

Large Scale PRRSv Exposure Dynamic in Spanish Farms



I. Hernández-Caravaca, V. Rodriguez, S. Figueras, E. Díaz
Boehringer Ingelheim España, S.A., Spain

INTRODUCTION

The objectives of this study were to determine PRRSv exposure pattern in Spanish farms.

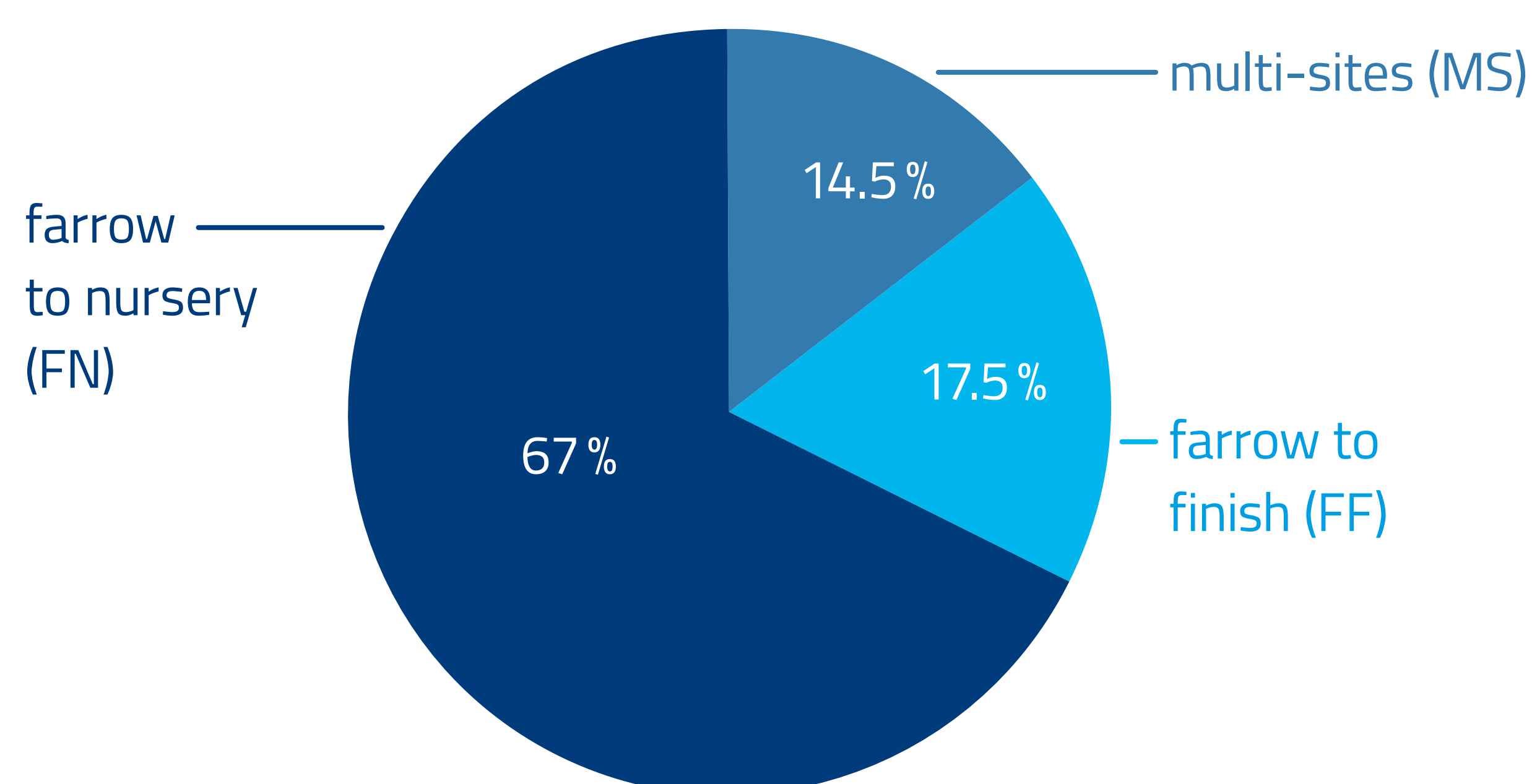
MATERIALS AND METHODS

Ninety seven farms were identified across Spain. These farms represent all the types of Spanish's production systems and all were PRRS positive at the moment of this study. All farms represented 117,480 sows, 5% of the Spanish's census. An on-farm questionnaire was implemented at each farm, capturing information about: Production System and vaccination program against PRRS in sows and in piglets. At each farm, a cross sectional sampling was implemented taking three sampling points since June 2015 to May 2016 to determine stability in each phase: at weaning follow the ASSV recommendation of sampling (30 piglets at the end of the lactation period); end of nursery (10 Blood samples and 2 Oral fluids (OFs) and mid finisher (same sampling as nursery). At each sampling point, all the blood samples were analyzed in pools (1:5) by PRRS rt-PCR (Quantitect SYBR Green RT-PCR QIAGEN) and individually in the case of OFs (Quantitect SYBR Green RT-PCR / QUANTINOVA SYBR GREEN RT-PCR QIAGEN). Additionally, all the samples were analyzed by ELISA individually. In total, 3663 ELISAs and 1289 pooled PCRs were analyzed.

