



LAKEVIEW ORGANIC GRAIN

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** LATE SUMMER 2016 NEWSLETTER **

CERTIFIED ORGANIC SEED FALL 2016

Wheat - Fredrick Blue Tag Soft White Winter <i>organic!</i>	\$26.00/50#
Wheat - Expedition Hard Red Winter <i>organic!</i>	\$26.00/50#
Triticale - Winter (vns) <i>organic!</i>	\$26.00/50#
Barley - Winter (vns) <i>organic!</i>	\$25.00/50#
Barley - Robust Spring <i>organic!</i>	\$25.00/50#
Rye (vns) <i>organic!</i>	\$25.00/50#
Spelt - winter spelt (dehulled) <i>organic!</i>	\$32.00/50#
Oats - 'Guyanoga Brand' or 'Medium Brand' <i>organic!</i>	\$20.00/50#
Peas - Austrian Winter <i>organic!</i>	\$48.00/50#
Peas - Austrian Winter <i>conventional untreated</i>	\$40.00/50#
Peas - purple forage <i>conventional untreated</i> <small>EXTREMELY SHORT SUPPLY</small>	\$32.00/50#
Peas - Admiral or Nette yellow <i>organic!</i>	\$34.00/50#
Hairy Vetch <i>organic!</i> <small>SHORT SUPPLY</small>	\$120.00/50#
Clover - medium red organic <i>organic!</i>	\$180.00/50#
Clover - Manitoba medium red clover <i>organic!</i>	\$190.00/50#
Clover - Alice white	\$190.00/25#
Yellow mustard <i>*conventional untreated</i>	\$90.00/50#
Buckwheat <i>organic!</i>	\$46.00/50#
Timothy - Climax <i>organic!</i>	\$150.00/50#
Alfalfa - assorted varieties <i>organic!</i> <small>EXTREMELY SHORT SUPPLY</small>	please ask
Blackhawk BMR Sorghum Sudangrass <i>organic!</i>	\$80.00/50#
Forage Turnip <i>*conventional untreated only, in 25# bags</i>	\$115.00/25#
Covercrop Tillage Radish <i>organic!</i>	\$215.00/50#
Birdsfoot Trefoil <i>*conventional untreated only</i>	\$260.00/50#
Assorted organic grass seed varieties	please ask
Pasture/Hay Seed Mix - <i>organic!</i> in 25# bags	\$110.00/25#
<i>bromegrass, timothy, perennial & annual ryegrass, festilolium, meadow fescue</i>	



Radish, October



Austrian Winter Peas, May



RECOMMENDED SEEDING RATES

<i>Crop</i>	<i>planting date</i>	<i>Seeding Rate/A</i>	<i>Seeding Depth</i>
Winter Triticale	mid Sept - late Oct	100 - 150 lb/A	1 - 2.5"
Winter Wheat	mid Sept - mid Oct	120 - 180 lb/A	1 - 2"
Winter Spelt (dehulled)	mid Sept - mid Oct	100 lb/A	1"
Winter Barley	early-mid Sept	96 - 130 lb/A (3-4 bu)	1-2"
Rye	mid Sept - late Oct	100 - 150 lb/A	1-2"
Covercrop oats	late Aug - mid Sept	50-100 lb/A (2-3 bu)	1-2.5"
Buckwheat	until early Sept	40 - 60 lb/A	0.5 - 1.5"
Austrian winter peas	mid Sept - mid Oct	60-100 lb/A	1"
Forage peas	until early Sept	60-100 lb/A	1"
Hairy Vetch	mid Sept - mid Oct	8 - 10 lb/A	0.25 - 0.50"
Yellow Mustard	early spring, fall	7-10 lb/A	frost seed - 0.75"
Medium Red Clover	early spring, fall	8 - 15 lb/A	frost seed - 0.5"
Tillage-type Radish	Aug - mid Sept	6-8 lb/A alone	0.25 - 0.5"
		2-4 lb/A with other covercrops	
BMR Sorghum sudangrass	June - July	35-50 lb/A	0.5 - 1.0 "
Japanese Millet	June - July	25 - 30 lb/A	0.25 - 0.5"
Forage Turnip	August	1.5-3 lb/A	1"
Alfalfa	spring, fall	12 - 20 lb/A	0.25 - 0.5"
Timothy	spring, fall	2 - 8 lb/A	0.25 - 0.5"
Orchardgrass, Ryegrass	spring, fall	4 - 12 lb/A	1 - 1.5"
Bromegrass	spring, fall	4 - 12 lb/A	1 - 1.5"
Reeds Canarygrass	spring, fall	6 - 12 lb/A	0.5 - 1"
Birdsfoot Trefoil	spring, fall	4 - 10 lb/A	0.25 - 0.50"
White Clover	spring, fall	2 - 8 lb/A	0.25 - 0.50"
Pasture/Hay grass mix	spring, fall	3-8 lb/A	

