Phytophthora ramorum Risk & Detection in Georgia

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Efforts have been made to alert the public of the risk our forests face from sudden oak death disease, and to get suspect plants tested at our lab. Numerous newspaper articles have been published along with the GFC brochure to provide this outreach. Despite these efforts, less than 1,000 of the 49,000 suspect plants have been tested to date.

Outreach to the Public

Brochure

West Coast Officials visit Georgia

In May 2005, the Georgia Forestry Commission hosted a group of west coast nursery and regulatory officials to illustrate the risk of P ramorum in our eastern forests. Steve Oak, USFS, and James Johnson, GFC, took the group to a high risk forest setting to illustrate the understory host species that could facilitate spore production and oak infections.

This tour was part of a southeastern nursery tour throughout multiple states and Georgia Dept of Agriculture were the guides for the trip. This stop was the only one involving a general forest setting.

Phytophthora ramorum Detection and Outreach Program in Georgia

James Johnson & Mark Raines, Georgia Forestry Commission (GFC)

The Sudden Oak Death monitoring program continues and Georgia now had 1 nursery that was confirmed positive (through APHIS) for *Phytophthora ramorum* in 2006, and this brings the total to **16** nurseries with infected nursery stock since 2004. The GFC provided on site assistance with the burning of these plants (along with Georgia Department of Agriculture and USDA– APHIS officials). Georgia had 0 homeowner positives in 2006 and the number of homeowner samples being tested continues to decline as the media coverage on the SOD threat has also declined. The GFC checked 51 trace forward nursery locations with our perimeter surveys and the 3 homeowner, and 10 forest sites. No positives have been found on native vegetation. The GFC is helping fund the costs associated with operating the plant pathology lab at UGA that does the testing for Georgia. Georgia Department of Agriculture (through APHIS) is also providing funds for this lab, and approximately 7,200(+) samples have been processed (with 84 confirmed positives on nursery stock from 2004-2006) to date through this lab.

Georgia's stream baiting continues in 2006 and 10 sites were chosen in northeast Georgia to detect the presence of *P. ramorum*. Ten forest (vegetation) sites were chosen within these watersheds also. Four of these sites are in close proximity to nurseries that were known to have infected plants in 2004 (and one was a repeat in 2005). The University of Georgia, in cooperation with Georgia Department of Agriculture and the national nursery survey, is water sampling and stream baiting the irrigation water within 6 nurseries also. Future stream baiting efforts will target more watersheds near other positive nurseries in the metro Atlanta area with the belief that many of these plants were sold and planted locally and could be causing further *P. ramorum* infections in the landscape undetected.

In 2003-04, the best estimate is that 59,000 West Coast plants (from positive *P ramorum* nurseries) were imported into Georgia. Georgia Department of Agriculture intercepted 10,000 of these plants and they were destroyed, but the other 49,000 potentially infected plants were sold and planted in landscapes within the state. It is estimated that 1-2% of these might be infected with *P ramorum* but at one of the 16 positive nurseries (on the coast) had a 60% infection rate for samples processed. This percentage is likely skewed somewhat since only symptomatic leaves were sampled but the coastal region of the state is indicated as "low risk" on the national risk map and this may not take into account the coastal climate factor. Two of the three homeowner positive plants came from this small nursery.

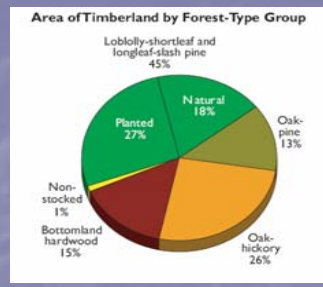
Georgia continues to have a coordinated sudden oak death program and communication with all partners remains a priority, and survey efforts are coordinated. Members include: USDA – APHIS, USDA – Forest Service, Georgia Department of Agriculture, University of Georgia, and the Georgia Forestry Commission. The Sudden Oak Death Action Committee (SODAC) was formed in 2001 and continues to be a cooperative partnership between these state and federal agencies. A proactive plan was implemented spring and summer 2005 to inform the public and green industry about getting plants checked (if they meet certain criteria), and the procedures that will be followed if infected plants are detected.

