



From the Ground Up

Bath County Agricultural Newsletter

June

Robert Amburgey

2023

*Bath County Extension Agent for Agriculture
and Natural Resources*

Cooperative Extension Service
Bath County
2914 E. Hwy 60
Owingsville, KY 40360
(606)674-6121
Fax: (606)674-6687
bath.ca.uky.edu
[LIKE US ON FACEBOOK:](#)
[BATH COUNTY AGRICULTURE](#)



PROGRAMS AVAILABLE:

**FOR MORE INFORMATION, YOU CAN CONTACT THE BATH COUNTY
EXTENSION OFFICE AT 674-6121**

CAIP Educational programs available:

- June 5 at 10:00 a.m.—Grazing math and common pasture weeds**
- June 5 at 2:00—Beef Cow management tips**
- June 6 at 4:00—Meeting the nutritional needs of grazing livestock**
- June 6 at 6:00—Fencing types and grazing systems layout and design**
- June 12 at 2:00—Meeting the nutritional needs of grazing livestock**

All sessions take place at the Bath County Ag Center

June 17th at 6:30—Bath County Cattleman picnic

July 10-15—Bath County Agricultural Fair

**RSVP TO THE BATH COUNTY EXT OFFICE AT
674-6121**



Ways to protect yourself from the sun

Source: Wayne Sanderson, professor and director of CARERC and SCAHIP

The sun is important for farmers' careers and livelihoods, but the sun's powerful rays do not always shine to your benefit. Since you spend most of your time outdoors, you are at increased risk of not only getting sunburns but also sunburns and skin cancers compared to other segments of the population.

While they may seem like a harmless part of your occupation, sunburns are your bodies' defense mechanism against too much sun and can cause your skin to prematurely age. Premature aging results in skin changes such as freckles, rough skin and wrinkles.

Sunburns happen when your body receives too much of the sun's radiation. Besides being painful, a sunburn can cause the skin to blister. This is a sign of a second-degree burn.

Skin cancers occur when our bodies get too many ultra-violet rays. The three most common types of skin cancer are basal-cell carcinoma, melanoma and squamous-cell carcinoma. Basal-cell and squamous-cell carcinomas are the most common kinds of skin cancers, and when caught early, the great majority can be cured.

Melanoma is far more dangerous, as it can spread to other parts of your body including your organs. If not caught early, melanoma can be life threatening and even deadly. Melanomas appear as tan, brown or black spots and often appear near a mole or dark spot on the skin.

While anyone can get skin cancer, those of you with fairer complexions are at the greatest risk. This is because your skin cells contain less of the brown pigment melanin, which helps block damaging UV rays. This means you get sunburns and freckles easier than other skin types.

It is important for you to be aware of the warning signs of skin cancer and perform a self-check each month for signs of a potential skin problem. Warning signs include changes in color, size and shape of moles or dark spots on your skin. These spots may also ooze or bleed or cause pain, itchiness or tenderness. Your hands, feet and under your nails are particularly sensitive to sun exposure.

The good news is you can lower your risk of getting skin cancer by reducing your exposure to the sun. The sun's rays are the most powerful between 10 a.m. and 3 p.m., so you may want to move field work to the early morning or later in the afternoon to avoid the sun. When outside, wear a wide-brimmed hat, long-sleeved shirts and pants. Use sunscreen with a sun protective factor (SPF) of at least 15 on any exposed part of your body. Reapply sunscreen throughout the day so the sunscreen stays effective. Remember to wear sunscreen regardless of the weather. The sun's rays are present whether the day is sunny or cloudy.

If you notice any changes to your skin, contact a dermatologist or your primary care physician.



University of Kentucky
 College of Agriculture,
 Food and Environment
 Cooperative Extension Service

CAIP EDUCATIONAL VIDEO SERIES

Program dates:

June 5

10:00

2:00



June 6

4:00

6:00



June 12

2:00

**BATH COUNTY
 EXTENSION OFFICE**

2914 E. HWY 60
 OWINGSVILLE, KY 40360

606-674-6121

ramburge@uky.edu



This video series is intended to provide CAIP applicants an opportunity to receive educational training that meets the CAIP program requirements.

You only need to attend one of the available sessions. Each session will last approximately 1 hour.

