University News

UWA researchers helping Australian sheep producers tackle high-oestrogen clovers

Monday, 15 April 2019

A team of researchers at The University of Western Australia are working together with farmers to tackle an issue which could have a devastating impact on Australian sheep producers.

Older cultivars of subterranean clover sown up to the 1970s can contain high levels of the oestrogen formononetin in their green leaves. Associate Professor Megan Ryan from The UWA Institute of Agriculture and UWA School of Agriculture and Environment said that continued exposure to high-oestrogen clover cultivars could have serious and long-term impacts for grazing sheep.

“The impacts can include temporary infertility and, if grazing occurs for prolonged periods of time, permanent infertility,” Professor Ryan said. “Unfortunately, the grazing of high oestrogen pastures can also cause an increase in ewe mortality, uterine prolapse, difficult births and post-natal lamb mortality.”

The issue was thought to have been largely resolved in Australia in the 1980s with the introduction of new clover cultivars selected for low oestrogenic compounds. However, in a recent national survey by UWA, the old subterranean clover cultivars were found to still be common in many pastures across southern Australia.

“Many sheep producers in Western Australia are not yet aware of this issue, and may mistakenly associate poor reproductive performance of their sheep with other animal husbandry problems,” Professor Ryan said. “To allow prime lamb producers to return to their full potential, we urgently need to raise awareness and tackle the issue of high-oestrogen subterranean clovers again.”

A free service will be offered to Australian farmers in 2019, through a research project led by Dr Kevin Foster from UWA's School of Agriculture and Environment and Institute of Agriculture, and jointly funded by UWA and the Meat and Livestock Australia Donor Company. The research team will map the occurrence of high-oestrogen subterranean clover cultivars, and provide advice to farmers on how to remedy this issue.

“We will measure levels of oestrogens in green leaf samples and, when possible, identify the subterranean clover cultivars in samples submitted by farmers from across southern Australia,” Dr Foster said. “We want to get samples from a wide range of pastures with a subterranean clover component, whether they are grazed by sheep or not.”

To submit a sample of subterranean clover from your farm, contact Dr Foster on kevin.foster@uwa.edu.au to register your interest and provide a postal address. The free sample kits will be mailed out in mid-June and there will be a limited number available.