

CASE STUDIES

Gwillimdale Farms: A Vegetable Grower, Packer, Shipper – Committed to Water Conservation

Tracking water use more effectively has allowed Gwillimdale Farms Ltd. – a Bradford area vegetable farm – to increase production while reducing their water use and environmental impact.

Gwillimdale Farms has been in the Hambly family since 1907. Along with grain crops and beef cattle, fourth-generation owners John and Cristina Hambly grow 1,000 acres of carrots, potatoes, onions, beets, parsnips, cabbage and kale for the fresh produce market. They also operate their own cold storage and packing facility.

A big part of the storage and packing process involves washing the root vegetables to remove residual soil from the field before sorting and packaging them for retail sale. This process can use a substantial amount of water. Gwillimdale Farms has already invested in state-of-the-art processing equipment that incorporates a number of water recycling components. Clean water used for the final wash step along with all the other wash water is collected underneath and reused to wash the dirty vegetables in the front portion of the washer. This equipment already shoots the operation to the forefront as far as water efficiency is concerned. Through the

Water Smart Water Assessment Program with Farm & Food Care Ontario (funded by OMAFRA), John and Cristina installed in-line flow meters on each vegetable wash line. These rotameters are essentially a sight gauge that allows the machine operator to see what the flow rate is to each machine. This simple tool is very important as much more water can easily be used to thoroughly clean the vegetables simply by opening the water supply valve too far. The meters accurately display the rate of flow to each line – which means operators can easily adjust the flow rate to the required amount. This easy management tool alone helped reduce the vegetable washer water use by over 65 per cent.



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“Once our staff agree on the required flow rate it’s easy to adjust to that flow and then simply observe the flow rate on the rotameter when you walk past it. Without being able to observe the flow, we were consistently using more water than we thought we needed to use. How much water is flowing into any machine is usually just guess work, but the rotameter takes the guess work out of water flow rates to any machine” says John.

One of the other major adjustments made at the wash line involved installing a “de-dirter,” or a piece of equipment that uses rubberized finger brushes to remove as much surface dirt before the washing process begins. The logic is simple – get the dirt off before you put the vegetables in the pre-wash soak tank. In turn, cleaner vegetables will require a less-intense bath, and consequently, a lower volume of water will be used to achieve the same end goal. And, this in turn will reduce the amount of wash water requiring treatment.

“Being able to map our water use allowed us to enhance our business by 50% over the last two years without increasing the volume of the water we use.” says John.



Photos: Farm & Food Care

John and Quinton Wood, Plant Manager, have keenly adopted a water savings philosophy as less water used means less demand on the well, less wash water requiring treatment, and savings in electricity to pump water. Buoyed by success over the last two years, the team has other ideas in mind to further reduce water use by reducing the pre-wash soak tank’s automatic emptying cycle times.

The commitment of the management and staff at Gwillimdale to reduce water use is consistent with their other commitments to good soil management, all of which are driven by their passion in sustainable farming.

Farm & Food Care Ontario’s Water Smart program is designed to help growers better understand how and where they use water. By having better information, growers are often able to reduce their water use, cut costs and generally find lower cost treatment systems. For more information visit www.FarmFoodCareON.org



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