

SEROLOGICAL SURVEY OF PRRS (PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME) IN THE STATE OF MINAS GERAIS, BRAZIL

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Introduction

The PRRS has caused considerable losses to the swine production world-wide, having affected sows and pigs, causing respiratory and reproductive problems. The PRRS has been related in many countries of Asia, Europe and America. In Brazil, there isn't description of PRRS until the present date, despite the fact of Brazil is next to countries that possess PRRS as Chile and Venezuela (1,2), and to import animals of countries that present the syndrome. Although the necessity to constantly monitor the PRRS in Brazil as monitoring, there are few surveys confirming the absence of the disease in the country (3,4). These surveys had been made until the year of 2001 and after that there weren't trustworthy works in our way. The objective of this is to give continuity to the serological survey of PRRS in the Minas Gerais state (MG) carried through previously (3) and to keep the monitoring of the absence of the agent in Brazil.

Materials and Methods

The study was conducted with sampling in two levels or stages, a- herds sampling and b- animals sampling, to evidence and to confirm the absence of the virus of PRRS in the swine production of MG, Brazil. The herd and animal sampling was calculated to get 90% of confidence that at least one infected herd/animal would be detected if PRRS is present, using 90% of sensitivity for herds and animals and prevalence of 5% for herds and 15% for animals. For the blood samples collections, the state was divided in five regions, according to the distribution and characteristics of the swine production (6). The number of 1.120 sows had been evaluated, from 71 herds selected by chance of diverse regions of the State. Also had been evaluated 20 sera from finishing pigs on each herd, with age between 145 and 170 days, totalizing 1420 sera from finishing pigs. After the blood collection, the samples were sent to the laboratory. For the antibodies detection, an indirect commercial ELISA kit had been used.

Results

All the 2540 samples of sera tested, from sows and finishing animals, had presented negative results, suggesting that PRRS is not present in the State of MG, Brazil.

Discussion

These results are in accordance with previous works (3), where, in a PRRS serological survey in MG, 1054 sera proceeding from sows had been

analyzed, and did not find positive results using the ELISA. These data are important, because it suggests an idea of the situation of Brazil as free Country of PRRS. MG state has continuously received animals from countries with the presence of PRRS, as well as the importations that had occurred in the decade of 1990 deriving animals from Germany, Belgium, France, Denmark and England, that had constituted a strong risk factor. The State of MG is an interesting sample of the national swine production, not only for the cited factors, but also for actively participate with the exportation and importation of genetic material inside and outside the country, to possess important regions of swine production and to present many types of production systems, as independent production, integrated production and production in only one or in different sites. In a study of the PRRS virus prevalence in Brazil (4), 3785 samples in eight States in Brazil had been analyzed between the year of 1990 and 2001 and also indications of the disease had not been found. It is known that the infected swine importation the main form of dissemination of PRRS in the currently positive countries (5). It is interesting to cite a study evidencing the absence of the PRRS in Switzerland (7), which analyzed the results of surveys made for the virus in the years of 2001 and 2004, not finding evidences that the virus is present in this country. The authors of this study comment that the restricted importations done in the country in these last decades is a possible explanation for the continuous absence of PRRS in the country. Brazil is strongly inserted in the international context as important swine producer and meat exporter and does not present these characteristics of lower scale production, what increases the susceptibility of the country front the agent and the importance on keeping the status of free for PRRS.

References

1. Ruiz, A. et al (2003). PRRS Comp., p.221-222.
2. Boulanger, A. et al (2006). Proc 19th IPVS Congress, p.32
3. Ristow, L.E. et al (2001) X ABRAVES, v.2 p.85.
4. Ciacci-Zanella et al (2001) X ABRAVES, v.2 p.83.
5. Albina, E. (1997) Vet. Microbiol., v.55, p.309-316.
6. Silva, I.J. (1997) UFMG, Veterinarian College 139p.
7. Corbellini L.G. et al (2006) Vet. Microbiol., v.118, n.3-4, p.267-273.