

The National Arbovirus Monitoring Program (NAMP)

What does NAMP do?

NAMP monitors the distribution of economically important insect-borne viruses of livestock and their vectors across Australia. State and territory governments and livestock industries jointly fund the program.

What is an arbovirus?

An arbovirus is an arthropod-borne virus. Insects are part of the arthropod group of animals. Blood-sucking insect vectors transmit arboviruses. The virus multiplies inside the vector insect, which then transmits it to other animals.

NAMP involves collection of blood samples from cattle to monitor the presence of Akabane, bluetongue and bovine ephemeral fever viruses. The insects that transmit these viruses are *Culicoides* (midges) and mosquitoes.

Figure 1: blood collection from a cow



Why are arboviruses important?

From the perspective of international trade, it is important for Australia to be able to determine areas within the country that are free of arboviruses. The export of ruminants from Australia and international trade in their semen and embryos depend on an accurate assessment of any risks to the health of an importing country's livestock industries.

From a disease perspective, it is important to know the distribution of these viruses in order to manage cattle and sheep properly. As the viruses are insect-borne, they may be present in some areas on a seasonal basis. Cattle and sheep not previously exposed may show clinical disease when infected with some of these viruses.

Why NAMPP?

NAMPP has three major objectives:

1. To support trade: NAMPP provides technical information to meet the requirements of the Australian Department of Agriculture for export protocol negotiations and assist exporters to meet export certification requirements. NAMPP particularly supports the export of live cattle and sheep.
2. To provide bluetongue virus early warning: NAMPP conducts a dynamic surveillance of the northern bluetongue endemic disease area to detect new incursions and provide an early warning of any spread of the disease strains present.
3. To provide risk management: NAMPP provides epidemiological advice to producers and exporters on arboviruses.

How is NAMPP organised?

NAMPP relies on blood sample collection and virus testing from a national network of 'sentinel' cattle herds. There are at least 10 animals in each sentinel herd. The frequency of sampling depends on the level of arbovirus activity in the local area. Sentinel herd information is supplemented by sero-surveys in remote areas where it is not possible to maintain a sentinel herd. In addition, potential insect vectors are trapped and identified to monitor changes in their location and abundance.

In the Territory, sentinel herds are located at 5 government research farms: Beatrice Hill Farm, Douglas Daly Research Farm, Katherine Research Station, Victoria River Research Station and the Arid Zone Research Institute in Alice Springs. Several pastoral properties also run sentinel herds for NAMPP. A national database holds the test results, to which all states and the Territory contribute. The information in the database is used to build a profile of insect-borne viruses for the whole of Australia.

More information

For more information, go to <https://nampp.animalhealthaustralia.com.au/>

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