For best quality, seed grass mix with 1-2 bu/A oats as a nurse crop, and overseed with 12-15 lb/A alfalfa, 1-2 lb/A white clover or 6-8 lb/A medium red clover

Organically approved non-GMO Rhizobium inoculant is available for alfalfa/clover, pea/vetch, birdsfoot trefoil and soybeans

Also available - conventional untreated seed for orchardgrass, white clover, bromegrass, Ladino clover, birdsfoot trefoil, Reed canarygrass and other pasture grasses/legumes

***** if you don't see it - please ask! *****

- **All seed must be paid in full at time of delivery/pickup. Delivery costs are NOT included in seed price.**
- **Pallet deposit of \$8.00/pallet, refundable upon return of pallet in same condition**
- **All returned seed - 10% re-stocking fee. Only sealed bags in original condition will be accepted for return.**
- **All sales final for inoculant.**

DELIVERY OPTIONS - we offer the following seed delivery options:

You pick it up – always the cheapest, **please call at least 24 hours in advance** so we can have it ready.

Teals Express – a really great trucking company out of Watertown, they ship pallets throughout the northeast. Most places will cost around \$140/pallet (up to 2500 lb per pallet) for farm delivery (fork lift unload assumed)

Central Transport, Rist or FedEx – for pallet (LTL) delivery outside the Northeast, rates vary with location

UPS – delivery in 2 days, only cost effective for 6 bags or less. UPS charge is usually about \$25/50 lb bag.

Wilson Transport – a great family company out of Arcade, NY doing a pallet delivery route from Seneca Lake west to past Buffalo, direct to your farm. The delivery cost is \$80/ton or ton fraction (\$40 minimum)

Our feed truck – we can sometimes deliver bags of seed to your farm or a farm near you when we make feed deliveries. Active feed customers take priority if space is limited and you **MUST** pick your seed up within 24 hours if we ship this way. The delivery cost is \$1.50/bag, and we can carry up to 20 bags/customer.

FALL SMALL GRAINS . . .

What are my choices?

Barley must be planted early in the fall, usually in early September, approximately 1-2 weeks before usual wheat planting, to be sufficiently well-established before winter. It will also be the first small grain in the summer to be harvested - generally in mid-late June. Barley is best adapted to rich, well-drained, loamy soils and should not be planted on poor, sandy, or wet fields. Barley may not be sufficiently winter hardy in colder areas of the Northeast. Barley produces good quality silage or hay, producing high quality, highly digestible forage, lower in acid detergent fiber and lignin than other small grains, but it yields less tonnage. Most Northeast barley is used as feed, but there is a small, growing market for malting barley to make local beer. Plant at 2-3 bu/A.

Triticale is a terrific grain for the Northeast, a cross between rye and wheat. It is generally the highest yielding small grain and forage crop that can produce approximately 10-12 T/A of high quality forage, or up to 3T grain/A. It is also the most adaptable, most forgiving grain, doing well in most locations under less-than-perfect conditions. For highest quality forage, triticale should be harvested at the boot stage and may require more time for wilting than rye and wheat. Triticale should be seeded at 2 bu/A in late September through late October, although we have seen triticale sown even into November make a crop. In this very dry year, we are strongly recommending dairy farmers plant winter triticale and Austrian winter peas for spring forage/grazing.

Wheat is a versatile small grain with several strong markets. Traditionally the soft white wheat varieties are most popular in New York, but there is a growing market for both Frederick white, and hard red wheat for the food/flour milling market. Best planted in late September/early October, wheat planted too early or too late may result in poorer winter survival. It is a good choice following soybean harvest. Wheat can also be sown in the fall for spring grazing. Wheat is well adapted to most soils, performing best on loamy, well-drained soils with medium to high fertility. Wheat will withstand wet soils better than barley or oats but not as well as rye and triticale. If there is rain during harvest,

wheat may sprout, making it unsuitable for the food market. Because there is not always a strong market for organic feed wheat, make sure you plan destination before planting – often feed triticale or barley are much easier to sell than organic feed wheat.

