COOPERATIVE EXTENSION SERVICE • UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE • LEXINGTON, KY, 40546

AGRICULTURE NEWS

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AGRICULTURE & NATURAL RESOURCES

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Campbell County Farmers,

I certainly don't need to tell you that the weather has been awful for accomplishing most anything related to agriculture or horticulture this spring, much less doing it in a timely fashion. My grandfather once told me that "you can do more with it (rain) than you can without it." Wouldn't it be nice to have a normal growing season? This newsletter will address several timely topics that will hopefully take our mind off of the weather and more towards things that you can manage. Please take the opportunity to participate in our upcoming field days and tours. Campbell County is once honored to have a summer intern. I hope that each of you will have the opportunity to meet Lindie this summer.

Don Sorrell
Campbell County Extension Agent for Agriculture and Natural Resources

My name is Lindie Huffman, and I am the summer intern for the Campbell County Extension Office. I am currently a senior at the University of Kentucky, where I am studying Agricultural Education with hopes of one day pursuing a career as a high school agriculture teacher. Agriculture is a true passion of mine and I love sharing my experiences and helping others to see the value that agriculture provides to everyday life. I have utilized many of the extracurricular activities at the University to provide myself with an outlet for spreading my love of Agriculture. I have served as Captain of the UK Livestock Judging Team, President of UK Block & Bridle, and have also been an active member of the UK Agriculture Education Society, as well as the Honor Fraternity Alpha Zeta.

I have gained many experiences within various fields of agriculture enterprise to further my knowledge and skills so that I may assist and educate others. Examples of jobs I have had are: UK Vet Sciences, Tractor Supply customer assistance, garden center manager, sales clerk and office assistant at Blue Grass Stockyards, and the UK Meat Science Laboratory, not to mention my many years of experience on our family farm where we have a commercial cow-calf herd and have raised tobacco and hay for many years.

This summer I will be pulling from my library of agricultural skills to assist various agents with planning and conducting special projects. Some of the programs I will be assisting with this summer is planning an agricultural tour through various portions of Ohio, including Amish Country; researching and developing a marketing plan for the Campbell County Freezer Beef Program; assisting with planting and harvesting of the Giving Garden; and also in conducting the Backroads Farm Tour. I have already had the opportunity to assist with different programs in 4-H and Horticulture. The staff at the Campbell County Extension Service have plenty of activities planned for me this summer. Thus far I have conducted a few farm visits and met with local producers to learn about their operations and help them in the planning of goals for their enterprise. On one of these visits I helped to establish a 14-acre plot of alfalfa by spreading fertilizing, disking, and cultipacking. I am eagerly anticipating the variety of tasks on my agenda this summer and hope that I am able to meet many different people from the county and learn all about what Campbell County has to offer!

Banner Year for Carpenter Bees?

There have been lots of complaints about carpenter bees this spring. Carpenter bees closely resemble bumble bees but have bare, shiny black abdomens. Bumble bees have hairy abdomens with at least some yellow markings. Bumble bees nest in the ground, while true to their name, carpenter bees chew tunnels into wood to construct nesting sites.

Carpenter bee gathering nectar and pollen

Carpenter bees spend the winter in their galleries and begin to feed on nectar and pollen around early April. Now, they are starting new tunnels or expanding old ones in order to raise a brood of about 6 larvae during the summer. The entryway is a round 0.5 inch diameter hole in the underside of a soft wood board. The gallery soon turns 90 degrees and follows the wood grain. Sawdust accumulates beneath the tunnel opening as the female extends it. The bees prefer bare or weathered wood but a coating of paint or stain will not guarantee the wood won't be used. Liquid sprays of carbaryl (Sevin) or a pyrethroid (e.g., permethrin or cyfluthrin) can be applied as a preventive to wood surfaces which are attracting bees. Residual effectiveness of these insecticides is often only 1-2 weeks, however, and the treatment may need to be repeated. Tunnels which have already been excavated are best treated by puffing an insecticidal dust (e.g., 5 percent carbaryl) into the nest opening.

Fresh carpenter bee entry hole

Aerosol sprays labeled for wasp or bee control also are effective. Leave the hole open for a few days after treatment to allow the bees to contact and distribute the insecticide throughout the next galleries. Then, plug the entrance hole with a piece of wooden dowel coated with carpenter's glue, or wood putty. This will protect against future utilization of the old nesting tunnels and reduce the chances of wood decay.

Although carpenter bees are less aggressive than wasps, female bees provisioning their nests will sting. Treatment is best performed at night when the bees are less active, or while wearing protective clothing.

