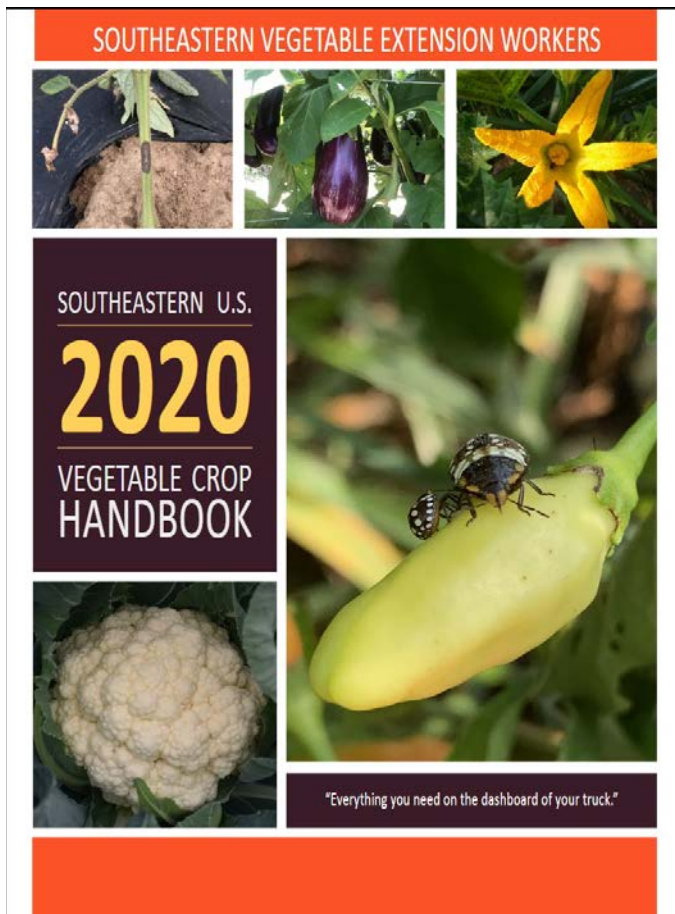


# White County Horticulture

April 2020 Vol. 7. No. 4  
Published Monthly

**The 2020 Southeastern U.S. Vegetable Crop Handbook is available and now has gone DIGITAL!**



"[This handbook] contains the information that you need to manage your vegetable crops, including which varieties to plant, planting dates, fertilizer recommendations, cover crop selection and conservation tillage options, pesticide selection, grafting, fertigation, plasticulture, postharvest handling, alternative pest management tools and suggestions, as well as many other topics."

#### **Sections include:**

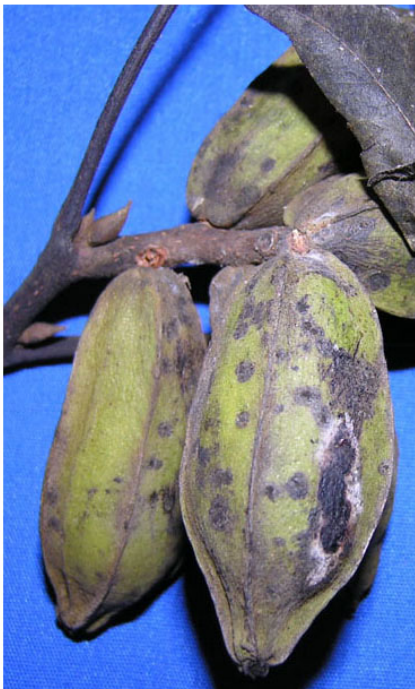
- General Production Recommendations
- Specific Commodity Recommendations
- Soil Pests: Their Detection and Control
- Calibrating Chemical Application Equipment
- Registered Fungicides, Insecticides, and Miticides for Vegetables
- Insect Control for Commercial Vegetables
- Disease Control for Commercial Vegetables
- Chemical Weed Control in Vegetable Crops

Download your copy here:

<https://content.ces.ncsu.edu/southeastern-us-vegetable-crop-handbook>

**Pecan Scab**  
**By: Jan Yingling**  
**County Extension Agent - Agriculture**

Pecan Scab-  
*Fusicladium caryigenum*



Sherrie Smith, University of Arkansas Cooperative Extension Service

Pecan Scab is an important fungal disease caused by the pathogen *Cladosporium caryigenum* and is generally considered to be the most destructive disease of pecan in most growing regions in the United States. Without management, pecan scab can cause 50-100% losses in susceptible varieties. Scab is favored by wet and humid conditions, especially prolonged periods of continuous leaf wetness, and can occur on leaves, twigs, and nut shucks. Young and actively growing tissues are the most susceptible to scab and become less susceptible as they mature. The disease first appears as small, dark brown to black spots which may continue to increase in size, sometimes coalescing into large, irregularly-shaped lesions. Infection is more often seen on the lower leaf surface, but both sides of the leaf may be infected. Leaf infection can cause a reduction in photosynthetic output, but nut

shuck infection causes the majority of losses linked to scab. When early infection of the nuts occurs, trees may experience significant premature nut drop as well as a reduction in nut size and quality. As the season progresses, initial nut scab infections become less damaging to yield and quality, with damage mostly being cosmetic if the disease develops after shell hardening. The likelihood of nut drop increases greatly if lesions cover more than 50% of the shuck and may also result in nuts that remain on the tree or will not separate from the shuck.

Pecan scab can be managed through cultural methods such as removing fallen branches from the orchard floor and pruning trees to increase air circulation, planting scab-resistant varieties, and following a fungicide spray program. Scab severity can vary greatly from year to year, so frequent scouting of orchards and being observant of weather conditions are essential tasks to stay ahead of scab development.

When relative humidity is above 90% and the temperature is above 70° F, conditions are very favorable for pecan scab development. Each pecan variety has their own level of resistance, so a method for determining spray intervals has been developed using accumulated pecan scab hours.

Accumulated scab hours are calculated by totaling the number of hours where both 90% relative humidity and 70°F temperatures occur at the same time, resetting the calculation after each fungicide application. The model assumes that the crop will be protected for 14 days following a properly applied fungicide application. Thresholds have been set at 10 scab hours for highly susceptible varieties, 20 hours for moderately susceptible varieties, and 30 hours for less susceptible varieties. If the threshold is met within the two week period following a spray, it will be necessary to reapply. If the threshold has not been met it may be possible to delay the next application until the hours have been met. It has been shown that using the scab hour model rather than simply spraying on a fixed schedule can

reduce the number of fungicide applications required in many crop years.

Find more information on Pecan Diseases at our website [www.uaex.edu](http://www.uaex.edu)

Fact Sheet for Pecan Diseases: <https://www.uaex.edu/publications/pdf/FSA-7540.pdf>

### **Cooperative Extension Service seeks to establish statewide water quality database**

By Ryan McGeeney

The acidity, alkalinity and hardness of water used in spray applications can have a significant impact on the herbicide being used and researchers with the University of Arkansas System Division of Agriculture are asking the help of growers in establishing a water hardness and pH database for the state.

Tommy Butts, extension weed scientist and assistant professor for the Division of Agriculture, said extension agents in every county are available to help growers collect one-liter samples.

In addition to testing for pH, agents will test for hardness — or the amount of dissolved calcium or magnesium — and record the water sample's GPS coordinates. Agents will also add a short description, noting the surrounding conditions. Samples will be analyzed at Division of Agriculture facilities.

“Primarily, we are looking at water that is used for pesticide spray applications, but this can include row crops, pastures, or anything else where this water is being used for pest control,” Butts said. “We will analyze the samples this fall, and we will make sure to share the results again with participants this winter.”

Butts said he and his fellow researchers, as well as extension agents, had first collected samples for the database in 2019.

“I greatly appreciated the help that CES agents provided in the collection of samples last year, and I hope we can collect even more this year,” he said.

Butts said the goal of the research is to build a database of spray water quality in Arkansas. Once the results are analyzed, researchers will conduct studies to evaluate how water quality is affecting pesticide applications, and whether external adjustments can or should be made to improve the efficacy of pesticides.