Spelt - this ancient wheat has a persistent hull that must be removed before it can be used for the food/flour milling market. People with wheat intolerance often are able to eat spelt. Spelt grows taller and leafier than most wheat, making it more competitive against weeds. Spelt is also more tolerant to poorly drained soil or lower fertility conditions. Spelt is less likely than wheat to sprout if rain comes during harvest. Planting dates and rates for dehulled spelt are similar to wheat. Often called 'speltz' in Pennsylvania, whole spelt can be used in horse and cattle feed with approximately the same nutritional value as oats. Because spelt needs to be dehulled before sale for food use, make sure you plan destination before planting.

Rye is a traditional winter cover crop, generally following soybeans or vegetables. Rye is the most winter hardy of all small grains, tolerant of low fertility, acidic or sandy soil. Like wheat, rye can be sown in late August at 2-3 bu/A to provide fall grazing, excellent winter ground cover, and spring grazing. When grown for grain, rye can be sown in October. The rapid growth of rye, both in fall and spring, makes it productive for pasture at times when other forage may be in short supply. Forage rye can become unpalatable when over-mature and can impart off-flavors to milk. There is not a large market for rye grain since few dairy farmers use it in feed rations and the market for food-quality rye is small. Grain infected with the fungus ergot can cause abortions and other problems. Rye requires moderate fertility but excess nitrogen can cause lodging. As a cover crop, rye strongly suppresses weeds, but may leave a residual effect in the soil that can damage vegetables, especially cucurbits.

FALL COVER CROPS! . . .

What are my choices?

It seems that cover crops are on everyone's mind right now – the vegetable farmer seeking soil cover over the winter, the grain farmer needing help with pesky weeds, the dairy farmer looking ahead for earlier forage next spring, even the conventional farmer trying to reduce high fertilizer bills. Cover crops make so much sense – they

cut fertilizer costs, improve soil health and condition, prevent soil erosion, improve water-holding and infiltration capacity, produce nitrogen, and much more. Many covercrops are allelopathic, which means they exude chemicals from their roots that suppress the growth of other plants - weeds! - around them.

One way to categorize cover crops is by whether they are

(1) **LEGUMES** (clover, hairy vetch, peas, alfalfa) which can convert nitrogen in the air to a form that plants can absorb, in a mixture, legumes will also enhance the protein level in other companion crops

(2) **NON-LEGUMES** (buckwheat, cereal/small grains, and crucifers (like radish, turnip and mustard) which add organic matter and suppress weeds but do not fix nitrogen.

Both groups are strategically useful tools in our crop rotation line-up. Often you don't have to choose one or the other - mixtures of different cover crops (peas & oats / rye & vetch / winter peas & triticale / oats & radish) provide multiple benefits at one time!

Another way to categorize fall-planted cover crops is by whether they :

(1) will grow all fall, then will **winter-kill** at hard frost, leaving ground-covering residue over the winter

(2) will produce some growth in the fall, go dormant during the winter, and **then grow back in the spring**

WINTER-KILLED COVERCROPS

Tillage/Covercrop Radish – Numerous studies have shown that corn and soybeans, planted after fall covercrop radish, will have significantly higher yields. Additionally, covercrop radish reduces soil compaction by 'punching' holes through compacted layers, improves water infiltration, suppresses weeds and nematodes, and controls erosion in fall and winter months. They scavenge and hold soil nutrients at the surface and increase soil organic matter by up to 5 tons/acre. Dairy farmers particularly like planting covercrop radish after manure application, because they effectively hold the nutrients. Plant in the fall, 30-60 days before the first killing frost. Covercrop radish will grow rapidly through the fall, and then winter kill, leaving the soil in great shape the following spring. Radish can be drilled, or broadcast followed by a light disking. Grazing is also successful. **One caution** – covercrop radishes don't smell good as they rot in the spring – so plan your fields with your neighbors and family in mind!

