

# INSULATING HOUSES WITH FIBRE FROM PIG MANURE


**Six Wageningen Master's students have developed insulation material made out of pig manure. They won second prize with their invention at the Biobased Innovation Student Challenge Europe (BISC-E) in Berlin on 24 October.**

Houses and offices near airports need better insulation, says MSc student of Biobased Sciences Stamatis Chrysanthopoulos from Greece. 'The noise pollution can make you ill. People living near airports have a higher risk of heart failure.' The Wageningen student team BioSilence looked for an organic material that could be used for sound insulation. And they came up with manure. 'In manure processing plants, nitrogen and phosphate are extracted from manure,' says Bas Roovers, another MSc student of Biobased Sciences. 'What is left over is fibre. That is currently incinerated or used to improve

soil, but you can also press it and dry it, which kills the micro-organisms and gets rid of the smell. And then you've got sound-insulation material.' The students experimented with this material in the lab first, and then they wrapped up the fibre in a piece of rockwool. They exhibited that prototype at the BISC-E final in Berlin.

'Our insulation material is a lot more sustainable than the usual rockwool,' says Chrysanthopoulos, 'because the production of rockwool takes a lot of energy and is responsible for high greenhouse gas and nitrogen emissions.' BioSilence eventually wants to replace the rockwool with their production entirely. That will not be easy in the conservative construction world, said the Dutch jury of BISC-E a few months ago at the preliminary round. But the Wageningen team won that round, nevertheless.

BioSilence is a very international team. As well as Chrysanthopoulos and Roovers, there are two

Italians, one Mexican and one Colombian on the team. Their supervisors are Costas Nikiforidis, a researcher at Biobased Chemistry, and Martin van den Oever, a researcher at Wageningen Food & Biobased Research.  AS

