

FIELD REPORTS

The right mix for blended cheese

Ms. Elizabeth Fujas is founder and president of Rising Sun Farms, a 22-year-old Oregon company whose eight flagship products, Cheese Tortas, are layered with flavorful, premium cheeses and fresh organic herbs. Her organic, herb-rich Cheese Tortas are a favorite at high-volume chain retailers such as Whole Foods, Costco, Harry and David, Trader Joe's and Publix.

As demand for Cheese Tortas surged last year, Southern Oregon was in the throes of a labor shortage. Unable to boost production by adding staff in her 20,000-sq.-ft. facility, Fujas decided to increase capacity by switching to a more efficient processing method. She contacted several equipment manufacturers, including Charles Ross & Son Company in New York, which manufactures sanitary mixers.

Fujas worked side-by-side with Ross test and development laboratory engineers to identify the optimal mixer design for her products. During the lab tests at Ross, Fujas stressed the need for a short mixing cycle. "In order to maintain Rising Sun's standards for purity and freshness, we need to minimize handling during processing," she says. "We don't want to beat the product to death, or it will lose its fresh taste and texture."

Working with a highly viscous product presented a significant mixing challenge. A traditional, single-planetary mixer would require a long mixing cycle to soften seven 30-pound blocks of cold cream cheese and blend it with butter and other viscous ingredients. A multi-shaft, high-shear mixer would whip air into the cheese.

After testing a variety of mixers and agitator designs, the Ross team came to a surprising conclusion. A 9-ft.-tall, sanitary, double planetary mixer equipped with helical "HV" blades (a mixer more commonly used to blend ultra-viscous materials such as dental sealants and plastic molding) mixed the Cheese Torta ingredients quickly and met Fujas' exacting specifications.

High-powered mixer boosts production of gourmet Tortas five-fold; cuts processing time in half.



The trailing slope and helical design of the Ross mixer blade works well in this specialty cheese application, creating five times the product in half the time of a conventional mixer. Source: Charles Ross & Son.

"Compared with our old process, the Ross mixer enables us to create five times the volume in half the time with less labor. Before, we needed two people to mix a batch of Torta ingredients. Now, one person can complete the batch in only a few minutes."

The efficiency of this process is attributable to the HV blade design. With a trailing slope and helical geometry, the HV blades mix high-viscosity materials very quickly. The angled blades continuously push ingredients down into the batch, while they also move material from the walls toward the center of the vessel. This motion promotes complete top-to-bottom homogeneity and close control of temperature within the batch.

Once the mixing cycle ends, a Rising Sun employee rolls the 40-gallon vessel to a discharge station, where an automated system discharges the mixed ingredients into packaging equipment. Meanwhile, a clean vessel, fully charged with ingredients, is rolled into place to start the next batch. With multiple mix vessels on hand, cleaning, mixing and discharging can all proceed simultaneously in a virtually continuous process.

"Rising Sun Farms has met the demand from our high-volume retailers," Fujas says. "The Ross mixer has given us room to grow without compromising quality or freshness." ♦

For more information:
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