



Jerry Faulring

Boxwood Blight Compliance Agreement

On February 1, 2017 Waverly Farm signed a Boxwood Blight Compliance Agreement (BBCA) with the Maryland Department of Agriculture. Think lab rat.

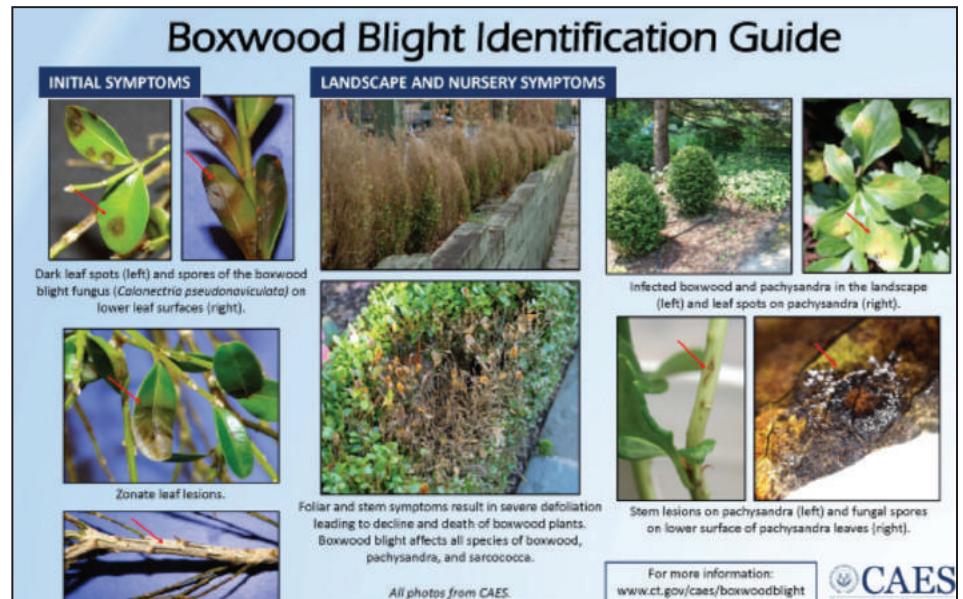
Bob Trumbule, Maryland Department of Agriculture, Plant Protection and Weed Management Section and his entire staff have spent significant time and energy to implement the Agreement for the benefit of Maryland boxwood growers and their customers. Many other Maryland growers have attended meetings along the way to make this program a reality. I gratefully acknowledge that MDA edited this article for accuracy and factualness.

A copy of the full Agreement can be seen at:

<http://mda.maryland.gov/plants-pests/Documents/Maryland%20Boxwood%20Blight%20Compliance%20Agreement.pdf>

As this is the first signed BBCA agreement in Maryland, MDA staff worked diligently to get it right the first time so that all subsequent agreements are identical at least in the first year. It is reasonable to believe with experience, there may be some changes upon renewal. If not, a job well done!

I strongly support the BBCA and



This handy aid is available in laminated form from the Oregon State University

encourage as many growers as possible to join in this program.

WHY? We are all proud of the Maryland nursery industry and should implement any and all programs that insure pest free production systems yielding pest free plants for our customers. Collectively, our goal should be to show the industry we are a trusted partner in the supply chain.

I spoke with several contractors, designers and landscape architects at MANTS last January. They all state virtually every landscape plan drawn today includes boxwood. This alone should place a high level concern for everyone to insure a boxwood supply chain that is free of boxwood blight. For growers, field and container, boxwood is a

high value crop that we must work hard to keep in production.

At first glance, compliance requirements do not seem that rigorous. As always, when one gets into the details, thinking through the requirements carefully, implementing the requirements to the nth degree is actually pretty awesome, but doable. First, I see implementation as a change in culture. We have to get the entire staff thinking about sanitation and pest transmission into and throughout the operation as a way of life. This is not only applicable to boxwood blight, but to a range of other plant diseases and pests. There are certain to be additional threats to the industry

(continued on page 10)

(continued from page 9)

vis-à-vis plant health in the future. This implementation serves as great training and operational understanding for what may be coming. It's easy to go overboard and become hyper about such things as deer moving through the crops spreading the spore. Our job is to do everything reasonably possible but know risk is a reality.

Implementation of the BBCA will come at a cost to growers but I believe our customers will be willing to share in the cost to be assured they are sourcing boxwood with the greatest chance of not introducing and spreading blight to their landscape projects.