Data from growers' samples will be anonymized in the database, Butts said, and personal information will remain confidential. The GPS coordinates used to identify the location of specific samples will not be made public, but will be used to create a map depicting the general conditions of water throughout the state.

“I realize this may be a challenging task right now with the threat of COVID-19, but I wanted to at least share this now, so if there is a possibility of collecting samples, then we can do it,” Butts noted.

Producers interested in participating in the survey should contact their local CES office, or contact Butts directly at (501) 804-7314 or [tbutts@uaex.edu](mailto:tbutts@uaex.edu). A directory of county offices can be found at <https://www.uaex.edu/counties/default.aspx>.

### **Tri-County Pecan Production**

Agents from Lonoke, Prairie and White counties have teamed up to educate the public on pecan production for small commercial growers and homeowners. We held our first meeting on March 12 at ASU-Beebe, with a great turnout.

Since then, we've started a social media presence on Facebook and Twitter

Go like us:



## Prohexadione Calcium Demo on Blackberries



Last week was exciting in the world of horticulture for this county agent. We were able to put out two demos, one in Clarksville at the Fruit Station

and one in White county at Ritter Farm.

Why is it exciting? I'm glad you asked. Two years ago, I learned about an exciting opportunity that North Carolina State University was beginning in commercially grown blackberries.

Under the direction of Gina Fernandez, NCSU was using Prohexadione calcium in a small plot of blackberries. Prohexadione calcium is a foliar applied plant regulator which reduces vegetative growth by inhibiting the synthesis of gibberellin, a naturally occurring plant hormone. Specifically, it decreases the length of shoot internodes.

In apples and pears, it decreases the need for pruning, allows more light to penetrate the tree canopy increasing fruit coloration, and, due to increased air circulation, decreases the incidence of fire blight, a bacterial disease of apples and pears.

Why is this a big deal? Labor costs can be decreased dramatically if we can demonstrate that this product is sufficient in the "tipping and pruning" management of canes. With less tipping and pruning we think it should lessen the disease incidence as well. To read more about the project and to see Gina's presentation at the Southeast Regional Fruit and Vegetable Conference in Savannah GA from January 10, 2019:

<https://www.raspblackberry.com/.../Modifyng-cane-archit...>

We are simply piggy backing onto NCSU's research to see if we get similar results here in

Arkansas. It's our hope that our findings will be useful to them as well.

## Strawberries: Test for nutrients in spring to get a good crop in summer

By Tracy Courage  
U of A System Division of Agriculture



There's a sure way to know if strawberry plants are getting enough nitrogen and other nutrients to produce a good crop, and that's by testing the leaves and stems.

The University of Arkansas System Division of Agriculture offers a low-cost strawberry petiole sampling program that helps growers know if they are overfertilizing or under fertilizing their strawberries. Petioles are the stalks that attach leaves to stems.

"Analysis is the best way to monitor the nutritional status and correct deficiencies that can occur in the strawberry crop," said Amanda McWhirt, extension specialist for horticulture crops production for the Division of Agriculture. "Proper crop nutrition ensures that yield and quality are optimized, and it protects against applying excess nutrients in the environment and incurring unnecessary expense."

The key is to sample the correct tissue at the correct time. Early spring — when plants start

to bloom until late April — is the best time to test strawberry leaves and petioles.

“Now is the time that growers should be pulling samples,” McWhirt said. “Once you have red fruit, you’ve missed the ideal window.”

Growers collect samples of mature leaves and petioles and send them to the Agricultural Diagnostic Laboratory in Fayetteville for analysis. Leaves are tested for nitrogen, potassium, sulfur and boron, and the petioles are tested for nitrate nitrogen. These nutrients are tested because they are important to producing a good quality strawberry fruit. The cost is \$48 for six plant samples. Results are usually available within two to three business days after the sample is received. Extension specialists are available to talk with growers about their results.

Strawberries need higher nitrogen levels particularly in early spring when they are putting out new growth and flowering. Too much nitrogen, however, can lead to too much plant growth and soft fruit.

The analysis can also reveal excess or lack of nutrients that can make or break a berry crop. Too much boron, for example, can cause toxicity, but not enough boron can result in misshapen fruit.

