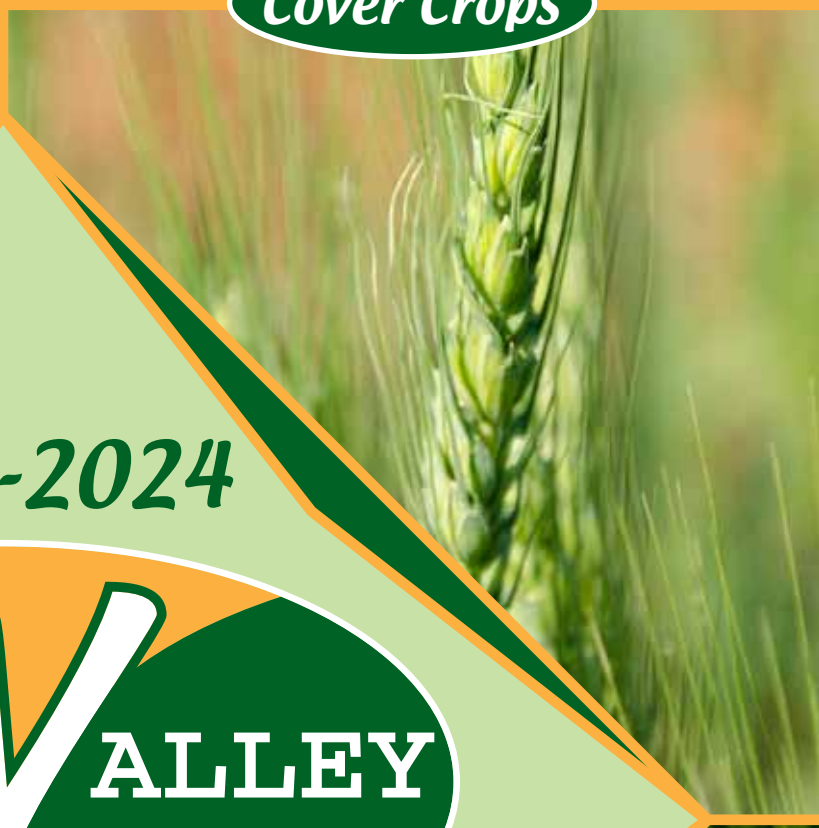
Forages

Cover Crops



2023-2024

GREEN VALLEY SEED

Product Guide

CRP/Wildlife

Turf

Your seed source for hay and pasture forages, summer annuals, small grains, cover crops, turf seed, and specialty crops.

About Us

Green Valley Seed is a regional seed distributor located in Northeast Missouri. With a dealer network throughout northeast Missouri, southeast Iowa, and west central Illinois, we are committed to meet the needs of dealers and producers within our trade area.

Green Valley Seed was founded in the late 1940's as an agri-based seed company specializing in buying, processing, and marketing of local commodity-type seeds. Though our focus has shifted to include proprietary and specialized forages and grains, we have remained very committed to both the seed industry and the consumer. We do our best to keep up with the ever changing agricultural industry to provide the best products available as well as knowledge on new trends and management practices.

Knowledge of the capabilities and characteristics of various seeds will be the greatest deciding factor in whether or not you are pleased with the results. Inputs are high, so make your choices wisely. Your investment in seed will play a large part in your production of the future.

GREEN VALLEY SEED

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AMPAC seed company

farm science genetics

DLF SEEDS & SCIENCE

SORGHUM PARTNERS

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We have the availability of other kinds of seed which are not in stock.
Please call our office at 800-748-7943 for price quotes.

Thank you for the opportunity to serve you.

Legumes

Alfalfa

Alfalfa is a perennial legume used for hay and grazing. Establishment requires a firm seedbed, high levels of P & K, and a pH of 6.0 to 6.5. Alfalfa stands cannot be thickened with interseeding. Alfalfas are rated on the Wisconsin Disease Index (WDI), X out of 30, and by Fall Dormancy (FD), the higher the number the longer the growing season. Newer varieties may be scored on a 35 point scale with the addition of aphanomyces race 2 testing.

Optimum 4.2. WDI – 35/35, FD: 4

Green Valley's leader in alfalfa performance with an outstanding trait package that raises the achievement bar to the next level. Optimum 4.2 boasts a 35/35 on the disease rating index, has the best winter hardiness score available, is resistant to stem nematode, and top all that off with high resistance to Aphanomyces Race 2. This two-variety blend produces exceptional forage yields, superior forage quality or very fast recovery after cutting, Optimum 4.2 is the choice for commercial hay, beef and dairy producers.

Optimum DP. WDI – 35/35, FD: 4

A "Dual Purpose" alfalfa in our lineup. This sunken crown alfalfa performs great in both hay and pasture scenarios. The branch root feature of this alfalfa also allows it to be more productive in poorer drained soils. Add high resistance ratings for multiple Aphanomyces races and it is easy to see why this new variety had the credentials to join our Optimum lineup.

Optimum LH. WDI – 35/35, FD: 4

Optimum LH is the optimum choice for an alfalfa that offers high resistance to potato leafhopper. Optimum LH tolerates a wide range of environmental and soil conditions with characteristics such as high resistance to Aphanomyces Race 2, excellent persistence, fast recovery after cutting and high relative feed quality in sprayed or unsprayed conditions. High yield potential, strong winter hardiness, and an elite agronomic makeup ensure Optimum LH is an excellent choice where straight alfalfa stands are desired.

431RRLH. WDI - 30/30, FD: 4

431RRLH is the latest generation of Roundup Ready® Alfalfa leafhopper resistant varieties that lets you produce cleaner, higher quality alfalfa for greater profit potential. The simplicity and improved crop safety of using one herbicide along with high leafhopper resistance enables you to be in control instead of Mother Nature. 431RRLH alfalfa performs well over a wide range of environmental conditions and is adapted to all areas where 3, 4 and 5 fall dormancy varieties are planted. Whether it's for great forage yields, superior forage quality or fast recovery after cutting, 431RRLH alfalfa is the choice for commercial hay, beef and dairy producers who want to take advantage of Roundup Ready® Alfalfa technology in areas where potato leafhoppers are a significant economic problem.

