

# Sheep reproduction hope for NZ possum control

Researchers from AgResearch New Zealand and CSIRO Livestock Industries hope that sheep with natural genetic mutations affecting their reproduction may prove to be an excellent model in developing a possible control for New Zealand's possum plague.

After being introduced in the 1830s from Australia, New Zealand's Brushtail Possum numbers are now estimated at over 80 million. As declared pests, they decimate native trees, eat native birds and eggs, and compete with native fauna for food.

Speaking about the reproductive research direction at a recent seminar, AgResearch scientist Dr Jenny Juengel said the possums also spread TB into cattle herds and farmed deer herds, so eradicating them would not only be good for the

environment but good for livestock production as well.

'We have linked our animal breeding and genetics research with molecular genetics and reproductive physiology to identify the central role that growth factors (hormones) produced by the oocyte (egg) play in regulating fertility,' she said.

'Understanding pathways that are essential for reproduction in sheep gives us a target pathway to see if it's essential in the Brushtail Possum, and to see if we can then develop a product that interferes with that pathway in the possum to cause sterility.'

'We're also developing comparative biology between the two species – because the possum and sheep diverged 100 million years ago – those things that are most important for reproduction may be



Controlling the Common Brushtail Possum costs New Zealand hundreds of millions of dollars each year. Gary Unwin

common across a wide range of mammals.'

To date, growth factors are unable to act as a sterilisation reagent. The researchers aim to find out why that might be, so that a highly effective, humane population control could be developed.

'The idea is to completely knock out ovulation. What we're

looking at with the Brushtail Possum is a mechanism to either prevent the reproductive cycle or prevent them from becoming pregnant – we've focussed more on preventing the reproductive cycle and in particular in the female.'

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# Miserly water recycler installed in Melbourne

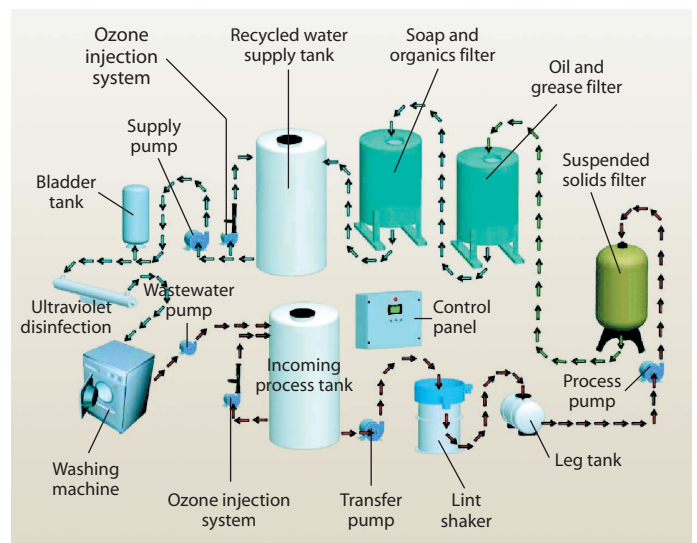
As part of implementing a Trade Waste and Water Resources Management Plan assisted by City West Water, commercial launderer Melbourne Linen Services is the first operation in Australia to install a highly efficient AquaRecycle Laundry Water Recycling System.

Developed in the USA, and already installed across a number of sites in North America and the Middle East, AquaRecycle's state-of-the-art technology re-uses up to 85 per cent of the wastewater generated on-site.

The process removes contaminants and solids

through unique filtration stages, and then disinfects the recovered water before it is returned for use. With this system, as little as one glass of water is needed to clean certain commercial linen batches.

As a result of the technology, Melbourne Linen Services, which has clients in the CBD including hotels, motels, hospitals and nursing homes, will reduce its potable water consumption by approximately 50 million litres per year – an 80 per cent decrease, making it one of the most water efficient linen services in the nation. In addition, their trade waste discharge to the Western Treatment Plant



The AquaRecycle system involves a series of filtering and reprocessing stages. City West Water

will be reduced by approximately 34 million litres a year.

City West Water provided Melbourne Linen Services with

a \$100 000 grant from its Cleaner Production Grant Scheme to help with the implementation expenses.