

## **ABOUT THE PROJECT**

*Gray's Iris – The Rainbow Goddess Collection* may well be the most exhaustive research project to date to determine the adaptability of tall bearded iris (TB's) to Savannah and the surrounding Low Country. The terms of the project, as detailed in a Memorandum of Agreement between the University of Georgia and Stan Gray, acknowledge this effort as a bold experiment to ascertain whether tall bearded iris merit a place in the horticultural landscape of the southeast coastal plain. While there has been in the Savannah area disparate private holdings of TB's of varying time durations, there is currently no scientific body of knowledge prescribing the optimum cultural conditions under which these cultivars should be grown, let alone whether they are even suited for long term sustainable performance on the coast. Savannah has long been recognized by the community of iris experts as lying on or near the southern limit of where bearded iris can be successfully grown. Given that fact, growing TB's for sustained performance requires a detailed understanding of the local biotic and abiotic forces that influence plant viability, and then attempting to reduce the aggregate levels of stresses to within tolerable or acceptable levels for plant survivability and production.

As such, the project, which began in the fall of 2007 with the transfer and planting of 380 varieties from the Gray gardens in northern NJ, has resulted in the collection of three years of data to date in an attempt to carefully document trends and patterns. So far, most conclusions are tentative at best. Due to an overly rich compost amendment used in the manufacture of the planting beds in 2007, over 85% of the plants from the New Jersey collection succumbed to bacterial soft rot. In late 2008, the entire garden was redone, incorporating a high percentage of sand into the base organic material. The sand was introduced to dilute the nutrient levels of the original compost, while at the same time promoting enhanced drainage (TB's thrive under relatively dry conditions; excess moisture promotes soft rot). The collection was also expanded to 430 varieties in order to satisfy the re-designed garden plan of eleven (11) full arcs.

The bloom history of the plants in 2010 and 2011 has been quite revealing, and it is becoming more conclusive that while some TB varieties will never adapt to the growing conditions of the Low Country, others may likely thrive. In fact, it is currently speculated that a small number may be even better suited to this area than to the majority of other regions within the TB growing range. Data being collected annually on each variety in the collection include: # of fans (the sheath of leaves attached to a rhizome); % of plant increase or decrease from the previous year; # of bloom stalks; and, dates of first bloom opening and last bloom fading, thus total bloom timing and duration. Plant identities are being documented through photos being made available to the public on The Farm's official website. Soil tests are conducted annually, with adjustments made to fertilization regimes depending on divergence from established nutrient targets. (The nutrient targets being adapted for this project have been provided by several of the largest commercial TB growers in the U.S.).

At this point, as interim guidance to others attempting to grow TB's on the southeast coastal plain, the research from the project suggests adherence to the following practices:

1. Plant in raised beds of 4-8" height with adequate sand content to ensure excellent drainage

2. Water with 1-2 deep applications only if drought conditions persist in the several weeks prior to bloom (April), and after planting (October)
3. Plant in area of at least 6-8 hours of sun, preferably morning sun; late afternoon shade is acceptable
4. Maintain a pH as close to 7.0 (neutral) as possible; since most soils in the Low Country are acid, the addition of dolomitic limestone will also provide needed quantities of the key nutrients calcium and magnesium.
5. Seriously limit the amount of nitrogen intake; fertilizing with one 1-2 tablespoons of 5-10-15 around each clump in late February seems to provide acceptable levels of these three major nutrients, absent a detailed soil test
6. Avoid covering the plant rhizomes directly with mulch; mulch promotes moisture retention, which is detrimental to TB's; keep mulch at least several inches away from the plants if used for weed suppression

Guidance will be revised as necessary, and posted to the website as new lessons are learned from the project, or existing lessons are refined.

For further information or discussion about this project, please contact Stan Gray at [graysirisgarden@comcast.net](mailto:graysirisgarden@comcast.net).