

"I no tilled the Triticale Plus in sorgham/sudan stubble (no spray or tillage) the second week of last September. We got good rain around the first of October, and were able to graze once in November. It was lush and very high quality at that time. The area (15 acres) was then not touched until the middle of March, when we had good regrowth. I did put 50

lbs of nitrogen and 50 lbs of potash on around the end of February.



We have been able to run the cows through three times, running around 50 cows per acre per day. I

give them a 2 acre strip for two days. **I wish I had a hundred acres to put Triticale Plus on; I would need no hay or other winter feed. Annuals have become an important component in extending nearly year round grazing for me. It also lets us keep our numbers up knowing we will have extra high quality grazing."**

-Chuck Benhoff, Farmville, VA

Encouraging Word

When money is tight we all begin to look for ways to cut costs. After all, cutting cost is the best way to increase profitability. Or is it? When it comes to seed selection during this economic low, the temptation will be to ignore what we know about varietal differences and look for the varieties with modest performance with a cheap price tag. This decision can be justified by asking the question-

"Is their really that much difference?"

University of Wisconsin Madison Forage Extension Specialist, Dan Undersander stated in a recent article, "I am always amazed by the number of people who buy the cheapest alfalfa or grass seed they can get. That is a little like saying that you want the cheapest cow and

"Annuals have become an important component in extending nearly year round grazing for me. It also lets us keep our numbers up knowing we will have extra high quality grazing."

don't care whether it's an Angus or Holstein. **The difference among alfalfa varieties or grass varieties of any species is greater than the difference between an Angus and Holstein cow."**

How are these differences accounted for? Disease resistance, starch availability, heading dates, fiber digestibility and consistency are just a few factors utilized to decipher varietal differences.

The encouragement here is for you to think about why you're using higher value seed products, crunch some numbers and quantify those differences, then make your decisions.

Undersander continues to say, "If you figure the total cost of land, taxes, production and harvesting costs, seed cost is often less than 1% of the total production cost, so buying any variety that does not have high yield or the characteristics most beneficial for your management system is being penny wise and pound foolish."

Exerpt from Farm Progress Magazine, January 2014.

The Kentucky New Era.....July 9, 1968



Opt for the Legume?

Adding Cowpeas to Forage Sorghum

Cowpeas are a viney summer annual legume that can climb, tolerate some shade, and fill in the spaces in a summer annual grass, so should you consider adding them to a stand of forage sorghum? The answer (as usual) contains many variables, with both pros and cons to weigh. Space is at stake and plants naturally expand to fill up the available space, but just as important is the competition for nutrients and water. Depending on seeding rate, space can be less of an issue because of the climbing nature of the cowpeas. They use the sorghum stalks to climb to sunlight, a tendency that is enhanced by their general shade tolerance and ability to wait it out, flourishing in the canopy until they are able to reach the light.

According to *Progressive Forage Grower*, “Intercropping is a system of growing two diverse species of crops on a piece of land at the same time with the assumption that they improve the efficiency of using both above-ground and below-ground resources compared to growing them separately. As a result, often the total productivity of an intercropping system is more than growing any of the component crops alone.” Strictly in terms of biodiversity, this is true. A mix of crops does produce a synergy effect, where the interaction of components improves the end result. It is also better insurance for the season, since environmental conditions that harm one of the species may not affect the other one. Legume taproots are also quite different from the lateral branches of a sorghum plant’s root system. Plus, the interplanting practice, with its varied growth styles, ensures more ground coverage from the outset.



It is important to know, however, that the legume is going to take up physical room and use resources that are likely to be limited at some point (such as moisture and nitrogen). Despite appearances of large amounts of material from both species, the sorghum is by far the high yielder in this relationship. Dry matter makes up a greater proportion of the fresh weight of the sorghum than the cowpeas, so every cowpea plant that takes the place of a sorghum plant or inhibits its production potential is a reduction in yield – however minor.

