

# How's Your Balance?

*Build it into your farm through diversity!*



**King's AgriSeeds** Inc.

FEEDING YOUR FARM'S FUTURE.

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## Late Summer & Fall Product Information Guide

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# Reducing Crop Risk - *Tim Fritz, Owner*

In recent years, growing a high-quality crop seems to be getting more and more challenging, as wet-weather cycles can be very difficult to break out of. Here in Lancaster PA, 2018 happened to be the wettest year on record, with very few periods of dry weather. 2019 doesn't seem much different as it has been another very wet year so far. Finding adequate windows for planting and harvesting crops has been a serious challenge and has taken a toll.



I have been taught over the years that we cannot control the uncontrollable. In eastern agriculture, we rely on a good balance of sun & moisture for our farms to thrive. Most of us simply cannot just turn on the irrigation system when we need the rain or turn off the water when it's time to harvest our crops. We have to learn how to work with the weather, which can be challenging especially in these extremely wet seasons. To reduce your weather risk, we recommend relying on more than just two basic crops. While the short-term advantages of a two crop system can be very high and rewarding, the risk associated is high and the crop rotation is weak. Weak crop rotations allow room for unwanted weeds, insects, diseases and other pests into that two crop system, either lowering crop yields and/or requiring more pest control inputs, neither of which are desirable.

King's AgriSeeds offers a multitude of species and mixtures to increase your farms' productivity through biodiversity. Biodiversity will benefit your soil health, increase your risk management, and ultimately long-term profitability. **Applications for Various Producer Types Below**

## **... for Dairy and Livestock**

Forage quality is paramount to dairy and other ruminant livestock profitability! Consider a more diverse forage program through utilizing more complex mixtures of both annuals and perennials that match your soils and local climate. Focus on products that have wide harvest windows that meet both production and quality needs. The crops adapted to your farm may be different from your neighbor but are certainly different from neighboring regions. The movement to all annuals is high yielding but very risky.

## **...for Grain**

Adding diverse cover crops to a grain crop rotation has huge potential to improve soil healthy. A healthy soil will pay great dividends to the farm. Cover crops need to be planted in the appropriate planting window. On some farms, it may require rethinking the crops, the rotation and the crop maturities selected.

## **... for Hay**

For hay producers, consider planting mixtures that will be ready for harvest at different time of the season. See Diversifying your Hay Portfolio by Joy Beam page 5.

Please consult with your local King's AgriSeeds dealer and the rest of your management team to build a productive system that reduces risks.



## **King's AgriSeeds, Inc**

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KingsAgriSeeds.com

**Mission:** To serve the agricultural community by providing premium forage and cover crop seed along with relevant information for our seed dealers and their customers to develop productive cropping systems. We also strive for a God honoring workplace in that the gifts and talents of team members are used for His Kingdom.





# King's Triticale & Triticale Mixtures

*Split your acreage between straight triticale and a triticale mix to reduce your weather risk. Below is a recommended forage harvest guide that gives your farm lots of harvest windows to make superior forage quality and excellent tonnage.*

## Trical 815™- *Leafy & Late*

This leafy winter triticale was bred for high forage yield and quality. 815 consistently has the superior NDF digestibility in our test plots. Its maturity date is similar to most winter wheats. Very wide harvest window allows you flexibility in attaining both forage quantity and quality. Harvest before head emergence. Can be no-tilled into thin alfalfa stands to increase first cut tonnage. Also a great grain and straw product.

## Gainer 154™- *Big Yield & Early*

Gainer 154 is a new high-yielding variety. It is very responsive to good fertility and crop management. With its early maturity (compared to some other triticales), early spring management is important. Apply spring fertilizer earlier to push the crop out of dormancy for maximum yield and protein.

## Why go with a proven forage triticale product?

- Wide Leaf
- Wide Harvest Window
- Later Maturity
- Graze It
- Harvest It
- Make Milk with It.
- Increase ADG with It.
- Out-yield your neighbor!

## Featured Products

### King's Triticale Plus™

A mixture of triticale and annual ryegrass. Designed for one or two spring cuts of haylage. This mixture will have excellent NDFd when harvested prior to boot stage. Even more tonnage than triticale by itself. Works great to thicken old alfalfa fields in the fall for one huge cutting the following spring. The triticale will add some bulk to the forage for easier silo unloading, while the ryegrass adds sugars and high fiber digestibility.

#### Harvest Management

Triticale's window of harvest is wider than most other small grains, so it maintains high quality longer. Annual ryegrass also maintains high quality even as the head begins to emerge (quality still drops after this point, so avoid waiting too long.) Wide swath it for best drying. Cut prior to boot stage. After allowing 6-8 weeks for ryegrass regrowth, a second cutting may be made. This second cutting will be mostly ryegrass.

### King's Double Play™

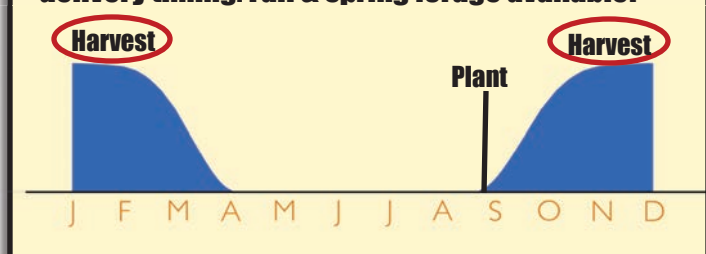
An annual mixture that that will give both quick fall growth and a spring harvest. Oats and annual ryegrass will give quick fall growth. The oats winter kill once temperatures drop into the teens. Both the triticale and the annual ryegrass will overwinter (with proper fall management) and produce a cutting of high quality forage in the spring. This mix is a balance for both fall and spring production.

