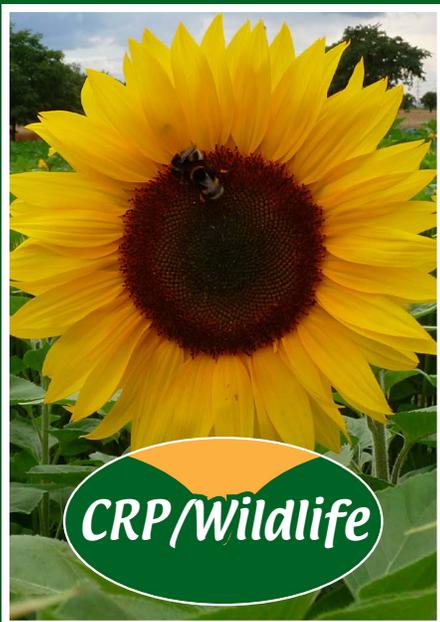


# 2019 Product Guide

Your seed source for hay and pasture forages, summer annuals, small grains, cover crops, turf seed, and specialty 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, Alice	768,000	60	4 to 5	1/2 to 1	1/8 to 1/4	February - May, August - October	7 to 10	Pasture	Perennial
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	15 to 20	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
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, Austrian Winter	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	2 to 4	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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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 new "Dual Purpose" alfalfa to 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 winterhardiness, and an elite agronomic makeup ensure Optimum LH is an excellent choice where straight alfalfa stands are desired.

### **430RRLH.** WDI - 30/30, FD: 4

430RRLH is the latest generation of Genuity® Roundup Ready® leafhopper resistant alfalfa varieties that lets you produce cleaner, higher quality alfalfa for greater profit potential. 430RRLH 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.

### **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 alfalfa. 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.

**Freedom!** An exceptional clover for use in haying situations. Fine stems with less pubescence help this clover dry down fast. Freedom Red Clover is a multi-year clover. Barenbrug

### **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.

**Pinnacle Ladino Clover.** Pinnacle was developed for today's high-performance pasture needs. Expect excellent establishment and seeding vigor, along with cool season productivity and the aggressive season long growth necessary to maximize grazing. Pinnacle has a very upright growth habit with numerous fine stems and large dark green leaves. This variety was bred for superior persistence and can stand up to leaf disease and virus pressure.

**White Dutch Clover.** Small leaved white clover with a prostrate growth that is used primarily in turf stands.

**Alice White Clover.** Alice has large leaves and is a prostrate growing ladino clover with medium height making it an excellent companion in diverse pastures. Work well when frost seeded and can also be planted late summer/early fall. It provides great nitrogen fixation, and has a long life expectancy, making it a great addition to any pasture.



## 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 produces better soil tilth.

**Crimson Clover.** With its 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.

# 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.

**STF-43** is a premium blend of late maturing, soft-leaf tall fescues. This blend is formulated with varieties that provide exceptional levels of dry matter. STF-43 is well-suited for both hay and pasture. Barenbrug

**Baroptima Plus E34.** Soft-leaf fescue with beneficial endophyte. High energy and high yields with three times more persistence than endophyte-free varieties. Barenbrug

**KY31 Premium.** Early maturing with endophytes present. Excellent for waterways, levees, or pond dams. Makes excellent winter stockpile.



## 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.

**Extend Orchardgrass.** 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.

**HLR.** A blend of intermediate to late maturing varieties that exhibits the best of the Barenbrug breeding program. High leaf-to-stem ratios provide improved digestibility and energy. Increased disease tolerance along with high yield potential make HLR a perfect forage choice. Barenbrug



## 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.

**Summit.** Fast spring green-up, early maturity, improved summer regrowth, and great palatability, make Summit an excellent choice for pasture or hay production. FSG

**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.

**Presto.** Presto is a medium-late maturing timothy that offers great winterhardiness and is easily established. This timothy was bred to co-exist with other grasses and legumes and therefore is extremely persistent and reliable in all grass-legume mixes. Presto is a proven high yield producer.



