

SCOTT G. WILLIAMS, L.L.C.

THE  
**MEGA**

NAME IN  
MICRONUTRIENTS™



## Pine Tree Study

# Scott G. Williams' Iron Fertilizers Co

Pine chlorosis is the most serious nutritional problem of slash pines (*Pinus elliottii*) in Florida (Gilman and Watson, 2014). Pines needles gradually turn yellow and the tree begins dying. The iron deficiency is generally associated with high pH soils and/or high pH irrigation water which reduce the uptake of iron (Fe) and manganese (Mn).

Two chlorotic pine trees were observed in the West Palm Beach area of south Florida (Fig. 1). The needles were very yellow, sparse in number, and the trees appeared to be dying. The trees were treated with Scott G Williams (SGW) iron products in an attempt to correct the chlorosis and revive the trees.



Figure 1 - Tree A: The tree on the left appeared very chlorotic on February 18, 2017. The one in the right appeared normal.



Figure 1 - Tree B: The tree canopy was very chlorotic on June 3, 2017.

## Methods and Materials

Tree A is approximately 2 feet in diameter. Tree B trunk is about 18 inches diameter, wider at base. On February 18, 2017, holes were drilled 3/8 inch diameter by 3 to 4 inches deep (well into the white wood) into the root flare of tree A approximately 6 inches apart and filled with granular SGW Florida Live! FE 13 (Fig. 2).

On June 3, 2017, holes were drilled 7/16th inch diameter by 3 inches deep (well into the white wood) into the root flare of tree B approximately 6 inches apart and filled with SGW Wildfire Iron (13% Fe) powder (Fig. 3). The powder was packed into the holes, since the powder did not fall into the holes as readily as the granular material.

On both trees, roofing tar was used to cover the holes (Fig. 4).



Fig. 2: Placing SGW Iron 13 into holes drilled into the root flare of tree A.



Fig. 3: SGW Wildfire Iron was brushed into holes in tree B, with packing using the brush handle.



Fig. 4: Roofing tar was used to cover the holes.

# Correct Iron Deficiency in Slash Pine

## Results and Discussion

Improvement in needle color (reduced chlorosis) was observed on both trees (Fig. 5, 6). Change in color appeared to take approximately four months for tree A, which used the granular product. Change in color appeared to take only one month in tree B, which was packed with Wildfire Fe powdered product. The duration for which the improvement will last has not been determined, and factors related to application methods no doubt can be optimized; this study is preliminary. While the application method is somewhat time consuming (approximately 30 minutes per tree), the time and expense required are far less than that for cutting down and disposing of a dead tree.



Figure 5: Appearance of Tree A in February (left) and June (right), 2017.



Figure 6: Tree B before (left, June 3) and after (right, July 16) application of SGW Wildfire Iron.

### Literature Cited

Gilman, E. F., and D. G. Watson. 2014. *Pinus elliottii*: Slash Pine. University of Florida/IFAS Extension, Environmental Horticulture, document ENH-622. <http://edis.ifas.ufl.edu/st463>.





## SCOTT G. WILLIAMS, L.L.C.

2111 General Arts Rd,  
Conyers, GA 30012 U.S.A.

Plant: 770-761-4448  
US Toll-free: 1-800-582-0578

Fernando R. Muñoz  
General Manager  
Cell: 404-323-2813  
Email: sgwillc@aol.com

[www.scottgwilliams.com](http://www.scottgwilliams.com)



**Our products are used to create best-in-class growth rates matched with outstanding quality. Above, six year old Jose Muñoz holds on to a 25 pound zucchini squash.**

## Philosophy of Scott G Williams LLC:

Philosophy teaches, from very early on, that there are three major divisions in living things: plants, animals, and rational beings. All three levels of life contain a type of soul. The characteristics of the plant soul include growth reproduction and the ability to take in nutrition. The animal soul builds on the characteristics of the plant soul by adding characteristics such as locomotion, communication, and additional sensory functions such as sight. Humans then add on to the characteristics of the animal soul by having a rational thought process that allows for all living things to work together harmoniously.

Interestingly enough, all life appears to require a similar type of nutrition. Plants offer fuel for animals and humans in the form of food. Animals require the basic building blocks of nutrition but also require a series of micronutrients and secondary elements that are added in their feed in the

form of mineral or trace packages. Again, humans achieve their nutritional requirements through the consumption of plants and animals. However, sometimes humans don't get the full range of nutrients that they require. For this reason, humans have taken the approach of augmenting their diets with fortified foods or with mineral and trace elements vitamin pills.

The elements required to fulfill the range of secondary and micronutrient elements are not always found in the soil used in growing plants. These vital elements are combined and added to our products, which help plants reach their maximum potential. When plants reach their maximum potential, this affects the animals that eat these plants, thus affecting humans as well. The products produced in Scott G. Williams L.L.C. help create a chain reaction of better health and better living for all living things.