

Blight Worries and Beyond Boxwood Blight (BwB)



MD Dept of Agriculture
October 23, 2019

Plant Protection and Weed Management



Presentation

- **What to expect if BwB is found in nursery.**
- **Compliance Agreement**
- **History and Economic impact of BwB in Maryland**
- **Minimizing BwB and Best Management Practices (a review)**
- **FAQ's**

Boxwood blight (BwB)

What to expect if boxwood blight is found in the **NURSERY**

What to expect if found in the NURSERY Handled Case by Case for several reasons:

- Business type: low, medium, high risk facility
- Pathogen- possible dispersal at site, follow Best Management Practices regularly?
- Surrounding state's regulations at time of find
- Interactions with those involved
- history of disease in general and at facility

What to expect if found in the NURSERY

Initial things to do:

- Quarantine area
- Stop fungicide use
- Notify all employees
- Exclude traffic
- Get paperwork in order- inventory, sources, any sales

What to expect if found in the NURSERY

Initial decisions to be made:

- Complete or partial destruction?
- How to destroy: burning, burial, or double bag and haul to landfill?

What to expect if found in the NURSERY

Timeline of events/paperwork- both may vary, but include:

- Confirmed positive if not already (*lab report, inspection report*)
- Removal of positive plants from area of production/sales (*Stop Sale*)
- Destruction-what and how?
(*Condemnation Seizure Notice*)

What to expect if found in the NURSERY

Timeline of events/paperwork- both may vary but include (continued):

- Site sanitation
- Re-inspection/sampling if under Stop Sale

All written as
Pest Control Order

What to expect if found in the NURSERY

Tools to use:

- Pest predictor model:

https://uspest.org/risk/boxwood_app

- Frequently asked questions
- Best Management Practices

What to expect if found.....

All Licensed Facilities Are Not The Same

1. Box Stores: Are plants supplied by a “consignment” nursery and is their staff on site to receive MDA documents and handle the plant destruction?
2. Garden Centers: #'s of boxwood plants in stock at a retail/wholesale business can range from 6 to 2,000+.
 - Upon decision regarding a full or partial plant destruction, the nursery must provide labor and necessary supplies (bags, dumpsters, etc.).
 - Any new boxwood plants (after Stop Sale is lifted) must be placed in a separate area of the sales area.
3. Nursery (Production/In-Ground): The proximity of boxwood plant blocks to positive plants can determine destruction or re-inspection

Boxwood blight (BwB)

Compliance Agreement

Compliance Agreement Production Nurseries

Background

- June 2016, PA implements a boxwood blight quarantine: incoming plants require inspection/certification or be grown in certified clean growing program
- MDA develops an agreement for MD production same year (agreement is on MDA website)
- Target production nurseries
- Agreement addresses critical control points of production, Best Management Practices

Compliance Agreement Key Points

- Exclude the Pathogen
- Water Management
- Sanitation
- Inspection
- Training
- Record Keeping/Traceability

Compliance Agreement Example



Maryland Department of Agriculture
Office of Plant Protection & Weed Management
50 Harry S Truman Parkway
Annapolis, Maryland 21401

CERTIFICATE OF QUARANTINE COMPLIANCE

For: Boxwood Blight Cleanliness Program

“This nursery has been inspected and found to be apparently free of Boxwood Blight, *Cylindrocladium pseudonaviculatum* (syn. *C. buxicola*, *Calonectria pseudonaviculata*). The responsible party has agreed to the stipulations of a compliance agreement designed to prevent the introduction and minimize the risk of spreading Boxwood Blight.”

Establishment: Brand X, Inc.

