

# AG & NATURAL RESOURCES

»»» NEWSLETTER «««



## LAWN ESTABLISHMENT IN KENTUCKY

Because of temperature extremes in summer and winter, developing a really good lawn may be a big challenge. Proper establishment and management techniques may differ considerably from those used in surrounding states. Still, if you know these local problems and establish your lawn correctly, a good lawn is possible and should not be expensive to maintain.

### Which Grass Should You Select?

Although we have many high-quality Kentucky bluegrass lawns, tall fescue is the best adapted grass for Kentucky. Problem lawns with shade, poor soil, or heavy traffic and Western Kentucky lawns should almost always be established with warm-season grasses such as bermudagrass or zoysiagrass. Although these grasses remain dormant (brown) for six to seven months every year, they are drought and pest tolerant. Lawns can also be established with warm-season grasses such as bermudagrass or zoysiagrass.

### When to Establish Your Lawn

Don't make the mistake of establishing your lawn at the wrong time. Only certain periods each year have a favorable temperature, moisture, and minimum competition from weeds. The best time to seed Kentucky bluegrass, fescue, or perennial ryegrass is from mid-August to late September. The second best time is from mid-February to mid-March and not later than mid-April.

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## How to Prepare Your Soil

### *Grading*

Soil conditions are very poor on many lawn sites because the lawn was not a major consideration when construction began. Ideally, the topsoil should be stockpiled to the corner of the lot when initial grading is done so it will not be destroyed or covered by the foundation or basement subsoil.

### *Soil Improvements*

What if topsoil is not available? Buying topsoil is not usually recommended, for two reasons: It is very difficult to purchase good topsoil. Frequently, you get heavy clay or rocky soil, and often it is seriously infested with weed seed.

Well-adapted species such as tall fescue may be grown on the most difficult soils. In fact, an excellent tall fescue turf can be maintained on heavy clay or sandy soils if the lawn can be irrigated during periods of summer drought. Adding large quantities of organic matter is the best method for improving a poor soil. Peat moss; well-decomposed sawdust; well-rotted, weed-free manure; and sewage sludge or any organic compost will improve soil that is either too sandy or contains too much clay. Use 2-3 cubic yards of organic matter for each 1,000 square feet of lawn area. Spread it evenly over the surface, and before seeding, thoroughly rototill or disk it into the upper 4-6 inches of soil.

### *Lime and Fertilizer*

Have your soil tested to determine its exact lime and fertilizer needs. Your local Extension agent can provide you with soil cartons and other necessary information. If a soil test cannot be made, you should apply approximately 80 pounds of ground limestone per 1,000 square feet of lawn area. Also apply one of the following fertilizers: 30 pounds per 1,000 square feet of 5-10-5, 25 pounds per 1,000 square feet of 10-10-10, or 20 pounds per 1,000 square feet of 5-20-20.

Work all lime and fertilizer into the top 4-6 inches of soil before seeding.

### *Final Soil Preparation*

A newly graded lawn should be allowed to settle before planting. Two or three good rains or irrigations will help the settling. Puddles of water that form during a rain or irrigation indicate low spots that should be filled or drained prior to planting. Good surface drainage is a must! The final seedbed should be firm and free of large clods, rocks, and discarded building materials. Seedbed preparation is similar regardless of which planting method is used on a new lawn.

### *Seed or Sod?*

Kentucky bluegrass and tall fescue lawns are either seeded or sodded. Should you seed or sod? Initially, seeding a lawn is less expensive, but getting an established lawn may take a month or longer with seed than it does with sod. Also, the risk of serious erosion is minimized with sod. In addition, when you use quality seed or quality sod, you have little chance of introducing troublesome weeds. Even though many weed seeds are already present in your soil, quality sod will impede growth of these weeds. Finally, a sodded lawn is immediately attractive and somewhat serviceable. Mud is not tracked into the home, sidewalks can be kept clean, and it is easy to maintain other newly planted landscape plants.

### *How to Seed*

1. Seeding is usually done with a rotary seeder or the usual drop-type seed and fertilizer spreader. To determine the proper seeding rates, ask for a copy of Cooperative Extension publication *Selecting the Right Grass for Your Kentucky Lawn* (AGR-52).





