

Kentucky Agricultural Leadership Program's

Domestic Learning Journey

Florida 2020



Homestead/Miami Area

First day in South Florida began with a delicious lunch at White Lion Cafe. Our first educational visit was to University of Florida's Tropical Research center established in 1929. Dr. Jonathan Crane gave us a tour of the tropical fruits, including papaya, dragon fruit, lychee, mangos. We ate star fruit directly off the tree. Miami Dade County is the second largest agricultural producing region in the state of Florida with 70,000 acres producing \$800 million. The most lucrative markets are ornamentals, potted plants, and large palms, since landscaping is in high demand in the region. Primary issues faced in this region include zoning, land competition, food safety, and trade with Mexico as a major competitor. Labor was less of an issue than we anticipated, because farming year-round has led to many workers taking residence with their families in the area.



Figure 1, above: Daniel Hayden examining a Jackfruit tree in a trial at University of Florida's Tropical Research and Education Center.

Next, we visited RF Orchids to learn about the booming ornamental business in south Florida. We were taken with the gorgeous ornamental flowers that wrapped trees. Potted plants and landscaping are both lucrative. This particular location served as an event venue.

Agritourism at its prettiest!



Figure 3, above: Anne Bays, Carrie McIntosh, and Stephanie Halcomb exploring the retail facility at RF Orchids.



Figure 2, left: Orchids growing on an old tree at RF Orchids.

Figure 4, right: Class XII at with Dr. Jonathan Crane





Figure 5, Class XII listening to Tony DiMare at the packing house.

A visit to the DiMare packing house, with Tony DiMare, led to discussions about the competitive pressure Mexico places on the fruit and vegetable market. Tomato dumping from Mexico, at a margin of 21% less than fair value, has led to a Tomato Suspension Agreement from the U.S. International Trade Commission. With Mexican companies arguing that their economic indicators lead them to believe they have not been dumping, the issue will likely continue to impact both countries' tomato producers.

The group briefly visited Atlantic Sapphire Bluehouse, a massive Atlantic Salmon aquaponics facility. The continental United States is the world's largest salmon market, and is importing 90% of what we are consuming. Norwegian and Danish developers selected the Miami area due to the naturally purified limestone water. (Apparently the water that breeds strong Thoroughbreds and creates delicious bourbon is also perfect for salmon.) The center will finish construction in summer of 2020 and is committed to "green" principles like recycling water and reducing freight. Environmental consciousness was a common theme during our Florida visit.

After hearing about the amazing milkshakes at Robert is Here since nearly the moment we arrived, we were able to visit Robert and Heather Moehling at their unique fruit stand. Robert, Heather's father-in-law started the fruit stand in grade school. He set up near the entrance to the Everglades National Park

and had no visitors on his first day. Feeling defeated, he returned home and devised a marketing plan. With the help of his father, he hand-painted "Robert is Here" on a large piece of wood to place near his stand. The next day, he sold out. A humble beginning for an amazing agritourism location, now serving local and exotic fruits and vegetables, unique food and grocery products, and (we can now confirm) delicious milkshakes. We sampled several tropical fruits. If you are visiting the Homestead, Florida region, put this KALP favorite on your itinerary.



Figure 6, Heather and Robert Moehling sharing dragon fruit with the group.



Figure 7, Class XII in front of the Robert Is Here Fruit Stand. Heather Moehling, our hostess, seen front left, is a member of the current Wedgeworth Leadership Institute cohort.



Figure 8, Miranda Chaplin, Lindie Huffman, and Jennifer Tucker pose with bouquets of sunflowers at Robert is Here.

Belle Glade Area



Figure 9, Tony Holloway, Anne Bays, and Will Snell sample sweet corn.

A midday arrival in Belle Glade began with meeting Keith Wedgeworth. Lunch with local alumni kicked off our discussions of area production. Pioneer Grower's was gracious enough to host lunch and one of our first tours. Pioneer Grower's, which began as a marketing cooperative owned by local farmers in the 1950s, is now one of the world's largest sweet corn distributors, growing over 13,000 acres annually. They are the leader in Traypack corn after they began processing and packing in 1992. In 2012, the installation of a state-of-the-art corn packing line allowed for the expansion of capacity to 25,000 crates a day. They also grow more than 6,000 acres of green beans, radishes, celery, and cabbage. Packaging for brands like Green Giant and Stay Sweet Pioneer, it is likely that you have purchased their products in Kentucky.



Figure 10, a crate of green beans ready to go into refrigerated storage.

We also visited a sugar processing plant, packaging for Domino's and store brand varieties. Spoiler alert, they are the exact same product, unless it is organic. Another item of interest, brown sugar begins as white sugar and has molasses reintegrated to produce its brown color. Brian Cross, our host at the Sugar Cane Growers' Cooperative of Florida allowed us to sample raw sugar from the mountains of sugar in a storage facility.