Oats and Spring Barley make a great fall covercrops that produce vigorous grassy growth through the fall without putting any effort into making grain. Their natural allelopathy suppresses weeds while producing lots of biomass. By spring, the small grains are gone, leaving the soil mellow and ready to plant. They

also absorb nitrogen, potassium and phosphorus, holding it in a stable form through the winter. They can be grown alone or in combination with peas, turnips, or radishes, and can be used as a nurse crop for the establishment of perennial pastures and hay fields. Generally, fall oats and barley should be planted by mid August, or at least 40-60 days before first killing frost. Mixed with turnips or peas, this make great grazing or forage.

Buckwheat is a quick-growing covercrop that very effectively suppresses weeds, solublizes soil phosphorus, and softens and loosens the soil. Buckwheat performs better than small grains in dry and poorer soils and therefore is a great 'pioneer' crop when bringing abandoned or neglected land back into production, or when working on soil structure or persistent weed problems. Buckwheat is most commonly planted in the summer, although it can also be used as a fall cover.

Field Peas are legumes, and therefore produce nitrogen. Forage 4010 field pea varieties produce excellent vigorous succulent vines that break down rapidly, releasing accumulated nitrogen in a form that other plants can easily use. When mixed with oats in the fall, or with oats or spring triticale in the spring, the resulting growth is thick and lush, a great source of forage for grazing or chopping, or simply a very effective, high biomass, rapidly growing covercrop.

Yellow Mustard – for the past couple years, we have been experimenting with using yellow mustard as a short-term spring covercrop, frost-seeding it in March and plowing it under in June before planting red kidney beans. We have been amazed how this practice has significantly raised bean yields and feel this will be useful for vegetable and potato farmers to address soil borne disease problems. Like radishes, mustard is a crucifer, producing glucosinolates (or 'hot' flavored chemicals) that suppress root rots and nematodes.

OVER-WINTERING COVERCROPS

Rye – the hardiest of the cereal small grains, rye can be seeded later in the fall and still produce a tremendous amount of biomass, both leaf and root mass, that will reduce erosion and nutrient loss. Rye's strong allelopathy provides exceptional weed suppression, and also controls nematodes and insect pests. It is widely adapted, and can grow on poorer soils or poorly prepared land. Farmers often mix rye with about 10% vetch for nitrogen fixing. **One warning** - rye can be incredibly vigorous in the spring, and if not plowed under fairly early, you may need to mow or chop it before plowing.

Hairy Vetch – vetch is a good example of the old 'truism' that "one farmer's covercrop is another farmer's weed." Vegetable farmers love vetch for its strong nitrogen fixation, soil structure improvement, and weed

suppression. Planted as a fall covercrop with rye or wheat, it produces an early spring cover that can be tilled or rolled before planting vegetable seed or transplants. However, hairy vetch is considered a noxious weed in winter small grains grown for seed production or milling. Its life cycle almost exactly matches that of winter wheat, with round black seeds that are extremely difficult to separate from wheat using normal grain cleaning equipment. Flour made from wheat contaminated with vetch seed is bitter with unattractive black specks. Because vetch produces 10-20% hard seed each year, getting rid of it on a grain farm is very difficult.

Triticale – a cross between wheat and rye, triticale combines the vigor and wide adaptability of rye with the more 'civilized' growth habit of wheat. It is the most forgiving of all small grains, doing well under a wide range of soil types, climates, fertilities, and planting dates. Triticale is highly versatile as a covercrop, forage, or grain crop, and it can easily be mixed with other species like peas or vetch. There are both winter and spring versions of triticale, expanding its usefulness.

Austrian Winter Peas – few covercrops are as impressive as Austrian winter peas! Planted in September with barley or triticale, they grow moderately through the fall, and then in the spring simply explode with vigorous viney growth and purple flowers, fixing lots of nitrogen and making highly nutritious and palatable spring forage. The small grain is needed for support - without it, winter peas will quickly go flat at bloom as they become heavy with leaves and pods. Small grains also help protect peas against winter kill. We have found that 2 bu barley/A is the right amount to provide adequate support for the peas without being too competitive. Winter barley or triticale, mixed with winter peas, makes a highly nutritious and palatable spring pasture for grazing.

