Forage Resource Guide

Byron Seeds™

KingFisher®

RED TAIL

Seed for Livestock Performance

Welcome to Byron Seeds

Dear Farmer Friends,

Byron Seeds is committed to providing the best forage for livestock. Having livestock as our focus changes how we view corn, alfalfas, grasses and small grains. We are on a continual global search to discover the best in forages and grain in support of our goal to improve feeding efficiency in dairy, cattle, poultry and hogs.

The superior genetics that is the result of our ongoing, exhaustive research is backed by Byron Seeds' dedicated service and support. On our team are some of the best forage experts in the industry, and they are ready and eager to assist you in proper variety placement and management.

Building soil with cover crops, crop rotations and good farm management practices is also very important to all of us at Byron Seeds. Forages high in sugars, nutrients and proteins need soils that are healthy and well balanced to produce at peak performance.

Our KingFisher and Red Tail corn hybrids have been selected from a wide genetic base for the best in agronomics and digestibility. Because of this broad selection and attention to genetics that produce corn with outstanding potential to boost livestock performance, we now have a silage corn lineup like no other. Our on-farm data show that higher fiber digestibility and higher starch availability in grain have a huge positive effect on meat and milk production.

And when it comes to alfalfa and grass, good feed quality is all about high NDFD. Every five-point increase in NDFD equals more milk or more meat. Once again, you realize a huge savings in feed rations and a herd with superior body condition that produces high milk yields.

It's important to develop a cropping plan to maximize our forages and cover crops for production and soil health. Our Certified Forage Specialists can guide you in creating cropping plans that maximize digestible fiber per acre. They are eager to share years of experience and knowledge for your benefit. Refer to the listing at the end of this resource guide and contact your local specialist today. You'll be glad you did!

Cordially,

Samuel S. Fisher

Samuel S. Fisher

How to Use the Resource Guide

Growing Zones

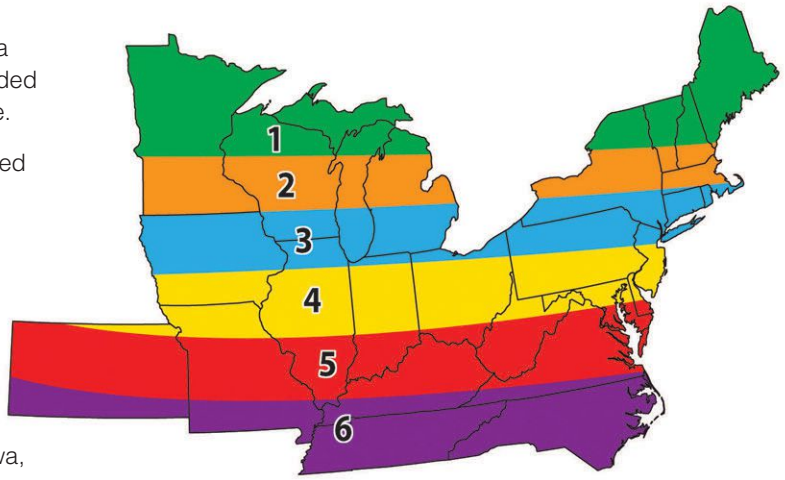
Below the name of each variety listed in this resource guide is a zone recommendation. The variety does best in the recommended zone(s). The map on this page shows the location of each zone.

There may be a management recommendation as well. The listed variety will do well in the management zone(s) if good farming management practices are implemented.

Zones: These zones are the recommended location(s) for the variety listed.

Management: An acceptable variety in this zone with good farm management, soils, and fertility.

Maturity Zones pictured: Minnesota, Wisconsin, Michigan, Iowa, Kansas, Missouri, Illinois, Indiana, Ohio, Kentucky, North Dakota, South Dakota and Tennessee.



Replant Policy

Byron Seeds will replace the seed of our Premium Products that failed to germinate and emerge, as determined by a Byron representative. Premium Products that qualify for the Replant Policy are as follows: KingFisher products, Premium perennial grasses and summer annuals. Byron Seeds also offers a 50% replant on any competitor's premium products.

EXCEPTIONS

Corn that is planted prior to or after the state's insurable dates is not covered under this Replant Policy. Seed that is frost seeded or interseeded into existing stands is excluded as are non-KingFisher annuals, cover crops and turf grass.

GOOD FARMING PRACTICES

Byron Seeds will not replace seed if planting was not done under good farming practices. Good farming practices include, but are not limited to, proper seed bed preparation, good weed control at planting, proper seed depth and recommended seed-to-soil contact. To qualify for a replant, a site inspection and approval by a qualified Byron representative may be required.

TERMS

Replant requests must be received within 6 months of the planting date. Freight charges apply. Other terms and conditions may apply.

ORGANIC SEED

Byron Seeds is a supporter of the organic farming movement. We believe that there is a need for good, healthy forage for our livestock, and good, healthy food for our families. It seems that others agree with us because there is an ever-increasing demand for a source of unmodified food and forage.

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Alfalfa

Alfalfa is a legume that can fix most of its own nitrogen, is deep-rooted to give drought tolerance, and yields well during the hotter part of the summer. On many farms today, alfalfa stands are only in production for three to four years. Byron Seeds selects only the highest-performing varieties for maximum yields throughout the life span of the stand.

The low-lignin industry alfalfas are good quality but they have a drag on yield. Our KingFisher alfalfas are not only excellent in quality, but they actually ***increase*** yield. KingFisher alfalfas have improved fiber digestibility on farms across the country. KingFisher alfalfas and alfalfa/grass mixes also have produced award-winning yields of high-quality forages that have garnered many honors and championships in the rigorous, unbiased World Dairy Expo Forage Analysis Superbowl.

Management

Many modern varieties can handle 28-day cutting schedules, and some elite varieties need that type of management to perform their best. One very critical aspect of alfalfa management is knowing when to take the last cutting in the fall. Alfalfa needs five weeks of growth before a killing frost (25°F). In some areas, another cutting can be taken after frost when the alfalfa is dormant.

Higher fall dormancy numbers in alfalfa indicate early spring and late fall growth, thus increased yield. For winter survival, the lower the winter survival number, the more winter-hardy the variety.

Establishment

Alfalfa can be planted in the spring or late summer, but we advise late summer when possible. If spring sown, a nurse crop of grass or small grain is advisable to maximize the tonnage in the seeding year. We usually advise seeding grass with alfalfa to increase tonnage and produce a better quality feed for the life of the stand.

Good ratios of sulfur, boron, and phosphorus as well as a pH above 6.5 are critical for alfalfa. Nitrogen is key for good grass yields.

Alfalfa exhibits autotoxicity, which means established plants (older than 6 months) give off compounds that prevent new alfalfa seedlings from establishing.

KingFisher alfalfas are available with a SureStand conventional coating or a SureStand coating approved for organic.

SYNERGYX BLAZE SYNERGYX IGNITE SYNERGYX FORTRESS SYNERGYX HYDRO-POWER

KingFisher SynergyX alfalfas are intelligent alfalfa blends designed to increase yield, reduce risk, and extend life through the varying root systems and the synergistic teamwork of the high-performing alfalfa varieties that compose the blends.

Each of our four SynergyX blends has a unique place and focus:

- KF SynergyX Blaze HD^2 – focused on highest quality and highest disease resistance for best soils
- KF SynergyX Ignite—focused for very high yields
- KF SynergyX Fortress—focused on rugged, high-traffic tolerance with a sunken crown component
- KF SynergyX Hydro-Power—focused for lower, wetter soils with a red clover component.

Because of the unique strengths they bring to the farmer, KingFisher SynergyX alfalfa blends have exploded across the Midwest! Don't miss out on their powerful advantages.

KF SynergyX Blaze HD^2

ZONES: 1, 2, 3, 4, 5, 6

- Blaze is a blend of high-performing alfalfas naturally bred for reduced crosslinking with lignin and lower UNDF240.
- Blaze brings strong disease resistance (APH2) and increased NDFD30 and protein digestion.

Disease Resistance	30-35
Dormancy	4.5
Winter Survival	1.8
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

KF SynergyX Ignite

ZONES: 1, 2, 3, 4, 5, 6

- Ignite is a combination of high-performing alfalfas with superior quality, disease resistance, and varying root systems for the best alfalfa managers.
- This mix has very high yield potential while having reduced crosslinking with lignin.

Disease Resistance	30-35
Dormancy	4.5
Winter Survival	1.8
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

KF SynergyX Fortress

ZONES: 1, 2, 3, 4, 5, 6

- Fortress is a blend of rugged, high-traffic-tolerant alfalfas.
- This mix includes sunken crown, branch root, creeping, and APH2 resistant alfalfas.

Disease Resistance	30-35
Dormancy	4.5
Winter Survival	1.8
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

KF SynergyX Hydro-Power

ZONES: 1, 2, 3, 4, 5, 6

- Hydro-Power is a combination of stress-tolerant alfalfas that handle variable soil types and will make award-winning dry hay, baleage, or haylage.
- It also has a persistent red clover component that will increase the yields and the fiber digestibility of this strategic mix.

Disease Resistance	30-35
Dormancy	4.0
Winter Survival	2.0
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

30 out of 30 is the highest resistance rating. 35 ratings indicate resistance to APH2. Higher fall dormancy numbers indicate early spring and late fall growth.The lower the winter survival number, the more winter-hardy the variety. More asterisks means better persistence.

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

SynergyX Alfalfas Boost Yield

The strength of our KingFisher SynergyX alfalfa blends is the power of synergy—mutually advantageous combined action. Instead of competing, the varieties in the SynergyX blends work together with their strengths to produce yield and longevity above what each individual variety could do by itself.

The varying root systems of SynergyX blends consistently feed the plants for better resilience in extreme weather patterns. SynergyX alfalfas fill a greater portion of the soil profile with roots, producing more root exudates for better soil health. This translates into better yield and persistence for the stand.

Most fields have a variety of high and low spots as well as soil types. Each variety in a SynergyX blend performs best in different areas. When planted in a field, these differences work together to bring a consistency in the yield across the field. Raising the yields of the poor spots in your field and bringing greater consistency to every square foot is probably the biggest way our SynergyX alfalfas bring more yield to your farm.

Byron Seeds
SYNERGYX

The SynergyX alfalfa program is a result of 30 years of alfalfa research and experience.

30 YEARS OF ALFALFA RESEARCH AND PRODUCTS

The Starting Point

1995 Byron Seeds begins offering alfalfa and grass seed

2002 KingFisher premium alfalfas introduced

Premium Introduction

Two Decades

2015 Byron Seeds celebrates 20 years of alfalfa expertise

2020 KF SynergyX alfalfas introduced

Intelligent Combinations

A Research Milestone

2025 30-year Anniversary of Byron Seeds' alfalfa portfolio

KingFisher alfalfas are available with a SureStand conventional coating or a SureStand coating approved for organic.

KF Stronghold

ZONES: 1, 2, 3, 4, 5, 6

- Stronghold features a sunken crown for great traffic tolerance.
- The branched roots keep the plant firmly in the ground, helping avoid winterkill.

Disease Resistance	35
Dormancy	4.3
Winter Survival	1.8
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

KF 425HD

Frequent Finalist at the World Forage Superbowl

ZONES: 1, 2, 3, 4, 5

- This variety works very well for feeding programs dependent on fiber digestibility from alfalfa.
- KF 425HD is naturally bred for reduced crosslinking with lignin.
- One of our most excellent varieties; very popular!

Disease Resistance	30
Dormancy	4.5
Winter Survival	2.0
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT | World Forage Analysis Superbowl

KF 406A2

ZONES: 1, 2, 3, 4, 5, 6

- Our best disease-resistant variety including Aphanomyces Race 2.
- This branch-rooted variety works well on marginal soils prone to disease and wet conditions.

Disease Resistance	35
Dormancy	4.0
Winter Survival	2.0
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

KF 403CR

ZONES: 1, 2, 3, 4, 5

- This variety is super persistent.
- It is good for grazing because it is a creeping alfalfa that spreads by rhizomes, healing pastures.

Disease Resistance	30
Dormancy	4.0
Winter Survival	2.0
Forage Quality	Excellent
Leaf to Stem	Good
Persistence	*****

KingFisher 100% REPLANT

KF 401B

ZONES: 1, 2, 3, 4, 5, 6

- This branch-rooted variety works well on a wide variety of soil conditions.
- This variety has excellent regrowth even in heavier soils.

Disease Resistance	30
Dormancy	3.8
Winter Survival	1.6
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT | World Forage Analysis Superbowl

30 out of 30 is the highest resistance rating. 35 ratings indicate resistance to APH2. Higher fall dormancy numbers indicate early spring and late fall growth. The lower the winter survival number, the more winter-hardy the variety. More asterisks means better persistence.

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

KingFisher alfalfas are available with a SureStand conventional coating or a SureStand coating approved for organic.

KF 444

ZONES: 1, 2, 3, 4, 5

- KF 444 is a consistent performer across a wide variety of soils and conditions.
- It demonstrates branch rooting in wet and heavy soils.

Disease Resistance	30
Dormancy	4.0
Winter Survival	1.5
Forage Quality	V. Good
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT | World Forage Analysis Superbowl

KF 407A2

NEW

ZONES: 1, 2, 3, 4, 5, 6

- Our best disease-resistant variety including Aphanomyces Race 2.
- This branch-rooted variety works well on marginal soils prone to disease and wet conditions.

Disease Resistance	35
Dormancy	4.0
Winter Survival	2.0
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT | USDA ORGANIC

OR202

ZONES: 1, 2, 3, 4, 5, 6

- OR 202 is an economical organic option for short-term alfalfa.
- A fall dormancy of 4 helps it move farther south.

Disease Resistance	28
Dormancy	4.0
Winter Survival	2.0
Forage Quality	Good
Leaf to Stem	Good
Persistence	***

KingFisher 100% REPLANT | USDA ORGANIC

Byron's 44 Mag

ZONES: 1, 2, 3, 4, 5, 6

- This tall, robust organic variety has a dense, leafy canopy and good tonnage.
- This grower-friendly variety is easy to manage; performs well in short or longer rotations.

Disease Resistance	30
Dormancy	4.3
Winter Survival	2.2
Forage Quality	V. Good
Leaf to Stem	V. Good
Persistence	****

KingFisher 100% REPLANT | World Forage Analysis Superbowl | USDA ORGANIC

Pillar Plus

NEW

ZONES: 1, 2, 3, 4, 5, 6

- This is a high yielding, extremely persistent alfalfa with aggressive recovery.
- An ideal alfalfa where a long-term stand is needed.

Disease Resistance	35
Dormancy	4.8
Winter Survival	1.0
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

Prairie Thunder

NEW

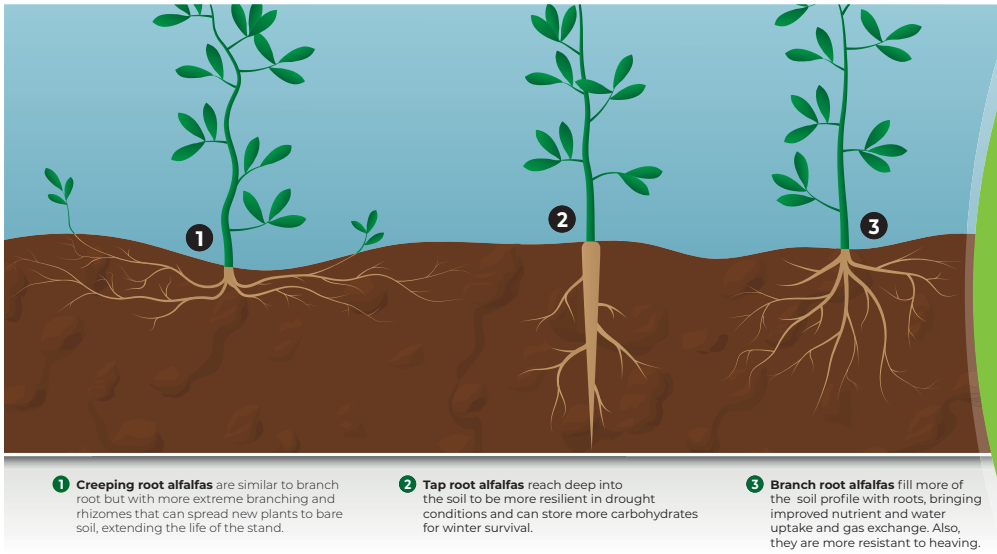
ZONES: 1, 2, 3, 4, 5, 6

- This branched root alfalfa is for operations with heavier soils and disease pressure.
- Fine stem and forage quality with excellent yields.

Disease Resistance	35
Dormancy	4.5
Winter Survival	1.9
Forage Quality	Excellent
Leaf to Stem	Excellent
Persistence	*****

KingFisher 100% REPLANT

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT



WHAT HAPPENS WHEN THESE ROOTING SYSTEMS ALL COME TOGETHER IN

A POWERFUL SYNERGYX ALFALFA PROGRAM?

High Yields!
Better Resilience!
Consistent Performance!

SYNERGYX

Byron Seeds is offering to help you succeed with alfalfa!

Utilizing our powerful alfalfa solutions, we bring many benefits for your success:

- A family-owned company that was founded on alfalfa
- 30 years of alfalfa research and management expertise
- Award-winning KingFisher SynergyX alfalfas
- A systems-approach to alfalfa management
- Support in producing and feeding alfalfa

SureStand Hydro Seed Coating

How SureStand Hydro Works

SureStand Hydro is a proprietary mix of minerals, special compounds, rhizobia bacteria and beneficial soil microbes designed for any type of legume seed. It is bonded to each seed in a dense, durable, protective coating that ensures survivability and stimulates vigorous growth in young seedlings by absorbing water from the soil and providing beneficial nitrogen-fixing bacteria.

About Myco Seed Treatment

SureStand contains Myco Seed Treatment (MST), a proprietary organic microbial seed treatment package designed to stimulate healthy growth in legumes when conditions are less than ideal and increase performance in ideal conditions. MST includes free-living and symbiotic bacteria, fungi, actinomycetes, algae and mycorrhizal fungi. Once the seed is planted, the microbes start to grow and multiply.

Byron Seeds field trials have shown that SureStand Hydro ensures:

- **Nodulation**
- **More plants per pound of seed**
- **Improved seed emergence**
- **Seed survivability of 50% or greater**
- **More uniform stands**
- **Superior performance over uncoated seeds**
- **Potentially higher yields**
- **Easier handling and even distribution**

		← 3 WEEKS AFTER PLANTING →		← FALL →	
SEED	SEEDING RATE LBS/ACRE	PLANTS/SQ. FT.	% SEED TO PLANT	PLANTS/SQ. FT.	% SEED TO PLANT
Uncoated	15	29.9	40.4	24.2	32.7
Coated	15	40.2	85.5	29.3	62.3
Uncoated	20	39.3	40.1	29.4	30.0
Coated	20	45.2	71.7	29.8	47.3

Fertility Needed to Grow Alfalfa

by Leon Hershberger

How would the dairy industry look without the queen of forages— alfalfa? Farmers and nutritionists love the crop because it is drought-tolerant, and its nutritional content is fairly predictable.

Due to an increase in cuttings to four to five per year, versus two to three in years past, alfalfa management has become more intense. But the higher number of cuttings does not allow the plant very much time to build its root reserves to survive the winter. Fertility also must be optimized to meet the nutritional needs of the plant.

Alfalfa Seeding Management

Taking a soil sample is a common practice before planting a new seeding of alfalfa. Yet some farmers regularly apply lime regardless of what soil sample results would indicate. It's important to understand how to read a soil sample and apply amendments accordingly. Here are five things to consider:

- **Soil pH.** We all know that the soil pH must be above 6 for alfalfa to grow. But even though lime will raise the pH, it should not be the only factor in deciding if lime is needed. The other factor that must be considered is that the base saturation of calcium should be 70% to 75%. If the soil test shows good levels on base saturation, you might apply gypsum instead of lime.
- **Nitrogen.** The second factor to consider is the organic matter. If the organic matter is 2.5 or less, apply 100 to 150 pounds of ammonium sulfate 21-0-0-24. This will supply much-needed nitrogen and sulfur to ensure a vigorous start for the alfalfa seedings. The ammonium sulfate can be blended with other fertilizer as needed. If the organic matter is higher than 2.5, it will generally produce enough nitrogen on its own.
- **Potassium.** The third factor is the potash levels on the soil test. Alfalfa requires a lot of potash to yield tonnage. But too much potash can ruin the quality, so a balance is a must to have the nutrients you need for your livestock.

  We decide the potassium needs on the base saturation. Generally, if the base saturation level is below 3%, yield will be hampered. We do not recommend applying potassium above the recommended maintenance rate if the base saturation is 5% or higher. We prefer using potassium sulfate (0-0-50+S17%) when potash is needed. Within a fairly short period of time, it will become available to the plants—plus we get the sulfur with it.

  Potassium chloride 0-0-60 has acquired a bad rap due to the chloride. The truth is, however, we need chloride to live, as do our soils and crops. But the application rates that many county extension agents recommend are higher than we believe is safe. We do not recommend more than 100 pounds per acre, 0-0-60 per application. If a soil test reveals very low levels, potassium may be applied twice during the growing season. We generally recommend applying potassium after the first cutting; it can also be applied in late August to build root reserves to boost winter survivability.
- **Sulfur.** Good sulfur levels in the soil are needed to produce high-quality alfalfa with true protein. Poor-quality "funny" protein drives up MUN (milk, urea, nitrogen) levels in the milk. With good sulfur levels, you can feed very high-quality alfalfa without having MUN levels skyrocket and stress your cows. A few good sources of sulfur that may be available from a local source are as follows: ammonium sulfate 21-0-0-24S, Tiger 90 Elemental Sulfur, K-Mag, 0-0-50-17.5S Potassium Sulfate, and gypsum 14% to 16% Sulfur.
- **Boron.** Generally, we recommend adding boron because it is the driver to supply all nutrients to the plant. Alfalfa, for example, feeds much better when it has enough boron. Rarely do we see a soil sample with adequate levels at 2.5 ppm. But boron can damage the germination of seeds if applied less than 10 days before seeding. So, it is best to include boron in a dry fertilizer blend if the 10-day rule of thumb won't be followed. We recommend 14.5% borate at 10 to 15 pounds per acre once a year.

Recycling Nutrients

An interesting note is that a ton of alfalfa hay typically contains 60 pounds of potassium (see chart), taken times

the tonnage of hay you remove in a year. This is one reason our ancestors kept alfalfa for only 3 years before planting corn. The winter before the alfalfa is planted into corn, the field gets lots of manure and then another application of manure after the corn is harvested. This helps build potassium levels before being seeded back into alfalfa. If the hay is sold off the farm, more fertilizer is needed. This is one reason dairy farming works so well—alfalfa hay is hauled to the barn, fed to the cows, and then the urine and manure is collected and hauled back out to the fields.

Foliar Feeding Alfalfa

Alfalfa responds very well to foliar feeding if the soil has adequate calcium levels. Foliar feeding very rarely promotes height, but the leaf and branch growth is lush and thicker.

The number of stems emerging from the crown is dependent on the overall energy levels in the root. A foliar can boost the energy levels and cause the plant to initiate more stems and produce larger leaves, therefore producing greater tonnage.

A foliar should not be used to attempt to build the soil nutrient levels, but rather as a boost for the cutting to which it's applied. A foliar product should contain a broad array of trace minerals and bio-stimulants that have a positive impact on quality and improve the feeding value of the forage.

Estimated Elements in One Ton of Alfalfa Hay

60 lbs.	Nitrogen
12 lbs.	Phosphate
60 lbs.	Potash
5.3 lbs.	Magnesium
28 lbs.	Calcium
5.1 lbs.	Sulfur
1.25 oz.	Boron

Important Note: It is essential to collect the above nutrients as manure on your farm and then to haul the manure back out to the fields. Most of the potash is excreted in the urine.

Clovers

Red Clover

Description

Red clover is a legume that is widely grown throughout the United States as a hay or forage crop. Red clover does better than alfalfa in areas with low soil pH or fertility and poor soil drainage. Improved red clovers are fast-starting, highly productive and more persistent than older common types. Improved red clovers will persist between 3 and 4 years.

Red clovers can be used in haying or grazing systems. In side-by-side trials, red clovers have had higher RFQs (more digestibility) than alfalfa in fermented or dried forages and approximately twice the level of bypass protein.

Management

Red clover production during the second year is generally higher than during the first or third years. The weather influences red clover growth much more than deeper-rooted alfalfa.

If summer rainfall is good, clover may be cut about every 35 to 40 days. Growth should be removed after “freezedown.” Leaving the growth on a field during fall and winter can kill the stand. Red clover stands that are one year old or older should be cut three or four times in a season. Harvesting in drought conditions will also thin stands.

Establishment

Red clover can be sown by itself or in mixtures with small grains, sorghum-sudans, alfalfa, and/or cool-season grasses. Planting depth should be 0.25 to 0.50 inch. Red clover can also be established by frost seeding (broadcasting on frozen or snow-covered ground).

Red clover requires soil pH to be 6.0 or higher. Red clover is responsive to phosphorus and potassium. Apply to soil testing recommendations.

All clovers are available with a SureStand conventional coating or a SureStand coating approved for organic.

Red Clover

The benefits of alfalfa are many and well known. However, modern improved varieties of red clover also bring benefits:

- Clover has better winter hardiness.
- Clover better tolerates "wet feet".
- Clover is not as dependent on high soil pH.
- Clover has higher bypass protein than alfalfa.

Prairie Fire

NEW

ZONES: 1, 2, 3, 4, 5, 6

- This is a persistent, high yielding, double cut red clover
- Good compliment with alfalfa in a hay stand or can be planted with grasses.

Yield	Excellent
Dry Down	V. Good
Winter Hardiness	Excellent
Quality	Excellent
Persistence	Excellent

KingFisher 100% REPLANT | USDA ORGANIC

KF Red Power Clover Blend

ZONES: 1, 2, 3, 4, 5, 6

- KF Red Power Clover Blend brings a synergistic effect to enhance yield and reduce risk.
- This blend combines the best of our red clovers for a powerhouse forage.

Yield	Excellent
Dry Down	V. Good
Winter Hardiness	Excellent
Quality	Excellent
Persistence	Excellent

KingFisher 100% REPLANT

Renegade

ZONES: 1, 2, 3, 4, 5, 6

- This variety works well on heavier, wetter soils.
- It is organic and conventional.

Yield	Excellent
Dry Down	Good
Winter Hardiness	Excellent
Quality	Excellent
Persistence	V. Good

KingFisher 100% REPLANT | USDA ORGANIC

Emerald

ZONES: 1, 2, 3, 4, 5, 6

- Emerald is very high yielding with fast recovery.
- Emerald is bred for better fall production and has good disease resistance.

Yield	Excellent
Dry Down	V. Good
Winter Hardiness	V. Good
Quality	V. Good
Persistence	Excellent

KingFisher 100% REPLANT

Redkin

ZONES: 1, 2, 3, 4, 5, 6

- A multi-year red clover, Redkin brings high yields and quality.
- Good disease resistance.

Yield	Excellent
Dry Down	V. Good
Winter Hardiness	Excellent
Quality	Excellent
Persistence	Excellent

KingFisher 100% REPLANT

KF Resilience

ZONES: 1, 2, 3, 4, 5, 6

- Bred for persistence in the Midwest, this variety gives very high RFQ and great yields.
- KF Resilience has very fast recovery.

Yield	Excellent
Dry Down	V. Good
Winter Hardiness	Excellent
Quality	Excellent
Persistence	Excellent

KingFisher 100% REPLANT | USDA ORGANIC

KF Clover Mix

ZONES: 1, 2, 3, 4, 5, 6

- This is a 70% red clover, 30% white clover mix that gives good yield in pasture situations.
- It is organic and conventional.

Yield	Good
Dry Down	Good
Winter Hardiness	Excellent
Quality	V. Good
Persistence	Excellent

KingFisher 100% REPLANT

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

White Clover

Description

White or ladino clover is a long-lived perennial that spreads by creeping above ground stems or stolons that root at the nodes.

It is a large-leafed clover, very high in protein, vitamins, and minerals. Addition of white clover to pastures will increase daily dry matter intake in livestock. Ladino clover is a good producer of high-quality feed and is utilized extensively as a soil-building crop. It is an excellent legume to use in combination with other legumes and grasses. Ladino also produces large amounts of nitrogen, which in turn feeds the grass sward within the pasture.

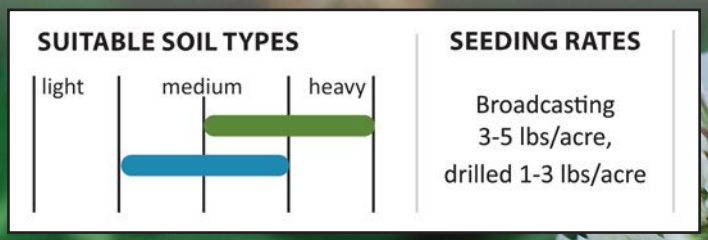
Management

Ladino is primarily a pasture-type clover. Ladino clover planted with perennial grasses should be grazed or mowed frequently (2 or 3 times per summer) with the final mowing in late August. Fertilizer should be applied throughout the year.
To manage the bloat risk associated with ladino clovers, manage your pasture swards with no more than a 10% stand of clover. Do not overgraze the grasses below 4 inches for this increases the clover concentration.

Establishment

White clover will thrive on soils with a pH of 5.5 or higher. Both white and ladino clover require adequate phosphorus and potassium for establishment, persistence and growth. White clover is especially responsive to cool, moist conditions. It grows best between 50°F and 85°F. Because of its shallow root system, it is not adapted to shallow, droughty soils.

Ladinos can be broadcasted, frost-seeded, or drilled into soil. Seed depth should not exceed 0.25 inch.



Kakariki White Clover

ZONES: 1, 2, 3, 4, 5, 6

- This late maturing white clover has very large leaves for high yields.
- The many stolons of this variety bring persistence even in heavy grazing situations.

Yield	Excellent
Height	Excellent
Winter Hardiness	Excellent
Stolon Density	Excellent
Persistence	Excellent

KingFisher 100% REPLANT

KF Vigilant White Clover

ZONES: 1, 2, 3, 4, 5, 6

- Because of its very stoloniferous and winter-hardy traits, this blend is very persistent in addition to being a high yielder.
- This is a blend of 2 of our best white clovers.

Yield	Excellent
Height	Excellent
Winter Hardiness	Excellent
Stolon Density	Excellent
Persistence	Excellent

KingFisher 100% REPLANT

Regal Graze White Clover

ZONES: 1, 2, 3, 4, 5, 6

- This is a ladino, large-leafed clover.
- It is rated as having the highest palatability of any white clover and has great recovery because it has been specially bred with Overgraze Protection.

Yield	Excellent
Height	Excellent
Winter Hardiness	Excellent
Stolon Density	V. Good
Persistence	Excellent

KingFisher 100% REPLANT

Klondike

ZONES: 1, 2, 3, 4, 5, 6

- This clover is a very persistent variety with large leaves.
- Klondike has good resistance to nematodes and clover rot.

Yield	V. Good
Height	V. Good
Winter Hardiness	Excellent
Stolon Density	Excellent
Persistence	Excellent

KingFisher 100% REPLANT

USDA ORGANIC

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Grass At Its Best

Cool season grass is where it all started for Byron Seeds. More than 25 years ago, when Byron Seeds founder, Samuel Fisher, was searching for better grasses for his grazing dairy, he found the solution in Europe. Grass-breeding programs were flourishing in Europe back then whereas alfalfa was the queen of forages in the U.S., and the grass varieties offered in the U.S. dated back to grandpa. The synergies of combining grass and alfalfa were forgotten in the upper Midwest.

