

Bovine Brucellosis Risks

ARE YOU TAKING A RISK?

Bovine brucellosis is a chronic disease that causes abortions and reduced fertility in cattle that is caused by *Brucella abortus* bacteria. It is mainly spread between herds through the introduction of infected cattle and within herds when infected cattle abort or give birth (millions of bacteria are released into the environment during the birthing process). Cattle are curious by nature and will sniff and lick an aborted foetus or afterbirth. Brucella organisms then enter the animal through the mucous membranes of the mouth, nose and eyes. The incubation period is highly variable, ranging from a few weeks up to many months before an infected animal test positive. This makes testing and removing positive animals a challenge. Once an animal is infected, there is no treatment to effectively cure the disease – the animal should be slaughtered to remove it as a source of infection to healthy animals.



Photo source unknown

AWARENESS OF BRUCELLOSIS – WHAT SHOULD YOU KNOW?

Brucellosis is regarded as a herd disease. The disease may be incubated for extended periods of time before an individual animal test positive. Therefore, animals that test negative within a positive herd are classified as "high risk" as these animals may still be incubating the disease and only test positive later on. Heifers born from infected cows may incubate the disease ("latent carriers") and only show up positive on tests after their first calving/abortion.

- Notify previous buyers of animals and current milk buyers if your herd is infected with brucellosis.
- The owner/farmer of dairy cattle may sell the milk if it is pasteurised or sell to companies that pasteurise the milk – selling of raw milk (unpasteurised milk) is prohibited from a herd tested positive for brucellosis.
- Movement of animals from a quarantined herd will only be allowed under Red Cross permit when the movement is directly to an abattoir for slaughter.

BEWARE OF RISKY FARMING PRACTICES WHICH INCLUDE:

- Not vaccinating your heifer calves between the ages of four to eight months with Strain 19, or with RB51 vaccines

- Buying in cattle from herds of unknown health status
- Buying in unvaccinated cattle
- Sharing pastures
- Buying cattle on an auction or from a speculator to make a "quick buck" (remember cattle infected with brucellosis do not look sick)
- Not testing your cattle on a regular basis
- Buying or selling cattle from an infected herd – it has been quarantined to protect other farmers
- Allowing infected heifers/cows to calve down on your farm
- Thinking that by not cooperating you will get rid of the disease (you will prolong the problem)
- Thinking IT WILL NEVER HAPPEN TO MY HERD.

AUCTIONS AND SPECULATORS

- Do not buy cattle that are C-branded
- Do not buy cattle from a herd of unknown brucellosis status. Ideally, the seller needs to provide proof that his whole herd has been recently tested for brucellosis and found to be all negative.
- If only the animals for sale have been tested and not the entire herd, you might be buying animals that are incubating the disease (e.g. the herd of origin is positive, but the farmer sells individual animals with negative test results – high risk!)
- Insist on knowing what the herd status of the animals to be sold is. Insist on proof of testing (don't just take someone's word for it)



Photo source unknown

BUYING OR KEEPING HEIFERS BORN FROM INFECTED COWS

- May be latently infected – often only start testing positive once she has calved/aborted
- Millions of bacteria are then spread within the herd and in the environment
- Avoid

INFECTED HERD

- If your herd is infected, cooperate with the state veterinarian to eradicate the disease
- Once your herd is cleared of brucellosis, keep it clean – prevention is better than cure
- Only buy in clean, tested animals from herds of a known negative brucellosis status.

VACCINATION (\$19 OR RB51)

- Routine use of standard S19 dose in heifers four to eight months of age, not older (RB51 may also be used)
- RB51 may be considered in adult cows in high-risk circumstances

- State veterinarian needs to approve RB51 use after having discussed the advantages and disadvantages with the owner and getting him/her to sign indemnity form
- Ideally, S19 vaccinated animals should be permanently marked
- RB51 does not interfere with serological results when used in older animals.

RESPONSIBLE SELLER

- Test your herd regularly to determine status (see maintenance programme diagram)
- In addition, test individual animals before sale
- Provide results as proof and ensure you identify your animals properly
- Vaccinate your cattle against brucellosis
- An informed buyer will realise that your cattle are of a much lower risk.