#### Harvest Management

Fall growth: Prior to the end of university recommended wheat planting dates, a fall cutting must be made. Leave at least 4" of stubble.

Spring growth: Oats will normally winter kill, leaving triticale and ryegrass for one cutting. Harvest when flag leaf is emerging (about 7 to 10 days prior to alfalfa bud stage). This is when the head is about 2 to 3" from emerging.

**Mixtures such as Double Play™, spread out forage delivery timing. Fall & spring forage available!**



## Need more info?

**Ask your dealer about our Research Report to compare products and mixtures or visit- [KingsAgriSeeds.com](http://KingsAgriSeeds.com)**

# Perennial Mixtures

King's AgriSeeds offers a wide variety of perennial mixtures, 25 in total, containing varying amounts of alfalfas, grasses, clovers and forbs. These have been developed over many years with the help of our dealer network and from comments from customers such as yourself. All of these mixtures have great potential to make high quality forage.

One of the beauties of having a diverse mixture that the dominant species may vary depending on weather patterns and soils. Where a straight stand of alfalfa may struggle in a wetter year, a grass alfalfa mix will still produce well on the grass side, ensuring a better harvest.



## Featured Products

### King's Grazing Mix

Seeding Rate: 25-35lb/A

A highly palatable mixture of late heading winter hardy perennial ryegrasses, soft orchardgrasses, clovers and forage chicory. Excellent for high producing livestock including dairy, grass finished beef, and goats. Ideal for good soils that have high fertility. Chicory is included for better mineral nutrition and other animal health benefits.

### Performance Max

Seeding Rate: 20-25lb/A

Alfalfa-tall fescue mixture that has excelled both agronomically and nutritionally. The alfalfa adds drought productivity, protein and high NSC. The tall fescue adds consistent high fiber digestibility, superb yields, traffic tolerance and wet soil tolerance.

### NutraMax

Seeding Rate: 20-25lb/A

NutraMax is a highly digestible mixture of alfalfas, grasses and clovers. It was developed by a nutritionist for top end quality. Best for PA-North.

### Balancer

Seeding Rate: 25-35lb/A

Balanced energy and protein, this high yielding mixture of grasses and legumes is designed for all stages of beef production. The base of Martin 2 Protek complements the blend of orchardgrass and clover.

#### Contents

- Grazing Tolerant Orchardgrass
- European Perennial Ryegrass
- Meadow Fescue
- Medium Red Clover
- White Clover
- Chicory

#### Contents

- KingFisher Alfalfa
- Kora & STF 43 Tall Fescue

#### Contents

- KingFisher Alfalfa
- Festulolium
- Meadow Fescue
- White Clover
- Red Clover

#### Contents

- Martin 2 Protek
- Inavale Orchardgrass
- Olathe Orchardgrass
- Freedom Red Clover OC
- Regalgraze Ladino Clover OC

**Check your seed tag for ingredients and planting instructions.**

# Diversifying your Hay Portfolio

Joy Beam, Technical Sales Support

Have you ever considered the depth of your hay portfolio? Just as diversity in business helps limit risk, diversifying your hay fields helps you weather the all-too-familiar challenges that come with making hay. With many different forage species available, hay programs can easily be diversified by strategically taking advantage of differing maturities of various cultivars.



By incorporating early and later maturities onto your acres, the harvest window can be widened as early maturing fields can be harvested with ample time before later maturing fields are ready to harvest. On operations with many acres to cut, this can be vital in maximizing both the quality and quantity of hay produced. Similarly, if rain keeps one maturity group from being cut at peak time, it is more than likely that the other maturity class will have better weather when it is ready to be harvested. Below is a summary of maturity patterns for straight common hay cultivars to aid in developing your hay portfolio:

**Orchardgrass:** Early, medium, and late maturing orchardgrasses are available on the market with up to two weeks' difference between early and late maturity dates. Late maturing orchardgrasses pair well with alfalfa. Some southern producers prefer early maturing orchardgrasses as they can put on most of their first cutting growth and replenish resources before it gets hot.

**Tall Fescue:** As a whole, tall fescue matures later than orchardgrass. However, later maturing varieties such as Kora and STF 43 still pair well with late heading orchardgrasses.

**Timothy:** There is a wide difference in maturity dates between early and late timothy. Early timothy varieties, like Zenyatta, can be paired with alfalfa or late orchardgrasses while late varieties will mature after fescue.

**Smooth Brome:** Smooth brome grass matures very late. As a high yielder that is very persistent if left go to seed, brome grass works very well on fields that are hard to get to and are not first priority. Even if harvested after the ideal date, brome grass holds its quality better compared to other hay varieties. Since it is similar to timothy in that most of its production comes in the spring, smooth brome can be paired with timothy if limited management is desired.

Incorporating different maturities will diversify your hay business across fields, but diversifying your stands within fields is also recommended by planting mixes of grass species. Depending on weather patterns, one variety may excel one year while another grass species will shine another year. This will also help combat against varying soil types within one field. King's AgriSeeds has designed multiple mixes with this concept in mind that include species of similar maturity to diversify your business.

