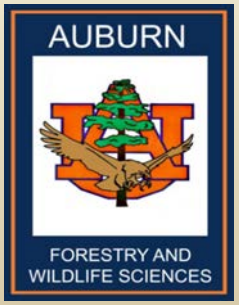
# Update of Herbicide Trials

FY 2016 SFNMC Advisory Meeting
Auburn, AL

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# Studies installed in 2015

All studies designed to test herbicidal effectiveness and seedling tolerance

Marengo®
- container trial
- bareroot trial
- directed spray trial

Pendulum® AquaCap™
- container trial
- bareroot trial
- hardwood trial
- soil type trial

# Marengo® container trial

- follow-up to first Marengo® container trial in 2014
- installed at 3 nurseries on 4 species in 2 container types



# Marengo® bareroot trial

- follow-up to 2013 bareroot trial in 1 nursery

- installed at 4 nurseries on 3 species




# Marengo® directed spray trial

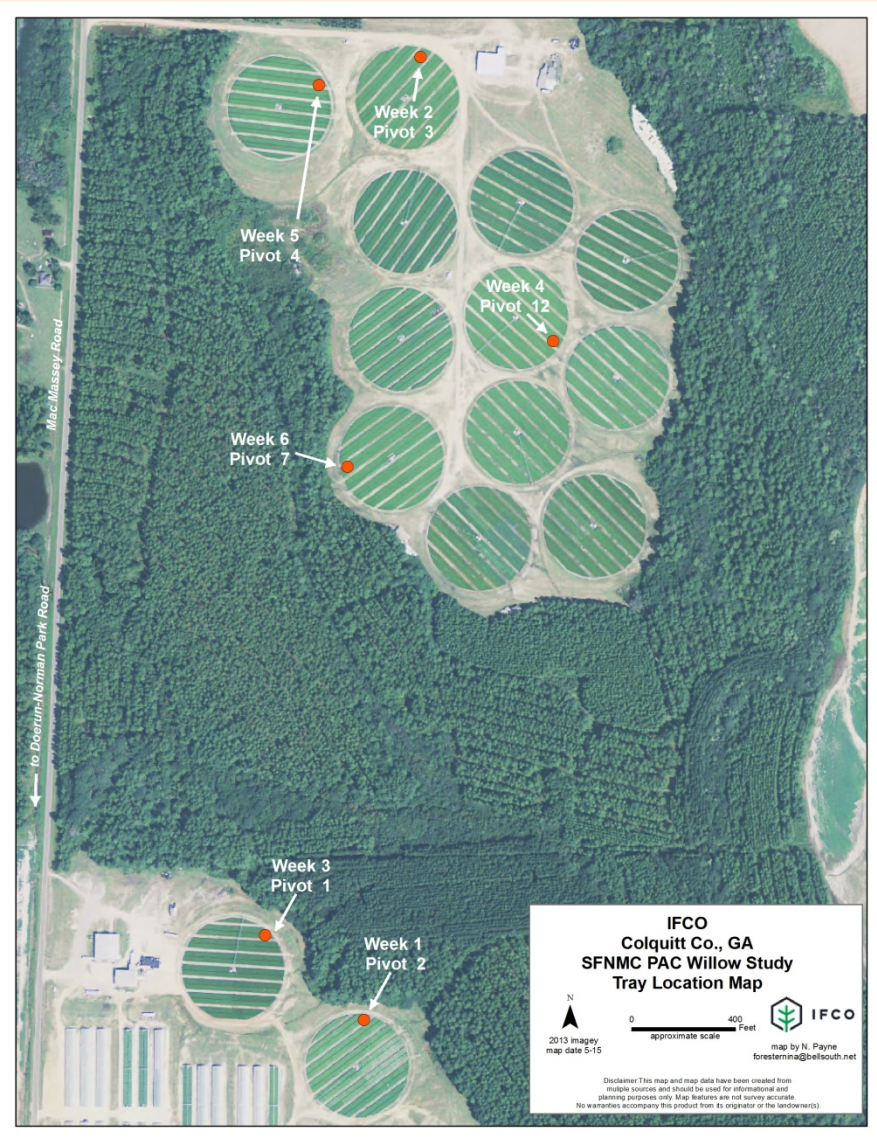
- further development of 2 trials for morning glory control in hardwood (broadcast spray applications)

