

MASTRONARDI

Innovating in all that they do

HEAD OFFICE: Kingsville, ON

TYPE OF OPERATION: Grower, Marketer

NO. OF EMPLOYEES: 1,000+

ESTABLISHED: 1954

WEB: sunsetgrown.com

HIGHLIGHTS

- Well established customer facing program:
The Green Grass Project
- Eliminated pesticides and fungicides
- Reduced water consumption

CONTEXT / BACKGROUND

Mastronardi Produce is a pioneer and industry leader in the gourmet greenhouse industry that grows & markets nationally recognized brands such as the Campari® Tomato, Splendido™ Grape Tomatoes, Kumato™, and Zima™ Tomatoes™ under its SUNSET® label. Family owned & employee managed for more than 50 years, Mastronardi prides itself in producing consistently flavorful gourmet tomatoes, peppers and cucumbers.

APPROACH TO SUSTAINABILITY

In the 1990's, Paul Mastronardi, President, began to communicate a vision of a greener, more sustainable company. There started a long and evolutionary approach to sustainability that has seen Mastronardi become one of the most innovative, and forward thinking produce companies in North America.

To capture and demonstrate this leadership and commitment to the environment, Mastronardi created and launched The Green Grass Project™ in 2009; highlighting the progress it was making in greening their key processes: Growing, Packaging and Distribution.

ENVIRONMENTAL RESPONSIBILITY

Greening the Growing Process

- Mastronardi grows its hydroponic produce using either rockwool or coco peat, beginning a journey that has eliminated inputs such as soils and chemicals, and ends with fresh produce and new bricks!
 - The use of coco peat, made from the husk of a coconut, is a waste by-product of the coconut industry (that would otherwise be landfilled) repurposed as a growing medium that in turn is used to make new coco peat or composted;
 - Rockwool, made from Basalt (volcanic rock harvested according to strict environmental regulations and in non-protected areas) is turned into a stone wool substrate. Stone wool minimizes the amount of input materials required which in turn decreases growing costs and increases crop yields and quality. One cubic metre of basalt can produce fifty cubic metres of stone wool bricks, sufficient to cultivate 350,000 kg of tomatoes or one million cucumbers;
 - After its use, Mastronardi commits its supplier (Grodan) to recycle the stone wool inputs to produce new products such as new bricks, potting compost, soil improvers, or plastic products. As a result, Grodan has been awarded a number of international environmental certificates and awards;
- Using an environmentally-controlled atmosphere has enabled Mastronardi to eliminate pesticides and fungicides by introducing an Integrated Pest Management system that uses 'good bugs' (i.e. lady bugs and bees), to pollinate and control the 'bad bugs';
- Minimizing fertilizer and water inputs by capturing the leachate from the application of fertilizers in holding tanks, sterilizing it and reusing it; creating a closed loop system that saves money and reduces the use of resources;



PACKAGING

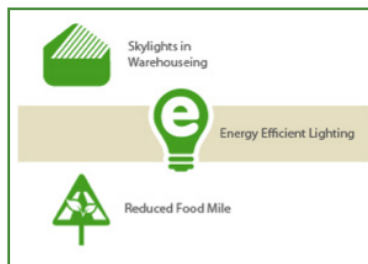
- Mastronardi has invested heavily in their greenhouses and packaging, both of which contribute significantly towards their sustainability goals, including:



- Installation of top and sidewall energy curtains, which has decreased the rate of heat loss and increased leaf temperature by providing a warm overhead surface. The company estimates this has saved 25% of natural gas consumption;
- Treatment and recycling of wastewater has resulted in a 50% reduction in water consumption over traditional farming practices;
- Using a powder coated greenhouse white frame to maximize reflective surfaces and minimize heat absorption;
- Using more than 11,250,000 recycled pop bottles per year in its clam shell packaging;
- One of the first companies to utilize bleach free post consumer recycled paper in its boxes, paper trays and slip sheets, the company estimates that it is saving 10,200 trees per year from being cut;

ENERGY EFFICIENCY & CARBON

- In 2011, Mastronardi's growing process used more than 22,500 tonnes of Carbon Dioxide than it produced;
- Constructing a new trigeneration (or cogeneration?) greenhouse that uses the waste heat from generating its own electricity to both heat and cool the greenhouse; lowering operating costs and emissions (compared to a conventional greenhouse) and permit the company to grow tomatoes year round, even in colder climates;
- In 2012 its Sombra, Ontario greenhouse used the waste heat from a neighbouring facility to produce more than 1.8 million pounds of their Eco-Peppers
- Some of their growers have begun using biodigesters and biomass boilers to reduce waste and generate energy;
- The company has also employed other technologies, such as installing skylights, procuring energy efficient lighting, installing motion sensor lighting, faucets and fixtures, and a planned solar array on the new Coldwater, MI facility;

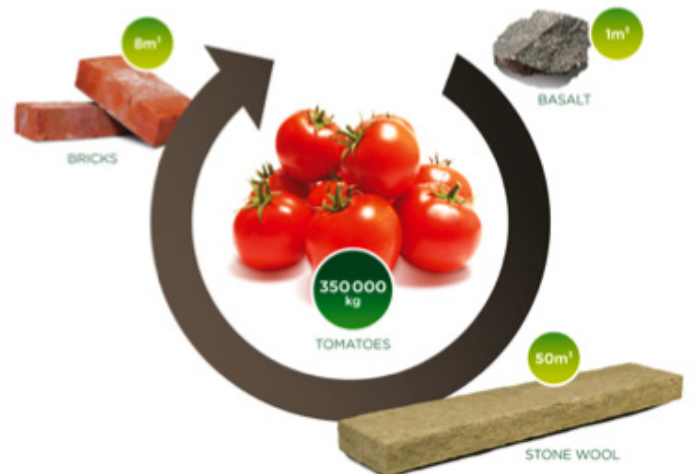


OTHER INITIATIVES

- The company green team has accomplished a number of initiatives including:
 - 50% post consumer recycled paper;
 - Eco-logo and green seal certified hand soaps and cleaners;
 - Green Grass Project promoted on all shipping cases;
 - 'Meat-free' Friday's to draw awareness to the environmental impacts associated with producing meat;
 - Bike rack stations at 2 facilities to encourage staff to bike rather than drive;
- Created a new Director of Social Compliance position to manage and companies growing environmental and social programs.

SUMMARY

Mastronardi has become the largest producer of vegetables under glass anywhere in North America in large part because of their entrepreneurial, innovative, and forward thinking philosophy has led to many industry-first initiatives. The Green Grass Project, highly efficient greenhouses and carbon neutral peppers are just some of the examples that demonstrate the type of leadership required to demonstrate that environmental and social responsibility do not have to be mutually exclusive from a company's economic objectives.



¹ A biodigester is an anaerobic (oxygen-free) tank that digests organic material and avoids the need to send organic 'garbage' to the landfill. The process decomposes the waste and utilizes the methane gas produced as a 'renewable' energy source.

² Biomass Boiler is a heating system that uses agricultural, forest, urban and industrial residues and wastes to produce heat and electricity. Mastronardi uses wood chips, miscanthus, switchgrass, willow, polar, hemp, and sorghum. Although these systems burn carbon, their impact on the environment is less than burning fossil fuels.