

Australia's sheep are naturally itching for tea tree's good oil

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Scientists at UQ's Queensland Alliance for Agriculture and Food Innovation (QAAFI) have discovered that one of Australia's best known folk remedies might help to alleviate the sheep industry's biggest headache.

Although indigenous Australians have long used the native tea tree (Melaleuca alternifolia) plant for medical purposes, only recently has tea tree oil been seriously considered as a natural, on-farm insecticide, QAAFI senior research fellow, Dr Peter James said.

"Tests have shown that tea tree oil has potential to be used commercially in a range of farming products that would very likely benefit both farmers and their animals," he said.

"In scientific trials we've demonstrated that lice were eradicated from sheep dipped in diluted tea tree oil, using concentrations of between one and two per cent.

"Our sheep trials confirmed our work in the laboratory, which suggested that a one per cent tea tree oil formulation could kill both lice and their eggs."

Tea tree oil also killed blowfly maggots and eggs and prevented flies laying new eggs on treated wool for up to six weeks.

The antiseptic effects and wound-healing properties of tea tree oil may



also help flystrike resolution.

Flystrike and louse infestations are estimated to cost the Australian sheep industry more than \$400 million annually and tea tree oil is well placed to capitalise on global trends towards natural products, particularly for the wool industry.

"Tea tree oil-based products could potentially work to counteract resistance to existing pesticides, plus reduce occupational exposure to farm chemicals and greatly reduce the threat of environmental contamination," Dr James said.

"Natural products are sometimes criticised for their variability.

"However, the composition of tea tree oil is stipulated under stringent international standards, providing confidence for consistency of effect."

Despite being a natural compound, any future tea tree oil-based product would have to undergo rigorous trials and testing before it could be registered for farm use.

"Getting the formulation exactly right is vital and it's something that will require more research," Dr James said.

"It's not as simple as mixing tea tree oil with water and applying it to your sheep; it's a complex and exact science.

"More research needs to be conducted before we can definitively say tea tree oil is a viable treatment for fly strike and lice infestations.

"However, these initial findings are very encouraging."

The study: "Controlling Fly Strike and Louse Infections in **Sheep** with



Tea Tree Oil" was funded and published by the Rural Industries Research and Development Corporation.

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