Aerosol wasp and hornet killers shoot a long jet of spray but the nimble bees are challenging targets and the cost per bee can be very high.

LOW SOIL PH REDUCES FERTILIZER EFFICIENCY

Failure to maintain soil pH at proper levels decreases fertilizer efficiency resulting in lower yields and wasted money. Uptake of the major soil nutrients – nitrogen, phosphorus and potassium – is optimized at a soil pH range of 6.3 to 7.0. When the soil pH drops below this range, N, P & K uptake efficiency is reduced.

According to UGA Extension Forage Agronomist Dennis Hancock, nutrient uptake efficiency on soil with a pH of 5.6 is reduced 35% for N, 50% for P and 10% for K when compared to uptake at a soil pH of 6.2. For hayland, this can result in lost fertilizer value totaling $60 or more per acre annually (see table).

Comparison of annual value of decreased fertilizer efficiency in a soil with a pH of 5.6 relative to a soil with a pH of 6.2

Nutrient	Amt. lbs/ac/yr	Price ($/lb)	Decreased Efficiency	$ Value of Decrease
N	200	$.60	35%	-$42
P_2O_5	50	$.30	50%	-$8
K_2O	150	$.67	10%	-$10

Source: Dr. Dennis Hancock, UGA Agronomy Dept.

In most areas of the country, the prorated annual cost of aglime needed to raise a pH of 5.6 to 6.2 would approximate $15/acre or less. Keeping in mind potential yield loss, wasted value of fertilizer applied and the positive economics of applying lime, one can easily see the significant benefits of maintaining proper soil pH in pastures and hay fields.

Summer Annual Grasses

A very wet spring has kept many Campbell County farmers from seeding cool season grasses and legumes. With the first cutting hay crop looking to be approximately 50% of normal and with low stored hay stocks this could be another challenging year for harvesting enough forages for winter feeding needs. We will need a very good summer and fall growing season to make up for our yield losses due to excessive spring rains.

Summer annual grasses can be considered a temporary solution to your summer and winter forage needs. They can be expensive to produce (primarily because of the need for a cultivated seedbed and the need for nitrogen fertilizer), however, if properly managed, they can provide high yields of good quality forage in a short period. Summer annual grasses have excellent potential for hay (especially if you have the option of harvesting as high moisture hay or silage) and make for excellent grazing. The following is a summary of some of the summer annual grasses that you may want to consider.

Sorghum-Sudan Grass (left) and Teff (right) three weeks after seeding

Sudangrass hybrids are rapidly growing annual grasses of the sorghum family. They are high yielding and well suited for grazing. They regrow quickly after harvest and can be grazed several times during summer and early fall. They are more likely to contain toxic levels of prussic acid after a frost and are difficult to cure for dry hay.

Millets are small-seeded, fast-growing summer annual grasses. They have smaller stems and are more leafy than the sorghum-type plants. Although they are lower yielding and somewhat slower growing, they do not have a problem with prussic acid poisoning. Pearl and foxtail millets are used as forage in Kentucky. Pearl Millet is higher yielding than foxtail millet and regrows after harvest if a 5-inch stubble height is left. Dwarf varieties, which are leafier and better suited for grazing, are available. Foxtail Millet (German millet) is shorter growing and finer stemmed. This makes it easier to harvest as hay. However, it is the lowest yielding of the summer annual grasses and will not regrow to produce another harvest.

Teff is relatively new warm season annual grass. A few local farmers have experimented with this forage during the past couple of years. It has the greatest potential for dry hay production than any of our other annual grasses. **See the enclosed article for more information on growing teff.**

These crops can be planted from late May until the end of July. Of course, later plantings reduce the number of harvests and total yields. Having two or more plantings at different dates can help with managing harvestings. Except for teff, the seed can be broadcast and lightly disked into the soil or seeded with a grain drill into a well-prepared, firm seedbed. Seed can also be planted with a no-till drill. No-till planting usually requires the use of a herbicide to control existing vegetation. This is especially true when seeding into a pasture or hay field.

Summer annuals need a good supply of nutrients to make high yields. Lime, phosphorous, and potassium should be applied according to soil test results. Nitrogen is important and should be added at the rate of 180 to 300 lbs. of 34-0-0/or 100 to 200 pounds of urea per acre at planting time. If additional harvests are planned, apply one half the above nitrogen rates per acre after each harvest will increase the yield.

