

Submit

[HOME](#) | [NEWS](#) | [WORLD](#) | [SHOWS](#) | [DIRECTORY](#) | [MAGAZINES](#) | [FARM SHOPS](#) | [COURSES](#) | [PROPERTY](#) | [JOBS](#) | [ADVERTISE](#) | [ALL SECTIONS](#) 

Farminguk

1 March 2019 13:00:00 | [Animal Health](#) , [Feed and Forage](#) , [News](#)

Daffodils used as alternative to antibiotics in animal feed



The national flower of Wales has found a new role this St David's Day – helping scientists to better understand the value of plant extracts as an alternative to antibiotics in animal feed.

Researchers have investigated the effects of daffodil extracts as natural antimicrobials on the digestive systems of cattle and sheep.

Plant extracts have the potential to improve growth performance and health, as well as decrease methane produced by enteric fermentation – a digestive process that sees carbohydrates broken down by micro-organisms.

However, the effects of feeding plant extracts to animals can be inconsistent. This has been attributed to differences in the composition of the extracts, even when prepared from the same source and using the same methodology.

The study, which has been published by *Scientific Reports*, found that very small differences made to the chemical structure of the bioactive compounds in the daffodil extract – haemanthamine – made a considerable difference to digestion in the rumen – the first stomach of ruminants

3/3/2019

Daffodils used as alternative to antibiotics in animal feed - Farming UK News

such as cattle and sheep.

'Positive effects'

The scientists concluded that if plant extracts are to replace traditional antibiotics in animal feeds, then a joint approach linking chemistry and biology will be required to describe the effects of novel plant extracts.

Dr Eva Ramos-Morales from Scotland's Rural College (SRUC), said: "It was very surprising to find that apparently similar compounds could have such different impacts on rumen digestion.

"This study highlights the need to standardise processes and obtain plant extracts with consistent chemical composition in order to maximise the positive effects in animals."

Dr Paddy Murphy from Bangor University added: "The role of organic chemists in separating naturally occurring compounds from agricultural waste products is key to developing new environmentally sustainable materials.

"In the future we hope to extract metabolites from daffodil by-products that will be of interest to the pharmaceutical industry."

The research follows news of a Welsh sheep farmer who grows daffodils which have been found to contain a higher-than-usual amount of galantamine, a compound known to [slow Alzheimer's disease](#).