



Preview

Pearth

to earth

2017 Annual Review



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Acknowledgements

Throughout 2017, our business has received an unending amount of help and advice that has shown to be extremely valuable for us. If we didn't have the help advice that we do from our key mentors, *Earth to Earth* would be nowhere near as ahead as we are now. So now we would like to take the time to truly thank the following people for all their precious time, effort and encouragement. We are extremely grateful for this!

-  Nick Hubbard – Mentor
-  Andrew Dartnall – Mentor
-  Judith Tatom – Regional Coordinator
-  Jackie Green – Teacher
-  Phil Muir

Thankyou sincerely, from the team at *Earth to Earth*.

Cameron Bassett, Fergus Dartnall, Jackson Suckling, Greer Murray & Bailey Judd.

Executive Summary

Vision:

Our vision is that every new planting has a net positive impact on the environment.

Mission Statement:

Our mission is to make biodegradable pots the “new normal” for volume planting projects in New Zealand.

Overview:

Us five young students really begun our journey at *Earth to Earth* in March 2017. Before this, we had pondered many ideas, tried surveys and spoke to many previous students involved in YES to try and find that innovative idea with potential. Until March, we were stuck with how we could use our energy and potential to take an idea to the market. Our journey began when we realised we all cared and had a shared passion for the environment. Excited by the opportunities we knew we had in our reach through the YES programme, this shared passion now forms the backbone of our enterprise. We were stunned when we discovered that 350 million tons of plastic was being produced every year; and none of this would ever break down. We pondered this for weeks but we couldn't find a suitable solution to how five young school students could have any impact on this huge environmental issue. Until, a member, Fergus Dartnall, who had worked in a nursery in his holidays said ‘nurseries use millions of plastic pots, why can't we make these out of something else?’ The idea hit hard, but it didn't bounce off. It stuck. We immediately took this idea to three nurseries around our area, and found out they were all were using plastic pots, and one in particular was using up to 700 000 pots annually in just one

Company Objectives:

-  Raise sufficient capital to manufacture our product.
-  To get our product into 12 commercial nurseries in NZ by end of 2017.
-  Win Young Enterprise scheme National finals.
-  Forge and maintain strong loyal relationships to have repeat customers.
-  To share our passion for the environment with as many people as possible.

size! We also did research back at home, and found there were biodegradable concepts on the market, such as jiffy pots and peat pots, but these weren't used commercially in nurseries as they weren't durable enough and were the wrong shape and size. Eventually we had a prototype designed and made though working with a local cardboard producer here in Christchurch. Half of these samples were immediately put into testing, and with the others we began to get feedback and interest from nurseries. The feedback we received was very encouraging and we found many more benefits from our pots than first intended! We discovered the nurseries other positive features such as saving time and better survival rate for the plant. By not removing the plastic pot, valuable time is saved increasing the efficiency of the planting team. With a great mission, and plenty of motivation, we began our journey to success. We set high standards for ourselves, created the company objectives above and got to work!

Now looking back over the year, we can measure how far we have actually come. We achieved all our main company objectives except one, (we can't say we have won nationals just yet!) and also the smaller objectives we set under each area of the business. These are covered in greater detail in the following pages.

Sustainability

As future generations become more eco-conscious, nurseries will become more aware of the impact that they have on the environment. As increasing pressure from government legislation comes into effect, nurseries will react by seeking more environmentally friendly options. The current market for biodegradable plant pots can only become larger in New Zealand and globally, meaning *Earth to Earth* will remain sustainable if we continue to pursue our vision. *Earth to Earth* pots tick all the boxes on the quadruple bottom line; Environmental, Social, Economic and Cultural. We are incredibly proud of *Earth to Earth's* sustainability.

Achievements:

- 🌱 **ECONOMIC** - We achieved a net profit of \$1763.67 in 5 months and have customers committed to using our product in the 2018 growing season which demonstrates *Earth to Earth's* economic sustainability.
- 🌱 **ENVIRONMENTAL** – *Earth to Earth's* solution eliminates petro chemical products in the growing cycle for volume growing planting which demonstrates *Earth to Earth's* environmental sustainability.
- 🌱 **SOCIAL** - Our environmentally friendly solution leaves future generations with less to clean up which demonstrates *Earth to Earth's* social sustainability.
- 🌱 **CULTURAL** - New Zealand has a culture which embodies a clean, green image. This is part of the heritage of Aotearoa, the land of the Long White Cloud. Supporting a natural cycle of products from the earth that are returned to the earth demonstrates *Earth to Earth's* cultural sustainability.