Do not graze stunted or frost-damaged sudangrass or sorghum x sudangrass hybrids because of the danger of prussic acid poisoning. The best practice is to remove animals from these areas before frost is anticipated. They can be turned back in to eat the residue after a killing freeze and the leaves have turned brown (two or three days later). In addition to grazing, these crops can be harvested as green chop, silage, or hay.

Teff as a Summer Forage

What is it? Teff, also referred to as Summer Lovegrass, is a warm season annual native to Ethiopia. It is a fine-stem, leafy grass with a shallow root system. The seeds are extremely small with each pound containing approximately 1.3 million seeds. I It is well adapted to KY's climate and has no disease or insect problems.

Varieties: There are several varieties on the market including Tiffany, Excalibur, Dessie, Corvallis, and Pharoah. Seed is available, both raw and coated.

Establishment: Seeding rates vary from 4-6 lbs/acre for raw to 8-10 for coated. Since seeds are so small, seeding depth is critical (1/8—1/4 inch and not over 1/2). Best results are usually observed when seeding (broadcast or lightly drilled) on a firm, well-prepared seedbed followed by cultipacking. Soil test to determine Phosphorus and Potassium needs. Nitrogen at rates of 30-50 pounds (90 to 150 lbs of 34-0-0 or 60 to 100 pounds of urea) per acre are suggested at seeding. High rates of nitrogen increases lodging which can be a major problem with this grass. If the higher rate is used at establishment, no additional nitrogen would likely be needed following first harvest. To reduce the lodging, the lower rate could be applied at seeding followed by an additional (90-120 lbs. 34-0-0/acre) after the first and second harvest.

Harvesting: Since Teff has a tendency to lodge as seedhead formation begins, consider harvested for hay or silage in the late-vegetative or very early head stage. With adequate growing conditions, this will occur approximately 45-50 days after seeding with 30—40 days between cuttings. Seedings made in late May can normally be cut 3 times; some have gotten 4. Yield per acre has ranged from 3.5 to over 6 tons per acre. It is fine stem—leafy and usually dries much quicker and has better quality than sorghum-sudan hybrids; however, yields are often only half of sorghum-sudan hybrids.

Quality: Quality of Teff, like all other forage plants, varies with stage of maturity. Crude protein usually averages averaged 12-16%.

Use: The best use of teff is for hay. It can be used as a grazing crop but with it's very shallow, fine root system, plants are very easy to pull up. For this reason the first grazing should not be grazed. Once the plants have established and have a good root system and are anchored, it can be grazed; however, damage can occur.

INCREASE PASTURE PROFITS USING CROSS FENCES

Electric fence is the easiest and cheapest way to increase production from summer pastures. Dividing pastures with electric cross fences gives you more control of when and where your cattle graze. It helps you encourage cattle to graze pastures more uniformly and completely, including areas they normally avoid. And, it can help you improve the health and vigor of your grass by giving it time to recover and regrow after each grazing. As a result, your grass production and pasture carrying capacity will increase.

I'm sure you've seen many ads promoting high-powered, high tensile, imported electric fencing systems. In fact, I encourage using these systems in many situations. But, cross fences do not need to be permanent, nor do they need to be expensive. This is especially true if you already have electric fencing your animals respect. And using fencing you already have gives you an inexpensive opportunity to experiment with where you might eventually place a more permanent cross fence.

The electric fence that keeps your cows on stalks during winter can give you this inexpensive opportunity to try some cross fencing where you have been reluctant to try it before.

So, as the rapid spring growth of your pastures begin to slow down, use your winter electric fence to try some extra summer cross fencing of your pastures. More grass, better gains, and better profits might be the result.

PASTURES: TO CLIP OR NOT TO CLIP?

Once that grass plant produces a seed head, it stops producing vegetative tillers and the quality of the plant declines as fiber percentage increases, while crude protein and energy percentage decreases. Most, if not all, beef cattle owners are going to have to deal with seed heads in their pasture. Most producers' first option is to clip those seed heads off. This is a necessary pasture management chore isn't it?

