

# FORAGE & Turf GUIDE



WE'LL GROW YOU ONE BETTER!



## A NOTE ABOUT OUR COMPANY

Kitchen Seed Company, Inc. was founded in 1974 by Phillip Kitchen. Our main facility is in Arthur, Illinois in the heart of Amish Country. As an independent, family owned company, we have been in the Forage and Turf business for more than 40 years.

Kitchen Seed Company, Inc. is proud of the fact that we can offer you a full product line of pasture, turf, or wildlife seed. We buy only the highest quality seed direct from growers in the Northwest. We carefully pick genetics and seed traits best suited for the Midwest growing area.

Whether you're buying a bag of pasture mix or a bag of lawn mix, please take a minute to read the analysis tag. You'll see that our mixes are formulated to give you the highest quality product with the longest term growth for your dollar. We use NO "filler seed" or annuals in our formulas.

**WE INTEND TO LIVE UP TO OUR MOTTO:**

# WE'LL GROW YOU ONE BETTER!

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**FORAGE GRASSES**

- Climax Timothy
- Conquest (Early) Timothy
- Fawn Tall Fescue
- FSG 402TF Forage Fescue
- Smooth Brome
- Elena Perennial Rye
- Marathon Reed Canarygrass (ctd) ASK
- Red Top
- Annual Ryegrass Fria

**ORCHARD GRASSES**

- Extend/Blizzard Late Orchardgrass
- Potomac Orchardgrass
- FSG Early Bounty II OG

**SUMMER ANNUALS**

- Teff Grass
- Sorghum-Sudangrass
- Cow Peas
- Hybrid Pearl Millet

**LAWN GRASSES**

- Premium Kentucky Bluegrass
- ASP Premium Per. Rye Grass
- AST Premium Turf Fescue Varieties
- Creeping Red Fescue

**BRASSICAS & COVER CROPS**

- Forage Turnips
- Purple Top Turnips
- Rape Seed
- Impact Forage Collards
- Eco-Till Radish
- Crown Vetch ASK
- Hairy Vetch
- Cover Crop Wheat
- Winter Rye Grain
- Eco-Till Radish
- Crimson Red Clover
- Austrian Winter Peas
- Winter Barley

**SEED OATS**

- Saber Seed Oats
- Reins Seed Oats

**ALFALFA**

- FSG 450 Alfalfa Ultra-Cut
- KSC Extender IV Alfalfa
- FSG 421LH Leaf Hopper Resistant
- FSG 527 Premium Alfalfa
- FSG 438RR Alfalfa
- Common Alfalfa
- FSG 476 HVXRR Ultra-Cut
- FSG 415 BR Alfalfa

**CLOVER**

- Medium Red Clover (uncoated)
- FSG 402/401 - 3 Year Red Clover (ctd)
- Mammoth Red Clover
- Alsike Clover
- Yellow Sweet Clover
- Ladino White Clover
- Pinnacle or Will Ladino Clover (ctd)
- Crusade Intermediate White (ctd)
- Korean Lespedeza
- Birdsfoot Trefoil
- White Dutch
- White Sweet Clover

**WILDLIFE**

- Sugar Beets (ctd)
- Chicory
- Japanese Millet
- Peredovic Sunflower
- Wildlife Grain Sorghum
- Buckwheat
- Egyptian Wheat
- Clearfield Sunflowers

**REAL WORLD WILDLIFE  
FOOD PLOT MIXES**

- Clover/Chicory Blend  
(1 acre bag or ½ acre bag)
- Upland Game Blend (1 acre bag)
- Whitetail Soybeans (1 acre bag)
- Whitetail Forage Oat Blend (1 acre bag)
- Whitetail Harvest Salad (½ or 1 acre bag)
- Bedding In A bag (1 acre bag)
- Real World Switchgrass (10 lb bag)
- Fall Plot Topper (½ acre bag)
- Deadly Dozen (¼ acre)
- Maximizer Mineral (40 lb bag)
- Maximizer Mineral Plus (40 lb bag)
- Nutri-Crave Corn
- Soil Charge (40 lb bag)

**KSC FORAGE MIXES***Professional Beef Pasture Mix - Inoculated*

- 35% FSG Bounty II OG Orchardgrass
- 35% FSG 402 Red Clover
- 10% Intermediate Ryegrass
- 10% Elena Perennial Ryegrass
- 5% Conquest Timothy
- 5% Pinnacle Ladino Clover

*KSC Horse Pasture Mix*

- 30% Elena Forage Perennial Ryegrass
  - 30% Potomac Orchardgrass
  - 20% Premium Kentucky Bluegrass
  - 20% Climax Timothy
- Packaged in 25 lb bags*

*KSC Pasture Mix #2 - Inoculated*

- 60% Vernal Alfalfa
- 25% Medium Red Clover
- 10% Climax Timothy
- 5% Benchmark Orchard Grass

*KSC Grasswaterway/Pasture Mix*

- 20% Potomac Orchard Grass
  - 35% Fawn Tall Fescue
  - 35% Premium Perennial Ryegrass
  - 10% Climax Timothy
- Packaged in 25 lb bags*

**KSC LAWN MIXES***KSC Lawn Mix*

- 65% Premium Kentucky Bluegrass
  - 35% Premium Turf Perennial Ryegrass
- For a premium fine bladed, deep green turf. Excellent for new lawns or reseeding existing lawns.*

*Shaded Green Lawn Mix*

- 30% Premium Kentucky Bluegrass
  - 25% Creeping Red Fescue
  - 20% Premium Turf Perennial Rye
  - 25% Turf Type Fescue
- A superior mix for moderate to heavily shaded lawns or lawns with poor soil quality.*

*KSC 5-Way Fescue Blend*

- For a hardy lawn with lush green color all season long. Rust resistant and drought tolerant. Excellent for parks and athletic fields.*

*Greenpathway Lawn Mix*

- 50% Premium Kentucky Bluegrass
  - 25% Turf Type Fescue
  - 15% Premium Turf Perennial Ryegrass
  - 10% Creeping Red Fescue
- For a durable lawn with heavy traffic.*

*Grow-All Lawn Mix*

- 25% Premium Kentucky Bluegrass
  - 25% Creeping Red Fescue
  - 50% Premium Turf Perennial Ryegrass
- An excellent lawn mix that grows well in all soil types and conditions. Comes up quicker than other mixes. A favorite among landscapers.*

*All Lawn Mixes Packaged In  
25 lb, 10 lb, or 3 lb bags*



*Premium Alfalfa Varieties from KSC for those who plant the very best!*

# ALFALFA

## ESTABLISHMENT

A seedbed should be smooth, firm, free of weeds and trash, and contain adequate moisture for germination and emergence. Land grading should be sufficient to ensure good surface drainage. Alfalfa should not be seeded as a first crop on newly leveled land where fill may settle and cause poor surface drainage.

Fifteen to twenty pounds of coated or non-coated inoculated seed per acre evenly drilled 1/4-inch-deep on adapted, properly prepared sites will produce adequate stands. A combination drill and packer is desirable. Cult packing soil before and after seeding is helpful to stand establishment. Seeding depth should be no greater than 1/4 inch on finer textured soils and no greater than 1/2 inch on sandy soils. Spring seedings can be made 30 days before the average date of the last killing frost. Alfalfa can also be successfully seeded during the late summer. Allow time for adequate growth prior to the first killing frost.

## MANAGEMENT

In general, graze or cut for hay when alfalfa is in early bloom. Graze or cut to about a 2-inch height. Successive cuttings for hay should occur at 1/4-inch bloom stage. Alfalfa can best withstand grazing if rotated frequently or grazed in small strips. The last cutting of alfalfa should be made 3 to 4 weeks before the first killing frost date. Alfalfa may cause livestock to bloat. Care should be used in managing such grazing to reduce the possibility of this hazard.

After several years of testing, Kitchen Seed Company is proud to offer these **PREMIUM** alfalfa varieties. We have carefully selected these genetics for their traits and yield potential in this area.

## FSG 438RR

The newest genetics in  
Roundup Ready® Alfalfa

## KSC EXTENDER IV

Economically priced

## FSG 421LH

The newest Leaf Hopper  
Resistant genetics available

NEW

## FSG 527 PREMIUM

Very winterhardy, our best yielder!

NEW

## FSG 450 ALFALFA

## ULTRA-CUT

Improved disease package - High-yielder

## FSG 476 HVXRR ALFALFA

Roundup Ready®, High-quality, Low-Lignin

## FSG 438RR ALFALFA

- Roundup Ready® Alfalfa
- High resistance to Aphanomyces Race 2
- Unsurpassed weed control
- Great forage yield potential
- Superior forage potential
- High multi-foliate leaf expression
- Excellent winterhardiness and persistence disease/insect/nematode ratings
- 4.0 fall dormancy
- 2.0 (Very Good) winter survival
- Very fast recovery after cutting



438RR alfalfa lets you produce cleaner, higher quality alfalfa for greater profit potential. The simplicity and improved crop safety of using one herbicide with the widest window of application available enables you to be in control instead of Mother Nature. 438RR alfalfa performs well over a wide range of environmental conditions and is adapted to all areas where 3, 4, and 5 fall dormancy varieties are planted. With high resistance to Aphanomyces Race 2, 438RR alfalfa features a Wisconsin disease index rating of 35/35 and is also resistant to stem nematodes. Whether it's for great forage yields, superior forage quality or very fast recovery after cutting, 438RR is the choice for commercial hay, beef, and dairy producers who want to take advantage of Roundup Ready® Alfalfa technology.

