

# Inspector Findings in ----Kentucky----

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**-NURSERY INSPECTORS-**

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<http://www.uky.edu/Agriculture/NurseryInspection>

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## PEST TO WATCH FOR IN JUNE

- Bagworms
- Pine Sawflies
- Potato leafhopper
- Azalea lacebug
- Spider mites
- Lecanium scale crawlers
- Roundheaded apple tree borer
- Cottony maple scale – egg hatch
- Japanese beetles
- Powdery mildew – dogwood, rose, spirea & others
- Oak spider mite
- Tuliptree aphid
- Fall webworm

### Pests seen in May

- Spider mites – lirope
- Azalea lacebug- azalea
- Leaf & flower gall - azalea
- Anthracnose - ash
- tip blight – pine
- anthracnose – maple
- powdery mildew – Kentucky bluegrass
- Psyllids – boxwood
- Horned oak gall – white oak



Row 1: ash anthracnose and maple anthracnose Row 2: obscure scale and oystershell scale Row 3: San Jose scale and cottony maple scale Row 4: Oak lecanium and fletcher scale Row 5: cottony maple leaf scale and tulip tree scale

### Shade Tree Anthracnose Symptoms Appearing In Landscape

John Hartman, Extension Plant Pathologist

Sycamore anthracnose. Anthracnose symptoms have become noticeable on Sycamore in the past week. On infected green, expanding leaves, look for irregular dark, necrotic blotching centered along the leaf veins or leaf

edges. These dark blotches may turn a tan color as the diseased areas of the leaves dry out. In the same trees, tips of young shoots with newly expanding leaves are wilting and dying because of twig or shoot infection. With continued rainy weather, the disease should continue to spread in the foliage. Symptoms are not as severe as we see some years when trees are heavily defoliated by now. The incidence and severity of anthracnose diseases of landscape trees varies with the season. When we have cool springs with extended periods of wet weather, anthracnose diseases are worse. This spring, much of the wet weather has occurred later in the spring when temperatures were warmer. As the weather dries, sycamores normally put out new, healthy foliage. However, the legacy of crooked branches (because lateral shoots take over when terminals are killed by anthracnose) and multiple shoots arising from the base of a killed branch may be still visible many years later.

Sycamore anthracnose is caused by the fungus *Apiognomonia veneta*, and the fungus attacks both sycamore and London plane.

Ash anthracnose. Brown blotches along leaflet edges can be seen now on new ash foliage. Many of these infected leaflets will begin to drop soon and carpet the walks and lawns nearby. Ash anthracnose is not normally a threat to ash tree survival, however, and the ash trees will simply put out a new set of leaves. The ash anthracnose fungus is a species of *Discula*.

Maple and oak anthracnose. Symptoms on these trees range from leaf spots to shoot blight and shoot cankers. Maple anthracnose may be caused by *Discula* sp. or *Kabatella apocrypta*, and oak anthracnose by the fungus *Apiognomonia quercina*. Although these two diseases are less common than the sycamore and ash anthracnose disease, they, too are found in cool, wet springs. Dogwood anthracnose, caused by the fungus *Discula destructiva* is only found occasionally in most home landscapes, but it is very common in forest trees and heavily shaded landscapes.

## Periodical Cicada Brood XXIII

### Emergence Underway

Lee Townsend, Extension Entomologist



Kathy Keeney, McCracken County Horticulture Agent, reported the beginning of Brood XXIII emergence. This is a 13-year brood that

occurs primarily west of I-65 in Kentucky.

The individual life cycle of the periodical cicada is long but relatively simple. Adults usually emerge between late April and early June. Just before emergence, cicadas burrow to the soil surface and if in water-soaked ground will often build a 6" to 8" tall mud "chimney," a structure very similar to those built by crayfish on water-soaked ground. This structure probably allows the cicadas to

climb above the moist ground so their outer skin can dry out and be shed.

Following emergence, adults move immediately to any convenient vertical object and shed their last nymphal skin. They leave empty brown skins, which have split down the back, lying all about. After struggling out of the pupal skin, adult cicadas rest on that site for several hours until their bodies and wings have expanded and are dry and hard.

After mating, females disperse to lay eggs. They prefer grapevines and oak, hickory, apple, peach and pear trees for egg-laying. They first slit the bark and then insert a row of eggs into the wound. Eggs hatch in six to eight weeks. Nymphs fall to the ground and burrow down to the root system where they stay for the next 13 years. Damage occurs as they use their piercing- sucking mouthparts to feed on sap in the roots.