## King's AgriSeeds Hay Mixture Maturities

	Early	Medium	Late
<b>Alfamate</b>			X
<b>Hay Pro</b>			X
<b>Haymaster</b>			X
<b>Highland Hay</b>			X
<b>Hillside</b>	X		
<b>North Star</b>			X
<b>Performance Max</b>			X
<b>Sale Topper</b>			X
<b>Balancer</b>	X		
<b>GrassPro</b>			X
<b>GrassMaxx</b>	X		
<b>Lowland Hay</b>			X
<b>Milkway</b>			X
<b>Versa</b>		X	
<b>Organic Partner</b>			X



# KingFisher Alfalfas



Twenty unique alfalfas that solve a variety of problems. For over 20 years we have selected alfalfas based on agronomic AND nutritional performance. We now have one of the largest and most unique alfalfa lineups. Let our dealers help you select from our lineup of alfalfas, the one that's right for your region and your farm!

## Featured Products

### KingFisher Stronghold 35-2.....Branch Root / Sunken Crown

Stronghold 35-2 brings a great defense to our alfalfa line-up. Stronghold features a sunken crown for great traffic tolerance, branched roots keep the plant firmly in the ground during freezing and thawing, and helps protect the plant from water damage by keeping more roots above of the water table. Stronghold also features great winter hardiness and disease resistance. APH Race 2 Resistance.

**NEW**

### KingFisher Secure BR.....Branch Root

Secure-BR combines high resistance to the pathogens that inhabit wet soils which include Aphanomyces root rot (Race 2) along the branch rooted feature. Its root system has been selected for a greater degree of the branched rooted trait. This trait helps keep more of the root system above the water table and better *secures* the plant in the ground when freezing and thawing occurs. The branch-rooted trait will adjust as moisture stresses intensify.

### KingFisher 425 HD®....High Digestibility

KF- 425HD was bred for quality and delivers outstanding NDFD 48 and TTNDFD scores. With these high quality attributes, KF-425HD has comparable lignin ratings similar to the non- GMO low lignin alfalfas. KF-425HD has an excellent agronomic package that provides a very persistent and healthy plant for top production over a broad range of soils. Place KF-425HD on your most productive soils for the greatest value of this tremendous variety. *HD® is a Registered Trademark of Legacy Seeds, Inc.*



**Branch Roots**



**Sunken Crown**



**Multi-Foliate**

### Enhanced Nutrition– KF 425 HD Grand Champion Haylage @



## What goes great with KingFisher Alfalfas?

**Grass! Combine these KF alfalfas with high energy grasses for optimizing forage quality and yield. Our perennial mixtures contain two or more KF alfalfas.**

# Thinking cool season grass?

## Yield Big with Modern Grass.

Orchardgrass has come a long way. These varieties with specific features offer a wide range of production solutions.

**HLR**— Barenbrug's High Leaf Ratio

**Olathe**— Big yielding, upright, early maturity.

**Inavale**— True medium maturity with high disease resistance.

**Echelon**— Late maturity with great palatability.

## Grass Features We Offer

- High Leaf to Stem Ratio
- High TTNDFD
- Late Maturing
- Early Maturing
- Medium Maturing
- High Disease Resistance
- Novel Endophyte
- Tetraploid

## Improve Digestibility With Grass.

High fiber digestibility is a key feature of high quality grass. While our entire lineup features products with improved forage quality, our lineup of meadow fescues stands out!

**HDR Blend**— Barenbrug's 'High Disease Resistant' meadow fescue.

**Liherold**— An early maturing variety with great winter hardiness and strong yields.

**Tetrax**— A tetraploid variety that is great for improving fiber digestibility in new alfalfa seedings.

*"Meadow fescue has higher fiber digestibility (NDFD) than most other grasses grown with alfalfa in the northern U.S. Feeding trials across the U.S. show that a one percentage unit increase in NDFD increases milk production by 0.5 to 1.0 lbs/cow/day, and more than 1.0 lb/cow/day for the highest producing cows. Meadow fescue in combination with new reduced-lignin alfalfa varieties has the potential to produce a very high quality forage for lactating dairy cows."*

— Alfalfa Grass Mixtures Update, Progressive Dairyman.

Contributed by Jerry Cherney, Debbie Cherney and Ken Paddock



## Thicken up Your Stand with Interseeded Grass.

Maintenance overseeding is a great way to keep your pastures and hay field in great shape for the future. Check out these options for overseeding. These and many more available through your local dealer.

**Kora Tall Fescue for Hay Fields**— A late, highyielding hay type fescue with improved digestibility. If quality and yield is your goal, this fescue is worth overseeding in your hay field.

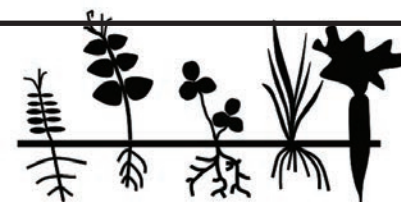
**Greenfast for Pastures**— It's fast! Diverse grasses and legumes make this a quick mix for fast green up on pastures. Maintain your pastures and reduce replacement.





# Cover Crops & Mixtures

Whether you are farming conventionally, organically or aiming for no-till, each field should have a living crop for as many months of the year as possible.



**Each cover has a purpose.**

We have developed a variety of mixtures designed and tested to improve soil health. Multi-species blends are more beneficial at improving the life of your soil than monocultures. Cover crops are proven to help optimize your soils long term productivity and profitability.

## Featured Products

### Soil Builder Plus Mix

A mix of TriCal 815 triticale, crimson clover, hairy vetch, annual ryegrass, and daikon radish. An excellent spring forage and/or overwintering cover crop. Can also be used for wildlife food plots. Clovers and vetch provide protein in a forage application, and triticale and ryegrass contribute effective fiber and bulk. This mix is ideal for a spring grazing or cutting when the triticale reaches flag leaf or boot stage.

