

Technical Article Series

Green Giant meets strict BOD regulations and lowers labor costs with vibratory screen separators

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Green Giant Meets Strict BOD Regulations and Lowers Labor Costs with Vibratory Screen Separators

"By using Kason's to screen our waste the proportion of solids to volume of water is quite low," says Don Borrowman, chief engineer of Green Giant of Canada's Harrow, Ont., cannery, "and this factor permits us to use our spray-irrigation system without plugging nozzles."

Eliminating cannery wastes was a real problem for what is now the Green Giant Cannery at Harrow, Ontario, Canada. Effluent from a rotary screen had been pumped to a seepage or filter bed that was susceptible to clogging and subsequent pollution problems. Solids were sold to local farmers for fertilizer. An attendant was required to shovel out clogged solids from the rotary screen. When the Ontario Water Resources Commission established BOD (biochemical oxygen demand) guidelines for waste effluent, the requirement could not be met with the plant's existing method of disposing of cannery waste.

THE KASON SOLUTION. . .

Three Kason Vibratory Screen Separators were installed in a building that formerly housed the rotary screen.

All were single deck 48" diameter units with 34-mesh screens with anti-blinding auxiliary installed. The solids discharged into a screw conveyor where the material was transported to an inclined bottom bin outside the building to await truck transportation.

To handle the clarified effluent from the Harrow plant, Green Giant installed irrigation sprays on a 200-acre company-owned farm half a mile away. The seepage bed was abandoned in favor of pumping the screened effluent to the irrigation sprays. No screen changes were necessary since the proportion of solids to water was low enough in the screened effluent so the spray nozzles would not plug.

To cope with probable soil erosion on the farm, Green Giant planted a special grass known as reed canary grass. "You can't kill it with water," says Don Borrowman. "This grass has an extensive root system that spreads easily and quickly, and its large leaves give off water into the air."

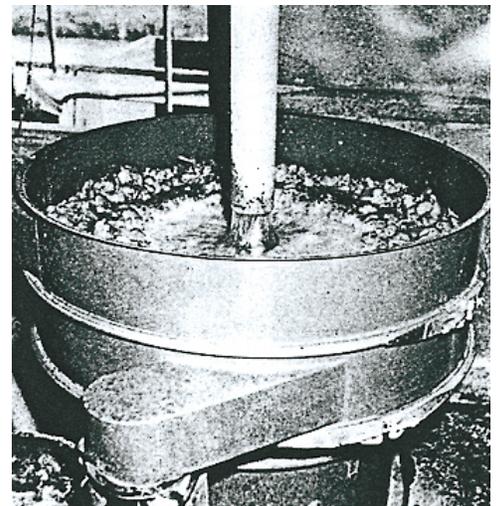
No.1 PACK IS TOMATOES

The Harrow plant today produces soups and pork and beans for consumption in Ontario and Western Canada. Their number one volume production is tomato juice, followed by tomato soup, then pork and beans, then a collection of various soups: tomato-rice, corn, asparagus, mushroom and vegetable.

Today, an attendant visits the waste removal building every morning to start the system which is self-regulating. He does not return until evening to shut down the system.

TYPICAL CANNING INDUSTRY APPLICATIONS

- Dewatering of fruits and vegetables.
- Dewatering potato slices before frying.
- Recovery of berries from wash water.
- Grading frozen peas, snap-beans (whole and cut) and french fries to length.



Classifying instant potato granules. Classification of sliced pickles to remove 'end cuts' and seeds. Removal of chips from diced products.

Pre-clarifying clear juices (e.g. apple) to minimize filter aid consumption.

Clarifying frying oil.

Separating pulp, seeds and rag (peel membrane) from orange and lemon juice.

Sifting dehydrated vegetables.