Insecticides can be used to reduce damage by cicadas but several applications may be needed. Dursban (chlorpyrifos) and Sevin (carbaryl) are labeled specifically for periodical cicada control. Several synthetic pyrethroid insecticides are labeled for landscape trees and shrubs. Often, these insecticides have a repellent effect that causes insects to leave treated surfaces shortly after landing on them. The following examples do not list the periodical cicada but are broad spectrum products that are effective against a wide range of insects - Astro (permethrin), Decathlon 20 WP or Tempo (cyfluthrin), DeltaGard T&O (deltamethrin), and Scimitar (lambda cyhalothrin). Several of these are available only to commercial applicators.

Nurseries under a routine spray schedule should be sprayed according to intensity of the outbreak, which can range from a few cicadas in some areas to massive numbers in other areas. During low level outbreaks application may be needed twice a week. During massive outbreaks, damage will potentially occur even with daily applications. Continued cicada flight to landscapes and nurseries from surrounding woods keeps reinfestation pressure high for several weeks. Control is most effective when the insects are hit directly with spray droplets. Residual control must rely on cicadas sitting on treated surfaces long enough to absorb the insecticide. This can delay or reduce action on the insect.

## Powdery Mildew And Cedar Apple Rust Are Appearing On Apples

by John Hartman, Extension Plant Pathologist

Powdery mildew. Symptoms of powdery mildew are visible now on leaves and shoots of apples and crabapples. Powdery mildew, caused by the fungus *Podosphaera leucotricha* can seriously reduce the vigor and productivity of apple trees. The mildew fungus may deform, stunt, or kill twigs, leaves, blossoms, and fruit. Signs of the fungus in the form of gray felt-like patches occur on leaves and on current seasons twig growth.

Leaves may be distorted, appearing crinkled, folded lengthwise, and thickened. Mildew infections on fruit can result in net-like russetting symptoms. Mildew overwinters in infected buds. It especially survives well through mild winters such as the one just past. Conidia from these primary infections become available to cause new infections in early spring before the apples bloom. Commercial growers are urged to manage powdery mildew with fungicides as described in the Kentucky Commercial Tree Fruit Spray Guide, ID-92, available at county extension offices.

Cedar apple rust. Wet weather a few weeks ago favored production of cedar apple rust (*Gymnosporangium juniperi-virginianae*) spores on cedars and junipers and favored infection of developing apple leaves. Rust symptoms on apple leaves are just now appearing as tiny bright-orange spots on the upper leaf surface. As the fungus in the spots matures, produces specialized spores, and mates with nearby apple rust, the spots will eventually enlarge and form spore-bearing structures on the leaf undersides. These spores, called aeciospores will infect cedars and junipers in mid-summer to continue the disease cycle on the alternate host. It is too late to apply fungicides for management of cedar apple rust on apples because the period for infection by spores carried from cedars is past.

## May Beetle Feeding Damage

by Lee Townsend, Extension Entomologist



May beetle is a generic term for a large group of 3/4 inch long light brown to dark brown beetles that emerge in May or early June. The adults of many species don't feed but those of other species can strip the foliage from oaks, and some other trees. The adults feed at night eating the leaf tissue and leaving only veins. This means the damage appears suddenly with no apparent cause. Caterpillars can cause this type of injury but they should be found on or near damaged leaves. The beetles fly in, feed, and move away with no trace. Small trees can be protected with an application of Sevin, if necessary.

## Borers Are Flying

by Mike Potter, Extension Entomologist

Four serious pests of landscape trees dogwood borer, bronze birch borer, flatheaded appletree borer, and honeylocust borer are beginning to emerge. The dogwood borer is the most serious pest of ornamental

dogwoods, especially stressed trees in full sun. The bronze birch borer is a severe pest of white or paper birch, especially cultivated trees under stress. Flatheaded appletree borers are major pests of red maples, hawthorns, flowering crabapple, and several other hardwoods,

especially those which are newly transplanted or under stress. Honeylocust borers are serious pests of transplanted and established urban trees with limited root zones. Mated females of all four species fly to host trees and lay eggs on the bark.

