

Good Morning Sisters and Distinguished Guests.

My name is George Brown, and I am the President of MASS Environmental Services Inc. It is an honour to be here with you today.

To the Sisters of Villa Angela, the team who has put this together, and Lorne Little - who has spearheaded so much of this project – I want to start off by telling each of you how proud I am to be a part of this future-forward initiative.

Villa Angela is a special place, and it is the people like each of you, who make it that way.

When I first visited Villa Angela, I was blown away by how the team here takes ownership over their own impact in everything they do. This sense of empowerment is crucial to success in all that we do, and ties in well with the MASS motto of – Change Begins with Just One Step.

Like the team at Villa Angela, the team at MASS believes that we can all make a difference by doing the right thing. By taking that first step – no matter how small – we can have an impact larger than ourselves.

I am delighted to be here today to celebrate the launch of the Rocket In-Vessel Composting System.

The Rocket is a leading-edge piece of composting equipment that allows locations like Villa Angela to take ownership over their food-waste and create compost right on-site.

I am privileged to be a part of this project, and am truly in awe, watching the way this team has come together to support this initiative.

The Rocket will allow Villa Angela to reduce their environmental footprint by eliminating the methane gas, created by food-waste from their location being sent to landfill. This is monumental, considering where we are today as a country when it comes to battling the growing issue of food-waste throughout Canada.

It is important to understand the definition of food loss and food waste:

Food Loss refers to food that is intended for human consumption, but through poor functioning of food production and supply system is reduced in quantity or quality.

For example: food that rots in the field or in storage.

Food waste refers to food consumption that is discarded due to intentional behaviours. This includes food that has spoiled, expired, or has been left uneaten after preparation

Food waste in landfills is a significant source of methane gas, Methane Gas is a greenhouse gas which is 25 times stronger than carbon dioxide.

Food Loss and Waste is an increasingly important issue in Canada, Mexico and the United States, where close to 168 million tonnes of food produced for human consumption are lost or wasted.

This happens across the food supply chain, including in preharvest and consumer sectors each year.

In Canada, food-waste is a major issue of current concern, with 13 million tonnes of food waste being sent to landfill each year.

This is 110 kilograms per person on an annual basis.

This breaks down to \$31 billion dollars worth of food wasted, or 868 dollars per person each year.

In Ontario specifically, the Ministry of the Environment and Climate Change tells us that 2.2 million tonnes of food waste go to landfill each year.

- Given population growth and economic trends, it is forecasted that Ontario will need 16 new or expanded landfills by 2050 if no progress is made to keep materials out of landfill
- Keeping food and organic waste out of landfills can help us fight climate change by reducing greenhouse emissions if we recovered double the province's recovery of food waste would lead to a reduction of an additional 1.1 megatonnes in greenhouse emissions equivalent to removing approximately 260 THOUSAND cars from Ontario each year

The bottom line is that turning organic food waste and into compost creates economic and environmental benefits, which can improve soil health, help reduce erosion and improve water quality.

And this is where the Rocket comes in. It is my pleasure to share with you this morning the history of the Rocket

The Rocket was born at the request of Englishman John Webb.

John was a keen gardener, he had a small holding, a few animals, and a big garden. John knew a lot about composting, but was only familiar with the traditional method, and was looking for a way to speed up the process without turning the pile every hour after hour.

With this in mind, John sat and looked at all the elements of what helps composting micro-organisms – or as he called them – composting bugs- do their work the best.

This is when he came up with the legendary “back of a cigarette packet” drawing of an “automated” system that encompassed a method of turning and aerating the mass, insulating heat, ensuring liquid drain off.

The rudimentary drawing was passed to his son, Simon. Simon was an engineer, and the pair of them came up with the first version of the “Rocket Composter”. John used the unit for domestic purposes at first and it did what he referred to as a “cracking job.”

In fact, it did so good a job, that John and Simon decided that this should be patented and perhaps a business made to sell them. So, they did just that. That was the late 1990’s.

In February 2001, in the United Kingdom there was an outbreak of disease in cattle and livestock that was ultimately traced back to food wastes being fed to pigs. The outbreak cost the country terribly. Whole farms and businesses were ruined.

In response, a new set of laws, called the Animal By Product Regulations were laid down in Europe. In these laws, it said that food wastes could be used not to feed farm animals, but “otherwise” if certain “criteria” could be met. Otherwise included composting.

John and Simon saw that there was an opportunity to develop the Rocket to compost food wastes. The pair sat on a panel with the government, took heed of the requirements, developed the machine and the first versions of the Rocket for dealing with food wastes were released. This was still well before 2005.

Then, in 2006, John and Simon set up their own composting site with their own food waste collections, and for the period of a year collected food wastes 3 Times A Week from local hotels and restaurants and composted the food wastes using their own products the Rockets.

The biggest clients at the very start were actually domestic food waste collection programs in East London.

Tidy Planet also had a financial mechanism for the “business case” of composting in the UK that was growing. Previously the composting systems were sold as “nice to haves” for the green agenda. But year on year, taxes were growing on waste.

Because of increased taxes, the composters became more popular over the next 10 years even more so. The company grew, as did the knowledge base surrounding compost.

Now, over 20 years since the first composter was created, the units are sold worldwide and together with their clients, Tidy Planet, and MASS have learned an awful lot about composting.