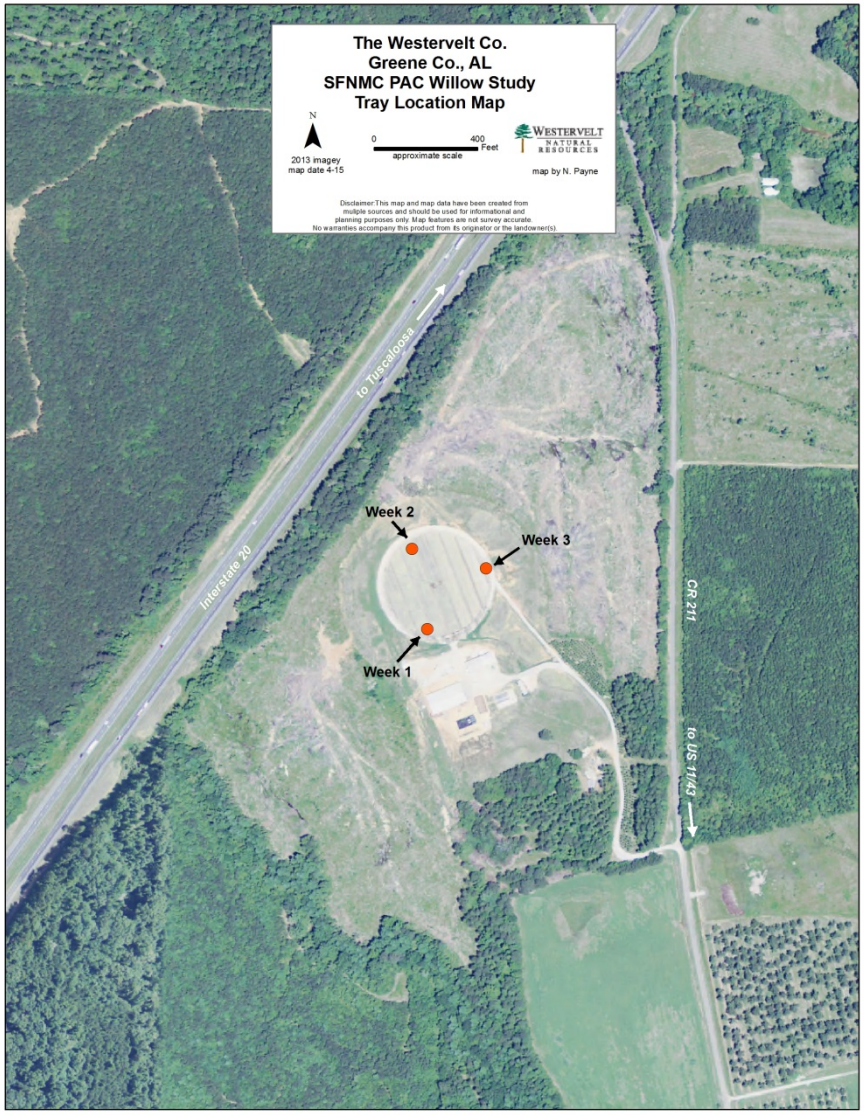
- installed at East Tennessee Nursery (TN DOF)


# Pendulum® AquaCap™ container trial

- to test herbicidal effectiveness in containers for willow control
- PAC controls weeds in bareroot nurseries with no detrimental effect to pine when sprayed at sowing (11 Research Reports)
- PAC not tested in containers with organic matter by SFNMC
- installed at 2 nurseries on 2 species


- sprays made weekly for up to 6 weeks (on newly-sown trays each week) in order to coordinate herbicide application with pine sowing and willow seed dispersal



# Pendulum® AquaCap™ bareroot trial

- follow-up to PAC bareroot trials
- installed at 1 nursery on 2 species

# Pendulum® AquaCap™ hardwood trial

- further development of studies of PAC on hardwood and on small-seeded species
- installed at 1 nursery on 1 species (buttonbush)

# Pendulum® AquaCap™ soil type trial

- installed in SFNMC greenhouse
- objective of the study -

To determine the effect of soil type on herbicide gall formation when temperature variable is removed

- one species sown in 2 soil types, sprayed with PAC at 6 weeks post-sowing to induce herbicide gall formation

# Status of studies installed in 2015


Currently in evaluation and seedling collection stage for 7 studies located in 13 installations

Data to be analyzed, research reports made available to members

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# Planning for studies to be installed in 2016

1. Repeat Pendulum® AquaCap™ container trial:

    - in response to insufficient weed (willow) pressure this year
    - to acquire second year of information on pine seedling tolerance to applications of PAC in container media
    - weekly PAC applications will be made during the sowing season to coincide with willow seed dispersal

2. Continue directed spray trials:

    - to continue testing the ability of herbicides to control broadleaf weeds (primarily morning glory) when applied as directed spray
    - in hardwood nurseries
    - to be installed as equipment is available from member nurseries

3. Herbicide-treated seedling survival studies:

   - to compare survivability of herbicide treated to non-treated seedlings
   - using seedlings from Marengo® and Pendulum® AquaCap™ container trials at Westervelt (AL) nursery this year
   - operationally planted and monitored for one year for survival

4. Trials of three untested active ingredients:

   - in response to member nurseries' identified weed problems (broadleaf weeds, grasses, sedges)
   - active ingredients identified by AU Crop, Soil and Environmental Sciences faculty as potential control agents include *penoxsulam, florasulam,* and *trifloxysulfuron*
   - have not yet been tested by SFNMC
   - multiple nurseries with various soil types are needed
   - herbicidal effectiveness and pine seedling tolerance will be evaluated

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