FEW years ago, dairy farmer Albert Waardenburg was perplexed about what to do with a large pile of hay standing on a "low spot" on some rented land. When he called John Paul of Transform Composting Systems for help, Paul advised him to compost it himself. A favorable experience with that material and his son's decision not to go into the family dairy business, led Waardenburg to sell his 150 cows and start A&R Composting in Abbotsford, British Columbia. The farm buildings are used for curing, bagging, storage space, loading and unloading, and offices. He brought Paul on board as one of two other co-owners.

A&R composes a mix of grocery food residuals and chicken manure delivered by several generators who pay a tipping fee. Processing takes place in a facility constructed to house a smaller version of the composting system that Paul established for an Abbotsford Holstein breeder and dairy farmer (see "Composting Cattle And Dairy Manure In Agitated Bays," March, 2000). It includes concrete walls, a fabric roof, horizontal loading access doors, and a ventilated floor with a controlled air supply. "It's totally sealed off so that anything leaching out is automatically drained into a holding tank," notes Mark Stratford, general manager. Feedstock is loaded at regular intervals in the first portion of the bays and moved further down every two or three days by a large turner. "The turner runs along the top of the wall, then comes to the end of the channel," Stratford explains. "It then is moved across by a transfer carriage to the next channel." There are four channels in total.

In addition to packaging its own compost, the company does contract bagging for a producer of fish meal and an animal bedding manufacturer.

Dairy farmer brings in partners to shift into a composting operation that includes a bagging system for their product.

Dave Block

The materials have sufficient moisture to make watering unnecessary. The sealed building operates under negative pressure and includes a biofilter. After eight weeks, the compost is taken to the converted barn for two weeks of curing on an aerated floor. The product is run through a Starscreen to remove plastics and large particles of compost and placed in a large holding bin where a conveyor takes it to the bagger.

BAGGING SYSTEM

Even though bagging equipment added to capital expenses, it was important for viable marketing on the retail level. "We got the bagging system right from the start," says Waardenburg. "It's done well for the year that we've been in operation. When someone walks into a nursery, they want a bag that they can put in the trunk of their car and take home. If you can't offer that, you're behind the eight ball. We also recognized that others in the valley would like to get bagging.
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The four-channel composting system includes concrete walls, a fabric roof, horizontal loading access doors and a ventilated floor with controlled air supply.

done for small batches."

Waardenburg's farming background has helped in the long process of learning to set up an ideal bagging system and operate it effectively. "We've never done anything like this before," he says, "but I can change with the times. I've always done my own thing on the dairy farm, so I'm familiar with equipment, electronics, hydraulics and using air. It's a matter of applying expertise from that field to this one." Hiring his brother-in-law, a fabricator and welder, was a tremendous help.

The Creative Packaging bagging line includes a hopper scale that allows the weight of the bag to be preset. Although the system can be automated, it is run with an operator putting the bags on the line separately, says Stratford. After reaching a predetermined weight, the bag drops onto a conveyor and runs through the sealer. It then gets turned and put through a bag flattener, and onto the end conveyor. The bags are manually taken off the end of the machine and placed on a pallet. The system can put out eight of the smallest bags in one minute.

Waardenburg estimates that the company has filled 8,000 bags of its own product. An affiliated company markets the bags into retail stores. Homeowners are the main users of the product, incorporating it into soil for gardens and houseplants, and to suppress garden weeds. Landscapers and garden centers also are customers. The price is $3.95/20-liter bag or three bags for $10. Although bags comprise the majority of sales, bulk compost is a significant part of the business. Trucks pick up anywhere from two to 30 cubic yards (cy) at a time at $20/cy. Compost has been shipped as far away as Smithers, British Columbia, which Waardenburg estimates is at least a 12-hour drive north. Some bulk deliveries are made in a truck with a five-cy bin.

Contracted bagging clients include a producer of fish meal and a manufacturer of animal bedding. Their products are bagged, stored and loaded for delivery. "We're negotiating with a number of other people interested in having bagging done," says Waardenburg. "We can take big trucks coming in and out of here on the paved driveway. We're out of the way, so there's not a great deal of traffic."

Waardenburg has advice for others interesting in entering the bagging market: "Get as much information when you're starting as possible. It pays to shop around when it comes to bearings, fittings, pulleys and things like that. We basically just bought the bagging system without any conveyors or elevators. We have used existing equipment and built much of it ourselves, which reduced costs quite a bit. Being on the farm, there is a lot of related equipment around."