



The Plant Doctor's LANDSCAPE TIPS

By Dr. David L. Roberts, The Plant Doctor LLC a.k.a. The Tree Doctor

TWO PRESIDENTS AND AN OAK SAPLING

INTRODUCTION

In my continuing series on the Plant Doctor's Diary, I thought it might be interesting to share an experience I had several years ago. In 2018, France's President Emmanuel Macron and his wife visited President Donald Trump at the White House. As a symbol of the long-standing good will between France and the United States, President Macron brought an Oak sapling to give to President Trump. The presentation and subsequent planting of the tree in the White House landscape attracted a lot of publicity in most news organizations. It was a good photo opportunity for both Presidents (Photo 1).



Photo 1

Photo 1: A Sessile Oak sapling was given by French President Macron to President Trump as a symbol of the great relationship the two countries share in the defense of freedom in our countries and around the world. The Oak sapling was transplanted from Belleau Wood in Northern France, where several thousand U.S. Marines died while defending France during World War I. The planting ceremony by President Macron and President Trump took place on April 23, 2018, as Brigitte Macron and Melania Trump looked on. (Photo Credit, Reuters/ Steve Holland)

HISTORICAL SIGNIFICANCE

Anytime two Presidents of their countries meet, it represents history in the making. What made this meeting so unique and perhaps of importance to us in the Arboriculture and Landscape Industry is the presentation of an Oak sapling to President Trump. The oak tree that was presented was not just any ole oak from France. It was an oak seedling transplanted from Belleau Wood in Northern France. Belleau Wood is a site where American marines defended France by battling German forces during World War I. Several thousand U.S. Marines were killed during this three-week struggle in Belleau Wood and vicinity. The oak seedling brought from this area was a Sessile Oak, *Quercus petraea* (Photo 2).

"Sessile" means stalkless. The acorns of this oak species attach directly to the branch with no stalk, hence, the name Sessile Oak. The Sessile Oak ranges throughout much of Europe, the U.K., southern Scandinavia, and into the Middle East (Photo 3).



Photo 2

Photo 2: A mature Sessile Oak. (Photo Credit: iNaturalist)



Photo 3

Photo 3: The range of the Sessile Oak in Europe and vicinity. To my knowledge, Oak wilt is not present in European countries.

APHIS AND THE SESSILE OAK

The tree was planted in the southern White House Lawn in a ceremony on April 23, 2018, that recognized the freedom the two democratic countries share (Photo 1). Several days later, the tree disappeared. Why? Apparently, the Animal & Plant Health Inspection Service (APHIS), a division of the United States Department of Agriculture, had retrieved the tree from the White House landscape for quarantine reasons; it was to be held in quarantine at Beltsville, Maryland, until it was determined there were no foreign/alien insects or diseases associated with the

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seedling. Unfortunately, the tree died in quarantine, and as we might expect, there was extensive political commentary in the news about the tree's demise (Photos 4A & 4B).

I received an email from Emily who was an environmental reporter for a news agency in Washington D.C. (Photo 5). Emily asked some interesting questions. Among the important questions Emily asked, she wondered if the tree could've already spread "parasites", threatening other trees in the Washington D.C. area, when the tree was planted at the White House lawn before being placed in quarantine? My answer was yes . . . and that it could threaten trees well beyond that locale. She also queried me about the level of risk. That question was difficult for me to answer, but I tried my best.

Metaphor for America's Relationship With France Has Died

BY RYAN BORT

JUNE 10, 2019 2:27PM EDT



Photo 4A

U.S. NEWS

French president gifts Trump with new 'friendship tree' after the first one dies

Emmanuel Macron confirmed the first tree, planted by both presidents on the South Lawn of the White House in April 2018, died in quarantine.



Photo 4B

Photos 4A & 4B : When French President Macron's Sessile Oak gift to President Trump died in quarantine, as we might guess, the press made political commentary out of the occasion.

Hi Dr. Roberts,

This is Emily [REDACTED]. I'm an environmental reporter for [REDACTED] I was hoping you might be able to help me with some questions I'm trying to answer about the [oak sapling French President Emmanuel Macron brought to America last week](#). The sapling was supposed to be quarantined for awhile to prevent parasite spread, but President Trump insisted the two men plant it on the White House grounds together. So they did, but now the tree is gone, placed back in quarantine.

The questions I have: Does this make sense? Was the tree already given an opportunity to spread parasites? Are there any harmful parasites that feasibly could be spread from a French oak sapling to other trees in the D.C. area? Basically, what was the level of risk in briefly planting this tree?