If you plant a straight stand of forage sorghum, you get greater yield but can expect less protein with adequate moisture and fertility you can typically get a greater dry matter yield per acre and the protein percentage in the sorghum forage will depend on nitrogen fertility **(meaning you may need to supplement protein depending on your livestock classification and needs)**. If you include a legume like cowpeas in the mixed stand, you can typically raise the crude protein percentage of the forage mix, but your overall dry matter tonnage per acre of the mix will be lower because the dry matter level per acre of the legume is less than that of the sorghum, and to accommodate both species you have lowered the population of sorghum plants per acre in the mix. So you will need to plant more acreage to get the same amount of dry matter forage. If you plant a mixed stand, you can increase protein by several percentage points, but will need to plant more acreage to get the same amount of forage.

Either way, protein/nitrogen costs money. None of this is to say you shouldn’t do it, however. You just need to be aware of the likely protein-yield trade-off and figure out if your soil and climate allows you to supply enough fertility to bump the yield up a little bit.

It comes down to asking yourself, how much benefit are you gaining either way? If you were to measure it, you are likely to gain less in protein on a dry matter basis than you are losing in overall dry matter production. Of course, protein is a much smaller component of dietary needs than carbohydrate energy, so the comparison can get complicated.

In most forage combinations, the addition of a legume or other species added for its high quality (protein, sugars, etc) tends to detract from yield. We see this in many marriages, from pea-oat mix to triticale combined with annual ryegrass for its higher sugars. Yet these mixes continue to thrive in popularity in certain situations,

thanks to their elevated quality and feed value. (Quality is a relative term, though, and this depends of course on how you define value, what is the main emphasis in your ration, and whether it is more economical for you to buy or grow various components of the feed). In general, legumes are considered more digestible and high in protein, but are often so rich that they need to be supplemented with plenty of carbohydrates and digestible fiber to complete the diet.)



The key is to include enough fertility and a high enough rate of your “quality additive” to make a difference as a significant part of end yield – considering that the legume/ryegrass/etc. will likely be lower in dry matter content. The nutrients it contributes are, in the end, on a dry matter weight basis.

Forage sorghum is a quick starter, faster than Master-Graze tillering corn, which we have evaluated in combination with cowpeas for several years. It will be able to compete from early growth and may even be too competitive with the cowpeas if the rate is too high. It also grows efficiently with smaller amounts of nitrogen and water. Sorghum alone will likely have a higher number of leaves, tillers, and taller plants, just because each plant has more space to grow.

Grow for your soils first

On average, cut back both the sorghum and the cowpeas to 50-70% of the recommended straight stand seeding rate. How much you cut it back depends on what your soils can support – what is the soil type, fertility, moisture, and soil organic matter? What does the rest of the rotation look like? On droughty soils with lower fertility and moisture availability, for example, cut back the rate the most, in order to allow the most possible resources for each plant. The poorest soil should have the highest ratio of cowpeas to sorghum, since the sorghum is the heavier feeder of nitrogen and other soil resources.

Adequate fertility (you’re growing two crops, after all)

To push early tillering and yield of the sorghum, the field needs adequate nitrogen. Focus especially on boosting nitrogen on soils where manure was not applied and soil organic matter is low. Although cowpeas are a nitrogen-fixing legume, it takes time for the Rhizobium bacteria to infect the soybean root and for the root to develop nodules and begin providing nitrogen to the plant. The exact time period will vary depending on the type of inoculation and upon the soil conditions of temperature and moisture (inoculate with peanut inoculant for best results).

Typically it takes about 21 days to establish nodules, which house the rhizobium bacteria and then begin to fix nitrogen. So in the first 15-30 days, the cowpeas are growing rapidly and taking up free nitrates in the soil and directly competing with the sorghum for this soil-available nitrogen. This aggressive growth period for the cowpeas coincides with a critical stage for the sorghum, when the sorghum plant begins to tiller, and the sorghum should have enough fertility during this time. Also consider that your sorghum will have a relatively short growth span (we recommend either a short season sorghum such as AF 7101 with 50 to 60 days to boot stage/82 to 85 days to soft dough stage, or a full season variety such as AF 7401 with 110 to 115 days to soft dough stage), and there will be less N release from soil organic matter than there would be over the longer lifespan of a full-season corn crop.

