

# Biochar: turning waste into wealth

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As all gardeners know, manure helps the flowers grow. But that manure also gives off greenhouse gases, contributing to global climate change.

At the newly established Biochar Research Centre at Massey University, researchers are trying to harness the good qualities of waste, while limiting the bad. Biochar is the result.

The project is one of three showcased at Massey University's stand at National Fieldays this week.

Associate Professor Marta Camps has been recruited to help lead the centre. She says biochar can help in many ways.

“Biochar has the potential of carbon sequestration as it is much more stable than the carbon from the material it is made, and it can remain in soils for hundreds to thousands of years.” she says. “In New Zealand, there are high methane and nitrous oxide emissions as a result of the agriculture industry. The biochar technology may help New Zealand as a country in terms of meeting its international obligations regarding [greenhouse gas](#) emissions.”

Biochar is a fine-grained charcoal that is produced by a process called pyrolysis, or thermal decomposition under oxygen-limited conditions. “In addition to sequester carbon, biochar has other potential environmental and agronomic benefits when applied to the soils,” Dr Camps says.

Dr Camps and her team, who will be joined by another Professor and five PhD students later in the year, have been working on different biochars in the laboratory and will soon begin trials.

“We’ll begin with sandy soils which are low in nutrients and can’t retain water,” she says. “But ultimately we need to know the responses of all types of soil and also chart the characteristics of different types of biochar.”

To make the process more sustainable, it is important to source the waste material that will from close to where it will end up once converted, she says.

Source: Massey University

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