



## Leaving plastic behind – our new pots!!

by Tyson Hammond, R&D, August 2020

Plastic has been one of most outstanding manmade products of the last century. It is strong, durable, versatile and can be made in variety of different shapes and sizes. However, like anything the dose is always the poison. We have been bingeing on plastic for far too long, now we're literally drowning in it. Here at Tui Balms we've been wanting to find a more environmentally suitable alternative to contain our natural products for nearly a decade now. In the last few years we've had many questions from our customers asking why we remain in polypropylene plastic containers. This update will hopefully shed some light on our journey away from our difficult-to-recycle containers and put your minds at ease a little because very soon we will be changing to what we hope is a home compostable alternative.



### Bioplastics

I remember it was about 7 years ago we started seriously researching our alternatives. One of our first calls was to Pharmapac, the Auckland manufacturer of our plastic pots, and asked if they could make our containers by using plastic polymers from a renewable resource like sugarcane or corn. This we thought would be an easy switch for us, as we could keep the same sized and shaped containers, use the same labels and our customers could continue to easily recognize our products on the shelf.

However changing polymers is a little trickier than we thought. Sugarcane and corn-made polymers are softer and more difficult to mold into the container and lids we were asking for. Pharmapac declined to go on this innovative journey with us. We also asked if they could use a percentage of already recycled plastic to help reduce the carbon footprint of each container. Again they declined to experiment with what they called 'low grade plastic' and mix it with the virgin plastic they were used to using.



So after a few years of enquiry around NZ for manufacturers to make plastic containers from renewable resources, some trials and many errors, we decided that maybe plastic containers regardless of what they are made from, sugarcane or petroleum based, that maybe plastic wasn't the best way forward.

## Tins

Next came the tin container exploration. We thought tin might be a good direction, its light and strong like plastic and consumers are more likely to recycle metal than plastic according to the research. After many sample tins being tested we learnt that most tin containers are not actually made from tin; the tin containers that suited our needs were made from aluminum. Aluminum is quite an amazing material, light, strong and can be recycled again and again without losing hardly any of its original integrity. Whereas most plastics can only be recycled once maybe twice before they become landfill. However, there is fear from some consumers around the safety of aluminum and it's potential to leech into the product inside it. After some research into this and discovering that it's highly unlikely that this would happen due to the nature and pH of our products, we still decided to look for an alternative solution rather than risk losing some of our customers. This led us to the original "tin" containers, which are made from steel and are tin coated. We thought this might be a safer option. The downside though is that they are slightly heavier which would add to our carbon footprint when in transit but we continued in this direction for a while. This was until we discovered that all tin plated containers need to have some kind of epoxy resin coated on the inside to stop the tin leeching into the product inside. The most common epoxy resin is BPA. This was familiar to us because we had seen it on tinned food containers that this can was "BPA free". So we thought if we get tin plated steel containers that were BPA free we'd be on the right track towards finding a safe, strong and recyclable container. However, as we looked more into the alternative epoxy resins that coated the tin plated steel we weren't that convinced that the other resins wouldn't leech into our lovely balms. Possibly in a few years the next BPA-type resin could be discovered to have been causing harm to our customers through the years of using our products.



## Bamboo

Off on another direction we trudged wondering if we would ever find a suitable alternative. We stumbled onto 100% bamboo containers, which looked beautiful and would decompose in the soil. However, after more research into these we had questions about the glue that holds them together and its biodegradability. Also, the availability of different sizes didn't suit our needs, there was a supply issue with the amount of containers we needed each year and the price difference was significant. We didn't think our customers would be happy paying an extra 3 to 4 dollars for the container. Tui Balms prides itself as being an affordable natural product so, we continued our search.



## Glass

Glass containers were always a fallback option, glass is one of the most inert substances available and it is easy to recycle within New Zealand. We also had experience with glass with our original Tui Bee Balm from the 1980's being in glass containers. However glass is fragile and a lot heavier than the alternatives and of course a greater weight = a bigger carbon footprint. When we did use glass for our products 'back in the day' sometimes the container would break and usually in transit. Most glass containers for skincare products these days come in a cardboard box as well. This made us think that instead of having our product within glass within cardboard maybe we could eliminate the glass altogether and just have a cardboard container.



## Cardboard

Firstly, we approached all the New Zealand based cardboard tube manufacturers to see if they wanted to create something with us that could change our local natural products market towards something more sustainable. None of them were willing unfortunately so we started researching offshore. We had some big questions from the very beginning about the suitability of cardboard for our oil-based products. We did see other oil based products on the market but these were mainly high wax based lip balms or deodorant sticks whereas we were endeavoring to try to put all our products into cardboard, with most having 3 to 4 times less wax. After many failed attempts, we came very close to giving up on cardboard being able to contain our products on the shelf for 3 years without the container becoming completely oil saturated. Then along came a company that really listened to our needs and showed some amazing ingenuity from the very beginning. What followed was an ingenious compostable cardboard container that now has its own patent on the design. Made from 100% recycled cardboard, which can be burned in your fireplace or composted in your compost at home.



Later this year we will release our original Bee Balm in it, and also our Baby Balm. Aiming to release all our products in these containers later next year in 2021.



Thanks for reading. We hope you will enjoy our new packaging!