Figure 11, left, Class XII with Keith Wedgeworth and Brian Cross at the Sugar Cane Growers' Cooperative of Florida.

Figure 12, below, Will Snell with a sugar "mountain."





Figure 13, Steven Basore speaking to the group at TKM Bengard Farms.

Day three began at the beautiful TKM Bengard lettuce farm. Steven Basore hosted Class XII as we explored the largest lettuce grower east of the Mississippi River. TKM Bengard grew 8000 acres last season, yielding 100 million lbs of product. The fourth generation farm benefits from the “muck” soil, some of the richest soil in the United States. The geographical location, just south of Okeechobee Lake, has allowed deposits that resemble potting soil. A huge departure from the gravelly soil we left in Homestead. The gap between consumers and their food source was discussed again when we tackled the importance of food safety. With several recent national recalls of lettuce, specifically romaine tainted with E. coli, Basore was sure to point out that none of the effected product was grown in Florida. Since consumers are unable to discern the differences in food sources, Basore said that the recalls caused a lot of unnecessary hysteria about the safety of the products they are growing in the Belle Glade area.



We came across several farmers wearing “This Farm Cares” (logo, right) hats during our tour of Florida. A program implemented by the Florida Farm Bureau Federation requires farmers to prioritize environmental stewardship. Following a certain set of Best Management Practices (BMPs) qualifies farms to apply for the program. Producers must engage in nutrient management practices to minimize impacts to water resources, carefully schedule irrigation to reduce nutrient and water loss, and use barriers to protect neighboring water areas from the transport of sediments.



After seeing the packaging of sugar, we were eager to visit a sugar cane field. Luckily, we were able to see a fire in the field. They burn the extra biomass from the cane before harvest. The same cane can grow for multiple seasons.

Figure 14, left, Melissa Miller stands in front of sugar cane to showcase the height of the plants.

Water, a common theme throughout our trip, was the focus of our next visit. We met with Dr. Samira Darius to discuss water issues and took an airboat ride on Lake Okeechobee. The tour allowed us to see how the marsh serves as a natural filtration system.

Okeechobee Area

Following lunch, we headed toward another gracious Wedgeworth Leadership Institute alum, Ray Royce, in the city of Okeechobee. Ben Butler gave us a tour around his dairy farm. We discussed the many struggles that dairies are facing lately. He shared that 30% of his business was in Dean's and another 30% was in Borden's. So 60% of his business recently disappeared. In fact, during 2018 they lost nearly \$1,000 a day. They are also in the process of transitioning the farm, with his parents as the owners, but Ben and his brother serve as the principle operators. Butler Dairy has 1400 head of dairy cattle, each producing about 63 lbs of milk a day. Florida is facing many of the same challenges that our Commonwealth is facing.

Figure 15, right, Class XII members on Lake Okeechobee airboat tour. Featured: Tony Holloway, Dan Miller, Anthony Jones, Doug Lawson, Lindie Huffman, Stephanie Halcomb, Will Snell.



Figure 17, above, Genie Tillman of Parker Island Gator Farm with Tony Holloway, Lindie Huffman, Daniel Hayden, Micah Lester, and Don Holbert.

Farm, where our hostess Genie Tillman farms gators. They harvest about 2,000 alligators a year from their 8,000 in breeding ponds. It takes 67 days for a gator egg to hatch; then it takes about 18-24 months for the gator to be 4-5 ft in length. They started their operation with only 25 alligators.

A short trip through Lake Placid allowed for a tour of the town's many famous murals. The largest mural, a tribute to the area's cattle, actually "moo"s at you! Our Central FL guide, Ray Royce, took us into a citrus grove. We discussed the decline in consumer demand for citrus, disease, and the major problem with greening. About 200 million 90lb boxes were consumed 15 years ago and only 75 million boxes have been consumed in the last few years. Some farmers are experimenting with bamboo and are finding that it may be a viable alternative, harvesting for hardwood flooring and a type of drywall replacement.

Noah Handley from Lykes Brothers Ranch, showed us around the 330,000 contiguous acre property, the 4th largest in the United States. They have 14,000 head of cow/calf, primarily Brangus and Brahmin, since they can withstand the Florida tropical weather. The operation was impressive, but of even more interest to our group was the diversity of projects. Including land leasing, hunting leasing, and citrus, they are also on the forefront of water treatment projects in the Herbert Hoover canal area. They were about to flood 8,000 acres, returning it to marsh land. With benefits for the water and wildlife, the marsh will naturally clean water before it flows south to the Everglades Agricultural Area. When asked about challenges, Handley expressed aggravation with the permitting process. The permit and environmental impact studies required for creating a marsh are comparable to building a mall.

After checking out cattle and water issues, we ventured to Parker Island Alligator



Figure 18, right, Jim Gilles, Jennifer Tucker, and Daniel Hayden enjoy fresh citrus.