CAIP PROGRAM DATES AND TOPICS:

June 5	10:00 am	Grazing math and Identifying common pasture weeds
	2:00 pm	Beef Cow management tips
June 6	4:00 pm	Meeting the nutritional needs of grazing livestock and Identifying common pasture plants.
	6:00 pm	Fencing types and Grazing system layout and design
June 12	2:00 pm	Meeting the nutritional needs of grazing livestock and identifying common pasture plants

Cooperative Extension Service
 Agriculture and Natural Resources
 Family and Consumer Sciences
 4-H Youth Development
 Community and Economic Development

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.
 LEXINGTON, KY 40546



Disabilities accommodated with prior notification.

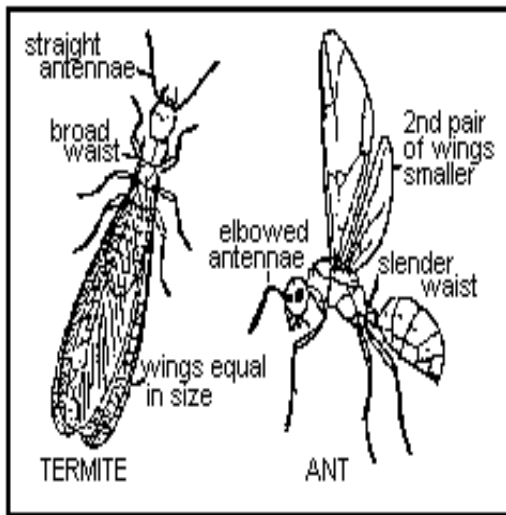
TERMITE SEASON

Termite season is upon us and unfortunately many of you will start seeing winged termites around the house or in window sills in the home.

The only good news is that many times these winged insects turn out to be winged ants instead of termites.

Termites can cause billions of dollars in damage each year. They mostly feed on wood, but also damage paper, books, foam board insulation and even swimming pool liners and filtration systems. Termites can damage living trees and shrubs, but are mostly secondary invaders.

Spring is typically when most people notice termites in and around the home. This is when the “swarmers” emerge to disperse and start new colonies. Swarmers inside the home do not eat wood and are best cleaned up with a vacuum cleaner, but they are an indication of an infestation.



How to tell winged termites from ants

If you see swarmers there are ways to determine if what you are seeing is termites or ants. Termites have straight antennae, uniform waist and wings of equal size. Ants have elbowed antennae, constricted waists, and forewings that are longer than hind wings. You can also bring samples to the extension office for identification. Swarmers are attracted to light and are often seen around windows and doors.

Other signs of infestation are mud tubes extending over foundation walls or sill plates. The mud tubes are about the diameter of a pencil. The tubes are constructed by the termites for shelter as they travel between their underground colonies and the structure.

Ridding a home of termites requires special skills. Knowledge of building construction is needed to identify the critical areas where termites are likely to enter. Many of these areas are hidden and difficult to find. Termite control also utilizes specialized equipment such as masonry drills, pumps, large-capacity tanks, and soil treatment rods. A typical treatment may involve hundreds of gallons of a termiticide injected into the ground alongside the foundation, beneath concrete slabs and within foundation walls.

In short, termite treatment is a job for a professional.

For more information on termites and their control, contact the Bath County Extension Office at 674-6121.

CARPENTER BEES BUZZING AROUND

Well, many of you probably have noticed large black bees buzzing around your house, deck or out-buildings. Chances are, these are carpenter bees searching for mates and favorable sites to construct their nests.

Carpenter bees resemble bumble bees, but the upper surface of their abdomen is bare and shiny black; bumble bees have a hairy abdomen with at least some yellow. Other than appearance, the two bees are quite different.

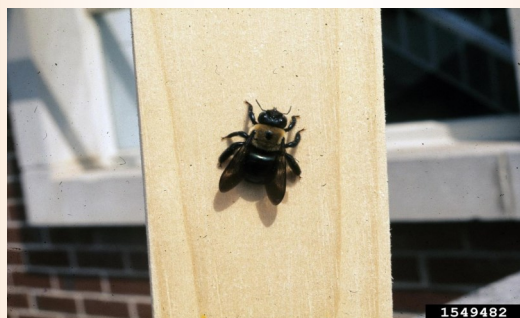
Bumble bees nest in the ground while carpenter bees tunnel into wood to lay their eggs. Bare, unpainted or weathered softwoods are preferred, especially redwood, cedar, cypress and pine. Painted or pressure-treated wood is much less susceptible to attack. Common nesting sites include eaves, window trim, fascia boards, siding, wooden shakes, decks and outdoor furniture.