### DISEASE/INSECT/NEMATODE RATINGS

<b>Bacterial Wilt</b>	Highly Resistant (HR)	5
<b>Fusarium Wilt</b>	Highly Resistant (HR)	5
<b>Verticillium Wilt</b>	Highly Resistant (HR)	5
<b>Anthrachnose - Race 1</b>	Highly Resistant (HR)	5
<b>Phytophthora Root Rot</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Race 1</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Race 2</b>	Highly Resistant (HR)	5
<b>Wisconsin Disease Index</b>	35 out of 35	-
<b>Pea Aphid</b>	Highly Resistant (HR)	5
<b>Stem Nematode</b>	Moderately Resistant (MR)	-

Ratings based on the Wisconsin Disease Rating Index. 1-5, 5 = best

*Premium Alfalfa Varieties from KSC for those who plant the very best!*

## KSC EXTENDER IV ALFALFA

- Resistant to Sclerotinia crown and stem rot
- Perfect 30 out of 30 on the Wisconsin disease index
- Excellent hay yield and wide adaptability
- Newer genetics and higher yield potential than
- 4.0 fall dormancy
- 3.1 (Good) winter survival
- Very fast recovery after cutting

KSC EXTENDER IV is a new improved version of KSC extender III Alfalfa. This productive variety is highly resistant to all major disease pests and offers resistance to Sclerotinia crown and stem rot.

KSC EXTENDER IV also is resistant to Pea Aphid and Stem Nematode and displays excellent tolerance to Lepto Leaf Spot and Spring Black Stem. Adapted for hay, haylage, or grazing purposes, KSC EXTENDER IV delivers consistent performance under a wide range of climatic and soil conditions. Characteristics include superior establishment, excellent persistence, fast recovery after cutting, and exceptional winter hardiness.

### DISEASE/INSECT/NEMATODE RATINGS

<b>Bacterial Wilt</b>	Highly Resistant (HR)	5
<b>Fusarium Wilt</b>	Highly Resistant (HR)	5
<b>Verticillium Wilt</b>	Highly Resistant (HR)	5
<b>Anthrachnose - Race 1</b>	Highly Resistant (HR)	5
<b>Phytophthora Root Rot</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Race 1</b>	Highly Resistant (HR)	5
<b>Wisconsin Disease Index</b>	30 out of 30	-
<b>Pea Aphid</b>	Highly Resistant (HR)	5
<b>Sclerotinia Crown and Stem Rot</b>	Resistant (R)	-
<b>Stem Nematode</b>	Moderately Resistant (MR)	-

Ratings based on the Wisconsin Disease Rating Index. 1-5, 5 = best

## FSG 421LH ALFALFA

- Very high resistance to potato leafhoppers
- Superior yield potential
- Excellent forage with increased palatability
- High resistance to Aphanomyces Race 2
- A widely adapted glandular haired conventional alfalfa variety
- 4.0 fall dormancy
- 2.0 (Very Good) winter survival
- Tap root type
- Very fast recovery after cutting

FSG 421LH alfalfa is Farm Science Genetics latest conventional potato leafhopper resistant variety. With very high leafhopper resistance, a Wisconsin disease index rating of 35/35 and a fall dormancy of 4, FSG 421LH is at the top when it comes to performance, adaptability and pest resistance. FSG 421LH tolerates a wide range of environmental and soil conditions with characteristics such as high resistance to Aphanomyces Race 2, excellent persistence, fast recovery after cutting and high relative feed quality in sprayed or unsprayed conditions. FSG 421LH is the perfect choice for areas where potato leafhoppers cause economic damage year after year.

### DISEASE/INSECT/NEMATODE RATINGS

<b>Bacterial Wilt</b>	Highly Resistant (HR)	5
<b>Fusarium Wilt</b>	Highly Resistant (HR)	5
<b>Verticillium Wilt</b>	Highly Resistant (HR)	5
<b>Anthrachnose - Race 1</b>	Highly Resistant (HR)	5
<b>Phytophthora Root Rot</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Race 1</b>	Highly Resistant (HR)	5
<b>Wisconsin Disease Index</b>	35 out of 35	-
<b>Pea Aphid</b>	Highly Resistant (HR)	-
<b>Sclerotinia Crown and Stem Rot</b>	Resistant (R)	-
<b>Stem Nematode</b>	Moderately Resistant (MR)	-

Ratings based on the Wisconsin Disease Rating Index. 1-5, 5 = best



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## FSG 527 ALFALFA

- Great forage yield potential
- Superb forage quality
- High multi-foliate leaf expression
- Very fast recovery after cutting
- Excellent winterhardiness and persistence
- Perfect 30 out of 30 on the Wisconsin disease rating index
- 5.0 fall dormancy
- 1.0 (Superior) winter survival
- Very fast recovery after cutting

FSG527 alfalfa is at the top of its class with superior combination of winterhardiness, very fast recovery after cutting, high multi-foliate leaf expression for improved forage quality and great forage yield potential. FSG 527 alfalfa is ideal for the commercial hay grower or dairy producer using an intensive cutting management schedule or for those on a less intensive 3 cut management schedule.

### DISEASE/INSECT/NEMATODE RATINGS

<b>Bacterial Wilt</b>	Highly Resistant (HR)	5
<b>Fusarium Wilt</b>	Highly Resistant (HR)	5
<b>Verticillium Wilt</b>	Highly Resistant (HR)	5
<b>Anthrachnose - Race 1</b>	Highly Resistant (HR)	5
<b>Phytophthora Root Rot</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Race 1</b>	Highly Resistant (HR)	5
<b>Wisconsin Disease Index</b>	30 out of 30	-
<b>Pea Aphid</b>	Resistant (R)	-
<b>Stem Nematode</b>	Resistant (R)	-

Ratings based on the Wisconsin Disease Rating Index. 1-5, 5 = best



Due to the unique cropping practices do not plant Roundup Ready® Alfalfa in Imperial County, California, pending import approvals and until Forage Genetics International, LLC (FGI) grants express permission for such planting.

Forage Genetics International, LLC ("FGI") is a member of Excellence Through Stewardship® (ETS). FGI products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with FGI's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. Roundup Ready® Alfalfa has pending import approvals. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Growers should refer to <http://www.biotradestatus.com/> for any updated information on import country approvals. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® Technology contains genes that confer tolerance to glyphosate. Glyphosate will kill crops that are not tolerant to glyphosate. Roundup Ready® and Roundup® are registered trademarks of Bayer Group, used under license by Forage Genetics International, LLC.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Roundup Ready® is a registered trademark of Bayer Group, used under license by Forage Genetics International, LLC. HarvXtra® is a registered trademark of Forage Genetics International, LLC. HarvXtra® Alfalfa with Roundup Ready® Technology is enabled with Technology from The Samuel Roberts Noble Foundation, Inc.



Premium Alfalfa Varieties from KSC for those who plant the very best!

## NEW FSG 450 ALFALFA ULTRA-CUT

- High resistance to multiple races of Aphanomyces
- High resistance to multiple races of Anthracnose
- Exceptional forage yield potential
- Superior forage quality
- Unmatched winter hardiness and persistence
- High multifoliate leaf expression

FSG 450 alfalfa is the leader in alfalfa performance with an outstanding trait package that raises the agronomic achievement bar to the next level. FSG 450 performs well over a wide range of environmental conditions and is adapted to all areas where 3 and 4 fall dormancy varieties are planted. FSG 450 features the UltraCut™ alfalfa disease package which helps you grow a healthy alfalfa crop in field conditions susceptible to evolving Aphanomyces and Anthracnose disease strains. Its protection can help deliver an advantage through improved agronomic performance and yield potential. Whether it's for exceptional forage yields, superior forage quality or very fast recovery after cutting, FSG 450 is the first choice for commercial hay, beef and dairy producers.

### DISEASE/INSECT/NEMATODE RATINGS

<b>Bacterial Wilt</b>	Highly Resistant (HR)	5
<b>Fusarium Wilt</b>	Highly Resistant (HR)	5
<b>Verticillium Wilt</b>	Highly Resistant (HR)	5
<b>Anthracnose - Race 1</b>	Highly Resistant (HR)	5
<b>Anthracnose - Race 5</b>	Highly Resistant (HR)	5
<b>Phytophthora Root Rot</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Multi-Race</b>	Highly Resistant (HR)	10
<b>Wisconsin Disease Index</b>	40 out of 40	-
<b>Pea Aphid</b>	Resistant (R)	-
<b>Spotted Alfalfa Aphid</b>	Resistant (R)	-
<b>Stem Nematode</b>	Resistant (R)	-

Ratings based on the Wisconsin Disease Rating Index. 1-5, 5 = best

## NEW FSG 476 HVXRR ALFALFA

- HarvXtra® provides unprecedented flexibility by widening cutting windows, which:
- Averages 12-15% less lignin and 12-15% higher neutral detergent fiber digestibility (NDFD) and relative forage quality (RFQ) than conventional alfalfa harvested at the same stage of maturity
- Roundup Ready® Alfalfa technology provides unsurpassed weed control with excellent crop safety
- HarvXtra® is the first genetically enhanced alfalfa technology developed to maximize quality compared to conventional alfalfa at the same stage of maturity, by reducing the amount of lignin in the plant
- 4.0 fall dormancy
- 2.0 (Very Good) winter survival
- Very fast recovery after cutting

476HVXRR Alfalfa gives growers the ability to better manage the yield-versus-quality trade off. It offers more flexibility in a cutting schedule to achieve improved forage quality or greater yield potential, when compared to conventional alfalfa at the same stage of maturity. 476HVXRR alfalfa incorporates the UltraCut™ alfalfa disease package providing high resistance to multiple races of Aphanomyces and Anthracnose which leads to higher forage yields, better forage quality and longer stand persistence.