Besides the quality boost – why do this?

Organic and conventional growers will benefit the most. For organic growers it allows them to plant the forage sorghum in 15 inch rows which they otherwise couldn't do, because of the need for weed control in straight forage sorghum. For conventional clean till and no-till farmers this allows them to skip a residual broadleaf herbicide or selective grass and broadleaf herbicide since the cowpeas smother weeds. Cowpeas' broad leaves do a good job filling in this space and shading out weeds – yet another benefit to outweigh the competition they pose to the sorghum. As the crop grows, the vines can easily climb and twist in any direction to find the light, naturally filling the blank spots. Cowpeas are also a better fit with one-cut forage sorghum than the more commonplace mix with sorghum sudan, since their regrowth can be poor.

We found the cowpeas especially helpful for weed control when mixed with the MasterGraze tillering corn. So, it turns out that the choice all comes down to your feed needs, your acreage, your goals, your soil, and a host of other factors unique to your farm.

Weather is likely to be the biggest influence (and the biggest unknown) in the outcome. Forage sorghum and cowpeas are an innovative and balanced mix that can round out the quality profile of the sorghum, but like every other crop, finding its proper placement is key.

Seed Drill Calibration

Wear and tear on a seed drill can have a huge effect on the setting, and with any drill, you never know what you are putting down until you calibrate by hand. It's also important to check the closing wheels. If they have too much play, seed may not be getting placed deep enough with good coverage, especially in dry ground.

Calibration of equipment by trial and error as you plant several acres can be costly in many ways. Seed lots and species vary in their flowability. To calibrate your seeding equipment right, all you need is a calculator, measuring tape, a small accurate scale, and something to collect seed before it is planted. A postage scale or dietary scale are adequate. It really does not take a lot of time and pays off in the big picture.

Keep in mind...

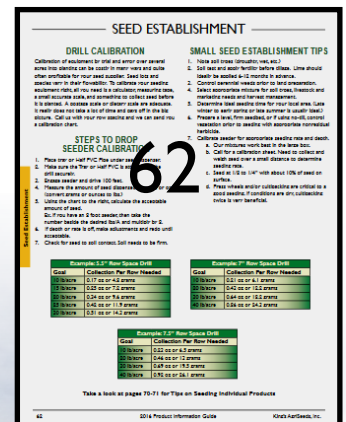
- The drill does not have mixtures on the chart
- Charts on a drill are not as accurate after many acres of use
- Check with the drill manufacturer to get recommendations
- Every lot of seed flows different
- Calibration saves money and pays

Want to go Paperless?
 Email us at info@kingsagriseeds.com and let us know if you want to be added to our E-Newsletter list rather than receiving a hard copy.

Visit KingsAgriSeeds.com for consistent blog posts

Find us on Facebook to view pictures, videos and educational tips related to forages and cover crops

See Page 62 of our Product Info Guide for Seed Drill Calibration Info!



“Calibration of equipment by trial and error as you plant several acres can be costly in many ways.”

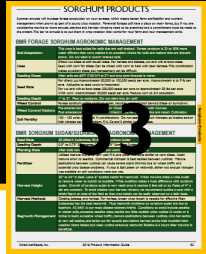
THIN ALFALFA STANDS?

Evaluating thin alfalfa stands can lead to critical decisions about summer annual forages. If your stand is not thick enough (approximately 40 stems per square ft according to Dr. Marvin Hall, Penn State University), consider interseeding a summer annual such as sorghum sudan or sudangrass, or rotating to Masters Choice corn for silage.

