

## Go beyond the audit, every day

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**October 26, 2018** - Our battle against pathogens entering the fresh produce supply chain is daunting.

It seems there isn't a week that goes by without an outbreak advisory warning and subsequent recall somewhere in North America, let alone the bombshell events like the massive outbreak with romaine lettuce in Yuma, Ariz., that still occur periodically.

We are all in this together, as these ongoing events drastically impact the health of our end consumers, and in their confidence that our industry can provide safe and reliable food.

There is no silver bullet that will prevent these food safety threats. But collectively we can make significant improvements through ongoing scientific research, devising practical solutions, and implementing best practices across our entire industry.

At the Center for Produce Safety, there has been impressive progress over the past 10 years with funding provided to scientists around the world to conduct foundational research on food safety.

Over 300 people attended the last CPS annual symposium to learn about new research findings and potential applications for their company's operations. Although the symposium is an outstanding event, the CPS board recognized that much more needs to be done to reach the thousands of other companies in our industry.

Recently, a new CPS Knowledge Transfer Task Force has been formed to tackle this area. Its main priorities are to work with strategic partners, such as trade associations and commodity groups, to share research findings, help with education seminars and develop best practices.

Further priorities are to author and release to media ongoing articles highlighting individuals that have taken CPS research findings and implemented best practices within their companies.

Through these activities, our hope is that we can reach a much wider audience to make a significant difference on improving our industry's record on food safety.

Sharan Lanini, director of food safety at Pacific International Marketing/Dynasty Farms, has served for several years on the CPS technical committee, and is absolutely passionate about taking new research findings to continuously improve PIM's food safety program.

While there are a vast number of CPS research findings available, we focus this article on the research project led by Dr. Laura Strawn of Virginia Tech – "Control of Cross-Contamination During Field Pack and Retail Handling of Cantaloupes."



While focused on cantaloupes, this research project is particularly interesting because it has broad application potential across all field-harvested commodities. It was also the first project funded by CPS that spanned across the supply-chain from farm through to the retail environment.

More recently, key findings of this research project were included in the Leafy Greens Food Safety Task Force recommendations on harvest equipment sanitation – in direct response to the romaine lettuce outbreak in Yuma.

Some of the key findings of Dr. Strawn's research included:

- Pathogen survival was greater on dirty compared with clean food contact surfaces on harvesting machines, highlighting the importance of robust and frequent cleaning and sanitation.
- The most effective sanitation protocol for food contact surfaces was an overnight application of either chlorine or PAA (Peroxyacetic Acid) with a contact exposure time of 15 hours.
- Pathogen transfer was highest for rubberized gloves compared with all other field-pack contact surfaces, because over time rubberized gloves get cracked and allow better attachment of pathogens. It is better to use nitrile (single-use) gloves, or cotton gloves if used in a dry environment.
- Foam used to cushion produce in a retail display had the highest prevalence of *Listeria* (spp – a non-virulent form), which indicates foam can become a harbinger site for pathogens and should not be used.

When Sharan started at PIM/Dynasty Farms three years ago, she recognized the need for improved field harvester Sanitation Standards Operating Procedures and made several improvements including the following:

- Harvest machine cleaning and sanitation is scheduled right after each day's harvest.
- Dedicated an individual and mobile truck to ensure the daily cleaning and sanitation program is completed on all harvest machine equipment daily.
- Trained all Dynapac Harvesting personnel in their cleaning and sanitation program.
- Standardized the requirements for purchasing chemicals from a highly respected supplier.

Sharan then used Dr. Stawn's findings to scientifically validate the need for enhanced SSOPs, which illustrated to company owners the critical nature of food safety exposures and the need for continuous improvements to their overall food safety program.

With these and many other CPS research findings, Sharan has been instrumental in implementing a culture of food safety at PIM/Dynasty Farms.

Strawn's CPS research project has been very important to our industry. It validates best practices and is relatively simple to implement, while adding another preventative control to the field practices that can easily and significantly decrease the potential for cross contamination by pathogens on harvest equipment.

It is also noteworthy that this project was not targeted toward leafy greens, but due to the universal nature of the conclusions it is immediately and universally implementable to all field-harvested commodities.





These are just a few examples from the vast depth of CPS research knowledge available to improve food safety across our industry.

But “just passing the annual audit” doesn’t necessarily mean that a company has an effective food safety program. The audit is just a snapshot in time, and is only as good as the food safety procedures each company has implemented internally.

That’s why every company in our industry needs to keep abreast of new food safety research findings and learn how to apply best practices to ensure they have an effective food safety program specific to their business operations.

A message to all other C-level and executive management out there: When your food safety person puts forward recommendations on improving your company’s food safety program, pay close attention. You’ll never go wrong by approving food safety initiatives that include training, education, tools and other resources, especially if supported by relevant CPS research.

Foster a culture of food safety in your organization, and always go well beyond the audit on a daily basis.

To learn more about Dr. Stawn’s or other CPS research projects, go to <https://www.centerforproducesafety.org/> Click on Research Awards menu, and Research Awards to bring up a searchable list.

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