“It is important to determine if there are any nutrient deficiencies early in the season when growers still have a chance to correct the problem while plants are flowering,” McWhirt said. “Once fruit is close to being harvested, nutrient deficiencies can’t be corrected.”

#### Phylloxera

Three species of phylloxera (*Phylloxera devaatrix*) are pecan pests, but only the pecan phylloxera causes economic damage in

certain years. The pecan leaf phylloxera and the southern pecan leaf phylloxera feed primarily on the foliage, whereas the pecan phylloxera attacks the foliage, shoots and fruit and is therefore the most damaging. The pecan phylloxera overwinters as eggs located inside the dead body of a female adult, which is in protected places on the branches of pecan trees. Soon after bud break, the eggs hatch and the young insects migrate to opening buds or leaf tissue to feed on expanding new growth. The individuals that hatch from the overwintering eggs are known as stem mothers. Feeding by the stem mothers stimulates the development of galls, which enclose the stem mother in a few days. Inside the gall, the stem mother matures, lays her eggs and dies. Eggs laid by the stem mother hatch within the gall, and these nymphs feed within the gall until they mature. Because the galls are seen easily, pecan phylloxera infestations often appear worse than they are. Once the galls appear, it is too late to control pecan phylloxera for the season. However, in most cases it is not necessary to be of much concern, since they usually do not cause enough damage to pecan trees to warrant an insecticide application. If you would like to apply an insecticide try Bayer Advanced Fruit, Citrus and Vegetable Insect Control for systemic control that requires no spray application. Only the trees that were infested the previous year will need treatment, not the entire orchard. Certain native trees and grafted varieties within an orchard become more heavily infested than other trees.

## Weed demonstration in Commercial Blackberries

We were able to get a weed demo put out last week on commercial blackberries at Ritter Farm

Plot Plan:

Trt #	Treatment / Name	rate / ac
1	Gramoxone	1 qt
2	Gramoxone	1 qt
	Princep	1 qt
3	Gramoxone	1 qt
	Princep	1 qt
	Surflan	2 qt
4	Gramoxone	1 qt
	Chateau	6 oz
5	Gramoxone	1 qt
	Alion	6 oz
	<b>First wire</b>	
6	Gramoxone	1 qt
	Princep	1 qt
	<b>First wire</b>	
7	Gramoxone	1 qt
	Princep	1 qt
	<b>second wire</b>	

Field Notes: plants 7 years old, 0.25% surfactant all treatments

dock, vetch, red deadnettle, chickweed

plots were sprayed with Gramoxone+ Princep + Surflan 30 days prior to treatments

Note: Alion is a new herbicide we're trying this year.

## Restricted Use Pesticide License Renewals will be Extended

The notice below was sent out by the Arkansas Department of Agriculture on Tuesday, March 24. If a private applicators license was set to expire on March 31, it will now be extended until April 16.

"The office of Plant Industries Pesticide Section has received numerous requests from licensees regarding extensions for license renewals, which expire on March 31, 2020. Considering the State's COVID-19 response and the Governor's call for social distancing, pursuant to EO 20-06 all Private Applicator license expiring on March 31, 2020, will be extended until April 16, 2020. Private Applicators should continue submitting applications and payment to the Department of Agriculture during this time frame to ensure their license will be renewed on or before April 16, 2020."

### Cedar apple rust

Plants Attacked: Apple, crabapple, juniper

Damage: On apples and crabapples, leaf spots, fruit spots and lesions on stems. On junipers, large galls form that become gelatinous and bright orange during wet weather.

Cultural Control: Prune out the galls on junipers. Remove nearby wild juniper species to protect ornamental malus species.

Chemical Control: Fungicide applications applied during the orange gall stage, until the galls become dry and brown, help protect apples and crabapples from infection. Homeowners may use Captan on fruit trees.

On ornamentals, you may use Spectracide Immunox 3-1 Insect & Disease Control Plus Fertilizer For Gardens® (myclobutanil and permethrin).

See [www.uaex.edu/publications/mp-154.aspx](http://www.uaex.edu/publications/mp-154.aspx).



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