### DISEASE/INSECT/NEMATODE RATINGS

<b>Bacterial Wilt</b>	Highly Resistant (HR)	5
<b>Fusarium Wilt</b>	Highly Resistant (HR)	5
<b>Verticillium Wilt</b>	Highly Resistant (HR)	5
<b>Anthracnose - Race 1</b>	Highly Resistant (HR)	5
<b>Anthracnose - Race 5</b>	Highly Resistant (HR)	4
<b>Phytophthora Root Rot</b>	Highly Resistant (HR)	5
<b>Aphanomyces - Multi-Race</b>	Highly Resistant (HR)	5+5
<b>Wisconsin Disease Index</b>	39 out of 40	-
<b>Pea Aphid</b>	Resistant (R)	-
<b>Stem Nematode</b>	Resistant (R)	-

Ratings based on the Wisconsin Disease Rating Index. 1-5, 5 = best

## Red and White Clovers

## RED CLOVER

### ESTABLISHMENT

Red clover may be seeded in pure stands, but it is often mixed with grain or grass. Spring or late summer seedings are satisfactory. It may be over-seeded in the spring or fall. Red clover seed should be inoculated. Phosphorus and potash are the fertilizer elements needed most by red clover. Apply as recommended by soil tests. Seeding may be done with a drill or broadcaster. A firm, weed-free seedbed is essential. Plant seeds 1/4 to 1/2 inch deep. Seeding rates are 12 to 15 lbs/A broadcast and 6 to 8 lbs/A when drilled. For renovating pastures, the recommended seeding rate is 8 lbs/A.

### MANAGEMENT

Graze or cut for hay when the red clover is 1/4 to 1/2 bloom. A second cutting or successive grazing should occur when red clover is 1/4 in bloom. Leave at least 2 to 3 inches of growth after each harvest. Care should be taken to eliminate or appreciably reduce bloat of livestock when grazing. Keep lime and fertilizers (phosphorus and potash) at the proper level.

## WHITE CLOVER

### ESTABLISHMENT

The standard seeding rate is 2 to 4 pounds per acre, planted at a depth of 1/4 to 1/2 inch. For pasture establishment, seeds are drilled into a well-prepared seedbed that has been plowed, harrowed and compacted to produce a firm seedbed. The seeds are inoculated before seeding. For stabilization use, seeds are broadcast on roadside cuts and fills by cyclone seeders, hydro-seeders, or blower-type equipment. The proper time of seeding is determined by seasonal and moisture conditions. This may vary from April to May. Late summer and fall seedings should be conducted while adequate moisture is still in the soil to assure establishment before freezing.

### MANAGEMENT

Management for forage is aimed at maintaining 40% to 50% clover. Close grazing (2-inch stubble height) favors clover, whereas light grazing favors grass. Well-fertilized grass will outgrow clover in fall and winter and could smother the clover. Spring applications of nitrogen will stimulate grass and provide early feed, but excessive rates are detrimental to the clover stand. Phosphate applications are broadcast in fall or spring according to soil tests. Sulfur, boron, or magnesium may be needed for maximum production on some soils in the western part of white clover's range.

## FSG 402 RED CLOVER

- High yield potential
- Excellent forage quality
- Longer stand persistence
- Superior disease resistance

FSG 402 is an elite new-generation diploid medium red clover developed for higher yields and longer stand persistence; three or more years under good management. FSG 402 is at 50% bloom at approximately the same time as Arlington in the spring and performs extremely well over a wide geographic area and under variable growing conditions.

***Whether it's for hay, pasture, or silage, FSG 402 is hard to beat when it comes to yield, persistence, and disease resistance.***

## WILL LADINO WHITE CLOVER

- Increased forage quality
- Fixation of atmospheric nitrogen by Rhizobium bacteria in root nodules results in reduction of up to 70% of fertilizer cost
- Excellent regrowth following grazing
- Superior winterhardiness

Will Ladino White Clover is persistent in hot climates, has superior winterhardiness, and offers high yield potential. Developed jointly by the USDA and North Carolina State University, Will Ladino White Clover is excellent for pastures and hay, and is widely adapted to different climates. This variety is known for excellent stolon development and establishment and competes well against weeds. Will Ladino White Clover's large leaves are highly nutritious.



*Timothy Grass and Tall Fescue***CONQUEST TIMOTHY**

- Superior for hay or grazing
- Early maturity
- Great palatability
- Perfect for pure stands or with legumes and
- Other grasses
- Improved summer regrowth
- Excellent spring vigor
- Superior leafiness
- Very winterhardy

Summit II is a new early-type timothy with maturity similar to Clair and 10 days earlier than Climax. Summit II was bred for higher yields, faster spring green up and better summer regrowth. Summit II is ideally suited for pasture mixes, especially when used with alfalfa. Summit II can tolerate moderate continuous grazing, but does best under rotational grazing. Summit II is the hay and pasture grass of choice for horse owners and others who demand high quality forage.

**SUMMIT II TIMOTHY DRY MATTER YIELDS**

Variety	Total % Yield*	Loc./Yrs.
Summit	105.1	27
Clair	102.8	29
Climax	91.8	29

\*All test locations

**FSG 402TF TALL FESCUE**

- High yielding
- Superior summer regrowth
- Excellent disease resistance
- Great for winter stockpiling
- Excellent persistence and drought tolerance
- Wide area of adaptation

FSG 402TF is an endophyte free, medium maturing tall fescue variety which eliminates concerns about fescue foot, bovine fat necrosis or fescue toxicosis in cattle. With excellent summer regrowth, superior disease resistance, high forage yield potential and a wide area of adaptation, FSG 402TF will easily outperform other currently available tall fescue varieties.

**TIMOTHY****ESTABLISHMENT**

Timothy is usually seeded in mixtures with legumes. This mixture may be drilled with a small grain drill. If planted with a winter grain, the Timothy is seeded with it, and the legume is planted early the following spring. Seeding depth of timothy should be 1/2 inch. A firm, weed-free seedbed is a key to a successful planting. Common seeding rates are 6 to 12 pounds per acre when seeded alone and 2 to 6 pounds per acre when seeded in mixtures.

**MANAGEMENT**

Timothy is highly responsive to fertilizers, which should be applied frequently in ample quantities. Fertilizer, especially nitrogen, is important when legumes have almost disappeared from the hay or pasture mixture. Timothy stands become weak under close and continuous grazing. A fundamental reason for the decline of timothy under poor grazing practices is injury to the culms. These culms form in the spring at the same time the stem elongates. Food materials are stored in them, and they may be destroyed by trampling of grazing animals. Timothy can be initially grazed before jointing and again between early head to full head. Second and successive grazing should also occur before jointing and when basal sprouts appear at the soil surface. After the second grazing, plants usually do not joint. Timothy should be cut for hay or silage from early to full head. Make successive harvests for hay and silage when basal sprouts appear at the soil surface. Sterile seed-heads may be 15 to 20 inches up the stems when sprouts appear at the time of second cutting. Growing points stay below ground after a second cutting. Graze or cut to a minimum height of 3 inches or more.

**TALL FESCUE****ESTABLISHMENT**

Tall fescue is easy to establish due to its rapid germination and good seedling vigor. It may be planted by any common method such as grass seeders, hydro-seeding and broadcasting. Seeding rates are 15 to 20 pounds per acre if drilled and 20 to 25 pounds per acre if broadcast. The seeding depth is 1/2 inch.

**MANAGEMENT**

While tall fescue is tolerant of abuse and low fertility, it does respond to fertilizer inputs. Follow the soil test recommendations. Endophyte-infected tall fescue will tolerate grazing abuse better than most cool season grasses. If the tall fescue is an endophyte-free variety, it should not be grazed closer than 3 inches, and will not tolerate overgrazing. Tall fescue can be grown with white clover, red clover and alfalfa. First cutting for hay should be at the late boot stage with further cuttings as regrowth allows. Tall fescue is one of the best grasses for stockpiling in the fall.



## Orchardgrasses

**ORCHARDGRASS****ESTABLISHMENT**

A clean, firm, weed-free seedbed is recommended. Range and erosion control seedings should be made in the late fall or very early spring. Do not seed after the spring moisture period is well advanced or a failure may occur because of drought and hot summer conditions before the grass is well established. A deep furrow or range drill with press wheels may be used. Orchardgrass is easily established with grain drills or by broadcast seeding. The seeding rate is 8 to 12 pounds per acre. For range and critical area treatment, a seeding rate of 3 to 4 pounds per acre is recommended. If broadcast, double the seeding rate. Adjustments in seeding rate should be made when seeding in mixtures. Seeding depth should not be more than ½ inch.