Background. The Pennsylvania Department of Agriculture (PDA) declared boxwood blight to be a "regulated pest." The goal of regulating this disease is to stop its artificial spread by human activities, particularly the propagation and distribution of infected boxwood and other host plants such as *Sarcococca* and *Pachysandra*. On June 25, 2016 the Department implemented a Quarantine to prevent the introduction into or movement of Boxwood Blight in Pennsylvania.

The PDA action drove the whole Maryland BBCA process into existence. Many of us had been talking about blight issues and wondering what we do if quarantines became a reality. Within days of the PDA action, the conversation turned quickly into a response that became the Maryland BBCA. Realizing it only took 7 months to implement the BBCA, I think it came together pretty quickly.

Pennsylvania's quarantine

requires us to comply with new rules for shipping boxwood into their state. One of two things must happen. The first choice is to obtain a phytosanitary certificate from MDA on or about the day of shipment. For one who ships boxwood into PA this may be a cumbersome process because we have to give MDA at least 10 days notice and pay a \$25 inspection fee. During the busy shipping season, MDA may have difficulty with limited staff in fulfilling the inspections in a timely fashion. This could complicate shipping in a big way and was the primary driver for us to obtain a BBCA. The second choice is to obtain a Boxwood Blight Compliance Agreement from MDA which has to be acceptable to the PA Department of Agriculture. The BBCA says that MDA is reasonably sure that a given producer's operation is free of blight and that the grower is complying with a rigorous set of rules to prevent the spread of blight. The BBCA is in force for one year and precludes the need for shipping day phytosanitary certificates.

Compliance comes with a lengthy list of requirements.

Mandated Procedure Checklist for MD Boxwood Blight Compliance Agreement

- Know your sources and suppliers.
- Isolate all incoming host plants, on a cleanable surface, for 30 days and inspect weekly.
- Deliver new host plants directly to isolation areas or clean any common loading areas after deliveries.

- No fungicide applications or pruning in isolation areas during the 30 day waiting period.
- Separate all host plants by source.
- Avoid overhead and late-day watering.
- Prevent water runoff from one production area to another.
- All tools, equipment and surfaces must be disinfected between crop cycles.
- Use new potting medium and sterilized or new pots.
- Report suspect plants to MDA.
- Maintain complete host plant records for 12 months.
- Train appropriate staff on symptoms, sanitation, and compliance agreement.

These additional, nursery-suggested, procedures are strongly recommended, in order to minimize risk of contamination for your operation:

- All visiting vehicles will only enter the nursery through controlled-access points.
- Vehicles will be inspected for plant debris and soil. Dirty vehicles will be denied access or sent for decontamination at the nursery's wash-down facility.
- Customers will only tour fields with a nursery-supplied guide, in a nursery-owned vehicle.
- Customers will not exit the tour vehicle to access any boxwood or other host plant block.

At this point in time, Waverly propagates all of its boxwood which eliminates the first five items of the mandatory requirements. If in the future, we source plants from another grower, they will either have a BBCA or we will segregate those plants as required above. For

growers who purchase boxwood plants for field liners or to grow on in containers, they will have to conform to the first five conditions.

How does this apply to wholesale distribution centers? It's complicated. My understanding is if they engage a BBCA it requires the 30 day quarantined holding period. They may need a phytosanitary certificate if shipping into PA. Alternatively, they can buy from holders of a BBCA of which there are increasing numbers of compliant growers in various states; each state has its own compliance agreement with same basic principle. It is also my understanding that all BBCA agreements are not that rigorous and are granted on a voluntary, good faith basis by which the grower simply agrees to compliance conditions without inspection from their state regulators. 'Buyer beware' kicks in here. This BBCA, replacing regular phytosanitary certificates needed for each shipment, will benefit the nurseries engaged in the boxwood business.

For our MNLGA greenhouse growers, their production systems and compliance for a BBCA is the same as a field grower.

Landscape contractors are under no obligation obtain a BBCA but will need a phytosanitary certificate to take plants into PA. However, it would be very prudent to apply the holding period rules in an effort to prevent blight from spreading into landscapes. Alternatively, as above, they could and probably should source plants from growers and re-wholesalers who can document BBCA suppliers.

