



MEDIA RELEASE

Thermal Blanket Helps Lower Greenhouse Energy Costs



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Farmers are looking at many different solutions for dealing with rising energy costs. For one greenhouse grower, the answer lies with a new technology, a thermal blanket installation, which is expected to lower his energy costs by about one-third.

Gerard Schouwenaar of Orchard Park Growers, a St. Catharines-area flower producer, retrofitted a 30,000 sq ft greenhouse in the fall of 2009 with the technology—also called a thermal curtain—as a way of combating rising energy costs and he's very satisfied with the results.

“We're anticipating annual savings in our heating and energy costs of about 30 per cent due to the installation of this curtain,” he says. “It's not been quite a year yet, but we're definitely on track to meet that target.”

Greenhouses are high users of energy since they need to keep interior temperatures warm in the winter and cool in the summer. This can be a costly undertaking in a region like southern Ontario, where temperatures can easily fluctuate from below -20C in the winter to over 30C in the summer. In addition to reducing energy costs, this project will also save energy, which is a key priority under Ontario's Green Energy Act, passed in 2009. Additional fringe benefits will include improved productivity and reduced emissions.

The thermal curtain is a fabric cloth with aluminum foil woven through it that reflects the sun. In a greenhouse, it can be installed truss to truss or gutter to gutter. It is kept closed at night to retain the heat inside the greenhouse and keep the cold out in winter; in the summer months it is kept closed during the day to provide shading and keep the interior temperature of the greenhouse cooler to improve crop growth.

Schouwenaar's system is tied to two different climate zones in the greenhouse, but controlled centrally through a single point. The curtain is connected to the computer that controls the environment inside the greenhouses. This computer considers variables such as the type of plants being grown, time, temperature and the amount of light that comes in, and automatically determines when the curtain needs to be opened and closed for optimum results.

Schouwenaar installed the technology into a greenhouse that he had originally built about four years ago to grow crops that needed cooler temperatures. Now he grows primarily potted gerberas and works on plant propagation in this zone, both of which need higher temperatures in the winter to flourish.

Looking for a way to keep his energy costs under control, he turned to the Greenbelt Green Energy Program for Agriculture (GGEPA) program and the Canada-Ontario Farm Stewardship Program (COFSP) to help fund his environmentally friendly retrofit.

GGEPA, a program funded by the Friends of the Greenbelt Foundation and administered by the Ontario Soil and Crop Improvement Association, provides cost-share funding for farmers to implement best management practices that involve energy conservation and green energy generation. Funding is available to farmers who have projects that have been approved as part of the Environmental Farm Plan (EFP) and COFSP.

Both EFP and COFSP are funded through Growing Forward, supported by Agriculture and Agri-Food Canada and the Ontario Ministry of Agriculture, Food and Rural Affairs under the Best Practices suite. The programs are administered by the Ontario Federation of Agriculture acting on behalf of the Ontario Farm Environmental Coalition. OSCIA delivers the programs to producers.

In order to qualify for GGEPA funding, eligible farm businesses within the Greenbelt must have a peer-reviewed Third Edition EFP, be approved for COFSP cost-share dollars in the 2010 cropping year and have selected at least one best management practice (BMP) from the GGEPA list.

There are four specific BMP categories from COFSP that are eligible for cost-share funding under GGEPA: renewable energy production for agricultural purposes (BMP category 27); energy conservation measures for agricultural purposes (BMP category 26); farm energy audits (BMP category 25); and livestock nutrition planning to reduce greenhouse gases (BMP category 22).

Schouwenaar's thermal blanket installation fits into the BMP category 26, energy conservation measures for agricultural purposes. Agricultural producers in the Niagara Region and elsewhere in the Greenbelt have responded well to the enhanced cost-share opportunities presented through GGEPA. The entire budget has been allocated to about 50 on-farm projects.

With this project complete, his entire facility—Orchard Park Growers owns three acres of greenhouses at their main site and rents another acre nearby—is now set up with thermal blankets. Most new greenhouses now being constructed have these kinds of energy-saving curtains already built in.

“It does cost more to install this kind of technology when you're building a greenhouse; it could be up to 10 per cent of the construction costs on an average greenhouse,” he says. “The payback can be as fast as three years or as long as five but with energy costs what they are, it makes sense to do this.”

Any curtain system will work well and provide benefits, but Schouwenaar stresses that regular maintenance is key for optimum performance and return. It is important to stay on top of tears and gaps and fix them quickly when they happen.

“A well-maintained system will definitely pay for itself where energy costs are concerned,” he says. Orchard Park is a family-run business started by Schouwenaar's father as a fruit operation in 1969. They added greenhouse production in 1990, although at that time the focus was on vegetables. Eventually they switched to propagation and now exclusively grow flowers, including flowering potted plants with a special focus on gerbera, hanging baskets, and flowering vines. Their plants are sold to wholesalers, garden centres and markets in Ontario and the United States.