Management -- Borers rarely injure healthy trees or shrubs growing in their natural environments. When transplanted into landscape settings, every effort should be made to minimize plant stresses such as drought, soil compaction, sunscald, lawn mower/weed trimmer injuries, etc. Because newly planted trees are under considerable stress, preventive sprays are advisable during the first 2-3 growing seasons after planting. Timing is crucial in order to have a lethal residue of insecticide on the bark to intercept newly hatched larvae before they burrow into the tree. Now is about the time to apply protectant sprays for all four species. Lindane or Dursban (chlorpyrifos) are effective, and should be sprayed to runoff on the trunk and main scaffold limbs. A second application, three weeks after the first, provides extended protection.

## Caterpillar Hunters - Large Beetles With Appetites To Match

by Lee Townsend, Extension Entomologist



Caterpillar hunters are large (1.25 inch long beetles) with metallic green wing covers and a blue-black head and following segment with copper edges.

The long legs and antennae are also blue black. These ground beetles were introduced into New England from Europe to help with control of the gypsy moth in 1905. The insect has spread widely in the US. The adult will eat several hundred caterpillars during a life span of two to four years. They are common crawling in wooded areas now.

## Scale Insects

Eric Day - Virginia Tech University

Entomology Publication 444-224, August 1996

*Note: The dates listed for treatments are for Virginia. Dates for Kentucky will vary slightly.*

Scale insects are a peculiar group and look quite different from the typical insects we encounter day to day. Small, immobile, with no visible legs or antennae, they resemble individual fish scales pressed tightly against the plant on which they are feeding. There are over 150 different kinds of scales in Virginia. Many are common and serious pests of trees, shrubs, and indoor plants.

### *Damage*

Scale insects feed on plant sap. They have long, threadlike mouthparts (stylets) six to eight times longer than the insect itself. Feeding by scales slowly reduces plant vigor. Heavily infested plants grow poorly and may suffer dieback of twigs and branches. Occasionally, an infested host will be so weakened that it dies.

### *Control*

Adult scales are protected from insecticides by waxy coverings. Control measures, therefore, must be aimed at unprotected immatures (crawlers) or the overwintering stage. Dormant oils are effective on the overwintering stage of most species, but they can only be applied in early spring before leaves appear. During the summer, control requires accurate identification of the pest species so that hatching dates of crawlers can be determined. Once the pest is identified and proper timing known, any one of several common insecticides can be used. Consult your local Extension Agent for current insecticide recommendations.

### Armored Scales

Scale insects can be roughly divided into two groups: armored scales and soft scales. Armored scales are so named because they secrete a protective cover over their bodies. Most species overwinter as eggs beneath the female cover. In spring, eggs hatch into tiny mobile crawlers which migrate to new feeding sites. After a few days, crawlers settle, insert their mouthparts, and begin feeding. Soon they secrete a protective cover and lose their legs. Large populations can build up unnoticed before plants begin to show visible symptoms. Our most common armored scale pests are described and illustrated below.

#### *San Jose Scale*

Mature scales are circular, slightly convex, and smoky black. They are about 1/16 inch across. Under a magnifying glass, a conspicuous, dark gray, concentric ring is visible. San Jose scale is perhaps the most widely distributed and most destructive scale insect pest of fruit trees, shade trees, and ornamental shrubs in the United States. Over 60 host plants are known, including apple, pear, peach, cherry, ash, poplar, lilac, elm, willow, pyracantha, and cotoneaster. There are at least three generations a year in Virginia; broods often overlap. When necessary, treat June 10-15, July 10-15, and September 10-15.

#### *Oystershell Scale*

These scales are shaped like the shell of an oyster. They are chestnut to dark brown, sometimes with lighter transverse bands. Twigs are often completely encrusted with scales. This is a common and destructive pest of over 120 different species of fruit trees, shade trees, and woody ornamental shrubs. Hosts include apple, lilac, dogwood, boxwood, birch, elm, sycamore, viburnum and many

others. There are two generations per year with crawlers active May 1-20 and July 15- 25.

#### *Pine Needle Scale*

Mature scales are pure white and shaped like oyster shells. This is a common and serious pest of ornamental pines and various spruces. Less preferred hosts include hemlock and fir. Ornamental plants, Christmas tree plantations, and nursery stock are more frequently infested than forest trees. In heavy infestations, needles may be completely whitened by a continuous layer of scales. There are two generations per year in Virginia. Crawlers are active between April 20-May 30 and July 10-20.