Carpenter bees overwinter as adults in wood within abandoned nest tunnels. They emerge in the spring, usually; in April or May. After mating, the fertilized females excavate tunnels in wood and lay their eggs within a series of small cells. The entrance holes are perfectly round and about the size of your finger. The extent of damage to wood which has been utilized for nesting year after year may be considerable.

The best way to deter the bees is by painting all exposed wood surfaces, especially those which have a history of being attacked. Wood stains and preservatives are less reliable than painting. Garages and out-buildings should be kept closed when carpenter bees are actively searching for nesting sites.

Liquid sprays of carbaryl (sevin), or a synthetic pyrethroid (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 (5% Carbaryl) into the nest opening. Leave the hole open for a few days after treatment to allow the bees to contact the distribute the insecticide throughout the nest 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.



LIVESTOCK

PASTURE FLY CONTROL OPTIONS

by Lee Townsend

Eliminating or treating a pest's breeding site often is right at the top of the list of pest management options. It's best if the breeding site is very specific - like freshly deposited cow manure - the egg-laying site of choice for female horn flies and face flies. This allows the option of feed-thru larvicides (insecticides that control fly larvae or maggots) that pass through the digestive tract and are present at toxic levels in manure.



Active ingredients used as oral larvicides include the insect growth regulator methoprene (Altosid) and the organophosphate insecticide tetrachlorvinophos (Rabon). Insect growth regulators affect the development of larvae and prevent them from emerging as adults. In contrast, organophosphate insecticides kill by disrupting normal function of the nervous system. In either case, they must be present at or above levels in the manure that are toxic to the larvae. Either active ingredient can be formulated in several different ways and is available under several different brand names.

Methoprene - Altosid 0.5% Premix Dose or Altosid 0.1% IGR Block to prevent the breeding of horn flies in the manure of treated cattle. Dose rate 0.8 to 1.5 milligrams per 100 lbs body wt/ cow/ per day.

Rabon 7.76 Oral Larvicide Premix - to prevent development of horn flies and face flies in manure of treated beef and lactating dairy cattle. Dose rate 70 milligrams per 100 lbs body wt/ cow/ day.

General recommendations for oral larvicides

Clarifly (diflubenzuron) is available in several premix forms for horn fly and face fly control.

1. Start feeding in early spring before flies begin to appear and continue until cold weather restricts fly activity.
2. Ensure adequate consumption by all animals.
3. Monitor consumption to determine if adequate dose rate is eaten adjust as necessary.

Use supplemental adult fly control methods as necessary.

1 Points to consider

1. What is the cost per head? This will take some calculations to compare options based on minimum consumption rates, herd size, and alternatives.
2. What is your key pasture fly pest? Both active ingredients are labeled for horn fly control, products containing tetrachlorvinophos are labeled also for face flies.
3. How well do your neighbors control pasture flies and how close are their herds? Movement of horn and face flies from nearby cattle can keep numbers on your animals above acceptable levels, even if your larvicide program is working well. Is there room in the budget for some supplemental control (dust bag, etc.) if necessary?
4. Can or will you check consumption of the oral larvicide to see if enough is being eaten? This could mean weighing some salt blocks, etc. and relocating mineral feeders if consumption is low.

Keep some estimate of flies per head to see if numbers are growing drastically - an indication of either poor control or arrival of flies from an off-farm source.

Other available treatment options for fly control include:

Insecticide impregnated ear tags

Pyrethroid Group 3	Organophosphate Group 1B
Permethrin - Atroban Extra, Apollo, Deckem, Ectiban, Ear Force, Expar Extra, Gard Star Plus, New Z Permethrin, Permethrin Insecticide Ear Tags, Super Deckem II (10%) 2 tags	15% coumaphos + 35% diazinon Corathon 2 tags
10% Cyfluthrin - Cutter Gold 2 tags	Coumaphos + Diazinon - Co-Ral Plus 1 tag for horn fly, 2 tags for face fly suppression
<i>beta</i> -Cyfluthrin CyLence Ultra (8%) CyGuard 15% 2 tags	20% fenthion Cutter Blue 2 tags
10% z-Cypermethrin - Python, Python MagnuM, ZetaGard 1 tag	pirimifos methyl Dominator 2 tags
10% l-cyhalothrin - Saber Extra/Excalibur 2 tags	New Z Diazinon (18%) Insecticide Ear Tag + Synergist
	20% diazinon OPTimizer / X-Terminator
Combination Tags P + OP Groups 1B + 3	40% diazinon Patriot 2 to suppress face flies
6.8 % l-Cyhalothrin + 14% Pirimophos methyl - Double Barrel VP 2 tags	30% diazinon + 10% chlorpyrifos Warrior / Diaphos Rx 2 tags
7% Cypermethrin + 5% Chlorpyrifos - Max-Con 2 tags	
Group 21	Abamectin Group 6
15% Tolfenpyrad – Tolfenpro 1 or 2 tags	18% Abamectin XP820 2 tags

Animal Sprays for Pasture Flies	Days to Slaughter
Coumaphos (1) Co-Ral 6.15% Fly and Tick Spray, Coral 42% Flowable	0
Dichlorvos (1) Vapona Concentrate Insecticide 40.2%	1
Phosmet (1) Prolate/Lintox – HD (phosmet)	3
Tetrachlorvinphos (1) Rabon 50% WP	0
Tetrachlorvinphos + Dichlorvos (1) Ravap 28.7% EC	0
Permethrin (3) Atroban 11% EC, GardStar EC, Ectiban 5.7% EC, Permethrin II 10% or 25%WP	0
<i>Pyrethrins (3) PyGanic 5%</i>	0

Products for Backrubber (oilers) and Face rubbers	Amount to use	Days To Slaughter
coumaphos (1b) Co-Ral ELI or Fly and Tick Spray	9.75 fl. oz. per gal 4 qts / 13 gal No. 2 fuel oil or No. 2 diesel	0
dioxathion (1b) Delnav 30% EC or 15% EC	13 Tbs (1:20) or 26 Tbs (1:10)	0
stirofos+dichlorvos (1b) Ravap 28.7% EC	5 fl oz/gallon	1
phosmet (1b) Prolate/Lintox-HD	1/2 gal in 25 gallons	3
Atroban, Back Side, Brute, Ectiban, GardStar, Insectrin, Permethrin II, Pyranha, Synergized De-Lice, Ultra Boss, etc. (permethrin) (3)	See label	0



Insecticide impregnated cattle ear tags release small amounts of an insecticide which are distributed over the animal during grooming or rubbing. In general, ear tags provide excellent, long term control of horn flies and some reduction in face fly numbers. Price breaks on early order opportunities often means considering fly control programs well before the season begins.

Here are some things to consider:

- Read the label before you buy. All tags are labeled for beef cattle while only those with certain active ingredients are approved for use on lactating dairy animals. Also, check for any limitations for use, such as animal age.
- Look for the common name of the active ingredient (for example, permethrin). In some cases, different brands of tags contain the same active ingredient. You can save money by comparison shopping, or avoid inadvertently using the same active ingredient if resistance is a potential problem.
- Consider the recommended number of tags per head. Some brands are used at the rate of one per animal. UK research trials have generally shown that systems which use two tags per animal seem to provide better face fly control than those which rely on a single tag. Animals only need to be handled one time to apply the tags. However, this is not necessarily when you would normally work your animals.
- For fly control, it is best to tag animals after horn fly numbers reach 100 or more per side. This reduces the chances of developing resistance to the active ingredients that are being used. Normally, tags provide 12 to 15 weeks of fly control. Tagging too early in the season can mean that the tags are not providing good control in the fall that will help to control the overwintering population. With insecticidal ear tags, the control system moves with the animals. This may be an advantage if animals are moved at intervals and dust bags or back rubbers are not in place in every pasture or grazing area.

Insecticide ear tags can provide good control of horn flies and may provide some reduction in face fly numbers. Install tags after flies first appear in the spring. Horn fly resistance to insecticides is an increasing problem. If insecticide resistance is suspected, use tags containing an insecticide with a different Group number. Remove tags at the end of the fly season (September) or before slaughter. Protective gloves should be worn when applying or removing tags. In general, calves less than 3 months old should not be tagged because ear damage may occur.

