

# Use of PADRAP – Production Animal Disease Risk Assessment Program – In 167 farms in Spain



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## INTRODUCTION

Identifying and controlling internal and external risk factors for the introduction and spreading of pathogens are a key factor in disease control and prevention. The PADRAP-Production Animal Disease Risk Assessment Program- was developed to support the evaluation and management of risks that are predictive of clinical PRRS episodes for individual farm sites<sup>1</sup>. The objective of this study was to evaluate the biosecurity level of Spanish farms using PADRAP and to evaluate the differences between regions.

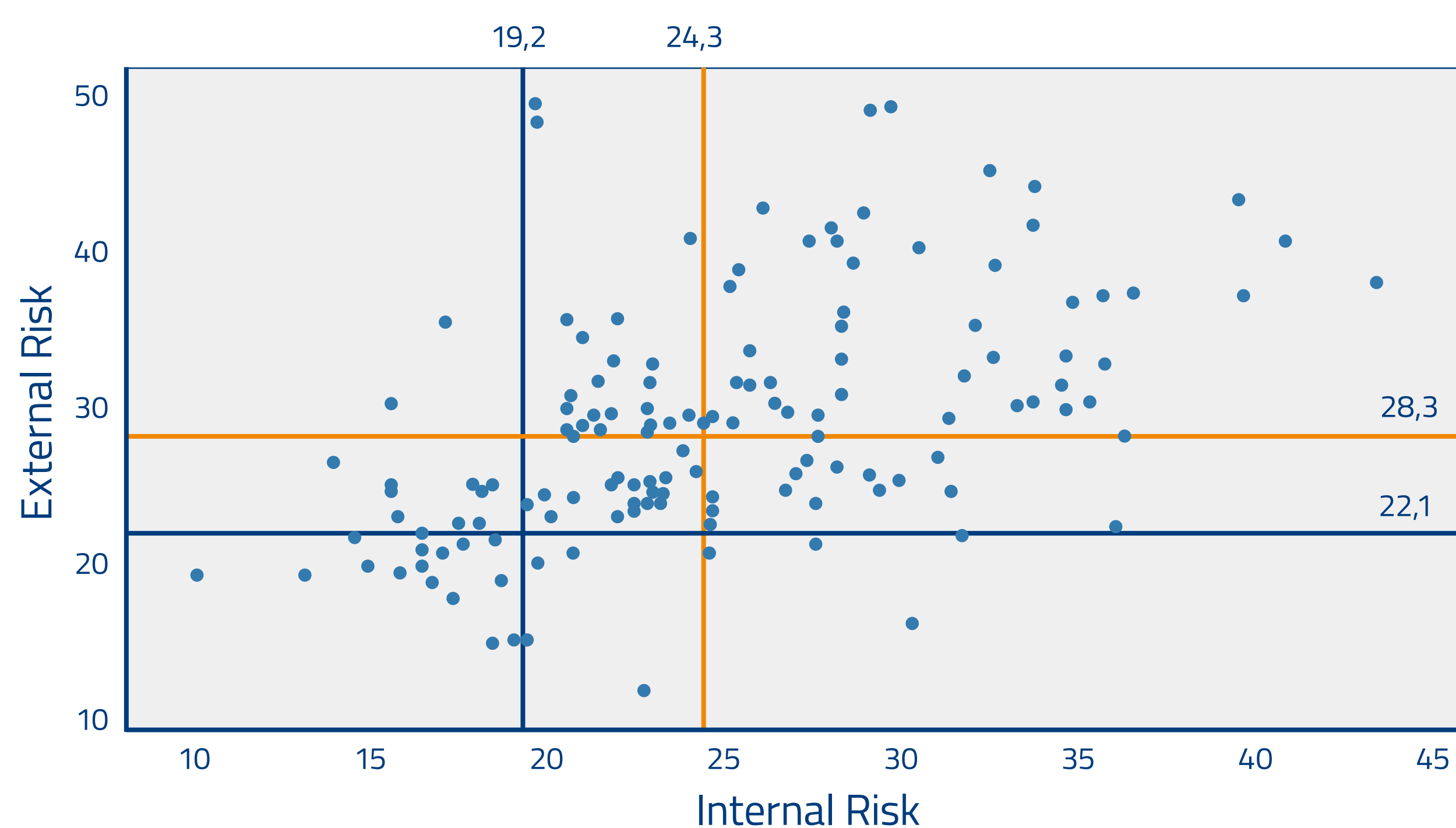
## MATERIALS AND METHODS

In Spain, 167 sow farms completed PADRAP on-line between 2014 and 2016 to assess the current biosecurity status. A scatterplot was used to compare the results between the 167 Spanish sow farms and other swine farms round the world in the PADRAP database<sup>2</sup>. Another scatterplot and a boxplot were used to compare the PADRAP scores and their dispersion between three Spanish regions, Central and Northwest (CNW), Northeast (NE) and Southeast (SE). Commercially available software (Minitab 17 for windows) was used for designing the statistical tables.