Product Contents:

- Triticale
- Crimson Clover
- Hairy Vetch
- Daikon Radish

### Broadcaster Mix

A small-seeded mix, it's well suited for broadcasting and aerial seeding, while providing species diversity at a reasonable price. It contains Daikon radish, annual ryegrass, crimson clover, medium red clover, and yellow blossom sweetclover. Broadcaster can be planted with oats as a fall nurse crop, and will continue to grow in the spring, when it can be killed or turned under.

Product Contents:

- Annual Ryegrass
- Crimson Clover
- Common Medium Red Clover
- Daikon Radish
- Yellow Blossom Sweetclover



**Soil Builder Plus in October**

### Ray's Crazy Fall Mix

This 8 way mix is the fall formulation of our cover crop cocktail. This is a versatile cool season mix made up of grasses, legumes, and brassicas that can be used as a short-term cover crop, a soil-building transition crop to renovate depleted soils, a grazing mix, and a wildlife food plot. It also contains several blooming species that, if left to grow and flower, will attract beneficial species.

Product Contents:

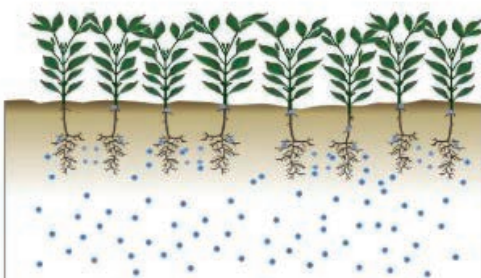
- Winter Pea
- Forage Oats
- Triticale
- Hairy Vetch
- Crimson Clover
- Annual Ryegrass
- Daikon Radish
- Barkant Turnips

**Didn't find what you like in a mix?**  
**We also do custom mixtures for specific cover crop/grazing needs.**



# TerraLife® Mixtures

Single Species Cover Crop



TerraLife® Mixtures



**It's all about diversity. Chart illustrates the effect of multiple root types and structures and the positive impact to soil life.**

## ***What makes TerraLife® different?***

- **Mixed rooting structures, restructure the soil at all levels through the profile, alleviating compaction.**
- **Produces a greater amount of various root exudates for enhanced microbial activity and humus production.**
- **Mobilizes nutrients, supplies nutrients to other plants in the mixture and following crop.**
- **Increases biodiversity.**
- **Suppresses weeds.**
- **Reduces nutrient losses via soil erosion or leaching.**

**Pictured is a TerraLife® mixture at a field day in NY. We are committed to soil health education improvement.**



## **Fall Planted Options**

### **BetaMaxx**

The cover crop mix for vegetable and sugar beet Cultivation.

- Winterkills (Black oats can be an exception)
- Creates ideal seed bed conditions.

### **MaizePro DT**

Balanced, partly winter hardy cover crop for intensive corn crop production.

- Leaves optimal soil structures.
- Supports deep roots.
- Very good nitrogen exploitation.

### **Rigol DT**

Strong root growth stabilizes the soil structure.

- Very deep roots.
- For compacted soils.

### **VitaMaxx DT**

Fast growing mix for intensive livestock farms

- Legume free
- Preserves nutrients over winter
- Well suited for later planting than many cover crop mixture

# King's AgriSeeds Fall Product List

## Perennial Mixes

	Wt.	Treat.	Seed Rate	Comments
<b>King's Perennial Mixtures</b>				
AlfaMate	33	MST	25 to 35	All grass mix to seed alone or with alfalfa. Makes soft hay and very palatable.
Balancer	33	MST	25 to 35	Balance of energy and protein, a high end mix of grasses and legumes. Featuring Martin II protek tall fescue
Creekside	33	MST	25	A highly palatable mix for wetter soils in cooler climates. Will form a nice sod to to handle foot traffic
Grass Maxx	33	MST	20 to 30	A rugged mix of Martin II novel endophyte tall fescue with early new-release orchardgrass.
GrassPro	33	MST	20 to 30	A mix of endophyte free tall fescue & late-heading orchardgrass & timothy. Great for stored feed.
Graze-All	33	MST	25	An all-grass long lived mixture designed for grazing by multiple livestock species.
Greenfast	33	MST	30 to 40	Aggressive 3 to 5 year mix. Good for shorter term pastures and renovation.
Highland Hay	50	CT	25	Easy to dry alfalfa grass mix. Will make a very nice mixed auction hay that will feed very well
Hillside	33	MST	25	A strong orchardgrass based grazing mixture. Great for good to drier soils.
King's Grazing Mix	33	MST	25 to 35	Our premier grazing mix designed for managed grazing. Including chicory for mineral nutrition.
King's Haymaster	50	MST	20 to 30	Easy to dry hay mix. Contains orchardgrass, Hakari brome, timothy & KF alfalfa.
King's HayPro	50	MST	20 to 30	An alternative to King's Haymaster Mix that includes soft leaf tall fescue instead of Alaska brome.
King's Horse Supreme	33	MST	25	Excellent horse mix with no tall fescue, can be used for all classes of livestock. Tolerates short grazing.
Lowland Hay	50	MST	20 to 25	A grass based, easy to dry mix for wetter soils, that includes Freedom red clover.
North Star	50	CT	18 to 25	An 85/15 blend of Kingfisher alfalfa with tall fescue and meadow fescue. Designed for Central PA and North
Northern Energy Mix	50	MST	30 to 35	A high energy and highly digestible grass/clover mix ideal for PA and further north.
NutraMax Hay Mix	50	CT	25	Highly digestible alf/clover/grass mix that is primarily adapted to central PA & north. Good haylage & baleage.
Performance Max	50	CT OC	20 to 25	70/30 blend of our Kingfisher alfalfas and late tall fescue. Consistent quality and high yield.
Sale Topper Grass Mix	33	MST	15 to 20	Easy to dry. 80% late orchardgrass & 20% timothy. Lower seeding rate with legumes (5 to 10lbs).
Versa Mix	33	MST	15 to 30	A versatile forage grass mix. 70% festulolium, 30% orchardgrass.
<b>Barenbrug Perennial Mixtures</b>				
Beefmaster	50	UT	30 to 35	Good for finishing beef. Contains perennial ryegrass, fescue, orchardgrass and clover.
Southern Beefmaster	50	MST	30 to 35	Southern version of Beefmaster featuring BarOptima plus E34, beneficial endophyte.
Browsemaster	50	YJ	22	A grazing mixture for goats, wildlife and more. Contains a lot of forbs.
Equinemaster Paddock	25	UT	30 to 100	For exercise areas. Contains soft leaf tall fescue, KY bluegrass and perennial ryegrass.
Milkway	50	UT	35 to 40	60:40 mix of meadow fescue and soft leaf tall fescue. Lower seed rate with legumes (3 to 10lbs).
CT=conventional coated, Apron treated, inoculated    OC = organic coated, OMRI listed    YJ=yellow jacket conventional coated				
Myco Seed Treat (MST) is an OMRI approved product that stimulates root zone activity.				

