



From the Ground Up

BATH COUNTY AGRICULTURAL NEWSLETTER

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May 2017



DATES TO REMEMBER:

- MAY 18 – OPENING DAY FOR THE BATH COUNTY PRODUCE AUCTION**
- JUNE 16 – OPENING DAY BATH COUNTY FARMERS MARKET**
- JULY 5-8 – BATH COUNTY AGRICULTURAL FAIR**
- June 22 – PESTICIDE JUG COLLECTION AT THE BATH COUNTY OFFICE 1-3:00**
- SEPTEMBER 21- PESTICIDE JUG COLLECTION AT THE OFFICE 1:00-3:00**

PESTICIDE JUG COLLECTION PROGRAM:

The Kentucky Department of Agriculture will be collecting empty pesticide jugs on June 22nd and September 21st at the Bath County Extension office. The collection times are 1:00 to 3:00 both days.

The program allows producers to recycle used jugs that have previously held agricultural chemicals.

Jugs should be rinsed out and have a hole punched into the bottom before being brought in for recycling. This is a free service to our farmers and pesticide dealers.



CARPENTER BEES BUZZING AROUND

Well, many of you probably have noticed large black bees buzzing around your house, deck or outbuildings. 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 outbuildings 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.

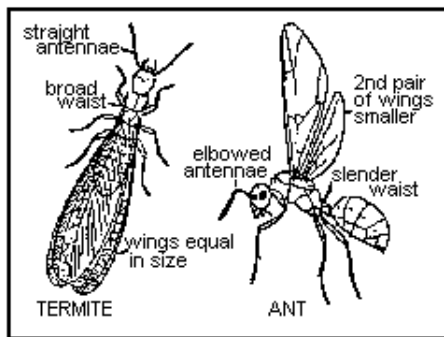
TERMITE SEASON

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.

LIVESTOCK

PASTURE FLY CONTROL OPTIONS by Lee Townsend

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 Impregnated Ear Tags (number of tags per animal)

Pyrethroid Group 3	Organophosphate Group 1B
Permethrin - Atroban Extra, Apollo, Deckem, Ectiban, Ear Force, Expar Extra, Gard Star Plus, New Z Permethrin, Permectrin 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% Pirimiphos 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

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.

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

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. Watch the animals use the devices to see if a change in placement will improve application or ensure that all animals get treated.

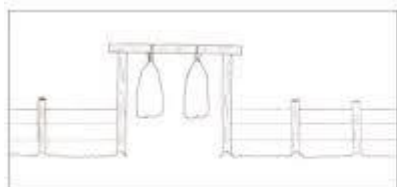


Figure 7. Forced-use dust bags.

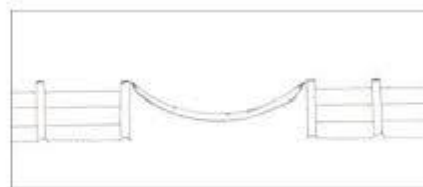


Figure 8. Insecticide-charged back rubbers.

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
Pyrethrins (3) PyGanic 5%	0

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 regulator methoprene (Altosid) tetrachlorvinphos (Rabon). development of larvae and In contrast, organophosphate function of the nervous system. above levels in the manure that ingredient can be formulated in under several different brand



larvicides include the insect growth and the organophosphate insecticide Insect growth regulators affect the prevent them from emerging as adults. insecticides kill by disrupting normal In either case, they must be present at or are toxic to the larvae. Either active several different ways and is available 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.
4. Use supplemental adult fly control methods as necessary.

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 tetrachlorvinphos 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.
5. 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.

FORAGE 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 metsulfuron (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 an herbicide to help reduce the population of buttercup plants plus use good pasture management techniques to thicken the stand of desirable forages.

TOBACCO

CHEMICAL OPTIONS FOR MANAGING DISEASES ON TOBACCO TRANSPLANTS



Healthy and vigorous transplants serve as the foundation for a successful tobacco crop. Tobacco producers in Kentucky are faced with several diseases each year that have the potential to cause serious losses, and the majority of these can be managed with an integrated strategy that includes cultural practices and fungicides/bactericides.

The most commonly encountered fungal diseases in the float system in KY are, in order of importance, *Pythium* root rot, target spot, *Rhizoctonia* damping-off, *Sclerotinia* collar rot, anthracnose, and blue mold. The latter does not occur each year, but can be devastating when it appears on tobacco seedlings. Bacterial diseases are found less frequently and include black leg (bacterial soft rot) and angular leaf spot/wildfire. Black leg is by far the most common of the bacterial diseases seen in float systems.

The following is a summary of labeled chemical products that can be used in the float system to manage diseases in 2017. Detailed information on these products and their use can be found in the latest Burley and Dark tobacco production guide available at the Bath County Extension Office.

Table 4. Guide to chemicals available for control of tobacco diseases 2015—transplant production.