BUYERS

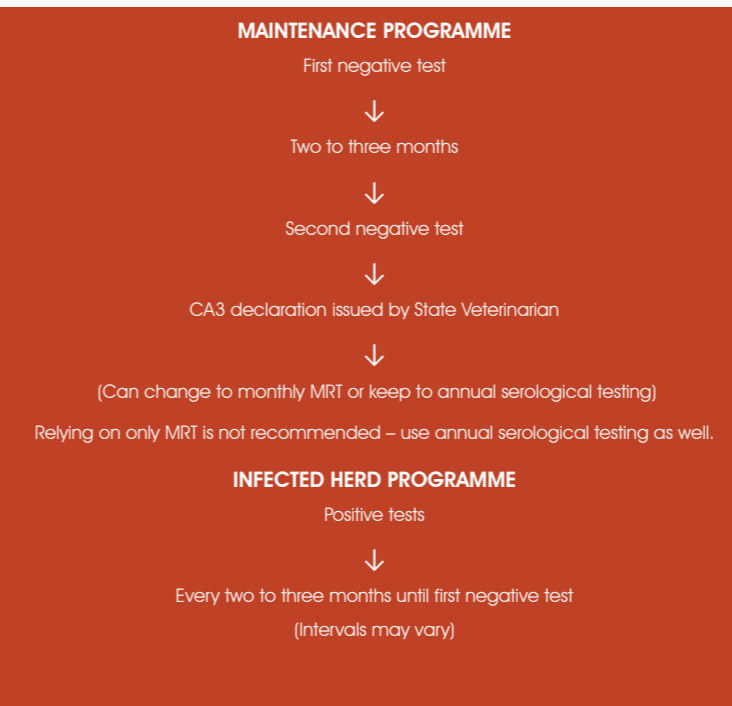
- Be alert, be informed – the disease can devastate your existing herd!
- Brucellosis cannot be seen; the animals look healthy
- Insist on buying animals from a herd with a known negative status – ask for proof
- Insist on buying vaccinated animals - ask for proof.

ZOOONOSIS

- Brucellosis is dangerous to your health!
- Brucellosis may be transmitted to humans mainly through the consumption of infected unpasteurised milk or dairy products, and through the handling of abortions, afterbirths and excretions
- It is known as undulant fever and symptoms tend to be non-specific and flu-like: Headache, muscle pain, fever, cold sweats and general malaise. There is treatment available, but the disease may persist despite treatment.

All herds should preferably be incorporated into the maintenance programme.

The relevant declaration only indicates that the animals reacted negatively for brucellosis on the date of the second negative test. If animals test positive, the herd will enter into the compulsory infected herd programme.



MAINTENANCE PROGRAMME

Annual serological or 12 month monthly MRT in dairy herd Fifth negative test (At owners' expense)

(Where the heifer calves from infected dams are not slaughtered, the herd can be given CF status after completion of this test)

Maintenance Programme

Annual serological test or monthly MRT plus serological test every second year in dairy herd

CONCLUSION

- If you do not know the current status of your herd, contact your local state veterinarian or private veterinarian to test for brucellosis
- Test your herd regularly and keep your herd safe!
- You are the key factor in preventing brucellosis.

REFERENCES

- Bovine Brucellosis Interim Manual – 5 December 2013
- Bovine Brucellosis Scheme (R. of) under the Animal Diseases Act, Act 35 of 1984
- Credit to Dr Sewelwyn Davey's inputs

Feel free to contact your nearest state/private veterinarian/animal health technician for further information

Directorate: Animal Health	Directorate: Food Import and Export Standards
Animal Health Tel.: +27 12 319 7456 Fax: +27 12 329 7218 E-mail: SandraDAC@daff.gov.za Website: www.daff.gov.za	Animal Health Promotion Division Tel.: +27 12 319 6004/6117 E-mail: info.sps@daff.gov.za Website: www.daff.gov.za



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Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA