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## 2011 Late Summer Newsletter

### Our Expanding Mission to Better Serve You.

King's AgriSeeds was founded in 1993. Initially, our focus was primarily on grasses, which then grew to include highly digestible other crops such as Masters Choice corn, Kingfisher alfalfas, TriCal® triticale, and many other highly digestible forages.

Today our mission is growing broader to serve you in more ways. About three years ago we enhanced our cover crop program beyond our winter and summer annual forages and added forage inoculants. However, our warehouse restricted us from expanding into other crops. This winter we moved the business to Ronks Road into a much larger warehouse with a large climate controlled room for sensitive products. With these new facilities, we now have the space to offer a more diverse product line. Starting this season, our inoculant program will now include a dry flowable product in addition to the current

water soluble Agmaster line. Also, for the first time we will be offering Culbac, an exciting hay preservative and two new crops for King's, wheat and barley.

Our goal of serving you with the best products has not changed, as we remain committed to our core business of providing a complete line of highly digestible forage genetics. Highly digestible forages are at the heart of King's AgriSeeds. To make high quality forages, many things must come together on the farm. Our Product Information Guide is loaded with information along with the genetics to build a successful forage program built around sound agronomic principles for your farm. With the help

of your local dealer, select the right forages for your soils and develop a healthy crop rotation and you are on the way to better productivity. If you are feeding dairy and other ruminants, feeding a high forage diet is one of the keys to financial success. One of our forage goals is to help you produce high tonnage of the right kind of forages to make feeding high forage diets successful.

**Keep an eye on  
your mail box  
for the 2011-12  
Masters Choice  
Hybrid Guide.  
Evaluate your  
fields and tour  
local plots to  
know what  
works best on  
your farm.**



**Kingfisher Alfalfas**  
are selected for yield, quality  
and persistence. We get  
excellent farmer feedback.



*Kingfisher alfalfas mixed with our highly digestible grasses are excellent milk makers and yield better than alfalfa or grass alone.*

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## Inoculants for Fermented Forages and High Moisture Grain.

You can grow the best forage possible but if it is not harvested and properly preserved then your valuable forage resources can be reduced in both quality and tonnage. Bacteria, yeast, fungi and other micro-organisms consume your forages. Preserve your quality by drying the crop in the field as fast as possible and applying the appropriate inoculant for fermented feeds.

**Agmaster haylage** inoculant includes *Lactobacillus plantarum* and *Pediococcus acidilactici* for a fast fermentation. Research has shown that cows fed haylage treated with Agmaster produced 2.2 pounds more milk per day!

**Agmaster corn silage** inoculant includes *Lactobacillus xylosus* and *Pediococcus acidilactici* to improve fermentation and bunk life. University trials have shown that Agmaster treated corn silage has better bunk life and once fed to cattle improved daily gains.

**Agmaster Lb** for high moisture grain and corn silage contains the bacterial strains

*Pediococcus pentosaceus* and *Lactobacillus buchneri*. This inoculant is very effective in slowing yeast growth and thus improving bunk life and minimizing nutrient losses at time of feed out.

**Agmaster DG 100T** Multi-crop inoculant includes *Lactobacillus plantarum* and *Pediococcus acidilactici*. This new dry granular product is for all fermented forages and grains. Great for farms that prefer a granular inoculant program for multiple crops.

## Hay Preservative

**Culbac® Hay** - Higher moisture baling in combination with Culbac increases forage yield and quality by reducing leaf loss, heat damage and molds. It also decreases time to baling which reduces weather risks. Culbac is not a harsh propionic acid product. It is a liquid *Lactobacillus Acidophilus* fermentation product that promotes the growth of beneficial bacteria



Retain your alfalfa leaves and reduce molds! Bale alfalfa Culbac treated hay at 18 to 23% moisture for great quality hay.

that in turn reduces molds and mycotoxins. Culbac Hay is mixed with water and sprayed on the crop ideally during mowing or right after mowing. Bale hay at 18 to 23% moisture with Culbac Hay to increase protein and energy.

## Small Grains - Multi-Purpose Crops. Forage, Grain, Straw and Cover Crops

Small grains can be used for many purposes and they are relatively easy to establish, but as with most crops proper timing, seeding rates and depth are important for success. Of course, many other management factors and inputs are needed for maximum productivity.

Note: Occasionally under no-till conditions some rotational crops may be suppressed in cold wetter years due to a natural chemical release from decaying roots called allelopathy. Cereal rye has the largest potential. This affect also helps control many weed species. Tillage and manure applications dramatically reduce allelopathic effects (both positive and negative effects).