Resolute. WDI - 28/30, FD: 4

Our best selling alfalfa. Resolute is a blend of alfalfas chosen for their ability to produce high quality feed while maintaining stand integrity. Most often used in forage mixtures or short duration stands.

Trefoil

Birdsfoot Trefoil. Trefoil is a perennial legume used for hay, pasture, and green chop. It is considered a non-bloating legume when used in grazing situations. A great legume choice to use on poor quality soils. Plant stays green and succulent during and after seed ripening.

Lespedeza

Korean. Lespedeza is a warm season legume which is suitable from the IA-MO boarder south. Although lespedeza is an annual, if given the opportunity, it will perpetuate itself through seed production. Seed production takes place during Sep-Oct, then drops to the ground where freezing during the winter breaks the seed hull allowing the seed to germinate in spring. Lespedeza will perform better on lower pH soils than alfalfa or clover. Excellent forage for feeder calves or lambs.

Red Clover

Red clovers are easy to establish legumes that are quick growing, and produce high quality forage. Red clovers are primarily used for pasture, hay, silage, and for soil improvement. Establishment practices range from overseeding to sowing in a prepared seed bed. pH requirements are lower than alfalfas. Red clover is available in one, two, and multi-year varieties.

RC3. RC3 red clover is an improved proprietary red clover variety. This clover variety offers a longer stand life, greater yield potential, and increased disease resistance compared to common medium red. This trifecta of characteristics makes RC3 a clover that growers need to consider when planning over-seeding or establishment of hay acres.

Medium Red Clover.

Two-year clover that produces across all soil types and fits most management practices.

White Clover

Perennial legume that we consider to be the most useful pasture legume, but due to high moisture content, a poor choice for dry hay production. White clovers are extremely palatable with high protein levels. Due to the possibility of bloat, they are most commonly planted with a grass. White clover has a prostrate, stoloniferous growth habit. Commonly interseeded into existing pastures.

Jumbo II Ladino. An aggressive tillering white clover that is an excellent complement to grass swards. Jumbo II has superior disease resistance, which along with its aggressive tillering, provides a dense canopy of forage and has proven to do well in the low to mid 5 pH range.

Ladino Clover.

Widely used for forage, especially in pasture. It is high in protein digestibility, a heavy nitrogen fixer, easy to establish and moderately winter hardy. Ladino is an upright growing form of white clover which spreads by stolons and will grow in soils considered too acidic for red clover and alfalfa.

White Dutch Clover.

Small leafed white clover with a prostate growth that is used primarily in turf stands.

Other Clovers

Alsike Clover.

Intermediate variety of clover used for hay, pasture, and soil improvements. Preferred on wetter and more acidic soils.

Yellow Blossom Sweet Clover.

Sweet clover has a determinate taproot, reaching depths of up to 1 foot, with the ability to affix over 100 lbs. of actual nitrogen. Sweet clover is the most drought tolerant of forage legumes. It is also quite winter hardy and can extract and then release phosphorus, potassium and other micronutrients that are otherwise unavailable to crops. Sweet clover loosens soil structure, creates organic matter, and improves soil tilth.

Crimson Clover.

A winter annual with rapid, robust growth, crimson provides early spring nitrogen for full-season crops. Good nitrogen fixation makes crimson an excellent break crop for continuous corn producers. Crimson clover adds to the soil organic N pool by scavenging mineralized N and by normal legume N fixation. Crimson Clover has a simple taproot making it easy to kill mechanically or with chemicals.

Berseem Clover.

Berseem Clover is a fast-growing summer annual. Berseem provides a high-quality forage that doesn't cause bloat and works well with alfalfa. It is a heavy N producer and is among the least winter tolerant of true annual clovers. It also has an active root system and abundant biomass, making it an ideal winterkilled cover crop before corn or other high nitrogen demanding crops.

Balansa Clover.

Balansa clover is an annual clover that will work across a wide range of solid types and conditions. Used primarily as a cover crop, balansa clove will develop a deep tap root in the fall and grows rapidly in the spring to provide good weed suppression and is also good source of nitrogen. It will also work well for forage applications and as a food plot for deer.

Grasses

Fescue

Perennial grass used for haying, grazing, and for pastures. Fescue is also ideal for waterways, levees, and pond banks. Available in endophyte, endophyte-free, and beneficial endophyte varieties. Upright growth characteristics make fescue an excellent companion to legumes and herbs.

Fuzion. Fuzion fescue is a customized blend of improved endophyte free fescue varieties. Fuzion is long-lived and provides excellent production, making it a great base for hay and pasture applications.

Kentucky 31 Premium. Early maturing with endophytes present. Excellent for waterways, levees, or pond dams. Makes excellent winter stockpile. Green Valley offers Premium Kentucky 31 tall fescue guaranteeing a minimum purity of 98% with a minimum germination of 85%.

Orchardgrass

Orchardgrass is a bunch-type grass used primarily for hay production although the newer varieties are holding up very well under managed grazing. Combined with legumes and/or other grasses orchardgrass is a staple in forage production.

Triton. A 3-way blend of med-late maturing orchardgrass varieties with enhanced disease resistance to ensure seedling vigor, persistent plant health, and excellent yield potential. Summer heat tolerance combined with good fall productivity and excellent winter-hardiness make it an ideal choice for grazing, hay production, and as a companion with alfalfa. It also mixes well with other cool-season grasses like tall fescue, perennial ryegrass, and timothy.

Extend. Extend is a late-maturing orchardgrass that is perfect for alfalfa or clover hay mixtures. Extend combines superior yield with great palatability and excellent plant vigor.

Blizzard. A med-late maturing orchardgrass variety used for grazing, hay production or in mixes. Selected for superior winter survival with improved stem rust resistance and high forage yield potential, Blizzard is widely adapted throughout the United States.

Timothy

Timothy is a highly palatable bunchgrass that makes excellent horse-type hay. Used primarily in hay mixtures it can be seeded alone, although regrowth is slow.

Tuukka. Has superior ratings on a percentage of leaf-to-stem ratio and has the most desired trait of quick re-growth. It will provide season-long production of nutritious forage even in the second, third and fourth cuttings. Tuukka's maturity is generally 2-3 days earlier than Climax and is recommended for hay, grazing, silage or green chop.

Climax. This timothy has been a staple of forage production for a long time. High leaf-to-stem ratio gives good yields. Decent disease resistance allows very good survivability.

Bromegrass

Smooth Premium. Sod forming with good yield potential. 80% of yield in first hay cutting. Commonly used with red clover or alfalfa in forage situations or in mixtures for waterways.

Ryegrass

Ryegrasses are cataloged into 4 categories.

Annuals	***6 to 8 months***
Italians	***6 to 15 months***
Intermediates	***2 to 3 years***
Perennials	***3 to 5 years***

Ryegrasses are high energy, easily digestible grasses that are best suited for grazing or high moisture harvest. Ryegrass is designated as being either a diploid or a tetraploid. Diploids have half the chromosomes as a tetraploid does. Tetraploids retain more moisture, the leaves are shinier, and typically grow faster than diploids. Diploids normally are hardier plants, slower in production, and have a longer lifespan than tetraploids.

Elena. Elena tetraploid perennial ryegrass is a medium maturing variety which has shown superior forage yield potential, excellent forage quality and longer persistence in state trials throughout the United States. With strong spring and fall forage production plus fast recovery after cutting or grazing, Elena is the ideal component for horse, dairy or beef pasture mixes. Rapid germination and excellent seedling vigor make this variety perfect for pasture renovation as well.

Grasshancer 200. Grasshancer 200 is a blended Italian ryegrass that is an excellent choice for grazing or mechanical harvest. Perfect for use in areas where large amounts of animals have been running. Smooth out the ground, overseed the ryegrass, roll it in and graze in 5 weeks.

Bounty. Bounty is an early-maturing diploid annual ryegrass with outstanding yield potential. Bounty can be used for pasture, hay or silage and is well adapted to grass and legume mixes. Excellent disease resistance, seedling vigor, quick recovery after cutting and drought tolerance make a great choice.

DH-3. DH-3 diploid annual ryegrass combines the quick establishment and forage yield of Ribeye, the crown rust resistance of TAM90 and the frost tolerance and consistent yield of Marshall. DH-3 exhibits high forage yield, excellent seedling vigor, and medium maturity, allowing consistency in forage yield throughout the season with good transition back into warm-season forage grasses.

Bison 2. Bison 2 is a new intermediate ryegrass with an increased DM yield and better leaf disease resistance. It is extremely persistent for an intermediate ryegrass, often times outyielding typical perennial ryegrasses even into the third year. This variety recovers extremely quickly and can tolerate intensive grazing making it well suited for new pasture mixes and for overseeding existing pasture.

Redtop

Redtop is a common grass that can be found throughout the Midwest. Used in hay production and pasture, it forms a thick sod. Redtop has a fibrous root system that produces rhizomes. This is a grass that prefers moist conditions.

Reed Canarygrass

Reed Canarygrass. Can be used for hay production, grazing and erosion control. Even though canarygrass is very well adapted to wet soils it is also considered very drought resistant. Low alkaloid varieties are preferred for livestock production.

Specialty Blends

Green Valley Blends

Green Valley Blends consist of quality products combined to enhance each individual species strengths. All plants have inherent characteristics that, when combined, can ensure a consistent outcome.

GV10 Hay and Pasture.

Green Valley blend that is comprised of 50% grasses and 50% legumes. Works on a variety of soil types and stands up to grazing and haying.

GV10 Hay and Pasture

20% Alfalfa
18% Medium Red Clover
10% Alsike Clover
2% Ladino Clover
20% Intermediate Ryegrass
20% Orchardgrass
10% Timothy

GV20 Elite Hay and Pasture.

Green Valley blend comprised of endophyte free fescue, late maturing orchard grass, high production timothy, elite alfalfas and clovers. Designed to maximize production and longevity.

GV20 Elite Hay and Pasture

30% Fuzion Fescue
15% Improved Orchardgrass
15% RC3 Red Clover
15% Optimum Series Alfalfa
20% Perennial Forage Ryegrass
5% Improved Timothy

GV30 Plus Alfalfa Base.

Green Valley blend consisting of improved varieties of red clover, orchardgrass, timothy, and alfalfa that gives outstanding hay production.

GV30 Plus Alfalfa Base

60% Optimum Series Alfalfa
20% RC3 Red Clover
10% Improved Orchardgrass
10% Improved Timothy

GV50 and GV50 Free Waterway Mixes.

These Green Valley mixes combine quick cover, good growth, and persistence to hold the soil extremely well. We use endophyte-free fescues in GV50 Free for waterways that will be hayed or grazed.

GV50 Waterway

70% Tall Fescue
15% Intermediate Ryegrass
15% Timothy

GV50 Free Waterway

70% Endophyte Free Tall Fescue
15% Intermediate Ryegrass
15% Timothy

GV GO Mix.

Our grab and go mix is a Grass Only blend that works well for hay or pasture applications. It is a long lasting, high quality mix that will produce in less than ideal conditions. This mix is suitable for all livestock, but works especially well for sheep or as a base for goats.

GV GO

25% Perennial Ryegrass
25% Fuzion Fescue
20% Improved Orchardgrass
10% Intermediate Ryegrass
10% Improved Timothy
10% Kentucky Bluegrass

GV HP Mix.