#### *White Peach Scale*

Females are circular and white with an orange- yellow central spot. Males are elongate and pure white with a slight ridge down the back. White peach scale is a serious pest of stone fruits, especially peach and cherry. Flowering cherry, plum, and peach are also infested. There are three generations per year. Crawlers are active April 25-May 15, July 1-15, and August 20- September 15.

#### *Euonymus scale*

Females are pear-shaped and blackish-brown. Males are elongate and white. This is a common and serious pest of evergreen euonymus, often causing defoliation and dieback. Pachysandra and bittersweet are also suitable hosts. There are two generations per year. Crawlers are active May 5-June 10 and August 1-25. When required, four treatments are recommended: May 10 and 20, and August 5 and 15.

#### *Gloomy Scale*

Both sexes are circular, strongly convex, and dark gray or black. Mature scales have a central, light-gray, circular right which is visible with a magnifying glass. Gloomy scale is a common and serious pest of silver maple and red maple. It is also found on sugar maple, hackberry, elm, boxelder, sweetgum, redbud, buckthorn, gallberry, mulberry, and soapberry. There is one generation per year in Virginia with crawlers active June 10-20.

#### *Obscure scale*

Mature scales are dark gray, often identical to the color of the bark. Crawlers tend to settle close together, resulting in patches of scales several layers deep. This is a serious pest which causes dieback of branches, limbs, and sometimes entire trees. Oaks, especially pin oak, are the primary host, but it has also been reported on chestnut, pecan, beech, English walnut, willow, maple, hickory, and other trees. Crawlers on red oaks are active in mid-July, but on white oaks in mid-August.

#### *Juniper Scale*

Females are round and dirty-white with yellow centers. Under a magnifying glass they resemble miniature fried eggs. Males are also white, but smaller and narrower.

Hosts include junipers, arborvitae, incense cedar, and cypress. There are two generations annually. Crawlers are active April 5-20 and June 5-20.

#### *Japanese Scale*

Mature scales are grayish white, long, and narrow. Japanese scale is a pest of maple, privet, boxwood, holly, Japanese quince, and rose. Use dormant oil sprays or treat for crawlers every two weeks between June 1 and September 1.

#### Other Armored Scales

**Fern Scale:** Males white and narrow; females brown and pear-shaped. On ferns, African violet, begonia, camellia, citrus, fig, geranium, hibiscus, liriope, orchids, palms, violet, and many others. **Greedy Scale:** Attacks apple, birch, cactus, camellia, cherry, cotoneaster, English ivy, English walnut, euonymus, grape, locust, magnolia, maple, oak, palm, pyracantha, redbud, rose, willow, and many others. **Grape Scale:** Found on grape, peach, hickory, and sycamore. **Latania Scale:** On palms, orchids, canna, gladiolus, raspberry rose, and other plants. **Hemlock Fiorinia Scale:** On hemlock, fir, spruce, and yew. **Hemlock Scale:** On hemlock, Douglas-fir, Monterey, yellow, and some other pines. **Elm Scurfy Scale:** Found on elm and hackberry. **Scurfy Scale:** Attacks pear, apple, quince, cherry, peach, black raspberry, dogwood, mountain ash, black walnut, elm, hickory, maple, willow, and others. **Dogwood Scurfy Scale:** On dogwoods.

#### Soft Scales

In general, soft scales are larger and more convex than armored scales. Many resemble miniature tortoise shells. Soft Scales usually cover themselves with wax, but they lack the detachable protective cover for which armored scales are named. Most soft scales overwinter as immature, fertilized females. In spring they resume feeding, mature, and lay eggs. These hatch into tiny crawlers. After locating suitable feeding sites, crawlers settle and begin feeding. Some species lose their legs once they've settled, but others retain them and are able to crawl short distances to find suitable overwintering sites in the fall. Except for soft scales which infest indoor plants, most have only a single generation per year at our latitude. Our most common soft scale pests are described and illustrated below:

#### *Magnolia Scale*

Our largest scale insect, this species reaches 1/2 inch in length. Color ranges from dark brown to pink-orange and older scales are covered with a white waxy powder. Large amounts of a sticky waste product called honeydew are secreted by the scales. Wasps and ants are attracted to the honeydew and black fungi called sooty molds grow on surfaces where honeydew collects. There is one generation per year with crawlers active from September 1-20, much later than most other species.

#### *Tuliptree Scale*

This is our second largest scale, reaching 1/3 inch in length. Color varies from gray-green to pink-orange, mottled with black. It is easily mistaken for magnolia scale but lacks the white, waxy powder. Both tulip tree and magnolia are attacked and may be seriously weakened. Large amounts of honeydew are produced. There is one generation per year with crawlers active September 1-20. A single female can produce over 3000 young!