## Brown Marmorated Stinkbug in the Home Garden

Jessica Cole, Extension Associate, and Ric Bessin, Extension Specialist

Entfact-326

Brown marmorated stink bug (BMSB), *Halyomorpha halys*, is a new invasive species from Asia. First detected in Kentucky in 2010 it can now be found in multiple eastern and central Kentucky counties. BMSB is very mobile in the landscape and a serious pest that has a wide range of host plants, including significant agricultural and horticultural crops. BMSB aggregates in large numbers when feeding and can do significant damage to high-value crops. BMSB generally attacks the fruiting parts of plants, but it will also feed on other succulent parts, and the nymphs feed on leaves. In the fall the BMSB becomes a nuisance pest (like the Asian lady beetle) by migrating to homes and other buildings to overwinter. The last two weeks of September through the first two weeks of October is when high numbers of BMSB start coming into homes. When disturbed the BMSB will release a pungent odor that smells like cilantro.

### Identification

BMSB have the characteristic “shield” shape like all stink bugs. Adult BMSB are 14-17mm (5/8 inch) long, which makes them one of the larger stink bugs in Kentucky. They are a mottled brownish-grey color and have smooth shoulder margins without any toothed edges. BMSB has two distinct white bands on its otherwise dark antennae. The edge of the abdomen beyond the wings also has this alternating dark and light banding. The underside of the BMSB is white with some dark markings.

### Biology

From June to August females lay clusters of 25-30 light green barrel-shaped eggs on the undersides of leaves. Nymphs go through five different instars (stages) to reach adulthood while feeding throughout the summer and fall.



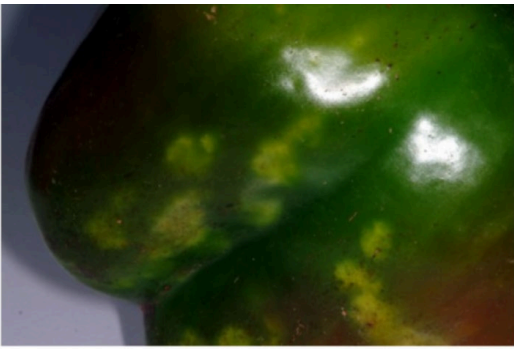
BMSB adult (right) and late instar nymph (left).

The nymphs are brightly colored red and black that look like a smaller version of the adult stink bug. Older nymphs are a darker color with banding on their antenna and legs, similar to the adults. Based on published growth models, there should be one to two generations per year depending on the location in the state the summer temperatures.

### Damage

BMSB is notable for having a wide range of hosts, over 100 plant species, including vegetable crops, grain crops, fruit crops and ornamental crops. Like other species of stink bugs both nymphs and adults use their piercing-sucking mouth parts to feed on leaf and fruit tissue. BMSB feeding can result in small discolored or necrotic areas on leaves and various types of damage to fruit. Fruit damage may include water-soaked lesions or cat-facing ranging from mild to severe. When feeding the BMSB aggregate in large numbers resulting more damage than our native stinkbug species.





Stink bug damage to peppers.



Internal damage to apple

## Home Invasion

The BMSB is not only a serious agricultural pest but it is a major nuisance pest to homeowners. As fall approaches, adult stink bugs leave their feeding sites in search of a place to overwinter. Unfortunately, they frequently select homes. From the end of September through October, BMSB will start entering homes, buildings, or other structures. Male BMSB release a pheromone that attracts other BMSB to the location. Large numbers of BMSB will aggregate together in homes and when disturbed will produce a foul odor. Fortunately they pose no threat to human or animal health inside the home.

## Management

Management tools for this new invasive pest are still being developed both for use in commercial agriculture and for the home gardener. Research in other states has shown that BMSB moves from one crop to another in the landscape and is considered highly mobile. Field populations start to build in May and peak in early August. By mid-September they begin moving to buildings to seek winter shelter.

## Netting

Woven row covers and fine netting can be used to keep BMSB off of highly susceptible vegetable plants like peppers and tomatoes. These need to be in place prior to the start of fruiting and should be sealed along the edge to keep BMSB out. Research at U.K. Entomology has found that 1/6" or smaller netting will block BMSB adults. A simple frame can be used to support the netting over taller vegetable plants. Netting may not be practical for plants that are dependent on constant insect pollination.

## Hand Picking

While impractical with large pest populations, hand-picking can be very helpful with small numbers of pests. BMSB has a tendency to drop off plants when approached, so hand picking may be easier in the morning when the insects are more sluggish. Stink bugs that are collected can be dropped into soapy water. As BMSB is mobile, re-infestation from other areas is likely, so routine hand-picking may be necessary.