## Alfalfa - Clover

	Wt.	Treat.	Seed Rate	Comments
<b>Alfalfa</b> <b>A very productive drought tolerant legume that is high in protein</b>				
KingFisher 101	50	CT OC	18 to 22	A respectable variety at a low cost. Replaces the Kingfisher Econo.
KingFisher 406AP2	50	CT OC	18 to 22	Resistant to multiple strains of aphanomyces and branch-rooted.
KingFisher 425 HD	50	CT OC	18 to 22	High yielding, selected for high digestibility. DRI 30/30, FD 4.5, WH 2.0
KingFisher 525	50	CT	18 to 22	A strong alfalfa with fall dormancy of 5. High yield and quality.
KingFisher Enhancer II	50	CT OC	18 to 22	An eye catching, high yielding, high quality alfalfa with Fall Dormancy 4.
KingFisher PLH 322	50	CT OC	18 to 22	Next generation potato leaf hopper resistant variety. 30/30 DRI, FD 3, WH 2.2
KingFisher Profusion2 HX	50	CT OC	18 to 22	High yielding fine stemmed hybrid alfalfa with exceptional quality. Fall Dormancy 4.
KingFisher Secure BR	50	CT OC	18 to 22	A high yielding branch-rooted alfalfa that will tolerate wetter soils.
KingFisher Stonghold	50	OC	18 to 22	An exciting new alfalfa featuring both a sunken crown and branched roots. Great diesese resistance: DRI 35/35
KingFisher Traffic Pro	50	CT OC	18 to 22	High yielding alfalfa with a deep set crown that takes traffic well.
<b>Brassicas</b> <b>High quality forage. Great for summer feed or late fall feed.</b>				
Barkant Turnips	10	UT	4 to 5	A leafy variety with a tankard shaped bulb.
	25	UT		
Barsica Rape	25	UT	4 to 5	A new forage rape that is fast maturing. Over-wintering.
T-Raptor Hybrid	25	UT	4 to 5	A turnip like hybrid that's super for multiple grazings (no bulb).
<b>Bromegrass</b> <b>Offers good drought tolerance.</b>				
Artillery Smooth Brome	50	YJ	30 to 40	A new release Barenbrug variety selected for drought tolerance.
Carlton Smooth Brome	50	OC	30 to 40	An improved traditional smooth brome. Maintains green hay color.
Hakari Alaska Brome	50	UT	35 to 45	Quick establishment. Late maturing and excellent to mix with alfalfa.
Arsenal Meadow Brome	50	YJ	25 to 35	A new release Barenbrug variety selected for drier climates.
Montana Meadow Brome	50	OC	25 to 35	A new grazing type brome. Earlier maturing, produces well in dry weather.
<b>Clovers</b> <b>Nitrogen fixing legumes. Inoculate at seeding</b>				
Alice White Clover	25	YJ OC	2 to 4	Large leaf and medium height. Popular for grazing.
Alsike Clover +	50	UT	6 to 8	N source, tolerates flooding, poorly drained and acidic or alkaline soils. Not for horses.
Balady 1 Berseem Clover	50	CT	15 to 20	An annual clover that resembles alfalfa. Winter annual in south. Summer annual in north.
Clover Pollinator Mix	5	OC	5 to 12	A mix of 6 clover species that will provide excellent nectar flow to pollinators.
	25			
Crimson Clover +	50	CT UT	15 to 25	A winter annual clover, good for hay, grazing and green manure.
Dutch-White Clover	5	OC	2 to 4	Excellent for between vegetable rows. For pasture it is lower yielding and low growing
	25			
Fixation Balansa Clover	50	CT	3 to 8	A cool season annual legume with similar winter hardiness to winter peas & crimson clover.
Viper Balansa	50	OC		
Freedom! MR Red Clover	25	YJ OC	4 to 20	A long lived, mildew-resistant variety with high yield and digestibility.
Ladino White Clover "VNS"	50	OC	5 to 9	Living mulch, erosion protection, green manure, beneficial insects.
Medium Red Clover "VNS"	50	CT OC	4 to 20	N source, soil builder, weed suppressor, attracts beneficials, forage.



