By Tim Spann, PhD Research Program Director



The city of Medellin. Photo credit: Carol Lamb

he California Avocado Commission (CAC) sent three representatives to the IX World Avocado Congress in Medellin, Colombia at the end of September. Attending on behalf of CAC were Chairman John Lamb, Production Research Committee (PRC) Chair Leo McGuire, and Research Program Director Tim Spann.

Colombian Avocado Industry

The Colombian Hass avocado industry covers about 15,500 hectares (ha), which equals a little more than 38,000 acres. Antioquia Department (state), where the city of Medellin is

located, is the largest producing area with more than a third of the producing hectares. This is a mountainous region, being part of the northern end of the Andes mountain range, and avocados are produced at an elevation of 1,600 to 2,400 meters (5,250 to 7,875 feet). The area receives abundant rainfall, with frequent showers occurring throughout the day as clouds move in and out.

Hass fruit take from 10 to 12 months to mature in Colombia, depending on elevation, with lower elevations maturing sooner than higher elevations. Like Mexico, Colombia has two crops — the main crop from August through

March and the second crop from April through June — and can supply fruit 11 months of the year.

The geographic location of Colombia is ideal for an export fruit industry. The country has both Atlantic (Caribbean) and Pacific ports, allowing it to efficiently export fruit to Europe, Asia (Japan and South Korea) and North America.

Cartama

Our visit started with two days of packinghouse and grove tours in and around Pereira (about 100 miles south of Medellin) with representatives from



Cartama packinghouse with Globalscan 7 imaging software (inset).

Cartama. Cartama, which focuses exclusively on avocados, is part of a group of family-owned companies with a 35-year history in Colombian agriculture. Cartama's sister companies, Banafrut and Capiro, produce bananas and cut flowers, respectively.

Cartama started in the avocado business in 2000 with 12 ha (about 30 acres) of Hass. In 2016, Cartama entered into a partnership with Mission Produce (who coordinated our visit). Today, Cartama has about 2,700 ha of land with 800 ha planted to avocados. Their goal is to have about 3,500 ha, 1,000 ha of which will be in partnership with Mission.

The Cartama packinghouse, although small, was built in 2015 and is state of the art, utilizing the latest vision grading and sorting technology.

We visited three different groves during our visit with Cartama — Sinai, a 350 ha grove; La Terracita, a 26 ha grove; and La Pradera, a 22 ha grove. Overall, all the groves were very well managed and professionally run. Sanitation and worker safety were front and center — Leo McGuire and I were scolded for checking out the pesticide

storage shed without the proper personal protective equipment.

None of the groves we visited had irrigation systems due to the abundant rainfall, but they are beginning trials with irrigation systems to better control their fertility program. Nitrogen, not unexpectedly, is very low in their soils and is a major limiting factor to tree growth. Currently, they apply dry granular fertilizer to each tree by hand several times a year, so an irrigation system allowing for fertilizer injection would be very beneficial. Zinc also is a difficult nutrient to supply adequately, given their soil conditions. Generally, the soils are well drained and of volcanic origins with an acidic pH. However, in some areas, like the La Pradera grove, the soil can be excessively acidic -4.8!

Currently, all the trees are grown on native seedling "Criollo" rootstocks that have been produced in Cartama's own nursery since 2017. A trial is underway at the Sinai grove with clonal Duke 7 trees from Brokaw Nursery and the trees are performing very well. Developing an industry based on



A view down a mountain valley showing how the clouds move in and out all day. Avocado groves can be seen on the steep slopes along the right side.



A new planting of trees at Cartama's La Pradera grove. Note the trenches in the lower right foreground as well as in the background that have been dug to improve drainage and control water flow.



An avocado display in a high-end supermarket. Hass fruit are shown in the upper left and lower right. Lorena avocados, a greenskin variety preferred in the local market, are shown in the upper right. Lorena fruit sell at about a \$0.20 premium over Hass fruit in the local market.

clonal rootstocks needs to be a top priority for the Colombian industry given the high rainfall and opportunity for rapid disease spread.

There are two major pests affecting the Colombian industry — the avocado seed moth (*Stenoma catenifer*) and avocado seed weevils (*Heilipus* species). Both pests appear to be taken very seriously by Cartama. We saw posters showing how to identify both pests and the damage they cause on display in the groves and packinghouse.

IX World Avocado Congress

The Congress itself was held in Medellin, September 24-26. The organizers report that 3,247 people attended the Congress from 50 different countries. That's more than 25 percent of the countries officially recognized in the world, which speaks volumes about the avocado's popularity.

The Congress was comprised of a tradeshow, the Academic Program, AvoTalks and posters. While scientific presentations still dominated the program, there was a very noticeable marketing and international business presence on the program, which again speaks to the avocado's growing world-wide appeal.

Scientific talks were split between the Academic Program and the AvoTalks. The Academic Program



Photo credit: Carol Lamb



Cartama Commercial Director Luis Maya, CAC Research Program Director Tim Spann, CAC Chairman John Lamb, PRC Chair Leo McGuire, Cartama CEO Ricardo Uribe and a Cartama grove worker pose for a picture in Cartama's La Pradera grove.

sessions were typically two-hour symposia dedicated to single topics (e.g., rootstocks or avocados and human health) and provided simultaneous translation between English and Spanish. The AvoTalks sessions were short, 20- to 30-minute presentations that were submitted presentations as opposed to invited speakers. The AvoTalks did not provide translation. Between the Academic Program sessions and the AvoTalks there were at least six rooms with presentations going on simultaneously.

I think everyone, especially the

organizers, were surprised by the size of this Congress. It certainly felt larger than Peru and I think the numbers support that. There were two meetings held, one at the start of the Congress and one at its conclusion, to discuss how to improve the Congress going forward. The group agreed to create the World Avocado Congress Committee, which will assist the host country with planning the scientific program. One key takeaway from these two meetings that everyone agreed on is that the next Congress needs to be extended by at least one or two days to better accommodate

all the talks. This will help to reduce the number of concurrent sessions and also will allow for the temporal separation of marketing and science talks so that people can hear both if they choose.

The final event of the Congress was to announce the winner of the voting for the next host country. And proving the adage that the third time's the charm, New Zealand finally won their bid to host the World Avocado Congress in 2023. Rumor is the Kiwis are exploring the idea of hosting the event on a cruise ship!