Green Valley's Horse Power mix. We designed this mix especially for horse pasture situations. It can handle heavy foot traffic and low grazing situations and is guaranteed to be endophyte free.

GV HP

25% Improved Orchargrass
30% Perennial Ryegrass
15% Improved Timothy
15% Kentucky Bluegrass
15% Brome

GV Rescue.

A 3-way blend of ryegrasses designed to repair or "rescue" areas where animal traffic has destroyed existing forage. Extremely fast growth and extensive root mass help hold soil while providing excellent forage.

GV Rescue

34% Perennial Ryegrass
33% Intermediate Ryegrass
33% Italian Ryegrass

Small Grains

Small Grains

Uses of small grains include grain production, winter pasture, hay, silage, wildlife food plots, and cover crops. They provide ground cover during the winter months to help reduce soil erosion, increase weed suppression, aid with nutrient retention, and provide a high-quality food source.

Certified Rushmore Oats. A medium-maturity plant with good standability and medium-tall height. With new genetics this variety will offer excellent yield and consistently heavy test weights making it a great option for seed, straw, or forage.

Cereal Grain Rye. Rye is the most winter hardy of all cereal grains, tolerating temperatures as low as -30^{O}F once it is well established. It can germinate and grow at temperatures as low as 33^{O}F and withstand drought better than other cereal grains. Compared to other cereal grains, rye grows faster in the fall and produces more dry matter the following spring.

TriCal Gainer 154 Triticale. An early maturity winter triticale with excellent leaf to stem ratio. Good fall seedling vigor, exceptional winterhardiness, and excellent straw strength make this an excellent choice for forage production in a double crop system after corn silage, soybeans, or summer annuals.

Barley. Barley has greater forage nutritive value than oats, wheat or triticale and is more drought-tolerant than oats. Barley prefers cool, dry growing areas and has a very short growing period. With its upright posture and relatively open canopy barley makes a fine nurse crop for establishing a forage or legume stand.

Wheat. Although typically grown as a cash grain, winter wheat can provide a grazing option prior to spring tiller elongation. Wheat also is slower to mature than some cereals, so there is no rush to kill it early in spring.

Broadleaf

Collards

Impact Forage Collards. Impact forage collards are a hybrid brassica selected for superior forage quality, high forage/biomass production, grazing and winter survival. With an ability to thrive in conditions below zero for several days without snow cover, it is one of the most winter hardy brassicas available. On the other extreme, once Impact's large tap root penetrates deep into the soil profile, it can still be productive during the hot, dry summers. Impact can tolerate close grazing pressure due to the growing point being near the soil surface which also allows for fast regrowth after grazing.

Turnips

Forage turnips. Features a leafy, upright growth habit and tankard shaped bulb. Ideal leaf to bulb Ratio (60%-40%), good leaf retention and early maturity (60-90 days) make these an excellent choice for summer or fall forage production.

Purple Top. Common bulb type turnip. Used primarily late summer-early fall for autumn grazing.

Rape

Rape. A cool-season annual plant similar to turnip and rutabaga. Produces large, flat leaves that grow between 12 to 20 inches long, and 8 to 15 inches wide. Grows to a height of 2 to 4 feet.

Radish

Eco-Till Radish. Eco-Till Radish is a Daikon type forage radish variety specifically developed for fall/winter cover crop applications. These radishes offer impressive benefits to the soil and the environment including the reduction of soil compaction, improved nutrient recycling, increased organic matter, enhancement of soil tilth and suppression of weeds, to name a few.

Chicory

Chicory. Primarily used for grazing applications due to high moisture content, Chicory will accumulate minerals naturally. A natural wormer, chicory leaves are higher in nutritional and mineral content than alfalfa or other cool-season grasses. A deep taproot provides access to moisture during drought conditions providing a great supplement to the traditional 'summer slump' of other cool-season forage species.

Vetch

Winter Hairy Vetch. Hairy vetch is a legume used primarily as a cover crop for green manure and for soil improvement. Well-nodulated hairy vetch can enrich the soil with 60 to 120 lbs/acre of nitrogen through nitrogen fixation. Vetch is also used in pasture as it withstands trampling, provides grazing during May and June, and has a feeding value slightly lower than that of clover or alfalfa.

Buckwheat

Buckwheat. Buckwheat is used primarily as a cover crop because it germinates rapidly, and the dense leaf canopy soon shades the soil. Buckwheat is sometimes used as a honey crop. It has a long blooming period, lasting into September when other sources of nectar are limited.

Peas

With protein levels of this legume reaching well over 20%, it is a good practice to combine peas with another crop. Most pea types and varieties have long and delicate vining stems that grow to between 2 and 4 feet tall and are not self supporting. It is common for the plant's delicate tendrils to coil around other plants for support. Companion crop used are oats and/or summer annuals. They do best in a pH range of 6.3-7.0.

Peas. Peas can be put into 3 categories. The first are known as Spring Field Peas, normally planted in early spring with oats or barley when temperatures are on the rise, although when planted in the fall will grow faster than winter peas and thus produce more forage for fall harvest. The second are Cowpeas which are a summer planted pea usually planted with a summer annual. Third are Winter Field Peas which, with a winter grain, provide additional tonnage and crude protein in the harvested forage the next spring. All Peas are excellent nitrogen fixers, establish quickly, and are an excellent source of high protein forage.

Summer Annuals

Annual warm-season grasses can be used as part of a year-round grazing system throughout the Midwest. With adequate moisture and fertility, they rapidly produce high-quality forage during late spring and summer when cool-season forages are dormant. In addition, warm-season annual grasses work well in rotation with row crops or as emergency pastures.

