

Agromillora Florida Greenhouse Project

Wildwood, Florida



Florida's citrus industry generates approximately \$9 billion per year, a major impact on Florida's economy. Florida is second only to Brazil in orange juice production and remains the world's leading producer of grapefruit. But right now there is an agricultural crisis in Florida; in fact, the USDA estimates in 2015, Florida will box its lowest production of oranges in the past 50 years.

The industry is in a fight for survival, and the culprit is the Asian Citrus Psyllid, a tiny bug no larger than the head of a pin that feeds on the leaves of citrus trees. This bug leaves behind a bacteria that results in vascular clogging, causing the tree to drop fruit and eventually die. This condition has become known as citrus "greening." Currently there is no cure for greening, and no country has successfully eradicated it.

The fight against greening has taken on several forms. The University of Florida has created a Citrus Research and Education Center where researchers from across the globe are working on short and long-term solutions to combat the bug and disease. Various companies are working on formulating pesticides and insecticides for eliminating reproduction capabilities of the bug, as well as new fertilizers to help the trees fight the disease. Some growers, like Southern Gardens, are hiring their own researchers to develop a genetically modified orange mixed with spinach DNA which is resistant to the bug.



Agromillora, headquartered in Spain, is dedicated to the production and marketing of the highest genetic and health quality plant materials to the agriculture industry. They are a world leader in the fruit and olive tree industry, and have expertise in modifications to produce the highest genetic and production quality. With the growing crisis, Agromillora decided to build a facility in central Florida to provide their services to this struggling market.

Imperial Builders, a leader in nursery, greenhouse, and warehouse manufacturing and construction, was selected to build the new research facility. The facility contains six greenhouses and a tissue culture lab. The use of pre-galvanized tubing and materials is very common in the greenhouse manufacturing industry, but Imperial Builders has chosen to set themselves apart by utilizing after-fabrication hot-dip galvanizing (HDG). The very nature of a greenhouse is to develop a warm, humid environment which is extremely detrimental to steel structures. Add in the consistent irrigation of the plants and the tropical Florida climate, and a quality corrosion protection system is a must. HDG's cathodic protection will ensure the corrosion resistance needed in this environment. The cost savings accrued from the long life and minimal maintenance that hot-dip galvanizing provides, will allow Agromillora to further invest in research and development for a cure to this disease.

Imperial incorporated galvanizing with the columns and any heavy structural members of the greenhouse. Imperial worked with their galvanizer to utilize HDG in more areas

of their buildings providing them a superior total package to offer their customers. One area of concern were the truss sections, which are manufactured with lightweight material and potentially subject to distortion during the galvanizing process. After consulting with the galvanizer, Imperial was able to change the design to manufacture the trusses using u-channel shapes leaving gaps wide enough to allow air and liquids to flow freely throughout during galvanizing. With the new design and special care by the galvanizer to hang the trusses in a manner to minimize distortion, they were galvanized successfully. This is a testament that with proper design, manufacturing considerations, and consultation with the galvanizer, lightweight products can be successfully galvanized.

The citrus industry accounts for 76,000 jobs in the state of Florida. Agromillora will use this facility to produce rootstock and seedlings that will be cultured, developed, and grown as healthy, disease-free plants resistant or tolerant to greening. Potential growth of this facility and others like it is already being planned. Imperial Builders is committed to be there and do their part in supporting long-term growth of the citrus industry by building greenhouses utilizing hot-dip galvanized steel which provides superior corrosion resistance for a long building life. ■

Galvanizer

Valmont Coatings-Tampa Galvanizing

Fabricator

Imperial Builders & Supply Inc.

Owner

Agromillora Florida, Inc.

Food and Agriculture