

Decarbonisation of Commercial Bakery Equipment:

Are you after longer lasting trays and better profitability due to less carbon build-up, increased production, reduced electricity use, and a reduction in food wastage? If so, then read on.

Over the last 9 months new developments and refining of the Decarbonisation system that was initially developed and tested in 2003 have been underway.

The results have seen a dramatic improvement in processing times and sustainable results. These results are the outcome of a focus on technology advancements that weren't around in 2003.

The image below shows the carbon removed from a commercial baking tray because of the process developed.



The process does not damage any coatings on the surface of the tray or leave any residue, as per the Food Safety Act of New Zealand. This carbon and any process residue is retained for processing at the end of treatment, where it is turned into organic bio carbon rich waste product suitable use in gardens etc., while the liquids are recovered and re-used again.

The aim of the system is to target 0% waste and 100% repurposed products, therefore reducing the total volume of raw material used in the continuous cycle approach (i.e., circular supply).

The processing results are demonstrated in the 3 images below:



This is a flat perforated Teflon Coated bakery tray that has been ½ submerged in the system.

The bottom half has gone through the processing system and then the rinsing process and is now ready for use.

The tray has been cleaned fully and was then returned to the bakery and put back into circulation without any further treatment required.

This is a before-treatment image of a Teflon coated French stick tray with carbon and grease build up.

This tray underwent the same process as the image above, and again was returned to the bakery and put back into circulation without any further conditioning.



This is the result from the process, and it is now ready for use.

Non-coated trays are treated successfully, as the top image demonstrates.

The Teflon coating is only on the side that comes into contact with the food products, the backs are left clear of any coatings.

Sasquatch Limited is now moving from the testing and proof of concept to commercialisation and initial on-road testing of the mobile system. The current mobile system is under refinement and should be ready for full commercial production in 3-4 weeks.

During this time, we are looking to secure potential interested clients who wish to take advantage of this process and book some of the 25 available weekly slots.

If you would like the easier and more sustainable approach then you can have a set number processed each week/fortnight or we can process all the trays in one session subject to suitability.

Please note that the heavily carbonised items will need to be treated at a main centre due to the associated increase in time and processing required to restore these trays and remove the large amount of built-up carbon.

The images above are very suitable for the mobile units, while the image below is only able to be processed at the main processing centre.



This is a 3-sided flat aluminium tray with carbon build up over 1mm – 1.5mm thickness. Normally a tray like this is no longer in use due to the heavy layer of carbon build-up.

This tray can be cleaned, but not with the mobile system.

The image to the right is the results from the testing using the mobile system. It is the tray on the far right.

The left side tray had even thicker carbon build up levels. Both trays were no longer in use.



If you have any questions around the process and costings then please feel free to contact me.

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