



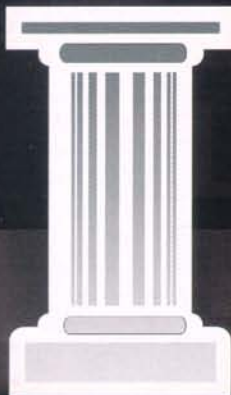
Refrigerated & Frozen Foods

RFF

SERVING FOOD PROCESSORS

- Yarnell's Ice Cream
- Reser's Fine Foods
- Nestlé Frozen Prepared Foods
- Dole Food Co.
- Taylor Packing Co.
- Country Home Bakers

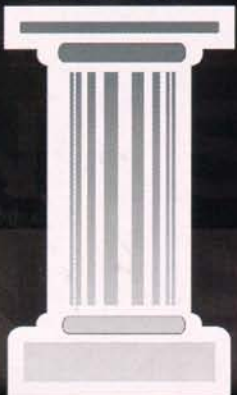
PLANTS OF THE YEAR



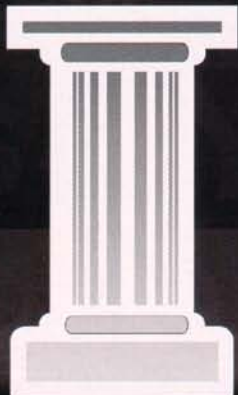
SEARCY, ARK.



HALIFAX COUNTY, N.C.



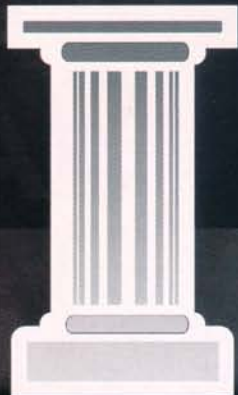
GAFFNEY, S.C.



SPRINGFIELD, OHIO



WYALUSING, PA.



TORRANCE, CALIF.

www.refrigeratedfrozenfood.com

Fresh perspectives

Advanced automation, sanitation and changeover techniques bolster Dole's salad plant in Springfield, Ohio.



When consumers grab a fistful of fresh lettuce, cabbage and other veggies out of a Dole salad bag, they're the first humans to touch the product since it was cut up.

Dole Food Co.'s packaged-salads plant in Springfield, Ohio, keeps the product untouched by human hands from trimming all the way through packaging. It's just one of the ways the Springfield facility maintains its edge in the fast-growing and highly competitive category of fresh-cut vegetables.

The 180,000-sq.-ft. plant, built in 1998 with a 30,000-sq.-ft. addition completed this year, processes eight to 12 truckloads of fresh vegetables a day into 30,000 cases of packaged salads. The plant supplies Dole's retail customers in the Midwest and East. Unlike Dole's two other salad plants, the Ohio facility works year around, processing vegetables shipped from the West.

Keeping the salad untouched is a function of the plant's extremely sophisticated material handling system. Years ago, in other Dole facili-

ties, workers would blend vegetables manually, in a gargantuan version of salad tossing. Today, cross-conveyors, guided by ultrasonic sensors, bring trimmed vegetables together from separate lines, sending them into choppers in exactly the right proportions.

Flexibility is another imperative. The Ohio plant produces a total of 48 SKUs – all of which run every single day. Changing between salad varieties means not only changing the vegetable blend, but switching the packaging film, which must be matched to each formulation. One of the keys to making fresh-cut produce commercially viable is packaging it in film with the right oxygen permeability rate; mixes with different vegetables need films with different rates. Changeovers also involve substituting form/fill/seal machinery tubes and giving the lines a thorough washdown.

Sanitation is another important operational aspect. It's critical for safety, because salads are served cold, and quality, because loss of even one day's shelf life could ruin the product. Sanitation is aided by a triple-wash system that carries the vegetables under a spray of chlorinated water, shakes off excess water with a vibratory conveyor, then repeats the process. Dole uses chlorine gas, which disperses into the wash water more readily than liquid chlorine (and is cheaper to boot). The water's pH is constantly monitored and maintained through the application of a buffering agent.



Coring is the most labor-intensive step.