A green industry task force developed a voluntary SOD best management practices manual for Georgia nurseries that was unveiled at the annual green industry meeting in Athens in January 2006. Although interest is keen among some growers, the UGA lab simply can't process the number of samples that would be required to implement the program. The group is seeking state funding at this time to allow the lab to step up sample processing numbers.

Training has been given to all GFC foresters on *P ramorum*, and the threat from this pathogen poses has been explained in detail at 50+ training sessions (presented by either the GFC Forest Health Staff or University of Georgia – Plant Pathology Department) to resource professionals throughout the state.

Georgia has approximately 9.7 million acres of Oak – type forest (and 24.7 million total forested acres)

The Oak Resource



2004 FIA Data

Oak Value

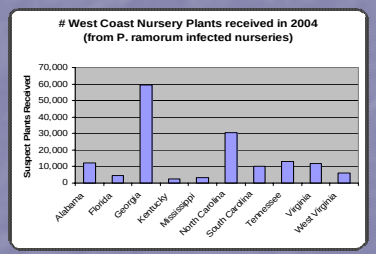
Estimate of all Oak trees in the State of Georgia

FIA data indicates that 15.8% of all forest trees are oak spp.

Values compiled by James Johnson, Georgia Forestry Commission

Growing Stock (standing timber) 1997 FIA Data	$ 7,541,612,000
Wildlife (consumptive and non-consumptive uses) Georgia Department of Natural Resources	$ 1,700,000,000
Tourism Georgia Industry, Trade, & Tourism	$ 1,100,300,000
Urban Forests (Nowak et al. study-Journal of Forestry; 99(3): 37-42)	$22,895,340,000
TOTAL ESTIMATE OF OAK IN GEORGIA	***$33,237,252,000***

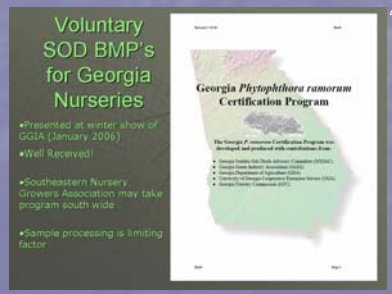
2003-04 Nursery Imports from West Coast



Trace forward plants imported from west coast nurseries into the southeastern states in 2003-04

Georgia Dept of Ag intercepted and destroyed 10,000 of these suspect plants so approximately 49,000 were sold and are now planted in landscapes

Working with Georgia Nurseries



The Georgia Forestry Commission participated in a series of town-hall type meetings held throughout the state targeting Georgia nurseries. These meetings were hosted by the Georgia Green Industry Association (GGIA) and the outcome was a task force that formulated a set of voluntary BMP's for Georgia nurseries that will minimize the introduction of infected nursery stock.

State funding to process the samples has not been secured and the program has not been fully implemented. This set of guidelines was patterned after the Canadian P ramorum exclusion program.

Who is Involved?

State and Federal agencies recognized the threat this disease posed to eastern forests and formed an action committee in 2001 to consolidate efforts.

P ramorum Survey 2006

Georgia's detection surveys have been a combination of nursery perimeter surveys at trace forward locations (which include the 16 positive sites), forest and homeowner surveys, and stream baiting.

Retrieval of one of the positive camellias by USDA APHIS, Georgia Dept of Agriculture, University of Georgia and the Georgia Forestry Commission. The infected plant, mulch within 6 feet and potting soil in the planting hole were removed and incinerated.

Note the flower beds are comprised of other known hosts (azaleas, vaccinium, roses and other established camellias) and the overstory trees are Georgia's State Tree: Live Oak (*Quercus virginiana*). Area has been sampled in 2004-06 and no positives on these established plants have been detected.