# Legionella bacteria found in compost products

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(Phys.org) —A study conducted at the University of Strathclyde investigating the presence of Legionella in compost, has found that the bacteria exist in a significant number of commercial products.

The research, the first substantial analysis of Legionella in UK composts, suggests that the bacteria are a common part of the microflora found within the composts tested.

It is widely recognised that Legionella bacteria are commonly present in the environment and the researchers have found that compost could be a potential source of infection.

Dr Tara K. Beattie, of the University of Strathclyde's Department of Civil and Environmental Engineering, said: "Disease causing micro-organisms are widespread in the environment, and therefore it is not too surprising that species of Legionella that can cause human disease are present in compost.

"Any environment where you have pathogenic bacteria could be a source of infection, and we already know that compost has been linked to human Legionella infection in countries such as Australia and New Zealand.

"Within the UK and across Europe composts have traditionally been composed of peat, whereas sawdust and bark are more often used to produce compost in Australia and New Zealand where Legionellosis

associated with compost is more common.

"It may be that the change in composition of composts in the UK, moving away from peat based products, could be resulting in species such as Legionella longbeachae being present in compost and therefore more cases of infection could occur."

The study was conducted by Dr Beattie, fellow academic Dr Charles Knapp, Strathclyde PhD student Sandra Currie and Dr Diane Lindsay of the Scottish Haemophilus, Legionella, Meningococcus and Pneumococcus Reference Laboratory.

Twenty two different brands of compost, commercially available in the UK, were examined for the presence of Legionella bacteria – 14 of those tested contained a variety of Legionella species. Some of the species found, for example Legionella longbeachae which was present in four brands, are known to have caused human disease.

Dr Beattie added: "A larger scale survey, covering a wider range of compost products is required to determine if these organisms, some disease causing, some not, are as widespread in composts as this initial study would suggest.

"It should be emphasised though, that although Legionella seem to be common in compost, human infection is very rare, especially if you consider the volume of compost sold and used.

"But with any potential source of infection precautions should always be taken. The occurrence of these bacteria in composts in Australia and New Zealand, and the cases of infection that have been traced to compost has resulted in hygiene warnings on compost packaging in these countries, and this is something manufacturers in the UK may wish to consider."

The paper, 'Legionella spp. in UK composts – a potential public health issue' has been published by *Clinical Microbiology and Infection* and can be viewed online. onlinelibrary.wiley.com/doi/10 … -0691.12381/abstract

Advice given by organisations such as Health Protection Scotland should be followed, for example, washing hands after using compost and when in the garden, and opening compost bags in well ventilated areas.

Further advice on safe compost use by Health Protection Scotland can be viewed online legionella.aspx#Longbeachae" target="_blank">www.hps.scot.nhs.uk/resp/657d0 … 177.aspx#Longbeachae

Provided by University of Strathclyde, Glasgow