

# FOOD ENGINEERING

SINCE 1928, THE SOURCE ON PROCESSING, PACKAGING, AND PRODUCT DEVELOPMENT

## New *sous vide* plant

At Food Plants '91, Idle Wild Farm reported creation of a new division tentatively called Quality Cuisine, Inc. (QCI) to produce extended shelf-life foods via *sous vide* and/or clean-room conditions as a contract packer, said Technical Services Director H. Louis Cooperhouse. QCI operates an \$8.5 million, 55,000 sq. ft. plant built at Pomfret Center, CT four years ago by General Foods to produce its now-discontinued *Culinova* line of chilled entrees. More recently it

was used by Kraft General Foods to produce its *Chillery* and *Fresh Creations* lines.

First client: Idle Wild Farm, for 2 million lbs. of *sous vide* meat and poultry products showing 15-30 percent gains in yield and significant quality improvements, said Cooperhouse.

QCI offers equity interest to food companies or financial institutions who share QCI's confidence in the business, and marketing partnerships with firms interested in establishing a proprietary position.

*Idle Wild Farm, Box 137, 153 Searles Rd., Pomfret Center, CT 06259*

## Promise, pitfalls of chilled foods

The "living laboratory" of the past decade provided a learning curve for the development of chilled foods, said H. Louis Cooperhouse, director of technical services at Idle Wild Farm and former vice-president of technical operations at Culinary Brands. (*Editor's note:* Culinary Brands, a *sous vide* packer in Stockton, CA, shut down last spring when Nestlé—a major investor—withdrawed its support in favor of bolstering its Stouffer's frozen-food business.)

Key to the learning curve: understanding the technologies involved. "Every change to product formulation and process has been shown to significantly impact resultant quality, shelf life and safety," Cooperhouse continued.

Of the three basic chilled-foods technologies—modified-atmosphere packaging (MAP), cook/fill/chill and *sous vide*—"in my opinion *sous vide* offers the highest quality, safety and extended shelf life," said Cooperhouse. It is, how-

ever, the most complicated and requires the longest learning curve. He nevertheless predicted that "*sous vide* will be the predominant technology for processing of chilled foods sold at retail in the year 2000."

Other key lessons on the learning curve:

- A chilled-foods project does not follow classical marketing strategy. "You must allow the market to be *technologically* driven," he added.

- Maintain "super-chill" temperatures (30-34°F) throughout the cold chain, from manufacturing plant to consumer refrigerator (*FE* May, July '91.) This boosts product shelf life two to four times.

- Use TTMs (time/temperature monitors), which recognize actual product abuse. "Use-by" codes are meaningless.

- Change merchandising tactics. Retailer insistence on full display cases, and processor concerns about being out of stock, lead to surplus inventory that typically is not rotated and lies in the case for a third of its shelf life. Best store location is the meat or deli department, not end-aisle kiosks.

- Boost the image of freshness. Cooperhouse believes that MAP is negatively perceived by consumers: Products are typically overpackaged, and the perception of "air" in the package does not convey "freshness." Vacuum-packaged products, however, are perceived as "fresh," so "*sous vide* products, packaged in trays with peelable lids, will be much better received."

- Build safety into product and process by applying HACCP principles and microbiological barriers.

### Benefits of *Sous Vide* vs. Conventional Cooking

Improved	Reduced
Taste	Shrink
Texture	Waste
Moisture retention	Labor
Flavor retention	Space
Nutrition levels	Salt
Consistency	Preservatives
Yields	
Flexibility	

Source: H. Louis Cooperhouse, Idle Wild Farm.