

## Improving Bluetongue Virus Surveillance In Remote Areas

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The National Arbovirus Monitoring Program (NAMP) carries out national surveillance of economically important insect-borne viruses of livestock and their vectors. This surveillance is carried out by testing blood samples from sentinel herds of cattle. Vector trapping and identification occurs at similar locations and time periods. Monitoring for arboviruses is also conducted both onshore and offshore by the Northern Australia Quarantine Strategy (NAQS) of the Australian Quarantine and Inspection Service (AQIS) to provide forewarning of incursion of new bluetongue virus (BTV) serotypes/genotypes into northern Australia and neighbouring countries, especially East Timor, Indonesia and Papua New Guinea.

Surveillance using sentinel cattle is impossible in many remote areas. Development of molecular techniques, in particular Polymerase Chain Reaction (PCR), has provided a possible method by which surveillance for incursion of new BTV serotypes/genotypes may be carried out in such areas. Preliminary work using a BTV PCR on midges collected in alcohol indicated this technique could provide useful data on BTV activity in an area.

The BTV PCR on alcohol fixed midges was optimised and validated. The technique was compared to conventional monitoring at sites of known BTV activity and an assessment made of the cost effectiveness as a monitoring tool in remote locations. Other applications included assessing the vector potential of midge species for which data were not available.