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Quickfeeder

A New Feeding Technique for Sow Group Housing

Sows in group housing can be fed group-wise rationed, computer-supported individually or ad libitum. Ad libitum feeding has too many disadvantages. It should be used only for flushing-feeding after weaning the piglets. Computer-supported feeding requires knowledge about computer technology and very good management. With the quickfeeder a simple and cheap technique for synchronised feeding of sows was developed.

The quickfeeder is a feeding system with a long trough which is mostly installed along the wall (fig. 1). At the trough, feeding places with a width of 45 cm are positioned, restricted by 50 up to 60 cm long side-walls between every feeding place. The width of feeding places for gilts is 40 cm. An auger-linked dispenser with a down-pipe integrated in the side-wall is placed above the trough in the middle between two feeding places (fig. 2). One feeding place in a group pen has its „own“ dispenser. So, one dispenser can be closed, if one sow has to leave the group pen. Therefore, uneven numbers of sows per group can also be fed. Using the double trough, a partition wall in the middle of the trough prevents that those sows feeding on opposite places can reach the feeding place of the other sow vis-a-vis. The double trough is cheaper than the single long trough, because the trough as the most expensive part can be used by two sows at any rate.

In the trough, an aqua-level waterer is placed so that all sows of the group have always free access to water ad lib. No additional nipple waterer is needed. The aqua-level waterer ensures always a defined level of water in the trough. While a sow is drinking the consumed amount of water is always replenished in the long trough so that the water level remains constantly between 3 to 4 cm. It is recommended to have partition walls also in the trough between different group pens. So, the water pipe in this group can be

closed or the feed-water-mixture can not flow from one pen to the other if one group is removed from the pen.

The function of the quickfeeder

A portion of feed enough for two sows is given 1 - 2 times per day to a defined amount of water into the trough. The feed is placed in the middle between two feeding places so that the two sows have free access to the same amount of feed. By this way, sows of the group have the same opportunity to get nearly the same portion. Shortly before the dosage of feed the water pipe will be closed to ensure that during the feed intake no water will flow into the trough. So, the feed-water-relationship will be nearly the same during eating. Opening or closing the water pipe can be done manually or by a magnetic valve.

It is possible to observe all sows eating at the same time making the daily health check of all sows, especially in large groups, easier. Sick animals can be identified and quick treated. The health control needs only approximately 5 minutes for all sows per day. It is recommended to install the quickfeeder parallel to the control corridor. So, the rear parts of the sows eating can be controlled (fig. 3). Based on synchronous eating, the farmer detects when first sows of the group have eaten their feed portion after 4-5 minutes (sows), or after 6-7 minutes (gilts), when starting to

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Keywords

Sows, group keeping, feeding

Fig. 1: Quickfeeder as long trough version

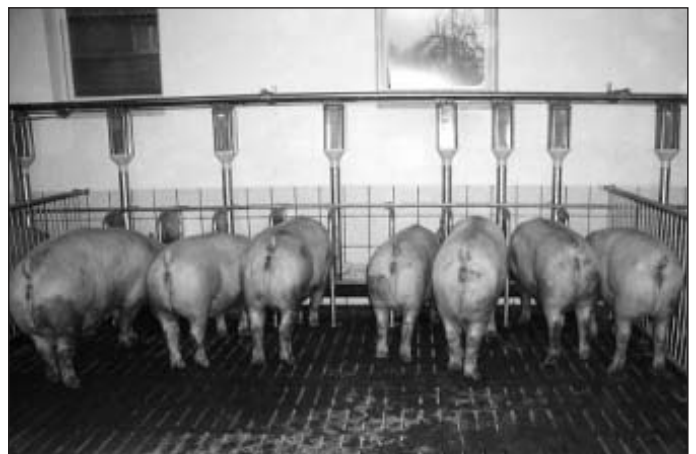




Fig. 2: Quickfeeder in detail

become fidgety. Just in this moment, it is recommended to open the water pipe again. After the eating the sows want to drink. So, the sows eating quicker than the pen-mates are highly motivated to stay longer at the trough to drink. Differences in fastness of feed intake can be adjusted.

Recommendations for management

Sows at quickfeeder are fed group-wise rationed. It is recommended to divide the sows into pens based on their size and body condition and to feed them with different portions (dosage via dispensers). A different feeding depending on performance and constitution in two groups with six sows each is possible from a herd size of 84 sows (3-week-rhythm) or 120 sows (2-week-rhythm). It is recommended to limit the group size to 16 sows. The feeding system can be used very flexible in different buildings and with



Fig. 3: Quickfeeder – configuration in the group pen

slatted or concrete floor. The minimum floor area available to each pig defined by EU directive 2001/88/EG is 2.25 m² for sows. The quickfeeder meets these space requirements. The costs per feeding place are low compared with other systems (60 to 70 € per sow).

Caused by the wet consistency of feed the mean duration of feed intake is only between 5 min (sows) and 7 min (gilts). The number of interactions and displacements during eating is very low because the sows are focused on feed intake.

The quickfeeder can also be used for raising the gilts. Gilts are fed in many breeding farms ad libitum during raising period. But, there is an increasing number of information indicating that gilts have in their early development too high daily gains leading to claw and hind leg problems. With the quickfeeder a simple and cheap feeding system for gilts is available.

Conclusions

The quickfeeder has the following advantages:

- simple installation,
- no learning to get feed by sows is necessary,
- below average costs per feeding place,
- quick daily health check also in large groups of sows because sows always eat at the same time,
- suitable for use in different buildings and pens,
- adaptable to varying group sizes,
- low frequency of fighting or bullying at trough because of the quick eating a wet feed,
- low intensity of management necessary,
- groups can be created to suit a particular feeding regime.

There are only a few disadvantages:

- restricted, but not individual feeding,
- no automatic selection of sows.