### Wheat

Wheat is used primarily

for grain and straw in our region with the grain of soft red winter wheat primarily used for cookies and pastries. Wheat can also be fed to livestock but quantities should not exceed one third of the grain for ruminants. Also, grain elevators now screen for mycotoxins. If marketing grain is the primary goal of the crop, manage for head scab to lower the risk of rejection at the mill. Wheat can also be used for forage and cover cropping.

Ideal uses: grain and straw. Other uses: forage and cover crop

Crop Rotation: Excellent crop to follow wheat harvested for grain in southern PA and south include: soybeans, various sorghums, sudans and their crosses, and teff. In northern areas, consider summer seedings of perennial forages or various cover crops to improve the soil.

**W1566** - You asked for a high yielding top end multipurpose wheat and we found it. W1566 is a new awnless red winter wheat release from Syngenta that is a true multi-purpose variety. Excellent grain and straw yields. W1566 grain yields are among the best of the industry, but straw yields are about 50% higher than most wheat varieties. This taller variety also has excellent forage potential but is not as high yielding as our TriCal® triticale varieties. Although

a taller variety, W1566 does have very good standability. In areas with fusarium head scab, a fungicide is recommended.

### Barley

Barley is the earliest harvest grain in our area allowing for excellent double cropping opportunities. Barley grain in the east is primarily used for livestock grain but can also be used in multi-grain breads and other products. The straw is also of excellent value. Barley can also be used as a forage in the flag leaf stage or soft dough stage. Yields as a forage are less than most other alternatives. Barley can also be used as a cover crop but must be seeded at the proper timing which is just before wheat dates. Awnless or awnleted varieties are preferred by many producers for straw and soft dough forage because of the "itch factor" of awned (bearded) varieties.

Ideal uses: grain and straw  
Other uses: forage and cover crop

Crop Rotation: Excellent crops to follow barley harvested for grain include: soybeans, various sorghums, sudans and their crosses, and teff. Less aggressive options include summer seedings of perennial forages or various cover crops to improve the soil.

**Thoroughbred** is a high yielding, full season, awned

(fully bearded), six-row hulled winter feed barley having very good straw strength, high test weight and bright plump seed.

Thoroughbred is a medium height barley and is a yield leader.

**Valor Barley** - Coming in 2012. A new winter barley release from Penn State with excellent winterhardiness and yield potential. This new variety is awnleted (very short awns) and is a taller variety making it an excellent multi-purpose crop. An excellent choice for grain, straw and forage at either flag leaf or soft dough stage.

### Triticale

Our TriCal® Triticales are the best choice for forage, as their yield is typically 50% more than other small grains with the exception of spelt. Yields of three tons of dry matter are common at the flag leaf stage which is ideal for high producing dairy cows. Yields of six tons are common when harvested at the soft dough stage. (Note: Soft dough stage harvest is not recommended for lactating dairy but is an excellent dry cow and heifer forage if high tonnage is the priority or if weather conditions are poor during flag stage to boot stage.)

Triticale has many uses, as it is not only excellent for forage, but also great for straw and livestock feed. For forage, harvest at flag stage is ideal;



for head straw, cut during pollen shed; for livestock grain and straw, combine at the same moisture as wheat. Note: For flag leaf forage harvest, we highly recommend wide swath mowing and aggressive tedding to reduce drying time which results in increased energy. The yield of triticale forage is impressive and the harvest window is wider than cereal rye.

Ideal use: Forage

Other uses: livestock grain, straw and cover crop

**Crop Rotation:** When harvested as forage at flag leaf, corn for silage is an excellent choice along with most other summer seeded crops. When harvested as soft dough silage or grain, please refer to the wheat comments above as the crop is harvested about the same time as wheat.

**TriCal 815** - Our tried and well proven variety that has superior tillering resulting in thick stands that yield very well. TriCal 815 typically has the best forage digestibility of all the triticale that we have sold. 815 is a great variety to mix with annual ryegrass and crimson clover where adapted. 815 is included in King's Triticale plus mixture which is ideal for two aggressive spring harvests making superior forage quality and excellent yields.

**TriCal 718** - Our newest

TriCal. 718 has the highest yield potential of all the current available TriCal varieties adapted to the Mid-Atlantic and Northeast. Excellent for mixing with oats for early seeding where a fall harvest is desired. Note: 718 is not recommended to be mixed with annual ryegrass as it is a tall variety and does not complement annually ryegrass as well as 815.



*TriCal 718 Seed Production Field in NY. 718 is a tall variety with great standability.*

### Spelt

The latest maturing small grain. Spelt can be used either as forage or grain. As a forage, it is very high yielding and has a very wide window of harvest. It is also dry stemmed, making it easier to dry than other small grains. As a grain, it feeds similar to oats as it has hull on that provides fiber.

Ideal use: Forage

Other uses: livestock grain, specialty grain, straw and cover crop.