Medium Red Clover - this is the standard, dependable, widely adapted legume covercrop that organic farmers rely on for much of their nitrogen needs. In the Northeast, we generally frost-seed red clover into our winter small grains in February-March. It grows through the spring, and really takes off after grain harvest. By the following year, the clover can be plowed, providing enough soil nitrogen to grow a healthy crop of corn or a vegetable crop. Clover can also be sown with a spring small grain before grain emergence. Red clover has also been successfully no-till drilled into wheat stubble in the summer, or overseeded into soybeans in the early fall at leaf-yellowing. Be aware that soil diseases affecting beans, peas and soybeans are also hosted by clover, so close rotations of these crops may technically be rotating crop species, but may not be sufficiently rotating root pathogens.

"HELP - Because of the drought, we WON'T have enough forage/feed this winter!"

Here in the middle of July, many dairy and livestock farmers are looking at hay fields and barns, knowing there won't be enough forage and grain to last through the winter. So . . .

SUPPLEMENTAL ANNUAL FORAGES!

What are my choices?

Annual Forages can provide large amounts of high quality feed in a pinch when perennial pasture growth isn't sufficient – like in years like this one! You can use these annual forages to strategically supplement pasture this fall, or to be growing in the early spring to help you when hay supplies are likely to start running out.

You have to handle annual forage a little different than you would perennial hay or pasture because a lot of valuable feed may be wasted if you don't graze or harvest carefully. You may only want to allow the cows to graze a few hours each day in the annual pastures and then move them back to the perennial pastures, or harvest some for greenchop.

For the most part, the annual forage species do not dry well, so if they are not grazed, they should be harvested as baleage. **Tom Kilcer, of Advanced Ag Systems**, cautions that working with wetter forages can be challenging. The forage should be cut in the morning, raked/tedded within 3-4 hours, and then bagged or bale-wrapped as quickly as possible, **preferably the same day it is cut**. Leaving wet forage in the field or on the wagon even overnight can result in undesirable fermentation, butyric acid formation, off flavors, and reduced feed quality, or, as Tom Kilcer puts it, 'can result in slimy smelly slop.' Adding a homolactic bacteria silage inoculant will help promote healthy fermentation (make sure you get the right kind of inoculant that is also organically approved). This is particularly critical with fall-harvested annual forages, when we are less likely to get good drying weather.

We have been growing and harvesting several types of annual forages. Many of the 'newer' alternative forage crops such as BMR sorghum-sudangrass, annual

ryegrass, late season oats, and forage brassicas are very high in moisture content and dry down slowly. Harvesting and storing these crops in a way that minimizes loss and maintains high quality presents special challenges especially during cool wet weather. There are several important principles that must be kept in mind when working with high-quality high-moisture forage crops.

Intensive grazing is the most economical way to harvest high moisture forages AND it makes the best quality feed. However, if you are not grazing it, harvest must be done very carefully.

Cutting the crop after several days of dark cloudy weather will result in lower sugar content and reduced feed value. When forage crops are cut, they continue to undergo respiration and lose water through the leaves. The sounds good, but rapid respiration consumes sugars that the plant has stored and lowers the feed value of the forage. Crimping actually increases the rate of sugar loss. Green forage plants can continue to photosynthesize after cutting if laid in a full swath in full sun. Handled this way, the plants can make enough additional sugar to replace what is lost through respiration. Even if driven on by the tractor tires, forage quality is better with a wide swath than with a narrow windrow.

Leaving very wet forage in the field after cutting for a more than a day results in greatly reduced quality, lowers the yield, and increases storage loss. But, putting excessively wet material in upright silos or deep bunk piles can result in excessive storage loss due to seeping and bad fermentation. Inoculating with a good homolactic bacteria and wrapping as balage or in an ag bag has produced truly top quality feed from high moisture forage.

1. For winter / very early spring grazing (January/April) – in late winter, try grazing **corn stalks** in last year's silage or grain corn. The cows will eagerly find dropped ears and early weeds like chickweed, and get valuable late winter exercise and sunshine. Some **fall-planted brassicas, like marrowstem kale**, can provide winter grazing when there isn't too much snow cover and may overwinter if the winter is mild.

2. For early spring forage (April/May) – if you are *really* lucky, you managed to plant winter **triticale, barley, spelt or wheat mixed with Austrian winter peas** last September! We have found that by the end of May, barley and winter peas are nearly 3 feet tall and by mid June, they

are over 5 feet. This makes for excellent, highly nutritious and highly palatable forage at a time when perennial pastures are just getting going and last year's hay supply is mighty thin. **Winter rye** can also be used like this, but it gets mature and unpalatable very quickly and has been shown to affect the flavor of the milk if the cows get too much. If you think you might be running short of good forage before pasture starts next year, think about planting some triticale/winter peas this September – you may be very glad to have it!