Product(s)	Product Rate Per		Target Diseases	Label Notes
	Application ^a	Season		
Agricultural Streptomycin (Agri-Mycin 17, Firewall, Harbour)	100-200 ppm (1-2 tsp/gal H ₂ O)	no limit	angular leaf spot wildfire blue mold	Apply in 3-5 gal/1,000 sq ft. Begin when plants are dime-sized or larger.
Aliette WDG	0.5 lb/50 gal H ₂ O	1.2 lb per 1,000 sq ft	blue mold ↙	Apply 3 gal of solution per 1,000 sq ft on small plants; increase to a maximum of 12 gal as plants grow.
Mancozeb (Manzate ProStick [CT, SC, OH, KY, NC, TN] or Penncozeb [VA])	0.5 lb/100 gal H ₂ O	no limit	blue mold anthracnose damping-off	Apply 3-12 gal/1,000 sq. ft. as a fine spray. Begin when plants are dime-sized or larger.
Milk: Whole/Skim	5 gal/100 gal H ₂ O	no limit	tobacco mosaic virus (plant-to-plant spread)	Apply to plants at least 24 h prior to handling.
Milk: Dry	5 lb/100 gal H ₂ O			Mix will treat 100 sq yd.
Quadris	0.14 fl oz (4 ml)/ 1,000 sq ft	0.14 fl oz (4 ml)/ 1,000 sq ft	target spot	Only one application prior to transplanting.
Terramaster 4 EC	Preventive: 0.7-1.0 fl oz/100 gal H ₂ O Curative: 1.0-1.4 fl oz/100 gal H ₂ O	3.8 fl oz	damping-off (<i>Pythium</i> spp.) root rot (<i>Pythium</i> spp.)	For prevention, apply to float-bed water at 2-3 weeks after seeding. Additional applications can be made at 3-week intervals. The curative rates can begin no sooner than 3 weeks after seeding. Apply no later than 5 days before transplanting.
Oxidate 2.0	Preventative 6 to 24 oz/1000 gal H ₂ O	no limit	<i>Pythium</i>	Approved for use in organic production, Should be used preventatively.

^a Rate range of product. In general, use higher rates when disease pressure is high. Refer to product label for application information, restrictions, and warnings.

Phytotoxicity is a concern with Terramaster; however, the risk of damage caused by the fungicide is almost always outweighed by the benefits of its use. The most common type of injury that we see is root burn, followed by sloughing off of water roots following treatment. The degree of root burn increases when higher rates of the fungicide are used, but in nearly all cases plants will recover. Some delay of growth is also common but rarely causes lasting damage to seedlings. Foliar injury such as bleaching (whiting) and distortion of leaves is common in cases where excessive rates of Terramaster have been applied, or where the product has not been mixed thoroughly in the float bed (which results in “hot spots” in the bed). Injury tends to be worse in water with a pH above 7. We receive occasional reports of premature flowering associated with Terramaster use. It is not believed that Terramaster actually causes premature flowering, but can aggravate the situation if plants have been grown under environmental conditions known to cause this disorder. To minimize the risk of phytotoxicity, do not exceed recommended rates and take steps to ensure uniform distribution of Terramaster in float beds. If necessary, adjust pH levels in the float bed prior to treatment. Never apply Terramaster “over the top”; the risk of foliar injury increases substantially and poor control of Pythium root rot could result.



Summer Veggie & Wild Rice Bake

1 (6 ounce box) wild rice with herbs and seasoning	1 green pepper, chopped	½ cup coarsely chopped fresh basil
1 tablespoon olive oil	1 medium onion, chopped	2 teaspoons salt
1 medium eggplant, peeled and diced	6 cloves garlic, minced	1 teaspoon pepper
2 yellow squash, cut lengthwise, sliced crosswise	3-5 tomatoes, coarsely chopped	1 cup low fat shredded Italian cheese blend

Heat oven to 350 degrees F. Prepare wild rice in saucepan according to package directions. Remove from heat; drain excess water; stir in packet seasonings. Heat oil to medium high in large skillet. Add eggplant, squash, pepper and onion; stir and cook 5 minutes or until tender crisp. Stir in garlic and cook 1 minute. Add tomatoes, basil, salt and pepper; stir occasionally and cook 2 minutes until heated through. Stir in wild rice and spoon into a 9-by-13 inch baking dish

that has been coated with cooking spray. Top with cheese and cover with aluminum foil. Bake 35 minutes or until bubbly. Uncover and bake an additional 5 minutes.

Yield: 16
Serving Size: ½ cup

Nutritional Analysis:
90 calories, 2.5 g fat, 1 g saturated fat, 5 mg cholesterol, 469 mg sodium, 13 g carbohydrate, 2 g fiber, 3 g sugars, 4 g protein.

Robert Amburgey
Robert Amburgey

Bath County Extension Agent for
Agriculture
And Natural Resources

Kentucky Eggplant

SEASON: Late June to October.

NUTRITION FACTS: Eggplant contains small amounts of several important vitamins that are needed daily. It is very low in sodium and calories, with only 15 calories for a half cup serving.

SELECTION: Select firm, heavy eggplant with smooth, shiny, deep purple skin. Choose medium size eggplant, about 3 to 4 inches in diameter.

STORAGE: Store soon after harvest or purchase in the refrigerator. Use within one week.

PREPARATION: Eggplant is a versatile vegetable and can be baked, broiled, grilled, fried,

stuffed or used in a variety of casseroles in combination with other vegetables. It works well with tomatoes, garlic, onions and cheese. One pound equals 3 cups diced. Eggplant should be peeled before preparation, unless it is very young and tender.

To broil or grill: Cut into three-fourth inch slices and brush with margarine or Italian dressing. Broil or grill for about 5 minutes on each side, until eggplant is tender and browned. Remove from heat and sprinkle with grated Parmesan cheese.

To season: Use marjoram, oregano, allspice, chili powder, curry powder, garlic, basil or rosemary.

KENTUCKY EGGPLANT

Kentucky Proud Project
County Extension Agents for Family and Consumer Sciences

University of Kentucky, Dietetics and Human Nutrition students

July 2016

Source: www.fruitsandveggiesmatter.gov

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