## Bromegrass

**Peak Brome.** Peak Brome was developed specifically for persistence and yield. This bromegrass features superior vigor, good winterhardiness, foliage disease resistance and excellent seed quality. Growing 20 to 40 inches tall, Peak Smooth Bromegrass produces higher dry matter yields, recovers quickly after cutting, and is highly palatable to livestock.

## Ryegrass

Ryegrasses are cataloged into 4 categories.

<i>Annuals</i>	6 to 8 months
<i>Italians</i>	6 to 15 months
<i>Intermediates</i>	2 to 3 years
<i>Perennials</i>	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. DLF

**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. DLF

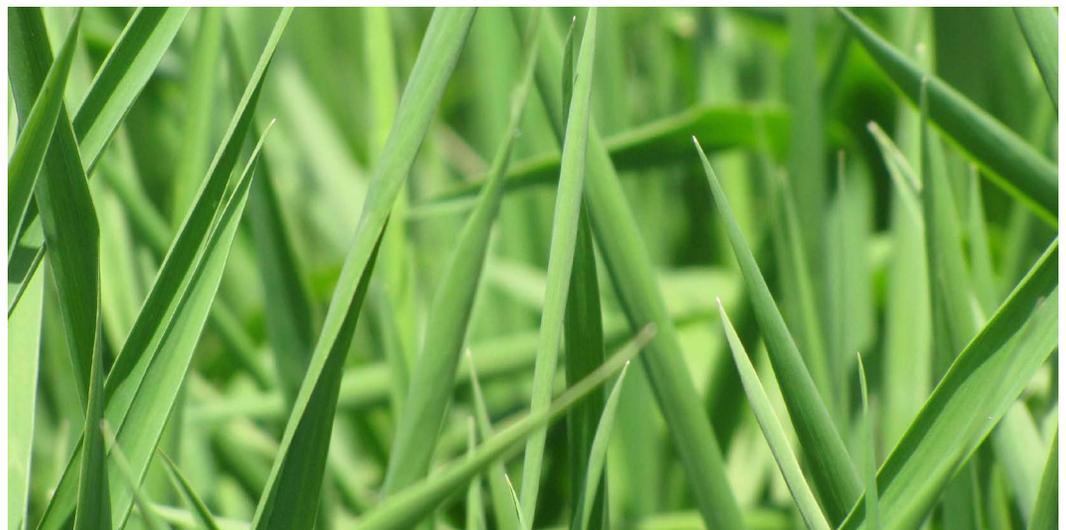


## Redtop

**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

**Palaton.** A widely adapted, low alkaloid variety that can be used for hay production, waterways or grazing. Very drought tolerant but also does well on wet soils.



# 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.

**GV20 Hay and Pasture Mix.** 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.

**GV 30 Alfalfa Plus.** Green Valley blend consisting of improved varieties of red clover, orchardgrass, timothy, and alfalfa that gives outstanding hay production.

**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.

**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 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.



# 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 Shelby 427 Spring Oats.**

Shelby 427, when compared to Jerry and Reeves, has superior grain yield, test weight, crown rust and lodging resistance. It has a medium plant height and an early medium maturity. It also has a high groat percentage, very good stem rust and barley yellow dwarf virus resistance. Shelby 427 has been a very reliable variety both as a forage producer and grain yield.



### **Cereal Grain Rye.**

Rye is the most winter-hardy of all cereal grains, tolerating temperatures as low as -30°F once it is well established. It can germinate and grow at temperatures as low as 33°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.

### **Triticale.**

Triticale is a highly versatile cereal forage for grazing, silage, hay or as a cover crop. Created by combining wheat and rye into a new species, triticale combines the advantages of both parent species for grain and forage. It develops rapidly in the spring for high quantity and high-quality silage or hay.

### **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. 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.

### **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

**Barkant.** Diploid turnip variety that has tankard type bulbs with good top growth that can produce up to 5 times more yield than standard purple top turnips. High sugar content provides winter hardiness and increased palatability. Barenbrug

**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 new 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. FSG



## Chicory

**Forage Feast.** High summer growth combined with excellent forage quality and elevated mineral content makes this a great choice for interseeding into existing forage stands. Bred for bolting resistance which makes it highly palatable. Barenbrug

## 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.

**Crown Vetch.** A cool season, hardy, perennial legume. It is not a true vetch, although it resembles common and hairy vetch. Crown Vetch spreads from rhizomes and will form a dense cover. It has been used for soil stabilization and as an ornamental for many years. It is a non-bloating legume.