#### *European Fruit Lecanium*

Typical scales are 1/8 inch long, oval, and very convex. Color varies considerably with age and host, but usually they are brown to reddish-brown, smooth and shiny. The host list of this insect includes a wide range of fruit and shade trees, shrubs, and other woody ornamentals. Favorite hosts include peach, cherry, plum, apple, ash, blueberry, black walnut, boxelder, elm, grape, hickory, locust, magnolia, maple, oak, redbud, willow, and many others. There is one generation per year with crawlers active between June 1-20.

#### *Oak Lecanium*

This species is similar in appearance to European fruit lecanium. Oak is the favored host, but hickory and birch are also attacked. There is one generation per year with crawlers active from May 25-June 25. When necessary, treat June 15 and 20.

#### *Fletcher Scale*

Mature scales are shiny, dark brown, and very convex. They are similar in appearance to European fruit lecanium and oak lecanium which are close relatives. Arborvitae and yew are the most frequently attacked hosts, but pachysandra and Eastern Red cedar are also susceptible. Honeydew excreted by the scales supports unsightly, sooty molds. There is one generation per year with crawlers active June 5-25. When necessary, treat between June 10-15.

#### *Hemispherical scale*

Mature scales are brown, smooth, glossy, and very convex (thus the name), with a slightly flared margin. They measure about 1/8 inch in length. Hemispherical scale does not overwinter outdoors at our latitude and is, therefore, primarily a pest of houseplants and greenhouse plants. Among the most commonly attacked host plants are ferns, palms, avocado, begonia, citrus, chrysanthemum, fig, lily, orchids, and many others. In a constant indoor environment, reproduction is continuous and generations overlap. Successful treatment requires two to three insecticide applications at 10-day intervals. When feasible, large numbers of these scales can be physically dislodged by gently wiping the leaves with a dilute mixture of water and dishwashing detergent. Combine manual and chemical control for best results.

### *Brown Soft Scale*

Adults are oval, soft, rather flat, and 1/8 inch long. Color is usually yellowish-brown or greenish-brown. Brown soft scale is found indoors throughout the state and outdoors along the eastern seaboard. It has a very long host list and is common on gardenia, fern, camellia, oleander, fig, and many others. Reproduction is continuous with overlapping generations. Recommended controls are the same as for hemispherical scale.

### *Pine Tortoise Scale*

Mature scales are shaped like miniature tortoise shells, thus the name. They are reddish-brown, mottled with dark spots. Scots, Austrian, jack, and red pines are preferred, but several other species of pines are susceptible. There is one generation per year with crawlers active June 10- July 5. When necessary, treat between June 20-25.

### *Wax Scale*

Immature scales have spots of wax on the back and around the margin. As they mature, more and more wax is produced until it eventually covers the entire scale in a thick, white, irregular coat. Wax scale is found only in eastern Virginia. Hosts include azalea, blueberry, camellia, Chinese holly, mulberry, pear, persimmon, plum, quince, and others. There is one generation per year with crawlers active June 1-25. When necessary, treat June 10-30.

### *Cottony Camellia Scale, Cottony Taxus Scale*

Long, white, cottony egg sacs produced by this scale are much more conspicuous than the scales themselves. After completion of the egg sac, the female dies, dries up, and falls to the ground. Host plants include camellia, holly, taxus, rhododendron, hydrangea, maple, and English ivy. There is one generation per year with crawlers active June 1- 10. When necessary, treat June 10-20.

### *Cottony Maple Scale*

Large, conspicuous, white egg sacs are produced on the twigs and small branches of host plants. During summer, immature scales feed on leaves, but they migrate to twigs as fall approaches. Honeydew excreted by the scales supports unsightly, sooty mold growth. Cottony maple scale is most common on silver maple, but also found on other maples, boxelder, linden, black locust, red mulberry, white ash, apple, beech, cherry, dogwood, elm, hickory, holly, honeylocust, peach, plum, sycamore, willow, and others. There is one generation per year with crawlers active June 5-25. When necessary, treat on both June 10 and 20.

### *Cottony Maple Leaf Scale*

Conspicuous, cottony egg sacs, similar to cottony maple scale, but produced on the leaves. Occurs on maple, dogwood, holly, andromeda, and gum. There is one generation per year with crawlers hatching June 1-10. When necessary, treat between June 15-30.

