Financial calculator for the economic losses caused by Oedema Disease and the return on investment of the vaccine ECOPORC SHIGA

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Introduction

Oedema Disease causes serious economic losses in a farm and psychological distress in farmers. Although the primary economic cost is due to the increase in mortality, other expenses due to therapy and prophylaxis (antimicrobials, acids, special feed) as well as the decrease in daily weight gain (DWG) should not be underestimated. The goal of this study is to establish an objective method to calculate the economic impact of ED in order to offer a tool to veterinarians to help them to decide whether or not to implement the vaccine ECOPORC SHIGA.

Material and methods

The calculator is an excel file that is divided into 4 parts. It takes into account the individual situation of a farm and is based on the results obtained since the launch of the vaccine.

Results

1. **Presentation of farm data:** Performances, costs of feed, price of the products sold (pigs or piglets) and information about ED (percent losses, weight at death, costs of control strategies)

2. **Economic impact ED:** The economic impact of a mortality is based on the value that it would have brought if the piglet did not die minus the costs not yet consumed (feed etc.). The costs of the control strategies must be filled as the costs per piglet

3. **Technical improvement in order to recover the cost of the vaccination:**
   a: criteria (separately): what is the decrease of the percent mortality needed OR by how much does the g/day of DWG have to increase in order to pay for the vaccine.
   b: criteria (combined in cascade): percentage of the investment in the vaccine recovered with the decrease in mortality and then the rest of the investment to be covered with the DWG.
   c: real gain of the additional DWG is calculated: it is figured into additional weight if the ideal market weight is higher than the current one OR in an shorter fattening period (fewer days needed to the market) if the current weight is already ideal

4. **Economical synthesis of the vaccination.** Summary of the net investment in the vaccination (cost of the vaccine minus the control strategies removed), the financial gain due to the reduction of mortality and the increase in DWG, leading to the net gain of the vaccination (per farm, per sow and per piglet weaned). In the end, the percentage of return on investment (ROI) is calculated (100 % meaning that for €1 invested, the return is €2).

Conclusion

This calculator has been designed in a comprehensive and objective tool in order to help the veterinarian to make decision whether to vaccinate or not. Tablet and smartphone versions are also available. ▪