Forage Sorghums

SP3904 BD/BMR. A Brachytic Dwarf BMR forage sorghum that is excellent for producing high quality silage. SP3904 will reach soft dough in approximately 110 days and will produce high levels of starch, which contributes to silage digestibility and energy levels. The brachytic dwarf trait reduces plant height and improves standability while maintaining leafiness. This hybrid is an excellent fit for the demand of high quality feed with superb tonnage.

Sorghum Sudangrass

SP4555 BMR. Versatile hybrid BMR sorghum x sudangrass that can meet the nutritional needs of most classes of livestock. This hybrid can be used for grazing, hay, haylage, and greenchop. SP4555 has a good leaf-to-stem ratio providing high quality and excellent production when combined with proper management.

SORDAN 79. Hybrid sorghum x sudangrass that can be used for grazing, haylage, greenchop, and ground cover. It is well suited for use as emergency feed as it will be ready for grazing in 40 days, with adequate moisture. Sordan 79's leaf-to-stem ratio helps insure good palatability and ease of management.

Sudan X Sudangrass

SP7106 BMR/PS. Widely adapted BMR sudangrass hybrid. Because it is photoperiod-sensitive it will not head under most conditions, providing great harvest flexibility. SP 7106 can tolerate high cutting frequencies as well as being well adapted to intensive grazing. This hybrid has very fine stems and a high leaf-to-stem ratio and produces high quality hay or haylage.

Trudan Headless. An exceptional photoperiod-sensitive hybrid sudangrass for most summer forage needs. It is best positioned and used for hay, haylage and grazing. Regrowth is fast after cutting or grazing. It adapts well to and can tolerate high cutting frequencies and intensive grazing practices with proper management. Exceptional forage quality can be produced that is high in protein and TDN.

Pearl Millet

Millex 32. Hybrid pearl millet for production of summer forage, even in hot, dry conditions. It is especially well suited in light, sandy soils where stress is common. Millex 32 is well positioned for hay, summer grazing, haylage or greenchop. It produces lush, leafy forage and can provide good quality with proper management. Millex 32 larger than normal seed size helps insure more consistent stands.

Millets

German R Strain Millet. A late-maturing, warm season annual crop. It has medium stem thickness and numerous broad leaves up the stem. It is shallow rooted, but tolerates short periods of drought during the growing season. German R Strain Millet produces most of its growth during July and August. The crop remains vegetative and grows rapidly whenever moisture is available. Used for food plots or dry hay production.

Japanese Millet. A warm season annual crop commonly grown for mid-season grazing and forage production. It is a crop that compares to Sudangrass but without the prussic acid poisoning. Cattle find the forage palatable and it can be cut or grazed multiple times in the season. It is the most rapid growing of all millets producing ripe grain in 45 days after seeding.

White Proso Millet. Matures 75 days after emergence, grows to a height of 3 to 4 ft. tall, and has one of the lowest water requirements of summer annuals. Produces well during hot weather conditions and does not require high-input additions of nutrients.

Sunn Hemp

Sunn Hemp. A member of the legume family with crude protein reaching 25-30 percent and producing 120 pounds of nitrogen per acre. It is a summer annual plant which loves heat and grows to a height of 6 feet in as little as 60 to 90 days. Sunn Hemp is highly palatable and recovers quickly from grazing.

Teff Grass

A warm season annual grass used for high forage production and high forage quality without the problems of other summer annual grasses; i.e. prussic acid or nitrate buildup. Teff grass is excellent for dry hay production with "horse hay" type quality.

Teff. A self-pollinated, warm season annual grass which can be harvested multiple times during the growing season as dry hay, silage or pasture. As a fast-growing crop, Teff combines excellent forage quality with high yield during a relatively short growing season. Very low seeding rates due to extremely small seed size.

Native Warm Season

There has been increased interest in establishing native warm season grasses (NWSG) and forbs as wildlife habitat. These grasses and forbs grow during the warmer months of the year as opposed to cool season grasses such as fescue and brome. Native wildlife is adapted to these grassland environments and will flourish in them when given the opportunity. They are productive and produce good quality forage when well managed.

Native Grasses

All native warm and cool season grasses, legumes and forbs species are available. Call for quotes on CRP Seedings.

Big Bluestem. A perennial bunch grass growing from 3 to 10 feet tall. The stem base turns to a blue-purple as it matures and it has deep roots that send out rhizomes creating a very strong sod. Big bluestem is a forage species for all classes of livestock. Crude protein content of 16-18% is maintained from May through August but drops below 6% in September and October. It is often cultivated as a pasture grass and for hay-making. It has high tolerance to drought and restricted water conditions but a slow ability to spread through seed production and the seedlings have low vigor.

Little Bluestem.
Little Bluestem is a perennial bunchgrass with many of the same characteristics as Big Bluestem with a height of 3 feet.

Indiangrass. A tall, bunching sod-former, 3-8 ft. in height with broad blue-green blades and a large, plume-like, soft, golden-brown seed head. This grass is important to the tall-grass prairie and is a favorite food of grazing livestock. It is also hardy and can live through flooding and repeated fires. Look for it growing in pure stands in lowland areas.

Sideoats Grama. A medium-size perennial bunchgrass, 15 to 30 inches tall, it is more palatable than many of the other grass species. It retains its color later in the fall and usually begins growth in the spring before other gramas. Sideoats grama cures well, and maintains a fairly high feeding value throughout the year.

Canada Wild Rye. A native perennial bunchgrass that grows to 4 feet and prefers moist sites. It has good seedling vigor and rapid spring growth that aids in easy establishment and ground cover. This grass also has some shade tolerance and can grow in sandy soil types. Matures in July and has a moderate ability to spread through seed production and the seedlings have high vigor.

Switchgrass. A perennial sod-forming warm season grass that grows 3 to 5 feet tall. Switch grass is used primarily for soil conservation, forage production, and wildlife cover. It is being looked at as a biomass crop for ethanol, also. As a warm-season perennial grass, most of its growth occurs from late spring through early fall. With livestock it can be utilized by grazing or in hay production.

