



## CASE STUDY

# Using the Science of Far-UVC to Safeguard a Vital Food Source

The Egg Basket implements Visium Apex to reduce surface and aerosolized contamination risk in egg processing

## OVERVIEW

The Egg Basket's egg processing facility is pivotal in their production of farm fresh eggs to their ever-expanding distribution base within the central US. As an addition to the farm's food safety and biosecurity protocols, Visium Far-UVC strengthens sanitization efforts against pathogens introduced through harvesting as well as providing an additional barrier to reduce the risk of environmental threats such as *Salmonella* and *Campylobacter*.

Visium Apex uses a specific wavelength of Far-UVC light (222 nm) to continuously inactivate airborne and surface pathogens while spaces are occupied. The Egg Basket selected Visium as a discreet, always-active layer of biosecurity to support the health and well-being of everyone who uses these shared environments.



## The Challenge

Food production hygiene strategies generally focus on contaminated surfaces or fomites. Surface cleaning and washes are effective, but manual cleaning is imperfect and episodic, leaving gaps between treatments. Conventional cleaning methods also fail to address pathogen aerosolization and airborne contamination.

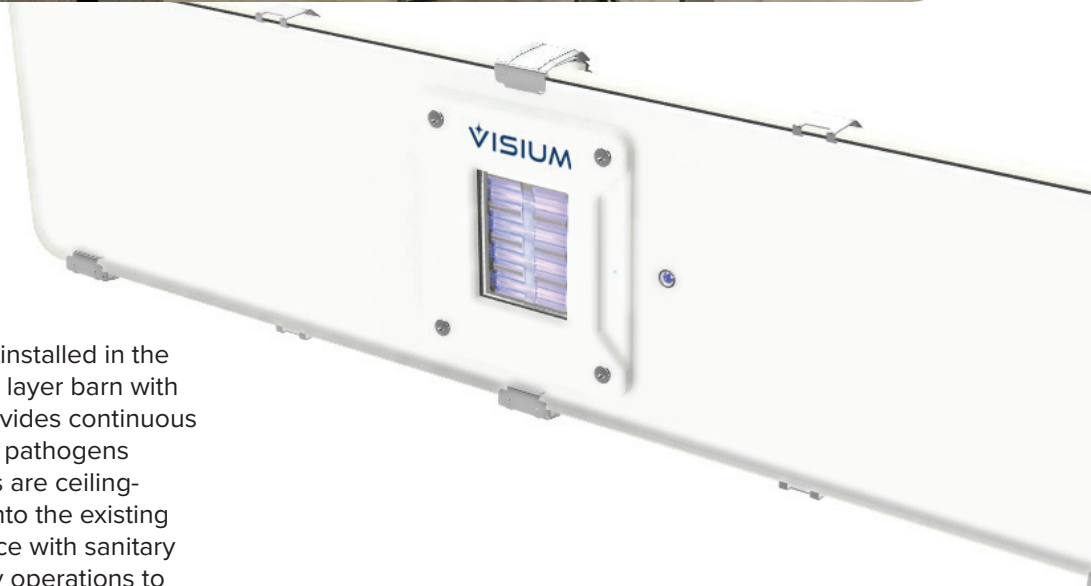
Integrating Far-UVC provides an added layer of defense for the facility's incoming and recirculated air, rapidly inactivating bioaerosols and reducing the risk of air and surface contamination. Continuous operation further lowers overall surface bioburden, creating a cleaner baseline for egg processing and minimizing the microbial load within the facility and on equipment.



## OUR SOLUTION

### Apex Far-UVC Sealed Fixtures

Thirteen Apex sealed fixtures were installed in the egg processing facility adjacent the layer barn with 10,000 active hens. The system provides continuous inactivation of airborne and surface pathogens across a 2,100 sq. ft. space. Fixtures are ceiling-mounted for seamless integration into the existing environment, maintaining compliance with sanitary design standards and allowing daily operations to continue without disruption.



## KEY FEATURES



Rigorous IP65 enclosure for industrial usage



Withstands harsh, corrosive environments



Pressure washer safe for ease of cleaning



Rapid lamp changeout

## Third-Party Testing Results

Independent testing by U.S. MicroSolutions evaluated the microbial impact of Visium Far-UVC within The Egg Basket's processing room. High-touch surfaces were sampled under two conditions:

- ▶ with Visium turned off for 24 hours, and
- ▶ with Visium operating continuously for 19 hours.

Sampling took place after normal cleaning procedures across multiple high-touch areas near the assembly line. After 19 hours of continuous operation, results showed a clear reduction in bacterial bioburden, indicating that a new, lower baseline level had been established even following the facility's standard terminal cleaning process.

### Findings

- ✓ Surfaces in the processing room with Visium on showed an average bacterial reduction of 84% compared to conditions without Visium in use.
- ✓ Consistent reductions were observed across all sampled sites, with the highest reduction of 98% on the right of the Loader Tray.

## Outcome

Visium Apex integrated seamlessly into The Egg Basket's biosecurity plan, providing continuous pathogen inactivation validated through biological sampling.

- ✓ Independent surface samples confirmed bacterial reduction with consistent Visium Apex use
- ✓ Up to 98% reduction in colony-forming units (CFUs), even with ongoing occupancy and use
- ✓ Significant reduction of airborne bacterial load, lowering risk to staff
- ✓ Visium Apex maintained superior cleanliness compared to the no Far-UVC control

## Conclusion

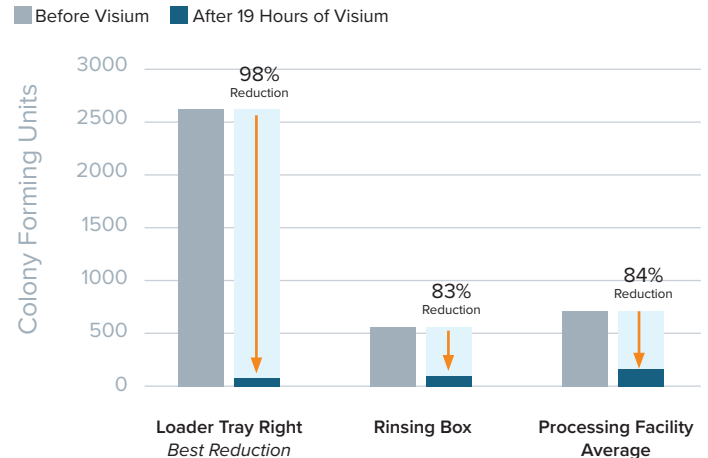
The Egg Basket upholds the highest standards in egg production, driven by continuous improvement and a commitment to animal welfare and healthier food. With Visium Far-UVC, the company strengthened its dedication to cleaner egg processing without disrupting daily operations. Operating within an active poultry environment with a constant flow of staff and products, Visium Apex maintained microbial levels significantly lower than when the system was not in use. The Egg Basket views Visium Apex as a powerful safeguard against microbial contamination that could compromise the health and productivity of both their operation and their customers.



One of thirteen Apex Far-UVC fixtures installed to continuously inactivate pathogens throughout the production area.

## Pioneering Safer Food Production at The Egg Basket

Change in Surface Bacteria Counts With Visium Use



## Contact & Next Steps

Ready to learn how Visium Apex can transform your spaces? Find information about Visium and its applications at [Visium.one](https://visium.one).