Nursery License #: NIC-123

Address: 10 Farm Lane

City/Zip: Hometown, Maryland

Compliance Agreement #: 0000

Expiration Date: January 31, 2020

SIGNATURE

By: Kimberly Rice, Program Manager

Maryland Department of Agriculture, Plant Protection and Weed Management



Compliance Agreement Additional Points

- Agreement good for one year period
- No fee involved to participate
- MDA staff inspects plants, audits records and may speak with employees
- Nurseries that are signed on with agreements are listed on the MDA website
- If you suspect disease, you must notify MDA as soon as possible

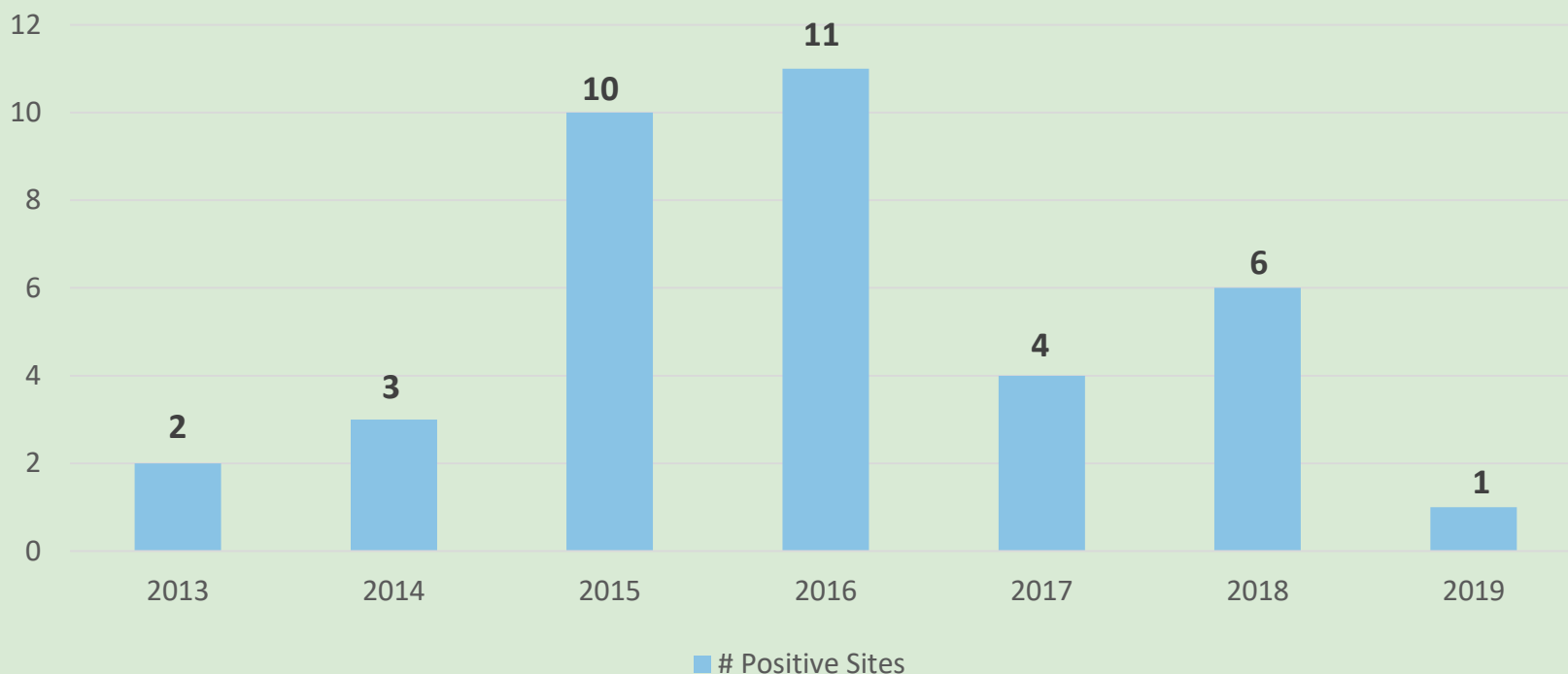
Boxwood blight (BwB)

