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## Introduction

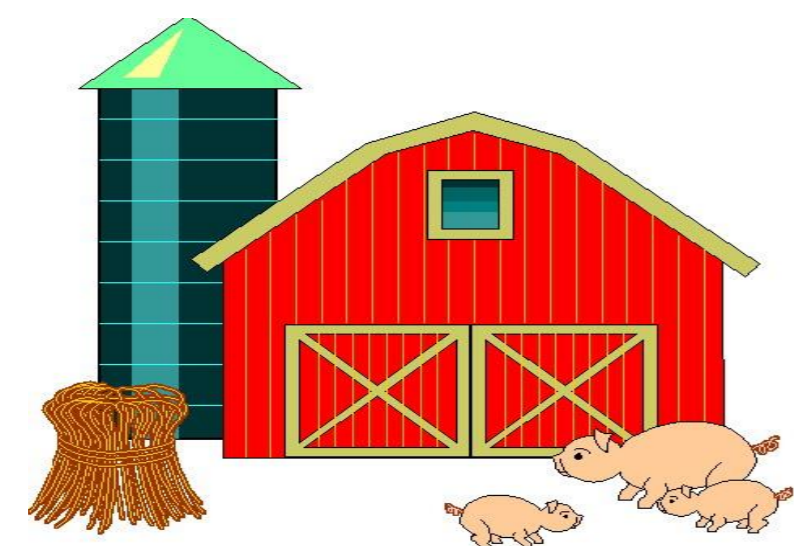
High antimicrobial use on pig production. Farmers are encouraged to reduce antimicrobial use:

1. Responsible antimicrobial use
2. Shift to use preventive measures

## Objective

Estimate the farm-level costs and benefits of reducing antimicrobial use and simultaneously improving the biosecurity level and herd management.