Success for Summer Annual Alfalfa Interseeding

1. Ensure that a residual herbicide program will not impact your summer annual choice.
2. Confirm minimum daily soil temperatures have reached 60 degrees F and predicted to stay warm. In most years this usually means taking two aggressive cuts before seeding or delaying the first cutting.
3. Prior to seeding, control grasses and weeds with an appropriate non residual herbicide or if organic, consider a light disking. Summer annuals do not interseed well into grasses or weeds but work well seeded into alfalfa and red clover.
4. No-till approximately 1/2 to 2/3 of suggested full seeding rate depending on alfalfa density.
5. Seeding depth is critical
Sorghum sudans – Seed into moist soil at a minimum of 1" depth and a maximum of 2". If soil is dry, risk is very high.
Sudangrass – Seed into moist soil at a minimum of 1/2" depth and a maximum of 1". If soil is dry, risk is very high.
Teff – Broadcasting and cultipacking may be as effective as a very shallow no-till seeding. The key is timing before a nice rain. Risk is high, but the seed cost is low.
6. Time alfalfa harvest as normal, but raise cutting height to a 4" minimum.
7. Assuming interseeding was successful, apply up to 25-35 units of Nitrogen and some sulfur after first cutting on the newly seeded summer annual. If soil is healthy and high in organic matter, you may not need any nitrogen. Do not over apply nitrogen or manure.
8. Test forage before feeding, including NDF digestibility and nitrates.

Consult Page 53 of our Product Information Guide for management info on Sudangrass, Sorghum Sudan and Forage Sorghum!



BMR Gene 6 Forages!

BMR Gene 6 is the most pronounced of the BMR Genes. For your cows, this means higher digestibility, higher energy, higher intake and higher production versus Non BMR and BMR 12.

BMR Gene 6 Highlights

FORAGE SORGHUM - SILAGE, HAYLAGE (BOOT STAGE)

AF 7401, 7101, 7201, 7102, 7202 and Silo Pro-

Take your pick of these short, medium and long season forage sorghums for top production on tough corn ground! High energy and sugars make fantastic silage for growing heifers, backgrounding calves or milk cows. The 7401, 7102 and 7202 all have the dwarf characteristic for improved standability.

SORGHUM SUDAN - BALEAGE, HAYLAGE, GRAZING

Sweet Six - The dry stalk characteristic of this SSX make it a great option for faster drying baleage and haylage!

AS 6401 - High disease tolerance for lower/wetter areas. Also the fastest starting for late planting.

AS 6501 - Harvesting late? This photo period sensitive won't produce a head until late in the season allowing it to maintain quality.

SUDANGRASS - DRY HAY, BALEAGE, HAYLAGE, GRAZING

AS 9301 - Dry stalk variety with fast dry down for baleage, haylage, dry hay or grazing!

AS 9302 - Similar to 9301 except with the brachytic dwarf characteristic that packs a lot of leaves on a short stalk. Great grazing option!



Exceed BMR Millet

Exceed BMR Millet continues to be a standout summer annual crop. High disease resistance, increased palatability, high yields and great regrowth combine to make it a top choice in the hybrid pearl millet category.

Agronomic Traits

- Dwarfing gene increases leaf to stem ratios, improves standability, and adapts to heavier grazing pressure
- Excellent disease resistance package
- Rapid growth and regrowth
- Drought stress tolerant
- Extensive tillering capacity
- Extreme leafiness allows for faster dry-down for hay
- Flexible to various soil pH ranges; handles lower pH acidic soils
- Works well as part of a summer annual mix or in a straight stand for renovating pastures, before a new seeding of perennials.

Recovery After Cutting: Good

Leaf Disease Resistance: Excellent

Drought Tolerance: Excellent

Standability: Good

Nutritional Characteristics

- BMR gene technology for improved feed intake and digestibility
- Excellent forage producer with superior animal performance, enhanced rates of gain and milk yields per pound of forage produced
- No HCN or risk of prussic acid
- BMR gene technology reduces plant lignin content versus conventional pearl millet hybrids
- Low lignin content in the stems and leaves results in a highly digestible forage with improved nutritive quality



Crabgrass

Mojo is Barenbrug USA's new Yellow Jacket® Coated,



improved crabgrass that thrives during the hot dry months. Crabgrass is a high quality, high yielding summer annual forage that is excellent for grazing and haying. This variety of crabgrass produces a highly digestible forage (up to 73% NDFd) and high crude protein content (25-30% early season; 15-20% mid-summer; 10% late season). Areas of adaption extend from Nebraska, south and east to the Gulf and Atlantic coasts. If your summer pasture has lost its appeal now is the time to get your mojo back!