There are several other systems that can be put in place so that cattle can treat themselves with insecticides for horn fly and face fly control, generally in an effective and economical manner. Dust bags and backrubbers can be made or purchased. In addition, there are spray systems that can be incorporated into mineral stations or triggered as animals pass through gaps in fences between pastures. Self-applicators must be placed where all animals will use them daily. The devices must be sturdy enough to hold up to frequent use and situated so they are easy to re-charge. Dust bags need to be hung so that the animal must butt it with its head to pass by. This way, the face and backline are treated. Dust bags can provide excellent horn fly control and good face fly control if they are placed correctly. Backrubbers provide good coverage of the back and sides. This is fine for horn fly control but "fly-flips" must be added to provide coverage to the face for face fly control. Backrubbers are often set in loafing areas and use by some animals may be very irregular.

Several sprayer designs incorporate compressed air or a solar collector and electric pump to deliver a measured spray dose as the animal visits a mineral station. These can be set to deliver the product to the face and backline as the animal feeds.

Self-applicators need to be checked regularly to make sure that they are charged and functioning properly.



Figure 7. Forced-use dust bags.

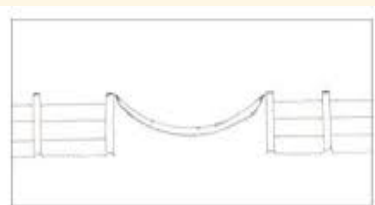


Figure 8. Insecticide-charged back rubbers.

Timely Tips

Dr. Les Anderson, Beef Extension Professor, University of Kentucky

Spring-Calving Cow Herd

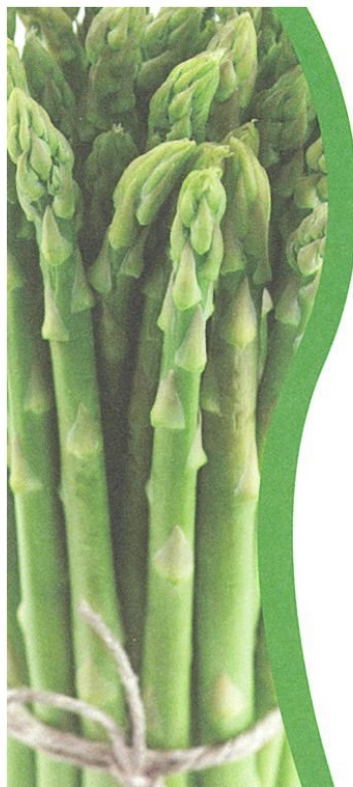
- Cows should be on good pasture with clover and preferably low endophyte levels in fescue for the spring breeding season. Keep pastures vegetative by clipping or making hay. They should have abundant shade and water. Our goal is to have cows become pregnant before July when temperatures and heat stress can ruin the “spring” breeding season.
- Observe the cows and bulls as the breeding season continues. Watch bulls for injury or lameness and change bulls if a high percentage of cows are returning to heat. Record cow breeding dates to determine next year’s calving dates and keep records of cows and bulls in each breeding group.
- Keep a good pasture mineral mix, which contains adequate levels of phosphorus, vitamin A, selenium, and copper, available at all times.
- Consider a special area for creep grazing calves, or practice “forward grazing” this summer, allowing calves to graze fresh pasture ahead of the cows. This can be accomplished by raising an electric wire or building a creep gate.

Fall-Calving Herd

- Pregnancy test cows if not done previously.
- Cull these cows at weaning time (or now)
 - Smooth-mouthed cows
 - Cows weaning light weight and/or poor-quality calves
 - Open cows
 - “Problem cows” with bad feet, teats, udders, etc.
- Select replacement heifers based on:
 - temperament
 - conformation
 - weaning weight
 - dam and sire records
- Select more than needed to allow for culling after a short breeding season

General

- Finish harvesting excess pasture as hay soon! It should be cut before it becomes too mature. Be sure and replenish your reserves. Try to put up more than you think you will need in case of a late summer drought.
- Pasture should supply adequate energy, protein and vitamins at this time. However, be prepared for drought situations. Don’t overgraze pastures so that recovery time will be faster. Overgrazed pastures will recover very slowly during July/August.
- Keep pastures small for rotational grazing so that nutritive quality can be maintained. They should be small enough so cattle do not graze longer than a week. As the season progresses, you need several paddocks to give each properly stocked pasture about 4 weeks’ rest.
- Maintain a clean water supply and check it routinely. Water is extremely important in hot weather.
- Control flies. Consider changing insecticides and/or methods of control this year, because insecticide resistant flies may have developed if you have used the same chemical year after year. Consider pour-on and sprays that allow you to put cattle in the corral or through the chute with little stress on them. It will make subsequent trips through the “chute” less stressful.
- Prevent/Control pinkeye
 - consider vaccinating,
 - control flies,
 - clip tall, mature grass,
 - treat problems quickly.
- Clip grazed-over pastures for weed control and so that seed heads do not irritate eyes. Pastures should be kept in a vegetative state for best quality.



