



# Metrolina Greenhouses

Huntersville, North Carolina



Founders Tom and Vickie VanWingerden emigrated from the Netherlands in 1971 and initially rented a 20,000 square foot greenhouse on 3 acres in Charlotte, NC, in 1972. One year later, the family moved to Huntersville, NC, opening a 40,000 square foot greenhouse on 85 acres of land and started what is now the largest single-site greenhouse in the United States. The first greenhouse was a 1 acre plastic covered galvanized structure.

By 1982 the greenhouse had grown to 12 acres, and increased again to 50 acres by 1996. During the last 15 years Metrolina has grown from 50 acres to 141 acres of greenhouse space and hot-dip galvanizing (HDG) has been integral to all of this construction. Galvanizing was engineered into the first buildings, and all future construction will include it to protect the steel from the moist, corrosive environment of the greenhouse.

Metrolina Greenhouses' newest \$50 million addition will bring the total size of the building to 5.8 million square feet. That's a footprint area

larger than the 4.3 million-square-foot Boeing plant in Everett, Washington. They employ 550 people year-round and use an additional 300 temporary workers during the peak times of the year. Employees use golf carts, mopeds and bicycles to travel through the expansive indoor farm. Every year more than 75 million plants and over 700 varieties are grown in this heated greenhouse. Metrolina Greenhouses is the largest single-story building in the United States, with annual sales of over \$125 million.

Metrolina is also 'green' beyond what it grows in its greenhouses. Chevrolet has invested 40 million dollars in projects around the world that reduce carbon emissions into the atmosphere, and Metrolina Greenhouses is one of those projects. The boilers used to heat the greenhouses have replaced 100% of fossil fuels with biomass. All of the runoff water from rainfall and the greenhouse floors is captured in retention ponds, cleaned and recycled. Plastic potting trays that are not re-used are recycled at a local plastics recycler. →

**Galvanizer**  
Galvan Industries

**Owner, Specifier**  
Metrolina Greenhouses

**Fabricator**  
VanWingerden Greenhouse Company

## lifetime achievement



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Metrolina is developing organic trays that can be used to plant directly into the soil and eliminate plastic altogether.

Continuing with this sustainable trend, Metrolina chose hot-dip galvanizing for all of their structures. Utilizing 100%

recycled, abundant and natural zinc for corrosion protection supports these green initiatives without sacrificing corrosion protection. Unlike paint, galvanized steel does not require the wasted energy and expended chemicals of continuous paint touch-up.

Art VanWingerden said, "Not only does galvanizing provide an exceptionally long life in the hot, moist greenhouse setting, but it also corresponds with our efforts to protect the environment by eliminating the VOC's released

when paint is used for corrosion protection." Metrolina Greenhouses is an outstanding example of vision to protect our resources and our planet, and hot-dip galvanized steel will protect these facilities from corrosion while helping meet its needs sustainably. ♻️

Metrolina Greenhouses						
Produced 1972, Tested 2011:						
Sample Area	Readings (mils)					Average
Columns	2.8	3.4	3.7	3.6	3.2	3.34
Truss	5.6	5.1	6	6.4	5.7	5.76
Plate Bracket	6.8	5.7	4.2	4.6	4	5.06
Watering Boom	7.9	7.9	7.2	7.4	6.7	7.42



lifetime achievement