History and Economic Impact in Maryland

MDA History of BwB

Positive Site Information

Includes Nurseries, Landscapers, Garden Centers, and Big Box Stores

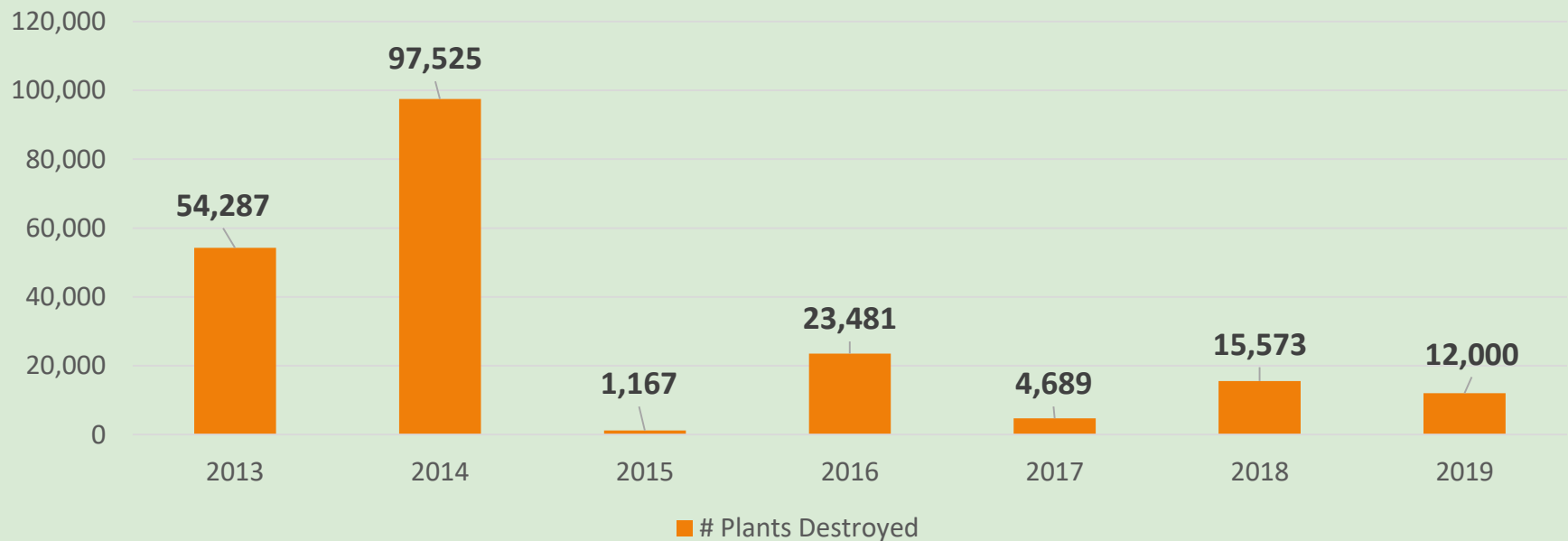


Data represent all positive boxwood blight sites
Total of 38 positive sites in MD