## Clover - Festulolium

	Wt.	Treat.	Seed Rate	Comments
<b>Clovers (continued)</b>				
Premium Clover Mix	25	YJ/CT OC	4 to 6	A mixture of premium red, white and ladino clovers. Seed alone or with grass.
RegalGraze Ladino	25	OC	2 to 4	A less aggressive large leaf white clover that tolerates heat, drought and cold very well.
Renovation White Clover	25	CT	2 to 4	A southern-bred white clover. Bred for persistence.
Yellow Blossom Sweetclover	50	OC	15 to 25	Deep tap root helps break up compacted soils. Little forage value.
3-Way Clover	50	OC	10 to 15	Clover mixture of Yellow Blossom Sweet Clover, Red Clover and Ladino Clover.
<b>Cover Crops and Specialty Items</b>			<b>Seeding rate is for cover crop usage ONLY.</b> <b>The soil benefits are listed below.</b>	
Broadcaster	50	PI	25 to 30	Best seeded in late summer. Annual ryegrass, radish, crimson, red & yellow blossom clovers.
Braco White Mustard	50	UT	8 to 10	Bio-fumigant crop-disease & nematode suppression, break crop, quick cover, weed suppression.
Buckwheat "VNS"	50	UT	50 to 70	Cool season or summer quick soil cover, weed suppressor, nectar for pollinators, loosens topsoil.
Lifago Buckwheat	55	UT	25 to 35	A later maturing small seeded buckwheat for cover crop programs. Not for grain. Does not attract pollinators.
Lowboy Annual Ryegrass	50	UT	15 to 20	A dwarf-type annual ryegrass that has great cover crop applications. DO NOT USE FOR FORAGE.
CARGO Mix	50	PI	60	Grass-legume green manure, nutrient scavenger, nitrogen fixer, soil builder, and forage.
Clean & Green	50	UT	35 to 75	For conservation. 80% tall fescue and 20% annual ryegrass. Adjust seeding rate to erosion risk.
Companion Mix	25	UT	50	A mix for orchards, vineyards, and between vegetable rows that requires less mowing.
Daikon Radish	5 50	UT UT	12 to 14	Deep root growth, improves tilth, scavenges N, weed suppressor, bio-fumigant & break crop.
Dutch White Clover "VNS"	5 25	OC	2 to 4	Excellent for between vegetable rows. For pasture it is lower yielding and low growing.
Peredovik Sunflowers	50	UT	40	A great sunflower for cover crop and wildlife programs.
Phacelia	50	UT	8 to 12	Excellent for beneficial insects including honey bees. Also a great soil builder.
AU Merit Hairy Vetch	50	OC	25 to 30	A high-yielding legume capable of producing abundant forage, fixing significant amounts of nitrogen, and attracting wildlife and pollinators.
Hairy Vetch "VNS" +	50	UT	25 to 30	Winter annual or summer annual legume, N source, weed suppressor, top soil conditioner.
Ray's Crazy Fall Mix +	50	UT	40 to 60	An 8-way mix for cover crop and/or forage.
Spring Champion Mix	50	UT	125	Plant early, produces N for summer planted crops. Early cover, soil improver.
Summer Solar Mix +	50	UT	50 to 70	Diverse legume-forb cover crop mix of aggressively growing summer annuals.
PI= Pre Inoculated				
<b>TerraLife Cover Crops</b>			<b>Taking cover crops to the next level</b>	
BetaMaxx +	50	UT	35 to 40	A cover crop mix for vegetables and beets.
MaizePro DT +	50	UT	35 to 40	A partly winter hardy cover crop mix for intensive corn crop rotations.
Rigol DT	50	UT	18 to 20	Strong root growth that stabilizes soil structure.
VitaMaxx DT	50	UT	18 to 20	Fast Growing, legume free mix, preserves nutrients over winter. Suitable for later sowing
<b>Festulolium</b>			<b>Crosses of ryegrass and fescue. High sugars and reduced summer heading</b>	
Fojtan	50	UT	30 to 40	A long lived heat tolerant Tall Fescue type with good nutrition.
Perseus	50	UT	30 to 40	A 3 year Italian Ryegrass type with excellent nutritional quality.

### Exciting New Product Highlight

New larger leaf vetch with strong forage potential and earlier maturity. This new vetch is a head turner in terms of leaf size and overall production potential.



