Ryegrass	15-25	Spring to Fall	215,000	Cool	0.5-1	Grass	Upright
Barley	80-120	Early Spring	15,000	Cool	0.75-1	Grass	Upright
Buckwheat	40-55	Summer	15,000	Warm	0.5-.075	Broadleaf	Upright
Chicory	2-4	Spring to Fall	425,000	Cool	0.25-0.5	Broadleaf	Upright
Cowpea	20-30	Summer	2,500	Warm	0.75-1	Broadleaf	Upright/Spreading
Faba Beans	100-150	Spring	200-800	Cool	2-3	Broadleaf	Upright
Flax	56	Spring to Fall	80,000	Cool	0.25-0.5	Broadleaf	Upright
Forage Sorghum	8-10	Summer	18,000	Warm	0.75-1	Grass	Upright
Grain Sorghum	8-20	Summer	15,000	Warm	0.5-0.75	Grass	Upright
Hybrid Brassica	3-5	Spring to Fall	225,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Kale	4-6	Spring to Fall	165,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Lentil	30-50	Spring to Fall	25,000-50,000	Cool	1-1.25	Broadleaf	Upright/Spreading
Millet, Foxtail	25-30	Summer	225,000	Warm	0.5-0.75	Grass	Upright
Millet, Pearl	12-20	Summer	60,000	Warm	0.5-0.75	Grass	Upright
Millet, Proso	20-30	Summer	80,000	Warm	0.75-1	Grass	Upright
Oats	60-80	Early Spring	17,000	Cool	0.5-1	Grass	Upright
Peas	100-150	Early Spring	3,000	Cool	1-1.25	Broadleaf	Upright (vine)
Piper Sudangrass	30-45	Spring to Fall	90,000	Warm	0.7-1	Grass	Upright
Purple Top Turnip	4-6	Spring to Fall	220,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Radish	6-8	Spring to Fall	35,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Radish, Nematode	10-12	Spring to Fall	35,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Rapeseed	4-8	Spring to Fall	145,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Safflower	20-30	Spring to Fall	12,500	Warm	0.5-0.75	Broadleaf	Upright
Sorghum Sudangrass	20-30	Summer	16,000	Warm	0.75-1	Grass	Upright
Soybean	30-50	Spring to Fall	3,000	Warm	0.75-1	Broadleaf	Upright/Spreading
Spring Triticale	80-120	Early Spring	15,000	Cool	0.5-1	Grass	Upright
Sugarbeet	4-6	Spring to Fall	10,000-25,000	Cool	0.25-0.5	Broadleaf	Upright/Spreading
Sunflower	5-10	Spring to Fall	25,000	Warm	0.5-0.75	Broadleaf	Upright
Winter Peas	100	Late Fall	3,500	Cool	1-1.25	Broadleaf	Upright (vine)
Winter Rye Grain	56	Late Fall	17,000	Cool	0.75-1	Grass	Upright
Winter Triticale	80-120	Late Fall	12,000	Cool	0.5-1	Grass	Upright
Winter Wheat	80-120	Late Fall	11,000	Cool	0.5-1	Grass	Upright

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WEST FARGO, NORTH DAKOTA
445 7th St NW | West Fargo, ND 58078
Phone: (701) 282-8118 | **Fax:** (701) 282-9119

EAGAN, MINNESOTA
3660 Kennebec Drive | Eagan, MN 55122
Phone: (651) 287-3400 | **Fax:** (651) 287-3401

MANDAN, NORTH DAKOTA
2813 Twin City Drive | Mandan, ND 58554
Phone: (701) 354-5551 | **Fax:** (701) 751-0789

BRANDON, SOUTH DAKOTA
1800 N. Walnut Avenue | Brandon, SD 57005
Phone: (605) 789-4775 | **Fax:** (605) 582-4663

agassizseed.com

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