Association between Parity Proportion and Production in Landrace Sows

Namtip Jirattikanpan

Thanathip Suwanasopee¹, Skorn Koonawootrittriron¹, and Mauricio A. Elzo²

¹Department of Animal Science, Kasetsart University, Thailand,
²Department of Animal Sciences, University of Florida, Gainesville, Florida, USA
Swine production in Thailand

- 978,032 Purebred pigs
- 5,916,596 fattening pigs

Source: Department of Livestock Development (2015)
Factors affecting sow production

Breed

Management

Age

Production sows

(NTB and NBA)

NTB = number of total piglet born; NBA = Number of piglet born alive
Parity proportion (PP)

Parity 1
Parity 2
Parity 3
Parity 4
Parity 5
Parity 6
Parity 7
To study association between parity proportion and production in Landrace sows
Dataset and Management

- **1,699 animals** (Landrace sows)
- **7,448 little record**
  - number total piglet born (NTB)
  - number piglet born alive (NBA)
- 2004 to 2013
- Commercial farm (opened-house system)
- All gilts were receive similar feed
  - 16% to 18% crude protein (CP)
What is Parity proportion?

Parity Proportion (PP)

The number of farrowing sows in each parity

\[
\text{Parity proportion} = \frac{\text{The number of farrowing sows in each parity}}{\text{Total sows}} \times 100
\]

Classification

- PP1
- PP2
- PP3
- PP4
Materials and Methods

- 1,699 animals
- During 2004 to 2013
- Classification (PP1, PP2, PP3 and PP4)

Number of total piglet born (NTB)
Number of piglet born alive (NBA)

Data analysis

Correlation of sow production

Distribution
Results and Discussion
## Classification of Swine

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Parity proportion of swine
Correlation of NTB and NBA
NTB and NBA were negatively correlated with PP1 and PP2 (range = -0.37 to -0.64), and positively correlated with PP3 and PP4 (range = 0.22 to 0.68)
Maintaining a suitable proportion of parities of sows in the production herd should be designed in order to keep a desirable annual piglet production for the commercial swine operation.

Larger proportion of the 3\textsuperscript{rd} to the 5\textsuperscript{th} parities (> 40 percent) should be considered.
Acknowledgements

Commercial Swine Farm

Department of Animal Science, Faculty of Agriculture, Kasetsart University, Bangkok, Thailand

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Thank you for your attention