### *Oak Kermes*

Mature scales are tan, globular, and hard. They are easily mistaken for galls or buds. Oak is the only host. This species is not particularly injurious to host trees, but, if necessary, treat between June 10-15.

### Other Soft Scales

Golden Oak Scale: Injurious to young oak trees and older trees when drought-stressed. Pit-making Scales: Form shallow pits in the bark of oak and holly. Azalea Bark Scale: On azaleas, rhododendron, andromeda, hawthorn, poplar, and willow. Calico Scale: On elm, Zelkova, maple, pyracantha, pear, sweetgum, Boston ivy, Virginia creeper, dogwood, buckeye, and flowering crabapple. European Elm Scale: Reddish-brown with a white fringe. On elms.

## Thistle-Head Weevil

The thistle-head weevil, a small beetle native to Europe,



is an important biological control agent against nodding thistle. Where this insect has been released, a 50-95% reduction in the number of thistle plants has occurred over time. The

weevils are dark brown-black, 1/4" long beetles with a short, broad snout and patches of small golden scales on its wing covers. The larval stage of the insect, a legless white grub, feeds on seeds in the receptacle of the developing musk thistle flower. Feeding does not harm the plant but reduces the numbers of seeds produced by an infested flowerhead. The more grubs present in a head, the fewer the number of viable seeds.

The weevils overwinter as adults under ground litter. In late spring, the adults feed on the leaves of musk thistle rosettes and mate. Near the time musk thistles begin to bolt, each female lays approximately 100 eggs on the bracts of developing flowers and covers them with a secretion of chewed plant material. This material gives the eggs a dirty, scale-like appearance.

Eggs hatch in six to eight days. The small grubs tunnel into the receptacle, or swollen base of the thistle flower, where they feed for about 25-30 days. When mature, the larvae enter a resting stage, called the pupa, which lasts another 8 to 14 days. During this time the insect transforms into an adult.

When 15 or more grubs feed within a single head, the thistle plant does not form seeds. Numbers of larvae per head tend to decrease as more flowers develop. Their feeding causes some flowerheads to turn brown prematurely because of damage to the head or to the stem just below the receptacle. Incompletely filled flowerheads with dead plant tissue in the center can be a sign that thistle weevils are present.

One generation of the weevil occurs each year. Adults emerge in July and seek overwintering sites under new musk thistle rosettes, ground litter, and wooded areas where they will remain dormant until the following year.

Note: The UK Department of Entomology has been active in distributing the thistle weevil throughout Kentucky since the mid-1970's. Distribution this year has centered on 1-64 in Jefferson and Shelby counties and along the Bluegrass Parkway in the Nelson and Washington county areas.

## Forest Tent Caterpillar Feeding Now

by Lee Townsend, Extension Entomologist

Forest tent caterpillars are feeding heavily on a variety of trees including sweetgum, oak, birch, ash, maple, elm and basswood. This species is similar to the eastern tent caterpillar in some ways but its activity pattern does not appear to fit the MRLS scenario. While classified as a tent caterpillar, these insects do not make large, obvious tents but lay down a silk mat on the trunk or branch of a tree on which to rest and molt.

This caterpillar can be distinguished from the eastern tent caterpillar by the keyhole-shaped spots along its back. Full-grown larvae have light-blue heads speckled with

black and are sparsely covered with fine, whitish hairs. There is one generation per year.

<b>Degree Day Totals through May 25, 2002</b>	
Bardstown - 726	London - 718
Bowling Green - 814	Louisville - 698
Covington - 527	Mayfield - 725
Henderson - 763	Paducah - 815
Huntington, WV - 720	Princeton - 948
Lexington - 663	Quicksand - 767
<b>Degree Day Totals through May 23, 2000</b>	
Bardstown - 804	London - 742
Bowling Green - 813	Louisville - 804
Covington - 660	Mayfield - 849
Henderson - 851	Paducah - 860
Huntington, WV - 751	Princeton - 1022
Lexington - 707	Quicksand - 774
<b>Degree Day Totals through May 25, 2001</b>	
Bardstown - 844	Louisville - 886
Bowling Green - 945	Mayfield - 850
Covington - 739	Paducah - 962
Henderson - 940	Princeton - 1008
Huntington, WV - 788	Quicksand - 789
Lexington - 830	Somerset - 820
London - 774	

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