**MANAGEMENT**

Under irrigation and higher rainfall areas, orchardgrass should be cut at boot stage for the first cutting and then at 4 to 6-week intervals depending on regrowth. Rotational grazing is best for production, persistence and quality. Fields should be grazed heavily and frequently during the spring, but do not overgraze. Leave a 3 to 4-inch stubble so plants can recover quickly. Heavy grazing during the late fall should be avoided to prevent depletion of root reserves. Under dry land conditions, orchardgrass should not be grazed until late summer or fall of the second growing season. The plants may be severely damaged by overgrazing especially in the seedling year. Use no more than 60% of the annual growth during the winter season or 50% during the growing season. This plant responds well to rotational grazing systems and good fertility management. One strategy, to even out the forage production, is to fertilize the stand after the first and second cutting or grazing to boost late spring and summer production. Apply fertilizer based upon soil tests.

**PLANTING SUGGESTIONS**

Seeding (Spring)..... March 1st to May 15th  
 Seeding (Summer) ..... August 1st to September 15th  
 Soil Type..... Moderate to well-drained  
 Minimum Soil pH..... 5.5

**NEBRASKA**

North Platte, West Central Research and Extension Center  
 Irrigated-2002 Seeding 2 Year Total Production.

ENTRY	DRY MATTER TONS/ACRE
Extend Orchardgrass	16.60
Pizza Orchardgrass	15.67
Latar Orchardgrass	15.65
Paiute Orchardgrass	15.30
Persist Orchardgrass	14.98
Potomac Orchardgrass	14.78
Baridana Orchardgrass	14.67
Experiment Mean	14.91
CV(%)	7.0
LSD (0.05)	1.49

**FSG BOUNTY II ORCHARDGRASS**

- Early – medium maturing
- Excellent foliar disease resistance
- Great forage yield potential
- Improved stand persistence
- Selected for seedling vigor
- Quick recovery
- Excellent color

**FFR PERFORMANCE DATA**

Entry	% Mean	Foliar Disease*
Bounty II	105	3.6
Vs. Persist	101	4.8
Bounty II	103	3.4 (2)
Vs. Prairie	101	5.3 (2)

\*Rating: 1 = little or no disease, 9 = 90%+ infection; mean of 4 field ratings

**EXTEND ORCHARDGRASS**

- Superior yield
- Late maturity
- Stem Rust resistance
- Great palatability
- Perfect for alfalfa or clover mixes
- Increased stand persistence
- Excellent plant vigor
- Responds to irrigation

**PLANTING SUGGESTIONS**

Planting Rate (pure stand)	10-20 lbs/A
Planting Rate (alfalfa mix)	3-6 lbs/A
Planting Rate (clover mix)	10 lbs/A
Planting Depth	1/4 to 1/2 inch deep
Seeding (Spring)	March 1 to May 15
Seeding (Summer)	August 1 to September 15
Soil Type	Moderate to well-drained
Minimum Soil pH	5.5

**ORCHARDGRASS YIELDS**

Summarized over years and 15 locations throughout: IL, KY, MI, OH, PA, TN, VA and WI.

ENTRY	% MEAN	ENTRY	% MEAN
Extend	104.6	Hayday	95.5
Haymate	104.2	Profile	95.2
Warrior	101.3	Duke	94.6
Benchmark	100.6	Pennlate	92.9
Progress	99.2	Kay	92.5
Potomac	96.4	Test Mean	100.0

(Total Tons Dry Matter/Acre)



## MARATHON REED CANARYGRASS

- Leafy, high-yielding, perennial forage grass
- Widely adapted
- Performs well on wet, poorly-drained soils and soils with a pH below 6.0
- Very drought tolerant variety that can be used for hay, silage, or pasture
- Low alkaloid

Marathon has short rhizomes that spread, creating a dense sod. It has greater winterhardiness and is more resistant to foliar disease than other cool-season grasses. Use Marathon for hay, silage or pasture. When cut for hay or silage, quality is optimal before seed heads appear, and then rapidly declines. Forage yields are excellent in the spring and early summer and are fair to good in late summer and early fall. When used as pasture, grazing Marathon down to 3 to 4 inches above the ground will make the best utilization of the forage. Allow the grass to recover before re-grazing, always keeping the grass below 12 inches tall during rapid spring growth.

### SEEDING RATE

8 to 10 lbs per acre when seeded alone. When seeding Marathon reed canarygrass in a mixture with legumes, decrease the seeding rate to 4 to 8 lbs per acre. Sow no deeper than 1/2 inch in a well-prepared, firm seedbed in the spring or late summer.

## ELENA FORAGE PERENNIAL RYEGRASS

- Superior yields of high-quality forage
- Forage is highly palatable, digestible, and nutritious for all livestock
- Extremely high animal performance from pasture or silage
- Vigorous, dark green plants with high disease resistance
- Excellent seedling vigor for fast establishment of dense stands
- Endophyte free
- Winterhardy and persistent

Elena tetraploid perennial ryegrass is a medium maturing variety which has shown superior forage yield potential, excellent forage quality, and longer persistence in state trials throughout the United States.

With strong spring and fall forage production plus fast recovery after cutting or grazing, Elena is the ideal component for horse, dairy, or beef pasture mixes. Rapid germination and excellent seedling vigor makes this variety perfect for pasture renovation as well. Elena also has great rust and leaf disease resistance which helps maintain palatability and digestibility for improved animal performance.

When all of these varietal characteristics are added up, Elena is without a doubt the best choice for livestock and dairy producers looking for increased weight gains and milk production.

## REED CANARYGRASS

### ESTABLISHMENT

A firm, moist, clean seedbed is needed for good emergence. The seed germinates readily but is somewhat slow to establish. Seed pure stands at a rate of 8 to 10 pounds/A and 4 to 8 pounds/A for mixtures. Seeding should be done in late fall or early spring. Plant shallow, no deeper than 1/2 inch. If necessary, irrigate to maintain surface moisture until plants are well established.

### MANAGEMENT

New seedings should not be grazed until fully established. It is best to harvest for hay 1 to 2 times before grazing. To maintain plant vigor and promote rapid regrowth, leave a stubble of 3 to 4 inches after mowing or grazing. Start spring grazing after plants reach a height of 10 to 12 inches. Maintain grass height below 12 inches during rapid spring growth. Harvest hay when the first seed-heads appear. Reed canarygrass will persist under close, frequent use, but yield will be greatly reduced. Its persistence under heavy use makes it well suited for calving, lambing, holding areas or special-use pastures. To maintain good yields, an annual application of fertilizer will be required on most fields depending on soil test results.

## PERENNIAL RYEGRASS

### ESTABLISHMENT

Seed should be planted 1/4 to 1/2-inch-deep in a well-prepared seedbed. Spring seedings of ryegrass may occur in March, April, or May. Perennial ryegrass may also be seeded mid-August to early September.

Generally, a rate of 30 to 40 pounds per acre is used if ryegrass is seeded alone. In mixtures, 6 to 10 pounds per acre is recommended, depending upon uses and companion species. In general, the perennial ryegrass component of a mix should be 20% or less since it is very competitive, due to rapid germination and good seedling vigor.

### MANAGEMENT

Ryegrass is generally cut for hay when seed heads start to emerge. Established perennial rye grass-clover pastures should be rotationally grazed when spring growth is 3 to 6 inches high. Allowing 7 to 10 inches of regrowth between grazing will benefit yield and persistence. On new seedings, harvest or grazing should be delayed until plants are 10 to 12 inches tall. Ryegrass responds well to good management, such as intensive rotational grazing and fertilizer applications.



*Teff Grass***DESSIE  
TEFF GRASS****PLANTING**

- Plant after all risk of frost has passed. Typically late May through late July. Teff does not germinate well in cool soils.
- Seeding rate 8 to 12 lbs/acre for coated seed
- Broadcast or drill
- Firm seedbed
- Seeding depth 1/8 to 1/4 inch
- Emergence in 3 to 6 days under optimum conditions

**FERTILIZER**

- Teff needs adequate phosphorous, potassium, and sulfur – SOIL TEST
- 50 pounds nitrogen per acre at planting. Small amounts of N may be needed after each cutting, however too much N causes severe lodging

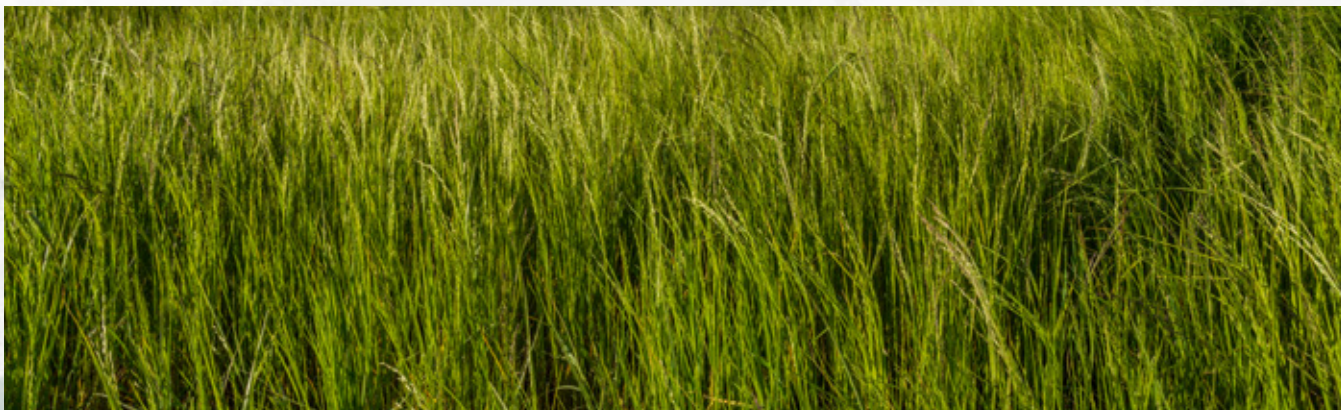
**HARVEST**

- For optimum quality, harvest in pre-boot to early boot stage, approximately 45 to 50 days after planting
- Harvest regrowth in 40 to 45 days depending on location and environmental conditions
- Cutting height 3 to 4 inches