## RESULTS

The results of the 167 Spanish farms PADRAP scores compared with the farms around the world are shown in Figure 1.

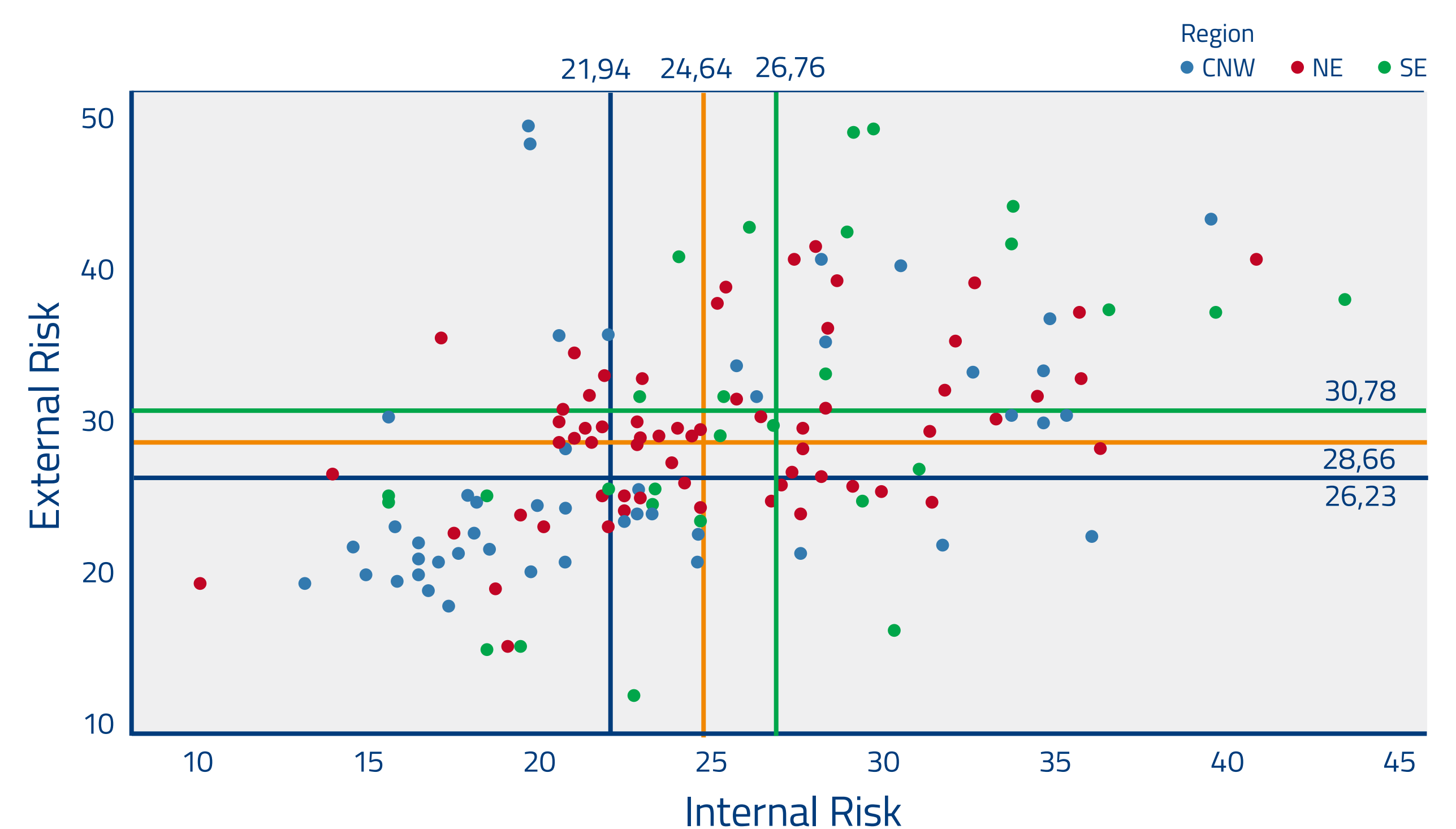
**Figure 1: Scatterplot of PADRAP scores for 167 Spanish farms.**



Both external and internal risks mean scores were higher in Spain (orange reference lines) than the global mean scores (blue reference lines). For internal risks the mean was 24.3 vs 19.2 and for external risks the mean was 28.3 vs 22.1.

