

GARDENING/HORTICULTURE NEWSLETTER

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CHECK YOUR TOMATOES FOR DISEASES

The tomato is the most popular vegetable grown. The tomato is also one of the most popular vegetables for diseases with more than 100 possible. Diseases cause low yields, poor quality or complete destruction.

Two of the more common diseases are early blight and Septoria leaf spot. Early blight is the most common disease of tomatoes in Arkansas. It appears as small brown or black spots on the lower, older leaves. As the spots enlarge, they take on the appearance of a target. The affected leaves become yellow, die and drop from the plant. The disease progresses up the plant until the entire plant is defoliated. Exposure of the fruit results in sun scalding, cracking and poor color ripening. Spots similar to the leaves appears on the stem and dark, leathery sunburn spots may appear near the stem end of the fruit.

Early blight is caused by a fungus that attacks potato and several related plants. The fungus can live in the soil and decayed plant tissue for 2-3 years. The disease is favored by humid weather when the temperature is above 75 degrees F.

Septoria leaf spot causes damage similar to early blight. It affects leaves and occasionally stems. The spots are small (1/16 - 1/8 inch) and circular, with light tan or gray centers surrounded by darker margins. Tiny dark specks occur in the center of the spots. Leaves are lost the same way as with early blight. Septoria leaf spot fungus overwinters on decaying diseased plant material. Temperatures of 60 degrees-80 degrees F and an abundance of rainfall favor the development of this disease.

To control these diseases, start a protective fungicide program when leaf diseases usually become evident about bloom time, or earlier if diseases occur. Continue throughout the season every 5-10 days. Spray every 5 days if the disease is present. Remember that fungicides have to be reapplied after a rain. Some materials that can be used for early blight and Septoria leaf spot are: chlorothalonil (Bravo or Daconil), mancozeb and Maneb.

BLOSSOM END ROT

Blossom End Rot is a physiological disorder of tomatoes, peppers, and cucurbits caused by a calcium imbalance within the plant. Excessively wet or dry soil, too much nitrogen fertilizer, roots damaged by cultivation, very high or low pH, or soils high in salts can prevent the roots from taking up enough calcium. The result is a water-soaked spot at the blossom end of the plant that enlarges, turning dark brown and leathery. Rot may set in at the spot as saprophytic fungi colonize the decaying tissue. Blossom end rot is common when plants grow rapidly in the beginning of the season, then set fruit during dry weather. **Fluctuating levels of soil moisture is usually the culprit.** As little as 30 minutes of water deficiency at any time can cause blossom end rot. Garden soils should be tested regularly for pH and nutrient levels. Vegetables do best at a pH of 6.5. Good mulching practices helps maintain even soil moisture. A quick fix for blossom end rot is a liquid calcium supplement applied to the foliage and as a soil drench. Most garden supply stores carry such products under names such as “tomato saver,” “end rot” and “stop rot”.

FIREBLIGHT IN APPLE AND PEAR TREES

Fireblight is a bacterial disease. It is the limiting factor as to what types and what varieties of these crops are suitable for growing in Arkansas. Fireblight will also occur on quince, crabapple, hawthorne, Cotoneaster and Pyracantha.

For the homeowner or hobby grower, the best thing to do is to use resistant varieties. Commercial growers and homeowners have the option of using streptomycin, but anything other than proper rates and proper timing will result in fireblight developing resistance and making this control measure ineffective. Streptomycin should be applied just before blossoms open and continued every five days till all the flowers are gone.

Fireblight gets its name from the appearance of trees following infection. The bacterium can infect both succulent new growth in the spring and flower buds. Shoot infections can be transmitted by insects, hail, freeze damage, and splattering rain. When a shoot is infected it will wilt at the tip and begin to die back along the shoot. The leaves will remain attached and have a “burned” look as if a blowtorch had been aimed at the tree.

If a flower is infected, that flower will turn black and wilt. It will then move into the shoot and cause that shoot to wilt. Sometimes, the infection will get into only one or two shoots, but often it will damage the whole tree. The amount of damage depends upon the variety of fruit and the amount of disease spores in the tree.

Removing the blighted wood is an important control measure, as it reduces the inoculum for further infections. Diseased wood should be pruned during an extended dry period or during the dormant season when the bacterium is not as active. Wood should be removed 6-10 inches below the last evidence of disease to insure elimination of the infection.

It is advisable to disinfect pruning tools between each cut by using a 70% alcohol as a dip or swab. A 10% solution of laundry bleach can also be used, but is corrosive to most pruning tools. Tools should be cleaned, dried, and oiled at the end of the pruning session.