**DESSIE TEFF GRASS**

- New high yielding warm season annual forage grass variety
- Excellent palatability and forage quality
- Ideal for horses and other livestock
- Great for use as an emergency forage crop and for double cropping
- Good for inter-seeding thin alfalfa stands in final year of production
- Excellent rotational crop when replacing alfalfa or perennial grass stands
- Can be used as a green manure crop and for erosion control

Dessie Teff is a new warm season annual grass variety developed for high forage production and forage quality without the problems of other summer annual grasses such as prussic acid or nitrate buildup. Dessie makes the ideal hay for horses with great palatability, digestibility, a mineral content high in calcium and iron and an attractive green color which is important for the premium horse hay market. Dessie is widely adapted throughout the United States and will tolerate drought conditions as well as wet soils. Dessie is a low input crop that has very few disease or pest problems and does not require high amounts of fertilizer for optimum production. Remember, for profitable summer forage production, Dessie is the answer.

**Notes**



## GREENGRAZER V SORGHUM-SUDANGRASS

(SORGHUM BICOLOR X SORGHUM BICOLOR)

- Small seeded and thin stemmed type
- Dark green color with green top trait
- Anthracnose and downy mildew resistant

Greengrazer V is a small seeded three way cross with thin stems that are highly palatable. Regrowth after cutting is very fast. Greengrazer V is a dark green color and also possesses the Green Top trait, which allows for further extension of the plant. Planting Greengrazer V at higher populations will result in a finer stemmed forage. Finer stems will allow the forage to dry faster for higher quality hay than is possible with thick stemmed types.

### SEEDING

- Soil temperature should be at least 60° F
- Greengrazer V is usually planted between June 10 through July 10 in the North
- Can be no tilled into the stubble of winter and spring crops
- Planting depth should be 1 inch
- Do not plant in soils with pH greater than 7.5 to 8.0. Chlorosis will be a severe problem

### HARVEST

- Greengrazer V is usually harvested 63-65 days after seeding
- Protein will decline as harvest is delayed, but energy will increase upon heading due to continued sugar formation in the sorghum stalks and leaves, and carbohydrate deposition in the developing grains

### STRENGTHS

- High yield potential
- Thin stemmed plant type
- Small seeded type
- Dark green plant color
- Green top trait (further extension)
- Good overall disease resistance package
- Resistant to Anthracnose and Downy Mildew
- Sweet juicy midrib

### WEAKNESSES

- Moderate drought tolerance
- Poor storage - juicy midrib favors bacteria

### AVOIDING NITRATE & PRUSSIC ACID POISONING FROM SORGHUM

- Avoid large nitrogen applications prior to expected drought periods
- 2,4-D can increase Prussic Acid concentration for several weeks after application
- Do not harvest drought-damaged plants within 4 days following a good rain. Do not green chop within 7 days of a killing frost
- Cut at a higher stubble height, nitrates tend to accumulate in the lower stalk. Wait 1 month before feeding silage to give Prussic Acid enough time to escape

## SORGHUM-SUDANGRASS

### ESTABLISHMENT

Planting rates vary from 20 to 40 pounds per acre depending on whether the seed is broadcast or planted in rows. Planting dates are usually from May to July but can be earlier in the deep South. Soil temperature needs to be a minimum of 60 degrees Fahrenheit for germination. Seeding depth should be 1 inch.

### MANAGEMENT

For optimum forage production, moderate fertility is suggested although sorghum-sudangrass will grow on lower fertility soils with better results than corn. Fertilize using soil test recommendations. If a soil test is not available, fertilize at similar rates to other annual grass crops. Grazing sorghum-sudangrass should begin when the plants are between 18 to 30 inches tall and grazed down to 8 inches within 10 days. After grazing, the residue needs to be clipped to a minimum uniform height of 8 inches to ensure high quality forage production for the next grazing period in 3 to 4 weeks. Do not graze after a killing frost until the plants turn completely brown (7 days). If the plants are frost damaged, wait until the regrowth is at least 18 inches high before grazing again. Green chop harvesting should begin when the sorghum-sudangrass is 18 inches tall and should be completed before the plants head out. Silage should be harvested when the plants are 36 to 48 inches tall or in the boot to early head stage. At this stage, moisture is usually too high, and the plants should be allowed to partially dry in the field before ensiling. Harvesting for hay is recommended before head emergence or when the plants reach 48 inches in height. Rapid, uniform drying is critical for sorghum-sudangrass hay to prevent spoilage. Avoid possible nitrate and prussic acid poisoning by avoiding large applications of nitrogen prior to expected drought periods; do not harvest drought damaged plants within 4 days following a good rain; do not cut or graze within 7 days of a killing frost; cut at a higher stubble height if under stress since nitrates accumulate in the lower stalk, and delay feeding silage 6 to 8 weeks after ensiling to allow prussic acid to dissipate. Never feed sorghum-sudangrass to horses.





*Sorghum Sudangrass and RyzUp SmartGrass® Plant Growth Regulator***PLANT GROWTH STIMULATOR FOR FORAGE CROPS AND PASTURES**

Ryzup Smartgrass® PGR is a naturally occurring plant growth regulator that promotes growth, maintains quality and improves forage yields when cool temperatures limit natural plant growth. Ryzup Smartgrass® is ideal for use on cool season perennial grasses and winter annual forage crops grown in conventional or organic operations.

- **Spring:** promotes growth for earlier grazing and hay cutting
- **Fall:** extends the grazing season and boosts fall stockpiling
- **Winter:** faster establishment and shorter rotational periods for winter annuals
- Use on forage crops grown for pasture, hay and silage production
- Approved for conventional or organic dairy, beef, equine, sheep and goat operations

**OTHER IMPORTANT INFORMATION**

- For best results, moisture levels and fertility must be adequate for pasture growth
- Treatment response will diminish when:
  - » Average daily temperatures favor natural pasture growth e.g., > 65°F
  - » Maximum physiological growth/biomass has already occurred
  - » Grass is subjected to drought stress conditions
- Foliage may appear lighter green in color due to accelerated growth rates following application. This does not affect grass nutritional quality or mineral content

**HOW TO USE RYZUP SMARTGRASS®**

<b>RATE TIMING</b>	0.3 – 1.0 oz per acre. Use higher rates when temperatures are < 45°F. Apply in late winter/early spring and mid fall when grass growth is limited by cool temperatures. Growth of cool season grasses slows down when average daily temperatures are between 40 – 65°F.  <b>Spring:</b> Apply at "green up" once grass breaks dormancy and new shoot growth starts to emerge, typically from late February to late March in the Southern US.  <b>Fall:</b> Apply to forages following grazing or cutting when grass regrowth is limited due to cool weather conditions, typically from early October to early November in the Southern US.
<b>METHOD</b>	<b>Foliar spray:</b> use flat fan or hollow cone nozzles
<b>SPRAY VOLUME</b>	10 to 20 gallons/acre
<b>APPLICATION TIPS</b>	Grass should be short (< 6") at the time of application. Grass must not be dormant and should have sufficient green foliage for uptake to occur.
<b>ADJUVANT</b>	Non-ionic surfactant; for tall fescue pastures a crop oil is suggested.

**DISEASE/INSECT/NEMATODE RATINGS**

Anthracnose	R
Downy Mildew	R

**AGRONOMIC TRAITS**

Early Seedling Vigor	Excellent
Growth Habit	Upright
Recovery After Cutting	Excellent
Maturity	63 Days to Boot
Uniformity	Excellent
Plant Color	Purple
Midrib Type	Juicy

**ADAPTATION RATINGS**

Photosynthetic Type	C4 - Warm Season
Soil Temperature	Warm (60° F)
Water Requirement	Very Low

**CROP USE INFORMATION**

Life Cycle	Annual
Ease of Establishment	Good
Shade Tolerance	Poor - Fair
Drought Stress	Excellent
Wet Soil	Fair
Low pH Tolerance	Moderate
Minimum pH	6.0
Saline Soils (White Alkali)	Fair
Saline – Sodic Soils (Black Alkali)	Poor - Fair
Hay	Excellent
Silage	Excellent
Continuous Grazing	Do Not
Rotational Grazing	Excellent
Palatability	Excellent
Anti-Quality	Prussic Acid and Nitrates

**PLANTING RATES**

Bushel Weight	56 lbs	-
Seeds/Pound	21,000	-
Rate (lbs)	Dryland	Irrigated
Pounds/Acre	10 – 30	35 – 100
Seeds/Sq. Ft.	5 – 14	17 – 48



*Horse-Mate Professional and Professional Beef*

# PROFESSIONAL BEEF PASTURE MIXTURE

Professional Beef Pasture Mixture was created to meet the needs of producers who want to optimize animal performance and maximize per acre return. It's also a good choice for hay producers who want a high quality, balanced hay.