3. For mid spring/early summer forage (April-June) - Plant small grains like **oats, spring barley, or spring triticale** mixed with **4010 forage peas** in the early spring for very successful early summer grazing or harvested forage. If planted at several times during the spring, this can provide pastures with sequential maturities. **Yellow mustard** can be frost seeded in March into standing winter small grains as an early mixed forage.

4. For summer forage (July/August)– In May-July, plant **BMR sorghum-sudangrass or Japanese millet**, either mixed possibly mixed with soybean, peas or oats. These warm-season grasses do best under dry or hot conditions, and on droughty soils. They do NOT, however, like temperatures below 50 degrees, so planting too early will reduce establishment, and they won't achieve full yield if planted much past mid-July. **Field corn** can be grazed or planted during this time for forage. We've been very pleased with drilled open-pollinated corn, planted in mid-July at very high population, harvested as forage (not silage) in early October at tasseling. It is very important to ensile corn forage the same day it is cut, otherwise much of the sugar will be lost. **Buckwheat** can also provide high quality, though rather low yielding, forage, but it must be fed cautiously to prevent photo-sensitization. Warm season annual grasses, like **Italian (annual) ryegrass and teff**, sown spring through mid summer can provide late summer and fall grazing. **Forage brassicas** planted in late spring will provide forage in August and September.

5. For fall/early winter forage (Sept/Dec)– We have found that **oats or spring barley** planted in early August will not try to make seed but will instead grow a vigorous grassy highly-palatable forage by late September. Fall oat silage can run 15-17% protein if harvested at the first flag leaf stage, though it can produce higher tonnage of more digestible feed but slightly lower protein if harvested at

the boot stage. **Forage brassicas like turnip or kale, or forage peas**, can mixed with the oats for an extra nutritional boost, and when planted in early August, will provide excellent forage from October-December, though if not grazed, harvest can be complicated a wet fall.

Tillage-type radish mixed with oats can also provide nutritious grazing. Later plantings of brassicas and oats can go in on fields that produced small grains or annual pasture earlier in the year. **Turnips and rape** are the fastest growing brassicas, reaching maximum production in 80-90 days, while swedes and kale require 150-180 days. When feeding brassicas, because they are so rich in feed value, introduce them in a limited manner and always feed some dry hay also. Some of the very best forage you will get in the fall will be from **medium red clover** that had been frost-seeded into small grains early in the spring. After the grain is harvested in July/August, let the clover grow, and you should be able to get one cutting of very high quality feed in mid-fall.

Some farmers have tried planting **oats and winter triticale** in August, with the hopes of harvesting an oat forage crop in the fall, and a triticale forage crop in the spring. You have to be careful not to harvest the oats any shorter than 3.5 inches, and not use it for fall grazing to be sure there is enough triticale is left for successful overwintering.

OTHER SUGGESTIONS

- ❖ **Diligently test your forage quality** and reserve your better forage for times of high nutritional need (like really cold days in January) and for your high producers. Know what you have and use it as strategically as possible for maximum good. Do everything you can to reduce spoilage, waste, and other feed loss.
- ❖ **Many types of feedstuffs can develop fungal toxins, or mycotoxins, including grains, haylage, baleage, silage, dry hay, and high moisture corn.** *This isn't a big problem this year with the drought, but most farmers don't realize the highest risk with incompletely fermented silage and baleage.* Even nice farmers can have mycotoxin problems! Infection is most common on plants grown under **stress**, especially when damaged by insects, birds, mites, hail, early frost, heat and drought stress, windstorms, and other unfavorable weather.

Mycotoxins can also form or increase when grains and forages are harvested and stored at undesirably high moisture levels, when grains are put into storage dirty, if plastic ag bags get torn or damaged, or if storage facilities leak. Not all moldy feed contains mycotoxins, but not all clean feed has none. The most common symptom is mild to severe immune system suppression. If you suspect feed to 'not be quite right', it is a good idea to get it tested. There are reasonably effective toxin binders that can be fed when you suspect a problem, but the best defense is to avoid feed with elevated toxin levels.