Turf Seed

Turf grasses are narrow-leaved grass species that form a uniform, long-lived ground cover that can tolerate high traffic. Only a few grass species produce acceptable turf in the northern U.S. These grasses are referred to as the cool-season turf grasses. One of the most important steps in turf grass establishment is the selection of high quality seed or a seed mixture that is adapted to the site conditions and intended use of the turf. Poor quality seed may be low in viability and contain weed seeds as well as undesirable grass species.

Turf Seed

Stronghold. A 4-way blend of turf-type fescues developed for use in the Mid-West. Heat and drought tolerance, plus an aggressive tillering growth habit rank these selections among the top of turf fescues. Excellent disease resistance coupled with low water requirements ensure a long lasting and low maintenance sod.

Elite Turf. Green Valley mix consisting of an improved bluegrass, an improved ryegrass, and creeping red fescue to create an outstanding lawn.

Quick Turf. Green Valley economical lawn mix that provides quick cover without giving up quality and appearance.

Elite Turf

50% Improved Variety of Kentucky Bluegrass
30% Turf-type Perennial Ryegrass
20% Creeping Red Fescue

Quick Turf

30% Kentucky Bluegrass
25% Turf-type Perennial Ryegrass
25% Creeping Red Fescue
20% Annual Ryegrass

Creeping Red Fescue. Shade tolerant fescue that is fine bladed with medium to dark green color.

Kentucky 31 Tall Fescue. Common field/lawn type fescue that provides a good sod at an economical price.

ASP0116-Ryegrass. An improved perennial variety that sets the standard for quality and performance with great disease package and salt tolerance.

Premium Keuntucky Bluegrass. With its deep blue-green color and naturally fine-bladed characteristics, Kentucky Bluegrass is a very popular option in turf type applications. Green Valley offers only Premium Kentucky Bluegrass, guaranteeing a minimum purity of 98% (prior to the addition of seed coating), and a minimum germination rate of 85%.

Wildhorse Kentucky Bluegrass. Known for fast establishment, it's medium-to dark green color, and early green-up in the spring Wildhorse is ideal for pure stands or blends with other species including tall fescues, fine fescues and ryegrass.

Wildlife

As thrilling as the actual hunt can be, there's also an excitement that comes with planning and planting your land or lease in hopes of attracting and retaining quality game. The most important piece of that puzzle is choosing the right ingredients **food plots** grown from the best seed.

Wildlife

Peredovik Sunflowers. A very popular sunflower for game birds that produces seed in 90-120 days. Grows 4-5 feet tall. Provides good cover for hunters while the small, black seed attract dove, quail and turkey.

Clearfield Sunflowers. A variety similar to peredoviks. The term "Clearfield" refers to a plant that has been selected and bred for tolerance to the imidazolinone family of herbicides. Beyond herbicide is currently the only imadazolinone herbicide registered for use on Clearfield sunflowers.

Buck Forage Oats. Side by side, Buck Forage Oats are preferred during hunting season compared to any other tested crop.

WGF Milo. Wild Game Food Milo is an early maturing plant that is 26 to 30 inches in height. The seed becomes edible at maturity and is readily consumed by upland game birds and deer.

German Millet. This annual does well on more than average moisture. Small seed makes excellent feed for waterfowl, upland birds, and songbirds.

Japanese Millet. Attracts a wide variety of wildlife including deer, ducks, quail, and dove. This millet seed is used most in food plots for ducks as it does well in areas that are wet and can be flooded at maturity to make duck ponds.

Purple Top Turnips. An annual member of the brassica family, purple top turnips produce a globe type bulb as well as top growth from stems and leaves. Readily eaten by deer after the first freeze when the plant releases more sugars into the leaves.

Forage Turnips. Produces a bulb shaped more like a soda can, much more stems and leaves compared to purple tops, plus better disease resistance.

Chicory. Its ability to accumulate minerals naturally, and as a natural wormer, make Chicory an excellent choice for wildlife food plots. Chicory leaves are higher in nutritional and mineral content than alfalfa and most cool season grasses.

Cover Crops

Grasses

Bounty Annual Ryegrass. Bounty is an early-maturing diploid annual orchardgrass with outstanding yield potential. Bounty can be used for pasture, hay or silage and is well adapted to grass and legume mixes. Excellent disease resistance, seedling vigor, quick recovery after cutting and drought tolerance make a great choice.

Spring Oats. Not just for spring grain production anymore. When planted in the fall, spring oats will produce more forage than any other fall planted grass. When combined with a brassica the feed quality is excellent. The fact that they will not overwinter makes this an excellent fall choice when spring termination is not desired, and the ground cover provides a mellow mulch before minimal till or no till crops. This is a certified variety that has worked very well in our region for both, grain production, and forage production.

Winter Grain Rye. Rye is the hardiest of the cereal grains and can be seeded later in the fall than other cover crops while still providing considerable dry matter, an extensive soil-holding root system, significant reduction of nitrate leaching, and cool season cereal cover for absorbing unused soil N.

Triticale. Triticale is a cross between wheat and cereal rye. Triticale has a fibrous root system that makes it an excellent choice for preventing erosion, scavenging for nutrients, and also building soil structure. Although less winter hardy than grain rye, triticale is longer to maturity with a yield potential very similar, reaching heights of four to six feet. Common triticale varieties do not increase in height as quickly as rye and are therefore easier to manage in the spring. Triticale's primary advantage over wheat is that it can be sown earlier in the fall, leading to more growth. Triticale has excellent grazing and forage values, and works very well when used in a mix with other cover crops.