Reflections:

In reflection, *Earth to Earth's* sustainability record is exceptional. In all four aspects of the quadruple bottom line, the business proves itself to be outstanding. It is rare for a business to have such an impact on all four aspect at once. Often economic sustainability is at the expense of environmental or social sustainability. Not in the case of *Earth to Earth*. Our business is truly win-win when it comes to sustainability.

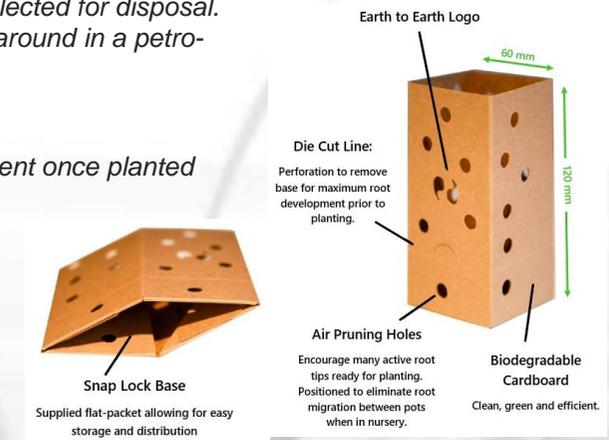
Innovation

How is our product innovative? Our biodegradable pots are completely unique. No other product on the market fulfils the same criteria, having 100% biodegradability along with enabling large scale plant production in a commercial price-conscious market. By creating these pots, we have found a solution that entirely eliminates the growing pile of plastic waste accumulating in nurseries throughout New Zealand in the process of growing plants. In addition, our solution responsibly disposes of cardboard waste, returning it to the earth from whence it originated resulting in a completion of its natural cycle; a full ecological circle.

Achievements:

Through doing extensive research and working with a local nursery, *Earth to Earth* have designed and tested a product that we believe will have a positive impact on the thousands of tonnes of plastic accumulated annually. We discovered that there were other biodegradable pots, but none suitable for volume planting. We found that other biodegradable systems did not allow air pruning of the roots resulting in potential root bounding and stress to the plant, if kept potted for too long. Furthermore plastic pots require an additional step in the process. The pot has to be removed before planting and later collected for disposal. Not all nurseries have a responsible approach to recycling resulting in large amounts of waste plastic pots being left to sit around in a petro-chemical graveyard. Our product solves these problems, and has the following innovations:

-  Air pruning holes – roots won't grow into open air, eliminating root bound, creating a healthier root structure
-  Removable base – the die-cut line gives perforation to quickly remove the base of the pot for maximum root development once planted
-  Snap lock base – pots are supplied flat pack, and when need can be quickly snapped open.
-  Its bio-degradable – reduces plastic waste, saves time planting, and takes advantage of cardboard waste.
-  Durable fibre board – 6 months allows many plant varieties to mature in the nursery before being planted.
-  Strategic placement of air pruning holes – prevents roots from adjacent plants becoming entangled as the holes don't line up with the pot beside it.



Reflections

Our biggest challenge when creating these Earth Pots, was testing the durability of the pots in the given time frame. Would we have a saleable proven product to sell before the end of the year? What added to this original anxiety was two failed prototypes, which sent us back to the drawing board. The *Earth to Earth* team were privileged to have the support of a local nursery which provided feedback and advice, to create a product that meets the end-user needs, as well as pursuing environmental sustainability in New Zealand. We are proud to have tested and launched a successful product in a very short time frame. The enthusiastic take up by other nurseries proved we had a commercially viable solution.

The way in which we sourced our investment capital was unique. We pitched our product to 15 business owners to give them the opportunity to invest in our vision. Students don't usually coordinate a business pitch evening and the attendees were intrigued to be invited. Their huge financial endorsement demonstrated the success of this innovative means of raising capital and their belief in our product.