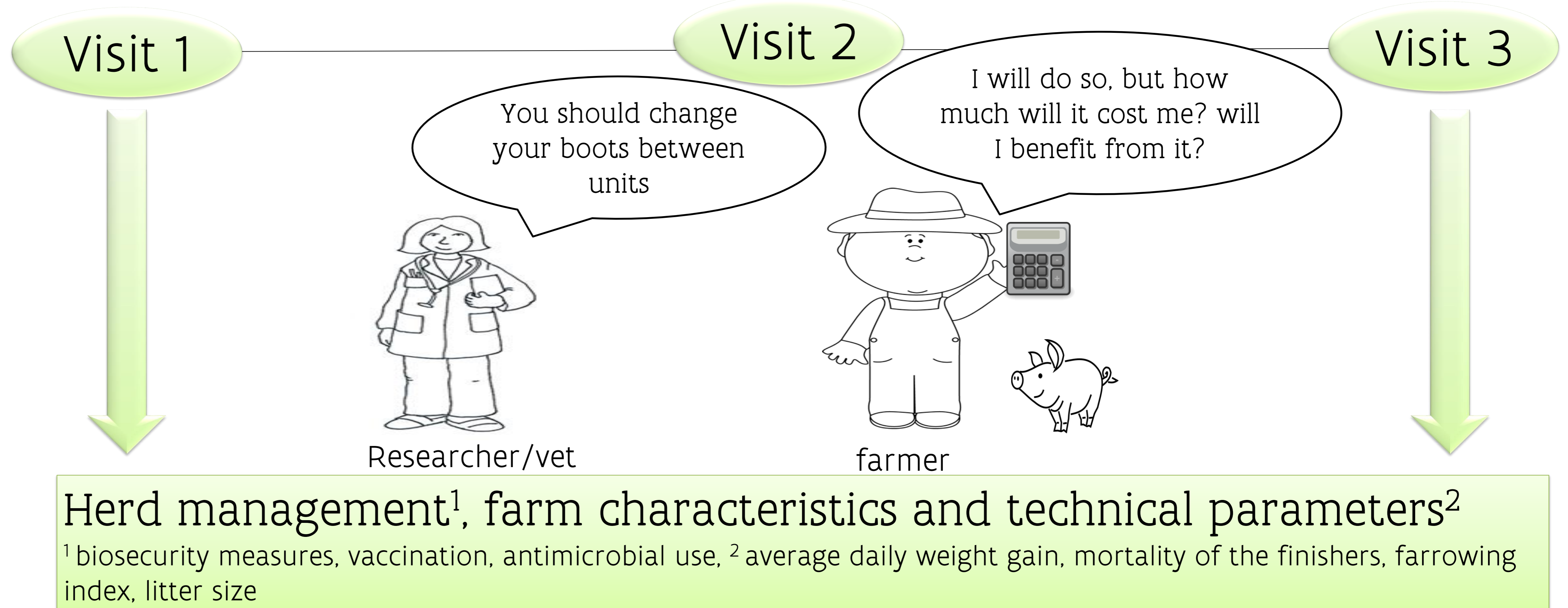
## Materials and methods



n=48 **advised** Flemish farrow-to-finish pig farms

n=59 **control** Flemish farrow-to-finish pig farms from FADN<sup>3</sup>

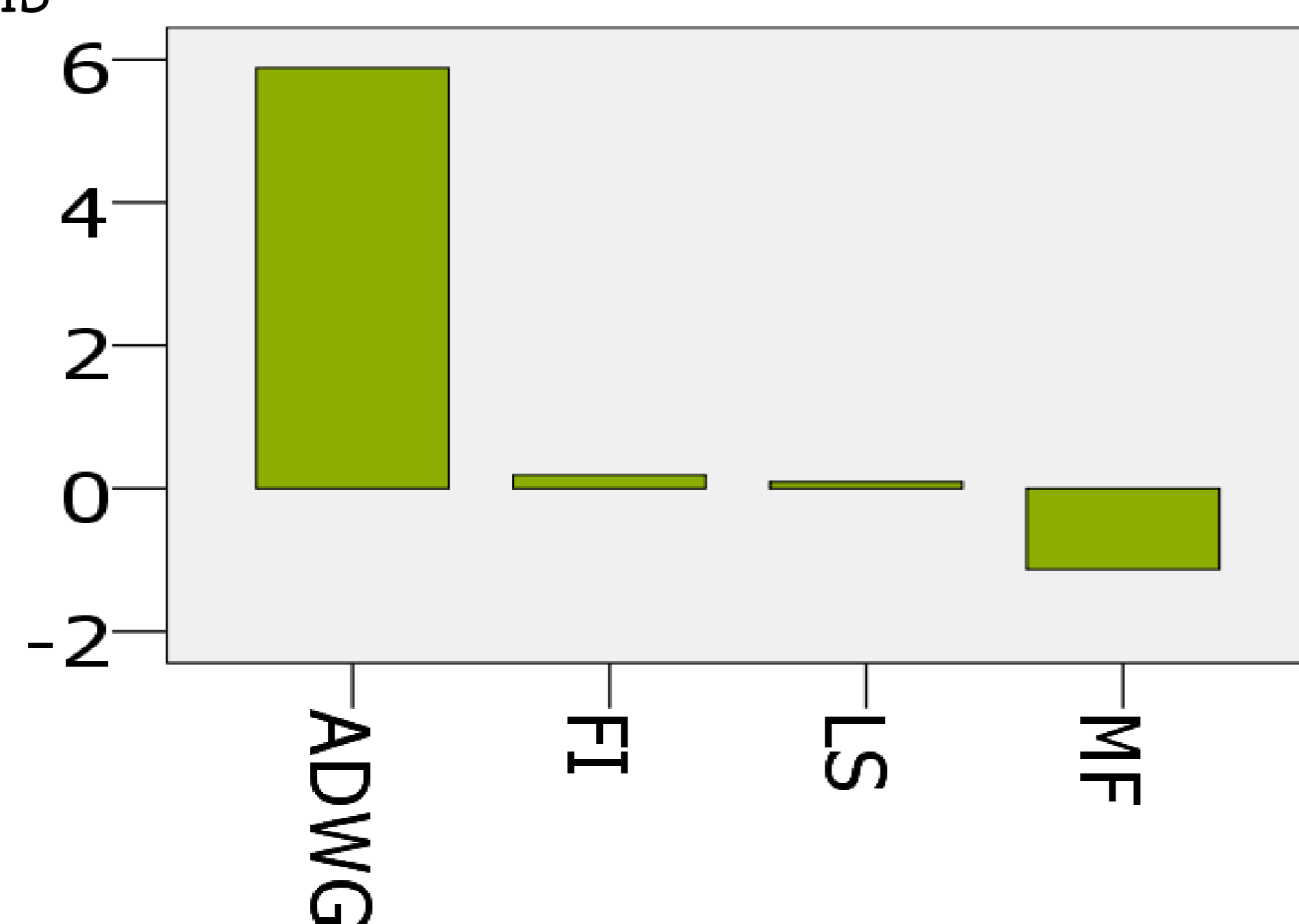
<sup>3</sup> Farm accountancy data network



- Propensity score matching of advised with control farms to examine the effect on technical parameters
- Estimation of the costs of biosecurity measures, antimicrobial and vaccinations use
- Use of a production economic model to estimate the benefits acquired

