

PRRS eradication efforts in Chile: Current situation and future prospects

J.M. Sanhueza, M.I. Apel, R. Castañón, V. Neira, B. Brito, V. Max, P. Pérez, C. Corzo

Key Points

- After being introduced in 1999, PRRS was eradicate it from the country in 2012
- In 2013 PRRS was again detected, sequence analysis suggested this was a new introduction to the country
- The Chilean swine industry and the Chilean Veterinary Services (SAG) expect to again eliminate the disease in the near future

The porcine reproductive and respiratory syndrome (PRRS) is a notifiable disease in Chile. It was first detected in 1999, and in 2000 both the swine industry and government joined efforts to eradicate the disease by a series of coordinated events including a mixture of herd closure and depopulation of infected premises. Vaccination was not allowed in the country to control PRRSV infection. The eradication program was completed in 2007 and as a result, Chile was declared PRRS free in 2012. Nevertheless, on October 2013 clinical signs compatible with PRRS were reported in a commercial sow farm. During 2014, a total of 27 sites were positive, corresponding to the 13.6% of the industry in the country. On May 2014, the swine industry and the Chilean veterinary service (SAG) launched an eradication and control program, which consisted of active surveillance of commercial and backyard pig farms, culling/slaughter of infected backyard animals, herd closure of infected sow farms, and gradual depopulation of nursery and finisher sites as they reached market weight. As in the previous outbreak, vaccination was not allowed in the country to control PRRS. All commercial herds performed surveillance activities according to a risk score based on location and biosecurity measures. From October 2013 to October 2017, approximately 153,000 blood samples have been analyzed.

Viral sequences obtained during the 2013 outbreak were compared to sequences from the early 2000s outbreak in Chile (Neira et al., 2017). Results showed a large genetic difference between isolates from both outbreaks. Further analyses demonstrated that the Chilean virus was closely related to a virus circulating in the state of Indiana in the US at the time of introduction. These results suggested that the latest PRRS outbreak in Chile was most likely due to a new introduction into the country rather than a reemergence of a strain previously detected in Chile. Although many hypotheses were formulated, the PRRSV source that led to the outbreak could not be confirmed and has remained unknown.

Following the eradication program launched on May 2014, a reduction in the number of infected premises and animals has been observed. By October 2017, the disease was restricted to approximately 45,000 animals in six commercial farms owned by two companies that currently have eradication programs in place. These six infected commercial sites are clustered in three areas (Figure 1). These farms account for 3.3% of the commercial farms in the country (SAG, 2017). Currently there is no evidence of PRRSV circulation in backyard pigs.

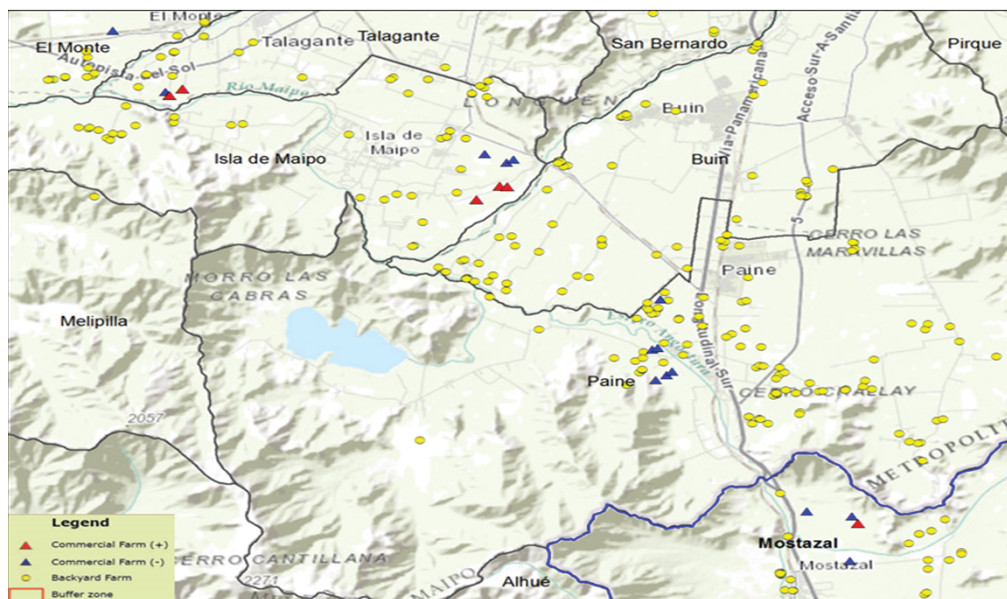


Figure 1: Spatial location of the six PRRS positive sites in Chile, October 2017 (Source: SAG, 2017)

During 2016-2017, only one new PRRSV infection was detected on a small commercial farm, which was immediately depopulated. The swine industry and SAG expect to eliminate the virus from the infected premises in the short term and demonstrate once again that the virus can be eradicated from the country. Arguably, this improved health status will provide the Chilean swine industry with a competitive advantage not only locally but also in international markets.

References

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