## 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.

**Cowpeas.** A warm season plant that establishes easily, provides high yields, and is better suited than soybeans for planting with summer annuals for ensilages. Cowpeas also have the ability to grow on poorer soils and are sometimes used to rehabilitate areas by growing as a green manure crop.

**Double Ought Peas.** Double Ought peas are dual purpose peas that can be used for spring production as well as winter. A blend of Whistler Winter Peas and Icicle Peas, Double Ought combines the semi leafless, excellent standing variety of Whistlers with the exceptional forage production of icicle. Both varieties are white blossomed with excellent palatability and superb cold tolerance.



## 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



*Alta Seeds is the premium seed brand of Advanta US, an operating unit of global seed company Advanta. Alta Seeds provides farmers with high-quality hybrids of grain sorghum and sorghums for forage bred from the proprietary genetics of Advanta.*

**AF7232.** ADV F7232 is a medium season forage sorghum with excellent yield for maturity and superior forage quality potential. The BMR-6 forage sorghum provides exceptional nutritional value. The brachytic dwarf trait adds a much tighter distance between internodes, allowing for better standability. ADV F7232 is adaptable and well-suited for full or limited irrigation or high yield dryland. 95-100 Days to soft dough stage.

**AF7401.** AF7401 features a genetic combination of BMR-6 and Brachytic Dwarf creating a compact, leafy, prolific plant. A 110 day to soft dough plant that will yield with taller sorghums giving the best of both worlds. Alta

## Sorghum Sudangrass

**AS5201.** AS5201 is a non BMR, small seeded, thin stemmed plant type variety that utilizes the Dry Stock Trait to create an excellent dry hay product. Alta

**AS6201.** AS6201 is an easy to manage sorghum/sudangrass product featuring the BMR-6 characteristics. It has shown an 18.9% average increase in feed value compared to conventional forages. It is widely adapted and features increased utilization and efficiency from the BMR-6 gene.

**AS6402.** AS6402 represents the newest generation of hybrid sorghum-sudangrass products. AS6402 combines the BMR-6 gene, and the Brachytic dwarf trait, creating a very compact, leafy and prolific plant with 70 days to boot. Alta

## Sudan X Sudangrass

**AS9302.** AS9302 is a Brachytic Dwarf, BMR-6 hybrid sudangrass with very fine stems and tremendous regrowth. This product can be cut/grazed at a lower height and has a quick dry down time making it one of the most versatile forage products on the market.

## Millet



**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.

**Pearl Millet.** A bushy type hybrid with high yield potential which is achieved from a plant structure consisting of virtually all leaves. Quick to harvest, taking only 63 days to reach boot stage. Pearl Millet has a high level of tolerance to many pathogens and high humidity. FSG

**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.

## 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.

## 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.



**Moxie.** Moxie teff is 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, Moxie combines excellent forage quality with high yield during a relatively short growing season.

# Native Grasses

**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.



**Mainstay.** A new turf type fescue blend for areas where low maintenance is preferred. This blend is comprised of two dwarf type tall fescues that offer slower growth and a shorter plant height compared to traditional tall fescues. Superior turf quality and unsurpassed density coupled with longer intervals between mowings make this a mix we are excited about.

**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.

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

**KY31 Fescue.** Common field/lawn type fescue that provides a good sod at an economical price.

**ASP0112-Ryegrass.** An improved perennial variety that sets the standard for quality and performance with great disease package and salt tolerance.

**98/85 KY Bluegrass.**

**Geronimo KY Bluegrass.** An improved variety that provides high performance, quick germination, dense growth, disease resistance and a dark green color.



## 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.



**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.

**Barkant Turnips.** A forage turnip variety. Produces a bulb shaped more like a soda can, much more stems and leaves compared to purple tops, plus better disease resistance.

**Forage Feast Chicory.** A good component to put in wildlife mixes. Forage Feast Chicory has better resistance to bolting than other varieties leading to more leave and higher energy.