Another way sanitation is maintained is through establishment of a "clean room" area, midway between trimming and packaging, where the vegetables are dried. This involves collecting the vegetables in perforated baskets that hold up to 300 pounds, and hoisting them into centrifuges that spin out the water. This room has fewer employees than the other areas; those entering must use foot- and hand-dips. A positive air pressure is maintained to prevent cross-contamination.

The plant is thoroughly computerized. The process is regulated through several controllers that are integrated with PCs, interacting with machinery and instruments at about 1,500 input/output points. This distributed control system performs real-time and historical monitoring of temperatures, basket fill times, cycles per drier, refrigeration compressor status, and other vital parameters. This system is integrated with a corporate database, a warehouse management system and a computerized maintenance management system.

AT A GLANCE

DOLE FOOD CO.

Plant location:

Springfield, Ohio

Products:

Packaged salads

Size:

180,000 sq. ft.

Employees:

360 hourly, 40 salaried

Strengths:

Quick changeover, automation, sanitation

Bagging the salad market

An interview with Lenny Pelifian, plant manager, and Ron Midyett, vice president for manufacturing, Dole Fresh Vegetables



Ron Midyett

How do you deal with the changeovers necessitated by your producing so many SKUs every day?

Pelifian: The changeovers are natural stoppages in the workflow, so we manage around that. We've taken strides to reduce the impact of the changeovers. It's very similar to automobile racing, where you can change four tires and fill up your gas tank in 16 seconds.



Lenny Pelifian

What are the greatest operational challenges involved in the bagged-salad segment?

Pelifian: Cost reduction. Maintain your margins by driving costs out.

Midyett: And yet at the same time, quality has to remain the same. Our job in the operation is to make thousands of high-quality cases of product in a safe, efficient manner every day.

Produce processing is traditionally very labor-intensive. What inroads have you made with automation, and what do you foresee automating in the future?

Pelifian: The trimming operation is obviously the most labor-intensive. There's a lot of technology on the market and Dole has always looked at that technology, run extensive tests over the years and really have not found anything that can do the job with the quality that we need. So the trimming operation has remained labor-intensive, and it will until a product is available to match the quality that we can achieve by human labor.

Midyett: It's always a tradeoff between flexibility and automation. Here they have an advantage in that they do not move the operation twice a year as we do on the West Coast. [Dole's plants in Arizona and California alternate operations every six months to match growing seasons, with equipment shuttled between the two facilities.] There, not only does all the equipment have to be flexible for the day-to-day operation, it also has to be very mobile to allow us to move it in 54 hours as we do.

This location is permanent year-around, so we can do some things in terms of automation such as palletization systems. We would never think of doing that on the West Coast, simply because palletization systems are large and bulky and are not made to be moved twice a year.

How has the current economy changed your labor situation?

Pelifian: When we first started the plant, for the first two and a half years, turnover was a major problem for us. It was very difficult getting qualified employees. We have since looked at other means, and now, our turnover is reduced at least four times what it was. The unemployment factor – we haven't seen that have an impact on us one way or another. A lot of people don't like working in a cold environment, so you kind of go through a lot of trial and error before that stabilizes. We have a very stable workforce right now.

What are the means you refer to?

Pelifian: We have employee enhancement initiatives; we try to compete in a non-financial way. We have music in the cafeteria. We have a very open-door policy. It's a smaller plant, so it's like a family – everybody knows everybody. You can go out on the line and talk to people. We continually have employee activities to maintain that [atmosphere]. We have a safety barbecue to kick off the season, we have holiday parties, things like that.

Bagged salads seem to be growing ever more elaborate, with increased variety and additions like protein, dressings and so forth. How does Dole keep up with these trends?

Midyett: We evaluate the market in terms of where we think it's going, yet we also understand what we're good at. We're good at sourcing and growing high-quality leafy vegetable material, and we're good at manufacturing bagged salads. What we try to do in new products is marry those two in terms of what is the trend in the marketplace and yet, what we are really good at. We're not necessarily going to choose a trend if we're not going to be able to excel in terms of executing against that trend. So maybe call it limited and focused growth.