Enter Byron Seeds. We began promoting the idea that diversity was also a great tactic for our stored hay crops. Work at the University of Wisconsin- Madison showed the value of cool season grasses on both the agronomy side and the animal nutrition side. Further work by Dr. David Combs led to the development of a better fiber digestibility metric, total tract NDF digestibility, or TTNDFD. This new metric showed the superiority of cool season grasses over corn silage and especially alfalfa.

What were the compelling reasons to bring cool season grasses back to the hayfield? Later-heading grass varieties were developed in Europe, where the cooler, damper weather made these grasses a better choice than alfalfa. In addition, yields were enhanced through these breeding programs.

Cool season grasses are also a great choice here in the U.S. for these important reasons:

- **Great Forage.** These improved grasses allow the grass's quality to persist when seeded with alfalfa. Unlike alfalfa, some grasses—such as meadow fescue, tall fescue and orchardgrass—head out only once per year. When these grasses reach boot stage and are harvested in the first cutting, they will remain vegetative when harvested the rest of the year. This applies even to the extended harvest protocols that are followed for new low-lignin alfalfas. When spring-seeded and treated as an annual, Italian ryegrass can produce yields similar to corn silage without ever heading out all year. It will, however, be very heady in the second year, by which time you've rotated to another crop. The TTNDFD test reveals much higher digestibility for modern improved cool season grasses reach than for alfalfa, and an even greater advantage over BMR forges. Our cool season grasses have been multiple winners at the annual World Forage Analysis Superbowl.
- **Great Yields.** In a two-year study at the University of Wisconsin-Madison, cool season grasses had yields similar to those of corn silage and far superior to those of alfalfa. In large plots, Italian Ryegrass yielded 8 and 9 tons of dry matter (DM) forage compared with 10.5 tons DM for corn silage and 4.5 and 5 tons DM for alfalfa haylage. Grasses such as tall fescue have yielded as high as 10 tons DM in university plot trials.
- **Great for Nutrient Management.** Clear-seeded grasses are the best option for nutrient management where liquid manure must be spread monthly after each cutting. No other forage crop we know of will take up as much phosphorous, nitrogen, potassium and other nutrients as a mixture of cool season grasses.
- **Great for the Next Crop.** Grass by itself is actually a very good crop to precede corn. In work undertaken by the University of Wisconsin-Madison at the Arlington Research Farm, corn after grass did as well as corn after alfalfa. Much of the benefit comes from the grass's extensive root system, along with the fact that at each cutting the grass sloughs off and regrows roots as it grows for the next cutting. This expression of organic matter is great for soil improvement.
- **Great for Your Soils.** Although grass doesn't fix nitrogen in your soils like alfalfa does, it scavenges for lost nitrogen that the corn crop wasted. The grass plants use this nitrogen, along with other potentially lost fertility, to produce forage for your cows. Or, when the crop is rotated, the nitrogen is there for the benefit of the next crop. In the meantime, no other crop does a better job of holding your soils in place while promoting good soil structure and helping keep your soils healthy.

Yes, cool season grasses are a great choice for your hay crop acres. Talk to your local Byron Seeds expert to see how these grasses can help your farm and livestock.

Cool-Season Grasses

When we say, "Byron Seeds searches the world over for better grasses," here's what we mean. Byron Seeds works directly with several grass-breeding companies that get their base genetics from around the world. For example, our popular Kora tall fescue has its origins in our breeding program in Central Europe. The weather conditions in that area resulted in a variety that is very cold-tolerant and very drought-tolerant.

We also have products that were developed in Romania and even New Zealand. A few of our products were developed here in the US. But whereas US breeders have made leaps and bounds in breeding corn, soybeans, wheat and alfalfas, they haven't advanced cool-season grasses at the same pace.

Producers like you have no cause for worry because Byron Seeds has made the commitment to find, test, select, and bring to you, the best cool-season grass the world has to offer.

Description

Cool-season grasses can be used in conjunction with other grasses and/or legumes in pasture applications or in conventional harvesting applications. These grasses typically have a higher caloric or energy value than legumes by themselves, so if planted with a legume, greater tonnage can be realized. Cool-season annuals and perennials work well together because the annuals come on faster, and the perennials, once established, have longevity and tonnage.

Management

Avoiding overgrazing or clipping lower than 3 inches helps stand vigor and regrowth. Six to eight inches are needed for overwintering and also encourage more root development. Proper fertility is important to ensure stand establishment, expected forage tonnage and quality. Approximate nitrogen needs are 40 lbs. for establishment and another 50 to 80 lbs. for the total annual requirement. If grass is to be used in a crop rotation where conventional chemicals are used, be aware of the potential chemical residue as the grass could be killed or suppressed.

Establishment

Cool-season grasses can be planted as early as oats. Start with a soil test to determine the fertilizer and lime requirements. Plant at a depth of 0.25 to 0.375 inch (or a depth no more than five times the diameter of the seed). A smooth, firm seedbed is needed to create optimal seed-to-soil contact for maximum germination. We do not recommend broadcast seeding and will not give a replant if there is a stand failure. However, if you do have to broadcast grass seed, broadcast seeding requires extensive field preparation along with 25% more seed. For best coverage, use a split application at right angles to each other or crisscross the field. Grasses need a soil pH of 6.5-7.0 to perform well.

Haymaster

NEW

ZONES: 1, 2, 3, 4, 5

- A mix of tall fescue, orchardgrass, and timothy designed to dry down well for dry hay.
- Well suited for those who want to market dry hay for high RFQ and superior visual appearance.

CONSISTS OF A SPECIAL MIX OF:

Tall Fescue	75%
Orchardgrass	20%
Timothy	5%

KingFisher 100% REPLANT

KF Haylage Plus

ZONES: 1, 2, 3, 4, 5, 6

- Designed for haylage or baleage harvest, or as a base for a custom pasture blend.
- Excellent as a straight planting or mix with alfalfa.
- High-yielding in various soil types and management systems.

CONSISTS OF A SPECIAL MIX OF:

Tall Fescue	50%
Festulolium	25%
Meadow Fescue	25%

KingFisher 100% REPLANT

Untreated Seed

KF Premium Hay Blend

ZONES: 1, 2, 3, 4, 5

- Contains at least two premium tall fescues.
- Highest-yielding of all grasses; high fiber digestibility (NDFD).
- Not recommended for grazing.

CONSISTS OF A SPECIAL MIX OF:

Premium Tall Fescue #1	50%
Premium Tall Fescue #2	50%

KingFisher 100% REPLANT

Untreated Seed

KF Alfa-Plus

ZONES: 1, 2, 3, 4, 5

- A mixture of the best tall fescues, orchardgrasses and meadow fescues.
- Better for grazing than KingFisher Premium Hay Blend; grazing to 4-6 inches will protect both the orchardgrass and tall fescue.
- Great for hay and haylage; easy to dry.

KingFisher 100% REPLANT

Untreated Seed

USDA ORGANIC

CONSISTS OF A SPECIAL MIX OF:

Tall Fescue	50%
Orchardgrass	25%
Meadow Fescue	25%

KF Hay Grazing

ZONES: 1, 2, 3, 4, 5

- A complete mix that can be either grazed or baled.
- Suited for two spring cuts and fall grazing combinations.

KingFisher 100% REPLANT

- Untreated Seed
- Organic Coating on Organic and Non-Organic Seed

CONSISTS OF A SPECIAL MIX OF*:

Red Clover	5%
Meadow Fescue	15%
Tall Fescue	25%
KingFisher Alfalfa	40%
Orchardgrass	15%

*Some percentages include seed coating

KF Highland Hay Mix

ZONES: 1, 2, 3, 4, 5

- This mix was developed for drier soils.
- It has a very good ratio of grass to alfalfa.
- Features increased fiber digestibility (NDFD) and easy drying.

KingFisher 100% REPLANT

- Untreated Seed
- Organic Coating on Organic and Non-Organic Seed

CONSISTS OF A SPECIAL MIX OF*:

KingFisher Alfalfa	65%
Brome	10%
European Hay Type Tall Fescue	10%
Orchardgrass	10%
Timothy	5%

*Some percentages include seed coating

KF Lowland Hay Mix

ZONES: 1, 2, 3, 4, 5, 6

- This mix was developed for wetter soils.
- It has great quality, high sugar, and easy dry down.

KingFisher 100% REPLANT

- Untreated Seed
- Organic Coating on Organic and Non-Organic Seed

CONSISTS OF A SPECIAL MIX OF*:

KingFisher Alfalfa	50%
Red Clover	15%
European Hay Type Tall Fescue	10%
Orchardgrass	15%
Timothy	10%

*Some percentages include seed coating

KF Performance Max

ZONES: 1, 2, 3, 4, 5, 6

- A complete mix of two high-quality alfalfas and three different grasses.
- Ultimate tonnage for alfalfa and grass mixtures.

KingFisher 100% REPLANT

- Untreated Seed
- Organic Coating on Organic and Non-Organic Seed

CONSISTS OF A SPECIAL MIX OF*:

KingFisher Alfalfas	70%
Tall Fescue	10%
Orchardgrass	10%
Meadow Fescue	10%

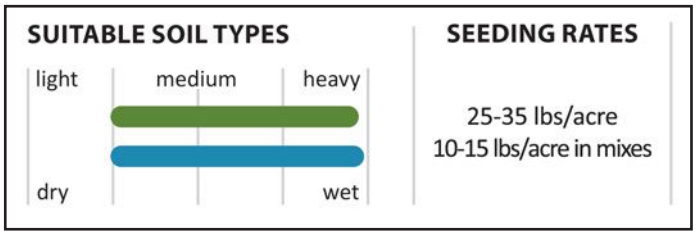
*Some percentages include seed coating

Meadow Fescue

Description

Meadow fescue is becoming the new go-to grass in the Upper Midwest. Why is it replacing tall fescue? Tall fescue will always outyield meadow fescue head to head. But when meadow fescue or tall fescue is partnered with alfalfa, the yield of the alfalfa and either of the grasses gives the same increase in yield over the alfalfa alone. It seems the meadow fescue is less competitive and does not try to replace the alfalfa. Therefore, the alfalfa/grass ratio remains more constant with meadow fescue. Yes, we still like the drought tolerance of the tall fescue and some may choose Haylage Plus (tall fescue, meadow fescue and Perun festulolium as a nurse crop) as their alfalfa partner.

There is, however, one more meadow fescue advantage and one more contributing factor. Work at UW-Madison has shown an edge in fiber digestibility (NDFD) that can amount to a 2- to 3-pound milk boost when meadow fescue is substituted for tall fescue.



Management

Meadow fescue needs fertile soils for optimum performance. It works well in intensively managed grazing or hay production if not mowed lower than 3 inches.

Establishment

Meadow fescue will establish faster than tall fescue or orchardgrass but will still benefit from a nurse crop. Use a low rate of a small grain or combine with festulolium or ryegrass to help suppress weeds. Meadow fescue is a good no-till option but will not express itself until the following year.

Liherold

ZONES: 1, 2, 3, 4, 5

- A top performer from Wisconsin to Kentucky.
- A standout in our Rockville trials.

Maturity	Late
Palatability	V. Good
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	V. Good

KingFisher 100% REPLANT · World Forage Analysis Superbowl · USDA ORGANIC · *Untreated Seed*

Tetrax/Schwetra

ZONES: 1, 2, 3, 4, 5

- This tetraploid is both extremely palatable and highly digestible.
- The high sugars found in a tetraploid give good livestock production.

Maturity	Late
Palatability	V. Good
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	V. Good

KingFisher 100% REPLANT · *Untreated Seed*

KF Galaxy

ZONES: 1, 2, 3, 4, 5

- Very cold tolerant with great persistence.
- Good in hay or grazing applications.
- Expect high digestibility.

Maturity	Late
Palatability	V. Good
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	V. Good

KingFisher 100% REPLANT · *Untreated Seed*

Timothy

Description

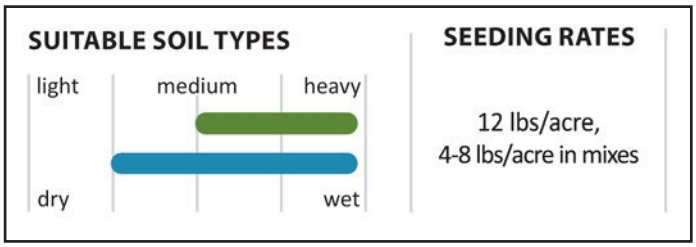
Known for its palatability and superior winter hardiness, timothy is the latest heading of all cool-season perennials. It is well suited as dry cow hay due to its low uptake of minerals such as potassium. It makes excellent horse hay. Timothy has a shallow root system allowing great spring production with poor performance in the heat and drought. However, it does well on heavy, wet, and peaty soils. The small bulb at the base stores nutrients, giving it persistence through the drought and heat periods.

Management

Choose an earlier-heading variety when combining with alfalfa because timothy will not tolerate harvest during the jointing (stem elongation) and early-heading stages. Keep the cutting height 3-4 inches for stand persistence. Does not graze well. Use a late-heading variety for grazing. It tolerates mechanical harvest well, with proper fertility. Fall cuttings should be early enough to allow carbohydrate reserves to be replenished. Early application of nitrogen will significantly boost production.

Establishment

Timothy can be spring or late summer planted. It needs to be planted into a very firm seedbed keeping the depth 0.125 to 0.25 inch. It is slow to establish so control weed pressure and leave 4 to 6 weeks from seeding date to summer drought for spring plantings and the same period before frost for fall plantings. In the South, timothy is often fall planted as a cover crop, harvested or grazed in the spring and then killed off to make way for spring crops.



Presto

ZONES: 1, 2, 3, 4, 5

- Best for yield distribution across the growing season.
- Presto has good total yields and persistence.

Maturity	Late
Palatability	V. Good
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	V. Good

KingFisher 100% REPLANT *Untreated Seed*

Dolina

ZONES: 1, 2, 3, 4, 5

- An organic timothy with good across-the-season yields.

Untreated Seed

KingFisher 100% REPLANT USDA ORGANIC

Maturity	Mid
Palatability	Excellent
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	V. Good

Basho

NEW

ZONES: 1, 2, 3, 4, 5, 6

- An aggressive timothy with impressive yields.
- Good choice for a timothy managed as an annual followed by a double crop.

Maturity	Early
Palatability	Excellent
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	Good

KingFisher 100% REPLANT *Untreated Seed*

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Tips on Establishing Pastures and Hayfields

by Aaron Fisher

Successfully establishing a pasture might initially seem daunting, but it's actually a question of closely following a set of dos and don'ts. The same is true of establishing hayfields.

If you adhere to the following recommendations—and rely on your local Byron Seeds Forage Specialist if you encounter any bumps along the way—your efforts will be rewarded with world-class pastures and hayfields.

Establishing Pastures

- **Drill seed into a firm, well-prepared seedbed** at a depth of 0.25-0.50 inch or use a Brillion seeder. If you'll broadcast the seed, it's critical to take a packer over it to ensure the necessary seed-to-soil contact. Seedbeds must be firm.
- **To kick-start the seedings,** use the equivalent of 40 units of nitrogen. Take a soil test. Apply fertilizer in April, June and August. High grass yields of 6-8 tons of dry matter per season need as much nitrogen as corn: a total of 150-200 units of nitrogen.
- **To encourage tillering,** clip the pastures when the seedlings are 6-8 inches tall. Hold off on grazing until the seedlings are firmly rooted. Rotational grazing is strongly recommended to promote your pasture's persistence.
- **Take your cattle off the pasture** when it has been grazed down to 4 inches.

Establishing Hayfields

- **Alfalfa and grass are best planted** with a drill or a Brillion seeder. For best emergence, plant 0.25-0.50 inch deep. If you'll broadcast the seed, it's critical to take a packer over it to ensure the necessary seed-to-soil contact. Seedbeds must be firm.
- **For higher tonnage and better-quality feed for the life of the stand,** we recommend seeding some grass with alfalfa. If you follow this recommendation, the stubble after cutting must be at least 4 inches for grass to continue to regrow well.
- **Take a soil test.** Calcium, potassium, phosphorus, sulfur, boron and other nutrients are needed in the right amount for high alfalfa yields. If you have a high ratio of grass with your alfalfa, adding some additional nitrogen will give a big yield boost.
- **Alfalfa needs 4-5 weeks of growth before a killing frost (25°F).** In some areas, another cutting can be taken after frost once the alfalfa is dormant. In fact, grazing alfalfa after it's dormant, rather than cutting it, may be a better approach because the cows will leave more stubble, enabling the alfalfa to breath better under ice cover.

Orchard Grass

Description

Orchardgrass is a perennial, cool-season bunchgrass best suited for fertile, light to medium soils with good drainage. It can persist in moderately poor drained soils. Orchardgrass has good winter hardiness, tolerance to shade and moderate tolerance to drought. It is an excellent choice for pasture, hay, greenchop or silage and is well adapted to grow with legumes such as clover and alfalfa. There is typically a 10 to 20 day spread in heading date between early-maturing and late-maturing varieties. Use a later-heading variety as a companion to alfalfa.

Management

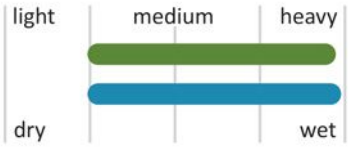
Orchardgrass is very responsive to fertilizer and aftermath production can be excellent with proper fertility and split N applications. For optimum first harvest yield and quality, orchardgrass should be harvested in early-mid boot stage at a cutting height of 3 to 4 inches so it can recover quickly and persistence can be maintained.

For grazing, excellent grazing management is required to maintain persistence and productivity. Graze to 3 to 4 inches and rest 28 days between rotations. Orchardgrass does not persist well under continuous grazing. It is not a good candidate to pair with perennial ryegrass since their management protocols are so different.

Establishment

Orchardgrass can be planted either in early spring or late summer depending on the area of the country being grown. Seeding depth is generally 0.25 to 0.50 inch in a firm seedbed. Rolling or using a cultipacker after seeding ensures even germination and emergence.

SUITABLE SOIL TYPES



SEEDING RATES

25-35 lbs/acre
10-15 lbs/acre in mixes

Endurance

ZONES: 1, 2, 3, 4, 5, 6

- As its name says, Endurance was selected for its durability, especially in the South.
- Works well in grazing and hay situations.

Maturity	Mid
Palatability	V. Good
Digestibility	V. Good
Winter Hardiness	Excellent
Grazing Suitability	Excellent

KingFisher 100% REPLANT *Untreated Seed*

Echelon

ZONES: 1, 2, 3, 4, 5

- Echelon has good persistence with the highest yield in our lineup.
- Echelon is our best fall performer with outstanding yield and forage quality.

Maturity	Late
Palatability	Excellent
Digestibility	Excellent
Winter Hardiness	Excellent
Grazing Suitability	Excellent

KingFisher 100% REPLANT USDA ORGANIC *Untreated Seed*

Lidacta

ZONES: 1,2,3, 4, 5

- Lidacta is a mid-late variety with excellent yield especially in the first cut.
- Lidacta realizes good results in rust resistance and standability.

Maturity	Mid-Late
Palatability	V. Good
Digestibility	Excellent
Winter Hardiness	Excellent
Grazing Suitability	Excellent

KingFisher 100% REPLANT USDA ORGANIC

Sundown

ZONES: 1, 2, 3, 4, 5

- Sundown is excellent for grazing or hay; aggressive tillering.
- Sundown is excellent quality, showing an NDFD of 82 in some trials.

Maturity	Late
Palatability	Excellent
Digestibility	Excellent
Winter Hardiness	Excellent
Grazing Suitability	Excellent

KingFisher 100% REPLANT *Untreated Seed*

KF OG Blend South

ZONES: 3, 4, 5, 6

- This blend has been created for endurance and performance in the South.
- Works well for grazing or hay with exceptional yield and digestibility.

Maturity	Late
Palatability	Excellent
Digestibility	Excellent
Winter Hardiness	V. Good
Grazing Suitability	Excellent

KingFisher 100% REPLANT *Untreated Seed*

KF OG Blend North

ZONES: 1, 2, 3, 4

- This blend has been created for endurance and performance in the North.
- Works well for grazing or hay with exceptional yield and digestibility.

Maturity	Late
Palatability	Excellent
Digestibility	Excellent
Winter Hardiness	Excellent
Grazing Suitability	Excellent

KingFisher 100% REPLANT *Untreated Seed*

Quickdraw

ZONES: 5, 6

- This early-maturing orchardgrass produces massive amounts of forage before summer heat slows growth.
- Very rapid regrowth; quick recovery allows more frequent harvesting.

Maturity	Early
Palatability	V. Good
Digestibility	V. Good
Winter Hardiness	V. Good
Grazing Suitability	Excellent

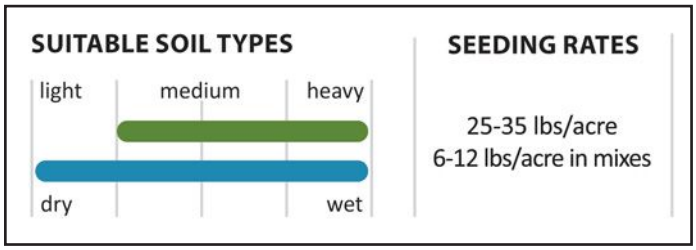
KingFisher 100% REPLANT *Untreated Seed*

Tall Fescue

Description

Tall fescue has a strong agronomic constitution that allows season-long productivity that is unmatched by other cool-season grasses. Tall fescue can grow in wet conditions but is also very drought tolerant. On dairy farms, tall fescue is a great addition to the hay portfolio, and on beef operations in the Midwest it remains the foundation of pasture systems.

In the past number of years, tall fescue has made many appearances at the World Dairy Expo Forage Analysis Superbowl including as the Grand Champion haylage! While tall fescue has long been thought of as a southern grass, endophyte-free tall fescues are thriving in Wisconsin and Minnesota. For our southern farmers, Novel endophytes tall fescue are the way to go.



Management

Tall fescue can be planted with alfalfa, with grass hay mixes, or simply in monoculture for hay or pasture systems. Remember that tall fescue, like most cool-season grasses, stores 90% of food for regrowth after harvest in the bottom 2 to 2.5 inches of the stem. This means that for maximum growth and production, at least 3 to 4 inches of stubble should remain after harvest.

Also, for top yield, we recommend 1 to 1.5 lbs. of available N for each day of growth. Another way to look at nitrogen is that it will take a total of 25 lbs. N for each ton of dry matter harvested. Sulphur is also very necessary for proper conversion of the N to crude protein. Tall fescue can tolerate less than ideal fertility but, like most crops, it gives best yield and quality in balanced soils. Tall fescue is the best grass for stockpile grazing.

Establishment

Tall fescue is easy to establish; but remember, a good seedbed is at the heart of excellent stands of hay or pasture. It can be no-tilled into existing alfalfa stands (0.25 to 0.50 inch deep) immediately after harvest. (Talk to your dealer about the proper timing for your area.) When seeding in a prepared seedbed, make sure sufficient packing has been done before and after seed is put down. Also, 20 to 30 units of N at seeding is necessary for a faster establishment.

Kora

Best tall fescue for hay!

ZONES: 1, 2, 3, 4, 5, 6

- This Superbowl winner is best used in hay/haylage situations where its high forage quality and extreme yields really shine.

Maturity	Late
Hay Production	Excellent
Grazing Preference	Good
Winter Hardiness	Good
Stockpiling	Excellent

KingFisher 100% REPLANT · World Forage Analysis Superbowl · USDA ORGANIC · *Untreated Seed*

Kora is the best tall fescue for hay. Kora maintains high dry matter productivity typical of tall fescues, plus very high digestibility!

BarElite

ZONES: 1, 2, 3, 4, 5, 6

- A soft-leafed variety that works well in grazing and hay production situations.
- Impressive digestibility and yield.

Maturity	Late
Hay Production	Excellent
Grazing Preference	Good
Winter Hardiness	Good
Stockpiling	Good

KingFisher 100% REPLANT · World Forage Analysis Superbowl · *Untreated Seed*

Tower Protek

ZONES: 1, 2, 3, 4, 5, 6

- All the advantages of Tower with a novel endophyte to ensure better persistence and heat tolerance.

Maturity	Late
Hay Production	Excellent
Grazing Preference	Good
Winter Hardiness	Good
Stockpiling	Good

KingFisher 100% REPLANT · *Untreated Seed*

BarOptima Plus E34

ZONES: 3, 4, 5, 6

- A medium-maturity fescue with a beneficial endophyte for excellent persistence.
- The soft leaf ensures the highest forage quality available in a fescue.

Maturity	Medium
Hay Production	Excellent
Grazing Preference	V. Good
Winter Hardiness	Good
Stockpiling	Good

KingFisher 100% REPLANT · *Untreated Seed*

Martin 2 Protek

ZONES: 5, 6

- This tall fescue variety developed in Missouri ensures good performance in the South.
- Martin 2 has high forage yield and great grazing palatability.

Maturity	Late
Hay Production	Excellent
Grazing Preference	Good
Winter Hardiness	Good
Stockpiling	Excellent

KingFisher 100% REPLANT · *Untreated Seed*

Tower

ZONES: 1, 2, 3, 4, 5, 6

- The best dual purpose fescue from DLF, this highly digestible grass can be used for grazing or hay production.
- Excellent yield and persistence.

Maturity	Late
Hay Production	Excellent
Grazing Preference	Good
Winter Hardiness	Good
Stockpiling	Good

KingFisher 100% REPLANT · World Forage Analysis Superbowl · *Untreated Seed*

LiPalma

ZONES: 1, 2, 3, 4, 5

- A very winter-hardy variety selected for digestibility and very high yield.

Maturity	Late
Hay Production	Excellent
Grazing Preference	Good
Winter Hardiness	Excellent
Stockpiling	Excellent

KingFisher 100% REPLANT · USDA ORGANIC

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Byron Seeds Grass Comparisons

Sometimes it's helpful when choosing grasses to consider how the various grass species rank compared to each other in things like winter hardiness or forage quality. The following table lists several important characteristics we look for in grasses and how the grasses stack up. This table is comparing the grass varieties in the Byron Seeds lineup and, in all these cases, there can be overlap in species. In almost every category, it's easy to pick the winner and the loser, but ranking those in the middle involves some hair splitting.

Ranking of Byron Seeds Grasses								
	Yield Potential	**Nutrient Uptake***	**Fiber Digestibility**	**Sugar Content****	**Grazing Tolerance*****	**Winter Hardiness**	**Drought Tolerance**	**Wet Soil Tolerance+**
Tall Fescue	1	1	5	5	4	5	1	4
Festulolium/Italian Ryegrass/Annual Ryegrass	2	2	1	1	5	6	5	5
Perennial Ryegrass	7	3	2	2	2	7	7	6
Orchardgrass	3	5	4	3	6	4	3	7
Meadow Fescue	4	4	3	4	3	3	4	2
Kentucky Bluegrass	5	6	6	6	1	2	2	3
Timothy	6	7	7	7	7	1	6	1

*You could think of this as nutrient requirement.

***Cutting height from shortest to tallest.

+Reed Canarygrass will be better than any of these.

**A big part of palatability.

1 = highest ranking; 7 = lowest ranking

Renovate your KY-31 Pasture without losing yield.

Byron Seeds knows how to renovate a KY-31 pasture without losing yield. In one year, you can change from old, poisonous fescue to highly digestible, friendly fescue that will boost the average daily gains of your herd, increase conception rates, and bring high yield and durability to your pasture.

We'll guide you through three simple steps to achieve a strong new pasture bursting with productive, friendly grasses for your herd.

Here's the plan:

Step 1—August or September: Terminate the old pasture and plant a temporary winter/spring feed.

Step 2—April or May: Graze or harvest the winter/spring feed and plant a summer annual to graze or harvest.

Step 3—August or September: Terminate the pasture again and plant our friendly tall fescues.

Call your local Byron Seeds dealer today!

Italian Ryegrass

Description

Italian ryegrass (IRG) is a cool-season biannual plant that requires vernalization (a period of cold and reduced day length) to initiate heading. IRG is extremely high-yielding and is typically the highest-quality, most-digestible grass of all. Its low cost and ease of seeding make it an excellent choice as either a nurse crop for other species or a great short-term forage in all Upper Midwest growing zones.

IRG is often used as a nurse when seeding alfalfa, tall fescue, orchardgrass and meadow fescue, with only about 2 pounds of IRG required. IRG makes excellent haylage or baleage, but it does not dry well for hay.

Management

Successful use of IRG requires aggressive management and high fertility. If there are a lot of nutrients on a farm, IRG can be a good choice to utilize and recycle those nutrients. It can be easily used to extend thinning alfalfa or mixed stands for one more year, resulting in high yields of excellent quality forage without the hassle of a total stand renovation.

With its soft leaves, clear stands of IRG are better suited to mechanical harvest with a discbine than a sicklebar. IRG also needs to be stored horizontally rather than in a vertical silo. It would be difficult to fill and to empty. Mixing IRG with other grasses or legumes alleviates these problems.

When IRG is sown in spring, very few seedheads will be observed throughout the seeding year. If IRG is fall sown, the plants will head profusely the following spring.

Establishment

IRG is very fast to establish, making it ideal for a spring nurse crop with other more perennial grasses. Planting depth should be 0.25 to 0.50 inch. Broadcast sowing into thin stands can sometimes be successful, but no-till drilling is the recommended method to thicken existing stands. Depending on the time of planting and conditions, the first harvest can come as early as 50 to 60 days after planting, and the first pasturing can take place in about six weeks or when the plant cannot be pulled from the ground.

SUITABLE SOIL TYPES

SEEDING RATES

25-40 lbs/acre drilled, 10-15 lbs/acre no-tilled into existing (but thin) stands

KF Allegro

ZONES: 1, 2, 3, 4, 5, 6

- A Superbowl Grand Champion, this diploid/tetraploid blend can give you the highest quality feed in just 40 days.
- Best in the North where it can yield as much dry matter as corn silage.

Tetraploid or Diploid	Both
Yield	Excellent
Winter Hardiness	Excellent
Grazing Tolerance	Excellent
Persistence	Excellent

Untreated Seed

KingFisher 100% REPLANT | World Forage Analysis Superbowl | USDA ORGANIC

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Perennial Ryegrass

Description

Globally, perennial ryegrass (PRG) is the most widely used grass for grazing because of its aggressive growth and high-quality forage. PRG also makes excellent haylage or baleage, but it does not dry well for dry hay. With proper management and high fertility, PRG can be persistent for 5 to 7 years or more in the Midwest. All the PRG varieties that Byron Seeds selects have excellent grazing tolerance.

Management

Intensively managed pastures are a great place to use PRG, which requires aggressive management and high fertility. Residual heights for PRG can be lower than for other grasses. Grazing down to about 2 inches in spring and fall is recommended, and leaving higher residual of at least 3 inches in the summer helps persistence and overall productivity of the stand. PRG is not a good candidate for pairing with orchardgrass, which has taller residual requirements.

Establishment

PRG can be sown by itself (usually 30 lbs./acre) or sown in mixtures with legumes or other cool-season grasses. Planting depth should be between 0.25 and 0.50 inch. Broadcast sowing into thin stands is sometimes successful, but no-till drilling is the recommended method to thicken existing stands. Plants are ready for pasturing when they no longer can be pulled out by the roots (about 6 weeks) and are ready for harvesting in about 50 to 60 days.

KF Eclipse

ZONES: 1, 2, 3, 4, 5

- A very winter-hardy tetraploid and diploid blend that is great for grazing or haylage.
- Good persistence with resistance to stem rust.