MDA History of BwB

Plants Destroyed

Includes Nurseries, Landscapers, Garden Centers, and Big Box Stores

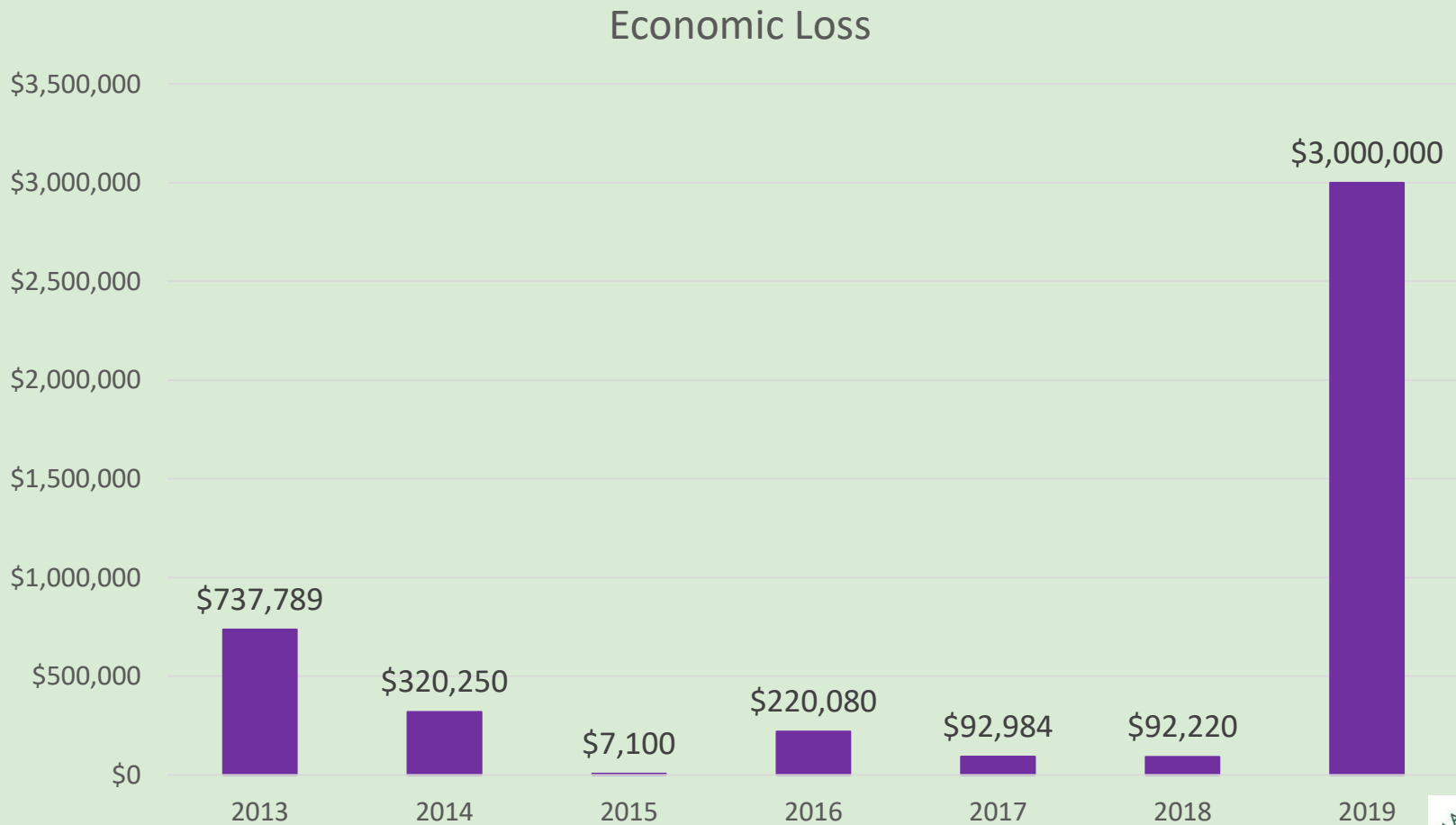


Data represent the number of boxwood destroyed by year.
Total of **208,722 boxwood plants** have been destroyed in MD

MDA History of BwB

Economic Loss

Includes Nurseries, Landscapers, Garden Centers, and Big Box Stores



MDA History of BwB

Includes Nurseries, Landscapers, Garden Centers, and Big Box Stores

- 2013 and 2014 – largest loss of plants
- 2019 – only 1 positive nursery to date
- Economic Loss to Date to Maryland:
\$4,470,422

Boxwood blight (BwB)

Minimizing BwB and

Best Management Practices

(a review)

Minimizing Boxwood Blight

- Current Scientific information concludes that using Best Management Practices (BMP's) and diligent sanitation procedures are key in minimizing BWB.



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50 Harry S Truman Parkway
Annapolis, Maryland 21401
Phone 410-841-5920 Fax 410-841-5835

www.mda.maryland.gov

BEST MANAGEMENT PRACTICES (BMP): **Boxwood Blight, *Calonectria pseudonaviculata*,** **In Nursery Production**

IF YOU SUSPECT INFECTION MAY BE PRESENT IN YOUR BOXWOOD, SARCOCOCCA OR PACHYSANDRA STOCK, CONTACT THE PLANT PROTECTION & WEED MANAGEMENT SECTION.

GOAL: Prevent the introduction and spread of *C. pseudonaviculata* within your nursery operation and the landscape.

RATIONALE: Implementing a BMP-based system of plant care has been demonstrated to eliminate the pathogen from the production cycle.

