

# Assessment of the preparedness of Spanish farms in the face of ZnO retirement.

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## BACKGROUND AND OBJECTIVES



'Sumando Esfuerzos' is a joint initiative among ANPROGAPOR (Spanish Swine Producer Association), PRAN (National program to reduce antibiotic resistance) and Elanco to help and guide the swine industry in the transition to Zinc

Oxide (ZnO) free feed. The group designed a checklist to assess the most important points to have into consideration in the farm to decrease the risk of having post-weaning diarrheas (PWD) in piglets after the removal of ZnO from the feed. The goal of this poster is to describe the results from 87 collected checklists.

## MATERIALS AND METHODS



Figure 1. QR code to the checklist.

The checklist has 35 multiple-answer questions divided in 6 sections: Piglet management in the farrowing room (7 questions), feed management strategies in the nursery (4 questions), hygiene and disinfection of the nursery (5 questions), environmental conditions in the nursery (5 questions), diagnostics, treatment and prophylaxis (4 questions) and nutrition (10 questions). The answers of the questionnaire are colored once the whole checklist is completed. The color code is red (points that are important and need to be addressed as soon as possible), yellow (points to be considered in order to reduce the risk of PWD or in the face of PWD) or green (points that are correct). The checklist can be accessed using the QR (figure 1). The results were described by using the percentage of answers in each question. Ward's method of hierarchical cluster analysis was applied by each section.

## RESULTS

Nine questionnaires were removed from the description as they were suspected to be tests as all the answers were 'a'. The percentage results for each question are summarized in figure 2. Some results worth highlighting are: 64% (50/78) of the farms weaned below 25 days of age (Q3), 33% (26/78) of the farms did not use creep feeding in the early nursery (Q11), 87% (68/78) of the farms cleaned and disinfected between batches (Q12), 50% (39/78) of the farms worked with densities below 0,2 m<sup>2</sup>/pig (Q21), 42% (33/78) of the farms did not know the susceptibility of *E. coli* farm strains (Q25) and lastly, 42% (33/78) of the farms were able to answer nutrition related questions, of those the questions related with the use of protein (Q30) were the ones with the highest proportion of red answers (55%; 18/33).

Nine clusters were identified in each of the sections. The nutrition section was not included in the cluster analysis due to the low number of answered checklists (figure 3).

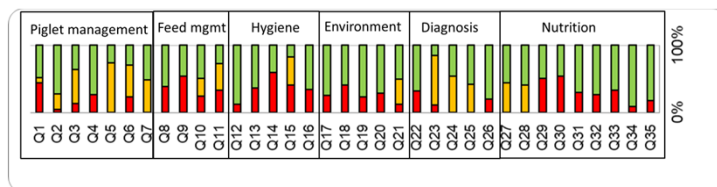


Figure 2. Summary of the percentage of each answer by question and section.

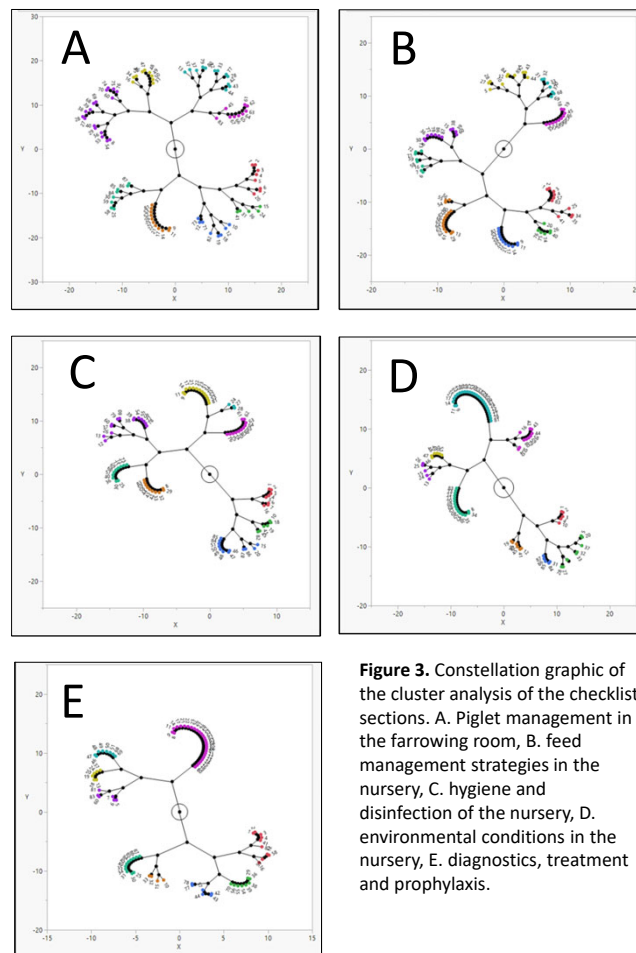


Figure 3. Constellation graphic of the cluster analysis of the checklist sections. A. Piglet management in the farrowing room, B. feed management strategies in the nursery, C. hygiene and disinfection of the nursery, D. environmental conditions in the nursery, E. diagnostics, treatment and prophylaxis.

## DISCUSSION AND CONCLUSIONS

Results from the study revealed a variability in the answers of the checklist. According to those results, the preparedness of the sector in front of the ZnO is heterogeneous. Some of the points that need to be improved are related with the feed management in the nursery, the hygiene of the installations and the nutrition.

The use of this checklist may serve as a starting point to define the ZnO removal preparedness status and can be a working document to prioritize future the actions to be taken.