QuickBooks Training

Warren County -- The University of Tennessee Extension will sponsor a financial record keeping training session for nurseries and small businesses. The record keeping software taught at the seminar will be QuickBooks Premier 2015. This is also an opportunity for people to learn about QuickBooks Pro since both of these software programs are similar. The training session will be held in **McMinnville at the TSU Nursery Research Station on July 16 and part of the day on July 17 if needed. The time will be 9:00 a.m. to 4:00 p.m. The cost of the training session will be $75 per company (for one representative) and an additional $50 for each additional participant. For further information about the Warren County financial record keeping session or reservation contact the Warren Co Extension at (931) 473-8484.**

Grundy County -- The University of Tennessee Extension will sponsor a financial record keeping training session for nurseries and small businesses. The record keeping software taught at the seminar will be QuickBooks Premier 2015. This is also an opportunity for people to learn about QuickBooks Pro since both of these software programs are similar. The training session will be held in **Coalmont at the Grundy County Extension Office on July 27 and part of the day on July 28 if needed. The time will be 9:00 a.m. to 4:00 p.m. The cost of the training session will be $75 per company (for one representative) and an additional $50 for each additional participant.** For further information about the Grundy Co. financial record keeping session or reservation contact the Grundy Co. Extension at (931) 592-3971.

Rusts

By: Adam Blalock
Summer, 2015

Working in the horticulture industry, most of us know there is never a shortage of plant diseases to address during the growing season. One plant disease that has been on my mind recently is rust. After doing a little research, I discovered the rust diseases are an incredibly diverse group of plant diseases. Around 7,000 different species of rust are known worldwide! This group of diseases gets its name from the rusty-orange to salmon-pink fruiting bodies and spores it produces which resembles the rust found on old weathered iron. Generally rust diseases cause only aesthetic damage to ornamental plants but sometimes a heavy rust infection will cause twigs and branches to dieback and reduced growth.

Besides being very diverse, rust diseases can also be very complex. Many rust diseases need two different plant species in order to survive. For example, cedar-quince rust gets its name from the fact that its two main host plants are the eastern red cedar (*Juniperus virginiana*) and the flowering quince (*Chaenomeles*). Other plants in the *Roseacea* family also serve as the alternate host. Each rust species has its own set of host plants. The alternate host for daylily rust is *Patrinia*, the alternate host for wheat rust is barberry (*Berberris*), and the alternate host for white pine blister rust is currants and gooseberries (*Ribes*).

To better understand the lifecycle of rusts, I'm going to focus on just one of the rust diseases, the cedar-quince rust. During the winter, cedar-quince rust commonly appears as orange pustules (blisters) or small gooey orange blobs on the eastern red cedar. Beginning in early spring, following wet weather, these pustules on the cedar trees produce spores that, if by chance happen to land on a susceptible plant in the *Rosacea* family (eg. hawthorn) a new infection will occur. Generally by late spring, the spores will stop flying from the cedar trees. During this time, cedar-quince rust will begin to produce new spores on the hawthorn tree. These spores are produced from short coral-pink to rust-orange spikes called aecia tubes and will only be able to infect the alternate host, the eastern red cedar. Next year, the cycle will be repeated.

Because it is impossible to eliminate the alternate host for the majority of the rust diseases, the easiest management technique would be to grow only resistant plants and plant selections. Unfortunately, due to customer demand, this is not always possible. If you know that rust is a serious disease you face every year on your *Roseacea* plants, be prepared to spray a fungicide every 10-14 days or after a rainfall beginning at bud break and continuing through late spring to early summer. An additional control practice to try for reducing the severity cedar-quince rust would be to locate junipers and *Roseacea* plants as far away from one another as possible when planting out new nursery stock.