



MYCOPLASMA BOVIS



When did *Mycoplasma bovis* arrive in New Zealand?

All the evidence we have is that *Mycoplasma bovis* arrived in New Zealand in late 2015 to early 2016. Investigations are ongoing.

Why do you think this?

We have two lots of evidence. A genetic clock and our tracking and tracing activity where we identify and test animals on farms that have received cattle or other risk items from *Mycoplasma bovis* positive farms, like milk for feeding calves.

What's a genetic clock?

Since we discovered *Mycoplasma bovis* in New Zealand in July 2017 we have been gene sequencing the disease to identify its genetic fingerprint.

There is only one strain of *Mycoplasma bovis* present here – which was an important part of the decision to go to phased eradication as this implies that the disease has entered New Zealand on a single occasion.

All DNA (including human) is constantly altering, or mutating, at a low rate. We have compared the mutations in the DNA of *Mycoplasma bovis* grown from individual infected properties.

We have then time sequenced that backwards, based on mutation rate. This work indicates the New Zealand strain likely entered the country in late 2015 or early 2016.

Based on current knowledge the genetic clock shows no evidence of the disease arriving before this date.

Who did this analysis?

This work was done by the MPI Animal Health Laboratory in collaboration with the molecular epidemiology laboratory at Massey University.

Could they be wrong?

The science is strong and the techniques used are well known and proven. The labs that did the work are world standard and quality assured.

Genetic sequencing work is on-going and of course our tracing work is on-going. It is possible new evidence will come to light. But right now, we have sound scientific evidence pointing to a likely entry date of late 2015 to early 2016.

A farmer says he received animals from the “first infected farm” in 2014. So how can your analysis be right?

That's where our second piece of evidence comes in – our tracking and tracing work.

That farmer is obviously right. He did receive animals from the suspected first infected farm in 2014. However, we have no evidence those animals were carrying *Mycoplasma bovis* and investigations of that and other potential sources of infection are on-going.

If you have any questions about *Mycoplasma bovis*

Please contact MPI on 0800 00 83 33 or email info@mpi.govt.nz