Plant City Area



Figure 19, Carrie McIntosh, Melissa Miller, Miranda Chaplin, Mary Beth Shackelford, Tyler Ferguson, and Abbi Graves sample strawberries at Hinton Farms.

A visit to Hinton Farms (no, not those Hintons) began our last full day of learning. Jake Raburn educated our group about strawberry farming. Hinton Farms operates a cooler and packing house, processing 600 acres of berries, of which they grow 180 acres. To put it in perspective, the Plant City area grows 10,000 to 12,000 acres of strawberries a year. 600 acres is approximately 1.5 to 2 million flats, with 8 lbs of strawberries in a flat. The plastic is put down in September, crews plant in September and October, then harvest from Thanksgiving to Easter.

The biggest challenge facing the strawberry market right now is trade issues with Mexico. The USMCA did not address several of the issues that specialty produce growers in Florida had with NAFTA. Mexican produce dumping was discussed again, with strawberry growers seeking aid for trade injury. Another concern is food safety and weather. Due to climate change, they are experiencing less frost days than when Raburn began in 2010, but they remain vigilant to protect the plants. Frost can cause damage, so many farmers will spray water over the plants to protect them from frost. Another option is covering the plants, however that introduces food safety concerns. How was the tarp stored? Was it exposed to chemicals or rodents? Raburn prefers to avoid covering, to avoid these concerns altogether. Hogs and deer in the field present similar food safety concerns, and must be monitored.

Hinton Farms employs 10-15 full time workers, primarily family members. A crew of 180 H2A laborers work the fields, picking the same plant every two to three days during the Thanksgiving to Easter harvest window. The goal is to move the plant from the field to the truck in one day, since it is such a highly perishable product. Workers are paid \$2.25 per flat during high season, resulting in an income of \$1500-1800. A conventional flat of berries will bring in \$18.90, an organic flat, \$35. There are approximately 4300 flats per acre, meaning that an acre grosses about \$60,000. With \$43,970 in operating costs per acre, they can expect about \$16,000 net on the acre.

There is very little new entry in strawberry farming, due to the prohibitive costs of land and lack of availability of crop insurance. Hinton Farms is currently undergoing succession planning, with four brothers sharing the responsibility of running the operation.

A visit to Dr. Jack Rechoigal at the Gulf Research Center in Wimauma opened Class XII's eyes to the vast research being conducted on strawberries. Well-funded programs for lucrative crops like caladiums, ornamental plants, specialty fruits and vegetables leads to groundbreaking new varieties. Researchers are eligible to earn royalties on new varieties they develop, creating a very progressive culture. We heard from a Rodrigo Onofre and Joe Montemayor, plant pathologists working on a UVC robot, named Thorvald, that will mitigate issues caused by mildew, chili thrips, and two-spotted spider mites. The machine currently has a 90% efficacy rate without the use of additional fungicide. It can cover approximately 75 acres a week, and is operated by a basic Xbox controller.

Luis Osorio introduced us to the strawberry breeding program. It takes 5-7 years for a new breed to be developed. The team is currently working with a seed variety brought to the US from Japan about three years ago. It creates a white strawberry which sells for \$15 a berry in Japan. They are also experimenting with a berry from France that has some grape-like characteristics.



Figure 20, White strawberry, from the breeding program at University of Florida's Gulf Coast Research Center.

Shinsuke Agehara is researching managing environmental stress from the temperature variations in Florida. With different colors and materials of cover for the field mulch, he is attempting to control the effects of the weather on the plant. Aluminum is being researched as an option to reflect sunlight and keep young plants cool. It also increases photosynthesis on the bottom of the plant's leaves. He is also working to improve materials currently used by farmers, as the aluminum is often not stretchy enough and the paint colors can run when the sprinklers are used.

Nathan Boyd is working on software that can cut back on the use of herbicide with precision agriculture for weed management. We also heard from Natalie Peres who created the strawberry advisory system.

A visit to Mulberry's phosphate museum allowed us to hear from Chelsea Young, museum manager and Morgan Odum from Mosaic. 70% of the Port of Tampa Bay's economic activity is phosphate related. Mosaic is currently using reclaimed land for improved pasture, growing sod, olives, hops, and herbs. They are also trying housing developments and have a golf resort, Stream Song, on their reclaimed sites.

The Port of Tampa Bay was our final visit on this adventure with Clay Hollis, Christina Doege, Matt Floyd, and Leanne Himrod taking the time to speak with Class XII. The Port moves 34 million tons of cargo, resides on 5,000 acres, and has a \$178 million economic impact. The largest export is phosphate.

Our trip to Florida was certainly educational and informative. We are always encouraged to visit other regions and learn they are battling similar struggles in new and different ways. The small community that is agriculture, is always available to help a fellow farmer succeed.



Figure 21, Class XII members on a retired railcar at the Mulberry Phosphate Museum.

