



AUSVET



Vaccination buffer zones

**A guide to minimising disease risk
from local livestock populations**

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The theory of buffer zones

1.1 What is a buffer zone?

A buffer zone is a delegated area around a group of animals or properties where control measures are implemented to reduce the risk of disease spreading between different groups of animals (in or out of the zone).

In context of Indonesian feedlots, buffer zones are created within a certain distance of a feedlot. Within these zones, animals are vaccinated by the feedlot to reduce the risk of these animals' transmitting disease to feedlot animals. Staff animals may also be included in the buffer zone vaccination plan, even when they reside outside the zone. This is to manage the risk associated with disease transmission from staff movement.

1.2 How are the animals for inclusion in the buffer zone determined?

The recommended radius of a buffer zone is dependent on the disease and context. In the case of protecting feedlots from foot and mouth disease (FMD), we recommend the following animals are included in the buffer zone:

- all cattle and small ruminants' populations of <100 animals within 1km of the site
- all large commercial cattle and small ruminant populations with > 100 animals (including abattoirs and live markets) within 5km of the site
- all pig populations within 6km of the site
- all susceptible species owned by facility staff (regardless of how far from the facility they are)



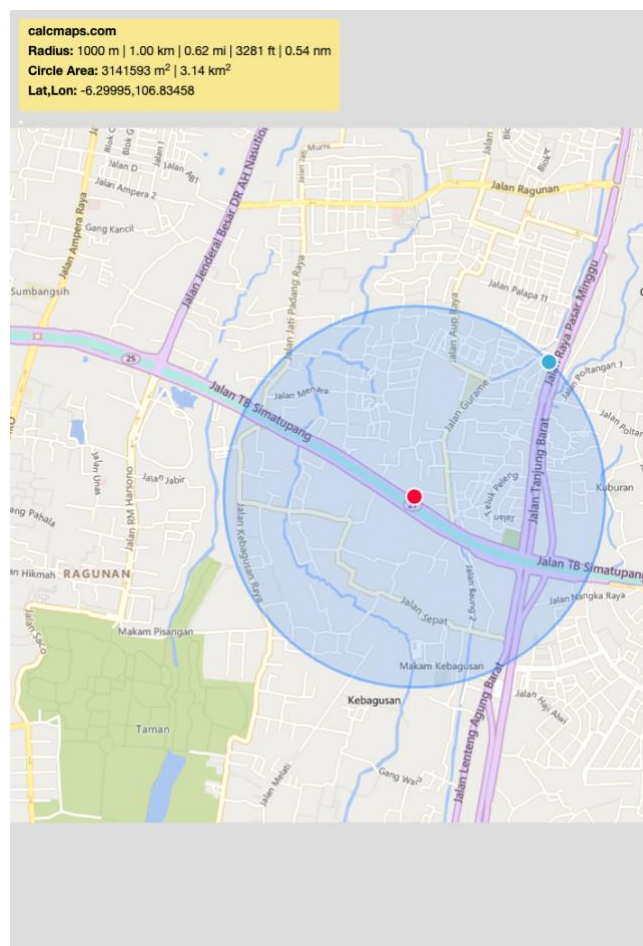
Creating a buffer zone

1.3 Identifying livestock for inclusion

Geographic Information Systems (GIS) can be used to visualise animals or properties within the recommended radii of the facility. For experienced GIS users, we recommend QGIS, which is free GIS software available for download [here](#).

For less experienced GIS users, there are user-friendly online tools and apps. These tools will produce a circle of a nominated radius around a point. Example tools can be found [here](#) and [here](#). Figure 1 shows a buffer zone map created using a simple online tool. The address of the Ausvet office was entered and a one-kilometre buffer selected.

Figure 1 One kilometre buffer zone around the Ausvet office



A series of maps may be required to identify all the animals that meet the inclusion criteria for the buffer zone (see 1.2). After the maps are created, staff who are familiar with the area and local livestock populations should be consulted to create a census of the animals or villages for inclusion.



1.4 Consult, vaccinate and record

Once a census is established, local village leaders and livestock owners should be consulted about the proposed buffer zone. Assuming livestock owners are willing, vaccination teams should:

- determine the vaccination status of each animal
- select an appropriate vaccine
- move from animal-to-animal with careful consideration of best practice vaccine management, administration, and biosecurity (See Ausvet's *Animal health and welfare manual* and *Biosecurity manual*)
- provide identification to any animals that don't have it (e.g ear tag)
- record which animals have been vaccinated, what they were vaccinated with and when they were vaccinated
- arrange for follow-up vaccination

1.5 Follow up

Once the initial vaccination has taken place, the feedlot should continue to ensure animals remain up to date with their vaccinations (including boosters when the manufacturer recommends them). The feedlot should contact village leaders regularly to enquire about any new animals that may not have been vaccinated.