RESULTS

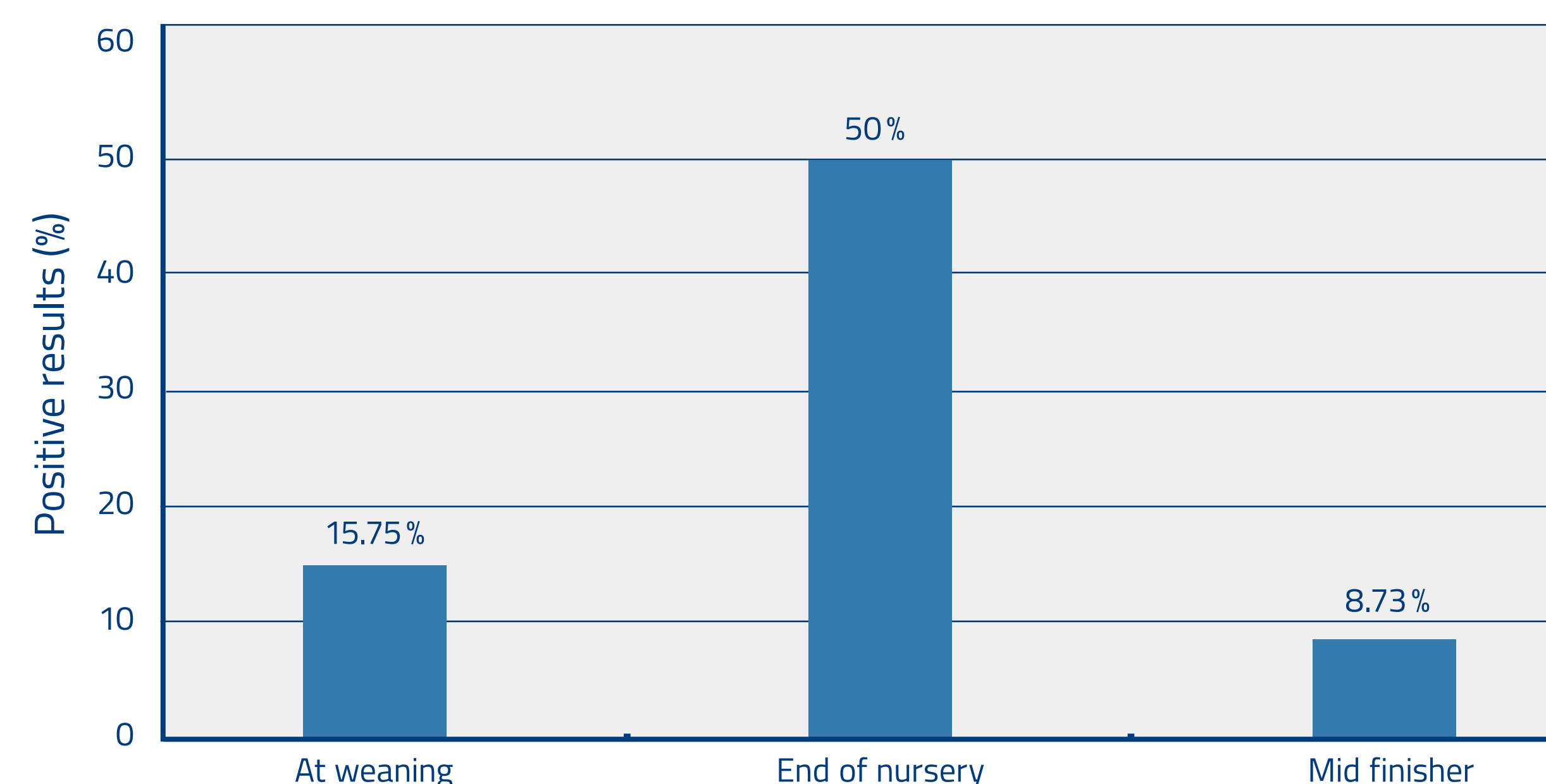
According to the questionnaire, the description of the sample was: 17,5% of farms as Farrow to finish (FF); 67% farrow to nursery (FN) and 14,5% multi-sites(MS) (Figure 1). Median size: 1221 sows, having a maximum of 5000 and a minimum of 300 sows.

Figure 1: Percentage of farm according to the production system.