## Meadow Fescue - Small Grains

	Wt.	Treat.	Seed Rate	Comments
<b>Meadow Fescue</b>				<b><i>Very palatable and very cold tolerant. More summer productive than ryegrasses.</i></b>
HDR Meadow Fescue	50	UT	35 to 45	Barenbrug's blend of high disease resistant meadow fescue.
Liherold Meadow Fescue	55	UT	35 to 45	A top performing variety with strong early growth.
Tetrax	55	UT	35 to 45	A tetraploid variety ideal to mix with new alfalfa seedings to increase energy levels in strong grass-growing regions
<b>Miscellaneous</b>				
Balin Kentucky Bluegrass	50	UT	15	Forage type with improved productivity.
Forb Feast Chicory	10 25	OC	2 to 5	Deep tap root. High mineral content. Helps break up hard pans.
Reed Canarygrass	50	UT	12 to 18	Very wet & drought tolerant. Once established it is very persistent. Low alkaloid.
Wellington Birdsfoot Trefoil	50	OC	20 to 25	A high yield hay variety that can also be used for pasture and conservation.
<b>Orchardgrass</b>				<b><i>Good Drought Tolerance. All varieties are less bunchy.</i></b>
Echelon	50	UT	20	A very late heading and high yielding orchardgrass variety.
HLR Orchardgrass Blend	25	UT	20	Barenbrug high-leaf-ratio blend of late maturing, leafy orchardgrasses.
		YJ	23	Coated at 50% Yellow Jacket which improves seed flow.
		OC	23	Coated at 50% KF SureStand Hydro Green OC.
Husar	33	UT	20	An European leafy late-maturing variety.
Inavale	50	UT	20	A new medium-maturity variety by DLF that looks promising.
Olathe	50	UT	20	An early orchardgrass with high yield and disease resistance.
Persist NP	50	CT	20	High yielding, persistent, early variety selected in western TN under tight grazing.
<b>Ryegrass - Annual</b>				<b><i>Best for late summer and early fall seeding.</i></b>
Kodiak	50	UT	35 to 40	An annual ryegrass with superior cold tolerance. High yield and quality.
McKinley	50	UT	35 to 40	A new winter hardy variety with high yield and quality.
<b>Ryegrass - Italian</b>				<b><i>Two year potential crop. Fast starting and very high quality.</i></b>
Green Spirit Blend	50	UT	35 to 45	A Barenbrug tetraploid, diploid Italian blend Does not go to head when spring seeded.
Kingfisher Allegro Blend	50	UT	35 to 45	A Kingfisher tetraploid, diploid Italian ryegrass blend.
<b>Ryegrass - Perennial</b>				<b><i>Highest energy grass. Great spring and fall production.</i></b>
BG-24T Blend	50	UT	35 to 45	A Barenbrug blend of premium tetraploid & diploid varieties.
BG 34 Blend	50	UT	30 to 40	A Barenbrug blend of premium late heading diploid varieties.
Kentaur	50	UT	40 to 50	A tetraploid variety with excellent southern & northern performance.
Remington NEA2	25	UT	40 to 50	The most durable tetraploid in the line up. Includes a beneficial Endophyte.
<b>Small Grains- Spring</b>				<b><i>Suggested for planting in the spring, or late summer for forage.</i></b>
40-10 Spring Peas +	50	UT	80 to 100	A high-quality purple flower forage pea. Can be planted spring or fall. Small seed size.
Arvika Spring Peas +	50	UT	80 to 100	A high-quality purple flower forage pea. Can be planted spring or fall. Small seed size.
AC King Spring Barley	50	UT	125 to 150	A strong two row spring barley that can be used for fast forage or grain.
Canmore Oats	50	UT	95 to 130	A taller grain variety that makes fast fill forage.
Niagara Oats	50	UT	95 to 130	A new release Canadian forage oat replacing Forage Maker 50.
Reeves Oats	50	UT	95 to 130	A 2004 release that is taller and earlier than Jerry oats for fast forage or grain.
King's Pea-Oat Mix +	50	UT	100	For grain or forage. A 50/50 mix of Proleaf 234 oats and 4010 forage peas.

### Exciting Product Highlight

**LOWBOY**  
LOW-GROWING ANNUAL RYEGRASS

After a couple of years using this product, we are excited about it's potential as a cover crop. With aggressive roots and lower top-growth, it is quickly becoming a favored cover crop ryegrass. Search 'LowBoy Ryegrass' on YouTube for more info.

## Small Grains - Seed Inoculants

	Wt.	Treat.	Seed Rate	Comment
<b>Small Grains- Winter</b>			<b><i>Can be used in the spring for grazing and nurse crop purposes.</i></b>	
Austrian Winter Pea +	50	UT	60 to 100	Use in mixtures and plant 1-2 weeks before recommended barley seeding date.
Keystone Winter Pea +	50	UT	60 to 100	Semi-leafless white flowering winter pea with excellent standability and nutritional value.
VNS Cereal Rye	56	UT	168	A Canadian rye that is leafier and later than local rye.
Comet Spelt	50	UT T	125	A shorter variety with high grain yields and low lodging. Ideal for feeding to livestock.
Sonic Spelt	50	UT T	125	A new variety with better disease resistance.
Sungold Spelt	50	UT T	125	A taller food grade spelt exhibiting better standability and winter survival. Also a good forage.
Malabar Wheat	50	UT	100 to 150	Awnless, tall red winter wheat. Very high yielding & multipurpose. 50% higher straw yields.
Gainer 154 Triticale	50	UT	100 to 150	A new high yielding variety. Slightly earlier maturity than TriCal 815
TriCal 815 Triticale	50	UT	100 to 150	A very leafy, highly digestible winter triticale. More tonnage than wheat, rye and barley.
<b>Mixtures with Small Grains</b>			<b><i>Use higher rates with later planting.</i></b>	
CARGO	50	PI	110 to 130	Grass-legume green manure, nutrient scavenger, nitrogen fixer, soil builder, and forage.
Double Play	50	UT	150 to 200	Forage for this fall and next spring. Contains oats and Triticale Plus.
King's Soil Builder Plus +	50	PI	120 to 140	Forage and soil building mix of triticale, crimson clover, vetch, annual ryegrass & radish.
Oats Plus Mixture	50	UT	75 to 90	For good quick feed. Contains 60% oats, 40% annual ryegrass .
King's Pea-Oat Mix +	50	UT	100	For grain or forage. A 50/50 mix of Proleaf 234 oats and 4010 peas.
Triticale Plus	50	UT	80 to 120	A mix of 2/3 triticale & 1/3 annual ryegrass. Better forage quality than triticale alone.
<b>Tall Fescue</b>			<b><i>Offers excellent drought and heat tolerance.</i></b>	
BarOptima Plus E34	25	UT	35 to 40	Improved soft leaf tall fescue with a beneficial endophyte.
Cajun II	50	UT	35 to 40	An early, high yielding and durable variety with no endophyte.
Kora	50	UT	35 to 40	Very high yielding hay type with late maturity with improved digestibility with no endophyte.
Martin II Protek	50	UT	35 to 40	Martin II is an early-medium maturity, novel endophyte tall fescue.
STF 43	50	UT	35 to 40	A blend of soft leafed tall fescue varieties. Late maturity. No endophyte.
<b>Timothy</b>			<b><i>Most palatable grass. Makes low potassium hay.</i></b>	
Barfleo	50	UT	10 to 15	A little later than Climax. Very high quality. Excellent for hay and grazing.
Barpenta	50	UT	10 to 15	Very late maturing. Best in cooler climates.
Climax	50	UT	10 to 15	The old standard variety for the Northeast USA. Mid-maturity.
Zenyatta	50	UT	10 to 15	A new high yielding, early timothy.
<b>Turf</b>			<b><i>Subject to sales tax if for residential use.</i></b>	
Sun and Shade	50	UT/YJ	175	A multipurpose fine leafed turf.
Turf Star	50	UT	300	A blend of Barenbrug's best soft leafed tall fescue varieties. Late maturity. No endophyte.
Water Saver Pro	50	UT	300	Turf type tall fescue blend. Excellent for durability and lower maintenance.
<b>Seed Stimulants</b>				
Myco Seed Treat (MST)	1 lb.	OMRI		2 to 8 oz. per 100lb. of seed An all natural non-GMO seed treatment that increases seedling vigor and plant health through a healthier root zone.
Myco Seed Treat (MST)	5 lb.	OMRI		
GroPak	12 lb.		3-8 oz	A hopper box seed treatment that replaces talc and graphite. Contains
GroPak SB	12 lb.		4 oz	A hopper box seed treatment that replaces talc and graphite. Contains micronutrients and trichoderma
<b>Seed Inoculants</b>				
N-Dure Alfalfa/Clover Inoculant	Pkg			For seed that was not preinoculated or coated. Treats 50lb
Prevail Alfalfa/Clover Inoculant	Pkg			For seed that was not preinoculated or coated. Treats 100lb
N-Dure Pea/Vetch inoculant	Pkg			For seed that was not preinoculated or coated. Treats 100lb
N-Dure Peanut inoculant	Pkg			For use on Cow Peas, Sunn Hemp, and Lespedeza. Treats 100lb
N-Dure Soybean Inoculant	Pkg			For use on Soybeans. Treats 300lb (6 units)