**Crop Rotation:** When harvested as a forage which is about 2 to 3 weeks after cereal rye, just about any

summer seeded crop will do well, but corn for grain will be a little on the late side. When harvested as grain, late summer perennial forage seedings and cover crops for soil improvement are the best options.

**Oberkulmer** - A true spelt with no wheat genetic influence. Oberkulmer is a very tall variety with very high yield potential.

**Comet** - A shorter variety with high grain yield and lower lodging risk. Ideal for feeding grain to livestock but can also be used for forage.

### Cereal Rye

The earliest maturing small grain that can also be seeded the latest into the fall. Rye in the majority of mid-atlantic and northeast is primarily used as a forage and cover crop. As a cover crop it can also be rolled for no-till vegetable production and other crops. Its primary strength is that it can be seeded later than any other crop and for forage it is the earliest crop to be harvested. From a forage perspective, the primary negative of rye is that the harvest window is very short!

Ideal use: Cover Crop and Forage

Other uses: Head straw (mowed for straw before grain)

**Crop Rotation:** Most summer crops do very well

following rye. However, early seeded crops such as alfalfa and cool season grasses are not recommended to be seeded into rye.

**Huron Brand** - A leafy later heading rye that is our top choice for forage. Huron is about four to seven days later than early rye varieties but are still about a week earlier than our triticales.

**Aroostook** - This is a medium maturing rye that was bred to handle later seeding and has extreme winter hardiness. It is also stemmier than Huron making it the best choice for cover cropping and rolling down.

## Annual Forage and Cover Crops

For forage production and cover crops, we highly recommend mixtures. These products make tremendous forages and excellent cover crops.

### Grasses

The grasses (small grains and annual ryegrasses) from a cover crop and soil perspective reduce soil erosion, scavenge excess mobile nutrients such as nitrogen and sulfur from leaching beyond the root zone and build soil organic matter. Our winter hardy annual ryegrasses also can

break up hard pans over a few short years.

### Annual Ryegrass

Annual ryegrass has been grown in the south for decades, but in last ten years or so winter hardy varieties of annual ryegrass has been successfully grown well to the north for both forage and cover cropping. The forage is very high in energy, has multiple cut potential and has a very wide harvest window. From a cover crop perspective, it is low cost, fast emerging and the roots are very active in the winter months. The roots build soil tilth and actually break hard pans when used regularly. Please refer to page 14 of our Product Info Guide for details of management, as this crop is not a small grain and requires different management. We include our winter hardy varieties in several mixtures. Caution: Many varieties are not winter hardy and the ryegrass must be killed properly before the next crop.

**Marshall** - A very well proven winter hardy variety that has consistently given great results.

**MO1** - A newer variety that was bred in Missouri for stronger winter hardiness.

**KB Royal** - A newer variety bred for quick emergence and cover. Has done very well in our plots and has very good

winter hardiness.

### Spring Oats

Spring oats seeded in late summer makes excellent forage and/or cover. For excellent quality forage and yields, seed forage varieties at least 30 days prior to recommended wheat planting dates. Yields of our forage oat varieties can be as high as three tons of dry matter. Spring oats typically winter kill when temperatures reach the lower twenties. For cover crops, seeding dates can be as late as about two weeks prior to wheat dates to give good soil cover and cover surplus nitrogen. Spring oats are an excellent crop to set up an early spring seeding of perennial forages such as alfalfa, clover, and/or grasses as weeds are typically suppressed and the dead crop material makes a nice seed bed. For this late summer, spring oats may be in tight supply, as the wet spring impacted seed oat acreage and availability dates. Our current varieties are **Everleaf 126, Viking, Jerry and Reeves**.

**Oats Plus** - Oats plus is a mixture of 60% Jerry Oats and 40% of our three top annual ryegrasses (Marshall, MO1 and KB Royal) that are all winter hardy. Late summer seeding dates are similar to spring oats. The beauty of this mix is that the oats will give quick growth and winter protection of the



annual ryegrasses, even though the oats freeze out. Over the winter annual ryegrass roots continue to grow and are ready to support early spring growth for forage and/or cover in the spring. Please refer to page 14 of our Product Info Guide for spring management of annual ryegrass.

**Trit-Oats** - A small grain mixture of 57% TriCal 718 triticale and 43% Oats (Jerry or Viking as available). Trit oats gives excellent forage tonnage and cover in the fall. Once a hard freeze occurs, the oats will freeze out leaving TriCal for spring growth for high quality forage and/or cover. Late summer seeding dates are similar to spring oats.

**Double play** is a mixture of 45% TriCal 815, 33% Oats (Jerry or Viking as available) and 22% of our annual ryegrasses. This is the mix for the farm that wants some of the features of both Oats plus and Trit-Oats and offers good diversity. Late summer seeding dates are similar to spring oats. Please refer to page 14 of our Product Info Guide for spring management of annual ryegrass.

