

Effect of extra fibre and feed texture on gastric health in sows

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Abstract

The effect on gastric health in sows of adding extra fibre (the addition of 10% sugar beet pellets) or increasing feed texture (the addition of 20% rolled oats) to gestation diets was studied in two herds using purchased diets. In the herd in which 10% sugar beet pellets were added to the gestation diet, the fibre content of the lactation diet was also increased.

The stomachs from all the slaughter sows were examined for changes in the white part in a period when the sows were given a regular grain mix in the gestation and lactation periods. Subsequently, the diets were altered according to the abovementioned, and the stomachs from all the slaughter sows were examined for changes for a period of time. The results of the gastric changes were expressed in a total gastric index.

The slaughter sows were culled according to the regular culling strategy in the herds. The distribution of sows culled after weaning, from the service facility and from the gestation facility was the same in both periods.

In the herd using extra fibre, a significant improvement was observed in the gastric index (reduction of 0.7 units), while the addition of rolled oats to the gestation diet did not result in any improvement.

The results of this trial indicate that it is possible to improve the gastric health by adding extra fibre in the form of sugar beet pellets to the gestation diet and extra fibre to the lactation diet. No effect was found on the gastric health of the sows from increasing the feed texture in the gestation diet. This result was unexpected and is attributed to the fact that the feed texture of the lactation diet was not changed. This indicates that the feed texture and the content of fibre must be increased in both the gestation diet and the lactation diet before an overall improvement in the gastric health of slaughter sows can be expected.

This type of investigation (observational longitudinal intervention study) with a before and after period provides an impression of whether a change in diets can affect the gastric health. However, it cannot unequivocally establish whether the dietary changes made alone result in this effect or whether other factors have contributed. To be able to unequivocally describe and quantify an effect of feed on the gastric health, an investigation must be made with two parallel groups.

Subsequently, further investigations have been initiated under Danish Pig Production to establish the level of dietary fibre and feed texture in sow feed necessary to affect the gastric health positively.