

## Investment Morphs To Project Then Passion

By Tim Linden

n the late 1970s, Marv Crumb was fully ensconced in the burgeoning electronics field when he bought a 44-acre avocado ranch in Valley Center in north San Diego County. The trees had been planted only four years earlier, and the mostly Hass acreage initially included seven acres of Zutanos and four acres of kiwifruit.

As a former farm boy from Kansas, the idea of being an investor in an agricultural pursuit was alluring. But Crumb was in the sweet spot of his career serving as general manager of the NCR computer division in Rancho Bernardo and traveling around the world. He hired a grove manager to take care of the place.

Over the years, he said the investment was a very good one as the "grove totally paid for itself," but his career, which went in several different directions, took precedence. In fact, it included a move to Seattle in 1980, which is where he lives today with his wife, Luann, who is his grove partner. He stayed in the electronics business until 2000 and then spent the next decade running his own company, which monitored and recorded earthquakes. Being involved in an executive or ownership position of these various pursuits for the first 30-plus years of avocado ownership limited his participation in the grove. He loved walking the ranch and communing with the trees, but his visits were few and far between.





But upon retirement a handful of years ago, Crumb became much more involved and enlisted his own analytic background to monitor his grove with the goal of improving production and lowering costs. "We had root rot and I saw we were removing about 3 percent of our trees every year. I set out to figure out what I could do to stop that."

He began by trying to figure out what he didn't know. Just as gathering data about earthquake activity is considered the key to increased knowledge, Crumb "instrumented the grove" to provide him with data. The instruments communicated with his computer in Seattle, continually dumping data about wind direction, soil moisture and ionic levels in the soil. "It gave me a lot of statistical data to work with," he said.

Armed with the information, he began to study the agronomy of the avocado focusing on soil science. He was looking at the physiology of avocado trees and the cycles they went through. "My brother, who has a PhD, says I now have a PhD in avocado agronomy," he quipped.

Much like in the field of electronics research, Crumb said the key "is to eliminate the unknowns." The avocado, he said, was ripe for this approach because there was an incredible amount of unknowns about what helps a tree produce a large quantity of good quality fruit.

One of his early discoveries was that the decomposed granite on which his ranch was located did not hold water very well because of the lack of organic material. "We had a tremendous problem with wilting," he said.

Working with avocado tree researchers, he determined that the best way to address this was with more frequent watering, while using less water. Initially, he was running the irrigation system 8-24 hours at a time once a week. His current protocol calls for watering three times a week for just three to four hours at a time. He uses less water but the trees are exposed to stress much less.

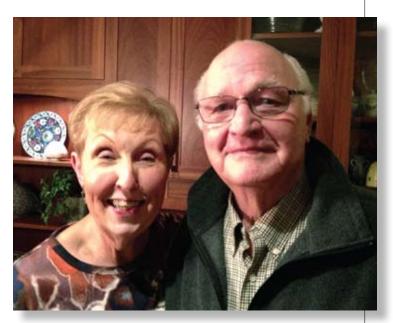
Water is the area is which Crumb has devoted the most attention and for good reason. He calls it the key to profitability. Several years back, he looked at his water bill that was around \$150,000 annually and rising, and realized "we

have to change that or get out of the business."

He hired a well locator, found a spot that would yield sufficient water and drilled a well equipped with a reverse osmosis system. Counting everything, including amortizing the cost of installation and annual pumping costs, Crumb said he has reduced his water bill to about \$120,000 per year. Without the well, he said the cost would now be at about \$180,000 per year.

For 2016, Crumb is anticipating the ranch yielding about 400,000 pound of fruit. Over the past few years, the yields have ranged from 10,000 to 15,000 pounds per acre.

Because the trees are more than 40 years old, he is in the process of what he calls "rejuvenating" his ranch. About a decade ago, he added 1,000 new trees and each year he continues on a replacement schedule. Recently he put in a



Luann and Marv Crumb

high density planting in a six-by-six foot spacing pattern to test its effectiveness. He is committed to a "data-driven and science-driven" approach to managing the ranch and improving the grove. Because he is getting what he calls "long in the tooth," Crumb and Luann have added their daughter and her husband to the family business team. The younger generation is involved in the latest capital improvements with the goal of taking over the ranch in the not-so-distant future.

Crumb remains bullish on the California avocado industry, which has made his investment of 40 years ago a winner by any objective measure.

And also by a more subjective bellwether. "I absolutely love walking the grove," he said from his Seattle home. "I come down once a quarter and spend two weeks at the ranch each time."

With equal parts data and the old-fashioned eye test, he is making sure his avocados are top notch.