We have had several interesting discussions about clipping pastures recently. As a result, we are "refining" our recommendations about pasture clipping, and adding some qualifications. While it is true that clipping seed heads will allow the plant to go back to vegetative growth and will result in higher quality forage, it is also true there is a cost associated with clipping pastures. The Kentucky Custom Rate publication (2008) says bush hogging costs about $15/acre. To get a payback from that $20/acre the beef cattle producer must be able to utilize the benefits that clipping is producing. Here are some considerations:

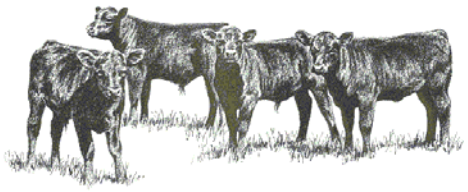
- Do my cattle need the increased quality that clipping seed heads will produce? A vegetative plant is high in crude protein. A beef stocker may need this kind of quality. A first calf cow may need the higher quality forage. Does a mature cow in milk need vegetative quality pasture?
- Instead of clipping seed heads in all pasture paddocks, could some paddocks be dropped out of the early season rotation and used for hay production? If the paddocks that remained in the early season rotation could then be subdivided, in effect increasing the stocking density, the cattle would graze more evenly with less selection, and minimize the need for clipping.
- If economics dictated that pastures could only be clipped one time per year, when would be the best time to clip? Clipping in late June would insure that re-growth is vegetative and would prepare pastures for increased summer growth.
- On the other hand, that $20/acre cost for clipping off seed heads might also be looked at as management that is necessary to open up the pasture canopy, let sunlight in and insure that lower growing white clover stays in the pasture mix.
- Clipping might be important in your management scheme to allow grass plants to continue vegetative growth and tillering to thicken the sod base and fill in bare areas, or simply as management to hasten recycling of plant nutrients in the pasture paddock. Some may even view clipping seed heads as giving an added benefit of reducing some weed pressure in pasture paddocks.

The point here is that the beef producer should know what they are trying to accomplish when pastures are clipped. Clipping should meet some management objective.

BEEF COW NUMBERS DECLINE DURING 2010

In late January, USDA released their annual Cattle Inventory report, which estimated the size of the US cowherd. As expected, beef herd liquidation continued during 2010 despite the stronger fall markets. US beef cow numbers fell by 1.6%, which was largely consistent with pre-report estimates. The number of heifers held for beef replacements may have been the biggest surprise of the report, falling by about 5%. With fewer cows and less heifer development, the 2011 calf crop will clearly be smaller than 2010.

Of course drought was a factor on many Kentucky beef cattle operations last year. Many began feeding hay in mid-summer and reports of hay shortages are becoming more common. This was no doubt part of the reason why Kentucky beef cow numbers continued to decrease. Also, rising production costs and increased competition for land for row crop production were at play. Kentucky beef cow numbers were estimated to be down by 47,000 (-4%). Kentucky's cow herd has decreased by 184,000 cows since January of 2007.

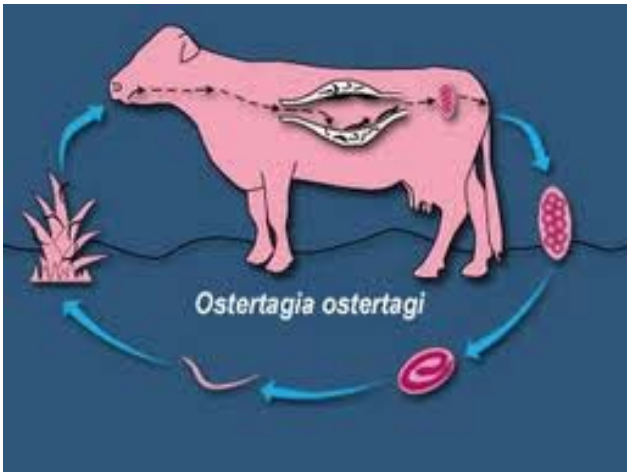


Since cow herd expansion is clearly not underway, it is worth revisiting some cattle cycle basics. The initial sign of expansion is an increase in heifer retention rates. Once this happens, it takes approximately two years for those heifers to be developed, bred, and to wean their first calves. Therefore, even if expansion were to begin in 2011 (and I want to stress the "if"), we are still at least two years away from seeing larger calf crops. So, while there are some clear market risks, including beef demand and grain prices, beef supplies should remain very tight over the next few years.

Do You Know the Enemy? Don't Let the Brown Stomach Worm's One-two Punch Knockout Your Profits - *Dr. Michele Bilderback, Extension Veterinarian, University of Kentucky*

It is important to understand the life cycle of cattle's most common problem parasite, the brown stomach worm (Ostertagia ostertagi). It thrives in temperate climates such as Kentucky's, especially in the moist and cool weather we usually experience in the spring. However, it is very susceptible to hot and dry conditions- a fact we can use to our advantage when choosing when to deworm.