# Certified Organic Products

Wt.	Treat.	Seed Rate	Comment
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## King's Certified Organic Mixtures

*Custom mixes are available but arrangements must be made in advance.*

Dairy Green	50	OC	25 to 35	A mix that will thrive on good to moist soil.
Partner	50	OC	20 to 30	Grass hay blend to seed with alfalfa or alone. Use lower seeding rate with legumes (3 to 8lbs).
Star	50	OC	25 to 30	For dairy quality pasture on varying soil types.

## Clovers

*Best for grazing & silage.*

Premium Org. Clover Mix	25	OC	4 to 6	A mixture of premium red, white and ladino clovers. Seed alone or with grass.
Diogene Crimson Clover	50	OC	20 to 25	A winter hardy, European crimson clover.
Harmonie Red Clover +	55	UT	4 to 8	A European red clover.
Klondike Ladino Clover	25	OC	2 to 4	A quick growing, large leaf clover. Include with pasture seeding or overseed into pastures.
Mammoth Red Clover	50	OC	4 to 8	A single cut red clover that is best for cover cropping applications.
Milvus Red Clover +	55	UT	4 to 8	A new red clover that is long lived and has some spreading tendencies.
Renegade Red Clover	50	OC	4 to 8	An improved red clover.
Respect Red Clover	50	OC	4 to 8	A European red clover.
Rivendel White Clover	25	OC	2 to 5	A very persistent, small leaf white clover.
White Clover 'VNS'	25	OC	2 to 4	This lot is a blend of a ladino type & an intermediate type white clover.
Yellow Blossom Sweet Clover	50	OC	15 to 25	Deep tap root. Helps break up compacted soils. Not good for forage.

## Meadow Fescue

*Looks similar to ryegrass and is palatable. Very cold tolerant.*

Mituva	50	OC	35 to 45	An improved European variety.
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## Ryegrass- Italian

Kingfisher Allegro Blend	50	MST	35 to 45	A Kingfisher tetraploid, diploid Italian ryegrass blend.
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## Ryegrass- Intermediate AND Festulolium

Astoncrusader	55	UT	35 to 45	A high-yielding intermediate ryegrass.
Storm	50	UT	30 to 40	A 2 to 3 year high yielding intermediate ryegrass, similar to a festulolium.
Perun	50	UT	30 to 40	An Italian ryegrass type festulolium. Very strong spring and fall growth.

## Ryegrass- Perennial

*Highest energy grass. Great spring and fall production.*

Premium Perennial Ryegrass	50	UT	40 to 50	An intermediate heading diploid variety that does well under lower nitrogen fertility.
Kingfisher TD Blend	50	MST	35 to 45	A Kingfisher blend of European tetraploid and diploid varieties.
Kentaur	50	UT	40 to 50	High sugar late maturing tetraploid with excellent productivity.

## Tall Fescue

*Tolerates drought, heat, wet soil and traffic. Very long lived.*

Kora Tall Fescue	50	UT	35 to 45	Extremely productive. Hay type. Very digestible.
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## Timothy

*A very palatable grass.*

U/C Climax Timothy	50	UT	10 to 15	Uncertified Climax timothy.
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## Seasonal Annuals

Lifago Buckwheat	55	UT	25 to 35	A small seeded buckwheat for cover crop programs.
VNS Fall Rye	56	UT	168	A canadian rye that is leafier and later than local rye
TriCal 815	50	UT	100-150	A very leafy, highly digestible winter triticale.

Notes:



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