Sow removal patterns in Norwegian and US herds

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Health and robustness project

• The overall idea is to develop new methods and strategies in order to increase the general robustness and disease tolerance of Norwegian pigs in both Norwegian and foreign markets.

• Identifying available phenotypes that could help in describing the innate robustness of pigs more accurately.
Introduction

- Length of productive life is directly related to¹:
  - number of piglets produced
  - infertility rates
  - average litter size
  - Non-productive days

- Herds with a low replacement rate are the most profitable²

- Ethics and animal welfare consideration

¹ Diaz et al., 2015 (in: The gestating and lactating sow), ² Faust et al., 1992, 1993,
Data

- Removal records from 5308 sows in US commercial herds
- Removal records from 47607 sows in Norwegian commercial herds
- Collection period: January 1st 2014 – June 30th 2016
- Data collected from the national litter recording system Ingris
- 37 removal categories → 11 main categories
Method of removal

USA | NORWAY
---|---
Dead/euthanized | Slaughtered

Within category and between countries different lettering notes statistical difference $P < 0.0001$
Within removal reason and between country different lettering indicates statistical difference P <0.001
Reproductive failure

- 25 and 27% of all sows are culled due to reproductive failure in US and Norway respectively.
- 40% of all culling's due to reproduction occurs between first mating and immediately after first farrowing.
- Sows culled at an early stage is costly, and the initial replacement cost has not been made.
- It is also a welfare concern.
Longevity

Avg. herd life in USA: 506d ± 3.37(SEM)

Avg. herd life in Norway: 615d ± 1.18(SEM)
Conclusions

- More dead/euthanized sows in US compared to Norway
- Removal categories differ somewhat between country, but the removal patterns show similarities
- Reproductive failure is the number one culling reason
- Almost a quarter of all removals, regardless of country, are registered as unknown
Implications

• Simplification of removal registrations needed
• More focus on reproduction
• Improved profitability with improved longevity
  - In Norway alone an extra piglet weaned per litter amounts to 11.7 mill/€ in increased revenue
  - for the Nordic marked alone a reduction in removal rate of 20% means annual savings of around 3 mill/€
• Better animal welfare
Thanks for your attention