



Number of cattle in US feedlots is down on the same period last year.

Vaccine trials target footrot

By **STEPHEN COOKE**

FOOTROT vaccine trials will begin at the end of the year after the completion of ground-breaking research.

The highly contagious sheep foot disease causes severe lameness and loss of body condition, and has been estimated to cost producers up to \$100 million annually in lost production.

The research, published this week in the science journal *Nature Biotechnology*, is the result of eight years' work on the bacterium that causes footrot.

The scientists involved have discovered eight like-

ly proteins in the footrot bacterium that are potential antigens for a new vaccine.

Australian research project leader Julian Rood is hopeful the trials will lead to a vaccine that will eliminate footrot.

Prof Rood believes any vaccine would be in the form of an injection.

Researchers for the joint project were based at Monash University, The Institute for Genomic Research in Maryland and the University of Arizona in the US.

The US Department of Agriculture and the Australian Research Council funded the eight years' research.

Prof Rood said any company that decided to commercially produce the vaccine would not have to recoup those costs.

The authors of the *Nature Biotechnology* article, Garry Myers of TIGR and Dane Parker of Monash, said the research was an example of how modern genomic science had the potential to affect primary production.

The project revealed the footrot bacterium's DNA sequence, which was analysed using reverse vaccinology to identify proteins that were more likely to elicit an immune response.