## 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.



**Shelby 427 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.



**Double Ought Peas.** Double Ought Peas are a blend of Whistler Winter Peas and Icicle Peas creating a dual-purpose pea that mixes well with cereals and grasses to provide fall foliage when planted after the hottest days of summer. When planted in the fall they add great forage quality to spring harvested forage. Double ought peas are winter hardy and provide nitrogen fixation, fast germination, weed suppression, and good biomass production.



**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.



**Barkant Turnips.** Barkants are a forage type turnip, producing more leaf and stem material when compared to purple top turnips. This increase of production makes Barkants the variety of choice when planning to graze cover crop acres. Barkants also offer a better disease package than purple top turnips, which helps greatly when seeding turnips on the same acres year after year. Much like purple top turnips, Barkants are known for their rapid fall growth, great biomass production and nutrient scavenging ability.

**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 an extensive root surface area for the uptake of phosphorus and some minor nutrients that are otherwise unavailable to crops.





## Why Should I?

**Why should I?** This may be a little blunt, but all other questions about cover crops should wait to be answered until this one is. So... Why should you consider adding cover crops to your farming practice? You'll need to decide what your motivating factor is.

**Is it financial?** Anyone can guarantee this will affect your bottom line, but in which way? Erosion control? Top soil is being lost at an alarming rate. We have new ditches every year, old ditches are now gullies, and our topsoil is filling up the lakes that supply drinking water to our cities. **How important do you think it is to increase water infiltration?** If more water went into the soil, then perhaps these 3" to 5" rain events would not hurt as much, and the ½" rains would be more beneficial. **What about weed control?** There is a never-ending onset of new chemicals and formulations, let alone the advent of the latest GMO seed, but we are still losing that one. **Of course, there is always the fertility issue.** How much is lost through tile lines, when a green growing plant will lock in excess fertility. **And while talking about that green growing plant, just how will it affect the next crop?** Will it increase or decrease next year's yield? If livestock is involved in the debate, the answer should come easier. Added forage is almost always welcome, especially early winter and early spring. Of course, this will require a change in management practices, which can be easy to implement if the weather cooperates. **We haven't mentioned the biggest driving factor yet.** Government involvement. The troubling question with this is, will you continue what you've started if the programs cease? The benefits of most of these practices come with time. Time for you and your land to become accustomed to the new practices. Time to receive the benefits of your extra work and management. **With or without added financial incentive, will you stick it out?**

There are many answers to each of these questions. As many different answers as there are people. If you ask enough questions and keep an open mind, you will be able to collect enough knowledge to help you make the right decision for you. Conventions, meetings, articles, the internet, and individuals can all supply knowledge, **BUT** you will have to supply the wisdom.

Here's my answer to the question. **Why should I? Stewardship!** I believe I will be held accountable for the condition in which I leave my farm. I make decisions daily that will affect the quality of the land that I own. Every decision I make has consequences. I may not always make the right decisions, but I plan leave my farm in better shape than I received it. I will be here on this earth a very short time and I want my children and grandchildren to see that I did the best I could with what GOD gave me.

David Otte  
Forage Manager  
Green Valley Seed



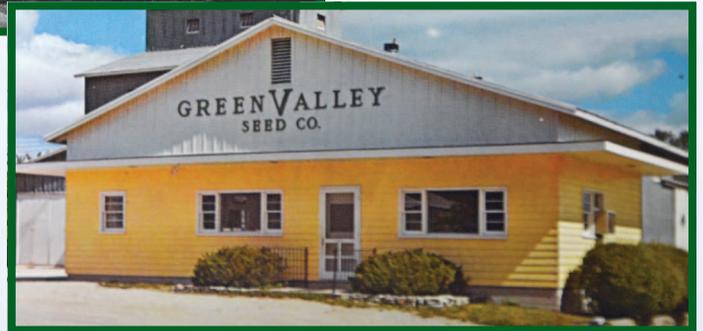
## About Us

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.

**P.O. Box 35**  
**121 College**  
**Kahoka, MO 63445**  
**Phone: 800-748-7943**  
**Fax: (660) 727-3343**  
**[www.gvseed.com](http://www.gvseed.com)**



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