Barley. Barley does an excellent job of preventing erosion, suppressing weeds, building organic matter, and scavenging for nutrients. Barley is a quick source of abundant biomass that, along with its thick root system, can improve soil structure and water infiltration. Being both easy to grow and terminate, barley provides exceptional erosion control and weed suppression in lighter soils. It's a fine choice for reclaiming overworked, weedy, or eroded fields while improving soil tilth and nutrient cycling. Barley has an upright posture and relatively open canopy that makes it a fine nurse crop for establishing a forage stand. Spring barley varieties will not overwinter.

Legumes

Hairy Vetch. Few legumes match hairy vetch for spring residue production or nitrogen contribution. Widely adapted and winter hardy, hairy vetch is a top N provider, contributing from 120 to 150 lbs N/A. Hairy Vetch grows slowly in fall, but root development continues through winter, leading to vigorous spring growth helping it out-compete weeds. An adequate stand of hairy vetch can replace all or most N fertilizer needs for late-planted crops. Hairy vetch improves topsoil tilth, creating a loose and friable soil structure. Vetch doesn't build up long-term soil organic matter due to its tendency to break down completely. When planted together, grain rye/hairy vetch mixtures mingle and moderate the effects of each crop. The result is a "hybrid" cover crop that takes up and holds excess soil nitrate, fixes N, stops erosion, smothers weeds in spring.

Peas. Peas can be put into 3 categories. The first are known as Spring Field Peas, normally planted in early spring with oats or barley when temperatures are on the rise, although when planted in the fall will grow faster than winter peas and thus produce more forage for fall harvest. The second are Cowpeas which are a summer planted pea usually planted with a summer annual. Third are Winter Field Peas which, with a winter grain, provide additional tonnage and crude protein in the harvested forage the next spring. All Peas are excellent nitrogen fixers, establish quickly, and are an excellent source of high protein forage.

Crimson Clover. Crimson Clover with its rapid, robust growth, crimson clover provides early spring nitrogen for full season crops. Good nitrogen fixation makes crimson an excellent break crop for continuous corn producers. Crimson clover adds to the soil organic N pool by scavenging mineralized N and by normal legume N fixation. Crimson clover has a simple taproot making it easy to kill mechanically or with chemicals.

Berseem Clover. A fast-growing summer annual, berseem clover is a heavy N producer and the least winter hardy of all true annual clovers. This, plus an active root system and abundant biomass, makes it an ideal winterkilled cover before corn or other nitrogen demanding crops.

Yellow Blossom Sweet Clover.
Sweet clover has a determinate taproot, with the ability to affix over 100# of N/A. Sweet clover is the most drought-tolerant of forage legumes, is quite winter-hardy, and can extract and then release phosphorus, potassium and other micronutrients that are otherwise unavailable to crops. Sweet clover loosens soil structure, creates organic matter, and produces better soil tilth.

Eco-Till Radishes. Eco-Till Radish is a Daikon type forage radish variety specifically developed for fall/winter cover crop applications. These radishes offer impressive benefits to the soil and the environment including the reduction of soil compaction, improved nutrient recycling, increased organic matter, enhancement of soil tilth and suppression of weeds, to name a few. The thin, lower portion of the taproot can grow to a depth of six feet or more while the thick upper portion of the taproot can grow to a length of 24 inches. This taproot creates vertical holes in the soil profile that breaks up soil compaction and improves soil tilth, while also improving water infiltration, aeration and fertilizer efficiency for succeeding crops.

Impact Forage Collards. With an ability to thrive in conditions below zero for several days without snow cover, it is one of the most winter hardy brassicas available. On the other extreme, once Impact's large taproot penetrates deep into the soil profile, it can still be productive during the hot, dry summers. Impact can tolerate close grazing pressure due to the growing point being near the soil surface, which also allows for fast regrowth after grazing.

Purple Top Turnips. Turnips suppress weeds in the fall with their rapid growth and canopy closure. Turnips are unaffected by early frost, but will likely be killed with temperatures fall below 25°F for 72 consecutive hours.

Forage Turnips. Features a leafy, upright growth habit and tankard shaped bulb. Ideal leaf to bulb Ratio (60%-40%), good leaf retention and early maturity (60-90 days) make these an excellent choice for summer or fall forage production.

Rape. Rape is a cool season plant of the brassica family that produces large, flat leaves that grow 12-20 inches long, and 8-15 inches wide, with plant height reaching 2-4 feet. Like other brassicas, rape will have a quick fall growth with great biomass production, providing outstanding fall cover.

Buckwheat. Buckwheat is the speedy short-season cover crop that establishes, blooms, and reaches maturity in just 70-90 days. It is easy to kill and has a strong weed suppressing ability. Buckwheat's dense fibrous roots cluster in the top 10 inches of soil, providing and extensive root surface area for the uptake of phosphorus and some minor nutrients that are otherwise unavailable to crops.