Tetraploid or Diploid	Both
Maturity	Late
Winter Hardiness	Excellent
Persistence	Excellent

KingFisher 100% REPLANT *Untreated Seed*

Kentaur

ZONES: 1, 2, 3, 4, 5

- A tetraploid with larger leaves for excellent forage quality.
- Very winter-hardy.

Tetraploid or Diploid	Tetraploid
Maturity	Mid
Winter Hardiness	Excellent
Persistence	Excellent

KingFisher 100% REPLANT USDA ORGANIC *Untreated Seed*

SUITABLE SOIL TYPES

SEEDING RATES

25-40 lbs/acre drilled, 10-15 lbs/acre no-tilled into existing (but thin) stands

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Festulolium

Description

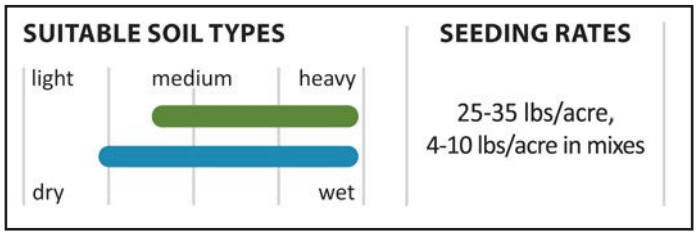
Festulolium is a cross between a fescue and a ryegrass. While there may be thousands of ways to make crosses, most yield very heady grasses. In contrast, the varieties we offer you are the best in the world.

Management

Festulolium fertilizer requirements are intermediate between ryegrass and tall fescue.

Establishment

Seed is identical in size and weight to tall fescue and they mix well together without separating. Seeding rate as a nurse crop with tall fescue and alfalfa is 2 to 3 lbs. per acre. For pastures in the Upper Midwest, we use 5 lbs. per acre. For a pure stand, the seeding rate is the same as tall fescue. This is not commonly done as stand life is approximately 3 years with the first year being the most productive and declining from there on. However, this characteristic with its fast establishment makes it an excellent nurse crop for alfalfa and tall fescue.



Perun

ZONES: 1, 2, 3, 4

- A meadow fescue/Italian ryegrass cross, Perun is a perfect nurse crop for new seedings as it establishes very quickly.
- Perun also works well extending the life of a pasture or hay field for a year or two.

Maturity	Late
Palatability	Excellent
Winter Hardiness	V. Good
Digestibility	Excellent
Grazing Suitability	V. Good

KingFisher 100% REPLANT · World Forage Analysis Superbowl · USDA ORGANIC · *Untreated Seed*

Kentucky Bluegrass

Description

Balin Kentucky Bluegrass may well be the world's most widely used Kentucky bluegrass—and for good reason. It has shown superior winter hardiness compared to many other bluegrass varieties, and its relatively tall growth habit makes it a much better forage producer than the common bluegrass that most producers are used to. If there is moisture, it will stay green into the summer—almost as long as tall fescue.

Management

Typically, 70% of bluegrass production is before June, hence its nickname "June Grass." Balin extends the growing period as long as there is moisture. This high-producing bluegrass can thrive in a more relaxed management system due to its superior summer production. Early heavy grazing prevents overmature, low-quality forage. And although Balin's rhizomatous root structure allows it to thrive on intensive grazing, any companion grasses will be stressed to their demise. Keeping a stubble height of over 2-3 inches increases Balin's tillering.

Establishment

Most bluegrasses take 21 to 28 days to establish. Balin, by contrast, establishes at 17 days. Seeding depth is 0.125 to 0.25 inch.

Balin — ZONES: 1, 2, 3, 4, 5, 6

- This may be the world's most widely used bluegrass because it has shown superior winter hardiness.
- Its tall growth and summer production make it a much better yielder than common bluegrass.

KingFisher 100% REPLANT *Untreated Seed*

Bromegrass

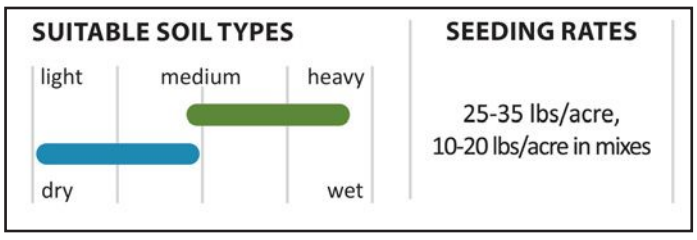
Description

Bromegrass is a diverse family with species that range from annuals to long-lived perennials. In our program, we concentrate on improved bromes that give increased yield and faster emergence than some other varieties.

All bromes are large-seeded and care must be taken to make sure the seed doesn't bridge in the drill. Also, bromes need to be seeded at the correct depth. Broadcasting is not recommended.

Management

Bromegrass requires high fertility levels and well-drained soils. Recommended seeding depth is 0.5 inch.



Hakari Alaskan Bromegrass — ZONES: 1, 2, 3, 4, 5, 6

- Hakari is a late maturing brome that both yields well and holds its quality even when headed out.
- Overall quality is better than orchardgrass.

KingFisher 100% REPLANT *Untreated Seed*

Cache Meadow Brome — ZONES: 1, 2, 3, 4, 5, 6

- This variety is very palatable and works well for grazing, even in dry weather conditions.

KingFisher 100% REPLANT *Untreated Seed*

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Pasture Mixes

Description

Pasture mixes are very popular for good reasons. They're versatile and more forgiving of adverse soil and climate conditions than monocultures. However, mixes can require good management to keep ratios consistent. Byron Seeds uses a lot of trial experiments from across the Midwest to help put together compatible mixes.

Management

Use the equivalent of about 40 pounds of N to kick-start the seedlings. Clip the pasture when the seedlings are about 6 to 8 inches high to encourage density. Don't graze until firmly rooted. Rotational grazing is best to promote persistence. Manure or fertilizer in the fall will help with winter hardiness.

Establishment

An early fall planting is best using a Brillion seeder or drilled 0.25 inch deep into a well prepared seedbed. If a Brillion seeder or drill is not available, the seed can be broadcast and rolled firm with a cultipacker. We **do not** recommend broadcasting, and seed that is broadcast **is not** supported by our replant policy.

Make sure weeds are controlled before establishment. Spring planting is possible but competition must be suppressed. Most of the Upper Midwest is spring planted.

KF Grassworks® Grazing Mix — ZONES: 1, 2, 3, 4

- A mix developed especially for dairy quality (very high fiber digestibility/sugar) for the Upper Midwest with good winter hardiness.
- This mixture is selected for consistent palatability and high yield and milk production for dairy or stockers.

CONSISTS OF A SPECIAL MIX OF*:

Meadow Fescue	45%	Red Clover	12%
Festulolium	25%	White Clover	8%
Perennial Ryegrass	10%		

*Some percentages include seed coating

KF Grassworks® D — ZONES: 1, 2, 3, 4

- This mixture is for livestock owners that want diversity; includes forbs.
- This mixture brings a great selection for yield and milk/meat gain for dairy/stockers.

CONSISTS OF A SPECIAL MIX OF*:

Meadow Fescue	30%	White Clover	5%
Festulolium	15%	Alfalfa	5%
Orchardgrass	15%	Birdsfoot Trefoil	5%
Perennial Ryegrass	10%	Plantain	4%
Red Clover	8%	Chicory	3%

*Some percentages include seed coating

KF Premium Pasture Mix — ZONES: 1, 2, 3, 4, 5, 6

- A high-yielding quality mix that lends itself to a variety of soils, heavy or light.
- This mix is drought tolerant. It's very versatile in the North but use only on good soils in the South.

CONSISTS OF A SPECIAL MIX OF*:

Meadow Fescue	20%	Perennial Ryegrass	15%
Soft-Leafed Tall Fescue	20%	Kentucky Bluegrass	5%
Orchardgrass	15%	White Clover	5%
KF 403CR	15%	Red Clover	5%

*Some percentages include seed coating

KF Beef Builder — ZONES: 1, 2, 3, 4, 5, 6

- This is a high-performing pasture mix for finishing beef.
- This mix brings great quality for faster weight gains; withstands heavy traffic.

CONSISTS OF A SPECIAL MIX OF*:

Endophyte-Free Soft Tall Fescue	50%	Red Clover	10%
		Kentucky Bluegrass	5%
Orchardgrass	20%	White Clover	5%
Perennial Ryegrass	10%		

*Some percentages include seed coating

All pasture mixes are available with an organic coating.

KF Horsepower

ZONES: 1, 2, 3, 4, 5

- Horsepower is a premium mix selected for horses–hay or pasture.
- This high-quality mix tolerates close grazing and traffic.

CONSISTS OF A SPECIAL MIX OF:

Endophyte-Free Tall Fescue	40%	Orchardgrass	15%
Meadow Fescue	20%	Kentucky Bluegrass	5%
Festulolium	15%	Timothy	5%

Friendly Fescue Foundation

ZONES: 4, 5, 6

- A solid mix of tall fescues (of which 60% contain friendly endophytes) for your pasture foundation.
- Orchardgrass and bluegrass bring even more value and performance to this pasture mix.

CONSISTS OF A SPECIAL MIX OF:

Tall Fescue	90%
Orchardgrass	5%
Kentucky Bluegrass	5%

KF Horsepower Plus

ZONES: 1, 2, 3, 4, 5

- This premium mix is great for horses or sheep–pasture or hay.
- The white clover in this mix produces nitrogen and gives higher protein.

CONSISTS OF A SPECIAL MIX OF*:

Endophyte-Free Tall Fescue	40%	Kentucky Bluegrass	5%
Meadow Fescue	15%	Timothy	5%
Festulolium	15%	White Clover	5%
Orchardgrass	15%		

*Some percentages include seed coating

KY Equine Blend

ZONES: 5, 6

- Hay and pasture production for the south.
- Safe for horses.
- Endophyte-Free.

CONSISTS OF A SPECIAL MIX OF:

Fescue	60%	Bluegrass	10%
Orchardgrass	25%	Timothy	5%

Diverse Graziers Blend South

ZONES: 5, 6

- This is a diverse pasture mix designed for use in the south.
- Features elite varieties of friendly tall fescue, orchardgrass, alfalfa, clovers, bluegrass, and forbs.

CONSISTS OF A SPECIAL MIX OF:

Tall fescue, Orchardgrass, Alfalfa, Red Clover, White Clover, Bluegrass, Chicory, Plantain

KY Supreme Pasture Blend

ZONES: 5, 6

- Novel endophyte fescue.
- High-yielding to various soil types.
- Hay or pasture production in the south.

CONSISTS OF A SPECIAL MIX OF:

Fescue	60%	Bluegrass	5%
Orchardgrass	20%	Timothy	5%
Red Clover	8%	White Clover	2%

*Some percentages include seed coating

Diversemaster

ZONES: 1, 2, 3, 4, 5, 6

- This extensive blend is designed for producers who want, and can manage, a biodiverse pasture stand.
- It's well suited for grass-finished beef or grass-based dairies.

CONSISTS OF A SPECIAL MIX OF:

Soft Leaf Tall Fescue, Meadow Fescue, Italian Ryegrass, Perennial Ryegrass, Meadow Brome, Timothy, Festulolium, Orchardgrass, Red Clover, Alfalfa, Birdsfoot Trefoil, Alsike Clover, White Clover

Renovator

ZONES: 1, 2, 3, 4, 5, 6

- This multi-species mix is designed for new seedings or for adding diversity to existing pastures.
- It supports high forage yield and quality across varying soils and seasons.
- In new pasture seedings, we recommend pairing this mix with Diversifier to increase yield and quality.

CONSISTS OF A SPECIAL MIX OF:

Soft Leaf Tall Fescue, Meadow Fescue, Perennial Ryegrass, Orchardgrass, Timothy, Italian Ryegrass, Festulolium

Diversemaster Plus

ZONES: 1, 2, 3, 4, 5, 6

- This diverse mix is similar to Diversemaster, except we replaced orchardgrass with more soft leaf tall fescue and meadow brome and added forbs.
- This mix will enhance forage quality and is well suited for all classes of livestock.

CONSISTS OF A SPECIAL MIX OF:

Soft Leaf Tall Fescue, Meadow Brome, Meadow Fescue, Perennial Ryegrass, Festulolium, Timothy, Alfalfa, Red Clover, Alsike Clover, White Clover, Birdsfoot Trefoil, Chicory, Plantain

Diversifier

ZONES: 1, 2, 3, 4, 5, 6

- This mix of legume species is designed for adding diversity to a pasture.
- The diversity of the blend benefits soil biology and improves forage quality.
- Diversifier can be added into an existing stand or used in a new stand along with grasses and forbs.

CONSISTS OF A SPECIAL MIX OF:

Red clover, White clover, Alfalfa, Crimson Clover, Alsike Clover, Birdsfoot Trefoil

KingFisher and Red Tail corn is selected for excellent fiber and starch digestibility and outstanding agronomics.

- **FiberGest**—High sugar and stalk density means highly digestible corn silage
- **SofStarch**—Highly-digestible starch, excellent rumen retention and digestibility
- **Agronomics**—Top-notch agronomics paired with ear flex and stalk expansion means more digestible starch and fiber harvested per acre

Producers want silage corn with strong agronomics and exceptional energy. And they want it consistently, year after year, across every relative maturity. KingFisher and Red Tail silage corn delivers consistent performance throughout the complete lineup, so every producer can maximize digestible energy for his livestock.

What is the story behind KingFisher and Red Tail corn hybrids?

Our rigorous testing program starts off with access to a large selection of corn genetics from multiple suppliers within the industry. We select from the best for hybrids that excel in FiberGest and SofStarch, always focused on hybrids with outstanding agronomics with the potential to produce high quality forage.

Next, we place these hybrids in multiple plot locations in multiple states. Then, these hybrids go through a vigorous testing process where yield, silage/grain quality, and agronomic observations are documented. Each hybrid goes through this process for an average of three years in similar locations and soil conditions. We look at each hybrid's yearly averages along with the three-year average and compare the results with our cornerstone (check) hybrids that are already in the lineup. If a hybrid meets all the qualifications set forth by the Kingfisher Corn Committee, it usually becomes part of the KingFisher and Red Tail corn lineup.

During the process, we look at hundreds of hybrids, but only advance the few that meet our high standards for excellent fiber and starch digestibility and outstanding agronomics. Dedicated to livestock nutrition, KingFisher and Red Tail corn is focused on consistently maximizing the harvest of energy per ace and boosting livestock performance.

Byron Seeds is offering to help you succeed with powerful corn silage solutions. We bring many benefits for your success:

- A family-owned company with 30 years of forage expertise
- An award-winning lineup of KingFisher and Red Tail corn hybrids
- An intense focus on digestibility and starch availability
- A systems-approach to corn silage management
- Local experience to guide in crop planning and soil health
- A strong commitment to seed quality, with up to 100% replant

Since 2018, KingFisher and Red Tail corn hybrids have won consistent Grand Champions in the World Forage Analysis Superbowl:

2018 – Grand Champion Standard Corn Silage

2019 – Grand Champion Standard Corn Silage

2020 – Grand Champion Standard Corn Silage and 5 Finalists

Winner of the Quality Counts Award

2021 – 5 Finalists in Standard Corn Silage

2022 – Grand Champion Standard Corn Silage and 4 Finalists

Grand Champion First Time Entrant (BMR Corn Silage) and 1 BMR Finalist

2023 – Grand Champion BMR Corn Silage and 4 Finalists

4 Finalists in Standard Corn Silage

Winner of Quality Counts Award

2024 – Grand Champion Standard Corn Silage and 6 Finalists

Winner of Quality Counts Award

2 Finalists in BMR Corn Silage

KF 27C10

CONVENTIONAL

77 Day RM

This impressive short season hybrid is a medium-tall robust corn with very good stalk and root strength and very good Tar Spot tolerance.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Red cob with 16-18 kernel rows
- Excellent dry down
- Very good response to fungicide application

Seedling Vigor..... Very Good
Plant Height..... Medium-Tall
Ear Height..... Medium
Ear Flex ..... Very Good
Cob Color..... Red
Stalk Strength..... Very Good
Root Strength..... Very Good
Stay Green..... Very Good
Dry Down ..... Excellent
Test Weight..... Good
Gray Leaf Spot Tolerance..... Good
Northern Leaf Blight Tolerance..... Very Good
Goss's Wilt Tolerance..... Very Good

KF 34C30

CONVENTIONAL / ORGANIC

84 Day RM

Impressive performance across high and low yield environments for silage and dry grain. Above average disease ratings. Great stay green for very good dry down in late season. Great test weight with great starch digestibility.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 27-32K
- Dual-purpose silage and grain
- Not for use on continuous corn acres
- High yields across varied soils
- Very good roots
- Very good response to fungicide application

Seedling Vigor..... Very Good
Plant Height..... Medium-Tall
Ear Height..... Medium
Ear Flex ..... Very Good
Cob Color..... Light Red
Stalk Strength..... Very Good
Root Strength..... Very Good
Stay Green..... Very Good
Dry Down ..... Very Good
Test Weight..... Very Good
Gray Leaf Spot Tolerance..... Very Good
Northern Leaf Blight Tolerance..... Very Good
Goss's Wilt Tolerance..... Very Good

KF 35C10

CONVENTIONAL

85 Day RM

Big plant, high yielding, very good stay green, dual-purpose hybrid, excellent corn-on-corn option.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 30-34K
- Dual-purpose silage and grain
- Great for continuous corn rotation
- Excellent in medium soils
- Very good stay green for wide harvest window
- Workhorse suited for most rotations

Seedling Vigor ..... Very Good
Plant Height..... Medium-Tall
Ear Height..... Medium-High
Ear Flex ..... Very Good
Cob Color ..... Pink
Stalk Strength ..... Very Good
Root Strength..... Very Good
Stay Green..... Very Good
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance..... Good

KF 37C60

CONVENTIONAL / ORGANIC

87 Day RM

Attractive hybrid with strong yield and agronomics. A medium plant with medium ear placement.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Good*

- Recommended Population 30-34K
- Excellent late season intactness and stay green
- Flex cob with 14-16 kernel rows
- Very good test weight
- Very good leaf and stalk disease ratings

Seedling Vigor ..... Very Good
Plant Height..... Medium
Ear Height..... Medium
Ear Flex ..... Very Good
Cob Color ..... Red
Stalk Strength ..... Very Good
Root Strength..... Very Good
Stay Green..... Excellent
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance..... Excellent

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KF 38C80

CONVENTIONAL

88 Day RM

A dual-purpose hybrid with semi-flex ears and excellent seedling vigor. Consistent yield and widely adapted across northern regions and soil types. Excellent stalk and very good root strength.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 28-34K
- Red cob with 16 kernel rows
- Medium-tall plant with medium ear placement
- Excellent on all soil types
- Excellent stay green for wide harvest window
- Widely adapted across northern regions

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		

KF 42C20

CONVENTIONAL / ORGANIC

92 Day RM

High yield with flex ears and impressive grain quality, outstanding silage hybrid for quantity and quality.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Very Good*	*Excellent*

- Recommended Population 26-30K
- Dual-purpose silage and grain
- High yielding grain potential
- Good agronomics
- Best performance when kept in maturity zone

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 43C40

CONVENTIONAL

93 Day RM

Very high yielding grain potential, showy canopy closes quickly, dual purpose grain or silage plant, flex ears, great corn-on-corn option.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 28-32K
- Dual-purpose silage and grain
- Quick canopy closer
- Great heat and drought tolerance
- First rate agronomic and disease package

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 44C20

CONVENTIONAL / ORGANIC

94 Day RM

Attractive hybrid with strong agronomics. Girthy, flex-style ears bring top yield potential.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Medium-tall plant with medium ear placement
- Flex cob with 16-18 kernel rows
- Very good test weight
- Very good leaf and stalk disease ratings

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Excellent		

KF 45C30

CONVENTIONAL — 95 Day RM

A medium-tall hybrid with semi-erect leaves that produces long flexed ears with 16-18 kernels around. Very good stay green and excellent tolerance to Goss's Wilt and Gray Leaf Spot. Great for continuous corn acres.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 27-34K
- Good late-season plant intactness for dry grain option
- Adapted to wide range of soils and management practices
- In top management and good soils, populations should be increased for top yield
- Top performance across a wide range of environments

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 48C90

ORGANIC — 98 Day RM

Excellent yield potential for maturity with fast dry down for timely grain harvest, excellent emergence and very good disease ratings.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 28-32K
- Quick dry down
- Medium plant with a girthy ear
- Super yield potential
- Responds well to good management

Seedling Vigor	Excellent	**Test Weight**	Excellent
Plant Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Height	Medium	**Northern Leaf Blight Tolerance**	Very Good
Ear Flex	Very Good	**Goss's Wilt Tolerance**	Very Good
Cob Color	Red		
Stalk Strength	Very Good		
Root Strength	Excellent		
Stay Green	Very Good		
Dry Down	Excellent		

KF 49C60

CONVENTIONAL — 99 Day RM

Medium placed flex ears, showy healthy plant, strong adaptation west to east.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 26-30K
- Dual purpose silage and grain
- Keep off wet/heavier soils
- Excellent eye appeal
- Quick emergence gives early flowering/pollination for consistent grain fill and yield

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Light Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Good		

KF 51C50

CONVENTIONAL — 101 Day RM

Medium-tall robust plant with great silage appeal and a wide range of adaptability in multiple regions. The pedigree behind this hybrid brings time-tested consistency with new era yield for silage and grain.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 30-34K
- Keep populations on higher end for top yield in better soils
- Very good dual purpose for silage and grain
- Strong performance between Interstate 90 and Interstate 70
- Can move south as an early hybrid
- Use caution applying Capreno, Sharpen, Status, or Corvus herbicides while hybrid is under environmental stress as grain yields may be reduced

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot**	
Ear Flex	Very Good	**Tolerance**	Very Good
Cob Color	Light Red	**Northern Leaf Blight Tolerance**	Very Good
Stalk Strength	Very Good	**Goss's Wilt Tolerance**	Very Good
Root Strength	Excellent		
Stay Green	Excellent		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KF 51C80

CONVENTIONAL / ORGANIC

101 Day RM

Tall, robust, versatile hybrid with excellent stalk strength and very good root ratings. Stay green is excellent.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Tall plant with medium ear placement
- Flex pink cob with 18-20 kernel rows
- Excellent tar spot tolerance
- Very good leaf and stalk disease ratings

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		

KF 52C20

CONVENTIONAL

102 Day RM

High yielding potential, very good stay green, very heat and stress tolerant, dual-purpose grain or silage hybrid, big plant, white cob with medium placed flex ears.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 26-30K
- Dual purpose silage and grain
- Strong agronomics and stay green
- Excellent heat and stress tolerance
- Excellent milk per ton/acre

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	White	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Excellent		
Stay Green	Very Good		

KF 54C50

ORGANIC

104 Day RM

A medium-tall plant with medium ear placement, impressive fall intactness and appearance, performs best in good management.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 28-32K
- Excellent dual-purpose hybrid
- Pink cob; 16-18 kernel rows
- Excellent agronomics
- Responds well to good nitrogen management

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 54C90

CONVENTIONAL / ORGANIC

104 Day RM

Medium-tall healthy plant with excellent flex. Widely adapted across all environments.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Excellent stalk strength and stay green
- Versatile hybrid that lends itself more to fed-grain
- Excellent test weight
- Excellent leaf and stalk disease ratings
- Very good tar spot tolerance

Seedling Vigor	Very Good	**Dry Down**	Excellent
Plant Height	Medium-Tall	**Test Weight**	Excellent
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		

KF 56C30

ORGANIC

106 Day RM

Excellent emergence, very good seedling vigor, very good disease package, stress and drought tolerant, semiflex ears.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 30-34K
- Good dual-purpose hybrid but leans more toward grain
- Solid agronomics
- Excellent emergence and very good seedling vigor
- Selected for wide range of management practices
- Great drought tolerance

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Excellent		
Root Strength	Excellent		
Stay Green	Very Good		

KF 57C80

CONVENTIONAL

107 Day RM

A robust plant with excellent silage and grain ratings, dark green canopy-type leaves on a robust stalk, consistent yields in silage and grain.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 30-36K
- Slower grain dry down due to plant health within maturity range
- Wide regional adaption
- Excellent roots and late season standability
- Excellent eye appeal
- Excellent response to fungicide application

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Good
Stalk Strength	Very Good		
Root Strength	Excellent		
Stay Green	Excellent		

KF 59C30

CONVENTIONAL / ORGANIC

109 Day RM

High-yielding versatile hybrid that's widely adapted across all environments. Medium-tall robust plant.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 27-30K
- Excellent stalk that is tolerant to anthracnose
- Deep, wide kernels on red cob
- Very good stalk and disease ratings
- Very good tar spot tolerance

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Excellent
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		

KF 60C50

CONVENTIONAL

110 Day RM

Excellent silage hybrid with great eye appeal, dark green canopy-type leaves with a robust stalk.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Excellent*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Silage use only, place on better managed soils
- Avoid continuous corn acres on stressed soils
- Excellent early and no-till planting
- Very good response to fungicide application
- Slow dry down with very good stay green for a wide harvest window

Seedling Vigor	Very Good	**Dry Down**	Fair
Plant Height	Medium-Tall	**Test Weight**	Fair
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KF 61C90

CONVENTIONAL

111 Day RM

Medium-tall plant with good flex and widely adapted across all environments. Versatile hybrid with very good feed quality.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 27-32K
- Very good stalk and root with excellent stay green
- Good kernel depth with a red cob
- Very good leaf and stalk disease ratings
- Very good tar spot tolerance

Seedling Vigor	Very Good	**Dry Down**	Excellent
Plant Height	Medium-Tall	**Test Weight**	Excellent
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Excellent		

KF 62C80

CONVENTIONAL

112 Day RM

Robust, medium-tall, dual-purpose hybrid with semi-erect leaves and light red cob with 18-20 rows of deep kernels. Produces unmatched, consistent yields east to west across varied soils and management practices. Excellent combination of plant health and agronomics contributes to multiregional adaptability.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 27-34K
- Semiflex ear and stalk with high population tolerance in good soils and management
- Maintain higher fertility in lighter soils
- Very good plant health
- Maintain good fertility management for top yields
- Match populations with soil types

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Light Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 63C10

CONVENTIONAL

113 Day RM

High silage producer in terms of both quantity and quality, good ear length and excellent flex, deep kernels, highly rated disease package, drought and heat tolerant.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Excellent*	*Excellent*

- Recommended Population 26-30K
- Proven silage hybrid with very good quality
- Versatile hybrid that covers all soil types
- Wide harvest window
- Excellent disease package
- Excellent milk per ton/acre

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 64C40

CONVENTIONAL / ORGANIC

114 Day RM

Medium-tall plant, medium-high ear placement, wide dense leaves with good canopy, excellent agronomics over multiple years of testing.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 28-32K
- Good for silage or grain (semi-flex ears)
- Red cob; 16-18 kernel rows
- Very good stalk and root
- Very good leaf and stalk disease ratings

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Excellent		

KF 65C00

CONVENTIONAL — 115 Day RM

Consistent, medium-tall, robust, mid- to full-season corn with very good silage appeal, at home between I-80 and I-70 and in the I-24 corridors in the Midwest and throughout the eastern states.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 30-36K
- Keep populations on higher side for best yields
- Does very well in productive to average soil conditions
- Excellent emergence in cold/no-till soils
- Very good stay green for longer harvest window
- Moves north very well as a full season hybrid; not recommended for deep South

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 65C90

CONVENTIONAL — 115 Day RM

A true-flex hybrid with large girthy ears, excellent track record for performance through the years.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Very Good*	*Excellent*

- Recommended Population 26-30K
- Super yields as silage or grain
- Very good hand husker
- Very good drought tolerance
- Very good stalk and leaf disease ratings

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Light Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Excellent		
Stay Green	Very Good		

KF 67C20

CONVENTIONAL — 117 Day RM

Consistent high yields, excellent agronomics, very good disease ratings, broadly adapted regions.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 28-34K
- Very good dual-purpose hybrid
- Broadly adapted with outstanding agronomics
- Consistent high yields across the Midwest and South
- Very good disease ratings

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Light Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 68C10

CONVENTIONAL — 118 Day RM

A tall robust hybrid with excellent emergence and seedling vigor: broadly adapted to regions.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 28-32K
- Wide range of soil adaption
- Solid white cob with 14-16 kernel rows
- Strong performance in north and south of zone

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	White	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KF 57H50

ENERGY EDGE

107 Day RM

An improved ultra high-oil hybrid that can be used as a sidekick or stand alone with improved yield and standability. A medium-tall hybrid with broad, thick leaves that produces long flexed ears with 16-18 kernels around. Exhibits very good stay green and has very good disease tolerance.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Excellent*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Dual-purpose hybrid for silage or grain
- In top management and good soils, increase populations for top yield
- Adapted to wide range of soils and management practices
- Recommended use is in our Energy Edge blends

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

KF 60S60

MALE STERILE

110 Day RM

Male sterile hybrid ideal for farms in niche markets that do not want grain in the diet. Appropriate for silage or grazing. The corn crop will be very high in sugar as grain is not formed. The plant will also take on a red color as sugar increases over time.
Note: Isolation from standard corn is recommended.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Very Good*	*Excellent*	*Very Good*

- Recommended Population 30-40K
- Appropriate for silage or grazing
- Versatile hybrid that covers all soil types
- Wide harvest window
- Very good disease package

Seedling Vigor	Very Good	**Dry Down**	N/A
Plant Height	Tall	**Test Weight**	N/A
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

Byron Seeds is offering several **Energy Edge corn blends** featuring KF 57H50 with other conventional and BMR corn. Energy Edge blends bring a higher level of fat and protein to your feed which may reduce the amount of expensive inputs in your diets.

ENERGY EDGE™

Elite BMR Genetics for Your Farm

KingFisher BMR corn brings elite agronomics to your farm:

- Increased stalk diameter and density, leading to improved digestibility, higher sugars, and slower dry down.
- Amazing standability and flexibility; holds yields even in tough environments.
- Superb plant health for excellent drought and disease tolerance.
- Consistent pollination for higher starch content and larger ears.

KF 59B70 is a BM3 SofStarch BMR hybrid that excels in standability, ear size, floury starch and overall plant health. With World Forage Superbowl champion quality and breakthrough agronomics, KingFisher BMR corn is changing the future of BMR corn silage.

Contact your local Byron Seeds Certified Forage Specialist to develop a BMR silage plan today!

KingFisher BMR Corn went head-to-head with the top-notch BMR's in the country at the 2023 World Forage Analysis Superbowl and emerged as Grand Champion winner plus four finalists, dominating the BMR Corn Silage category.

Let's hear from Jordan Zirbel, the Grand Champion BMR corn silage winner at the 2023 World Forage Analysis Superbowl:

Jordan Zirbel of Zirbel Dairy Farms near Green Bay, Wisconsin saw major agronomic improvement when he started using KF 59B70. The KingFisher BMR has larger leaves, bigger ears, and better drought tolerance because of it's deep-rooting qualities. And the yield of KF 59B70 averaged 26 tons per acre in 2022—huge, as compared to only 18 tons per acre, the average of the BMR he used to plant. And because of the quality of KF 59B70, his 1,000 cows continue their excellent production.

KF 59B70

BMR- SILAGE ONLY

109-115 Day RM

Brown mid-rib for improved digestibility and increased milk production, this non-GMO hybrid is daylight sensitive (moving it into northern regions of the corn belt will cause it to exhibit shorter maturity).

