

Risk factors for poor feed conversion ratios in finishers

Trial report 813, April 15, 2008

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Abstract

A risk factor study was conducted in 100 herds with a good feed conversion ratio (control herds) and in 100 herds with a poor feed conversion ratio (case herds). The study thus comprised 200 herds divided among two herd groups:

Group 1 (control):	Good feed conversion ratio (max. 2.75 FUgp per kg gain)
Group 2 (case):	Poor feed conversion ratio (min. 2.92 FUgp per kg gain)

The herds were selected on the basis of the last year's production results. All the herds were included in the national average for the P control in DLBR-Svine IT. The study consisted of one visit to each herd during which an interview was conducted on the basis of a questionnaire that included questions concerning feed and feeding, design of the facility, climate/ventilation in the facility, health and management. Furthermore, recordings were made in three sections per herd concerning feeding, design of the facility, climate/ventilation and health. The diets in each herd were analysed for particle distribution (grinding) and for content of water and crude protein. A personality test was made of the person in charge of the finisher facility. In herds with a sow unit, a weaner index was calculated, which showed the breeding value of the pigs. Furthermore, information was collected via VetStat concerning medicine consumption and information on the prevalence of chronic adhesive pleurisy was obtained from the slaughterhouse settlements.

The risk factors with the greatest influence on the feed conversion ratio of finishers were calculated. The results were computed as relative risk (Odds Ratio) for poor feed conversion ratio corresponding to min. 2.92 FUgp per kg gain compared with the probability for a good feed conversion ratio corresponding to max. 2.75 FUgp per kg gain.

The study revealed that the relative risk for a poor feed conversion ratio is:

- 5.1 times higher in herds with a grower facility
- 4.1 times higher in herds where the pigs suffer from respiratory disorders requiring group medication
- 2.9 times higher in herds with continuous operation in the finisher sections
- 2.6 times higher in herds with feed mixed on-farm
- 2.5 times higher in herds with liquid feed
- 1.3 times higher when the percentage of unthrifty pigs increases by 1%

Four of these six risk factors are directly or indirectly related to health matters including disruption of infections. This applies to the factors: grower facility, respiratory disorders, continuous operation and unthrifty pigs. Good health conditions and efficient disruption of infection are therefore essential in obtaining a good feed conversion ratio.

The two risk factors concerning feed (mixed on-farm and liquid feed) are assumed to be related to incorrect management of mixing and feeding equipment in many herds. In herds with computerised mixing and feeding equipment, the risk of errors is expected to be higher than in herds using pelleted purchased feed fed via simple dry feeding systems. When using feed mixed on-farm and/or liquid feed, it is therefore crucial to check and manage the mixing and feeding system optimally to minimise the risk of errors in the mixing and feeding process and thereby obtain a good feed conversion ratio.

Besides the six risk factors for poor feed conversion ratios that constitute the main result of the study, the study also demonstrated that many of the other factors that were investigated within feed and feeding, design of the facility, climate/ventilation, health and management also influence the feed conversion ratio to a minor degree.