

Faribault Foods Satisfies Discriminating Tastes with Optical Inspection Systems



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-- Jim Kern, plant manager

When the average consumer is contemplating about what style of canned green beans to buy, it usually comes down to two simple choices: French or whole bean cuts. But Faribault Foods' private label customers have much more discriminating tastes.

Faribault Foods has been in the canned vegetable business since the company was founded in 1895 and private label is an important part of its vegetable business. The company has earned a reputation for reliable

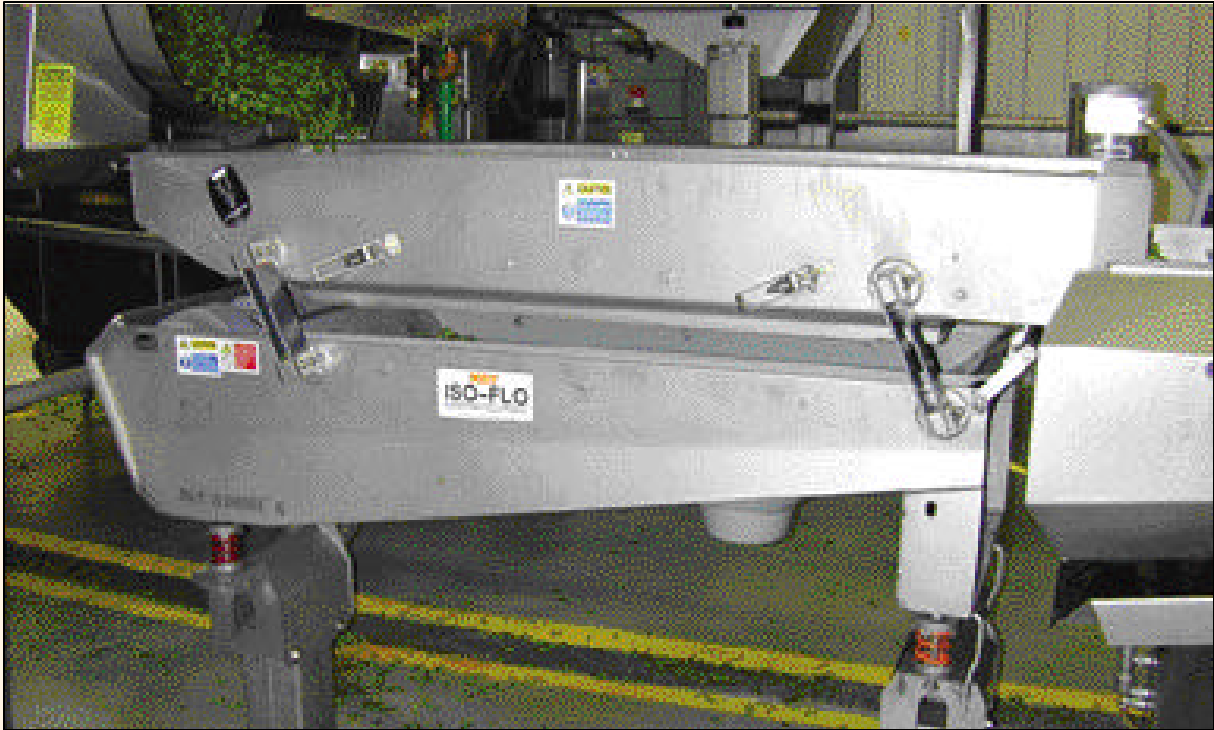
product quality and service and for their commitment to being in stock with all items, all year. Private label brands include Butter Kernel, Pride, and Mrs. Grimes.

No matter how you slice it, green beans mean business for the company's Mondovi, Wisconsin, plant. The facility processes nothing but green beans in season during an intense three-month period to supply all of Faribault Foods' distribution centers throughout the United States. During a typical season, the plant processes 30,000,000 pounds of green beans.

But mass quantity doesn't mean minimized quality for Faribault's customers. In fact, the company's multi-step inspection process, using [Key Technology's Tegra®](#) and [Optyx®](#) Optical Sorting Systems, sets it apart from some of its mega-competitors that may offer only French or cut beans.

"We have a meticulous inspection process," says Jim Kern, plant manager. "We grade by size because of customer demand. One wants a cut bean with a larger diameter and another wants a smaller size. Faribault makes a distinction in size and I think this makes us stand out from the rest."

Faribault Foods takes the usual cleaning steps when truckloads of green beans arrive at the plant. Before the raw product hits Key's optical sorters, the beans have been through dirt reels, air cleaners, washers, destoners, and cluster cutters. Then the Tegra is put to work.



“We put the beans through a two-pass inspection process using the Tegra so none of our inspection equipment downstream is overloaded,” Kern says. “We get the foreign objects out with the first pass and the second pass is more for EVM that’s green, like knuckles and ends that haven’t been cut off.”

Tegra® Color Sorters provide the industry standard in precision in-air sorting for shape/color defects and removal of stems, stalks, and other EVM. Fast and accurate, Tegra sorts nearly 10,000 pounds more product per hour than conventional sorters, at rates up to a million objects a minute. Tegra is available with trichromatic, Vis/IR multispectral, or monochromatic cameras — in full-view/4-camera models, as well as in topview/2-camera configurations.

After grading for size, larger beans are inspected on a smaller, two-camera Tegra as whole beans where about one third is selected for French style. The balance goes through cutters, then to another

Tegra for size grading and onto Optyx for grading by diameter.

The compact Optyx features the same camera, lighting, imaging, shape detection, and ejection technologies found in the Tegra® – proportionately sized for lesser volumes in a self-contained one-meter (42-inch) cabinet. In the case of Faribault Foods, while the Tegra units are used downstream where the volume of whole beans is as high as 12 tons per hour, the Optyx units inspect 4 tons an hour each.

“Optyx fit the flow of our plant and our capacity,” notes Kern. “We didn’t really need a Tegra unit at this point in the process. The goal of putting in the Optyx wasn’t to increase capacity, it was to increase our product quality.”

Each Optyx is dedicated to sort a specific diameter size – one for small and one for larger sized beans. According to Kern, production efficiencies are enhanced since there is no need to change programs to target different sizes. “We try to let each machine do a specific thing

instead of asking it to do everything. We have better luck doing it that way.”

More importantly, the Optyx units have eliminated the need to manually inspect the cut beans after the Tegra for diameter specifications, reducing labor costs. In fact, Kern reports that between the manual inspection replaced by the Tegra and Optyx systems, Faribault has cut its seasonal staff from 145 to 105. All of these savings add up to an expected three-year payback for the two new Optyx units.

After one season, Optyx has improved product quality and performed up to Kern’s expectations. “All of the data we’ve taken so far is that the Optyx is doing a better job than manual inspection. It is an excellent unit that would easily replace any manual inspection system you have in place. You don’t have to have manual inspection after that. It will handle it.”