Pathogen Exclusion



Best Management Practices Include:

- Obtaining certified clean material from nurseries that participate in a Boxwood Cleanliness Program
- Inspecting plants prior to purchase.
- Knowing that fungicide treatments can mask BwB symptoms on newly purchased plants

Best Management Practices Include:

- Having an isolation area for newly purchased plants and quarantine for at least 30 days with no fungicide applications.
- Newly received host plants should be isolated by a minimum of ten feet.
- Keep newly received host plants from different suppliers and sources separated.
- Keep boxwood lots separate in the nursery.

Best Management Practices Include:

- Keep accurate and timely records.
- Regularly inspect plants and train staff to recognize symptoms
- Assume any abnormal plant is infected and remove and treat.
- Do NOT sell suspicious plants.

Best Management Practices Include:

- Plant resistant cultivars
 - **No cultivar is completely resistant.**
 - “Resistant” cultivars may carry the disease but not express the symptoms “Typhoid Mary”

Sanitation is key to minimization :

- Disinfecting pruners and other tools frequently within and between different plots of plants.
- Avoid working in fields when the plants are wet.
- Wear clean disposable booties or wash soles of shoes between different boxwood locations.
- Best way to sanitize tools is to dip them for ten seconds in approved sanitation products (ethanol or bleach)

Sanitation is key to minimization :

- Do not shear boxwoods during the growing season.
- Collect and remove debris from pruning or shearing operations
- Avoid overhead watering
- Drip irrigation or hand watering is preferred.

Other Considerations

- Be aware that the fungus can remain in the soil for years.
- Use or consider alternatives
- Don't grow *Buxus*



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BwB FAQ's

Boxwood blight (blight) FAQs to address mechanics of enforcement/lessons learned:

1) If I have multiple licensed business locations and one is found positive for blight, can I still move stock in and out of those other locations?

Locations within Maryland may move boxwood stock once thoroughly inspected and are considered apparently free of blight. Locations in other states are under the rules and regulations of that other state.

2) How long does it usually take for MDA lab results to be provided to a nursery once plant samples have been taken and then submitted for analysis in cases of blight?

This can vary anywhere from less than one week to 3 weeks depending on pathologist's availability, volume of samples being examined, and quality of samples (including the presence of fungicides, time of year, etc.)

3) Are there any cases when MDA will sample and submit asymptomatic boxwood samples for blight analysis? Generally not; except when highly susceptible cultivars are located in close proximity to plants already deemed to be positive for blight. MDA may also take samples of declining stock, even if not exhibiting typical blight symptoms, from a nursery recently confirmed to be positive.

4) If a nursery determines that they possess plants known to be positive for boxwood blight, is that nursery required to contact MDA to report this? Nurseries under a Compliance Agreement are required to report a positive blight determination to MDA. As a licensed nursery following state plant pest control laws, this should also be reported so that MDA may notify the place of origin/shipping state (trace back) and follow up with any customer (trace forward). MDA has contacts in other states who work with their nurseries.

5) What is being done to try and keep blight out of Maryland? When does a pest move from eradication/containment to management? MDA plant pest/pathogen policies are often set in response to comply with another state's regulations/quarantines. At the nursery level, we encourage the use of BMPs and have developed agreements with some of our growers. Full eradication would require us to be under a strict quarantine which would halt all interstate movement of boxwood stock; thus restricting MD nurseries' sales tremendously. This is not necessary or realistic. We manage blight by providing outreach information about the disease and strongly encouraging the use of BMPs. MDA's role is to make sure that nurseries are compliant with plant pest control laws and do not knowingly sell infected/infested nursery stock. With cooperation, we can both manage and seek eradication simultaneously if done properly.



BwB Website Information

MDA Website :

https://mda.maryland.gov/plants-pests/Pages/nursery_inspection_plant_quarantine.aspx (Google-MD nursery inspection)

What you can find on the website:

- Bwb Compliance Agreement
- BwB BMP's
- BwB FAQ's (next week)

Any Questions?

**BUXUS DWARF
SUFFRUITICOSA #5**

Source

Date