Today, there a Rocket Composting projects worldwide, located in the Netherlands, Hong Kong, Chile, Portugal, the Maldives, Georgia, Africa, Iraq, the United States, Canada and more.

Tidy Planet has grown, and the variety of Rocket System set-ups has become endless.

The one thing we've learned over the years is that the most important factor to success with the Rocket Composting system is an operator who is interested, and willing to learn. The machine is 1/3 of the success. The rest of the success relies on the operator and what they are willing to put in!

So, how did the Rocket land in Canada?

At MASS, we have had our finger on the pulse of organics processing for years. In 2008 a number of senior care clients came to us concerned about the high cost of landfill in the Ottawa and what could be done about it.

We began the research process and found technology in New Zealand that claimed it could compost incontinent products and we started trials. This technology was referred to as the Hot Rot. It worked well, but after the business case was completed, unfortunately it was still cheaper to landfill incontinent products.

Then, in February 2009 MASS Completed a waste audit at Lakefield College School. The results were disappointing to the Headmaster as LCS was sending over 40 metric tonnes of food waste to landfill each year.

Around this same time, Simon Webb from Tidy Planet was coming to Toronto. We set up a meeting to learn about the system, and within the next few months MASS would become the exclusive distributor in Canada for the Rocket.

So, going back to my story about the Headmaster at LCS. I told him about the Rocket. I remember clearly him saying get some references out of the UK.

I contacted Tidy Planet who gave references, one of them turning out to be for the Royal Gardens. I remember vividly walking into the meeting with headmaster, handing him the references, him looking at the at references and he started laughing.

It turned out that a roommate from his days as a student himself at Lakefield College was Prince Andrew. As many people know, his brother, Prince Charles is an environmentalist and strong advocate for composting. So, the Headmaster called Prince Andrew who talked to Prince Charles, who recommended the technology.

So, the headmaster asked me to come into to see him. He said to me: "We are going to order a Rocket but there is one condition. You are going to run it for the next two years."

This could be referred to as divine intervention.

And that is how MASS got started in the composting business.

Today, my team is proud of the Rocket Installations we have throughout Canada, and we are particularly excited about this project here at Villa Angela. I want to take a few minutes now to share with you a little bit of the technical side of this equipment.

The Rocket is a fully automatic In-Vessel Composting system that has been designed to turn organic wastes including food and garden wastes in compost in a simple and efficient manner.

The Rocket does not make the waste turn into compost. That job is left to the naturally occurring composting micro-organisms that live in and on everything we put into the Rocket. The harmless organisms are everywhere in our environment and only once they find a suitable environment to live and breed do they start to do their job of turning organic wastes into compost. The Rocket composter simply provides the perfect environment for the organisms to do their job. Once we feed them with food and garden wastes, they have everything they need to turn your waste into compost in around 14 days.

The Rocket is a continuous flow type composting system, and this means that it can be fed every day with fresh materials. The insides of the Rocket are gently heated to make sure that the environment is warm enough for the organics to thrive and to destroy any dangerous pathogens that may be in the wastes that have been put into the Rocket.

The composting organisms work best when the temperature is around 55 to 66 degrees Celsius, and the waste materials are moist, but not wet. The Rocket Composter has been designed to mix the materials inside the cylinder automatically every few hours, and it is this mixing process that ensures a homogenous mixture of composting materials are produced – i.e. the food waste and wood chips that have been put into the Rocket in small (20 to 30 litre) batches are thoroughly mixed together.

The food waste materials that can be placed into the system are:

- Plate scrapings
- Vegetable & fruit peelings
- Fish
- Meat
- Vegetables
- Fruit
- Bread & Cakes
- Eggs & Dairy Products

The Rocket Composter does not like:

- Cutlery
- Cloths and Towels
- Saran Wrap

To create compost from food wastes, a bulking agent needs to be added. For the Rocket, we use a wood chip. The bulking agent is the key ingredient required to create structure in the composting mass.

Our team at MASS has worked with the Centre for Alternative Wastewater Treatment in Lindsay, Ontario, to investigate the stability and maturity of the compost created by the Rocket. The compost created by this system meets the Canadian Council of Ministers of the Environment guidelines regarding quality requirements for classification as a category AA compost.

Making a small difference each and every day is something that each of us can do. I am sure that each of you have heard the news stories circulating in recent weeks about how we – as Canadians – are struggling with our recycling programs. Recycling contamination rates are at a shockingly high rate, and this has resulted in what many have referred to as a broken system. However, I believe that what is broken can always be fixed – and perhaps we can come out even stronger in the end. We can focus on education – we can focus on engagement – and we can focus on taking ownership over our own environmental impacts.

Rather than throwing our hands up and releasing responsibility- blaming our lack of initiative on a broken system, I encourage each of you to do like Villa Angela and think about how you – yourself- can take ownership over your environmental footprint.

Here at Villa Angela, there is a team in place already that truly does care. Villa Angela has chosen to take the impact of their food waste into their own hands and implement a closed-loop organics processing system right on-site. They've opted to take responsibility over the impact of their food-waste, and they've taken ownership over this opportunity to make a difference for planet earth.

The Rocket In-Vessel Composting System is truly an investment in our future. Our goal, with everything we do, is to leave behind a healthy and thriving earth for the next generation. Choosing to look at food-waste – not as garbage – but as a valuable resource, is a mindset shift that can change the world. Congratulations to Villa Angela – for taking this step forward. The future generations of tomorrow will thank you.