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Very Good*

- Recommended Population 26-29K
- High grain-to-stover ratio
- Excellent SofStarch for a BMR corn
- Widely adapted to many soil types
- Excellent standability with proper plant populations

Seedling Vigor	Very Good	**Dry Down**	N/A
Plant Height	Tall	**Test Weight**	N/A
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Excellent		

KF 66B80

BMR- SILAGE ONLY

115-117 Day RM

Brown mid-rib for improved digestibility and increased milk production, this extra-leafy hybrid is medium-tall with high ear placement. This hybrid features extreme stalk expansion at low populations.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 26-29K
- High grain-to-stover ratio
- Widely adapted to many soil types
- Extra-leafy hybrid
- Excellent standability with proper plant populations

Seedling Vigor	Very Good	**Dry Down**	N/A
Plant Height	Medium-Tall	**Test Weight**	N/A
Ear Height	High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Excellent		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KingFisher Corn

Hybrid	Relative Maturity	GDUs 50% Silking	GDUs to Black Layer	Conventional (CV), Organic (O), Energy Edge (EE), BMR	Red Tail Hybrid (if any)	Irrigated/ Productive Soil	Average/ Variable Soil	Less Productive/ Stress Prone Soil	Heavy Soils with Poor Drainage	Seedling Vigor	Plant Height	Ear Height	Ear Flex	Cob Color	Stalk Strength	Root Strength
KF 27C10	77	1132	2100	CV	27T11	8	9	8	8	8	Med.-Tall	Medium	7	Red	8	7
KF 34C30	84	1145	2145	CV, OR		9	9	9	9	8	Med.-Tall	Medium	8	Light Red	7	8
KF 35C10	85	1180	2150	CV	35T12	8	9	7	8	8	Med.-Tall	Med.-High	7	Pink	8	8
KF 37C60	87	1150	2230	CV, OR		9	9	8	8	8	Medium	Medium	8	Red	8	8
KF 38C80	88	1220	2260	CV	38T86, 38T89	9	9	9	9	9	Med.-Tall	Medium	7	Red	9	8
KF 42C20	92	1200	2280	CV, OR		9	9	8	8	9	Med.-Tall	Med.-High	9	Pink	7	7
KF 43C40	93	1210	2300	CV	43T48	9	8	7	9	8	Med.-Tall	Medium	9	Pink	8	8
KF 44C20	94	1235	2320	CV, OR		9	9	8	8	8	Med.-Tall	Medium	8	Red	8	7
KF 45C30	95	1235	2370	CV		9	9	9	8	8	Med.-Tall	Medium	8	Red	8	8
KF 48C90	98	1250	2300	OR		9	8	7	8	9	Medium	Medium	8	Red	8	9
KF 49C60	99	1250	2307	CV	49T61	8	8	7	8	8	Med.-Tall	Medium	7	Light Red	7	7
KF 51C50	101	1220	2300	CV	51T51	9	9	8	9	9	Med.-Tall	Med.-High	8	Light Red	8	9
KF 51C80	101	1200	2290	CV, OR	51T86	9	9	9	8	8	Tall	Medium	8	Pink	9	8
KF 52C20	102	1298	2418	CV		9	9	8	8	8	Tall	Medium	9	White	8	9
KF 54C50	104	1270	2600	OR		9	8	7	8	9	Med.-Tall	Medium	8	Pink	8	8
KF 54C90	104	1250	2550	CV, OR	54T96	9	8	8	8	8	Med.-Tall	Medium	8	Red	9	8
KF 56C30	106	1300	2420	OR		8	8	8	8	8	Med.-Tall	Med.-High	7	Pink	9	9
KF 57H50	107	1300	2450	EE		9	8	8	8	8	Med.-Tall	Medium	8	Pink	8	8
KF 57C80	107	1310	2460	CV	57T81, 57T85	9	9	9	7	9	Tall	Medium	9	Red	8	9
KF 59B70	109	N/A	N/A	BMR		9	8	7	8	8	Tall	Medium	9	Red	8	8
KF 59C30	109	1310	2690	CV, OR	59T36	9	9	8	8	8	Med.-Tall	Medium	7	Red	9	8
KF 60C50	110	1300	2690	CV		9	9	7	8	8	Med.-Tall	Medium	7	Red	7	8
KF 60S60	110	N/A	N/A	CV		9	9	8	8	8	Tall	Medium	N/A	Pink	8	7
KF 61C90	111	1380	2400	CV	61T96, 61T99	9	8	8	8	8	Med.-Tall	Medium	7	Red	8	8
KF 62C80	112	1424	2470	CV	62T83	8	8	8	8	8	Med.-Tall	Med.-High	8	Light Red	8	8
KF 63C10	113	1320	2790	CV		9	9	8	8	8	Med.-Tall	Med.-High	9	Pink	8	8
KF 64C40	114	1360	2855	CV, OR		9	9	9	8	9	Med.-Tall	Med.-High	8	Red	8	7
KF 65C00	115	1435	2630	CV	65T06	9	9	8	8	9	Med.-Tall	Med.-High	7	Pink	8	8
KF 65C90	115	1355	2790	CV		8	8	8	8	8	Tall	Medium	9	Light Red	7	9
KF 66B80	115	N/A	N/A	BMR		9	8	8	8	7	Med.-Tall	High	8	Red	8	8
KF 67C20	117	1480	2700	CV	67T21	9	9	9	8	8	Tall	Med.-High	9	Light Red	8	7
KF68C10	118	1370	2910	CV	68T88, 68T89	8	8	8	8	9	Tall	Med.-High	9	White	8	7

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

Stay Green	Dry Down	Test Weight	High Population Tolerance	Continuous Corn	Drought Tolerance	Gray Leaf Spot Tolerance	Northern Leaf Blight Tolerance	Goss's Wilt Tolerance	Common Rust Tolerance	Tar Spot	FiberGest (30-hr. NDFD)	SofStarch (IVSD7)	Milk per Ton	Digestible Fiber Per Acre	Hand Husking	Fungicide Response
8	9	5	9	7	8	6	8	7	7	7	7	8	7	7	8	8
8	8	8	8	7	8	7	7	7	7	5	9	8	8	9	8	8
7	7	7	8	8	8	8	7	5	7	7	7	7	8	8	8	8
9	8	8	8	8	8	7	7	9	8	7	7	7	8	6	7	9
9	8	7	8	9	8	8	9	9	8	7	9	9	9	9	N/A	9
7	7	8	9	7	9	7	7	5	7	4	9	9	8	9	7	8
8	7	7	8	8	8	8	9	7	8	7	8	8	8	8	8	8
9	8	8	9	7	8	8	7	7	8	5	8	8	8	8	8	8
8	8	8	8	8	9	9	7	9	8	6	9	9	9	9	7	7
8	9	9	8	8	8	8	8	8	8	5	7	7	8	9	8	9
7	7	7	7	7	8	8	7	7	7	5	9	8	8	8	7	8
9	8	7	8	8	9	8	8	7	8	7	8	8	8	9	7	8
9	7	8	8	8	8	8	8	7	7	9	8	8	8	8	8	9
8	7	7	7	7	8	8	8	7	8	5	9	9	9	9	9	9
7	8	8	8	8	7	7	7	8	7	5	8	8	8	9	8	9
9	9	9	8	8	9	9	9	9	7	8	8	8	8	8	7	9
8	7	7	7	8	8	8	7	7	8	7	8	7	8	8	8	8
8	8	8	7	8	8	8	7	7	8	5	8	9	8	8	N/A	9
9	8	8	8	6	8	8	8	6	8	7	9	9	9	9	7	9
9	N/A	N/A	5	8	8	8	8	6	8	5	9	9	9	8	N/A	9
9	7	9	9	8	8	9	9	7	7	7	8	8	8	9	8	9
9	4	4	8	7	8	9	7	9	7	7	8	9	8	8	N/A	9
8	N/A	N/A	9	8	8	8	8	8	8	7	9	N/A	9	8	N/A	N/A
9	9	9	9	8	8	9	8	9	7	8	8	7	8	9	N/A	9
8	8	7	8	8	9	9	7	8	9	8	9	9	9	9	8	9
7	7	7	7	8	8	9	7	9	7	5	8	8	9	9	8	7
9	7	7	7	8	9	8	8	8	8	7	8	8	8	8	7	7
8	7	7	9	8	9	8	8	9	9	5	8	8	8	8	7	9
8	7	7	5	7	8	8	8	8	8	6	9	9	8	9	9	9
9	N/A	N/A	7	8	8	7	8	6	8	5	9	9	9	9	N/A	9
8	7	8	8	8	8	8	8	7	8	7	8	7	8	9	7	8
7	7	8	8	8	9	8	9	8	7	7	8	8	8	8	8	9

Red Tail Corn

Hybrid	Relative Maturity	Trait	GDUs 50% Silking	GDUs to Black Layer	Organic (OR) Conventional (CV) High Oil (HO) Red Tail (RT)	Irrigated/ Productive Soil	Average/ Variable Soil	Less Productive/ Stress Prone Soil	Heavy Soils with Poor Drainage	Seedling Vigor	Plant Height	Ear Height	Ear Flex	Cob Color	Stalk Strength	Root Strength
RT 27T11	77	GT	1132	2100	RT	8	9	8	8	8	Med.-Tall	Medium	7	Red	8	7
RT 35T12	85	GT, CB, LL	1180	2150	RT	8	9	7	8	8	Med.-Tall	Med.-High	7	Pink	8	8
RT 37T11	87	GT	1180	2190	RT	9	9	8	9	9	Med.-Tall	Medium	7	Red	9	9
RT 38T86	88	Agrisure® Above	1220	2260	RT	9	9	9	9	9	Med.-Tall	Medium	7	Red	9	8
RT 38T89	88	Duracade®	1220	2260	RT	9	9	9	9	9	Med.-Tall	Medium	7	Red	9	8
RT 41T14	91	Agrisure Viptera® 3110	1210	2350	RT	9	9	9	9	9	Med.-Tall	Med.-High	8	Red	9	7
RT 43T44	93	Agrisure Viptera® 3110	1210	2320	RT	9	8	7	9	8	Med.-Tall	Medium	9	Pink	8	8
RT 43T48	93	Viptera®	1210	2320	RT	9	8	7	9	8	Med.-Tall	Medium	9	Pink	8	8
RT 45T04	95	Agrisure Viptera® 3110	1250	2310	RT	9	9	8	8	9	Tall	Med.-High	5	Red	8	7
RT 45T09	95	Duracade Viptera™	1250	2310	RT	9	9	8	8	9	Tall	Med.-High	5	Red	8	7
RT 49T61	99	GT	1250	2307	RT	8	8	7	8	8	Med.-Tall	Medium	7	Light Red	7	7
RT 49T62	99	GT, CB, LL	1250	2307	RT	8	8	7	8	8	Med.-Tall	Medium	7	Light Red	7	7
RT 51T51	101	GT	1335	2460	RT	9	9	8	9	9	Med.-Tall	Med.-High	8	Light Red	8	9
RT 51T86	101	Power Core	1200	2290	RT	9	9	9	8	8	Tall	Medium	8	Pink	9	8
RT 53T44	103	Agrisure Viptera® 3110	1250	2390	RT	9	9	9	8	9	Tall	Med.-High	8	Pink	9	9
RT 53T49	103	Duracade Viptera™	1250	2390	RT	9	9	9	8	9	Tall	Med.-High	8	Pink	9	9
RT 54T11	104	GT	1390	2575	RT	9	9	9	9	8	Tall	Medium	9	Pink	8	8
RT 54T14	104	Agrisure Viptera® 3110	1390	2575	RT	9	9	9	9	8	Tall	Medium	9	Pink	8	8
RT 54T96	104	Power Core	1250	2550	RT	9	8	8	8	8	Med.-Tall	Medium	8	Red	9	8
RT 55T71	105	GT	1320	2430	RT	9	8	8	8	8	Med.-Tall	Medium	9	Red	9	8
RT 55T76	105	Agrisure® Above	1320	2430	RT	9	8	8	8	8	Med.-Tall	Medium	9	Red	9	8
RT 55T79	105	Duracade®	1320	2430	RT	9	8	8	8	8	Med.-Tall	Medium	9	Red	9	8
RT 57T81	107	GT	1375	2570	RT	9	9	9	7	9	Tall	Medium	9	Red	8	9
RT 58T46	108	Agrisure® Above	1315	2630	RT	8	8	8	8	8	Med.-Tall	Medium	8	Red	8	8
RT 61T96	111	Agrisure® Above	1380	2400	RT	9	8	8	8	8	Med.-Tall	Medium	7	Red	8	8
RT 61T99	111	Duracade®	1380	2400	RT	9	8	8	8	8	Med.-Tall	Medium	7	Red	8	8
RT 64T36	114	Agrisure® Above	1365	2602	RT	9	9	8	8	7	Med.-Tall	Med.-High	8	Red	9	8
RT 64T39	114	Duracade®	1365	2602	RT	9	9	8	8	7	Med.-Tall	Med.-High	8	Red	9	8
RT 65T06	115	Agrisure® Above	1435	2630	RT	9	9	8	8	9	Med.-Tall	Med.-High	7	Pink	8	8
RT 67T21	117	GT	1480	2700	RT	9	9	9	8	8	Tall	Med.-High	9	Light Red	8	7
RT 68T88	118	Viptera®	1370	2910	RT	8	8	8	8	9	Tall	Med.-High	9	White	8	7
RT 68T89	118	Duracade Viptera™	1370	2910	RT	8	8	8	8	9	Tall	Med.-High	9	White	8	7

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

Stay Green	Dry Down	Test Weight	High Population Tolerance	Continuous Corn	Drought Tolerance	Gray Leaf Spot Tolerance	Northern Leaf Blight Tolerance	Goss's Wilt Tolerance	Common Rust Tolerance	Tar Spot	FiberGest (30-hr. NDFD)	SofStarch (IVSD7)	Milk per Ton	Digestible Fiber Per Acre	Hand Husking	Fungicide Response
8	9	5	9	7	8	6	8	7	7	7	7	8	7	7	8	8
7	7	7	8	8	8	8	7	5	7	7	7	7	8	8	8	8
9	7	8	8	9	9	7	8	9	9	7	8	8	8	8	N/A	9
9	8	7	8	9	8	8	9	9	8	7	9	9	9	9	N/A	9
9	8	7	8	9	8	8	9	9	8	7	9	9	9	9	N/A	9
8	7	7	8	8	8	8	9	9	8	7	8	8	8	9	7	8
8	7	7	8	8	8	8	9	7	8	7	8	8	8	8	8	8
8	7	7	8	8	8	8	9	7	8	7	8	8	8	8	8	8
8	9	7	9	8	7	7	7	9	8	7	8	8	9	9	N/A	9
8	9	7	9	8	7	7	7	9	8	7	8	8	9	9	N/A	9
7	7	7	7	7	8	8	7	7	7	5	9	8	8	8	7	8
7	7	7	7	7	8	8	7	7	7	5	9	8	8	8	7	8
9	8	7	8	8	9	8	8	7	8	7	8	8	8	9	7	8
9	7	8	8	8	8	8	8	7	7	9	8	8	8	8	8	9
8	9	9	9	9	8	7	9	9	8	6	7	8	8	8	7	8
8	9	9	9	9	8	7	9	9	8	6	7	8	9	9	7	8
8	8	8	8	8	8	8	8	7	8	7	9	9	9	9	8	9
8	8	8	8	8	8	8	8	7	8	7	9	9	9	9	8	9
9	8	8	7	8	9	9	9	9	7	8	8	8	8	8	7	9
9	8	8	7	6	8	6	8	6	7	6	8	8	8	9	8	9
9	8	8	7	6	8	6	8	6	7	6	8	8	8	9	8	9
9	8	8	7	6	8	6	8	6	7	6	8	8	8	9	8	9
9	8	8	8	6	8	8	8	6	8	7	9	9	9	9	7	9
8	9	7	9	8	8	9	8	8	7	7	8	8	8	8	8	9
9	9	9	9	8	8	9	8	9	7	8	8	7	8	9	N/A	9
9	9	9	9	8	8	9	8	9	7	8	8	7	8	9	N/A	9
9	8	8	8	8	9	9	8	7	9	7	9	9	9	9	N/A	8
9	8	8	8	8	9	9	8	7	9	7	9	9	9	9	N/A	8
8	7	7	9	8	9	8	8	9	9	5	8	8	8	8	7	9
8	7	8	8	8	8	8	8	7	8	7	8	8	8	9	7	8
7	7	8	8	8	9	8	9	8	7	7	8	8	8	8	8	9
7	7	8	8	8	9	8	9	8	7	7	8	8	8	8	8	9

KF 27T11

GT

77 Day RM

This impressive short season hybrid is a medium-tall robust corn with very good stalk and root strength and very good Tar Spot tolerance.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Red cob with 16-18 kernel rows
- Excellent dry down
- Very good response to fungicide application

Seedling Vigor..... Very Good
Plant Height..... Medium-Tall
Ear Height..... Medium
Ear Flex ..... Very Good
Cob Color..... Red
Stalk Strength..... Very Good
Root Strength..... Very Good
Stay Green..... Very Good
Dry Down ..... Excellent
Test Weight..... Good
Gray Leaf Spot Tolerance..... Good
Northern Leaf Blight Tolerance..... Very Good
Goss's Wilt Tolerance..... Very Good

RT 35T12

GT, CB, LL

85 Day RM

Big plant, high yielding, very good stay green, dual-purpose grain or silage hybrid, excellent corn-on-corn option.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 30-34K
- Great for continuous corn rotation
- Excellent in medium soils
- Great high population tolerance
- Workhorse suited for most rotations
- Very good stay green for wide harvest window

Seedling Vigor ..... Very Good
Plant Height..... Medium-Tall
Ear Height..... Medium-High
Ear Flex ..... Very Good
Cob Color ..... Pink
Stalk Strength ..... Very Good
Root Strength..... Very Good
Stay Green..... Very Good
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance..... Good

RT 37T11

GT

87 Day RM

A medium-tall plant with medium ear placement and consistent yields. Widely adapted across northern regions and soil types.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 28-32K
- Versatile hybrid with semi-flex ears
- Red cob with 16-18 kernel rows
- Outstanding stalk and root strength
- Very good leaf and stalk disease ratings

Seedling Vigor ..... Excellent
Plant Height..... Medium-Tall
Ear Height..... Medium
Ear Flex ..... Very Good
Cob Color ..... Red
Stalk Strength ..... Excellent
Root Strength..... Excellent
Stay Green..... Excellent
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance..... Excellent

RT 38T89

DURACADE

88 Day RM

Also available as RT 38T86 Agrisure Above

A dual-purpose hybrid with semi-flex ears and excellent seedling vigor. Consistent yield and widely adapted across northern regions and soil types. Excellent stalk and very good root strength.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 28-34K
- Red cob with 16 kernel rows
- Excellent stay green for wide harvest window
- Excellent on all soil types
- Widely adapted across northern regions

Seedling Vigor ..... Excellent
Plant Height..... Medium-Tall
Ear Height..... Medium
Ear Flex ..... Very Good
Cob Color ..... Red
Stalk Strength ..... Excellent
Root Strength..... Very Good
Stay Green..... Excellent
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance..... Very Good
Northern Leaf Blight Tolerance ..... Excellent
Goss's Wilt Tolerance..... Excellent

RT 41T14

AGRISURE VIPTERA 3110 | 91 Day RM

A medium-tall plant with medium-high ear placement and consistent yield, widely adapted across northern regions and soil types.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 27-36K
- Dual-purpose with semi-flex ears
- Red cob; 18 kernel rows
- Wide population adaption
- Excellent leaf/stalk disease ratings

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Very Good		

RT 43T44

AGRISURE VIPTERA 3110 | 93 Day RM

Also available as RT 43T48 Viptera

A medium-tall plant with medium ear placement, widely adapted across northern regions and soil types.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 28-32K
- Dual purpose with flex ears
- Pink cob; 18-20 kernel rows
- Widely adapted to soil types
- Very good leaf/stalk disease ratings

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

RT 45T09

DURACADEVIPTERA | 95 Day RM

Also available as RT 45T04 Agrisure Viptera 3110

A high-yielding, dual-purpose hybrid with excellent eye appeal, tall plant with medium-high ear placement.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Excellent*	*Excellent*

- Recommended Population 30-34K
- Dual purpose with semi-flex ears
- Red cob; 18-20 kernel rows
- Excellent in cold/no-till soils
- Excellent eye appeal

Seedling Vigor	Excellent	**Dry Down**	Excellent
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

RT 49T62

GT, CB, LL | 99 Day RM

Also available as RT 49T61 GT

High yield with flex ears and impressive grain quality, outstanding silage hybrid for quantity and quality.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 26-30K
- Excellent seed emergence and vigor
- Consistent yield with top end potential
- Excellent eye appeal
- Very good drought tolerance

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Light Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Good		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KingFisher and Red Tail corn has produced Grand Champion forage nearly every year in the past 6 years at the Forage Analysis Superbowl. The consistent performance of our corns can bring you consistent success.

RT 51T51

GT

101 Day RM

Medium-tall robust plant with great silage appeal and a wide range of adaptability in multiple regions. The pedigree behind this hybrid brings time-tested consistency with new era yield for silage and grain.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 30-34K
- Very good dual purpose for silage and grain
- Keep pops on higher end for top yield
- Very good tolerance to stalk and leaf diseases
- Strong performance between I-90 and I-70; can move south as an early hybrid
- Use caution applying Capreno, Sharpen, Status, or Corvus herbicides while hybrid is under environmental stress; grain yields may be reduced

Seedling Vigor ..... Very Good
Plant Height ..... Medium-Tall
Ear Height ..... Medium-High
Ear Flex ..... Very Good
Cob Color ..... Pink
Stalk Strength ..... Very Good
Root Strength ..... Very Good
Stay Green ..... Very Good
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance ..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance ..... Very Good

RT 51T86

POWER CORE

101 Day RM

Tall, robust, versatile hybrid with excellent stalk strength and very good root ratings. Stay green is excellent.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Tall plant with medium ear placement
- Flex pink cob with 18-20 kernel rows
- Excellent tar spot tolerance
- Very good leaf and stalk disease ratings

Seedling Vigor ..... Very Good
Plant Height ..... Tall
Ear Height ..... Medium
Ear Flex ..... Very Good
Cob Color ..... Pink
Stalk Strength ..... Excellent
Root Strength ..... Very Good
Stay Green ..... Excellent
Dry Down ..... Very Good
Test Weight ..... Very Good
Gray Leaf Spot Tolerance ..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance ..... Very Good

RT 53T49

DURACADEVIPTERA

103 Day RM

Also available as RT 53T44 Agrisure Viptera 3110

A tall hybrid with medium-high ear placement. Top end yield potential and excellent dry down.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Excellent*	*Excellent*

- Recommended Population 26-38K
- Excellent late season intactness
- Semi-flex pink cob with 16-18 kernel rows
- Excellent test weight
- Very good leaf and stalk disease ratings

Seedling Vigor ..... Excellent
Plant Height ..... Tall
Ear Height ..... Medium-High
Ear Flex ..... Very Good
Cob Color ..... Pink
Stalk Strength ..... Excellent
Root Strength ..... Excellent
Stay Green ..... Very Good
Dry Down ..... Excellent
Test Weight ..... Excellent
Gray Leaf Spot Tolerance ..... Very Good
Northern Leaf Blight Tolerance ..... Excellent
Goss's Wilt Tolerance ..... Excellent

RT 54T14

AGRISURE VIPTERA 3110

104 Day RM

Also available as RT 54T11 GT

Excellent performance across varied environments. Dual-purpose hybrid with high grain and silage yields. Very good disease ratings. A flex hybrid that works on a wide range of populations.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 28-32K
- Very good dual-purpose hybrid
- High yields of silage and grain across varied soils
- Broadly adapted with outstanding agronomics
- Consistent high yields across the Midwest and South
- Very good seedling vigor

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

RT 54T96

POWER CORE

104 Day RM

Medium-tall healthy plant with excellent flex. Widely adapted across all environments.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Excellent stalk strength and stay green
- Versatile hybrid that lends itself more to fed-grain
- Excellent test weight
- Excellent leaf and stalk disease ratings
- Very good tar spot tolerance

Seedling Vigor	Very Good	**Dry Down**	Excellent
Plant Height	Medium-Tall	**Test Weight**	Excellent
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		

RT 55T79

DURACADE

105 Day RM

Also available as RT 55T76 Agrisure Above and RT 55T71 GT

A versatile medium-tall robust plant with excellent flex. Widely adapted with very good stress tolerance across all environments.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 27-32K
- Excellent stalk and stay green
- Excellent fungicide response
- Good leaf and stalk disease ratings
- Average tar spot tolerance

Seedling Vigor	Very Good	**Test Weight**	Very Good
Plant Height	Medium-Tall	**Gray Leaf Spot Tolerance**	Good
Ear Height	Medium	**Northern Leaf Blight Tolerance**	Very Good
Ear Flex	Excellent	**Goss's Wilt Tolerance**	Good
Cob Color	Red		
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		
Dry Down	Very Good		

RT 57T81

GT

107 Day RM

A robust plant with excellent silage and grain ratings. Excellent eye appeal across the corn belt, dark green canopy type leaves with a robust stalk, excellent roots and late season standability. Wide regional adaptation with consistent yields in silage and grain.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Excellent*	*Very Good*	*Excellent*

- Recommended Population 30-36K
- High silage yields
- Slower grain dry down due to plant health within maturity range
- Manage populations to management practices and soil conditions
- Very good response to fungicide application

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	Pink	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Excellent		
Root Strength	Excellent		
Stay Green	Excellent		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

RT 58T46

AGRISURE ABOVE

108 Day RM

A versatile medium-tall robust plant with very good flex. Widely adapted with very good stress tolerance across all environments.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 27-32K
- Excellent stalk and stay green
- Excellent fungicide response
- Very Good leaf and stalk disease ratings
- Average tar spot tolerance

Seedling Vigor	Very Good	**Dry Down**	Excellent
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

"Byron Seeds is an amazing company and staff to work with. They care for what I'm doing. They go a lot further than just selling seed."

–Wisconsin

RT 61T99

DURACADE

111 Day RM

Also available as RT 61T96 Agrisure Above

Medium-tall plant with good flex and widely adapted across all environments. Versatile hybrid with very good feed quality.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 27-32K
- Very good stalk and root with excellent stay green
- Good kernel depth with a red cob
- Very good leaf and stalk disease ratings
- Very good tar spot tolerance

Seedling Vigor	Very Good	**Dry Down**	Excellent
Plant Height	Medium-Tall	**Test Weight**	Excellent
Ear Height	Medium	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Excellent
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Excellent		

RT 64T39

DURACADE

114 Day RM

Also available as RT 64T36 Agrisure Above

A high-yielding dual-purpose hybrid with excellent eye appeal and very good ear flex. Medium-tall plant with medium-high ear placement.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Excellent*	*Excellent*

- Recommended Population 30-34K
- Red cob with 14-16 kernel rows
- Place on better soils with good management
- Excellent Gray Leaf and rust tolerance

Seedling Vigor	Very Good	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Excellent
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Excellent		
Root Strength	Very Good		
Stay Green	Excellent		

RT 65T06

AGRISURE ABOVE | 115 Day RM

Consistent, medium-tall, robust, mid- to full-season corn with very good silage appeal, at home between I-80 and I-70 and in the I-24 corridors in the Midwest and throughout the eastern states.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 32-36K
- Keep populations on higher side for best yields
- Excellent performer in productive to average soil conditions
- Excellent emergence in cold/no till soils
- Very good stay green for longer harvest window
- Moves north very well as a full season hybrid; not recommended for deep South

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Medium-Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Very Good	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Pink	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

RT 67T21

GT | 117 Day RM

Consistent high yields, excellent agronomics, very good disease ratings, broadly adapted regions.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Excellent*

- Recommended Population 28-34K
- Very good dual-purpose hybrid
- Broadly adapted with outstanding agronomics
- Consistent high yields across the Midwest and South

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Very Good
Cob Color	Light Red	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

RT 68T89

DURACADEVIPTERA | 118 Day RM

Also available as RT 68T88 Viptera

A tall robust hybrid with excellent emergence and seedling vigor: broadly adapted to regions.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Very Good	*Very Good*	*Very Good*	*Very Good*

- Recommended Population 28-32K
- Wide range of soil adaption
- Solid white cob with 14-16 kernel rows
- Strong performance in north and south of zone

Seedling Vigor	Excellent	**Dry Down**	Very Good
Plant Height	Tall	**Test Weight**	Very Good
Ear Height	Medium-High	**Gray Leaf Spot Tolerance**	Very Good
Ear Flex	Excellent	**Northern Leaf Blight Tolerance**	Excellent
Cob Color	White	**Goss's Wilt Tolerance**	Very Good
Stalk Strength	Very Good		
Root Strength	Very Good		
Stay Green	Very Good		

Rating scale: POOR 1-2 | FAIR 3-4 | GOOD 5-6 | VERY GOOD 7-8 | EXCELLENT 9-10

KingFisher and Red Tail (KF/RT) Corn Silage Quality Analysis – Central Wisconsin

Analysis across 31 farms; 46 total samples; 9 different hybrids.

These 46 KF/RT corn silage samples were compared to the average of the yearly industry-wide samples at Dairyland Labs (industry year average at Dairyland Labs was 53.74% NDFD30), with the following results:

- KF/RT average for NDFD30 was 58.66%, 4.92 points higher than the industry average.
  - 36% (16) were 60%+ NDFD30
  - 39% (18) were 57-59% NDFD30
  - 15% (7) were 54-56% NDFD30
  - 10% (5) were 51-53% NDFD30
- KF/RT average was 1 point lower in uNDF240.

Every 1% improvement in NDFD30 should increase dry matter intake by .25-.33 pounds/cow/day. This should increase milk production by a half pound/cow/day.

Conversely, each increase of 1% of uNDF240, decreases dry matter intake by .6 pounds/cow/day. This will decrease milk production by over 1 pound/cow/day. Thus, lower uNDF240 is important.

Duracade Viptera HX LIBERTY LINK

The DuracadeViptera™ trait stack (formerly 5222 EZ) is the industry's most comprehensive solution for proactively protecting yield potential and field health, featuring multiple modes of action to control 16 key insects—more than any competitive trait stack—including a unique mode of action that demonstrates strong performance against corn rootworm, and the convenience of an integrated E-Z Refuge® seed blend. **Pests controlled:** European corn borer, southwestern corn borer, corn earworm, western bean cutworm, black cutworm, dingy cutworm, fall armyworm, true armyworm, beet armyworm, common stalk borer, southern cornstalk borer, lesser cornstalk borer, sugarcane borer, western corn rootworm, northern corn rootworm, and Mexican corn rootworm.

Duracade HX LIBERTY LINK

The Duracade® trait stack (formerly 5122 EZ) offers season-long control of corn rootworm and corn borer, as well as suppression of ear-feeding insects, and includes a unique mode of action that demonstrates strong performance against corn rootworm, with an integrated E-Z Refuge® seed blend. **Pests controlled:** European corn borer, southwestern corn borer, black cutworm, beet armyworm, southern cornstalk borer, lesser cornstalk borer, sugarcane borer, western corn rootworm, northern corn rootworm and Mexican corn rootworm. Pests suppressed: Corn earworm, western bean cutworm, fall armyworm and common stalk borer.