**Triticale Plus** - Our top choice for seeding at barley to early wheat dates. This combination of 67% TriCal 815 and 33% of our winter hardy annual ryegrasses

(Marshall, MO1, and KB Royal) is ideal for making high tonnage and superb quality over two cuts. Up to 6 tons of dry matter (18 ton at 67%) of highly digestible forage when harvested as two cuts (1st cut around cereal rye dates and a 2nd cut typically three weeks later). A great forage and cover crop. For a higher level of protein and nitrogen production, simply add crimson clover in your small box. For best crimson clover results, seed at recommended barley dates.



*Triticale Plus with Crimson Clover is both a tremendous forage and cover crop.*

### Legumes

The legumes have the ability to fix nitrogen from the air and thus make “free” nitrogen and low cost protein. Annual legumes, such as crimson clover and hairy vetch, can be seeded with many of our grass mixtures to increase protein content of

forages and/or add nitrogen fertility to soil.



*Crimson clover is the earliest flowering annual legume. After it flowers, it can release 70 to 130 lbs of nitrogen to the following crop. Consult your dealer, for local recommendations.*

### Forage Products

#### Alfalfa

Kingfisher 525,  
Kingfisher Excelerator,  
Kingfisher Enhancer II  
Kingfisher OR24  
Kingfisher LHR67

#### Red Clover

Freedom!  
Cyclone II  
Start

#### White Clover

Alice  
Regalgraze Ladino

#### Red and White Blend

King's Premium Clover Blend

### Cover Crops

#### Alfalfa

Kingfisher Econo

#### Clovers

Common Medium Red Clover  
Ladino Clover  
Dutch White Clover  
Yellow Blossom Sweet Clover  
Alsike Clover  
Crimson Clover

#### Hairy Vetch

Purple Bounty  
Common

### Brassicas

The brassica family includes daikon radish, mustards, turnips, rape and many other winter annual forbs can also be used as both forage and cover crops. From a forage perspective, many are high quality but some have toxins, so be careful on what you intend to do with the crop. From a cover crop perspective, this family has tap roots, which penetrate deep into the soil, breaking pans and recycling nutrients that are beyond the depth of shallow rooted crops. Many of these crops also help suppress nematodes and can be used as bio fumigants.

**Daikon Radish** - A late summer seeded cover crop that can also be grazed if desired. Produces large carrot-like roots that help break up compacted soil below the tillage zone. Daikon radish is a fast starting cover that smothers weeds quickly, but will winter kill like spring oats. An excellent recycler of calcium, nitrogen, phosphorus and sulfur. For best results seed about 4 to 6 weeks before wheat dates which is the same time period that oats are seeded for forages. This fall we are marketing both daikon radish and Nitro-Radish.

**Appin and Barkant Turnips** - Turnips are excellent for grazing and can also be used as a cover crop with similar benefits as daikon

radish. They do not have as dramatic of a root and are less aggressive as a smother a cover crop, but unlike daikon and the many brands of cover crop radish, turnips are more compatible to mix with other crops. For forage, we like to mix them with oats.

**Braco White Mustard** - Got harmful nematodes? Braco is a natural fumigant which suppresses nematodes and recycles nutrients very efficiently. The foliage quickly decomposes in the soil. To use as a fumigant, mow or flail chop and incorporate immediately into the soil just prior to flowering. Note: We do not recommend as a forage crop.

## King's Cover Crop Program Late Summer Mixtures

**Broadcaster** - For broadcasting in late summer with moisture. Will improve soil in many ways including; nitrogen fixation, soil tilth and drainage. Can be broadcasted with hand seeders, high boy seeders and by airplane or helicopter. Great for seeding into a living corn crop and open fields. Includes our winter hardy annual ryegrasses, crimson clover, common medium red clover, daikon

radish, and yellow blossom sweet clover.

**Vetch Oats** - This is a well balanced mixture of Jerry Oats and Hairy Vetch (Purple Bounty if available) and works from North Carolina to Maine. The oats, which winter kill in most areas, help protect the slow establishing hairy vetch from weed pressure and gives the hairy vetch protection from winter extremes. This cover crop is an excellent nitrogen producer.

**Cargo** - A mixture of Crimson Clover, winter hardy Annual Ryegrasses and Oats. It is a superb cover crop for south of I-78 in southern Pennsylvania and further south. The benefit of the Crimson Clover is that it flowers early, thus will fix nitrogen earlier in the spring compared to other legumes. The oats give quick cover, weed control and winter protection of the Crimson Clover and Annual Ryegrass. The Annual Ryegrass has a very extensive root growth and improves soil structure better than cereal small grains.

*Note: Due to some seed shortages availability of individual products may be limited and mixtures may be modified if needed.*