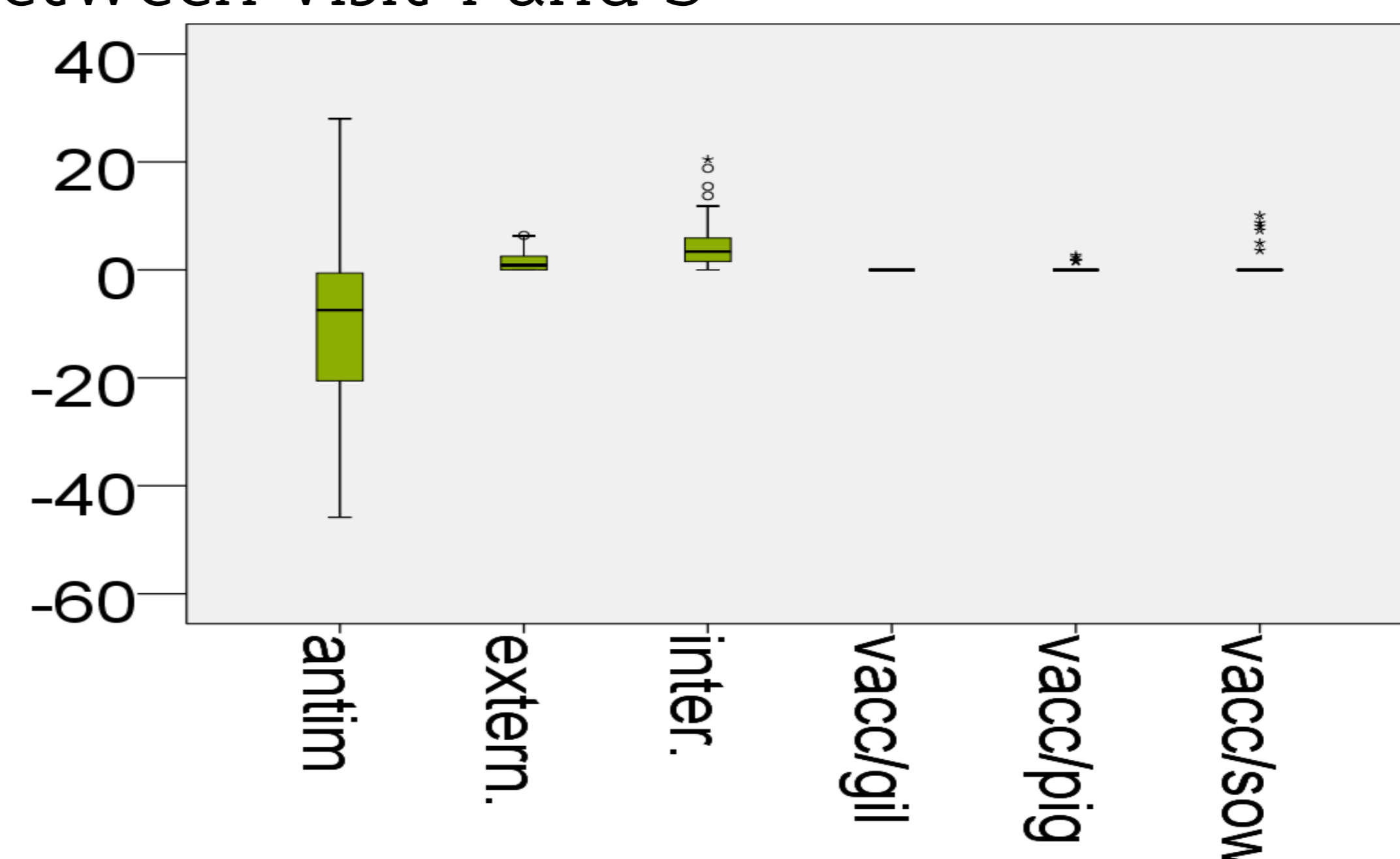
## Interim results

Bar-plot of the difference-in-difference (%) of technical parameters between advised and control farms



ADWG: Average Daily Weight gain, FI: farrowing index, LS: Litter size, MF: Mortality till finishing

Box-plot of the change on the costs (€) of biosecurity (internal and external), vaccination and antimicrobial use between visit 1 and 3



antim: Antimicrobials/sow/year, extern: external biosecurity/sow/year, intern: internal biosecurity/sow/year, vacc/gil: vaccination/gilt/year, vacc/pig: vaccination/piglet/year, vacc/sow: vaccination/sow/year

The net benefit increased on average € 5.36/average present finishing pig/year on farms which have implemented the advised interventions

## Conclusion

Farmers can shift from preventive antimicrobial use to implementing biosecurity strategies without reducing productivity with a positive profit

