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# Transport Technologies: Advances revolutionizing future of farming

BY MARA KNAUB, @YSMARAKNAUB 20 hrs ago



Plants are grown in a greenhouse and then transplanted to a field. The Yuma Center of Excellence for Desert Agric hosted a AgTech Talk Sept. 17 on transplant technologies with Brian Antle of Tanimura & Antle Plant Tape, Matt DiCori of Keithly-Williams Seeds and Gary Ursrey of Greenheart Farms.

Loaned Photo

Technological advances are revolutionizing the future of farming and local farmers are not shy about exploring and using innovative tools and methods to improve productivity and sustainability.

The AgTech Talk hosted by the Yuma Center of Excellence for Desert Agriculture on Sept. 17 focused on transplant technologies with guest speakers Brian Antle of PlantTape, which was acquired by Tanimura & Antle; Matt DiCori of Keithly-Williams Seeds; and Gary Ursrey of Greenheart Farms sharing their experiences.

Antle explained that the plant tape method is just that: a seed is planted inside a strip of tape. The automated system is more efficient than the conventional transplanting methods using plugs and soil blocks. It uses a fully integrated system from sowing the tape, to germination and nursery care, to transplanting in the field.

He noted that when the company started “down this path,” it was to save on labor costs in view of the rising minimum wage. But Antle noted other advantages, including that seedlings can be planted at any height and allows a lot of flexibility with leafy greens.

This method also addresses a lack of nursery space, pointing out that the same space can accommodate 338 plants or 810 tape plants.

Antle said that his company believes in the technology and felt strongly that it’s an investment into the future. It’s been “slowly catching on.” Growers can’t just switch to the new system; it has different water and fertilizer needs.

However, the company has made a lot of breakthroughs. He suggested that interested farmers should start now rather than waiting five years when the labor situation worsens.

“We’re real happy with it and the results,” Antle said.

Ursrey called the plant tape method a “very interesting idea” and noted that technology will eventually push farmers that way. “The only way to make money in this world is to stay in front of technology,” he said.

He shared information about available greenhouse technology, including touch pads and automated watering which allows workers to choose where they want to water and feed.

These types of technology also lessens the number of people it takes to run each greenhouse. However, Ursrey noted, he still sees a human presence in the greenhouse at least in his lifetime.

Touch pads are critical for regular feeding and watering, especially in the desert where no water in 30 minutes could mean trouble. With the cost of seeds going up, lack of water and attention can get “expensive real quickly,” he added.

Technology can also be expensive when growers first start getting into it. But, while they continue to rely on what they’ve done in the past, they must look to the future to find technology that will increase their output and reduce labor needs.

As labor costs continue to go up, farmers have to ask themselves if new technology will benefit them and if it’s financially feasible. Savings can then be passed on to customers.

Greenheart Farms has been testing several things, such as automated loaders and upgraded seed machines. Through trial and error, farmers usually will find the technology that works and doesn’t work for them, Ursrey said.

“Human beings don’t change until we’re forced to. Things in the past will no longer work. You gotta move to the future,” he added.

DiCori said Keithly-Williams Seeds entered the business because a lot of small growers wanted a greenhouse that focused on their specific needs. They needed help and wanted a chance to succeed. Now the company works with large companies all over the U.S., Canada and Mexico.

DiCori noted that the segment that's growing the most are transplants and organics, not just in this area but across the western U.S. It's no longer just the "mom and pops" who are getting into organics and selling them by the side of the road. Now the larger companies are following suit.

A seedling growing in a greenhouse has less days when a pest can try to consume it. Transplants also save 15 to 20 days of life in the fields. As a result, more crops are moving into the transplant arena. He noted that transplants technology can lead to more uniformity. This is important because consumers buy with their eyes. If they see bruises, although there's nothing wrong with the product, they won't buy it.

As more steps in the chain become automated and less people touch the product, the food safety risks go down as does the cost of labor. The key is looking for the best solution for each farmer. What works in Yuma may not work in Washington.

"We want to save a nickel, but we don't want to lose quality. You still want a product someone will want to buy," DiCori said.

Paul Brierley, executive director of YCEDA, noted that transplanting is here to stay. A lot of solutions to agriculture problems are being built into the seed and that's why it's getting more expensive, he added.