

Optimal finishing feed strength for finishers has increased



Karoline Blaabjerg

Chief Scientist, SEGES Innovation, Livestock

Email: kabl@seges.dk



Sabine Stoltenberg Grove

Consultant, SEGES Innovation, Livestock

Email: sasg@seges.dk



Per Tybirk

Chief Consultant, SEGES Innovation, Livestock

Email: pet@seges.dk

Abstract

The trial was conducted based on promising results in practice feeding a higher finishing feed strength to finishers than previously recommended. Therefore, the trial was designed to investigate the effect of finishing feed strengths of 3.0, 3.2, 3.4, 3.6 or 3.8 Feed Units for finishers (FUgp) per day (approx. 9.1 MJ NE per FUgp or 9.5 MJ NE per kg dry feed with 86 % dry matter leading to approx. 2.86, 3.05, 3.24, 3.43 or 3.62 kg dry feed per day) on productivity and production value. The trial was conducted in a DanBred herd using *liquid feeding* and 13 weeks interval of batch operation. For the herd in this trial, a finishing feed strength of max. 3.4 FUgp/day (3.24 kg dry feed per day) resulted in the numerically highest production value per pig. In general, this strength seems to be a good starting point for many herds. Production value per pen place per year was highest for max. 3.6 FUgp/day, differing significantly from max. 3.0 or 3.2 FUgp/day, but not from max. 3.4 and 3.8 FUgp/day. This was the case for both female pigs and castrates that differed significantly from each other in production values. Overall, the trial shows that it is possible to use the finishing feed strength as a tool to find the right compromise between slaughter weight and meat percentage. Herds with “time constraint” in the batch operation interval will benefit from a *high* finishing feed strength, while herds with less “time constraint” in the batch operation interval can use a slightly *lower* finishing feed strength to achieve a higher meat percentage.

Keywords: finisher, finishing feed strength, feeding strategy, liquid feeding.

Introduction

SEGES Innovation has previously recommended a finishing feed strength of max. 2.8-3.0 FUgp/pig/day (approx. 9.1 MJ NE per FUgp). However, in recent years, pig producers and advisors have frequently reported that the optimal finishing feed strength has increased and now exceeds 2.8-3.0 FUgp/pig/day. Furthermore, a recent trial by SEGES Innovation in a herd with DanBred animals showed that today's pigs can cope with a higher finishing feed strength without compromising meat percentage and feed utilisation considerably. In the previous trial, a higher production value was achieved with ad libitum feeding compared with restrictive feeding at 3.1 FUgp/pig/day from 60 kg as the gain, i.e., weight gain and slaughter weight, was worth more than the loss in meat percentage [1]. However, this trial was conducted with dry feed and did not investigate the finishing feed strengths between 3.1 FUgp/pig/day and ad libitum feeding, when feeding liquid feed. Therefore, the present trial was designed with *liquid feed* and maximum finishing feed strengths of 3.0, 3.2, 3.4, 3.6 or 3.8 FUgp/day (approx. 9.1 MJ NE per FUgp or 9.5 MJ NE per kg dry feed with 86 % dry matter leading to approx. 2.86, 3.05, 3.24, 3.43 or 3.62 kg dry feed per day). The pigs were fed one diet from 30 to 115 kg containing 133.2 g digestible protein/FUgp and 9.19 g digestible lysine/FUgp. The trial was conducted in a herd practicing 13 weeks interval of batch operation and comprised in total 7,486 pigs divided on the five finishing feed strengths [2].

Productivity

The pigs achieved a high productivity at all five finishing feed strengths of max. 3.0, 3.2, 3.4, 3.6 or 3.8 FUgp/day. The drop in meat percentage when feed strength increased was smaller than in earlier trials. Daily gain increased with increasing finishing feed strength from 1,065 to 1,173 grams/day, and meat percentage decreased from 63.7 to 62.3%. Feed utilisation was unchanged at 2.53 FUgp per kg gain when the results were corrected to the same weight interval (30-115 kg).