Traits

- Drought tolerant
- Good summer production
- High quality summer forage.
- Easy doublecropping with cool season annual grasses and legumes.
- Self-reseeding if allowed to go to seed
- Widely adapted

Establishment

- Plant after soils are 50 degrees and rising
- **Seeding rate:** 5-8 lbs/A, large box
- **Depth:** 1/4" on tightly packed soil



Certified Organic?

We have Certified Organic BMR Sudangrass, Forage Sorghum and others!

Success Story?

Mail or email your forage success story and receive a prize.

Your success could help someone else. Share it!

Summer Cover Crop/Grazing Mixtures

Summer Feast— A simple but effective mix of hybrid pearl millet and brassica. High yielding forage and deep tap root!

Ray's Crazy Mix— A 7-way mixture of summer annual legumes, brassicas and grasses. Equal parts forage and cover crop, this mixture is a great way to grow soil organic matter, improve tilth and increase the overall health of the soil while providing a high energy forage for livestock.

Summer Solar Mix— Just for cover! A mixture of multiple summer annual legumes and aggressive biomass covers, this mixture builds soil health fast. Expect available N for the following crop as well as improvements to soil tilth and organic matter. The multiple flowering species are also great pollinator boosters!

Custom Mixtures— If we don't have what you want, we can make it for you! Custom mixtures are available through our network of dealers.



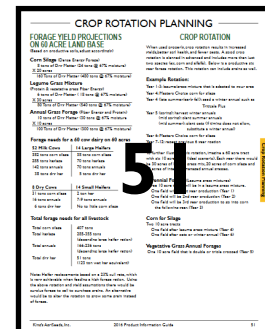
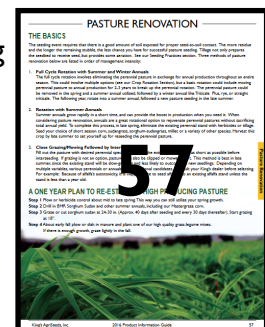
Custom mix 55 days after planting—
Cowpeas, Brassicas, Sorghum Sudan

Late Summer- Arriving Shortly

Quickly approaching June, we will slip right through summer and be to mid August before we know it. We have a chance this spring to evaluate our current perennial stands and begin planning our rotation accordingly. That rotation may include rotating some worn out pastures or hay ground into annuals and rotating some annual ground into long term perennial production. Considering your options now and answering a few questions may help you determine your late summer needs early to eliminate hasty decision making and ensure you have a solid plan with the products available to carry it out.

- What summer annual should I plant to allow for a late summer perennial seeding?**
- Will the perennial stand be utilized for mechanically harvested forage or grazing?**
- Will I be harvesting for hay, baleage or baylage?**
- Considering my other crops, do I need energy (grass) or protein (legumes)?**
- Will your herbicide program allow for a late summer perennial seeding?**
- What product is appropriate for the soil type of the perennial area selected?**

Pages 51, 52 and 57 in the Product Guide can help you in this planning process.





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High Energy Forages and Soil Building Cover Crops

Having nightmares about drought? Weather proof your forage supply with crop rotation!

What do experienced producers say?

"The most appealing thing about the sorghum is the drought tolerance..."

"When the heat comes, the corn stops, but the sorghum just smiles and keeps growing..."

"The drought tolerance and yield of forage sorghum will amaze you..."

"I get tonnage on the tough ground with 1/3 the cost..."

"Sorghum gives you a chance to make a good crop in a bad (dry) year..."

"The biggest advantage to sorghum is tonnage in a dry year..."

What could crop rotation do for you?

"With hot dry weather forecasted for the upper midwest and northeast, this is a crop to seriously consider this year. Yet sorghum species does not do well in cool wet conditions. By growing both corn and sorghum you reduce the weather risk and still have quality forage."

- Tom Kilcer, Advanced Ag Systems, April 2016 Newsletter