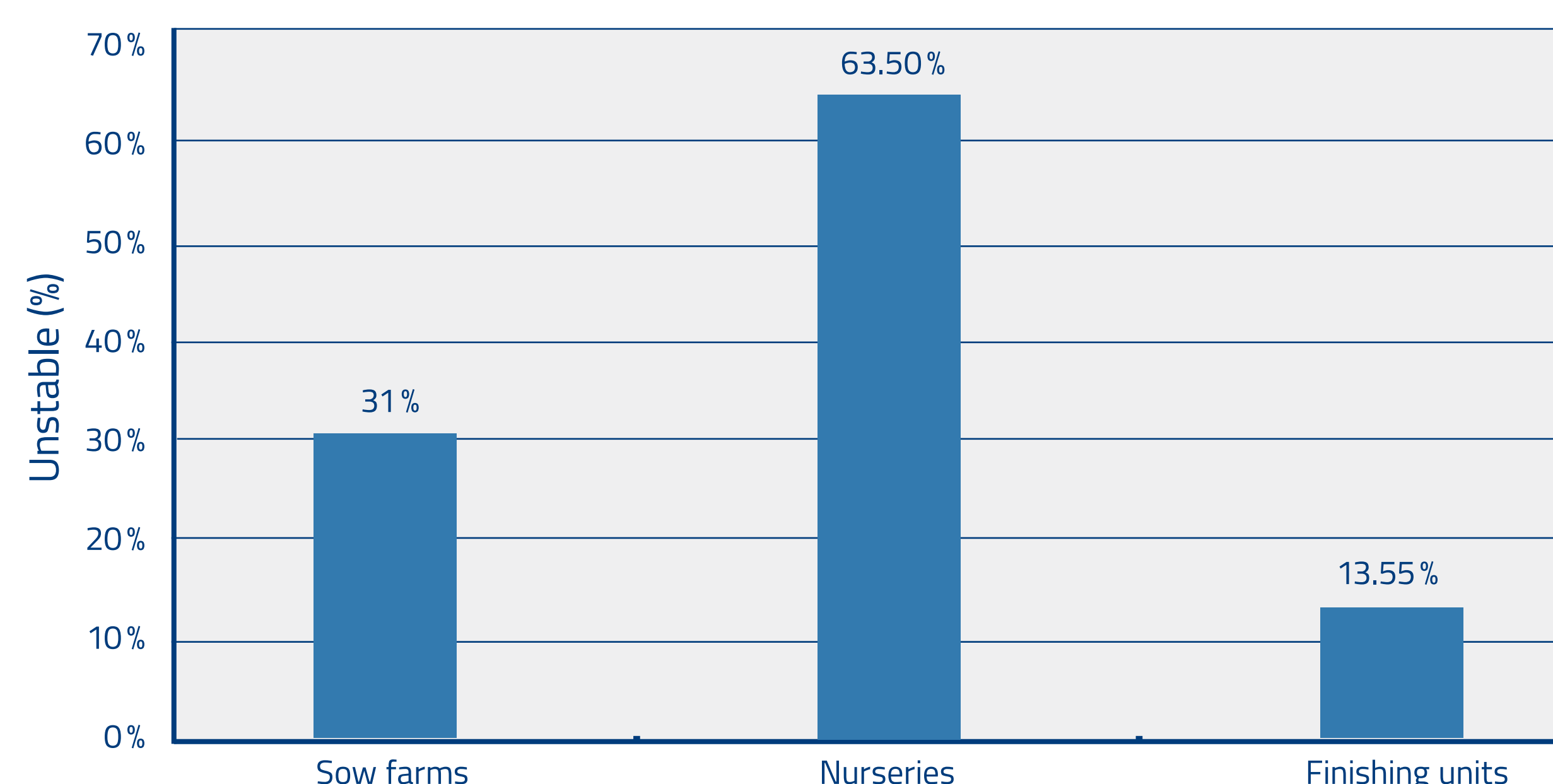
The percentage of modified-live virus (MLV) vaccination against PRRS in sows was 90.7% in contrast only 1% of the piglets were vaccinated. Prevalence to PRRS measured by ELISAs in the production flow was 100%. The overall percentage of positive PCR per production phase were 15.75% at weaning, the end of the nursery showed the highest PRRSv circulation with a 50% and 11.3% in blood and in OF, and finally in mid finisher only a 8.73% and 3.38% of the PCRs were positive in blood and in OF respectively (Figure 2).

Figure 2: PRRS PCR blood results by sampling point.



The overall percentage of unstable sow farms (at least one PCR positive) was 31%. According to the productions system the percentages were 41% in FF, 23% in FN and 42.8% in MS. The overall percentage of unstable nurseries was 63.5% been 13.55% the percentage of unstable finishing units. Figure 3.

Figure 3: Percentage of unstable farms by production phase



DISCUSSION AND CONCLUSION

Farms selected for this study were well representative for Spanish conditions in terms of production type and size. Wild type PRRSv prevalence by pig flow was 100%, having the highest circulation at end of nursery same results as other authors¹. The continuous flow in most of the nurseries may contribute to the maintenance of the virus, in contrast except in the FF all the finishing units within this study were all-in all-out. The percentages of PCR results in blood and in OFs didn't match and we are far to show a correlation between them. These results highlighted PRRSv presence and circulation in nurseries piglets as an important epidemiological event. For that, it should be considered changes in internal biosecurity, management flow and piglet vaccination in control and eradication programs in FF and FN farms.

REFERENCES

1. Angulo et.al ESPHM 2015. PRRSv Exposure Dynamic in Growing Pigs in European Farms Part I