Asian Asparagus Salad

1 pound fresh asparagus

1½ tablespoons low sodium soy sauce

2 teaspoons sugar or artificial sweetener

1 tablespoon olive oil

2 teaspoons sesame seeds

1. Snap off and discard the root ends of the asparagus.

2. Wash remaining stalks thoroughly.

3. Slice stalks into 1½ inch lengths on the diagonal.

4. Blanch asparagus for 1-3 minutes in boiling water, until bright green in color.

5. Cool immediately

under cold water and drain.

6. Combine soy sauce, sugar, olive oil, and sesame seeds in a small glass bowl. **Mix** dressing until sugar is dissolved.

7. In a gallon zip-seal bag, add asparagus and dressing.

Turn bag to coat asparagus with

dressing and chill in the refrigerator for 15 minutes. **Turn** bag again and chill for an additional 15 minutes before serving.

Yield: 4, ½ cup servings.

Nutrition Analysis: 70 calories, 4.5 g fat, .5 g sat. fat, 0 mg cholesterol, 250 mg sodium, 7 g carbohydrate, 2 g fiber, 3 g protein.

Buying Kentucky Proud is easy. Look for the label at your grocery store, farmers' market, or roadside stand.



Kentucky Asparagus

SEASON: April through May.

NUTRITION FACTS: Asparagus is a good source of vitamin A and folate. One-half cup of fresh, steamed asparagus has 22 calories, 2 grams of protein, and 4 grams of carbohydrate.

SELECTION: Choose bright green stalks with tightly closed tips. The most tender stalks are apple green in color with purple-tinged tips.

STORAGE: Fresh asparagus will keep 1-2 weeks in the refrigerator. Refrigerate upright with cut ends in water or with cut ends wrapped in wet paper towels in a plastic bag.

Source: www.fruitsandveggiesmatter.gov

PREPARATION: One pound of asparagus will yield 4 one-half cup servings, about 6 spears per serving. Wash asparagus thoroughly in cool, running water. Eat asparagus raw or lightly boil, steam, stir-fry, or grill. Overcooked asparagus will be mushy. Try seasoning it with herbs, butter, or Parmesan cheese.

ASPARGUS

Kentucky Proud Project

County Extension Agents for Family and Consumer Sciences

University of Kentucky, Nutrition and Food Science students

March 2011

Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin. For more information, contact your county's Extension agent for Family and Consumer Sciences or visit www.ca.uky.edu/fcs.

COOPERATIVE
EXTENSION
SERVICE

UK
UNIVERSITY OF
KENTUCKY
College of Agriculture

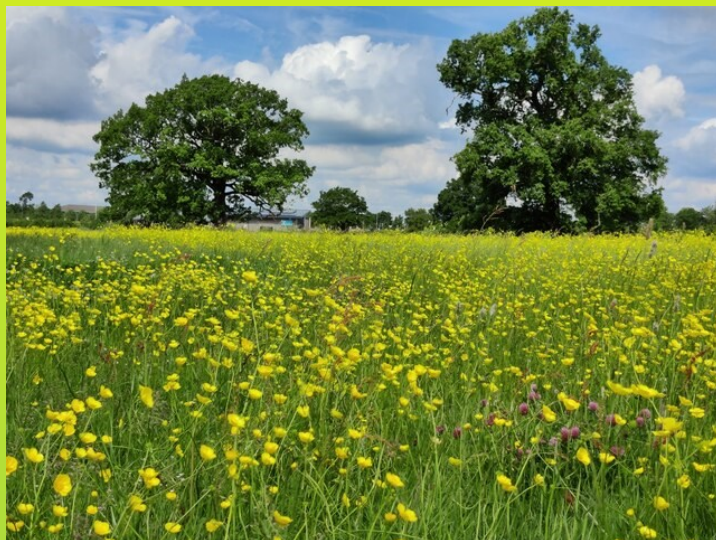
BUTTERCUPS IN GRAZED PASTURE FIELDS

by J. D. Green

One of the first signs of spring is the yellow flowers that emerge from buttercup plants. Buttercups (*Ranunculus* spp.) tend to thrive in fields with poor stands of desirable forages. In fact, many fields that have heavy buttercup populations are fields that have been heavily grazed by livestock during the fall through the early spring months.

