

UNDERSTANDING YOUR BVD RESULTS

There are two different ways of testing for BVD, both of which test for different things within the herd. Below we explain the difference between the tests, in which situation each one should be used and what the results mean, helping you to understand what you need to do next.

1. ANTIBODY (YOUNGSTOCK SCREEN) TEST

Purpose: to identify if an animal has been exposed to the virus in its lifetime.

As part of an annual Gwaredu BVD Youngstock Screen, 5 animals, between 9-18 months and homebred, where possible, from each management group are blood sampled (usually during a TB test) and tested for BVD antibodies. Testing 5 animals per management group is sufficient to give a representative sample for the entire herd.

This is a surveillance screen to identify the BVD status of the herd and to identify if further diagnostic work is required.

Interpreting Antibody results:

NEGATIVE



These animals have not been infected by BVD in their lifetime.

If all animals on your annual Youngstock Screen have a negative result, this suggests that BVD is not present on your farm, especially if homebred animals were tested.

If one or more animals in your herd screen antibody positive and/or you have clinical signs of BVD it is important to test antibody negative animals for antigen to identify if they are PI animals or not.



If you have a negative antibody screen, no further actions is required - your herd is BVD free.

Continue with high biosecurity measures and annual screening to retain your negative status.

POSITIVE

At some point in their lives these animals have been exposed to BVD virus. A positive result in a young animal (9-18 months old) indicates that the exposure was recent in time.

The source of infection could be a PI animal on your farm, contact with neighbouring cattle, cattle mixing in marts or biosecurity breaches.

Positive animals will be transiently infected and shed the virus for 2-3 weeks, before mounting an immune response. After this they are no longer a danger to your other animals. Alternatively, vaccinated animals who were tested in error will also provide an antibody positive result.

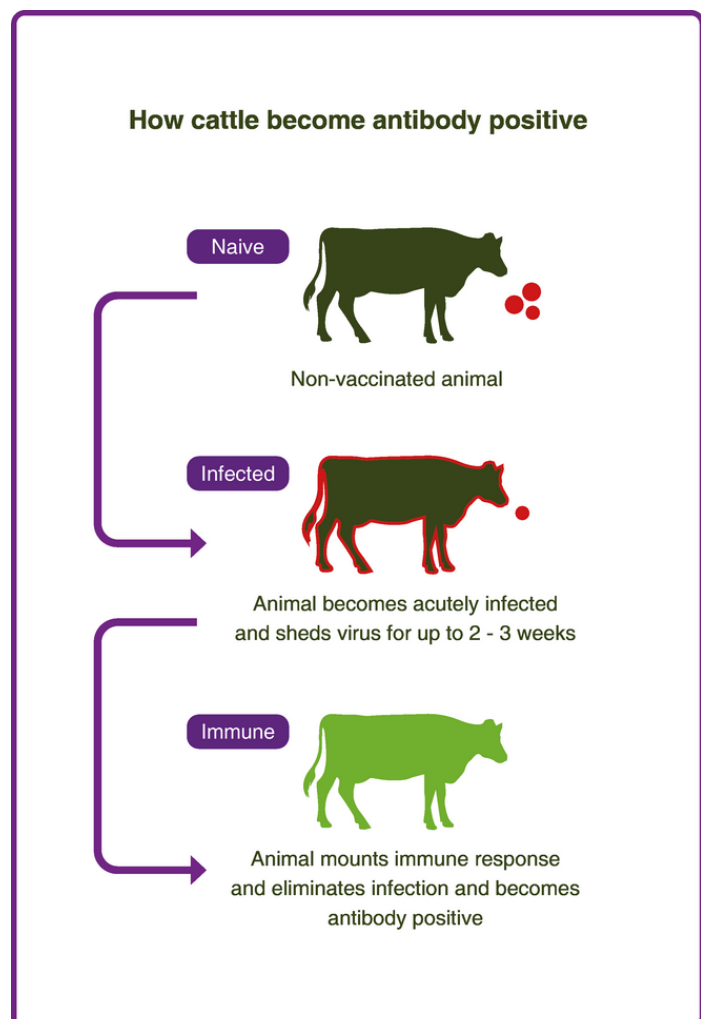
If you have a positive antibody screen, this is a warning signal and you should talk to your vet about the results and whether further investigations are required.

Antibody positive animals should not be isolated and culled, they are not a long term source of infection.

How do cattle become antibody positive?

Positive antibody animals **can never** be PI animals and they **do not** need to be culled.

Negative antibody animals **can be** PI animals. If you get 4 positive and one negative on an antibody Youngstock Screen that negative animal could be a PI that is spreading the virus on farm. So, remember to get it antigen tested to find out.



2. ANTIGEN (PI HUNT) TEST

Purpose: to identify virus positive animals, which are responsible for spreading the virus.

This type of test is usually carried out as part of a PI Hunt after receiving positive antibody results or when using BVD tag and test tags at birth.

Blood, ear tissue or bulk milk samples are sent to the lab for analysis to test if the sampled animals are virus positive and spreading the virus. Cattle are either born PI animals or not. They cannot become PI animals later in life.



Interpreting Antigen results:

NEGATIVE



This animal is not a PI animal.

POSITIVE



The tested animal is carrying the virus. Any antigen positive animals should be isolated immediately to avoid further spread.

An animal that has a positive antigen test may be a PI animal or transiently infected. Positive antigen animals should be retested 21 days later to confirm if it is a PI animal.

If the second, repeat test result is negative, the animal was transiently infected at the time of the first test and had cleared the infection by the time of the second test 21 days later. This animal is no longer a source of BVD infection on your farm and can remain as part of the herd.

If the second test is antigen positive then the animal is a confirmed PI. PI animals cannot be treated or cured, they should be isolated and culled to stop the spread of the virus.

It is estimated that 1-2% of animals within an antibody positive herd are PI animals. To stop the spread of the disease these animals must be identified and culled.

How a PI animal is created



Pregnant cow (45-120 days)
infected with BVD virus



Dam becomes immune and
generates an antibody positive
status. Calf becomes
Persistently Infected (PI)



Calf born Persistently Infected
(PI) sheds virus and infects
other animals within the herd.
No cure, needs to be culled