- ❖ **Pay close attention to feed inventories** and if possible, buy needed forage now if you can find it. Hay will be in short supply this winter – make connections now. Carefully calculate how much feed/forage you have on-hand, and figure out how much you need to buy to make it to spring pasture.
- ❖ **Heifers and dry cows** - lower nutritional quality hay can be feed to these groups, but they should not receive the moldy, slimy, and nasty forage. Spoiled hay is NOT adequate "heifer hay". Remember - you are feeding the next generation! If it doesn't smell good to you, it probably won't taste good to your cows.
- ❖ **Conserve your limited supplies** - If you are really short on forage/feed, you may want to consider selling down on young stock or lower-producing cows to conserve your limited supply for milking cows.
- ❖ **Pay closer attention to animal stress/animal comfort issues.** A happy animal makes better use of her feed. Are the cows clean, dry and well bedded? How does it feel when you drop to your knees in the stalls? Evaluate the ventilation, clean water availability, how well the cows walk through the barn, hoof problems etc. Do the cows have plenty of clean, readily accessible water at all times? Pay special attention to body condition as winter progresses - a cow that loses too much body condition not only won't milk as well, she also is likely to have reproductive problems later. Remember - clean, dry and comfortable . . . means a smaller feed bill!

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Harvesting and Feeding summer annual forages . . .

BMR SORGHUM SUDANGRASS - For double the protein and energy levels equal to corn silage, cut BMR SS when 36-48 inches tall. At this stage crude protein can run around 15-16%. If you harvest when the BMR SS is taller, yields will be higher but protein will drop, and dry-down may be more of a challenge as there will be much more water in the forage.

TO AVOID PRUSSIC ACID TOXICITY PROBLEMS - If grazing or green-chopping, wait until plants reach a minimum of 24 inches in height. Do not graze new regrowth that has developed after a frost or period of dry weather. Do not graze horses on sorghum sudangrass, as it can cause cystitis. Green plants that are frosted should be completely dried before grazing or ensiled several weeks before feeding. If BMR SS is properly fermented, prussic acid should not be a problem. As with corn, BMR SS can accumulate nitrates. When fermented, and if mixed with other feeds (not the sole forage), nitrates are minimized. If in doubt, run an inexpensive forage nitrate test.

FEEDING BMR SORGHUM SUDANGRASS - When balancing rations, keep in mind that standard NIR analysis will underestimate BMR SS energy level by 13 to 15 points. This could result in over-feeding grain. BMR SS is best used in a high forage diet.

JAPANESE MILLET is a warm season forage crop ideal for production of quick hay and/or bedding. It comes on fast, controls weeds and mellows soil.

While Sorghum Sudan, Pearl Millet, and Sudangrass may produce a slightly higher tonnage than Japanese Millet, they are coarser, less palatable, and dry down more slowly. Japanese Millet is not likely to have problems with prussic acid toxicity. **Plant 1/4 to 1/2 inch, 25-30 lb per acre from June to early August. Japanese Millet can get 4 1/2 to 7 ft. tall.** Rolling after seeding helps rapid emergence. When planted in June, you can get 3-4 cuttings. Cut the millet when 3' tall, but leave an 8 in. stubble for quick recovery between cuttings. Cut the 4th cutting close to the ground. For bedding let it grow to 5 ft. or 6 ft. Some farmers take the first couple of cuttings for hay and then let it grow to 4 ft. for a good harvest of bedding.

Can I use one field for both fall and next spring forage?

Some research has been done on the option of planting oats and winter triticale together by no later than August 20. If managed correctly, this mixture can produce one harvest of chopped oat forage by the end of September, cutting at a height of no less than 3.5 inches. It is really important not to chop the oats too low, and grazing is not a good idea, since both eating and foot traffic will damage the overwintering hardiness of the triticale.

Then, let the shorter triticale grow through the rest of the fall. It should come back next spring and can a large crop of high quality, highly palatable forage by mid-May. It is also important that the triticale is planted at 1.25 inches deep to prevent frost heaving.

On behalf of all of us at Lakeview - Mary-Howell, Klaas, Sheila, Stewart, Jeff, Ed, Jason, Robbie, Jack, Alex, Riley, CJ and all the others who work with us to serve you!

☞ We thank you for your continued business, support and confidence!

☞ We appreciate your business and your friendship!

Please let us know how we can better serve your needs!