To meet these needs, we start with only the highest quality ingredients. These species are carefully chosen for their regional adaptability and combined in the proper ratios to assure maximum pasture production.

This premium mixture, along with good management practices, will provide you with the best opportunity to optimize the return on your management investment.

- Components are present in the proper ratios to provide optimum pasture
- Premium quality components elected for regional adaptation and performance
- Maximum production per acre
- Produces high-quality, balanced hay
- Good general pasture mixture

## INGREDIENTS

- 35% FSG Bounty II Orchardgrass
- 35% FSG 402 Red Clover
- 10% Intermediate Ryegrass
- 10% Elena Perennial Ryegrass
- 5% Conquest Timothy
- 5% Pinnacle Ladino Clover

## PLANTING SPECIFICATIONS

Seeding Rates	20-25 pounds per acre – new seedings
	15 pounds per acre – overseeding
Seeding Dates	Fall or early spring

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# KSC HORSE PASTURE MIXTURE

High-quality pastures can provide much of the feed needed by horses, while providing the most natural and healthy environment for exercise and rest. Establish this type of productive environment – a health, safe, and attractive pasture – for your horses by using the quality components in KSC Horse Pasture Mixture.

KSC Horse Pasture Mixture is a forage blend specially formulated to meet the nutritional needs of horses, while withstanding their intense grazing pressure.

## INGREDIENTS

- 40% Bounty II Orchardgrass
- 15% Conquest/Derby Timothy
- 10% Intermediate Ryegrass
- 25% Forage Kentucky Bluegrass
- 10% Elena Perennial Ryegrass

## PLANTING SPECIFICATIONS

Seeding Rates	20-25 pounds per acre – new seedings
	15 pounds per acre – overseeding
Seeding Dates	March 15 to May 15
	September 1 to October 15





## KSC LAWN MIXES

At Kitchen Seed, we carry only the premium varieties of Bluegrass, Ryegrass, and Fescue. Our turf seed products produce dense, dark green, wear tolerant lawns with excellent disease tolerance. We offer the following mixes of cool season turf grasses best suited for our area.

### KSC LAWN MIX

- 65% Premium Kentucky Bluegrass
- 35% Premium Turf Perennial Ryegrass

An excellent choice for new lawns or for reseeding existing lawns.

### SHADED GREEN LAWN MIX

- 45% Premium Kentucky Bluegrass
- 25% Creeping Red Fescue
- 20% Premium Turf Perennial Ryegrass
- 10% Turf Type Fescue

A superior mix for moderate to heavily shaded lawns or lawns with poor soil quality.

### GREENPATHWAY LAWN MIX

- 50% Premium Kentucky Bluegrass
- 25% Turf Type Fescue
- 15% Premium Turf Perennial Ryegrass
- 10% Creeping Red Fescue

For a durable lawn with heavy traffic. Good choice for schools, parks, or any area that gets a lot of wear.

### KSC 5-WAY TURF FESCUE BLEND

For a hardy lawn with lush green color all season long. Rust resistant and drought tolerant. Excellent for parks and athletic fields.

### GROW-ALL LAWN MIX

- 25% Premium Kentucky Bluegrass
- 25% Creeping Red Fescue
- 50% Premium Turf Perennial Ryegrass

An excellent lawn mix that grows well in all soil types and conditions. This is a favorite among landscapers.

## Notes





## Notes

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## TURF-TYPE TALL FESCUE

Here at KSC we are proud to offer multiple varieties of turf-type tall fescues with excellent turf quality and disease packages. These varieties can be planted alone as single variety seedings or in blends with grasses that thrive in our area. Here is some specific information on the main varieties we carry:

### AST 5112 TURF-TYPE TALL FESCUE: *THICKER BLADE*

AST5112 is a new, elite tall fescue variety in the AST lineup. Advancements in color, density, disease resistance and drought tolerance combine to make AST5112 an outstanding variety. An aggressive tillering growth habit enables AST5112 to repair itself from damage, fill in bare spots and speed recovery time. It boasts a dark green genetic color, which is evaluated without the use of fertilizers. AST5112 is a medium-fine textured, dense tall fescue with superior turf quality that can be planted as a single stand, in blends with other tall fescue varieties or in mixes with other turfgrass species.

### AST 9003 TURF-TYPE TALL FESCUE: *SHADE TOLERANT*

AST9003 is a new, elite turf-type tall fescue variety developed to stand up to the environmental stresses that plague tall fescue varieties while providing the ultimate in turf quality. AST9003 demonstrates superior drought tolerance and has a very aggressive tillering growth habit which allows the plant to recover quickly from damage. AST9003 has the ability to grow and persist under low light conditions which allows it to be grown in denser shade than other tall fescue varieties. AST9003 is a medium-fine textured, dense tall fescue with an outstanding dark green color.

### AST 5120 TURF-TYPE TALL FESCUE: *THIN BLADE*

AST5120 is an elite tall fescue variety that is a true game changer when it comes to leaf texture and density of a tall fescue variety. Selections made during the breeding process produced a tall fescue variety with leaf texture and density comparable to elite Kentucky bluegrasses on the market today. Additional advancements were made in heat and drought tolerance along with improved resistance to brown patch and pythium diseases. Other characteristics include a dark green genetic color, improved mowing quality and excellent uniformity. AST5120 is a dark green, fine textured, dense tall fescue variety that can be planted alone, in blends with other tall fescue varieties and makes an excellent companion in mixes with Kentucky bluegrass and perennial ryegrasses.





## 3 STEP FERTILIZER PROGRAM FOR NEW GRASS SEEDING

Using the right fertilizers when establishing seed can determine the health and longevity of your investment!



### EARLY SPRING

**MID-APRIL TO EARLY MAY WHEN SOIL TEMPERATURE REACHES 55°**

– both options are applied directly over newly seeded areas

- **Option 1:** Lebanon Proscap 16-25-12 Starter Fertilizer
  - » (no herbicide included)

**OR**

- **Option 2:** Lebanon Proscap 21-22-4 Starter Fertilizer with Mesotrione
  - » Pre-emergent crabgrass & broadleaf weed control plus iron, safe for seed



### EARLY SUMMER

**JUNE**

- **Option 1:** Lebanon Proscap 19-0-6 with Dimension/Confront
  - » To control and prevent weeds for 4-6 weeks

**OR**

- **Option 2:** Lebanon 25-0-8 with Trimec
  - » Broad leaf weed herbicide, no residual-must have moisture when applied

**OPTIONAL: JUNE 1-JULY 15**

- **15-0-5 With Merit or Merit .5G Insecticide**
  - » provides protection from lawn damaging insects for up to 3 months
  - » will control lawn grubs, army worms, fleas, ticks (will not hurt birds/worms)

***\*Don't Forget to water at least weekly to protect new lawn from heat\****



### EARLY FALL

**SEPTEMBER THROUGH OCTOBER**

(MOST IMPORTANT/BENEFICIAL APPLICATION)

- **Option 1:** Lebanon Proscap 16-25-12 Starter Fertilizer
  - » To be used to address thin areas with new seeding
- **Option 2:** Lebanon Proscap 25-0-5 with 1% Fe
  - » If no seeding is required
  - » Will improve lawns sensitivity to frost, diseases, and stress throughout winter





## 4 STEP FERTILIZER PROGRAM

Dollar for dollar fertilization does more to improve poor quality turf or to maintain healthy turf than any other management practice



Lebanonturf.com

# 1

### EARLY SPRING

#### LATE MARCH TO MID APRIL

– Should ideally be applied at least 7-10 days before soil temps reach 55°

- **Lebanon Proscap 16-0-8 with Barricade (.43%)**
  - » Crabgrass and broadleaf weed preventer with highest A.I. pre emergent

# 2

### SPRING

#### EARLY MAY THROUGH EARLY JUNE

– Or around 4 to 6 weeks after first application

- **Lebanon Proscap 19-0-6 Dimension/Confront 3**
  - » Pre and Post Emergent herbicide for crabgrass and broadleaf weeds

#### OPTIONAL: JUNE 5-JULY 15

- **15-0-5 With Merit or Merit .5G Insecticide**
  - » This will prevent grubs and provide protection from army worms and other lawn damaging insects for up to 3 months

# 3

### SUMMER

#### LATE AUGUST THROUGH SEPTEMBER

- **Lebanon Proscap 8-4-24**
  - » Humic acid plus potash to improve stressed soils

OR

- **Lebanon 25-0-8 with Trimec**
  - » Contact killer if broadleaf weeds are present, no residual, must have moisture when applied

# 4

### FALL

#### OCTOBER THROUGH NOVEMBER

- **Lebanon Proscap 25-0-5, 51% Mesa+ 1% Fe**
  - » Will improve lawns sensitivity to frost, disease, and other stresses throughout winter



*Real World Wildlife Seed*

**REAL WORLD WILDLIFE SEED** is a joint venture between Kitchen Seed Co. and Real World Whitetails, Inc. Our seed blends are the best money can buy. They were developed and tested on our own hunting properties under real world conditions. We do not use any cheap filler seed to keep down our costs but instead strive to have the very best seed blends possible and sell them at a fair price. We challenge you to plant our blends side by side with any other brand and feel confident that our blends will blow away the competition, either in attractiveness to wildlife, price, or more likely BOTH!