The best cure is to plant resistant varieties, advises the Cooperative Extension Service. Pears such as ‘Bartlett’ should not be grown in Arkansas because of their fireblight susceptibility. For recommended pear and apple varieties, consult the University of Arkansas Division of Agriculture Cooperative Extension office at 425-2335 or our website at www.uaex.edu.

A CASE OF MISTAKEN IDENTITY (Robert Seay, Benton County Extension Agent)

At first, you may think you have bumblebees zipping around near your porch, deck or carport. It's a simple case of mistaken identity! Because of other similarities, as well as their black and yellow coloring, the carpenter bee is easily mistaken for the more ill-tempered bumblebee.

The situation can actually be worse since the carpenter bee, as the name implies, will bore into exposed, unpainted wood structures, resulting in a greater problem than a mere bumblebee sting. Their one-half inch diameter tunnels are then partitioned into individual brood chambers.

Carpenter bees are solitary, which means they don't nest as a colony or hive. But once they hang out their shingle, a resident population of individual bees boring individual holes will gradually develop. This repetitious boring can create 12-inch tunnels in the lumber, resulting in a weakened post, rafter or joist.

Their best trait is one of non-aggression since the male bee can't sting, and you would probably have to catch and hold a female bee before experiencing a sting. When a nesting site is approached, the male has a habit of hovering around, zipping back and forth trying to repel the intruder, which is as much aggression as they express.

As kids, my brothers and I would take wood slats, stand around an abundantly bee populated barn and take batting practice. The bees seemed to get caught up in the game and would continue to buzz back and forth, daring us to swing away. The only risk was in getting smacked by a wild swing from another wood slat.

Control is actually simple since a coat of paint on exposed wood members seems to deter their boring. By exposed, I mean any structure that is open to partial light. I've never seen carpenter bees bore into wood members inside an enclosed structure. Treated lumber may not provide much advantage either since I've noted carpenter bee tunnels in this product.

Another option is to remember that carpenter bees go to roost, so to speak. Once a hole is located, wait until the late evening and stuff it with an insecticide treated cotton ball and seal with a dab of putty. It would be great if all nuisance insects could be handled this easily!

WHAT DOES 'CERTIFIED ORGANIC' REALLY MEAN?

Buying organic is becoming more and more popular as some worry about the health and safety of the foods they eat. But what does it mean for a food to be organic?

According to the National Organic Program of the USDA, organic meat, poultry, eggs and dairy products come from animals that are given no antibiotics or growth hormones.

Organic food is produced without using most conventional pesticides, fertilizers made with synthetic ingredients or sewer sludge, bioengineering or ionizing radiation.

For a food to be certified as organic, the produce must come from a farm and processing plant that is certified as organic.

This means they go through an inspection process from certified government officials that ensure organic farms are up to the USDA organic standards.

It's the responsibility of the inspectors to assure that only organic methods are used and that there is no impact on the environment, such as contamination from pesticides, synthetic fertilizers or other non-organic compounds.

Just as food labels must meet standards to say that they are "heart healthy," organic foods must meet standards to make the claim that they are organic. The labeling requirements are based on the percentage of organic ingredients in a product.

The following definitions and facts can help you understand organic food labels better:

- Agricultural products labeled "100 percent organic" must contain all organically grown ingredients and processing aids.

- Products labeled “organic” must contain at least 95 percent organically produced ingredients, except for added water and salt.
- The USDA seal and the seal or mark of approval involved in certifying agents may appear on product packages and in advertisements.
- Agricultural products labeled “100 percent organic” and “organic” can’t be produced using excluded methods, sewage sludge or ionizing radiation.
- If buying processed products labeled “Made with Organic Ingredients,” these products need to contain at least 70 percent organic ingredients, and list up to three organic ingredients or food groups on the principal display panel.
- Processed products that “contain less than 70 percent organic ingredients,” can’t use the term organic anywhere on the principal display panel. However, they may identify specific ingredients that are organically produced in the ingredients statement.

Are organic foods better for you than non-organic foods?

The verdict is still out on that. Some will say yes; others will say no. One point to consider is that organic products aren’t more nutritious than conventionally grown foods. If you compare an organic apple versus a conventional apple, you would receive the same vitamins in the same amounts.

The drawback for many with organic products is cost. They’re more expensive to grow than conventionally grown foods and that cost shows up in higher prices at the grocery store.

UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE RELEASES NEW BUTTERFLY BUSHES

The University of Arkansas System’s Division of Agriculture has released two new varieties of *Buddleja*, also known as butterfly bushes because their blooms and nectar attract butterflies.

Plant breeder Jon Lindstrom said the new plants, named Orange Sceptre and Winter Waterfall, are suitable for greenhouses and conservatories. Orange Sceptre survives outdoors over winter in Arkansas but, if planted outside, Lindstrom recommends growing the plant in a container. Because *Buddleja* is a prolific non-native plant, the complete flower heads should be removed after blooming to prevent seed production.

Lindstrom, associate professor of horticulture, bred a sterile *Buddleja*, called Asian Moon that was released by the Division of Agriculture in 2006. Because it produces no seed, it’s more suitable to outdoor gardens, he said.

Orange Sceptre and Winter Waterfall resulted from a breeding program begun in 1999.

Lindstrom said the most striking characteristic of Orange Sceptre is its unique orange blooms. “This is a new color in *Buddleja*,” he said. “It attracts hummingbirds as well as butterflies.”

Orange Sceptre flowers well and has a long bloom time. In a greenhouse, Lindstrom said, it flowers year-round. Outdoors, flowering on new growth begins in late spring and, because it can tolerate temperatures that dip into the mid- to high-20s, it flowers well into late fall. An herbaceous perennial, it dies back to the ground in winter and grows back in the spring.

The plant has an upright and open growth habit, grows about 6 feet per year and can reach heights of more than 8 feet at maturity. Each cyme, or flower cluster, produces 15 to 24 flowers that are orange when open.

Winter Waterfall has a spreading, open growth habit and mature plants reach a height of about 10 feet. It produces clusters of white flowers in drooping panicles. It blooms from November through March.

Both Orange Sceptre and Winter Waterfall should be pruned immediately after flowering. Pruning on Winter Waterfall should cease in mid-summer to allow proper development of flower heads during the short days in fall.

The plants tolerate dry soils but grow best on moist, well-drained soil and prefer neutral pH. They grow best in full-sun and, in greenhouses, adapt readily to cool winter night temperatures down to around 50 degrees Fahrenheit.

Lindstrom said several nurseries have expressed interest in the plants, especially Orange Sceptre because of its unique color. He expects them to be available in nurseries in 2009.

CLOVER MITES

Baxter County Cooperative Extension Service is receiving reports from around the county of tiny (smaller than a pinhead) reddish-brown creatures that appear around homes by the hundreds, crawling around windows and other areas of the house. They are known as clover mites and are usually most abundant in the Spring in Arkansas. Sometimes, noticeable infestations also occur in the Fall. They can be distinguished from other mites by their extra long front legs.

Clover mites are plant feeders that occasionally invade homes; however, they will not reproduce under indoor conditions and will perish shortly of their own accord. They do not bite humans or pets nor cause damage but are extremely annoying both by their presence and the red stain that they leave when crushed.

Since the conclusion of World War II, the mite has become more common as a household pest. This increase in activity may be related in some way to an increased use of lawn fertilizers. The soil nutrient level or plant vigor and the proximity of the lawn to the house are factors that appear to govern the incidence of infestation.

Clover mites are most numerous in newly established lawns and in old lawns where there is a heavy growth of succulent, well-fertilized grass. They enter homes wherever they find tiny openings and seem to enter homes in largest numbers on the sunny south side.

Extensive use of a vacuum cleaner will remove many of the mites from inside the house. Chemical control inside the house may be difficult but household insecticide aerosols containing pyrethrins, pyrethrum, allethrin, permethrin, tralomethrin, prallethrin, cyfluthrin, cypermethrin, eugenol, or imoprothrin may reduce the number of mites in the house.

The best answer to the problem is to prevent the mites from entering the home by spraying the outside walls and border areas of the lawn with effective miticides and to use a twelve-inch barrier of cultivated soil next to the foundation.

Spray outside walls and foundations with bifenthrin, cyfluthrin, esfenvalerate, lambda-cyhalothrin, permethrin, tetramethrin or tralomethrin. The house should be sprayed from the lower window sill down to the ground. Be sure to test insecticide in an inconspicuous place on the house to be sure it doesn't stain the house.

Be sure to read and follow label directions on the pesticide used.

For more information on any of the above topics, contact the University of Arkansas Division of Agriculture Cooperative Extension office at 425-2335.

Sincerely,

Mark D. Keaton,
County Extension Agent-
Staff Chair
MDK/sa