Variety of Seed	Seeds/ LBS	LBS/ BU.	Planting Rate LBS/Acre		Seeding Depth	Planting Dates	Days Till Emergence	Uses	Life Cycle
			Monoculture	In Mix	Inches				
Alfalfa	227,000	60	15 to 20	6 to 14	1/4 to 1/2	March - May, August - September	7	Hay, Silage, Pasture	Perennial
Barley	14,000	48	90 to 120	30 to 50	1 1/2	March - April, August - October	7	Pasture, Grain, Silage	Annual
Birdsfoot Trefoil	370,000	60	8 to 10	4 to 8	1/4	February - May, August - September	7	Pasture	Perennial
Bluestem, Big	165,000	22	8 to 12 PLS		1/4 to 1/2	May - June	28	Hay, Pasture	Perennial
Bluestem, Little	237,000	n/a	6 to 8 PLS		1/4 to 1/2	May - June	28	Pasture	Perennial
Brome, Smooth	138,000	14	15 to 20	3 to 10	1/4 to 1/2	March - May, August - September	14	Hay, Pasture	Perennial
Buckwheat	15,000	52	40 to 55	5 to 10	1/2 to 1	June - July	7	Cover Crop, Grain	Annual
Chicory	426,000	n/a	4 to 5	2 to 3	1/8 to 1/4	April - May, August - September	7 to 21	Pasture, Wildlife	Intermediate
Clover, Alsike	728,000	60	7 to 8	1 to 3	1/4 to 1/2	February - May, August - October	7	Hay, Pasture	Perennial
Clover, Crimson	135,000	60	18 to 20	3 to 6	1/4 to 1/2	July - September	7 to 10	Cover Crop	Annual
Clover, Ladino White	768,000	60	4 to 6	2 to 4	1/8 to 1/4	February - May, August - October	7 to 10	Hay, Pasture	Perennial
Clover, Medium Red	272,000	60	12 to 16	4 to 8	1/4 to 1/2	February - May, August - October	7	Hay, Silage, Pasture	Intermediate
Collards	145,000	50	5 to 8	2 to 4	1/2	March - October	7	Cover Crop, Pasture	Annual
Crownvetch	138,000	60	20 to 40	5 to 10	1/2	March - May, August - September	14	Ground Cover	Perennial
Eastern Gamagrass	724,000	n/a	8 to 10 PLS		1/2	May - June	14	Hay, Pasture	Perennial
Fescue, Tall	227,000	25	20 to 25	10 to 15	1/4 to 1/2	March - May, August - September	14	Hay, Pasture, Waterway	Perennial
Hairy Vetch	16,000	60	20 to 25	5 to 8	1	August - October	14	Cover Crop, Pasture	Annual
Indiangrass	200,000	10	8 to 12 PLS	2 to 6 PLS	1/2	May - June	28	Pasture	Perennial
Kentucky Bluegrass	2,177,000	14	10 to 15	4 to 10	1/4	February - May, August - September	28	Lawn, Pasture	Perennial
Lespedeza, Unhulled	238,000	25	25 to 30		1/4 to 1/2	March - April	14	Hay, Pasture	Annual
Millet, German	220,000	50	20 to 25	2 to 8	3/4	May - July	10	Hay, Wildlife	Annual
Millet, Japanese	143,000	35	20 to 25	2 to 8	3/4	April - July	10	Hay, Wildlife	Annual
Millet, Pearl	60,000	52	20 to 25	4 to 8	1	May - July	7	Pasture, Silage	Annual
Millet, White Proso	80,000	56	20 to 25	2 to 8	3/4	May - July	10	Wildlife	Annual
Oats	16,000	32	64 to 96	20 to 32	1 1/2	March - April, August - September	10	Cover Crop, Hay, Pasture	Annual
Orchardgrass	416,000	14	10 to 15	3 to 6	1/4 to 1/2	March - May, August - September	18	Hay, Pasture	Perennial
Peas, Field	2,000	60	60 to 80	10 to 20	1/2 to 1	March - April, August - September	7	Hay, Pasture, Silage	Annual
Peas, Cowpeas	3,000	60	60 to 80	10 to 20	1/2 to 1	May - June	8	Hay, Pasture, Silage	Annual
Radish	39,000		4 to 6	2 to 3	1/2 to 1	May - September	4	Cover Crop	Annual
Rape	145,000	50	5 to 8	2 to 4	1/2	April - August	7	Cover Crop, Pasture, Silage	Annual
Red Top	4,990,000	14	4 to 5	1 to 2	1/4	March - May, August - September	10	Pasture, Erosion Control	Perennial
Reed Canarygrass	480,000	47	8 to 10	4 to 6	1/4 to 1/2	March - May, August - September	21	Hay, Pasture	Perennial
Rye Grain	18,000	56	90 to 120	40 to 56	1 1/2	March - April, August - November	7	Cover Crop, Hay, Pasture	Annual
Ryegrass, Annual	227,000	24	20 to 30	4 to 12	1/4 to 1/2	February - May, August - October	14	Cover Crop, Pasture, Silage	Annual
Ryegrass, Italian	227,000	24	20 to 30	8 to 12	1/4 to 1/2	February - May, August - September	14	Pasture, Silage	Biennial
Ryegrass, Perennial	227,000	24	20 to 30	4 to 10	1/4 to 1/2	February - May, August - September	14	Hay, Pasture	Perennial
Sideoats Gramma	160,000	n/a	6 to 12 PLS		1/2	May - June	28	Pasture	Perennial
Sorghum, Forage	17,000	56	5 to 8	2 to 4	1	May - July	10	Pasture, Silage	Annual
Sorghum, Grain	16,000	56	5 to 10	3 to 6	1	May - June	10	Grain, Pasture, Wildlife	Annual
Sorghum-Sudangrass	21,000	56	25 to 35	3 to 8	1	May - July	10	Hay, Pasture	Annual
Sudangrass	43,000	40	20 to 25	2 to 8	1/2 to 1	May - July	10	Hay, Pasture	Annual
Sunflowers, Peredovik	7,000	32	25 to 40	4 to 6	1	May - July	7	Wildlife	Annual
Sweetclover	259,000	60	12 to 15	2 to 6	1/4 to 1/2	February - May, August - October	7	Cover Crop, Pasture	Biennial
Switchgrass	389,000	55	4 to 8 PLS		1/2	April - May	21	Hay, Pasture	Perennial
Teff Grass	1,300,000	n/a	6 to 10		1/8 to 1/4	June - July	10	Hay	Annual
Timothy	1,152,000	45	8 to 12	2 to 6	1/4 to 1/2	February - May, August - September	10	Hay, Pasture	Perennial
Triticale	15,000	48	90 to 120	20 to 50	1 1/2	March - April, August - October	7	Cover Crop, Hay, Pasture	Annual
Turnips	220,000	55	4 to 8	1 to 2	1/2	April - September	7	Pasture, Wildlife	Annual
Wheat	12,000	60	90 to 150	20 to 50	1 1/2	March - April, August - October	7	Grain, Pasture, Wildlife	Annual

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