Viptera HX LIBERTY LINK

The Viptera® trait stack (formerly 3220 EZ) offers the most comprehensive above-ground insect control with multiple modes of action against key above-ground insects and the convenience of an integrated E-Z Refuge® seed blend. It is ideal for areas where corn rootworm management is not a primary concern. **Pests controlled:** European corn borer, southwestern corn borer, corn earworm, western bean cutworm, black cutworm, dingy cutworm, fall armyworm, true armyworm, beet armyworm, common stalk borer, southern cornstalk borer, lesser cornstalk borer and sugarcane borer.

Agrisure Above HX LIBERTY LINK

The Agrisure® Above trait stack (formerly 3120 EZ) offers the convenience of an integrated E-Z Refuge® seed blend plus multiple modes of action against corn borer, as well as suppression of ear-feeding insects. **Pests controlled:** European corn borer, southwestern corn borer, black cutworm, southern cornstalk borer, lesser cornstalk borer and sugarcane borer. Pests suppressed: Corn earworm, western bean cutworm, fall armyworm and common stalk borer.

Agrisure Total HX LIBERTY LINK

The Agrisure® Total trait stack (formerly 3122 EZ) offers the convenience of an integrated E-Z Refuge® seed blend with multiple modes of action against corn borer and corn rootworm, as well as suppression of ear-feeding insects. **Pests controlled:** European corn borer, southwestern corn borer, black cutworm, southern cornstalk borer, lesser cornstalk borer, sugarcane borer, western corn rootworm, northern corn rootworm and Mexican corn rootworm. Pests suppressed: Corn earworm, western bean cutworm, fall armyworm and common stalk borer.

Agrisure Viptera 3110 LIBERTY LINK

The Agrisure Viptera® 3110 trait stack offers season-long comprehensive above-ground insect control. It is ideal for areas where corn rootworm management is not a key focus. **Pests controlled:** European corn borer, southwestern corn borer, corn earworm, western bean cutworm, black cutworm, dingy cutworm, fall armyworm, true armyworm, beet armyworm, common stalk borer, southern cornstalk borer, lesser cornstalk borer and sugarcane borer.

AgrisureGT

The Agrisure® GT trait provides tolerance to in-crop applications of glyphosate-based herbicides. This hybrid is an excellent option for refuge acres in a structured refuge operation.

POWERCORE Enlist

PowerCore® Enlist® corn is a comprehensive trait package for above-ground pests and weed management. PowerCore Enlist corn features three modes of action against above-ground insect pests for broad-spectrum and long-lasting control. The primary pest controlled are black cutworm, European corn borer, fall army worm, and southwestern corn borer. Tolerance to multiple herbicides – including glyphosate, glufosinate, 2,4-D choline, and FOPS – gives you the flexibility in herbicide choice and management practices to help maximize yield.

LIBERTY LINK

Seed products with the LibertyLink® (LL) trait are resistant to the herbicide glufosinate ammonium, an alternative to glyphosate in corn, and combine high-yielding genetics with the powerful, non-selective, post-emergent weed control of Liberty® herbicide for optimum yield and excellent weed control LibertyLink®, Liberty® and the Water Droplet logo are registered trademarks of BASF.

HERCULEX® I Insect Protection HX™ HERCULEX® XTRA Insect Protection HX™

Corn trait technology incorporated into these seeds is commercialized under license from Syngenta Seeds, LLC. Herculex® Technology incorporated into these seeds is commercialized under license from Corteva Agriscience LLC. Herculex® and the HERCULEX Shield are trademarks of Corteva Agriscience LLC.

Insect Resistance Management
Planting Refuges, Preserving Technology

Before opening a bag of seed, be sure to read and understand the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed set forth in the technology agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with those stewardship requirements.

Important: Always read and follow label and bag tag instructions; only those labeled as tolerant to glufosinate may be sprayed with glufosinate ammonium-based herbicides.

Agrisure® Above, Agrisure® Total, Agrisure Viptera®, Duracade®, DuracadeViptera™, Viptera®, and E-Z Refuge® are trademarks of a Syngenta Group Company.

More information about Duracade® is available at http://www.biotradestatus.com/.

Herbicide Use in Sorghum by Duane Weaver

The key to having a successful sorghum crop is to start with a warm (60+°F soil temp), moist, weed-free seed bed as rapid germination and emergence are desired for maximum growth and shading. This will be the best form of weed control. Cultivation is an option only for forage sorghum and only when it is planted in 30-inch rows. Cultivation should be done prior to 30 days post-emerge as the plant's root system is too large and root damage or pruning can occur after that time.

The keys to a successful sorghum crop:

- Start CLEAN – either with a burndown pass or tillage
- Use a Pre-emerge herbicide (see below) or in the case of organic, plant on 30" rows to allow for cultivation.
- Understand whether you have untreated seed or Concep treated (safened) seed and then use the appropriate weed herbicide
- Read and follow all directions given on the chemical label, using appropriate additives (such as surfactants, UAN, etc.)

Pre-emerge herbicides are important because of a lack of options for grass control post emerge.

Concep (safened) Treated Seed

For forage sorghum and sorghum-sudan hybrids that are treated with Concep II, the chemicals acetochlor, alachlor and S-metolachlor can be applied as pre-emergence herbicides. In addition, atrazine mixed with grass herbicides — available in these branded products:

- Bicep II MAGNUM®, Lexar®, LumaxTM
- Degree Xtra®, Harness® Xtra
- FulTime®, Keystone®
- Zemax (metolachlor + mesotrione)
- Saflufenacil (Sharpen or Verdict)
- Propazine (Milo-Pro)

Restrictions for Lumax and Lexar in sorghum due to the Calisto herbicide:

- Do not apply to sorghum grown on sandy soils (sand, sandy loam or loamy sand)
- Do not apply to emerged grain sorghum
- Warning of possible crop injury if applied within 7 days of planting

Other generic herbicides with the same chemistry also can be used pre-emergence on seeds treated with Concep II.

Untreated Seed

Untreated seed can be planted and then sprayed with Atrazine as a pre-emergence herbicide. Then, broad leafed weeds can be sprayed with a post-emergence herbicide such as:

- Atrazine + 2-4-D
- Dicamba
- Laddock® S-12
- Peak®
- Permit®
- Shotgun® or Buctril®

Any post-emergence herbicide treatment should be done before the crop is twelve inches tall.

Important Note: Sudan-Sudan Hybrids

Sudan-sudan hybrids are very sensitive to Atrazine and to many other pre-emergence and post-emergence grass herbicides. For broad-leaved weeds, use 2-4-D or Dicamba.

Burndown Options Prior to Planting					
Herbicide	Planting Interval	Kochia	R. Thistle	P. Lettuce	Mustards
2,4-D LV, 1.0 pt	7-14 days	7	9	9	9
2,4-D LV, 1.0 pt + Banvel, 0.5 pt	7-14 days	9	9	9	10
2,4-D LV, 1.0 pt + Atrazine, 1.0 pt	7-14 days	10	9	10	10
Gramoxone Extra, 1.5 pt	0 days	0	6	8	9
Gramoxone Extra, 1.5 pt + Atrazine, 1.0 pt	0 days	10	9	10	10
Landmaster BW, 54 oz	7-14 days	9	9	9	10
Roundup Ultra, 16 oz	0 days	7	8	8	10
Roundup Ultra, 16 oz +Atrazine, 1.0 pt	0 days	10	10	10	10
Scale: 0 = 0% control, 10 = 100% control					

SORGHUMS

Sorghums used for forage are generally classed as forage sorghum, sorghum-sudan hybrids and sudangrass. Byron Seeds researches many varieties in field plots and selects the best for our KingFisher lineup.

Sorghums offer many advantages as superb summer forage:

- Outstanding forage nutritional quality attributes—especially Brown Mid-Rib (BMR) traits
- Drought tolerance and greater water use efficiency
- Ability to plant later than corn while achieving similar biomass yields
- Lower soil fertility requirements than corn
- Outstanding rotational crop benefits
- Opportunity for livestock grazing during summer months

With less lignin than conventional sorghums, sorghums with the BMR trait are extremely palatable with excellent fiber digestibility (NDFD). Because exceptional fiber digestibility fuels livestock performance, our sorghum lineups are exclusively BMR.

Most sorghum plants possess greater total leaf area than corn due to a greater number of nodes per plant (more nodes equal more leaves). Forage sorghums will have leaves similar in size to corn, while the leaves of sudangrass and sorghum-sudan will be smaller than those of corn.

Sorghums are extremely drought and heat tolerant and produce high yields with much less water than corn. Generally, sorghums will yield 1.75 to 2.5 tons of biomass per one inch of irrigation water, while corn produces less than one ton per inch of water applied. Sorghums also have a large, efficient root system capable of reaching soil profile depths of over five feet.

Sorghum's adaptive nature, high production and excellent fiber digestibility make it a valuable tool for forage producers demanding high-quality feedstocks.

Contact your local Bryon Seeds dealer to develop a plan to include sorghums in your summer crop rotation.

Whether you choose KingFisher, our premium line, or any of our other amazing summer annuals, you can be sure that their high fiber digestibility will have significant benefits for your herd as well as your wallet. And all members of our sorghum product line carry our 100% Replant Guarantee to cover any germination issues.

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Forage Sorghum

Description

Forage sorghum, a row crop handled very much like corn for corn silage, offers a replacement for corn silage or multi-cut sorghum-sudans at a much lower seed cost. The cost to plant an acre of forage sorghum—usually $20 to $25—is a fraction of the cost to plant an acre of corn.

The brachytic dwarf option adds more leaves and less stalk (the leaf nodes are much closer together). In addition, brachytic dwarfs tend to exhibit more tillering, along with the extra leaves, to more than make up for the shorter height. Brachytic dwarfs are also much less vulnerable to lodging from high winds.

Our forage sorghums are available both untreated and with Concep II®.

Management

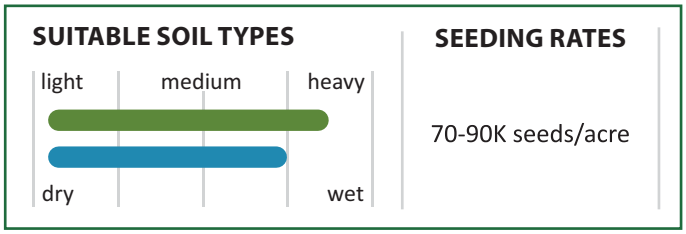
Forage sorghum is usually direct-cut with a forage harvester. The one struggle is having the forage dry enough to chop and store without having too much sorghum grain. The grain fills from top to bottom on the panicle (head) and becomes very hard with ripening, so the starch of the ripe grain will not be very digestible.

A big advantage of BMR forage sorghum over corn silage is that sorghums need about 33% less water and nutrients per ton of forage produced than corn silage. Sorghums love hot and dry climates, and therefore will be more productive than corn silage on marginal soils. Finally, sorghums have few insect problems (for example, corn borers and root worms), and mycotoxins are rarely a problem.

Establishment

Forage sorghum is planted (after 60°F soil temps are reached) with a corn planter adapted for low-output sorghum since seeding rates are small. Forage sorghum can be planted in 15- or 30-inch rows. Sorghum seeding rates—planted on 30 inch rows: 5 to 7 lbs with a target of 70,000 plants per acre; planted on 15 inch rows: 7 to 9 lbs with a target of 90,000 plants per acre.

Forage sorghum emerges in about 10 days, after which the plants grow from 3 to 6 inches a day, depending on whether the temperature stays over about 70°F. Sorghums will not grow below 60°F, but they will not deteriorate like corn at temps above 105°F. When the temperature moderates a bit, the sorghum recovers quickly.



KF FiberPro 74

ZONES: 2, 3, 4, 5, 6

- This full-season brachytic dwarf forage sorghum has been well proven.
- It has superior density with excellent standability and high yield potential.

Relative Yield	Excellent
Tillering	Excellent
NDFD	Excellent

KingFisher 100% REPLANT *Treated Seed* *Untreated Seed*

KF FiberPro 50

ZONES: 2, 3, 4, 5, 6

- KF FiberPro 50 is our shortest season brachytic dwarf.
- It is a very uniform hybrid with high yield and excellent quality.

Relative Yield	Excellent
Tillering	Excellent
NDFD	Excellent

KingFisher 100% REPLANT *Treated Seed* *Untreated Seed*

Byron's FiberPro 76A

ZONES: 2, 3, 4, 5, 6

- This is a full maturity, aphid-tolerant, brachytic dwarf forage sorghum.
- It's very high yielding with excellent standability, digestibility, and palatability.

Relative Yield	Excellent
Tillering	Excellent
NDFD	Excellent

KingFisher 100% REPLANT *Treated Seed* *Untreated Seed*

BMR Sorghum-Sudan

Description

Sorghum-sudan crosses are a warm-season, or C4, grass. Because warm-season grasses process sunlight into sugars (photosynthesis) differently than do cool-season (C3) grasses, sorghum-sudan:

- must be planted after soil temperatures reach 60°F and are rising.
- grow very little at temperatures lower than 60°F.
- grow best at 77°F and higher.
- will produce a ton of silage with half the rain or irrigation needed by corn silage.

After germination, sorghum-sudans thrive in hot, dry weather. They die soon after a freeze.

These forages produce quick tons of highly digestible (high-energy) silage or pasture; they are an excellent source of pasture for the hottest months.

BMR (brown mid-rib) is a natural trait (not GMO) that produces lower levels of lignin in these plants. This trait transforms sorghum products into highly digestible feed that fuels livestock performance. All the sorghum-sudans in the Byron Seeds lineup are BMR.

Brachytic dwarf sorghum-sudans (a natural trait) provide some good benefits:

- Shorter residual cutting height
- Shorter space between leaves for better leaf-to-stem ratio
- Shorter stalk but with more leaves, a quality improvement
- Higher tillering capacity

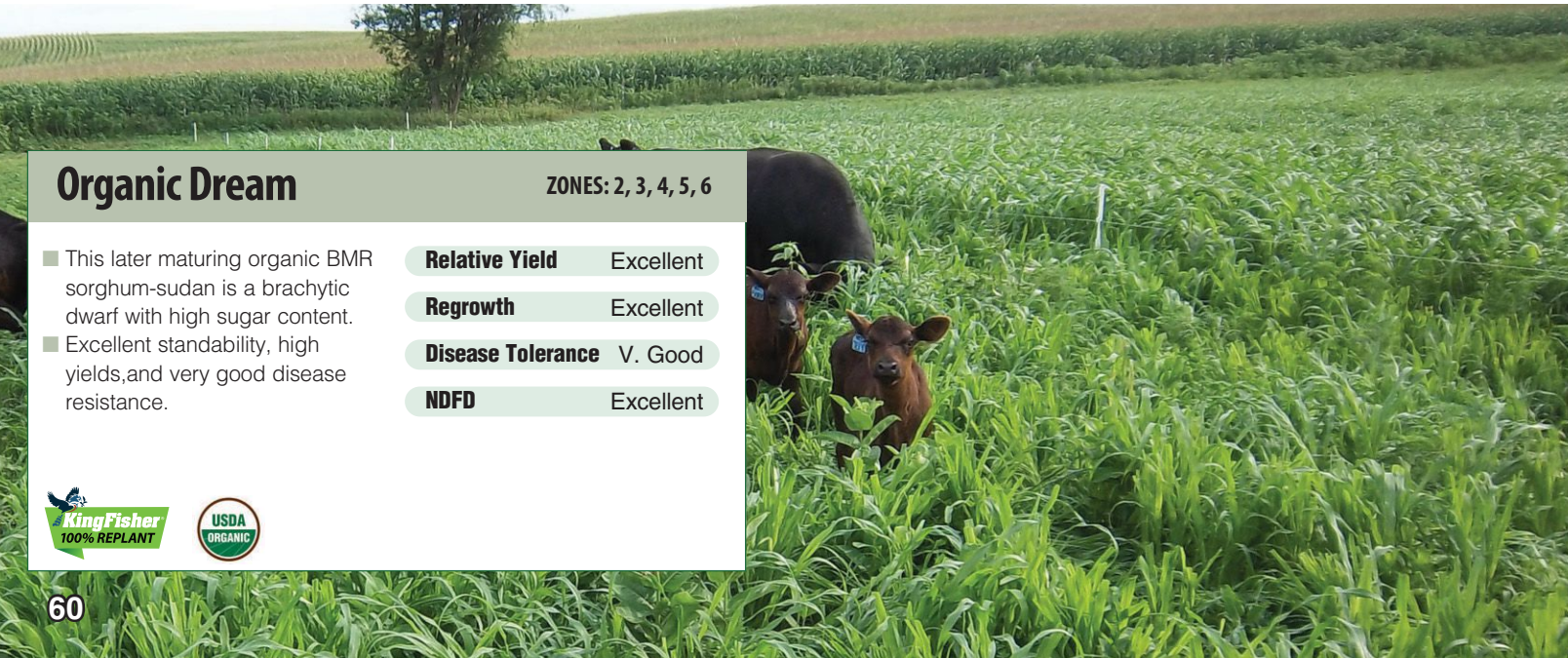
Management

Sorghum-sudan will be harvested for baleage or haylage about 45 days after planting. Grazing is usually initiated a week to 10 days earlier. Sorghum-sudan is mowed when it reaches a height of 38-40 inches.

Residue heights are also important. Brachytic dwarfs can be mowed with a 4-inch residue, one reason for their popularity. Non-brachytic versions must be mowed with at least 6 inches of residue (above the second growth node) to promote rapid regrowth. Caution: Regrowth can be almost zero if the residual is too short.

Fertilizer needs are 1.0-1.25 units of nitrogen per growing day, i.e., 45-50 units for the first cut and 30-35 units for each subsequent cut. Potassium, phosphorous and sulfur are also needed on most farms. All fertilizer needs are the equivalent of the needs for 100-bushel corn.

Manure can be used for the original application of fertilizer; however, commercial nitrogen is the best source after a cutting. Nitrogen needs for grazed sorghum-sudan must be reduced proportionally so that cows can be brought in to graze earlier without danger of nitrate poisoning. Sorghum-sudan should not be grazed for 7-10 days after a killing frost as it takes about seven days for the prussic acid produced by the frost to dissipate.



Organic Dream

ZONES: 2, 3, 4, 5, 6

- This later maturing organic BMR sorghum-sudan is a brachytic dwarf with high sugar content.
- Excellent standability, high yields,and very good disease resistance.

Relative Yield	Excellent
Regrowth	Excellent
Disease Tolerance	V. Good
NDFD	Excellent

KingFisher 100% REPLANT

USDA ORGANIC

BMR Sorghum-Sudan – cont.

Establishment

Sorghum-sudan usually emerges in about 10 days and then can grow 3-6 inches per day. A conventional or no-till drill is used for the seeding, and planting depth should be 1.0-1.5 inches.

Planting after a small grain crop (rye or triticale, for example) requires dealing with the allelopathic effects from the dying grain plants. This can be accomplished with either minimum tillage or heavy application of liquid manure.

Because no herbicides are available for sorghum-sudan, weed-management activities must precede planting.

SUITABLE SOIL TYPES

SEEDING RATES

35-50 lbs./acre

Organic Eons

ZONES: 2, 3, 4, 5, 6

- This later maturing organic BMR sorghum-sudan brings a wide harvest window with high green leaf retention.
- Eons features excellent tillering and regrowth with high drought resistance.

Relative Yield	Excellent
Regrowth	Excellent
Disease Tolerance	V. Good
NDFD	Excellent

KingFisher 100% REPLANT USDA ORGANIC

Commodity Cover

ZONES: 1, 2, 3, 4, 5, 6

- This is an economical mix of sorghum and/or sorghum-sudan for a cover crop.

Relative Yield	Good
Regrowth	V. Good
Disease Tolerance	Good
NDFD	V. Good

Treated Seed

KF Summer Supreme

ZONES: 2, 3, 4, 5, 6

- Summer Supreme is a blend of four premium sorghum-sudans that excel in regrowth, cold tolerance, disease resistance, and drought tolerance.
- This blend brings yield and resilience above what each variety could do by itself.

Relative Yield	Excellent
Regrowth	Excellent
Disease Tolerance	Excellent
NDFD	Excellent

KingFisher 100% REPLANT *Treated Seed* *Untreated Seed*

KF Summer Dream

ZONES: 2, 3, 4, 5, 6

- Summer Dream is a blend of three brachytic dwarf sorghum-sudans.
- This strategic blend brings the best of brachytic dwarfs for high yield, excellent quality, and fast regrowth.

Relative Yield	V. Good
Regrowth	Excellent
Disease Tolerance	Good
NDFD	Excellent

KingFisher 100% REPLANT *Treated Seed* *Untreated Seed*

KF Summer Prince

ZONES: 2, 3, 4, 5, 6

- Summer Prince is a blend of photoperiod-sensitive sorghum-sudans.
- The photoperiod-sensitive maturity allows for excellent multicut management.
- In systems that focus on single cut management, this blend is an excellent tonnage producer and can provide some flexibility in harvest timing.

Relative Yield	Excellent
Regrowth	V. Good
Disease Tolerance	V. Good
NDFD	Excellent

KingFisher 100% REPLANT *Treated Seed* *Untreated Seed*

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

BMR Sudangrass

Description

Our sudangrass hybrid is a very aggressive, drought-tolerant summer annual. It emerges more quickly and has faster regrowth than sorghum-sudan as well as finer stems that contribute to its superior quality.

Management

Sudangrass can be grazed or cut for baleage or haylage with an optimum grazing height of 30 inches and an optimum harvest height of 40 inches. Residual height (when recutting is planned) is 6 inches.

In southern zones, sudangrass can be made for dry hay, but it must be cut to 30 inches to achieve drydown. It responds well to applied fertility or manure. Timely cutting (45 days after planting and 30 days for subsequent cuts) is important because quality will decline as sudangrass reaches maturity.

Because sudangrass is highly sensitive to all herbicides, weed prevention—including starting with a clean field—must be done before planting. Sudangrass should not be grazed for 7-10 days after a killing frost as it takes about seven days for the prussic acid produced by the frost to dissipate.

Establishment

Sudangrass is easy to establish, but it does require 60°F soil temperatures (and rising) before planting. Seeding rates are 20-25 pounds per acre, with seeding at the higher rates providing the best yield and weed suppression. Seeding depth should be 0.75-1.0 inch. It is best to get the seed into the soil moisture.

If the seed will be interseeded into an existing hay or pasture stand, the grass should be cut very short to achieve good establishment.

KF EnergyPro 93

ZONES: 2, 3, 4, 5, 6

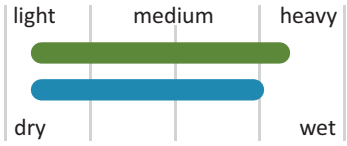
- EnergyPro 93 is very leafy with a fine stem and dry stalk with excellent heat and drought tolerance.
- High forage quality when harvested at 40 inches or less.

Relative Yield	Excellent
Regrowth	Excellent
NDFD	Excellent

KingFisher 100% REPLANT

Treated Seed *Untreated Seed*

SUITABLE SOIL TYPES



SEEDING RATES

20-25 lbs./acre

BMR Pearl Millet

Description

Pearl millet is a warm-season, annual grass with a growth habit like sorghum-sudan but without the potential for prussic acid poisoning. As a warm-season annual, pearl millet should be planted in the early summer and, like most crops, it will yield best in fertile, well-drained soils. However, it also will perform relatively well on sandy soils, acid soils, wet soils or when moisture and fertility are relatively low. Although millet seems to be utilized mainly for grazing, it can also be harvested for silage.

Pearl millet will provide grazing 45-60 days after planting with yields of over 6 tons of dry matter per year under good fertility.

Management

To avoid nitrate toxicity potential, do not apply excessive amounts of nitrogen or graze drought-stressed plants. Frost will kill pearl millet just as it kills sorghum-sudan.

Though rotational grazing will greatly improve grazing efficiency because managed grazing is more efficient, pearl millet may be continuously grazed. Grazing may be initiated after plants reach 18-20 inches or are cut at 24-30 inches.

Regrowth is best if a stubble height of 4-5 inches remains. An additional 40-50 units of nitrogen should be applied after first harvest or grazing to maximize regrowth.

Establishment

Pearl millet should be planted in early summer when soil temperatures reach 60°F-65°F. It can be broadcast-seeded into a prepared seedbed or drilled. Broadcast-seed into firm soil, then cultipack for good seed-to-soil contact.

If pearl millet is drilled, the seeding rate should be 15-20 pounds per acre and the seeding depth 0.5-1.0 inch. For best results, soils should be soil tested and P_2O_5 and K_2O applied accordingly. In the absence of a soil test, 70-90 pounds of both P_2O_5 and K_2O should be applied along with 60-70 units of nitrogen at seeding.

Between 0.75 and 1.0 unit of nitrogen should be spoon-fed per growing day rather than applied all at once. In grazing situations, 0.5 unit of nitrogen per growing day will be more appropriate.

SUITABLE SOIL TYPES

SEEDING RATES

20-25 lbs./acre broadcast

15-20 lbs./acre drilled

KF Prime 360 Pearl Millet

ZONES: 2, 3, 4, 5, 6

- KF Prime 360 has high leaf counts for super yields; higher quality than sorghum-sudan.
- Prime 360 is excellent for summer grazing and has zero prussic acid potential in the fall.

Relative Yield	Excellent
Regrowth	Excellent
Disease Tolerance	Excellent
NDFD	Excellent

KingFisher 100% REPLANT *Untreated Seed*

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

BMR Grazing Corn

This year we are introducing an excellent BMR Grazing Corn, KF 10B90. This high-yielding short day crop brings BMR quality corn for your livestock to graze. KF 10B90 is adaptable to most soils, with great stalk and roots, as well as good disease ratings and excellent fungicide response. Excellent drought tolerance and stay green round out this amazing grazing corn.

KF 10B90 NEW BMR-GRAZING 60 Day RM

BMR for improved NDFD30, this high-yielding grazing hybrid is adaptable to most soils with great stalk/root ratings and excellent drought tolerance.

FiberGest (30-hr. NDFD)	SofStarch (ISVD7)	Milk per Ton	Digestible Fiber per Acre
Excellent	*Excellent*	*Very Good*	*Very Good*

- Recommended Population 35-40K
- Excellent FiberGest
- Widely adapted to many soil types
- Amazing grazing corn

Seedling Vigor ..... Very Good
Plant Height ..... Short
Stalk Strength ..... Very Good
Root Strength ..... Excellent
Stay Green ..... Excellent
Drought Tolerance ..... Excellent
Fungicide Response ..... Excellent
Gray Leaf Spot Tolerance ..... Very Good
Northern Leaf Blight Tolerance ..... Very Good
Goss's Wilt Tolerance ..... Good

Byron Seeds Forage Solutions

What is your forage problem?

-Wet year/dry year
-Early spring/late spring
-Out of forage
-Manure management
-Prevent plant
-Erosion/weeds
-High input costs

Whatever your problem may be, Byron Seeds Forage Specialists have many forage tools to bring you a solution. We understand forage and have the expertise to develop an alternative plan to mitigate your forage frustrations and put you on the road to success.

Byron Seeds Forage Specialists are listed on pages 65-67 of this guide. Call for advice today!

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Teff

Description

Teff, a warm-season annual grass native to Ethiopia, in recent years has attracted the interest of forage agronomists and producers for its contribution as a hay crop. It is characterized by a fairly large crown, many tillers, fine stems, a very shallow root system, rapid growth, and high tonnage capability.

Teff's maximum yield potential and quality expectations are not completely known. Two harvests per year are relatively commonplace, and many producers in warmer climates have reported three to four harvests per year. We have seen harvests yield 2.0-2.5 tons of dry matter per acre (DM/acre). Single harvests of 1.5 tons of DM/acre are probably more typical, with total yields for the growing season of 4-5 tons of DM/acre.

Although teff must be reseeded each growing season, it can be integrated into a forage program in a variety of ways, including as:

- A stand-alone grass hay crop for commercial sales or on-farm use
- An emergency hay or haylage crop that can be planted in June or July or later farther south
- A rotational hay crop that can be planted after harvesting cereals or annual ryegrass
- A break crop when renovating a perennial grass or alfalfa stand
- A fast-growing, self-limiting nurse crop for fall-seeded alfalfa
- A one-year grass component planted into a thinning alfalfa stand

Management

Teff should be fertilized with potassium and phosphorous at rates comparable to other forage grasses grown in your region. We recommend split-applying a total of 80-100 units of nitrogen per acre during the season. Apply the first 50 units at planting, and then apply the remaining N after the first or second harvest.

Teff's fine stem is a benefit with respect to forage quality and palatability. However, the fine-stemmed nature of the crop can cause lodging problems if it is not harvested at the proper maturity stage. To avoid lodging, harvest teff in the late vegetative stage, just prior to seed head emergence, at a cutting height of 24-30 inches with a 4-5 inch residue height.

Establishment

Seeding depth is 0.125-0.25 inch; seed no deeper. Excellent teff stands can be achieved using either no-till or conventional seeding methods. But broadcasting teff seed into a very firm, prepared seedbed may be the best option in field environments where tillage is environmentally acceptable. The importance of a firm seedbed cannot be overemphasized.

Teff seedings should not be made until the soil temperature has consistently reached 64°F. The recommended seeding rate is generally 4-5 pounds per acre for uncoated seed and 10-12 pounds per acre for coated seed.

Teff is not recommended as a grazing crop due to its very shallow root system. Grazing animals are likely to pull substantial numbers of teff plants out of the ground as they graze. If grazing is necessary, wait until one or two hay harvests have been completed before grazing to allow the roots more time to develop and become better anchored in the soil.

Cascade/Corvallis

ZONES: 1, 2, 3, 4, 5, 6

- Teff is excellent as dry hay or haylage and is very palatable for horses and cattle.
- Teff is very much like timothy hay in quality.

Relative Yield	Excellent
Regrowth	Excellent
Disease Tolerance	V. Good
NDFD	V. Good

KingFisher 100% REPLANT

Organic Coating Seed

Forages to Maximize Your Growing Season

Description

If you're looking for ways to increase your farm's productivity and decrease ration costs, the easiest way to accomplish this is to plant annuals with high amounts of digestible fiber. Annuals can yield more than perennials and can help crop rations be more aggressive. Cool-season annuals like forage oats, annual ryegrass and brassicas will grow well into the fall and help shorten the winter. By planting warm- and cool-season annuals in sequence, you'll maximize every day you have.

If you are north of Interstate 80, instead of summer-seeding a new alfalfa crop, consider an annual cocktail mix. Yield Max is a combination of BMR sorghum-sudan, Italian ryegrass, two clovers and hairy vetch. The pairing of warm- and cool-season annuals lowers the risk that could come with a cool/wet or a hot/dry summer. And there's another bang for the buck: The ryegrass and clover stretch the growing season into the fall and act as a cover crop for the winter.

Summer Pro is a warm-season mix of sorghum-sudan and millet designed to create a stronger sward through two different rooting actions and to provide greater crop density. This mix helps you be successful on a wider range of soils and growing conditions and brings faster regrowth than sorghum-sudan alone.

Management

Summer Pro does best in the southern half of the Midwest. Suggested seeding rates are 25-35 lbs./acre.

Yield Max works great for very high-quality baleage, haylage or grazing and should be able to be harvested three times. Plant Yield Max in soils that are 60°F at 40 lbs./acre. Yield Max does best in areas north of Interstate 80.

ForageMAXd is a blend of forage sorghum and photo-period sensitive sorghum-sudan to give a single cut of highly digestible fiber in 60 to 90 days.

ForageMAXd is designed for a cut and wilt system as direct chop will be too wet for storage. Suggested seeding rates are 20-25 lbs./acre.

ForageMAXd

ZONES: 2, 3, 4, 5, 6

- This mix brings a rapid canopy, massive tonnage, and excellent rooting to build soil.
- It's designed for high volumes of digestible fiber with a wide harvest window in mind.