In the trial, female pigs and castrates were divided, and thus, production results could be separated for each gender. The castrates had a lower feed efficiency, as they consumed 0.1 FUgp more per kg gain, and a lower average meat percentage of 1.0 percentage points compared to the female pigs. With the better feed utilisation, the female pigs achieved a higher growth rate than the castrates. However, this gap narrowed with increasing finishing feed strength, as the difference was 53 grams/day at a maximum of 3.0 FUgp/day and only 14 grams/day at max. 3.8 FUgp/day. The smaller difference between female pigs and castrates fed the highest finishing feed strengths is attributed to a higher feed intake for castrates compared with female pigs that failed to eat 3.8 FUgp/day in all pens (Figure 1).

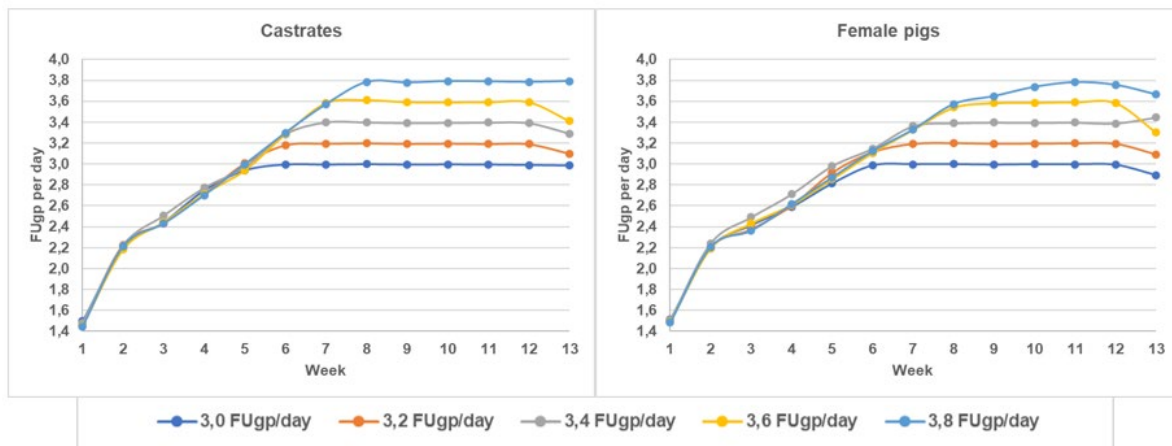


Figure 1 – Finishing feed strengths of max. 3.0, 3.2, 3.4, 3.6 or 3.8 FUgp/day during week 1 to 13 for castrates and female pigs. Note that especially the female pigs could not consume the amount of feed at the higher finishing feed strengths.

Production economy

In the trial, the production value per pig (gross margin per pig based on prices for the last 5 years) was numerically highest at a finishing feed strength of max. 3.4 FUgp/day. At a finishing feed strength lower than this, the higher meat percentage could not compensate for the smaller weight gain (and thus slaughter weight) and at higher finishing feed strength, the marginal increase in slaughter weight could not compensate for the loss in meat percentage.

The highest production value per pen place per year was achieved at max. 3.6 FUgp/day, but it did not differ significantly from max 3.4 and 3.8 FUgp/day. On the other hand, there was a significant difference to pigs fed a maximum of 3.0 or 3.2 FUgp/day. This was the case for both female pigs and castrates that differed significantly from each other in production values.

The trial demonstrated that if the batch operation interval could be reduced, the production value per pen place per year could be improved by increasing the finishing feed strength to max. 3.6 or 3.8 FUgp/day. However, this only applies if the increase in finishing feed strength generates a higher turnover of pigs in the system each year.

Sectional sorting

Based on the results from the present trial, it is worth considering whether the pigs should be sorted by size in the section. In practice, this can be done by allocating the smallest 50 % of the pigs on a finishing feed strength of max. 3.6 FUgp/day, while the largest 50 % is allocated on a finishing feed strength of max. 3.2 FUgp/day. This will result in the small pigs in the section achieving optimal slaughter weight at the same time as the large pigs that in turn achieve a higher meat percentage.

Conclusion

The trial shows that great production results can be achieved with DanBred genetics, and that the optimal finishing feed strength is higher than found in previous studies. A finishing strength of approx. 3.4 FUgp/day seems to be a good starting point for many herds.



However, the trial also shows that it is possible to use the finishing feed strength as a tool to find the right compromise between slaughter weight and meat percentage, where herds with “time constraint” in the batch operation interval will benefit from a high finishing feed strength, while herds with less “time constraint” in the batch operation interval can use a slightly lower finishing feed strength to achieve a higher meat percentage.

Acknowledgements

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References

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