



# Controlling Invasive Plants in Your Landscape

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# The Threat Is: Invasive Exotic Plants



- Not locally native (alien, non-native, exotic)
- Aggressively spreads, crowds out native species and habitat in natural environment

# What the Threat Is Not



- Most exotic and horticultural plants (1 to 10% of introduced plants become invasive)
- Native plants including native invasive plants
- All invasive plants often not invasive everywhere



# The Green Threat is Real

- Numerous species threatened or endangered
- Costs millions of \$\$\$ to fight (estimated at almost \$138 billion annually, 34 billion on controlling invasive plants)
- Thousands of acres/year lost
- Thousands of pounds/year of herbicides
- Local aesthetics, ecosystem functions, and resources lost
- It's green so it's harder to see (as being bad)



# Impacts (ecological change, lost native biodiversity)

- Change in animal-dispersed seeds of native plants
- Altered stream biodiversity (organic matter input and timing)
- Susceptibility to fire and storm disturbances
- Altered distribution and connectivity of habitats (landscape ecology)
- New nutrient cycling and soil chemistry behavior
- Exclusion of native perennials and tree seedlings (altered succession)



# Where Problems with invasive plants are greatest

- In and around cities (X population = Y invasive plants)
- Along streams and moist environments
- Along highways, railroads, powerlines, pipelines
- Neglected public places
- At forest edges
- Yards and landscaped areas

# Why do we use invasive exotic plants?

- Easy to grow/survive
- Stabilize tough places
- More showy than native plants (sell well)
- Easy/cheap to propagate (by green industry)
- Relatively disease-free
- What is available at nurseries
- We don't know/care about consequences to natural environment
- Still recommended by many extension services



Chuck Bargeron, The University of Georgia, [www.forestryimages.org](http://www.forestryimages.org)

# What Contributes to the Threat



- Development, land disturbance
- Landscaping with invasive plants
- Not controlling existing invasions
- Inadequate forecasting and testing of exotic and genetically modified plants
- Not detecting invasions early and responding
- Not knowing about any of the above





# All of Us Are Part of the Solution

- Developers (land disturbance mgt)
- Utilities (ROW maintenance)
- Green Industry (production, sales)
- Extension (information)
- Government (policies)
- Academia (research and evaluation)
- Homeowners/citizens/gardeners (discriminating plantings, volunteer work)
- Environmental groups (organize actions)



James H. Miller, USDA Forest Service,  
[www.forestryimages.org](http://www.forestryimages.org)

# What Needs to Be Done?

- Learn threats, identify problem plants
- Apply St. Louis guidelines (for green industry)
- Locate key problem areas
- Learn to identify problems early
- Take action: learn & apply control efforts (yards, ROWs, natural areas), choose natives for your landscaping
- Work with communities & groups
- Report invasives to the SE-EPPC web site



# How to Control Invasive Plants

- Know your pest
- Learn about the conditions that contribute to its presence, persistence, and spread
- Practice prevention
- Examine the range of methods available to you for controlling that pest, don't jump to chemical methods first
- Be persistent



Chuck Bargeron, The University of Georgia,  
[www.insectimages.org](http://www.insectimages.org)

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# Know Your Pest

- How does it reproduce?  
Sexual, asexual, or both.
- Is it a perennial, biennial, or an annual species?
- How long do seeds last in the soil?
- How are propagules dispersed?
- When does the plant flower?  
When does it produce fruit?
- What is the root system like? How long has the plant been there?
- When you understand your pest, select a method of controlling it (cultural, mechanical, chemical).



# Practice Integrated Pest Management (IPM)

- Prevention
- Cultural: cover crops, mulches, smother, livestock grazing
- Mechanical: scuffle hoe, cutting (mowing, weed eater), pulling, burning, tilling, digging
- Chemical: organic, commercial preparations
- Planting/restoration after control

Don't Make Chemical Control  
Your First Choice



Great Smoky Mountains National Park Resource Management  
Archives, USDI National Park Service, [www.insectimages.org](http://www.insectimages.org)

# If You Use Herbicides, Remember Safety First

- Read the label carefully, follow the instructions, understand precautionary statements
- Get a copy of the Material Safety Data Sheets (MSDS)
- Wear proper personal protective equipment (ppe)



**Now that you've removed the invasive plants, what are non-invasive alternatives that you can plant?**

**“Gardening with the Native Plants of Tennessee:  
The Spirit of Place”**

**Margie Hunter**



# Useful Web Sites

- TN Exotic Pest Plant Council: [www.tneppc.org](http://www.tneppc.org)
- SE Exotic Pest Plant Council: [www.se-eppc.org](http://www.se-eppc.org)
- Pesticide databases-EPA:  
[www.epa.gov/opp00001/science/databases\\_pg.htm](http://www.epa.gov/opp00001/science/databases_pg.htm)
- National Pesticide Information Center:  
<http://npic.orst.edu/index.html>
- Pesticide Product Labels:  
<http://www.epa.gov/pesticides/regulating/labels/product-labels.htm>
- Biocontrol Network: <http://www.biconet.com/index.html>



# Questions and Discussion