CONSISTS OF A SPECIAL MIX OF:

BMR Photoperiod-sensitive Sorghum-Sudan	60%
BMR Forage Sorghum	40%

KingFisher 100% REPLANT *Untreated Seed*

Yield Max

ZONES: 1, 2, 3

- Yield Max, developed for the North, is an annual cocktail mix that is summer seeded.
- Yield Max pairs warm- and cool-season annuals to maximize every day of summer and fall.

CONSISTS OF A SPECIAL MIX OF:

BMR Sorghum-Sudan	60%	Berseem Clover	5%
Italian Ryegrass	25%	Hairy Vetch	5%
Medium Red Clover	5%		

KF Summer Pro

ZONES: 4, 5, 6

- KingFisher Summer Pro is a mix developed for the South.
- This mix increases crop density, creates a stronger sward, reduces risk, and re-grows quickly.

CONSISTS OF A SPECIAL MIX OF:

BMR Sorghum-Sudan	60%	BMR Millet	40%

KingFisher 100% REPLANT *Untreated Seed*

TerraLife® Cover Crop Mixes

TerraLife® Rigol DT

ZONES: 1, 2, 3, 4, 5, 6

- Rigol DT works very well planted after wheat and prior to soybeans.
- This mix is extremely effective in penetrating compacted soils thanks to its intensive rooting activity.
- The low carbon-to-nitrogen ratio allows rapid nitrogen availability for the following crop.
- Included Species: Abyssinian Cabbage, Black Oat, Buckwheat, Egyptian Clover, Linseed, Phacelia, Persian Clover, Sunflower, Tillage Radish.
- Seeding Rate:18-20 lbs./A
- Planting Dates: late May to late August

TerraLife® MaizePro DT

ZONES: 1, 2, 3, 4, 5, 6

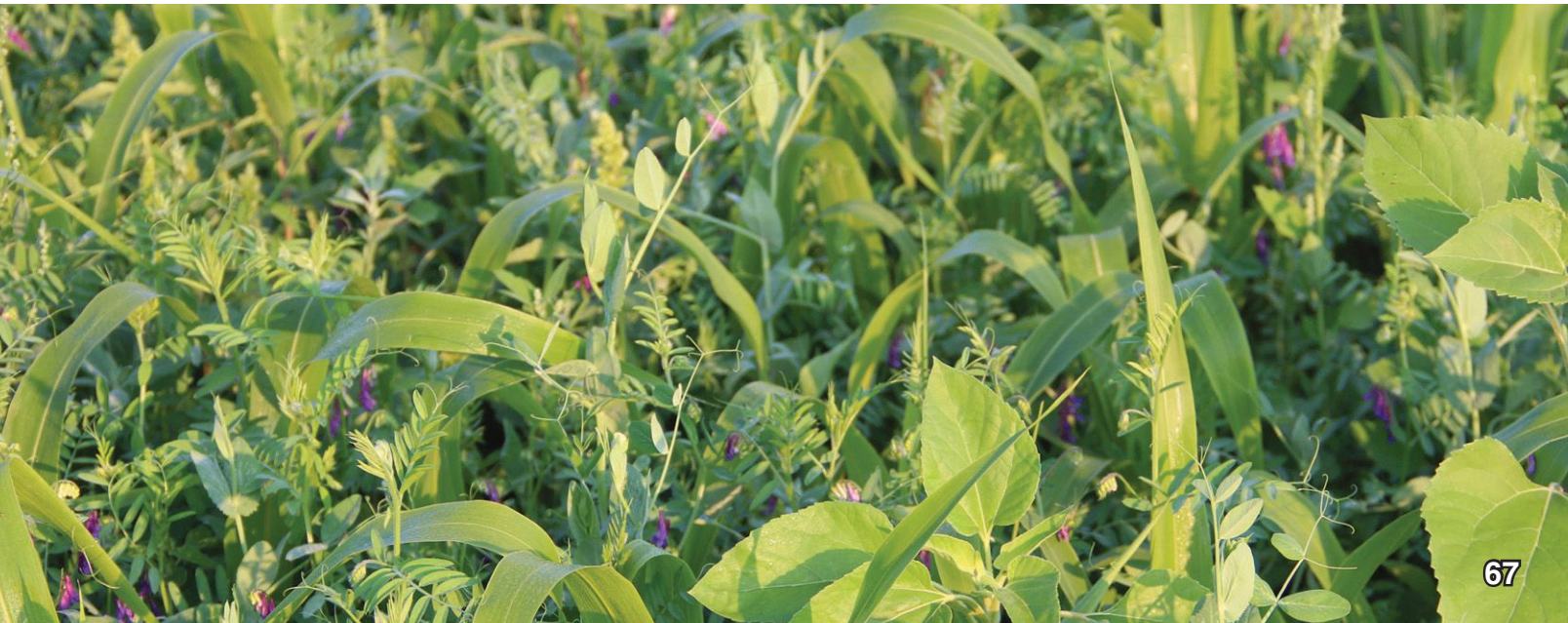
- MaizePro DT is ideal for corn crop rotations as it supports the formation of mycorrhiza and improves soil structure.
- This mix has several winter-hardy components that will likely need to be terminated before planting corn.
- It also has components that will grow quickly in the fall and die over the winter, providing fall weed suppression and quick nutrient availability in spring.
- Included Species: Alsike Clover, Crimson Clover, Field Pea, Linseed, Persian Clover, Sorghum, Sunflower, Tillage Radish, Winter Rye, Winter Vetch.
- Seeding Rate: 35-40 lbs./A
- Planting Dates: late May to late August

TerraLife® BetaMaxx

ZONES: 1, 2, 3, 4, 5, 6

- BetaMaxx was developed for planting in sugar beet rotations, but it also works very well for produce production. No cruciferous plants are included in this mix, which makes it suitable for growing in advance of brassica crops like broccoli and cabbage.
- Since BetaMaxx will reliably winter-kill in the North, vegetables and beets can be grown the following year with minimal soil preparation.
- Included Species: Black Oat, Common Vetch, Egyptian Clover, Pea, Linseed, Phacelia.
- Seeding Rate: 35-40 lbs./A
- Planting Dates: late May to late August

Corn root system after MaizePro compared to corn root system after other cover crop.



Bio-D, 16-Way Mix

ZONES: 1, 2, 3, 4, 5, 6

- Highly diverse mix with an intelligent design that allows all the species to actively express themselves.
- Utilize upper, middle, and lower canopy to maximize sunlight capture for warm-season nutrient cycling.
- Works for grazing or forage but yields less dry matter than a more focused mix.
- Included Species: Millet, Braco Mustard, Abyssinian Cabbage, Cowpeas, Sunn Hemp, Forage Sorghum, Flaxseed, Spring Pea, Black Oat, Sunflower, Phacelia, Berseem Clover, Persian Clover, Lifago Buckwheat, T-raptor Rape, Nitro Radish.
- Seeding Rate: 20-45 lbs./A. Plant from late May to early August.

Summer Lightning Mix

ZONES: 1, 2, 3, 4, 5, 6

- A fast-establishing mix designed for weed control with summer grazing potential (if grazed, the sorghum-sudan will be the only species to re-grow).
- Sorghum-sudan and buckwheat are powerful mycorrhizae builders while Sunn hemp and cowpeas add some nitrogen fixing.
- Our dual-purpose summer cover crop mix for high dry matter yields and forage quality.
- Included Species: Sunn Hemp, Sorghum-sudan, Cowpeas, Lifago Buckwheat.
- Seeding Rate: 20-35 lbs./A. Plant from late May to late August.

N-Cite, 8-Way Mix

ZONES: 1, 2, 3, 4, 5, 6

- A warm-season mix designed for nitrogen production and recycling with grazing potential.
- Good mix to follow small grain harvest; corn can perform well following this mix.
- This mix will winter-kill.
- Included Species: Cowpeas, Spring Peas, Lifago Buckwheat, Millet, Sunn Hemp, Nitro Radish, Sunflower, Abyssinian Cabbage.
- Seeding Rate: 15-30 lbs./A. Plant from late May to late August.

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Interseeder Plus

Description

Interseeder Plus is a diverse mix of Annual Ryegrass, Crimson Clover, Balansa Clover, and Hybrid Brassica. This cover crop blend was designed to capture excess nutrients in the late summer and early fall after the corn hits black layer. Interseeder Plus has shown excellent shade tolerance and is able to withstand the extreme shade under the corn canopy.

Establishment

Seed at 17 lbs./A with a drill or interseeder; 20 lbs./A if broadcasting. Plant between V4 and V7 corn stages. It can also be interseeded into corn after canopy opens.

Management

Interseeder Plus was developed after observing different cover crops that were planted into standing corn. With much research, we designed Interseeder Plus to have the best varieties that could handle the shading of the corn without negatively affecting the corn yields. In fact, some findings indicate that the following crop can have larger yields due to the increased biological diversity and improved soil health. Producers have also directly planted the next cash crop into Interseeder Plus in the spring with great success. Interseeder Plus should winterkill in the upper Midwest regions.

Interseeder Plus

NEW

ZONES: 1, 2, 3, 4, 5, 6

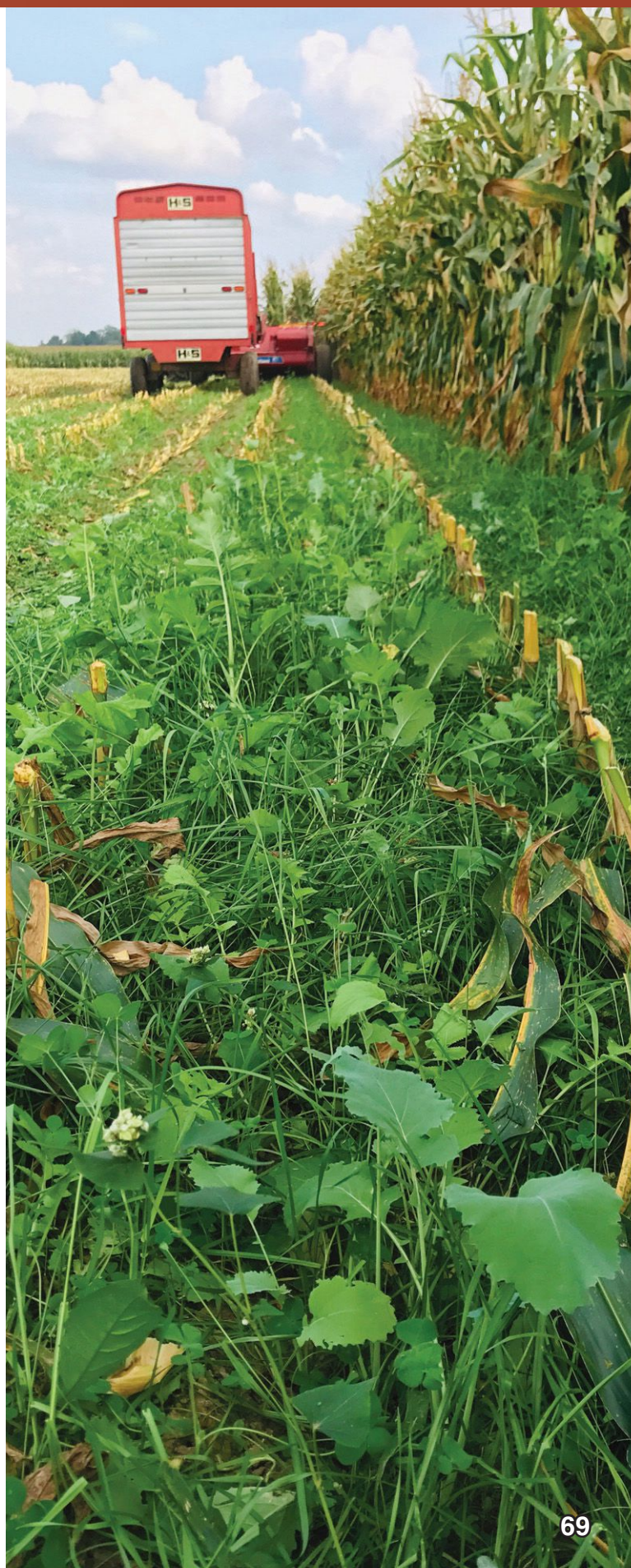
- Interseeder Plus withstands corn canopy and continues to capture excess nutrients.
- Excellent for interseeding early into corn at V4-V7; the clovers fix nitrogen for the following crop to utilize.

Loosen Soil	Excellent
Forage Value	Good
Ground Cover	Excellent
Soil Builder	Good
N Scavenger	Excellent
N Production	Good

CONSISTS OF A SPECIAL MIX OF:

- Annual Ryegrass
- Balansa Clover
- Crimson Clover
- Hybrid Brassica

Untreated Seed



Nitrogreen Mix

Description

Nitrogreen Mix is a mixture of species to maximize nitrogen production and green manure crop. Nitro radishes help loosen and aerate the soil. Plant from August 15th to October 10th, depending on how far south you are. If left until flowering the following year, it can produce up to 100-150 units of N for the next crop.

Management

Nitrogreen Mix must be sprayed or moldboard plowed in the spring before planting the cash crop. Direct seeding is best but also a relatively early seeding date is needed in northern zones to make sure the legumes are established enough to be winter-hardy. This mix does well when aerial-seeded into standing crops in late August. When aerial-seeded, you can expect more crimson clover to establish than hairy vetch, unless soil moisture is very consistent near the soil surface for a couple of weeks after seeding.

Establishment

Seed 15-25 lbs./A. Drill 0.5 inch deep.

Nitrogreen Mix

ZONES: 1, 2, 3, 4, 5, 6

- This mix includes deep-rooting legumes for southern and northern zones.
- The Nitro radish element breaks up hardpan and recycles deeply buried nutrients.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Excellent

CONSISTS OF A SPECIAL MIX OF:

Hairy Vetch	60%	Crimson Clover	10%
Medium Red Clover	10%	Balansa Clover	5%
Yellow Blossom Clover	10%	Nitro Radish	5%

Organic Coating Seed

Speedy Cover

Description

Speedy Cover is a mixture of oats and radish. True to its name, Speedy Cover is extremely quick to establish and also quick and easy to plant and manage. Since this mix will typically winter-kill, no spring spraying or tillage is normally needed. All you have to do is plant into the beautiful killed mulch that this mix leaves behind.

Management

Plant into existing crops at the beginning of leaf wilt. The harvest of soybeans should not be impacted unless harvest is delayed and too much growth of the cover crop has occurred by then. Brassicas and oats will winter-kill when temperatures dip into the low 20s. Avoid planting in waterlogged areas.

Establishment

Seed at 80-100 lbs./A. For best results, drill 0.25-0.5 inch deep or broadcast into a tilled seedbed and cultipack. Aerial applications have been very successful when corn has dried as high as the ear or soybean leaves start to drop. It can be no-tilled into a grass/alfalfa sod that has been killed or mowed very close. Herbicides can also be used to suppress the sod.

Speedy Cover

ZONES: 3, 4, 5, 6

- This mix of oats and radish is very quick to establish and will normally winter-kill.
- It is a good choice for a first-time cover cropper.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	Excellent
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

CONSISTS OF A SPECIAL MIX OF:

Oats	92%	Nitro Radish	8%

Untreated Seed

Soil Builder

Description

Soil Builder is a mixture of annual ryegrass, crimson clover, hairy vetch and nitro radish. This versatile mix will scavenge nutrients, fix nitrogen and establish quickly to combat weeds. No matter why you plant a cover crop, Soil Builder deserves your consideration.

Management

Soil Builder has to be sprayed or moldboard plowed in the spring before planting the cash crop. This versatile mix can be terminated early and still contribute a good amount of nitrogen due to the crimson clover. But if the cropping schedule permits, letting this mix grow until the purple blooms of the hairy vetch can be seen will result in significantly higher nitrogen fixation.

In the North, the radishes are not likely to perform to their potential if planting occurs after mid-August. Below I-70, the last date for planting for optimal radish performance would be September 10th. Other species in the mix, however, will still give tremendous benefits if planting is a bit late.

Establishment

Seed 18-25 lbs./A. Drill up to 0.5 inch deep. Satisfactory results can be obtained by flying the mix on if the seeding rate is increased.

Soil Builder

ZONES: 3, 4, 5, 6

- Soil Builder has tremendous root growth and early spring top growth.
- The legumes in this mix can fix up to 100 lbs. of nitrogen.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Excellent
N Scavenger	V. Good
N Production	Good

CONSISTS OF A SPECIAL MIX OF:

Annual Ryegrass	40%	Crimson Clover	20%
Hairy Vetch	36%	Nitro Radish	4%

USDA ORGANIC *Organic Coating Seed*

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Hairy Vetch

Description

While hairy vetch is a top producer of nitrogen and ground cover, fall-planted vetch is slow to establish and will not produce much top cover unless planted early, for example, after wheat or oats. For this reason, vetch is usually mixed with faster-establishing cover crops such as radishes and ryegrass. Rapid spring growth produces a heavy mulch layer and is one of the best for suppressing weeds and preventing erosion. If allowed to reach 50% bloom, vetch can produce up to 250 lbs. of N, about half of which is available to the following crop. About 10% of vetch seed is "hard seeded" and will not germinate the first year, posing potential weed problems.

Management

Hairy vetch is best ahead of corn. Inoculate with a vetch inoculant for best N production. Once vetch reaches 50% bloom, it can be killed by mowing or rolling with a roller crimper. Spraying and incorporation also work well. Vetch will provide a heavy ground cover, but as a succulent, it decomposes rapidly and will lose its effectiveness as cover in 4-6 weeks. Winter-kill is possible if temperatures are below 5°F with no snow cover.

Establishment

Drill 15-20 lbs./A or broadcast at 25-30 lbs./A and cover with a harrow (in mixes 10-15 lbs./A.). Seed 30-45 days before a killing frost as vetch is slow to establish. Plant 0.5-1.0 inch deep. Roots will continue to grow through the winter. Vetch has a high phosphorous and potassium requirement but needs very little N for establishment. Vetch doesn't do well as a spring-planted crop.

Patagonia Hairy Vetch

ZONES: 2, 3, 4, 5, 6

- This is an early-maturing variety allowing earlier termination in the spring to permit timely planting of corn.
- It is the fastest-establishing hairy vetch we have seen and the fall growth has been impressive.

Organic Coating Seed

Loosen Soil	V. Good
Forage Value	Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Fair
N Production	Excellent

Hairy Vetch

ZONES: 1, 2, 3, 4, 5, 6

- Hairy vetch is a great nitrogen producer and can lower N expenses by one-third.
- Rapid spring growth gives heavy mulch cover for weed suppression and erosion control.

USDA ORGANIC

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Fair
N Production	Excellent

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Clovers

Description

Clovers are an excellent source of nitrogen and can double as a quality forage. They are good as a soil builder, as a weed suppressor and for erosion control. Clovers can be frost-seeded and work well mixed with other cover crops such as small grains, grasses, radishes, and other legumes.

- Clovers can be spring-planted by frost-seeding or planting with small grains. Use the grass seeding box on the drill.
- North of Interstate 80, clovers can be overseeded into standing corn at last cultivation. Allow 6-7 weeks after applying pre-emergent herbicides like Altrazine; check labels.
- Clovers can be broadcast or aerial-seeded into beans at leaf yellowing prior to leaf drop.

Red clover will grow well in cooler, moist conditions and will slow down over the summer months. Yellow Blossom Sweet Clover does well in the summer and has the greatest warm-weather biomass production of any legume, exceeding even alfalfa.

Berseem (also known as Egyptian clover) works well doubling as a cover crop and as a forage, producing 18-28% protein.

Viper Balansa Clover

ZONES: 1, 2, 3, 4, 5, 6

- Viper is an annual clover with white blossoms and hollow stems—great for cover crop or forage.
- Viper replaces Fixation because it's more aggressive, establishing quickly with more mass.
- A low seeding rate (5-8 lbs./A) makes it very economical; cold tolerant to -14°F.

Loosen Soil	Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Good
N Production	Excellent

Organic Coating Seed

Mammoth Red Clover

ZONES: 1, 2, 3, 4, 5, 6

- This clover produces up to 150 lbs. of nitrogen and 4 tons of dry matter seeded at 10-12 lbs./A.
- When mixed with grains, it can be left for cover or forage after grain harvest.
- Mammoth is better than crimson clover for the North because it is more likely to survive the winter.

Loosen Soil	Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	Excellent
N Scavenger	Fair
N Production	Excellent

USDA ORGANIC *Organic Coating Seed*

Frosty Berseem Clover

ZONES: 1, 2, 3, 4, 5, 6

- Berseem is an energetic summer annual and a heavy nitrogen producer—150-200 lbs.
- Frosty survives cold temperatures better than standard berseem.

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	Excellent
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Excellent

Organic Coating Seed

Medium Red Clover

ZONES: 1, 2, 3, 4, 5, 6

- Medium Red can be cut once late in the seeding year and twice the following year.
- This clover is good for short-term rotations with good persistence.

Loosen Soil	Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Good
N Production	V. Good

USDA ORGANIC *Untreated Seed*
Treated Seed

Yellow Blossom Sweet Clover

ZONES: 1, 2, 3, 4, 5, 6

- Yellow Blossom is a summer biannual with a very deep root system (up to 5 feet deep).
- Seeded at 8-15 lbs./A, it can produce 2.5 tons of dry matter the first year; winter-hardy and drought-tolerant.

Loosen Soil	Excellent
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Excellent
N Scavenger	Fair
N Production	Excellent

USDA ORGANIC *Organic Coating Seed*

Crimson Clover

Description

Crimson clover is a fast-growing annual that provides early spring nitrogen, up to 200 lbs. at 50% bloom. Its rapid growth makes it an excellent weed suppressor and an emergency forage supply that doesn't cause bloat. In the South, crimson clover is fall-planted with other cover crops for weed suppression, erosion control and quality spring forage. It can be spring-seeded in northern areas for weed control and nitrogen production. If planted in the spring or summer, it will bloom the same year and will not overwinter.

Management

Crimson clover thrives in cool, moist conditions. It works well on any soil with the exception of heavy, wet clays. Inoculate for best N production. It is usually mixed with annual ryegrass, vetch, radishes, and small grains like oats. Nitrogen production requires an adequate supply of phosphorous and potassium.

Crimson clover can be killed by spraying or incorporation. At bloom stage, it can also be killed by mowing or rolling with a roller crimper.

Establishment

For fall planting, drill at 15-18 lbs./A, 0.125-0.25 inch deep, or broadcast at 22-30 lbs./A. If broadcast, roll into a firm seedbed. Use 10-15 lbs./A in mixes. For spring planting, seed as soon as all danger of frost is past. Don't plant too early in the fall if you want it to overwinter. If crimson clover goes to seed in the fall, it will not regrow in the spring.

Majestic Crimson Clover NEW

ZONES: 1, 2, 3, 4, 5, 6

- Majestic is more cold-tolerant than Dixie, making Majestic a better choice for a fall-planted cover crop that will produce good spring biomass.
- Good winterhardiness, but zones 1 and 2 are spring planted only.

Loosen Soil	Fair
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	Fair
N Production	V. Good

Untreated Seed
Organic Coating Seed

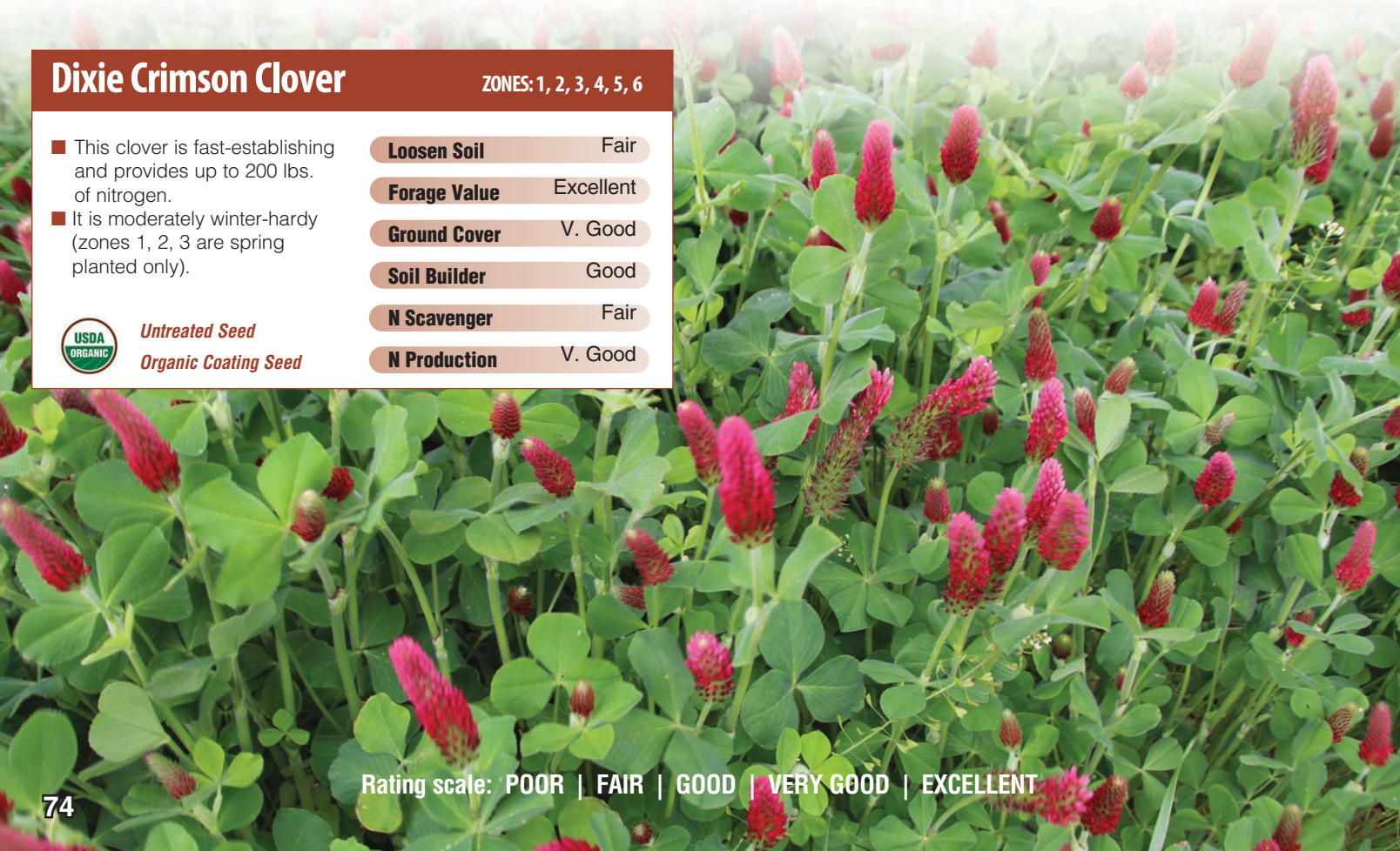
Dixie Crimson Clover

ZONES: 1, 2, 3, 4, 5, 6

- This clover is fast-establishing and provides up to 200 lbs. of nitrogen.
- It is moderately winter-hardy (zones 1, 2, 3 are spring planted only).

Loosen Soil	Fair
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	Fair
N Production	V. Good

Untreated Seed
Organic Coating Seed



Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Majestic Crimson Clover

Byron Seeds is offering Majestic Crimson Clover, a new crimson clover that widens your window to be able to plant a fall legume cover crop to fix nitrogen for your next corn crop. A better stand of crimson clover coming through the winter means more nitrogen production and better soil coverage.

In stress tests, Majestic crimson clover showed 75% winter survival while common Dixie crimson clover only had 10% winter survival. We've seen this marked difference for two years in a row. Majestic is more cold-tolerant than Dixie, making Majestic a better choice for a fall-planted cover crop that will produce good spring biomass. Majestic is also early blooming for quick nitrogen production.

Field Peas

Description

Field peas are excellent nitrogen fixers and establish quickly, providing good ground cover. Peas are usually mixed with oats, barley or triticale and are an excellent source of high-protein forage.

Field peas are divided into two types. Keystone winter peas can be planted in the fall and usually overwinter south of Interstate 70. The other peas, like the Arvika spring pea, do best planted as early as you can get in the field in the spring.

Management

Peas like cool weather and languish in heat and drought. Peas also like a wide variety of well-drained soils. They are almost always planted with small grains such as oats and are usually used as a dual-purpose cover and forage crop. Inoculate to ensure good nitrogen production.

Establishment

Plant peas 1 inch deep at 30-100 lbs./A depending on the mix. If nitrogen and protein are the goal, plant more peas than small grains. Plant fall peas by mid-August to mid-September; peas need to be 4-6 inches tall before going dormant for the winter. Plant spring peas as soon as you can work the fields. Expect peas to grow rapidly in the spring and to be ready for harvest or incorporation in about 60 days.

Survivor Winter Peas

We've seen superb winter hardiness in this pea!

ZONES: 2, 3, 4, 5, 6

- Survivor is bred for advanced cold tolerance, providing more confidence for winter survival.
- This pea provides good biomass production for higher nitrogen-fixing potential.

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Fair
N Production	V. Good

4010 or Arvika Field Peas

ZONES: 1, 2, 3, 4, 5, 6

- These spring peas have rapid spring growth; plant as early as you can get in the field.
- They are excellent forage and produce over 100 lbs. of nitrogen.

USDA ORGANIC *Untreated Seed*

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Fair
N Production	V. Good

Keystone Winter Peas

ZONES: 4, 5, 6

- Keystone winter peas compete very well with winter annual weeds because of good early vigor in the fall growth.
- They are a white-flowered pea for better palatability and digestibility.

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Fair
N Production	V. Good

Montech Peas

ZONES: 1, 2, 3, 4, 5, 6

- This is a semi-leafless, erect yellow grain pea with medium maturity.
- Fix nitrogen and build soil health with this non-shattering grain pea.

USDA ORGANIC *Untreated Seed*

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Fair
N Production	V. Good

Cowpeas

Description

Cowpeas, unlike field peas, are a warm-season annual. They cannot be successfully planted until soil temperatures reach 65°F, limiting their usefulness in the North. They are usually used only as a smother or soil-building crop. In our southern regions, cowpeas are used only as a double crop with short-season corn or sorghum. Some would even plant sorghum with cowpeas, but the caution is to not depend on the cowpeas for the sorghum's nitrogen. Their roles are to suppress weeds, build soil, prevent erosion, produce 90-120 lbs. of N and even be used as forage. The N production, though modest, can be accompanied by up to 8,000 lbs./A of biomass. Often, cowpeas are used as a summer soil-building, sacrifice crop/green manure.

Management

Cowpeas can tolerate a wide range of soil types, low fertility, high heat and moist or dry (once germinated) soils. Do not allow cowpeas to go to seed. Mowing or rolling stops plant development but does not kill. Quickly incorporate with light tillage to get fastest release of the plant's nutrients. Cowpeas used for cover crops will unlikely have any problems with pests as might those grown for their grain. We recommend cowpeas instead of mung beans since cowpeas are more aggressive in growth.

Establishment

Drill at 25-50 lbs./A, 0.5-1 inch deep. Inoculate the seeds for best performance. Cowpeas can tolerate lower pH although they will do best with adequate lime.

Cowpeas

ZONES: 1, 2, 3, 4, 5, 6

- These are a good double crop or companion crop in the South; smother crop or soil builder in the North.
- Plant after soil temps reach 65°F; excellent quick cover and weed suppression.