In all cases, the quarantine and

holding rules are complicated by weather conditions for which blight symptoms may appear. It is well recognized that blight development is favored by high humidity and rainfall within temperature ranges of about 80-90 degrees F. However, even during periods not favored for the expression of blight, subtle symptoms of the blight's presence can be seen or the plants may remain symptomless (asymptomatic). Look at the photo above to see visual symptoms of plants not otherwise actively engaged with the more obvious appearance of symptoms such as in the photos above and below.

Our BBCA, at this writing, does not include the strongly recommended requirements but we are moving as fast as possible to comply with those requirements.

Of large concern, and our greatest, is the prevention of blight from arriving here from others. A secondary concern would be limiting the spread of boxwood blight within the nursery if it is accidentally introduced. To that end, we have a number of implementations to accomplish immediately:

1. Signage will be placed at all points of entry to make sure all visitors, including trucks for pick up and delivery, are funneled into one farm entrance only. MDA, with my input, has developed a

template for approved signage that will be available for others when they engage the BBCA; the approved sign is below. Due to our high amount of road frontage and multiple entry points, a variety of different signs have also been developed.

2. Visitors will be directed to park in a special lot and required to call for host. All visitors will be required to have a Waverly host and travel on the farm in our vehicle; they will not be allowed to enter boxwood blocks on foot for any reason.
3. Trucks for pick up and delivery will need to remain parked at the Farm entrance and request inspection. If they are deemed to be unsanitary they will proceed to a sanitization/wash down site for processing; if they have any boxwood onboard or contain obvious boxwood debris they will be sent away. (See sign on page 12)

The sanitary truck requirement means we have to establish a wash down site that is appropriate for collecting wash down restate that will contain a sanitizer. If a grower has boxwood moving

(continued on page 12)



Potted plants exhibiting boxwood blight symptoms; photo by MASSNRC.org

(continued from page 11)

into or through the operation sourced from others, the loading yard would have to be sanitized with some frequency. There is a secondary advantage for the wash down site. I have long wanted a site to wash equipment and fill sprayers reducing the concern of pesticide escape into our environment.

Internally, several requirements will be implemented. Field staff will have to follow many new procedures:

1. Staff that work in boxwood blocks for any reason such as taking inventory, tagging, pruning, irrigation activities and harvest will be required to wear Tyvek booties and or pants to prevent the possible spread of blight on the farm if it occurs. Staff and their equipment will be sanitized when leaving a boxwood block; harvesting equipment will be sanitized after digging boxwood; all farm equipment including tillage, mowers, transportation, etc. will

be sanitized after working in the area of boxwood plantings. Getting used to this new sanitary environment will take some getting used to and will require much staff engagement.

2. Training of all staff that encounter boxwood will insure we all are familiar with blight symptoms and report it to our office and then MDA immediately if blight is suspected. Finding blight can be tricky because initial symptoms can mimic many leaf disorders and often, infected plants may not exhibit symptoms. We will also have to train everyone to identify boxwood diseases that are not blight.
3. We have been developing a training manual for our staff which I will share if requested. Again, I see the training component as creating a cultural change as well as becoming well versed in operating procedures and blight identification. This enhanced awareness should have the unintended consequence of making everyone more vigilant in looking for pest problems beyond blight.
4. Field harvesting (digging) of boxwood just got complicated. In my brilliance 20 years ago I decided to plant all genus and species in a mixed up scheme to avoid monoculture plantings. Now we have boxwood planted in 49 different planting zones; some are contiguous. It may still be culturally sound but makes general nursery maintenance and harvest a headache

related to disease transmission avoidance. Every time we move to a different zone the equipment will be sanitized. We have decided that we will only dig boxwood one day of the week; Friday. Both we and our customers will have to plan ahead better than in the past.

As we engage this experience there will likely be issues come up that we cannot foresee at this point in time. I am aware that several nurseries are also seriously considering a BBCA in the near future. A year from now I'll propose all BBCA participants gather for group counseling.

There are many sources of training information and general boxwood blight resources available at the MDA website (<http://www.maryland.gov/pages/search.aspx?q=boxwood%20blight&site=ytjh4v3yefg&name=Agriculture>).

Also see the American Hort Knowledge Center (<http://hortknowledgecenter.org/Search-Results?searchtext=boxwood+blight&searchmode=allwords>) and simply by searching Boxwood Blight on your web browser.

The Oregon State University has great training documents in English and Spanish (<https://catalog.extension.oregonstate.edu/em9124p>).

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This sign approved by MDA for Waverly's use