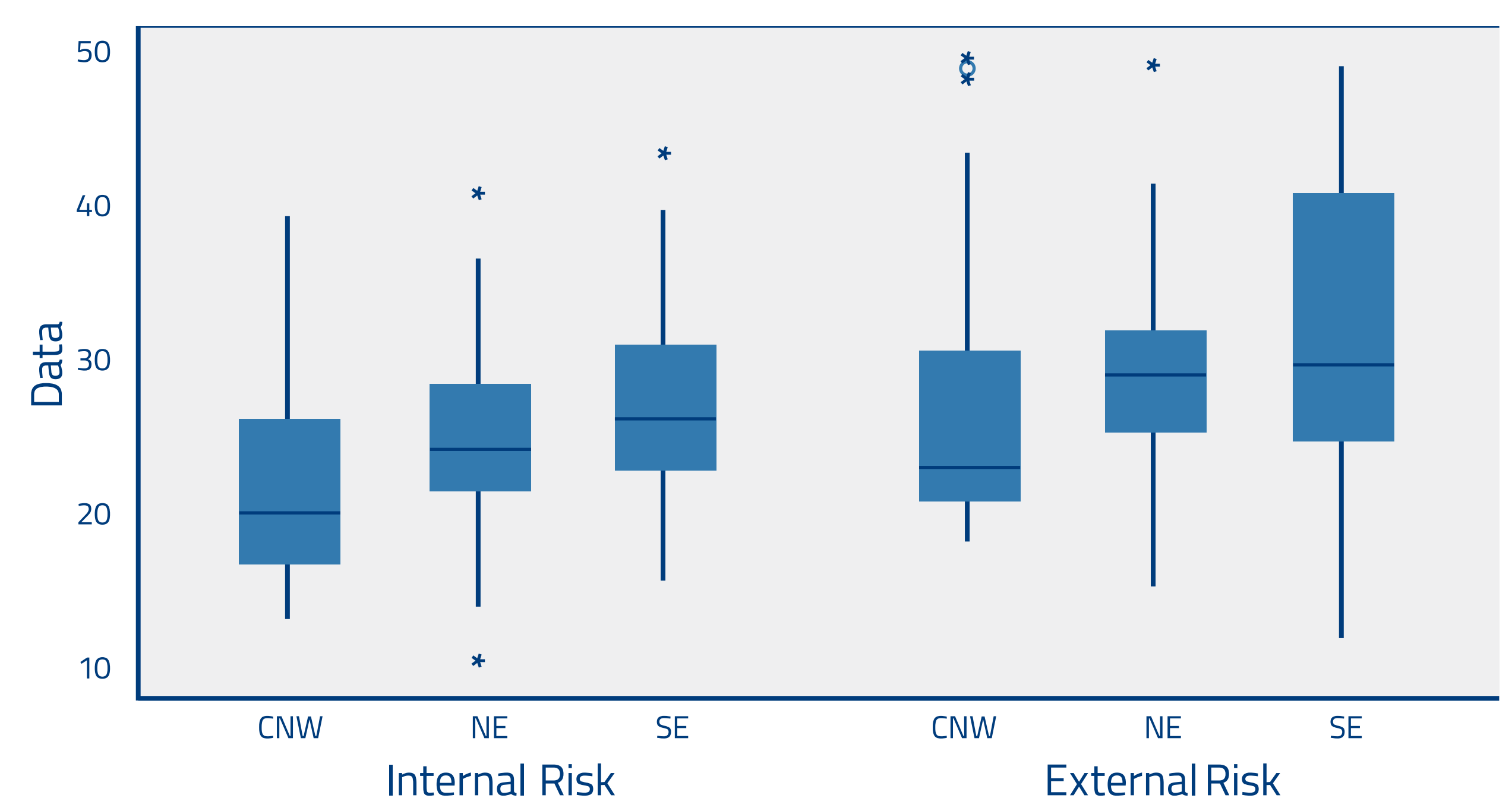
The comparison between regions is shown in Figure 2. The lowest mean scores for both internal and external risks were obtained in farms in region CNW (Blue reference lines) and the highest scores for both internal and external risks were obtained in SE (green reference lines)

**Figure 2: Scatterplot of PADRAP scores by regions in Spain.**



The Boxplot is shown in Figure 3. Both median scores for internal and external risks are also lower in the CNW region and higher in the SE region.

**Figure 3: Boxplot of PADRAP scores for external and internal risks in 167 Spanish farms.**



## DISCUSSION AND CONCLUSION

PADRAP is a tool to measure risks as well as to rank the farms. A correlation between less score and lower occurrence of PRRS outbreaks has been demonstrated<sup>3</sup>.

In Spain most of the analyzed farms have scores above the global mean scores and there are differences between regions. The results are worse in high pig density regions. However, we can also see differences in the internal risks. Therefore as the internal risks are not influenced by the pig density, all the farms, even the ones in the most high density areas, can make efforts to improve their biosecurity.

## REFERENCES

1. Polson et al 2006 IPVS 003-05
2. <http://padrap.org/>
3. Waddell et al. 2008. IPVS: P01-135