Untreated Seed

Loosen Soil	V. Good
Forage Value	Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	V. Good

Radishes and Rape

Description

Radishes establish very quickly, providing good ground cover, smothering weeds and preventing erosion. The taproot drives deep into the soil, pulling up nutrients otherwise unavailable to shallower-rooted crops. These taproots provide a way for air, water and crop roots to penetrate deeply into the soil. Fall-planted radishes are great for sequestering residual nutrients from the previous crop. Radishes work as a biofumigant, especially if incorporated in the vegetative stage.

Management

Radishes can be planted into existing crops at the beginning of leaf wilt, either by aerial application or by a high boy rigged with a broadcast system. They work well in mixes or can be seeded alone. In mixes, 2 or 3 lbs. is all that's needed. Radishes winter-kill when temperatures reach 23°F.

Establishment

Seed 8-10 lbs./A straight or 2-4 lbs./A in mixes. Drill in rows 6-8 inches apart, 0.25-0.5 inch deep. Radishes can be broadcast and rolled with a cultipacker or aerial-seeded into drying corn. Use higher rates for broadcasting and aerial seeding. Radishes can be no-tilled into grass if the grass has been grazed or mowed very close.

Nitro Radish

ZONES: 1, 2, 3, 4, 5, 6

- Nitro is fast-establishing and is bred to grow straight down to penetrate hardpan.
- It works well mixed with KB Royal annual ryegrass.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	Excellent
Soil Builder	V. Good
N Scavenger	Excellent
N Production	Poor

Untreated Seed

Organic Daikon Radish

ZONES: 1, 2, 3, 4, 5, 6

- A radish that is fast-establishing with consistent root growth.
- It is bred to grow straight down to penetrate hardpan.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	Excellent
Soil Builder	V. Good
N Scavenger	Excellent
N Production	Poor

USDA ORGANIC

Organic Coating Seed

Dwarf Essex Rape

ZONES: 1, 2, 3, 4, 5, 6

- Essex rape has more lateral growth than a radish and needs at least 8 weeks of growth.
- It provides good ground cover and is winter-hardy to 20°F.

Loosen Soil	V. Good
Forage Value	Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Forage Brassicas

Description

While not always thought of as a cover crop, brassicas often double as a forage and cover crop, usually being mixed with small grains like oats and triticale. Brassicas have a deep root system that allows them to stay green longer than most summer cover crops. These taproots pull up and recycle nutrients that are too deep for crop roots, loosening the soil and providing channels for air, water and crop roots.

Management

Planted in the early fall, brassicas provide a massive amount of dry matter that helps suppress weeds and control erosion, and can be stockpiled for winter forage. This family of forage can be grazed but not easily echanically harvested.

Some hybrids, like Winfred, are very flexible, working well both as a summer annual during the hot, droughty summer months and as a fall-planted cover crop that can withstand frosty winter conditions. Spring-planted Winfred shows very good regrowth after being cut or grazed. In extreme drought, Winfred will usually go dormant like a forage sorghum, waiting for moisture.

Establishment

Plant 0.125-0.25 inch deep at 4-6 lbs./A straight or 2-4 lbs./A in mixes.

T-raptor Rape

ZONES: 1, 2, 3, 4, 5, 6

- T-raptor has quick growth (6-8 weeks to first grazing) with vigorous regrowth for multiple grazings.
- It is very leafy with no bulb and cold tolerant to 18°F.

Untreated Seed

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Barkant Turnip

ZONES: 1, 2, 3, 4, 5, 6

- This turnip with vigorous top growth and high bulb yield is cold tolerant to 20°F.
- An 8-10 week growth can yield up to 4-6 tons of dry matter.

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Winfred

ZONES: 1, 2, 3, 4, 5, 6

- Winfred has slower upright growth (8-12 weeks) with no bulb; plant in spring or early fall.
- It stays green after frost and is winter-hardy to -5°F.

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Mustard

Description

Mustard establishes very rapidly, helping to suppress weeds and act as a ground cover. The taproot grows to a depth of 3 feet, helping break up soil and scavenge nutrients. Mustard works great as a biofumigant and suppresses verticillium in potato.

Management

Mustard is a cover crop that can be planted in early spring or early fall in the South if you want it to overwinter. Mustard kills at about 25°F. It mixes well with triticale, rye and hairy vetch and works extremely well as a nematode suppressor and as a natural biofumigant. Use in rotation with wheat, bean and potato.

Establishment

Drill 0.5 inch deep at 8-10 lbs./A or 3-5 lbs./A in mixes. Can be broadcast at the higher rate and rolled. Incorporate or kill after flowering for best biofumigant effect.

Braco White Mustard

ZONES: 1, 2, 3, 4, 5, 6

- This mustard suppresses nematodes and weed seed germination; it's a great nitrogen scavenger.
- It usually winter-kills except in the South and can be frost-seeded.

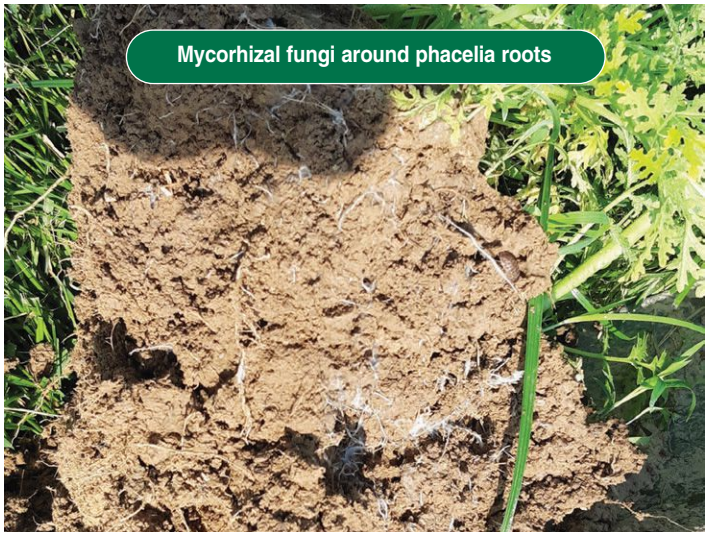
Untreated Seed

Loosen Soil	V. Good
Forage Value	Poor
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Phacelia

Description

Phacelia offers fast early development for a quick competitive canopy. It spreads very quickly across the ground and restricts the growth of weeds. Its vibrant flowers attract beneficial insects and it works well as a cool-season soil builder. Its extensive root systems can reach a depth of 30 inches, which is great for breaking up clay soil. Phacelia also scavenges for nitrogen in the soil. It makes a good winter-killed cover crop to prepare the ground for an early spring planting. The root system of phacelia creates abundant mycorhizal fungi.



Mycorhizal fungi around phacelia roots

Management

Phacelia is comparable to buckwheat but is more tolerant of cold and drought. It is well adapted to most soils. It flowers 6-8 weeks after planting if it still has at least 13 hours of sunlight.

Establishment

Seeding rate is 8-12 lbs./A at a depth of 0.25 inch. Seed in the spring or early fall.

Phacelia

ZONES: 2, 3, 4, 5, 6

- Phacelia develops quickly as a good cool-season soil builder.
- Its deep fibrous root system captures nutrients well and improves tilth.
- It will winter-kill but can tolerate light frosts.

Untreated Seed

Loosen Soil	Excellent
Forage Value	Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Buckwheat

Description

Buckwheat is a short-lived summer annual reaching maturity in just 70-90 days. It is not a grain or even a grass, but an herb. It is one of the fastest and easiest establishing cover crops available. It can produce 2-3 tons of dry matter in just 6-8 weeks, making it an excellent crop for summer weed suppression. Buckwheat is easy to kill and is known for its ability to extract phosphorus from the soil. It is also known for its sweet blossoms that attract beneficial insects. It is very succulent and does not add much to the soil by way of biomass. We offer Lifago and VNS buckwheat.

Management

Buckwheat likes light to medium, well-drained soils, sandy loams, loams, and silty loams. It grows best in cool, moist conditions. Buckwheat is not drought tolerant. It works very well as a nurse crop. Make sure to cut back on the seeding rates. It is very susceptible to frost and kills easily by rolling.

Establishment

Drill VNS buckwheat 35-45 lbs./A (Lifago-25 lbs./A) 0.5-0.75 inch deep when all danger of frost is past. For weed suppression or broadcasting into a firm seedbed, use up to 90 lbs./A. For a nurse crop, use one-third the usual rate.

Lifago Buckwheat

ZONES: 1, 2, 3, 4, 5, 6

- Lifago, a late-maturing buckwheat, is good as a summer crop to suppress weeds, mellow the soil, and attract beneficial insects.
- Lifago is the best buckwheat to use in mixes, since it pairs well with other species because of its late maturity.

Loosen Soil	Excellent
Forage Value	Good
Ground Cover	Excellent
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

USDA ORGANIC *Untreated Seed*

VNS Buckwheat

ZONES: 1, 2, 3, 4, 5, 6

- Buckwheat is good as a summer crop to suppress weeds, mellow the soil, and attract beneficial insects.
- It establishes very quickly with a fibrous root system; it's easy to kill, decomposing quickly.

Loosen Soil	Excellent
Forage Value	Good
Ground Cover	Excellent
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

USDA ORGANIC *Untreated Seed*

Forbs

Description

Forbs are a crop that has some valuable advantages for your livestock. They are known for their exceptionally high energy levels, and also have high protein levels at 20-23%.

Forbs are a very mineral-rich grazing herb. Two forbs that are a very good fit for pasture grazing are chicory and plantain. Chicory can be a little harder to manage due to its tendency of going to seed in the summer. Also, to be the most productive, it needs more rest periods. Plantain fits very well into grazing mixes and has excellent regrowth as well as very high digestibility.

Management

Forbs need to be managed properly. Chicory is not very persistent if it does not get a 25-day rest period between grazings. It can be used in a wide range of soil types and can be planted as a monoculture. Plantain is not recommended for use as a monoculture, but works very well with brassicas for pasture. It is ready to be grazed when the leaf tears before the plant is pulled out. Yield data show over 6 tons of dry matter for well managed plantain.

Establishment

Establishment into a firm seedbed is imperative. The monoculture seeding rate is 5 to 8 lbs. per acre and 1 to 2 lbs. per acre in mixes. Forbs respond well to fertilizers, especially nitrogen.

Birdsfoot Trefoil

ZONES: 1, 2, 3, 4

- High yield
- Does well on soil with poor drainage
- Does well on lower pH
- No case of bloat has been reported

Tonic Plantain

ZONES: 1, 2, 3, 4, 5, 6

- Plantain adapts well to drier regions, less fertile soils, lower pH, and heavy clay soils.
- It provides consistent dry matter production in all seasons.

Six Point Chicory

ZONES: 1, 2, 3, 4, 5, 6

- A deep taproot makes it drought tolerant.
- Chicory has excellent summer production and winter hardiness.
- It is very high in mineral content, protein, and digestibility but low in fiber.

Sunn Hemp

ZONES: 1, 2, 3, 4, 5, 6

- Hemp is a warm-season legume and a high biomass producer.
- It suppresses weeds and nematodes and can be grazed in the early stages of growth.

Peredovik Sunflower

ZONES: 1, 2, 3, 4, 5, 6

- This is a high biomass producer with tall, leafy growth.
- Sunflowers work well as part of a cover crop mix to add diversity; nice taproot to break up soil.

Reed Canarygrass

ZONES: 1, 2, 3, 4, 5, 6

- Canarygrass has medium to late relative maturity with excellent persistence.
- This grass goes from high to low quality faster than most other species, requiring close management to get high quality.

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Get Flex: Latest-Maturing, Highest Quality Annual Ryegrass Available

Byron Seeds is offering **Flex**—a late-maturing annual ryegrass that gives a wide, flexible harvest window. Flex stays vegetative longer and produces higher quality forage (better NDFD30) than other annual ryegrasses, regardless of when it's harvested.

Flex brand annual ryegrass features Koga and the sister varieties of Koga—powerful, flexible, late-maturing annual ryegrasses. The greatest benefit of Flex annual ryegrass is that it has a much longer harvest window than any other annual ryegrass on the market.

The Benefits of Flex Annual Ryegrass

- A wide, flexible harvest window (about 2 weeks longer than normal annual ryegrasses).
- Extended energy and quality since it stays vegetative longer.
- Fine dense leaves that mellow quickly when terminated as a cover crop.
- A more balanced C:N ratio (because of its vegetative state) when terminated as a cover crop.
- Easy to establish; quick emergence
- Very winter hardy
- Amazing root system

Even in Kentucky, farmers have discovered that Flex holds it forage quality much better than other annual ryegrasses since is stays vegetative much longer. Flex is also very winter hardy, making it adaptable from north to south.

Flex offers opportunities as a cash crop. While annual ryegrass is often thought of as just a cover crop for row-crop farmers, more farmers realize the extreme forage quality when it's harvested as haylage or baleage.

Don't settle for the old annual ryegrasses. Use Flex Annual Ryegrass for excellent forage or as a cover crop, and your cropping management will get easier.

FLEX BRAND ANNUAL RYEGRASS

Annual Ryegrass

Description

Annual ryegrass is one of the best choices for a fall-planted cover crop because of its versatility, ease of establishment, amazing root system, and incredible nutrient-scavenging abilities. It is an excellent soil builder, great at erosion control and weed suppression. The massive root system can add 5,000-9,000 lbs. of organic material per acre, growing down to 54 inches, providing channels for air, water, and following crop root systems. Farmers have reported corn root zones down to nearly 5 feet following ryegrass.

Management

Annual ryegrass has extremely fast emergence and establishes quickly on a variety of soil types. It works well alone or in mixes. In severe winter conditions, annual ryegrass can winter-kill, but roots have usually grown down 24-32 inches, sequestering leftover nutrients and providing a good start for the following crop. Incorporation will work to kill ryegrass if it is completely covered. If spraying, apply a full rate when the days are warm, averaging over 50°F, and the grass is growing vigorously.

Establishment

Drill at 15-20 lbs./A or fly on at 20-25 lbs./A, 0.25-0.5 inch deep, or fly into standing corn at the higher rate. You can also broadcast onto bare soil and roll with a cultipacker. Seed 40 days before killing frost date to help protect from winter-kill. Rates in mixes can be cut to 8-15 lbs.

Flex Annual Ryegrass

ZONES: 1, 2, 3, 4, 5, 6

- Flex is a very late-maturing annual ryegrass, giving a flexible harvest window while holding steady on quality.
- Flex establishes very quickly and is very winter-hardy.

Untreated Seed

Loosen Soil	Excellent
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good

Organic Annual Ryegrass

ZONES: 2, 3, 4, 5, 6

- This vigorous annual ryegrass establishes rapidly and has good cold tolerance.
- It gives superior yields with excellent palatability.

USDA ORGANIC *Untreated Seed*

Loosen Soil	Excellent
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good

KB Crown Annual Ryegrass

ZONES: 2, 3, 4, 5, 6

- KB Crown was developed for superior root mass and has good fall growth.
- It can be aerial-seeded, establishes quickly, and is deep-rooting.

Untreated Seed

Loosen Soil	Excellent
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good

Kodiak Annual Ryegrass

ZONES: 1, 2, 3, 4, 5, 6

- This winter-hardy annual ryegrass is selected for very tough growing conditions.
- More forage per acre makes this an economical choice for growers.

Untreated Seed

Loosen Soil	Excellent
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Cereal Rye

Description

The hardiest of fall-planted cover crops, cereal rye is the "last chance" crop for late-fall plantings. If planted late, it may not provide much winter cover, but if it has germinated, it will show rapid spring growth, suppressing weeds and providing forage or grain for harvest. If planted early enough, it makes for great winter grazing.

Rye is inexpensive and easy to establish. It has a fast-growing fibrous root system that can take up and hold residual nutrients. It's an excellent source of residual ground cover for no-till systems. Note: It can tie up nitrogen as it decomposes so N is not immediately available; so compensate.

Management

Cereal rye can establish in very cool weather in a variety of soil types. It can be killed by incorporating, spraying or, after boot stage, by mowing or rolling with a stalk chopper. Rye can deplete soil moisture in a dry spring. In a wet spring, it can overwhelm the next crop with residual. Rye has an allelopathy effect, which works on suppressing weeds but may also stunt a following corn crop.

Establishment

Drill 1.0-1.5 inches deep at 60-112 lbs./A or broadcast or aerial-seed onto standing corn at the higher rate from early September to November. Use 50-60 lbs./A in mixes.

Cereal Rye

ZONES: 1, 2, 3, 4, 5, 6

- Cereal rye can be seeded in the fall later than other small grains and used as a forage or cover crop.
- Its fast-growing fibrous root system takes up residual nutrients and is good for no-till systems.

USDA ORGANIC *Untreated Seed*

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

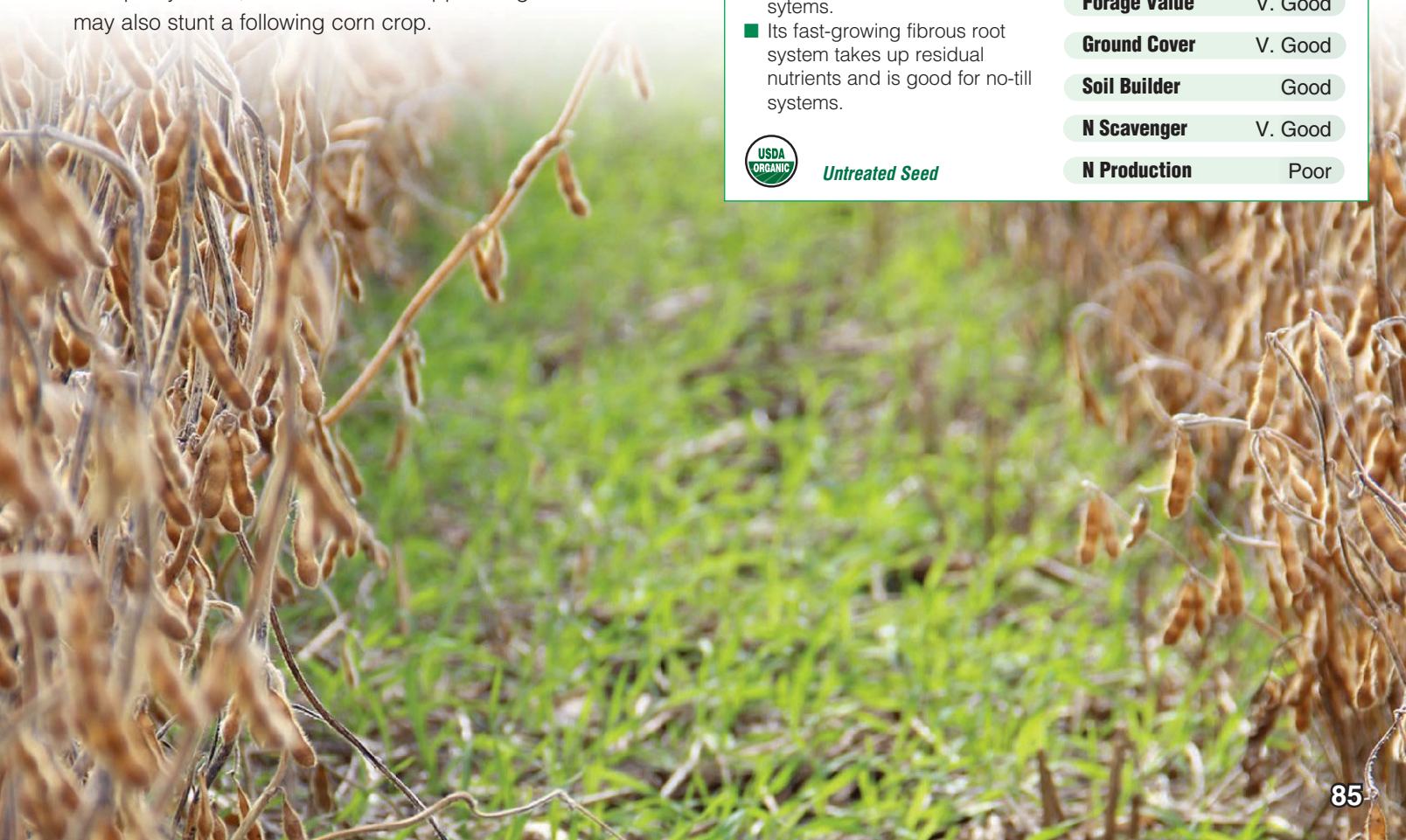
Elbon Rye

ZONES: 1, 2, 3, 4, 5, 6

- Elbon rye matures earlier making it better for crimping sytems.
- Its fast-growing fibrous root system takes up residual nutrients and is good for no-till systems.

USDA ORGANIC *Untreated Seed*

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor



Oats

Description

Oats are an inexpensive cover crop and a quick ground cover when fall-seeded, providing weed suppression and erosion control. They typically winter-kill and provide a beautiful killed mulch for spring-seeded crops. Oats are good nutrient scavengers and work well with radishes and turnips to provide fall forage.

Management

It's best to plant oats after wheat or as a spring cover crop. Allow 6-8 weeks before killing frost if the oats are intended as a forage.

Disking lightly in the spring will break up the brittle residue, exposing enough soil for warmer soils. No-tilling into oats in the spring works fine. If planted in the spring, oats can be killed by spraying. Mowing and rolling work well at soft dough stage.

Like rye, oats have an allelopathic effect and can cause slow growth in the following crop.

Establishment

Seed 100 lbs./A with a drill or fly onto standing corn.

Pratex Black Oats

ZONES: 5, 6

- Pratex is a true black oat and will winterkill.
- Pratex has rapid early development with a fibrous root system.
- This oat works well when nematode control combined with forage production and soil improvement are desired.

Loosen Soil	Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Panther Oats

ZONES: 1, 2, 3, 4, 5, 6

- Panther is a new, improved forage oat with top shelf yields and quality.
- It has very good disease resistance.

Loosen Soil	Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Tiger Oats

ZONES: 1, 2, 3, 4, 5, 6

- Tiger is a tall forage oat with wide leaves giving excellent dry matter yield.
- It has good rust resistance.

Loosen Soil	Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Esker Oats

ZONES: 5, 6

- Esker is the best oat for grain.
- It is a tremendous yielder, 20-30 bushels higher than Jerry.

Loosen Soil	Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

USDA ORGANIC

Untreated Seed

Cosaque Winter Forage Oats

ZONES: 5, 6

- This winter-hardy forage oat can be fall planted and will overwinter in southern areas.
- Cosaque oats make good stockpile feed.

Loosen Soil	Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Jerry Oats

ZONES: 1, 2, 3, 4, 5, 6

- Jerry is an inexpensive alternative with a good fibrous root system.
- It has vigorous growth when fall planted and it winter-kills.

Loosen Soil	Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	V. Good
N Production	Poor

USDA ORGANIC

Untreated Seed

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Triticale

Description

Triticale is a cross between winter wheat and cereal rye. Its winter hardiness allows it to grow later in the fall than other cover crops. Its fibrous roots continue to grow through the winter down 60 inches or more, building soil organic matter. Triticale's rapid growth suppresses winter weeds better than rye. It produces a lot of biomass that is good as a mulch mat, forage or straw. Triticale has an allelopathic effect on weeds and following corn crops.

Management

Triticale can be winter-grazed, plowed under in spring as a green manure, cut and made into baleage, rolled after boot stage to provide a mulch, or allowed to go to grain and combined.

Establishment

Drill or no-till 80-150 lbs./A at a depth of 0.5-1 inch. Triticale can be mixed with hairy vetch, crimson clover and annual ryegrass. Use about 40 lbs./A of nitrogen in the fall to help establish and 70 lbs./A again in the spring if it's going to be used as a forage.

Leap Spring Triticale

NEW

ZONES: 1, 2, 3, 4, 5, 6

- This aggressive triticale was developed as a spring type, bringing excellent forage yields.
- It's an excellent nurse crop when sown at 35 to 50 lbs/A.

USDA ORGANIC

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

HyTon Winter Triticale

ZONES: 1, 2, 3, 4, 5, 6

- HyTon has a strong prostrate fallwinter growth habit that suppresses weeds and gives superior soil coverage.
- It has good forage yields with exceptional forage quality; excellent winterhardiness.

USDA ORGANIC *Untreated Seed*

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Gainer 154 Winter Triticale

ZONES: 1, 2, 3, 4, 5, 6

- Gainer is early-maturing to fit full-season corn rotations.
- It's winter-hardy enough to be grown in the North; exceptional yields.

Untreated Seed

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Feast'nCover

ZONES: 1, 2, 3, 4, 5, 6

- Feast'nCover is an economical triticale to be used as a cover crop or forage.
- Triticale is a better soil builder then cereal rye; it makes soil more mellow and soft.

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Small Grain Mixes

Description

Triticale Plus Fall is a winter annual mixture that combines the strengths of improved forage triticale and Italian or annual ryegrass. The triticale adds agronomic stability for those not experienced with growing ryegrasses and more bulk for easier silo filling and unloading. The ryegrass in the mixture adds higher fiber digestibility (NDFD) and sugar content. This productive mixture can be followed with BMR sorghum-sudan or corn.

Tritical Plus Fall is an excellent choice to no-till fall seed into thinning alfalfa and cut one or two cuttings the following spring. Most growers will use only the ryegrass if they are doing more than one cut since it can be difficult to terminate after only one cut.

Management

Triticale Plus Fall gives flexibility for grazing or haylage or baleage. It works very well for double cropping after corn silage or no-tilled into old alfalfa stands in early fall in order to increase the following year's tonnage and quality in the first cutting.

Apply 30 units of N at planting. In early spring, at greenup, apply an additional 40-60 units of N to maximize tonnage and protein.

Caution: Allelopathy could affect the next crop unless either some light tillage is done or a large amount of liquid manure is applied.

Establishment

Seed at 70-100 lbs./A and drill at 0.5-0.75 inch deep.

Oats Plus

NEW

ZONES: 1, 2, 3, 4, 5, 6

- We've mixed Flex, our late-maturing annual ryegrass, with forage oats for superb yields and quality.
- Oats Plus can be spring planted in the North or South; it can also be fall planted south of I-70 and should overwinter for a spring harvest.

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Good
N Production	Poor

Untreated Seed

Tritlage Pro

ZONES: 1, 2, 3, 4, 5, 6

- This mix of Byron's Spring Trit and forage peas provides excellent digestible fiber for energy.
- The forage peas provide high protein along with nitrogen production.

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Good
N Production	Good

USDA ORGANIC *Untreated Seed*

Triticale Plus Fall

ZONES: 1, 2, 3, 4, 5, 6

- This mixture of Winter Trit and annual ryegrass has fast growth and is very winter-hardy.
- It is easier to cut with a cutter bar than ryegrass alone and blows into a silo better.

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	Good
N Production	Poor

USDA ORGANIC *Untreated Seed*

Milk Max

ZONES: 1, 2, 3, 4, 5

- Milk Max is a mixture of quality peas and forage oats.
- It can be used as a nurse crop for alfalfa or seeded alone.

Loosen Soil	Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	Good
N Scavenger	Good
N Production	Good

USDA ORGANIC *Untreated Seed*

Wheat and Barley for Grain and Forage

Wheat

Whether grown as a cover crop or for grain, wheat adds rotation to any cropping system. The seeding rate is 100-150 lbs./A for forage and 30-60 lbs./A for cover crop or in mixes. Harvested as a grain crop, wheat offers the option of double cropping with sorghum-sudan, radishes, or other cover crops.

Barley

Barley is gaining popularity in the Midwest for forage because it tends to be high in sugar and very soft and palatable, with high digestibility. The downside is it cannot take very wet areas, and it may winter-kill. As a grain, barley is 10 days earlier than wheat. Great for a double crop.

Haymaker Spring Barley

Haymaker is our highest-yielding forage barley. It produces more forage in a shorter time than any other cereal, since it matures earlier than oats. Haymaker is also more drought tolerant and disease tolerant than oats. If fall planted, Haymaker will bring you super quality forage in a hurry!

Haymaker Spring Barley

ZONES: 1, 2, 3, 4, 5, 6

- Haymaker is our highest-yielding forage barley.
- This is very high-quality barley that is earlier than oats.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Cover Crop Wheat

ZONES: 1, 2, 3, 4, 5, 6

- This is a more economical wheat for cover crop or forage.
- This wheat is an alternative to cereal rye, though not quite as winter-hardy.

Loosen Soil	V. Good
Forage Value	Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

P-919 Winter Barley

ZONES: 1, 2, 3, 4, 5, 6

- P-919 Winter Barley is our only awnless variety.
- This barley is great for fall grazing and forage production.
- It grows tall and has above-average lodging resistance.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Secretariat Winter Barley

ZONES: 1, 2, 3, 4, 5, 6

- Secretariat is semi-smooth awn barley with great resistance to powdery mildew and leaf rust.
- It is shorter (about 33 in.) with moderately early heading.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Untreated Seed

Robust Spring Barley

ZONES: 1, 2, 3, 4

- This barley is good for grain or forage.
- The plants are taller for more hay or straw.

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

USDA ORGANIC *Untreated Seed*

Lakeview Farms Wheat

LVF 0938 Soft Red Winter Wheat

Organic & Conventional

- Over 100 bu/a in Wayne County, IA (organic farmer).
- Excels on light sandy soil.
- Ideal for organic production with multiple genes tolerant to leaf diseases.
- Tall plants stand well and will produce high grain and straw yield.
- Early maturity makes it a good option for double crop.

Agronomic Traits	
Head Type	Smooth
Heading Date	136
Plant Maturity	Ultra-Early
Plant Height	37.4"
Straw Strength	Good
Test Weight	Excellent

Disease Resistance	
1= Most Resistant 9= Most Susceptible	
Powdery Mildew	3.0
Leaf Rust	3.0
Glume Blotch	2.0
Stripe Rust	6.0
Septoria Tritici	2.0
Soil-Borne Mosaic	6.0
Head Scab	1.5

USDA ORGANIC

Because of early maturity, this variety makes a lot of sense if you want to double crop, although, on average, LVF 1462 will yield a little better.

LVF 1462 Soft Red Winter Wheat

Organic & Conventional

- An obvious choice for most farms.
- High test weight.
- Robust look with long, filled heads.
- Good standability.
- Good disease resistance.
- Notice-PVP protected variety; this variety cannot be saved for seed for own use or others.
- New and improved over LVF 1640.

Agronomic Traits	
Head Type	Smooth
Heading Date	138
Plant Maturity	Med.-Full
Plant Height	38"
Straw Strength	Excellent
Test Weight	Very Good

Disease Resistance	
1= Most Resistant 9= Most Susceptible	
Powdery Mildew	4.0
Leaf Rust	1.0
Glume Blotch	N/A
Stripe Rust	1.0
Septoria Tritici	3.0
Soil-Borne Mosaic	3.0
Head Scab	3.0

USDA ORGANIC

This variety out-yielded the competition by 15 bushels/acre in 2023. It's smooth headed with good results from KY to northern IL and PA to MO.

Rating scale: POOR | FAIR | GOOD | VERY GOOD | EXCELLENT

Spelt

Spelt is a late-maturing grain closely related to wheat. As a forage, spelt has the potential to outyield triticale, although it matures a bit later than triticale. Forage quality is excellent. When harvested for grain, spelt produces an excellent straw. Seed spelt at 110-150 lbs./A.

Champ Spelt

ZONES: 1, 2, 3, 4, 5, 6

- Champ is suitable for forage or grain.
- Champ has a good disease package.

USDA ORGANIC

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Comet Spelt

ZONES: 1, 2, 3, 4, 5, 6

- Comet is high-yielding, the best choice for a grain spelt.
- A shorter spelt, Comet has excellent standability.

