



## AFE Student Final Report

### **Intro-**

My internship was at Metrolina Greenhouses in Huntersville North Carolina. Metrolina is a whole sale finished crop production facility that supplies mostly annuals to all of the Home Depot, Walmart, and Lowes retailers within a 500-800-mile radius. Metrolina produces most of their own plugs from equal parts cuttings and seed provided by nearly 50 different breeding companies. On top of that, Metrolina ships finished crops from about 15-20 contracted growers in the region.

My first impression of Metrolina was, obviously, that it was massive. Metrolina is 162 acres of greenhouses and that is just the indoor space. It was so large that upon arrival I was given a bike to get around. As such they had a ridiculous number of employees; about 1200 when I first arrived in May. Many of these employees were temporary hires. My first day I entered the greenhouse through a gauntlet-like walkway lined with concrete, chain-link fence, and hard-looking temps smoking on either side of me. I was worried that amongst all these people, there might not be anyone that could be bothered to worry about teaching an intern, catering to my internship objectives, or whatever. Ultimately, I was wrong; by the end of my 6 months I would be sitting in meetings with both the director of growing and the head of the research department. Metrolina's growers were exceptionally patient, and for no apparent reason I was afforded all manner of special privileges.



### **Work performed / Skills learned**

During the 6 months I spent at Metrolina I was placed in 3 separate departments. The first 2 months I spent under roof finishing annual ornamentals and a variety of vegetables. During this 2-month period my primary responsibilities were watering an acre of plants, mixing fertilizer, scouting for pests, and doing soil tests. Occasionally I was tasked with using the overhead irrigation system to spray pesticides and less enjoyable jobs like dumping plants or cleaning the floors.

After that I was sent outside to the trailer pad for nearly 3 months. On the trailer pad we grew approximately 120,000 mums. We grew mums in finished pots of 3.5, 3, 2.5, and 1.5 gallons as well as 3 quarts. On the pad I had many of same tasks along with a few others. I sprayed pesticides in a 100-gallon gas sprayer and drenched plants through drip irrigation. I laid drip irrigation lines and taught a lot of people how to do the same. I applied slow release fertilizer to slow growing mum varieties and operated lights to delay the mums flowering response with long days.

Finally, for the last month of my internship I was sent to RND, the research and party department! RND was altogether different. My first new task was drinking coffee. As you can see in the pictures above, I also built pyramids from soil cups. But that's not all! I had many important responsibilities. I recorded data on trial plants from breeders like Syngenta. I helped set up comparison trials and take pictures of the results. One of the trials I helped with was measuring the burn on poinsettia foliage from 800, 1600, and 2400 ppm greener and urea. The results showed surprisingly little burn on the foliage, especially from the urea since it has a nearly neutral EC. Furthermore, I helped in the soil lab by measuring pH and EC levels from soil samples across the entire greenhouse. One of the more interesting things I learned about was the use of bio control instead of pesticides to combat pest problems in RND. We released parasitic wasps like *Aphidius Colemani* and predatory mites such as *Amblyseius Cucumeris* to fight pest problems. Lastly, I was allowed to sit in on meetings between Metrolina and the breeding companies that we ran trials for. Metrolina would present data to breeding companies such as Syngenta, Pan American Growers, and Dummen based on how their new crop varieties

performed. After this, the breeder would present their new varieties to Metrolina and retailers so they could decide what few crop varieties would be introduced to production.

### **Company as host**

As a host company, Metrolina was very accommodating of my internship; especially when you consider what a massive organization they are. My supervisor, Andy Bame, prioritized the learning aspect of my internship above the companies need for me as a productive employee. He personally took the time to show me around and explain how the company works. He also collaborated with other directors within the company to allow me to work under different people in various departments. There were a couple times during the internship that my work became routine and I stopped learning as much as I otherwise could have; but whenever I asked for a new task the company accommodated me. One thing that future students should consider is that Metrolina does not overwhelm their interns with responsibility. New employees are slowly given manageable workloads. For some people this is less stressful but also slows the learning process. Overall Metrolina was a great host company and I would recommend it to other Ball interns; especially ones with less experience working in greenhouses.

### **Impact on career/education and future plans**

On the whole this internship had a very positive impact on my career and education. It allowed me an opportunity to apply all the knowledge I have accumulated in the last 2 years of school. On top of that it gives me a point of reference to better understand what I will learn in the future. I think that Metrolina was a good place to be introduced to the horticulture industry. It is a large-scale facility that deals with multiple aspects of production from seeding to finishing crops and shipping. Moreover, I learned skills at Metrolina that are difficult to teach in the classroom. I learned how to determine whether plants need water based off weight, rigidity, and discoloration. I committed many common pests to memory; and learned which pesticides are most effective in treating them. I think that having this practical knowledge of the horticulture industry will not only make it easier, but also more interesting to study in the future. This internship has also had an impact on my plans for the future. I think that the biggest takeaway in this regard is that I am more determined than ever to find success pursuing my own niche in the horticulture industry. Eventually I would like to have my own business producing less common species that cater towards an enthusiast or collector customer base. Ultimately I feel like this internship will prove to be an invaluable experience along the way to finding my career path.