This roundworm ("nematode") goes through a developmental process of 4 stages of larva (immature worm) and 1 egg-laying adult stage. Adult worms live in the abomasum or "true stomach" of a cow or calf for approximately 30 days where they reproduce and lay eggs. These eggs are passed out on the ground in fecal material and then go through a two week developmental stage while feeding on the manure. Larvae can survive up to a year in fecal pats, even in drought conditions or underneath snow. When the immature worm reaches the L3 stage, it must get away from the fecal pat and out on the forage to be eaten by cattle. Since the larva have no legs, they are forced to move in a film of moisture and generally move less than 1' away from the fecal pat and no more than 4" up the forage. One drop of dew may contain hundreds to thousands of immature larvae.



Once swallowed, the disease process begins. Young cattle (7-15 months old) experience "Type I Ostertagiasis" in which the larvae enter the stomach glands, grow and become adults in 3 weeks. When the adult worm leaves the gland, it tears its way out and begins feeding on the lining of the stomach. This destruction of the gastric glands makes it very difficult for the animal to digest protein which in turn causes diarrhea. Older cattle (12-20 months old) experience a "Type II Ostertagiasis". In this case, the L3 larvae migrate to the stomach glands, develop into 4th stage larvae then enter a sort of hibernation known as "hypobiosis". The immature worms remain in the stomach glands while the weather is extremely hot and dry outside, waiting for better conditions for survival of their eggs. When the weather gets cooler and wetter in the fall, all of the dormant larvae that have accumulated in the stomach glands tear out all at once, causing severe, rapid and sometimes catastrophic damage.

Typical clinical signs of Type I (younger cattle) and Type II (older cattle) disease include:

* Off feed (anorexia)

* Diarrhea (and usually dehydration)

* Weight loss/Poor doer

* Rough hair coat

* Bottle Jaw due to poor protein digestion

* Anemia/Pale mucous membranes

* - Subclinical Disease - May be most economically important because there are no obvious signs of disease yet gain is 0.2-0.4 lbs /day less than it would be without parasites.

Control of this parasite involves treating to kill the adults, the larvae in the stomach glands as well as any new larvae ingested from the grass. Broad spectrum dewormers known as "macrolides" (Cydectin, Dectomax, Ivomec, Eprinex) are very effective and last several weeks so incoming larvae are killed before they reach the stomach glands. The "benzamidazoles" (Valbazen, Safeguard, Synanthic) are also very effective but short acting. In Kentucky, research has proven late June to early July to be the optimal time for deworming of cows and calves. All young stock under 2 years old should be dewormed again in the fall since they are most susceptible to parasite problems. Although adult cattle are often considered "immune" to worms in the stomach, these adult worms will reproduce and lay eggs during times of stress, especially at calving. Therefore deworming of all cattle is essential to decreasing pasture contamination.

Campbell County Cattle Association Update
Newsletter - May, 2011
Ron McCormick, President
859-635-2745

I want to report to our membership a few pieces of information about your organization and activities that are being planned.

Membership - I am happy to report that you have exceeded last year's membership by four, giving us a grand total of 93 members for the year. Thanks for supporting our efforts to promote our industry.

Animal Shelter Grant - The KCA foundation is offering grants to animal shelters made possible by a donation by an individual cattleman from Boyd County. We have provided the appropriate information to our local animal shelter.

Ultrasound KBN Program - This program to measure back fat is available to individual producers. If interested, please feel free to contact me for important information.

KBC Grant - the CCCA applied for and received a grant to purchase beef for workshops to promote the consumption of beef. The CCCA, under the leadership of Don Sorrell and the Extension Service, provided two workshops in March and April with over 70 people participating. We will be providing a final event at the Backroads Farm Tour on July 23 with cooking and sampling of prepared beef at Ron McCormick's farm with several members assisting. The CCBA is providing the locally grown beef for these projects.

Amish Tour - Our annual tour is planned for July 27-29 to Amish Country, so mark your calendar. See the enclosed flyer for more information. Be sure to call in your reservation.

Long Horn Field Day - We are planning a field day to a Long Horn cattle operation and other sites in early Fall. Planning is still under way.

Scholarships - Five $1000 scholarships are available through the KCA for high school seniors who have graduated and will be attending a Kentucky college. If you know someone who is interested, have them contact Ron McCormick - 635-2745 for the application. The deadline is June 1, 2011. I am sorry for the late notice, but I received the information on 5/18/11. Keep this in mind for the next year as these scholarships are offered annually.

Campbell County Cattle Association
Newsletter - May, 2011