Let me know if you have insights, or suggestions for someone who might.

Thanks,

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Emily [REDACTED]
Staff writer, [REDACTED]

Photo 5

Photo 5: Emily, an environmental reporter for a Washington D.C. news organization, sent me this email with some very some inciteful questions. For example, shouldn't the tree have been placed in quarantine before being planted in the White House lawn? How much risk was there in planting the tree before placing it in quarantine? Emily exhibited astuteness about invasive pests and diseases. I suspect many Americans do not understand the importance of the USDA and APHIS.

INVASIVE PESTS AND DISEASES

My email response to Emily contained information about the invasive pests and diseases that have proved devastating to American trees. Examples include Chestnut Blight, Dutch Elm Disease (Photos 6A & 6B), White Pine Blister Rust, Emerald Ash Borer (EAB-discovered in North America by the author, Photo 7), Gypsy Moth (now called Spongy Moth), Trellis Rust, Oak Wilt (Photo 8), and Beech Bark Disease to name a few. What is most notable about "Invasive" or "Introduced" pests and microbes is that they tend to be far more serious than their native counterparts. For example, the EAB (*Agilus planipennis*) is lethal

to ash trees (*Fraxinus* sp.) while the native Two-Lined Chestnut Borer (*Agilus bilineatus*) attacks Oak (*Quercus* sp.) but is typically less lethal to its host tree, preferring to attack stressed trees. Another important attribute with introduced pests and diseases is that they tend to attack many species within a genus of plant. For example, the EAB attacks most species in the genus *Fraxinus*, even though there are some differences in preference by the insect. Native pests and diseases tend to zero in on species within a genus and, hence, are less devastating, not only to the whole genus but to the attacked species as well.



Photo 6A



Photo 6B

Photos 6A & 6B: Although there are some large elm survivors in Michigan (Photo 6A, near Ann Arbor, Michigan) these elms are simply lucky escapes from the deadly Dutch Elm Disease; many people erroneously believe large surviving elm trees are resistant to the introduced disease. The National Champion American Elm, the Buckley Elm, died in 2001 (Photo 6B). Dr. Duke Elsner and the author, both with Michigan State University, try to encompass the girth of the Buckley Elm's massive trunk (Inset).



Photo 7

Photo 7: An ash tree in its death spiral from attack by the Emerald Ash Borer. This photo was snapped by the author before discovering the Emerald Ash Borer in 2002.



Photo 8

Photo 8: An expanding Oak Wilt epicenter. The tree on the right was pruned, attracting Oak Wilt fungus by Overland sap beetle spread. Subsequently, the Oak Wilt fungus advanced below ground to nearby trees by root graft transmission. A more efficient vector for Oak Wilt would turn Oak Wilt into a rampaging disease much like Dutch Elm Disease.

SPECIAL ATTENTION TO OAK WILT

Because the gifted tree from President Macron to President Trump was an Oak tree, that raises special concern. With the demise of *Ulmus* (Elm), *Fraxinus* (Ash), *Castanea* (Chestnut), and other species, etc., *Quercus* species (Oak) becomes an ever increasingly important tree for the health of our natural and urban forests in North America. Even though *Bretziella fagacearum*, the fungal incitant of Oak Wilt, is an introduced fungus, Oak Wilt is far less devastating than Dutch Elm Disease, Chestnut Blight, and Emerald Ash Borer. Why? The comparison of Oak Wilt to Dutch Elm Disease is inevitable. Both are vascular wilts. Both are spread through root grafts. Both are spread Overland by insects. In fact, both were considered as species in the same fungal genus, *Ceratocystis*, for many years. But there is one important difference in these two diseases. What makes Dutch Elm Disease so serious is that the Elm Bark Beetle spreads the Dutch Elm Disease fungus to elms by its wounding (chewing) activity on twigs of elm trees. Currently, there are no insect vectors for Oak Wilt that injure oak twigs and that spread the Oak Wilt fungus. Sure, sap beetles can

spread the Oak Wilt fungus but only to oak trees that have been wounded by other means, i.e. pruning, storm, etc.. What keeps me up at night is the potential introduction of an insect, such as an Oak Bark Beetle, that could serve as an active vector for the Oak Wilt fungus much like the Elm Bark Beetle that spreads the Dutch Elm Disease fungus. If such an introduction occurs, oaks could go the way of elms and chestnuts. And that is why aggressive quarantine measures are needed. 🌱

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