Buttercups are short-lived perennials or winter annuals that produce shiny yellow petals in the early spring. There are four different species of buttercups that may be found in Kentucky: bulbous buttercup (*Ranunculus bulbosus*), creeping buttercup (*Ranunculus repens*), tall buttercup (*Ranunculus acris*), and small flower buttercup (*Ranunculus abortivus*). Although these plants may have somewhat similar flower heads, each of these buttercup species differs somewhat in their vegetative leaf characteristics.

Most buttercup plants emerge each year from seed during the fall or early winter months. Therefore, pasture management practices that improve and promote growth of desirable plants during these months is one of the best methods to help compete against the emergence and growth of this plant. Whereas, livestock animals allowed to overgraze fields during the fall and winter months is one of the main factors that contribute to buttercup problems. Mowing fields or clipping plants close to the ground in the early spring before buttercup plants can produce flowers may help reduce the amount of new seed produced, but mowing alone will not totally eliminate seed production. New buttercup seed are produced during the time petals are showy. This is one reason buttercups can survive year to year and new plants emerge each year. Therefore, waiting until after flowers appear can be too late to implement control tactics.



If chemical control options are desired, most herbicides registered for use on grass pastures that contain 2,4-D, dicamba+2,4-D (eg. WeedMaster), triclopyr (eg. Crossbow, PastureGard), or met-sulfuron (eg. Ally, Cimarron) will effectively control this plant. However, legumes such as clovers interseeded with grass pastures can be severely injured or killed by these herbicide products. For optimum results apply a herbicide in the early spring (February - March) before flowers are observed, when buttercup plants are still small and actively growing. For best herbicide activity wait until daytime air temperatures is greater than 55 F for two to three consecutive days. Consult the herbicide label for further information on grazing restrictions or other possible limitations.

For fields heavily infested with buttercup a variety of control tactics may be needed. Use a herbicide to help reduce the population of buttercup plants plus use good pasture management techniques to thicken the stand of desirable forages.

BLOSSOM END ROT CAN RUIN TOMATO HARVEST

Nothing can ruin a mouth watering tomato more than reaching for one on the vine only to find an ugly, flattened spot on it. If the ugly spot is located on the fruit opposite the stem end, it is likely blossom end rot, a disease caused by a lack of calcium that commonly occurs in tomatoes but can also affect egg-plant, peppers and many cucurbits.

Blossom end rot spots develop into dark brown, leathery decays that may affect half of the tomato. Calcium is an essential part of the chemical “glue” that binds cells together within the fruit. When fruits are enlarging rapidly, sufficient amounts of calcium do not reach the end of the fruit. This causes cells to come apart, resulting in a rot or decay in that area. Calcium does not move easily from other plant parts, so any disruption in the plant’s uptake can result in a deficiency.

Soils in Kentucky are rarely deficient in calcium, but water plays a critical role in the plant’s uptake and distribution of calcium. So maintaining an even supply of moisture is important in controlling blossom end rot. However, to be sure that a soil is not calcium-deficient, soil tests should be taken, and if needed, it can be applied as lime prior to planting.

Irrigate plants as needed, and use mulch to conserve soil moisture. Irrigate on a consistent basis. Don’t allow plants to become stressed from too much or too little water. Avoid wetting foliage as much as possible as this could encourage fungal and bacterial diseases to develop on the plant.

Trickle or drip irrigation is an excellent way of getting water to plants without the risk of wetting the foliage or splashing soil onto the foliage which can also lead to disease problems.

In addition, excessive amounts of ammonium tend to depress a plant’s calcium uptake. Avoid using urea or fertilizers high in ammonium. Instead, choose fertilizers high in nitrate. Calcium nitrate is an excellent nitrogen fertilizer, although it is more expensive than other nitrogen sources.