

Methods of reducing pestivirus infection cases in australia

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Pestivirus, also known as 'Bovine Viral Diarrhea Virus' (BVDV), is a disease mainly affecting cattle but can also affect sheep, rodents and pigs. The symptoms of BVDV include diarrhea, suppression of the immune system and severe reproductive loss. When an animal comes into contact with the pestivirus for the first time it will be highly susceptible to infection, but the immune system quickly responds and eliminates the virus within a couple of weeks. So, in many herds the virus is unrecognizable and most even become immune. The disease is most dangerous when the animal, usually a cow, is infected during pregnancy. The fetus of these cows accepts the virus and stops it from forming antibodies against it. The virus will multiply in the tissues of the calf, either causing deformities or killing the offspring but if it does survive its life expectancy will be significantly reduced. The virus is spread through direct contact with the carrier animal and its secretions, but can also be spread when in contact with biting insects and wild ruminants. They range from acute infections which have little effect on the host, to mucosal disease which is fatal. This infection can cause a variety of diseases which may not become apparent until well after the herd has contracted the virus.

It has been found that between 60 and 70 percent of cattle and up to 90 percent of herds have been infected with BVDV. The highly infectious nature of the pestivirus means that it is difficult to maintain and that quarantine measure must be in place to stop it from spreading even further. This disease is having a damning impact on Australia's cattle industry. The low reproductive rates and reduced resistance to disease caused by the pestivirus lead to direct economic loss. If the level of reproductive efficiency

drops, so too will the earnings of the cattle farm, ultimately leading to a rise in the price of beef. The cost to the national industry is estimated to be \$57.9 million annually, however Australia has quarantine measures to assist in decreasing the number of cases.

The Department of Agriculture and Fisheries recommends that farmers adopt their own biosecurity measures to keep their livestock safe from BVDV.

These quarantine measures would require introduced cattle from neighboring farms to be kept isolated and monitored for disease for approximately 4 weeks. This time allows any acute health problems such as the pestivirus to appear and be cured before introducing the new cattle into the rest of the herd. Any animals who becomes ill with pestivirus during this 4 week period must be checked by a vet, where they can administer a pestivirus vaccine. Early detection and prevention stops the disease from spreading into the rest of the herd.

This method, if done properly, is highly effective in reducing the rates of pestivirus in cattle farms. However, the fact still remains that a large proportion of farms have herds with the pestivirus disease. This shows that quarantine measures administered by farmers is ineffective and these farmers are failing to quarantine properly. Unlike, other countries there are no voluntary, industry or government funded initiatives in place to control and eradicate the pestivirus. If an initiative, such as this, was put in place the number of pestivirus cases would go down.

This method of quarantine is an easy method of quarantine and if done properly it would be successful, however the large number of cases still prevalent in Australian cattle shows that more profound quarantine measures need to be put in place.