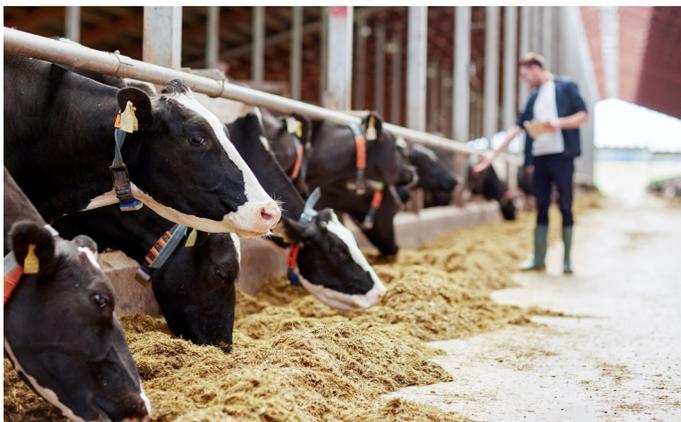


# How a Large Dairy Farm and Processor Uses Innovate™ to Ensure UHT & ESL Products Stay Safe



## Introduction

For over 100 years, a large dairy processor in the southwest US has dedicated itself to making milk and dairy products purer and fresher. Today, this dairy is using the Innovate™ Rapid Microbial Screening System to make good on that promise. The farm raises nearly 20,000 cows and makes milk, cottage cheese, sour cream, ice cream and egg nog. It makes non-dairy products, too: nondairy creamer, bottled water, juices and soy and almond milk creamers.



“Everything the company makes undergoes ultra-high temperature (UHT) pasteurization,” quoted the Quality Assurance Manager. “We purchase raw milk from suppliers, including our own farm, and process it into a variety of beverages.” UHT involves heating products up to 280 °F (137.8 °C) for two seconds, which kills nearly all bacteria and extends the shelf life of the products.

Quality’s job is to make sure products meet specifications and “manage products that are out of specification.” To help with this job, the manufacturer uses two Innovate

Systems, which use proprietary RapiScreen™ reagents to remove background ATP from products, leaving the ability to detect any remaining ATP from microbes (especially bacteria). “We have been using it starting with Celsis, then with Charles River Labs, and now with Hygiena®.”

The two Innovate System instruments run in a series, evaluating microbiological loads on finished products. Any results indicating contamination are confirmed with traditional plating.

The machines work overtime at the site. The facility operates 24 hours a day, seven days a week. “On average, we do 900 assays a day,” stated the Quality Manager. “We alternate days with each machine to spread out the mileage.”

The Quality Manager pointed to Hygiena’s swap out/loaner program as a particular advantage to them.

**“We get preventative maintenance twice a year. And if an instrument goes down, we get sent a loaner. Hygiena® troubleshoots the machine with the diagnostics support group. Hygiena’s program is awesome. It’s way better than having a technician come out. It’s important to have a system like that because you will always need assistance with machines.”**



The manufacturer is particularly interested in looking for coliform-based bacteria. Coliform bacteria generally belong to four genera of the *Enterobacteriaceae* family: *Citrobacter*, *Enterobacter*, *Escherichia* and *Klebsiella*, and are common in many places on a dairy farm. “Innovate allows us to monitor this rapidly.”

“The process of UHT already has a strict system of checks in place, so pasteurization is usually successful. If a problem is going to arise, it’s going to do so after pasteurizing,” the manager said. “Ninety percent of failures

are because something happened after pasteurization, and not because pasteurization failed.”

The Innovate System’s rapidity allows this dairy manufacturer/processor to have a higher throughput of products by testing more samples. “We do test a significant percentage of our production, and Hygiena lets us do that with high throughput,” said the manager. “We have our own laboratory, where we manage the reagents to make sure they don’t get contaminated, which would lead to false positives.”



## Results

While the Quality Manager said they inherited what is now the Innovate System when they joined the company, they did look at other systems. Overall, Quality was most impressed with Hygiena. Customer support and high throughput were the chief attractions of Hygiena and Innovate.

The Innovate System is not the only Hygiena system they have adopted. In its meat-cutting plants in the West, the BAX® System PCR assays for *E. coli* helps detect possible pathogens in custom-meat cut products.

And, just how can a farm raise 20,000 cows in the hot, dry Southwest? “We’ve built enough shade. You just have to get enough water.”