**WWW.REALWORLDWILDLIFEPRODUCTS.COM**

*Quality food-plot blends developed and tested under real world conditions.*

**CLOVER/CHICORY BLEND**

**5 lb bag - Plants ½ acre**

**10 lb bag - Plants 1 acre**

30%	Real World Ladino Clover
30%	Will Ladino Clover
20%	FSG 402 3 Yr. Red Clover
17%	Real World White Clover
3%	Real World Chicory

**WHITETAIL SOYBEANS**

(Glyphosate Tolerant Soybeans)

**50 lb bag of 4 varieties - Plants 1 acre**

50%	KSC 4017CRR
30%	KSC 4317CRR
10%	KSC 4817CRR
10%	KSC 5417CRR

**NORTHERN BLEND****WHITETAIL SOYBEANS**

(Glyphosate Tolerant Soybeans)

**50 lb bag of 4 varieties - Plants 1 acre**

20%	KSC 0918CRR
20%	KSC 1518CRR
40%	KSC 2318CRR
20%	KSC 3018CRR

**UPLAND GAME BLEND**

**25 lb bag - Plants 1 acre**

55%	Real World Soybeans
20%	Real World Peredovik Sunflowers
20%	Real World Grain Sorghum
5%	Real World Japanese Millet

**WHITETAIL HARVEST SALAD**

**25 lb bag - Plants ½ acre**

30%	Real World Winter Wheat
25%	Real World Austrian Winter Peas
25%	Real World Winter Oats
20%	Real World Winter Barley

**WHITETAIL FORAGE OAT BLEND**

**50 lb bag - Plants 1 acre**

Winter oat varieties that have quick establishment and great palatability to deer. Stays green long into the winter.

**NUTRI-CRAVE SEED CORN**

**1 acre bags**

**3 acre bags**

**FALL PLOT TOPPER**

**3 lb bag - Plants 1/2 acre**

12.5%	Eco-Till Radish
12.5%	Real World Crimson Clover
12.5%	Real World Purple Head Turnips
12.5%	Rape Plus
12.5%	Sugar Beets
12.5%	Real World Oil Seed Radish
12.5%	Real World Forage Collards
12.5%	Impact Forage Collards

**BEDDING IN A BAG**

**7 lb (pure live seed) bag - Plants 1 acre**

2.5 lbs	Real World Big Bluestem
2.5 lbs	Real World Indian Grass
2.5 lbs	Real World Switchgrass

**SWITCHGRASS**

**50 lb (pure live seed) bag - Plants 10-15 acres**

**10 lb (pure live seed) bag - Plants 2-3 acres**

Formulations may meet CRP requirements.  
Contact your local NRCS office for details.

**DEADLY DOZEN**

**12.5 lb bag - Plants 1/4 acre**

0.5%	Eco-Til Radish
0.5%	RW Crimson Clover
0.5%	RW Purple Head Turnips
0.5%	RW Rape Plus
28.8%	RW Winter Wheat
24.0%	RW Forage Oats
0.5%	RW Sugar Beets
0.5%	RW Oil Seed Radish
0.5%	RW Forage Collards
0.5%	Impact Forage Collards
24.0%	RW Winter Peas
19.2%	RW Winter Barley

**SOIL CHARGE MIX**

**40 lb bag - Plants 1/2 acre**

59.75%	Calypso Winter Barley
28.75%	RW Austrian Winter Peas
9.75%	RW Medium Red Clover
1.0%	Trophy Rape Seed
0.0%	Other Crop
0.0%	Weed Seeds
0.75%	Inert Matter



## PURPLE TOP TURNIPS

Produces a 4 to 6-inch globe turnip with a bright purple crown and white base. Turnip has a sweet flavor. Semi-erect prolific greens provide good forage. 50-day maturity. Sow 3 lbs per acre, April – October.

## ECO-TILL RADISH

- Superior, deep penetrating taproot
- Reduces soil compaction
- Builds organic matter
- Improves nutrient recycling
- Excellent weed suppression
- Enhances soil tilth

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

A superior, deep penetrating taproot is one characteristic that separates Eco-Till™ radishes from the competition. The thin, lower portion of the taproot can grow to a depth of six feet or more while the thick upper portion of the taproot can grow to a length of 24 inches. This taproot creates vertical holes in the soil profile that breaks up soil compaction and improves soil tilth. This process, known as “bio-drilling”, improves water infiltration, aeration and fertilizer efficiency for succeeding crops. Equally important is the ability of these radishes to take up nutrients from the soil profile to be stored in the tissues near the soil surface and make them readily available for use by the following crop.

## DIXIE CRIMSON CLOVER

- Adapted to low fertility soils with adequate drainage
- Excellent for reduced tillage farming systems
- Great winter cover crop in annual rotations

Use as winter cover crop in annual rotations and self-seeding cover in perennial systems to smother spring weeds, fix N, and improve soil tilth. Often over seeded into warm-season grass pastures to provide winter and spring grazing. Needs moist soil to germinate and seedlings do not tolerate drought. Can become a weed in the following crop.

## IMPACT FORAGE COLLARDS

- Excellent for early summer through winter grazing
- High forage/biomass production
- Superior forage quality and palatability
- Drought tolerant
- Great cover crop that reduces soil erosion
- Breaks up soil compaction
- Builds organic matter
- Nutrient recycling biofumigant
- Weed suppression

A hybrid brassica selected for superior forage quality, high forage/biomass production, grazing and winter survival. For forage quality, Impact places near or at the top in all desirable characteristics including crude protein and digestibility. Impact can thrive under a wide range of environmental conditions and seasonal extremes including conditions below zero for several days without snow cover or other protection, making it very winterhardy. Leaves may wilt or burn around the edges but vegetation will remain green and viable throughout the winter. On the other extreme, once Impact's large tap root penetrates deep into the soil profile, it can still be productive during the hot, dry summers experienced in many areas of the country. Impact can tolerate close grazing pressure due to the growing point being near the soil surface which also allows for fast regrowth after grazing. The versatility and economic benefits of Impact forage collards are unsurpassed.

## FRIA ANNUAL RYEGRASS

- Quick establishment
- High forage yield
- Excellent for overseeding
- Improved cold tolerance
- Good crown rust resistance
- Excellent palatability

DH-3 diploid annual ryegrass is the result of a polycross between Marshall, Ribeye, and TAM90 annual ryegrasses. DH-3 combines the quick establishment and forage yield of Ribeye, the crown rust resistance of TAM90 and the frost tolerance and consistent yield of Marshall. Tested throughout the South, DH-3 annual ryegrass is proving to be a real contender among new forage annual ryegrasses. DH-3 exhibits high forage yield, excellent seedling vigor, and medium maturity, allowing consistency in forage yield throughout the season with good transition back into warm-season forage grasses.



*Certified Varieties***ILLINOIS OAT PERFORMANCE TRIALS****SABER SEED OATS**

Saber is an early maturing variety with very good test weight. It is susceptible to loose smut and is moderately susceptible to crown rust. Saber has light yellow kernel color.

**REINS SEED OATS**

Reins is an early maturing variety adapted to production in Illinois. Reins is resistant to loose smut and tolerant to barley yellow dwarf virus. It is an oat with plump, tan kernels.

**ILLINOIS OAT VARIETY PERFORMANCE SUMMARY: 2021-2023**

Trait	ACROSS LOCATIONS: MONMOUTH & URBANA, IL				WITHIN LOCATION: MONMOUTH, IL					
	Yield (bu/ac)	Yield rank	Test weight (lb/bu)	Test weight rank	Yield (bu/ac)	Yield rank	Test weight (lb/bu)	Test weight rank	Yield (bu/ac)	Yield rank
<b>BAKER</b>	126	8	30	16	142	7	31	16	111	13
<b>BUCKSKIN</b>	127	7	31	11	138	11	31	11	117	4
<b>COLT</b>	119	18	32	4	132	16	33	5	107	18
<b>DEON</b>	124	12	31	8	133	15	31	12	115	6
<b>ESKER</b>	123	14	29	17	139	9	30	17	107	17
<b>EXCEL</b>	134	2	31	12	149	3	31	13	120	3
<b>HAYDEN</b>	124	11	33	3	137	12	33	6	112	12
<b>HORSEPOWER</b>	133	3	31	7	145	6	32	8	121	2
<b>NATTY</b>	122	17	32	5	132	17	33	3	112	11
<b>OGLE</b>	130	5	27	18	145	5	28	18	114	8
<b>P02A17815</b>	123	13	30	15	136	13	31	14	111	14
<b>REINS</b>	140	1	32	6	152	1	33	4	127	1
<b>RUSHMORE</b>	123	15	33	1	135	14	33	2	110	15
<b>SABER</b>	128	6	30	13	146	4	32	10	110	16
<b>SADDLE</b>	133	4	31	10	151	2	32	9	114	7
<b>SHELBY427</b>	126	9	33	2	139	8	34	1	113	9
<b>SPURS</b>	126	10	31	9	139	10	32	7	112	10
<b>WARRIOR</b>	122	16	30	14	129	18	31	15	115	5
<b>MEAN</b>	130.2	-	31.6	-	142.9	-	32.5	-	117.4	-
<b>CV</b>	2.8	-	1.3	-	3	-	1.5	-	3.7	-
<b>LSD</b>	10.8	-	1.2	-	13.1	-	1.4	-	13	-