## Chemical Control

With home gardening, chemical control is usually the last resort. Chemical control has a number of potential side-effects, including limiting when you can harvest produce and impact on pollinators and other beneficial insects. Specific insecticides will depend on the type of plant needing treatment. The crop plant must be approved and listed on the label with the appropriate rate. Research has demonstrated that products containing some of the pyrethroid insecticides (eg., bifenthrin, zeta-cypermethrin, and cyfluthrin) and organophosphate (malathion) can be effective against BMSB. Since these products can be detrimental to insect pollinators, they should not be used on plants in bloom or used in the evening when pollinators are not active.

12/2015





## Dealing with Common Poultry Parasites

A variety of parasites attack poultry by either sucking blood or feeding on their skin, and feathers. Knowing what pests may be bugging your flock will help you figure out how to deal with the problem. Continuous external parasites are ones that spend their entire adult life on their host. Temporary parasites feed on, but do not live on, their host.

Some continuous external parasites include:

**Northern fowl mite:** The most common external parasite in chickens, turkeys, game birds, pigeons etc., northern fowl mites are commonly spread through bird contact. Signs of infestation depend on severity. Heavy infestation can cause anemia. Chickens may lose weight and exhibit decreased feed intake and egg production and a lower carcass quality. Look for dark patches on the feathers and on the skin around the vent area. They are fast movers and leave behind a lot of fecal material.

They are usually more of a problem in cooler months. “No Mite Strips” are an effective way to control this mite in your flock. Some powdered insecticides also work, but you need to read the labels very carefully. Organic producers may want to use something like diatomaceous earth as a natural insect preventative. The lifecycle of these mites is five to seven days, so growers will need to be vigilant in repeating treatments to prevent a large infestation.

**Sticktight fleas:** Although they are called fleas, they are stationary compared to other fleas. They burrow; females attach to the skin around the face and wattles to lay eggs. Sticktight flea larvae develop in the soil around chicken cages, and a few weeks later, adult fleas emerge to continue their lifecycle. If you raise chickens in wire cages three or more feet above the ground, you won’t usually have a large sticktight flea infestation. You can use Sevin dust on the fleas and on the litter. An alternative treatment method is to coat the adult fleas with petroleum jelly.

**Scaly leg mites:** These mites burrow into and live under the scales of the feet, lifting the scales and deforming the feet. Chickens in wire cages three feet or more above the ground don’t usually have problems with these mites.

Prevention is easier than treatment, so you should inspect new birds before adding them to your flock. These mites are frequently picked up at poultry shows, so you should treat all chickens upon returning from a show. You can treat scaly leg mites by dipping chickens' legs in linseed oil or petroleum jelly at 7-day intervals for three weeks. Never use fuel oil, kerosene, motor oil or other liquid petroleum products on chickens. Even after mites are dead, the swollen and deformed look may remain.

**Chicken lice:** Lice feed on blood and other fluids, and they cause birds to become restless. That feeling adversely affects feed intake, digestion, growth and egg production. Young birds have a tougher time with lice. Lice tend to be more abundant in unclean, overcrowded conditions. Pesticides used for Northern fowl mites will usually control lice. Temporary parasites can also be annoying and hard to control. A number of blood-sucking external parasites feed on chickens, but they don't actually take up permanent residence. After feeding, they usually leave the host and hide in the floor and walls of the housing near the host. The most common are:

**Fowl ticks:** These soft ticks are also known as blue bugs. They are very different from ticks found on dogs and cats. Fowl ticks are reddish brown to dark brown, and they have wrinkled skin. Female fowl ticks lay several batches of eggs, usually 30 to 100 eggs per batch, sometimes 700 to 800 eggs in her lifetime. They need a blood meal to produce each batch. If conditions are right, ticks grow from egg to adult in about 30 days. Adults are extremely resistant to starvation and can live more than a year without a blood meal.

**Chicken mites:** Also known as red mites or roost mites, they are often confused with the Northern fowl mite, but these mites do not spend their entire life on their host. Chicken mites are pretty small, but you can see them, and they are typically visible in large numbers.

**Bed bugs:** Typically found in large numbers, adults are reddish brown and can completely engorge on hosts in about 5 to 10 minutes.