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Sun Gold Spelt

ZONES: 1, 2, 3, 4, 5, 6

- This unique brown-chaff spelt gets tall with good standability and excellent winter survival.
- The seed is smaller than most spelt making it easier to sow.
- Sun Gold is dual-purpose (forage or grain).

Untreated Seed

Loosen Soil	V. Good
Forage Value	V. Good
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Sonic Spelt

ZONES: 1, 2, 3, 4, 5, 6

- With its tall growth and wide harvest window, Sonic is the best choice for a forage spelt.
- Sonic has vigorous tillering and is very late heading.

Untreated Seed

Loosen Soil	V. Good
Forage Value	Excellent
Ground Cover	V. Good
Soil Builder	V. Good
N Scavenger	V. Good
N Production	Poor

Cover Crop Packaging Options

Byron Seeds has a bulk system dedicated to non-GMO, untreated and organic seed. We can custom mix seed to your specifications or help you develop a mix that fits your needs. Packaging options range from hopper-bottom trucks, seed tenders, totes, pro boxes, and bags—all the way down to a single pound. For large orders, we use a custom-designed mixer to mix an entire semi-load at a time. A popular package is a custom mix spouted directly into a hopper bottom semi-truck or seed tender. We can usually load a semi-truck in 40 minutes. Farmers with the trucks and infrastructure to pick up cover crop seed in bulk can save on packaging and shipping costs.

A very popular packaging option for mixes is tote bags—up to 2500 pounds per tote. These can be shipped via LTL trucks straight to your farm, eliminating the time and labor required to open and empty a lot of small bags.

For cover crop advice and service, contact your local Byron Seeds dealer listed at the back of this guide.

Forage Cover Crop Information Chart

Crop	When Planted	When Harvested (as forage)	Approx. Days after Planting to Harvest	Seeding Rate Drilled	Seeding Depth	Forage Quality	Winter Survival	Regrowth	Comments
Spring Triticale	August or Early spring	Oct., Nov., June	60-70 days	100-125 lbs./A	½ - 1 in.	Excellent Plus!	No	Poor	Excellent nurse crop.
Oats	August or Early spring	Oct., Nov., June	50-60 days	65 -100 lbs./A (2-3 bu)	½ - 1 in.	Excellent	No	Fair	Allow 6-8 weeks before a killing frost.
Tritilage Pro or Milk Max	August or Early spring	Oct., Nov., June	60-70 days	75-100 lbs./A	1 in.	Very good	No	Fair	Plant in time to harvest before the first frost.
Spring Barley	August	Oct., Nov., June	50-60 days	75-100 lbs./A	1 in.	Very good	Not in North	Fair	Highest quality of small grains.
Winter Wheat or Winter Barley	August, September	Late spring		60-100 lbs./A	1 in.	Very good	Yes	Fair	Follow with a double crop or summer cover.
Fall Triticale	Same as wheat	Late spring		100-125 lbs./A	Up to 1½ in. later in season	Excellent	Yes	Fair	Great double crop planted after corn silage.
Winter Rye	As late as November	Late spring		60-100 lbs./A	Up to 1½ in. later in season	Very good if harvested on time	Almost guaranteed!	Fair	Hardiest of all fall-planted cover crops.
Spelt	Same as wheat	Late spring		110-150 lbs./A	1-1½ in.	Very good	Yes	Fair	Highest yielding winter small grain. Later maturing than triticale.
Oats or Spring Barley & Fall Triticale	August	Oats or Spring Barley in Oct., Nov. & Fall Trit. in late spring	Oats or Spring trit in 50-60 days; rye in late spring	80-100 lbs./A of each seed	1 in.	Excellent Plus & Excellent	Spring crop no, Fall crop yes	Fair	Oats are inexpensive.
Oats or Spring Triticale & Winter Rye	August	Oats or Spring Trit. Oct., Nov.; winter rye late spring	Oats in 50 -60 days; Fall trit. in late spring	80-100 lbs./A of each seed	1 in.	Excellent Plus & good if harvested on time	Oats, Spring Triticale - no, Rye - yes	Fair	Oats provide quick ground cover.
Triticale Plus Fall	September As it gets later, switch to straight triticale.	Late spring		70-100 lbs./A	1-1½ in.	Excellent	Fall Triticale – yes, Ryegrass - Usually	Very good	The IRG should produce all summer long. If you won't harvest the IRG all summer, plant straight triticale.
Oats Plus	August or early spring	Oct., Nov., June	50-60 days	70-100 lbs./A	½ in.	Excellent Plus!	Oats – no, Annual Ryegrass - Usually	Very good	Quick to establish for superb yields and quality.
Forage Brassicas – usually planted with oats	Summer	Harvest by fall grazing	8-12 weeks depending on the brassica		1 in.	Excellent	Freezes out between 20°F and 5°F depending on the brassica	Very good	Great late grazing. Roots provide beneficial exudates for the soil.
Timothy	September	Late spring or Early fall		12 lbs./A	1/8 in.	Makes great grass hay in spring	Yes	Fair	This fall planted crop works best south of I-70. Can double crop after first cut.
Sorghum-Sudan, Sudan Hybrids	Once soil temps are 60 degrees and rising	Harvest by grazing until frost, then as baleage	45 days in warm enough ambient temps	35-50 lbs./A	1 in.	Excellent in BMR Gene 6	Stop at first frost	Very good although will stop at frost	Roots provide useful exudates for the soil. Sorghum produces much biomass.
Annual Ryegrass	August	Spring		15-20 lbs./A	¼-½ in.	Excellent	Usually	Good	Good for aerial seeding
Italian Ryegrass	August	November	45 days	25-40 lbs./A	¼-½ in.	Excellent	Usually	Good	Usually higher yields than annual ryegrass.

Notes: Planting dates are for Southern Wisconsin. Latitudes north or south should adjust accordingly. Wheat planting times are more generally known in an area than triticale, spelt or barley dates; however, they are the same. The later small grains are planted, seeding depths need to be 1½ in. to allow deeper roots for winter survival. When cover crops are rated for not surviving the winter, we are referring to Northern IL, IN, OH & IA.

When planted in the fall, spring small grains (oats and the spring versions of triticale, wheat and barley) exhibit a different growth pattern than when they are typically planted. In sensing that winter is coming, they will produce less NDF and more sugar to try to survive, even though they won't. The higher sugar and lower NDF in an already highly digestible plant makes it even more digestible. Cool-season grasses also exhibit the same growth pattern for the last cutting in mid to late fall.

The Bridge to Better Forages

Byron Seeds

Fertile Fields. Higher Yields. Plan On It.

SPECIALIZING IN QUALITY CERTIFIED ORGANIC & NON-GMO · LAKEVIEW FARMS · SEED AND GRAIN ·

Lakeview Farms Soybeans

Variety	Maturity Group	Approx. Seeds/lb.	Food/Feed Grade	Hilum Color	Protein % (Dry Matter)	Oil % (Dry Matter)	Emergence	Early Season Vigor	Standability	Plant Type	Plant Height	Flower Color	Pubescence Color	Pod Color	Phytophthora Root Rot	Brown Stem Rot	White Mold	Iron Deficiency Chlorosis	Sudden Death Syndrome	Soybean Cyst Nematode	Stem Canker	Sulfonylurea Tolerance
LVF 1933	1.9	2,650	Feed	Black	39.0	22.6	7	7	7	Med. Bushy	Medium	Mix	Lt. Tawny	Brown	N/A	7	N/A	N/A	N/A	7	N/A	No
LVF 2632	2.6	2,428	Feed	Black	40.3	21.6	7	7	7	Med. Bushy	Medium	Purple	Lt. Tawny	Brown	8	8	N/A	N/A	N/A	7	7	N/A
LVF 2849	2.8	2,900	Feed	Buff	38.0	N/A	8	7	6	Bushy	Medium	Purple	Gray	Tan	9	8	5	6	7	9	N/A	No
LVF 2872	2.8	N/A	Feed	Black	N/A	N/A	7	7	6	Med. Bushy	Med. Tall	Purple	Lt. Tawny	Brown	7	N/A	N/A	6	6	7	6	No
LVF 3073	3.0	N/A	Feed	Black	N/A	N/A	8	7	7	Med. Bushy	Med. Tall	Purple	Lt. Tawny	Brown	8	N/A	N/A	6	6	7	6	Yes
LVF 3430	3.4	2,300	Food	Yellow	44.0	21.0	6	7	7	Bushy	Medium	White	Gray	Brown	N/A	N/A	N/A	6	6	N/A	N/A	No
LVF 3432	3.4	2,840	Feed	Yellow	40.0	20.0	7	7	7	Med. Bushy	Medium	White	Lt. Tawny	Brown	9	N/A	N/A	8	N/A	7	N/A	N/A
LVF 3530	3.5	2,700	Feed	Black	39.1	20.1	7	6	7	Erect	Medium	Purple	Tawny	Brown	8	7	4	6	6	3	N/A	Yes
LVF 3648	3.6	2,750	Feed	Buff	42.8	19.5	9	8	7	Bushy	Med. Tall	White	Gray	Tan	7	6	4	6	8	7	N/A	Yes
LVF 3653B	3.7	2,700	Feed	Buff	39.0	22.0	9	8	6	Bushy	Med. Tall	Pur/Wh	Gray	Tan	7	6	6	7	7	8	N/A	No
LVF 3831	3.8	2,800	Feed	Black	39.0	22.0	8	7	7	Med. Bushy	Medium	Purple	Lt. Tawny	Brown	9	7	7	7	7	7	N/A	No
LVF 3949	3.9	2,750	Feed	Black	40.6	20.8	8	8	7	Bushy	Med. Tall	White	Tawny	Tan	8	6	6	8	6	7	N/A	No
LVF 4274	4.2	N/A	Feed	Black	N/A	N/A	7	7	8	Med. Bushy	Med. Tall	White	Lt. Tawny	Tan	6	6	N/A	N/A	N/A	7	6	N/A

Scale 1-10: 1=Poor, 10=Best

LVF 3648 in Missouri

Solid performance across locations!

LVF1933
Group 1.9
Feed Grade

- Organic
- High yield feed grade
- Replaces LVF 2032

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	N/A
Brown Stem Rot	7
White Mold	N/A
Iron Deficiency Chlorosis	N/A
Sudden Death Syndrome	N/A
Soybean Cyst Nematode	P188788
Stem Canker	N/A
Sulfonylurea Tolerance	No

Plant Height	Medium	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Brown
Flower	Mix	Hilum	Black
Oil % (Dry Matter)	22.6	Protein % (Dry Matter)	39.0
Approx. seeds/lb.	2,650	Emergence	7
Early Season Vigor	7	Standability	7

Notes: Black Hilum. Replaces LVF 2032. Feed grade. Showing great potential.

High yield and protein!

NEW

LVF2632
Group 2.6
Feed Grade

- Organic
- Aphid resistant
- Replaces LVF 2630 with better yields
- Amazing disease tolerance

DISEASE RESISTANCE	1-10
Phytophthora Root Rot RPS1K	8
Brown Stem Rot	8
White Mold	N/A
Iron Deficiency Chlorosis	N/A
Sudden Death Syndrome	N/A
Soybean Cyst Nematode	P188788
Stem Canker	7
Sulfonylurea Tolerance	N/A

Plant Height	Medium	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Brown
Flower	Purple	Hilum	Black
Oil % (Dry Matter)	21.6	Protein % (Dry Matter)	40.3
Approx. seeds/lb.	2,428	Emergence	7
Early Season Vigor	7	Standability	7

Notes: If you liked LVF 2630, this one is even better with excellent protein and high yield. The disease tolerance is excellent as well.

Organic field average over 70 bushels per acre.

LVF2849
Group 2.8
Feed Grade
Food Grade potential

- Organic/Conventional
- High yield potential
- Excellent cyst resistance
- Branchy with some leaning
- Widely adapted

DISEASE RESISTANCE	1-10
Phytophthora Root Rot RPS1K	9
Brown Stem Rot	8
White Mold	5
Iron Deficiency Chlorosis	6
Sudden Death Syndrome	7
Soybean Cyst Nematode	P188788 & 437654
Stem Canker	N/A
Sulfonylurea Tolerance	No

Plant Height	Medium	Pubescence	Gray
Plant Type	Bushy	Pod	Tan
Flower	Purple	Hilum	Buff
Oil % (Dry Matter)	N/A	Protein % (Dry Matter)	38.0
Approx. seeds/lb.	2,900	Emergence	8
Early Season Vigor	7	Standability	6

Notes: Farmers report yield monitor readings over 100 bu/A in parts of the field. Two organic field yield averages over 70 bu/A in 2022. Caution: It can lodge, so don't exceed 175,000 population.

#1 yielder in 2023 trials!

LVF2872
Group 2.8
Feed Grade

NEW

- Organic/Conventional
- A must try for late 2 maturity
- Excels in high yield environments

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	7
Brown Stem Rot	N/A
White Mold	N/A
Iron Deficiency Chlorosis	6
Sudden Death Syndrome	6
Soybean Cyst Nematode	P188788
Stem Canker	6
Sulfonylurea Tolerance	No

Plant Height	Medium Tall	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Brown
Flower	Purple	Hilum	Black
Oil % (Dry Matter)	N/A	Protein % (Dry Matter)	N/A
Approx. seeds/lb.	N/A	Emergence	7
Early Season Vigor	7	Standability	6

Notes: This bean has been through rigorous testing and shows to be one of the industry leaders. It was #1 yielder in our Lakeview research trials against over 80 varieties!

Beat LVF3039 by 9% in LVF research trials.

LVF3073
Group 3.0
Feed Grade

NEW

- Organic
- Replaces LVF 3039
- A good defensive package

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	8
Brown Stem Rot	N/A
White Mold	N/A
Iron Deficiency Chlorosis	6
Sudden Death Syndrome	6
Soybean Cyst Nematode	P188788
Stem Canker	6
Sulfonylurea Tolerance	Yes

Plant Height	Medium Tall	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Brown
Flower	Purple	Hilum	Black
Oil % (Dry Matter)	N/A	Protein % (Dry Matter)	N/A
Approx. seeds/lb.	N/A	Emergence	8
Early Season Vigor	7	Standability	7

Notes: LVF 3073 brings good agronomics and disease package. It has the same benefits as LVF3039 with more consistent yield across environments.

True food grade with good agronomics.

LVF3430
Group 3.4
Food Grade

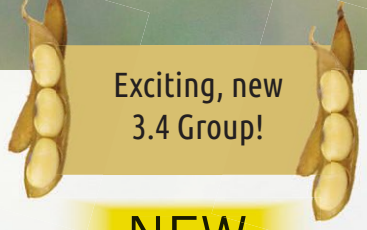
- Organic
- Traditional food grade
- Selected for high protein
- Protein up to 43.5%
- If you want true food grade, this is it.

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	N/A
Brown Stem Rot	N/A
White Mold	N/A
Iron Deficiency Chlorosis	6
Sudden Death Syndrome	6
Soybean Cyst Nematode	N/A
Stem Canker	N/A
Sulfonylurea Tolerance	No

Plant Height	Medium	Pubescence	Gray
Plant Type	Bushy	Pod	Brown
Flower	White	Hilum	Yellow
Oil % (Dry Matter)	21.0	Protein % (Dry Matter)	44.0
Approx. seeds/lb.	2,300	Emergence	6
Early Season Vigor	7	Standability	7

Notes: Yellow hillum, high protein food grade. Protein up to 43.5%. Food grade buyers love it. Expect a little yield drag compared to some of our other varieties.

Ratings: 1=Poor 10=Best



LVF3432

Group 3.4
Feed Grade
Food Grade potential

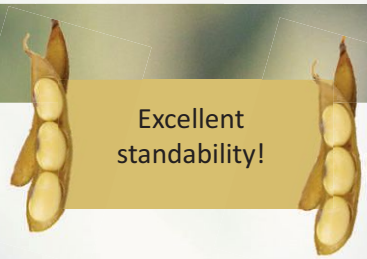
- Organic
- High yield across all soil types
- Widely adapted
- Strong defensive package

NEW

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	9
Brown Stem Rot	N/A
White Mold	N/A
Iron Deficiency Chlorosis	8
Sudden Death Syndrome	N/A
Soybean Cyst Nematode	P188788
Stem Canker	N/A
Sulfonylurea Tolerance	N/A

Plant Height	Medium	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Brown
Flower	White	Hilum	Yellow
Oil % (Dry Matter)	20.0	Protein % (Dry Matter)	40.0
Approx. seeds/lb.	2,840	Emergence	7
Early Season Vigor	7	Standability	7

Notes: After multiple years of rigorous testing, this 3.4 line could not be overlooked. It replaces several older lines, bringing better agronomics and yield. Plant it for feed or possibly food grade, or, as always, plant more than one variety to lower your risk.



LVF3530

Group 3.5
Feed Grade

- Organic
- Better suited for 30" row width or less
- Chosen for yield
- Excellent standability
- Very attractive looks

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	8
Brown Stem Rot	7
White Mold	4
Iron Deficiency Chlorosis	6
Sudden Death Syndrome	6
Soybean Cyst Nematode	P188788
Stem Canker	N/A
Sulfonylurea Tolerance	Yes

Plant Height	Medium	Pubescence	Tawny
Plant Type	Erect	Pod	Brown
Flower	Purple	Hilum	Black
Oil % (Dry Matter)	20.6	Protein % (Dry Matter)	39.1
Approx. seeds/lb.	2,700	Emergence	7
Early Season Vigor	6	Standability	7

Notes: Black hillum, feed grade. Very attractive plant type with the best standability in our lineup. Less bushy than most of our beans but still decent. Nice tawny color in the fall. Widely adapted in Group 3 maturity range and goes south to Southern IL/IN.

LVF3648

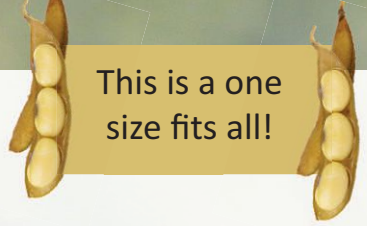
Group 3.6
Feed Grade
Food Grade potential

- Organic/Conventional
- Aggressive plants shade weeds
- Good early season vigor
- Very reliable with high stress tolerance

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	9
Brown Stem Rot	8
White Mold	4
Iron Deficiency Chlorosis	6
Sudden Death Syndrome	7
Soybean Cyst Nematode	P188788 & 437654
Stem Canker	N/A
Sulfonylurea Tolerance	Yes

Plant Height	Medium Tall	Pubescence	Gray
Plant Type	Bushy	Pod	Tan
Flower	White	Hilum	Buff
Oil % (Dry Matter)	19.5	Protein % (Dry Matter)	42.8
Approx. seeds/lb.	2,750	Emergence	8
Early Season Vigor	7	Standability	6

Notes: Buff hilum. Tried and true variety. Lots of happy customers on this one. 96 bu/A at Sandborn, Indiana in 2020.



LVF3653B

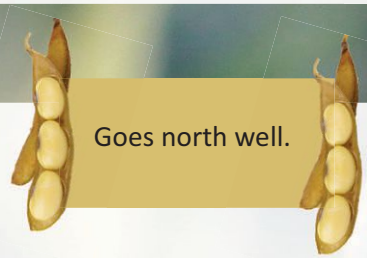
Group 3.6
Feed Grade
Food Grade potential

- Organic
- Widely adapted
- Good Soybean Cyst Nematode resistance
- Very aggressive plant type

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	7
Brown Stem Rot	6
White Mold	6
Iron Deficiency Chlorosis	7
Sudden Death Syndrome	7
Soybean Cyst Nematode	P188788 & 437654
Stem Canker	N/A
Sulfonylurea Tolerance	No

Plant Height	Medium Tall	Pubescence	Gray
Plant Type	Bushy	Pod	Tan
Flower	Purple-White	Hilum	Buff
Oil % (Dry Matter)	22.0	Protein % (Dry Matter)	39.0
Approx. seeds/lb.	2,700	Emergence	9
Early Season Vigor	8	Standability	7

Notes: Buff hillum, widely adapted. Looks like it could out-compete LVF 3648 since it out-performed it by 6% in 2022 and 2023. Nice and bushy but has a little lodging problem.



LVF3831

Group 3.8
Feed Grade

- Organic
- Responds well to high fertility
- Good standability
- Better suited on row width 30" or less

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	9
Brown Stem Rot	7
White Mold	7
Iron Deficiency Chlorosis	7
Sudden Death Syndrome	7
Soybean Cyst Nematode	P188788
Stem Canker	N/A
Sulfonylurea Tolerance	No

Plant Height	Medium	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Brown
Flower	Purple	Hilum	Black
Oil % (Dry Matter)	22.0	Protein % (Dry Matter)	39.0
Approx. seeds/lb.	2,800	Emergence	8
Early Season Vigor	7	Standability	7

Notes: Black hillum, feed grade. Not overly bushy but really good standability. Nice tawny look and very good agronomically. Goes north well.

LVF3949

Group 3.9
Feed Grade

- Organic
- High yield
- Moves south well
- Proven performance

DISEASE RESISTANCE	1-10
Phytophthora Root Rot	8
Brown Stem Rot	6
White Mold	6
Iron Deficiency Chlorosis	8
Sudden Death Syndrome	6
Soybean Cyst Nematode	P188788
Stem Canker	N/A
Sulfonylurea Tolerance	No

Plant Height	Medium Tall	Pubescence	Tawny
Plant Type	Bushy	Pod	Tan
Flower	Purple	Hilum	Black
Oil % (Dry Matter)	20.8	Protein % (Dry Matter)	40.6
Approx. seeds/lb.	2,750	Emergence	8
Early Season Vigor	8	Standability	7

Notes: Black hillum, feed grade. This is a very outstanding line. The most popular in longer season feed grade. Very widely adapted north, south, east, and west.

Ratings: 1=Poor 10=Best

High yielding Group 4!

LVF4274
Group 4.2 Feed Grade

- Organic
- Excellent standability
- Widely adapted

NEW

DISEASE RESISTANCE	1-10
Phytophthora Root Rot RPS1C	6
Brown Stem Rot	6
White Mold	N/A
Iron Deficiency Chlorosis	N/A
Sudden Death Syndrome	N/A
Soybean Cyst Nematode	P188788
Stem Canker	6
Sulfonylurea Tolerance	N/A

Plant Height	Medium Tall	Pubescence	Lt.Tawny
Plant Type	Medium Bushy	Pod	Tan
Flower	White	Hilum	Black
Oil % (Dry Matter)	N/A	Protein % (Dry Matter)	N/A
Approx. seeds/lb.	N/A	Emergence	7
Early Season Vigor	7	Standability	8

Notes: LVF 4274 is a feed grade bean with robust yield and agronomics (replaces LVF 4331).
A medium-tall plant with good standability and stress tolerance.

Soybean Seeding Rates and Tips

7 ½“ rows—170,000 seeds per acre
15” rows—160,000 seeds per acre
30” rows—150,000 seeds per acre

For organic production, increase the planting population by 20% to compensate for mechanical damage and to increase weed shading.

Plant soybeans when the soil temperature is 55 degrees or higher (usually the upper Midwest is after April 25).

Early planting can give maximum yield but it also increases more early season diseases and a prevalence for potential sudden death in September.

Soil pH should be 6.2 to 6.8.

Plant at 1 ¼” to 1 ½” deep. (Plant slightly deeper if needed to reach good soil moisture.)

Choose varieties that have strong disease resistance, quick emergence, strong standability, and late season health.

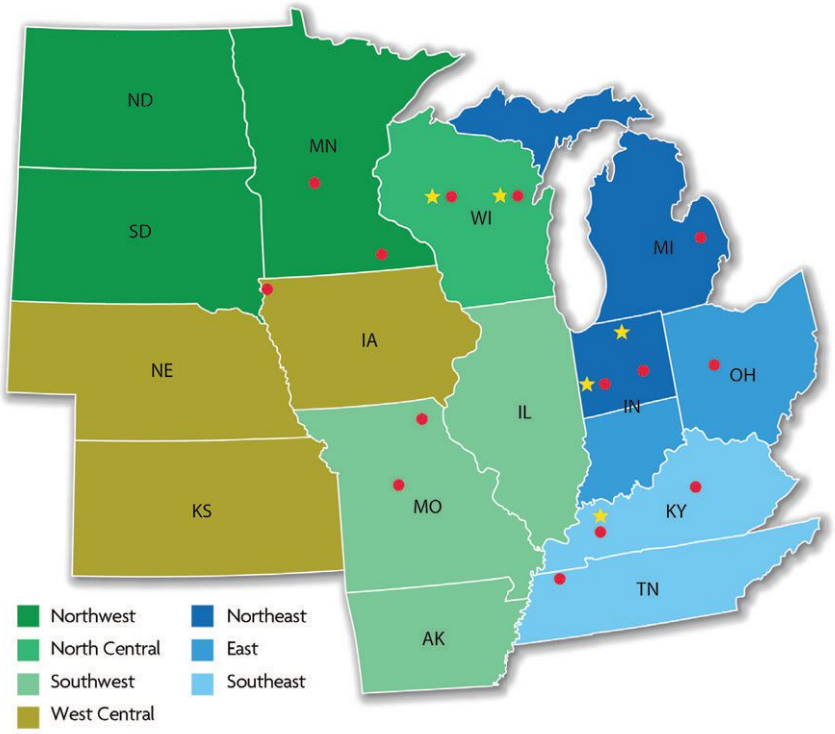
Pay attention to soil biology: Sulfur helps with protein production. Boron helps mobilize calcium. Potassium helps promote root growth, reduce drought stress, and translocate energy. Molybdenum helps with nodulation and nitrogen assimilation.

Ratings: 1=Poor 10=Best

Seed Characteristics Chart

Species	Type*	MSR**	HMSR†	Frost Tolerance	Seed Depth	RST‡
Alfalfa	P	15-25	6-15	Poor	1/8″ - 1/4″	Mar-May, Aug-Sept
Red clover	B-P	12-20	5-15	Excellent	1/8″ - 1/4″	Jan-Apr, Aug-Sept
White clover	P	2-5	2-4	Excellent	1/8″ - 1/4″	Jan-Apr, Aug-Sept
Berseem clover	A	15-20	8-12	Good	1/8″ - 1/4″	Mar-May, Sept-Oct
Alsike clover	B	6-8	4-6	Excellent	1/8″ - 1/4″	Feb-Apr, Aug-Oct
Crimson clover	A	15-20	8-12	NA	1/8″ - 1/4″	Jul-Oct
Sweet & mammoth clover	P	15-20	5-12	Excellent	1/8″ - 1/4″	Jan-Apr, Aug-Sept
Birdsfoot trefoil	P	5-8	3-6	Good	1/8″ - 1/4″	Feb-Apr, Aug-Oct
Hairy vetch	P	20-25	NA	NA	1″	Jul-Sept
Lespedeza (hulled)	A	10-20	8-12	Excellent	1/8″ - 1/4″	Mar-May
Lespedeza (unhulled)	A	18-25	10-15	Excellent	1/8″ - 1/4″	Feb-Apr
Grasses						
Perennial ryegrass	B	25-40	10-35	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Italian ryegrass	B	20-30	2-10	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Annual ryegrass	A	25-40	20-25	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Orchardgrass	P	10-15	6-10	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Tall fescue	P	25-35	2-10	Fair-Poor	1/8″ - 1/4″	Feb-May, Aug-Sept
Festulolium	P	25-35	5-15	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Meadow fescue	P	25-35	5-25	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Brome (Hakari)	P	30-45	NA	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Meadow brome	P	40	25-35	Poor	1/8″ - 1/4″	Feb-May, Aug-Sept
Timothy	P	12	3-8	Poor	1/8″ - 1/4″	Feb-May, Aug-Sept
Bluegrass	P	10-15	2-6	Fair	1/8″ - 1/4″	Feb-May, Aug-Sept
Most pasture mixes	P	25-40	NA	NA	1/8″ - 1/4″	Feb-May, Aug-Sept
Reed canarygrass	P	8-12	4-8	NA	1/8″ - 1/4″	Feb-May, Aug-Sept
Miscellaneous						
Millet	A	15-30	NA	NA	1/2″	>60°F soil temp
Forage sorghum	A	5-10	NA	NA	3/4″ - 1 1/2″	>60°F soil temp
Sorghum sudan	A	35-50	NA	NA	3/4″ - 1 1/2″	>60°F soil temp
Sudan hybrid	A	20-35	NA	NA	3/4″ - 1 1/2″	>60°F soil temp
Teff	A	8-12	NA	NA	1/8″ - 1/4″	>60°F soil temp
Triticale	A	100-125	NA	Poor	3/4″ - 1 1/2″	Mar-Apr, Aug-Nov
Turnip	A	3-5	NA	Poor	1/8″ - 1/4″	Mar-Sept
Chicory	P	4-5	2-4	Fair	1/8″ - 1/4″	May-Jun
Plantain	P	10	1-4	Fair	1/8″ - 1/4″	Sept-Oct, Apr-May

*Type = A, Annual; B, Biannual; P, Perennial **MSR = Monoculture seeding rate †HMSR = Hay mix seeding rate ‡RST = Recommended seeding time



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Bluford, IL 62814
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618-571-2299

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Premium Seed
Kenneth Yoder
217-322-8953

Anna IL 62906
Cache River Farm N Garden
Melvin Kauffman
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Hershberger Sales
Levi Hershberger
217-543-2092

Beecher, IL 60401
Haflinger Hay Service
Jerry Meyer
708-721-2563

Brighton, IL 62012
Schletter Brothers
618-978-5814

Cissna Park, IL 60924
Joseph Stuckel
309-287-3490

Dongola, IL 62926
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800-801-3596

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Pinnacle Livestock Nutrition
Sean Sherrod
217-342-1066

Hutsonville, IL 62433
Matt Draper
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Ludlow, IL 60949
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Cory Roelfs
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14136 Somers Church Rd

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Abraham Shetler
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Gorin, MO 63543
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Clair Martin
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William Detweiler
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LaMonte, MO 65337
Yoder Farms
Jon Yoder
660-287-1333

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Matt Brown
417-733-0240

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Bunse Seed
Nathan Bunse
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El Dorado Sprgs, MO 64744
Paul Hostetler
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Willis Schmucker
25522 Fort Madison Way

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810-712-2139

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Chris Phenicie
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Kyle Apsey
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Dillon Whitacre
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8316 N 250 E

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Bob Fairclough
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Milroy Seed Supply
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New Castle, IN 47362
Locust Grove Seed Supply
Melvin King
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Raber Seed Supply
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937-456-7149

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11861 Karnes Rd
Mark Miller
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Jacob Miller
2355 Codding Rd

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Amos Hostetler
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Brier Ridge Seed & Ag
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Randall Horst
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Timberline Sales & Service
Joe Graber
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Leon, IA 50144
D J Cattle Company
Daryn Yoder
641-344-6002

St. Ansgar, IA 50472
Focus Forage & Consulting
Mervin Beachy
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Bellevue, IA 52031
Eckstein Devons
Sheldon Headings
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Creston, IA 50801
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Greeley, IA 52050
Gary's Feed Store
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Roth Seeds
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Troyer Seeds
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Alan Dykshorn
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IDAHO

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Adairville, KY 42202
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Chris Timmons
270-847-2392

Austin, KY 42123
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Fairview General Store
Ivan Hostetler
270-789-0802

Glasgow, KY 42141
Southern States
Billy Beckham
270-651-6167

Liberty, KY 42539
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Albert Shirk
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Bluegrass Farm Supply
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Drakes Farm Service
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Cedar Lane Seeds
Daniel J Miller
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Mark Brubacker
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Benedict Brothers
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Rice Agri Marketing
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Stephen Mast
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Spencer, TN 38585
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