## WINTER BARLEY

- Annual cool season bunch grass
- Excellent for:
  - » Cover crops
  - » Feed
  - » Forage
  - » Brewing
- Excellent root system for holding soils in place
- Can plant ahead of a future corn crop with no issues or restrictions
- Excellent winter hardiness in the Midwest
- Favorite of the winter grasses for wildlife
- Planting rate:
  - » Grain of forage at 100 lb per acre
  - » Cover crop 50 lb per acre
- Termination is comparable to rye



WITHIN LOCATION: URBANA, IL					
Test weight (lb/bu)	Test weight rank	Julian date	Julian date rank	Plant height (in)	Plant height rank
29	16	157	12	35	13
30	12	156	4	32	2
31	4	154	1	35	11
31	7	160	18	36	15
28	17	158	13	36	14
30	9	158	14	34	7
33	2	160	17	35	9
30	8	157	11	34	6
31	5	157	7	39	18
27	18	157	9	35	12
29	15	156	6	33	3
31	6	156	5	31	1
33	1	159	16	38	17
29	14	156	3	34	5
30	11	155	2	35	8
32	3	157	8	37	16
29	13	157	10	33	4
30	10	159	15	35	10
30.7	-	156.6	-	33	-
1.7	-	0.3	-	2.5	-
1.6	-	1.3	-	2.5	-



FORAGE & TURF GUIDE · **SEED INFORMATION CHART**

	PLANTING RATE (LBS/ACRE)	PLANTING RATE IN MIXTURES (LBS/ACRE)	SUGGESTED PLANTING DATE
ALFALFA	15-20	8-10	March-May, August-September
ALSIKE CLOVER	7-8	1-3	February-May, August-October
ANNUAL RYEGRASS	30-40	6-10	February-May, August-September
BARLEY	90-120	60-90	March-April, August-October
BIG BLUESTEM	5-12 PLS	-	May-June
BIRDSFOOT TREFOIL	8-10	4-8	February-May, August-September
BUCK FORAGE OATS	60-70	-	August-September
BUCKWHEAT	40-55	-	June-July
CHICORY	4-5	2-3	April-May, August-September
CROWN VETCH	20-40	5-10	March-May, August-September
DUO FESTULOLIUM	25-45	8-20	March-May, August-September
DWARF ESSEX RAPE	5-8	4-6	April-August
FOOD PLOT CORN	12 lbs	-	April-May
GRAIN SORGHUM	4-20	-	May-July (soil temp above 60°)
HAIRY VETCH	20-25	-	August-October
INDIANGRASS	6-12 PLS	-	May-June
JAPANESE MILLET	15-30	8-12	April-July
LADINO WHITE	4-6	2-4	February-May, August-October
LESPEDeza, KOREAN	Hulled 25-35 Unhulled 25-30	15-25 15-20	March-April
LITTLE BLUESTEM	5-8 PLS	-	May-June
MAMMOTH RED	8-12	4-8	February-May, August-October
MEDIUM RED CLOVER	8-12	4-8	February-May, August-October
OATS FOR GRAIN/STRAW	64	-	March-May
OATS FOR COVER CROP	32	-	March-June, September-November



## SEED INFORMATION CHART · FORAGE &amp; TURF GUIDE

SEEDING DEPTH (INCHES)	EMERGENCE TIME (DAYS)	PRIMARY USE	LIFE CYCLE	APPROXIMATE SEEDS/LB
1/4 - 1/2	7	Hay, Silage, Pasture	Perennial	227,000
1/4 - 1/2	7	Hay, Pasture	Perennial	728,000
1/4 - 1/2	14	Hay, Pasture, Erosion Control	Annual	227,000
1 - 2	7	Pasture	Annual	14,000
1/4 - 1/2	28	Hay, Pasture, Wildlife	Perennial	165,000
1/4	7	Pasture	Perennial	370,000
1 1/2 - 2	14	Wildlife	Annual	16,000
1/2 - 1	7	Hay, Grain, Wildlife	Annual	15,000
1/8 - 1/4	7-21	Pasture, Wildlife	Perennial	426,000
1/2	14	Erosion Control	Perennial	138,000
1/4	14	Hay, Pasture	Perennial	227,000
1/2	7	Pasture	Annual	145,000
1 1/2	110 Days to Maturity	Wildlife	Annual	-
1	10	Grain, Wildlife	Annual	15,000
1	14	Hay, Pasture	Annual	16,000
1/2	28	Pasture, Wildlife	Perennial	200,000
1	10	Hay, Wildlife, Erosion Control	Annual	143,000
1/8 - 1/4	7-10	Hay, Pasture	Perennial	768,000
1/4 - 1/2	14	Hay, Pasture, Erosion Control	Annual	225,000 Unhulled 238,000 Hulled
1/4 - 1/2	28	Pasture	Perennial	237,000
1/4 - 1/2	7	Hay, Silage, Pasture	Perennial	272,000
1/4 - 1/2	7	Hay, Silage, Pasture	Perennial	272,000
1/8 - 1/2	7-10	Grain	Annual	16,000
1/8 - 1/2	7-10	Nurse Crop	Annual	16,000



FORAGE & TURF GUIDE · **SEED INFORMATION CHART**

	PLANTING RATE (LBS/ACRE)	PLANTING RATE IN MIXTURES (LBS/ACRE)	SUGGESTED PLANTING DATE
ORCHARDGRASS	10-20	3-6	March-May, August-September
PEARL MILLET	15-25	-	May-July (soil temp above 60°)
CLEARFIELD SUNFLOWERS	20,000 seeds/acre	-	May-July
PEREDOVIK SUNFLOWER	30-40 Broadcast 15 Drilled	-	May-July
PERENNIAL RYEGRASS	30-40	6-10	February-May, August-September
RED TOP	4-5	1-2	March-May, August-September
REED CANARYGRASS	8-10	4-8	March-May, August-September
RYE GRAIN	90-120	60-90	March-April, August-September
SIDEOATS GRAMA	6-12 PLS	-	May-June
SMOOTH BROME	15-20	3-10	March-May, August-September
SORGHUM-SUDANGRASS	20-40	-	May-July (soil temp above 60°)
SWITCHGRASS	4-8 PLS	-	April-May
TALL FESCUE	10-30	-	March-May, August-September
TIMOTHY	6-12	2-6	March-May, August-September
TRITICALE	90-120	60-90	March-April, August-October
WHEAT FOR COVER CROP	50	-	March-June, September-November
WHEAT FOR GRAIN/STRAW	90-120	-	October 1st
WHITE DUTCH CLOVER	6-8	2-4	February-May, August-October
WHITE OR YELLOW BLOSSOM SWEET CLOVER	6-15	3-8	February-May, August-October
<b>TURF GRASSES</b>			
KENTUCKY BLUEGRASS	3-5 lbs per 1000 sq ft	-	February-May, August-October
TURF TYPE FESCUE	8-10 lbs per 1000 sq ft	-	February-April, August-October
CREEPING RED FESCUE	4-6 lbs per 1000 sq ft	-	March-May, August-October
PERENNIAL OR ANNUAL RYEGRASS	5-6 lbs per 1000 sq ft	-	February-June, August-October



## SEED INFORMATION CHART · FORAGE &amp; TURF GUIDE

SEEDING DEPTH (INCHES)	EMERGENCE TIME (DAYS)	PRIMARY USE	LIFE CYCLE	APPROXIMATE SEEDS/LB
1/4 - 1/2	18	Hay, Pasture	Perennial	416,000
1/2	7	Pasture, Silage	Annual	60,000
1	-	-	Annual	-
1	7 100-120 Days Maturity	Wildlife	Annual	7,000
1/4 - 1/2	14	Hay, Pasture	Perennial	227,000
1/4	10	Pasture, Erosion Control	Perennial	4,990,000
1/4 - 1/2	21	Hay, Pasture	Perennial	480,000
1 - 2	7	Hay, Pasture	Annual	18,000
1/2	28	Pasture	Perennial	160,000
1/4 - 1/2	14	Hay, Pasture	Perennial	138,000
1	10	Hay, Pasture	Annual	21,000
1/2	21	Hay, Pasture	Perennial	389,000
1/4 - 1/2	14	Hay, Pasture, Erosion Control	Perennial	227,000
1/4 - 1/2	10	Hay, Pasture	Perennial	1,152,000
1 - 2	7	Hay, Pasture	Annual	15,000
1/8 - 1/2	7-10	Nurse Crop	Annual	11,000
1/8 - 1/2	7-10	Grain	Annual	11,000
1/8 - 1/4	7-10	Pasture	Perennial	768,000
1/4 - 1/2	7	Pasture	Biennial	259,000
TURF GRASSES				
1/8 - 1/2	28	Lawn	Perennial	2,177,000
1/8 - 1/2	7	Lawn	Perennial	225,000
1/8 - 1/2	5	Lawn	Perennial	615,000
1/8 - 1/2	7	Lawn	Perennial/Annual	227,000






**WE'LL  
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YOU ONE  
BETTER!**

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