All of these temporary parasites cause similar damage. You will probably see birds with bloody lesions of various sizes. Changes in poultry housing have almost eliminated these three main temporary parasites from commercial flocks. However, they do sometimes appear in small flocks of chickens, other poultry, or exotic birds such as parakeets and cockatiels. Because they are so rare now, it may be difficult to find pesticides labeled specifically for treating them. There are a few things you can do to minimize them. You need to eliminate cracks and crevices where these pests shelter. Prevent wild birds and rodents from entering with screens or other barriers. Treatment should include a thorough cleaning and sanitizing of the poultry house.

You can detect any parasites by examining your flock on a regular basis. Early detection really helps control any problems that may occur.

**Source: Jacquie Jacob and Tony Pescatore, UK Extension Poultry Specialists**



# LATE BLIGHT IN TOMATOES

Late blight has been positively identified in eastern Tennessee and has the potential to affect tomato and potato crops in Kentucky. Under wet conditions, this disease can completely destroy an otherwise healthy planting in about 2 weeks. Leaf lesions begin as water-soaked areas that can enlarge quickly (Figure 1). Fruit affected by late blight exhibit darkened, water-soaked spots (Figure 2).



Figure 1: Late blight leaf lesions begin as water-soaked areas that quickly enlarge. (Photo: Kenny Seebold, UK)



Figure 2: Fruit affected by late blight exhibit darkened, water-soaked spots. (Photo: Kenny Seebold, UK)

The last time late blight was influential in Kentucky was during the 2009/2010 seasons, and systemic fungicides targeting this disease are not a routine part of tomato/potato spray programs. Thus, most commercial growers will want to adjust their program if Kentucky crops are affected by late blight.

Currently, tomato and white potato growers in eastern Kentucky are advised to spray chlorothalonil or copper prior to the next rain event to protect their crops from late blight. Home garden options utilizing these active ingredients are also available. Growers in central and western Kentucky should maintain their routine fungicide program, but scout crops for late blight symptoms, particularly after rain events.

If late blight is suspected, submit a sample to a local county Extension office as soon as possible for identification. Sweetpotato cannot become infected with the late blight pathogen.

To monitor the spread of late blight (free service), use the USAblight website where farm location can be entered and alerts can be emailed or texted to the producer. Follow-up fungicide recommendations will be needed, many of which are also used to manage cucurbit downy mildew. Rapid identification and timely management are keys to minimizing late blight's damage.

By Emily Pfeufer, Extension Plant Pathologist



**AUGUST 15-25, 2024**

The Kentucky State Fair has so many great things to view and do. It's a showcase of Kentucky's talented individuals displaying food, arts, agriculture, and animals just to name a few. The Majority of the events are inside which makes it a cool atmosphere to enjoy during the hot summer. Other attractions include a huge carnival thrill way, concerts, and lots of unique food booths.

To learn more about the Kentucky State Fair contact our office, or visit the Kentucky State Fair website at [www.kystatefair.org](http://www.kystatefair.org).

## UPCOMING DATES



**AUGUST 15-25:**  
KENTUCKY STATE FAIR - LOUISVILLE, KY

**AUGUST 15 @ 5:30 PM:**  
COVER CROPS FALL GARDENING WORKSHOP

**AUGUST 27 @1 PM:**  
BACKYARD COMPOSTING CLASS

**SEPTEMBER 4:**  
LABOR DAY (EXTENSION OFFICE CLOSED)

**SEPTEMBER 5-7:**  
KNOTT COUNTY GINGERBREAD FESTIVAL



BUILDING SOIL HEALTH FOR YOUR GARDEN

# COVER CROPS

FALL GARDENING WORKSHOP

## THURSDAY, AUGUST 15, 2024 - 5:30 PM

### Knott County Extension Service

149 Parks Branch | Hindman, KY

To register call the office at (606)785-5329 by Wednesday, August 14th

Learn how to sustain your garden over the winter by using cover crops.


**\* Participant attending the workshop will receive some cover crop seed.**

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 Cooperative Extension Service

## TUESDAY, AUGUST 27, 2024 | 1:00 PM



# BACKYARD COMPOSTING



KNOTT COUNTY EXTENSION OFFICE  
149 Parks Branch Rd, Hindman, KY 41822

With Completion Of This Workshop Participants Will Receive A Reuseable Lawn/Yard Bag.

**PLEASE REGISTER BY CALLING (606)785-5329**



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