

Electronic Sow Feeder

FRIDAY, 19 MAY 2017 BY GILBERT VANDENHEUVEL



~~By Gilbert Heuvel~~

A little background information:

History tells us the the pigs was domesticated in Cyprus more the 11,400 years ago. They where first hunted but over time it was noticed that if food was presented to them, the pigs would come into pens at the edge of medieval villages. From there, pigs where brought inside to avoid parasites and increase production. Productivity (thus lowering per unit costs) has been the driver for barn and equipment design and technology ever since. Sow Stalls/Crates where part of this advancement in technology . In North America the farrowing and

gestation stall were developed and put into large scale production in the 60's but crates were used in various forms for many years before this in Europe.



Sow stalls have worked well to design a low cost building, allow for individual sow feeding, allow for worker/sow interactions such as AI and produced a sow with less injuries. Disadvantages have been the lack of ability to observe mobility and lameness, stereotyped behaviors observed, lack of sow's natural social interactions and most recently negative consumer view on sow crates.

From: Pig Progress. To see article [CLICK HERE](#)

From the initiative of consumers and food retailers groups housing systems were developed first in the EU.

history of sow group housing:

Unlike stalled systems that are reasonably standardized and well-understood in the industry, there is no "standard" template for group housing systems. Lots of

factors, such as pen configuration, flooring type, feeding system, nutrition program, grouping strategy, timing of grouping, pig flow, husbandry skills, genetics and others come together to influence the success of a group housing system.

Figure 1. Considerations When Transitioning to Group Sow Housing

1. Floor space allocation for sows

2. Feeding strategies to control variation in sow body condition

3. Plans for managing sows in dynamic groups, and knowing how to mix sows

4. Stockperson skills and ability to manage groups

Buhr, B.L., 2010, "Economic Impact of Transitioning from Gestation Stalls to Group Pen Housing in the U.S. Pork Industry," University of Minnesota, Department of Applied Economics staff paper.

Good overall articles on group housing:

- USA National Pork Board. [CLICK HERE](#)
- National Hog Farmer. [CLICK HERE](#)

There are many factors to group housing, we can't cover them all in one blog. Today we'll focus on feeding with a Electronic Feeding System (ESF)

Why use Electronic Sow Feeding Systems in a group housing system:

- Sows in top condition, more piglets
- Less feed wastage
- It's simple to apply feed strategies
- Notification when animals don't eat
- Substantial noise reduction, calm and relaxed sows
- Automatic heat detection, marking and separation of sows based on heat

Pig breeders that apply group housing for pregnant sows should pay attention to reducing competition around the feeding area, which may reduce aggression among the sows and minimize differences between high social and low social ranking sows.



Cal-Inn pro and CallMatic pro

Big Dutchman has two innovative electronic sow feeding (ESF) systems on offer: Call-Innpro and CallMaticpro. Each of these feeding systems is a perfect choice for pregnant sows kept in groups. They ideally combine the advantages of animal-friendly housing and a feeding method specially adapted to the requirements of each individual sow. For the sows, group management means more freedom to move, better health and robustness. Individual, computer-controlled feeding allows the feed supply to be matched precisely to the condition of the sow. For the farm manager, this means healthy sows, performance-related feeding and best use of the house surface area. The feeding station can also be used to select sows automatically.



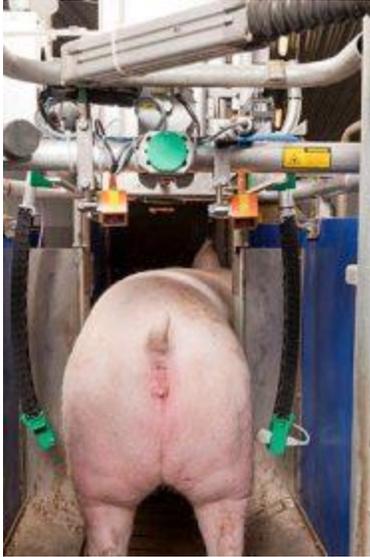
How It Works

Each sow is marked with a transponder ear tag. When a sow enters the feeding station, which is always open when no sow is inside the station, she passes a light barrier. As soon as the sow has entered the feeding station, the entrance gate closes. The sow is identified by the computer by means of an antenna located above the trough flap. If the sow is entitled to receive feed, the trough opens and feed is measured out in small portions. When the sow has finished eating, the trough flap closes. If the sow is not entitled to receive feed, the trough flap remains closed. The entrance gate re-opens after a set time delay if a sow does not leave the station by herself. The next sow then enters the station and automatically drives out the last sow. If a sow leaves the station even though she is still entitled to receive feed, the feeding process stops and the sow can eat her remaining share at a later point in time.

Accurate Sow Identification

Data collection and sow identification are carried out by a very reliable and small ear tag transponder, which is inserted into the sow's ear by means of special pliers. This passive transmitter operates battery-free. The sow is identified by means of an antenna in the trough area. The received data is transmitted to the control computer. An additional antenna is installed at the boar pen if a separate unit for heat detection is used. This antenna collects further information

regarding the sow's state. All established ear tag types can be read, irrespective of the manufacturer.



Advantages of the ESF station:

- Management of large groups (up to 60 sows/station), animal friendly and economic housing system
- Individual feeding of all sows based on the current requirements of each sow for a better overall condition and healthy animals
- Trough flap remains closed if the sow is not entitled to receive feed
- Manual operation directly at the station is possible
- Pneumatic opening of the gates; the entrance gate is always open when the station is unoccupied, which makes training gilts much easier

- Solid side partitions for undisturbed feed intake
- use of sound-absorbing materials to ensure a low noise level in and around the station

Big Dutchman has two different models: Call-Inn pro and the Call-Matic pro.

Our next blogs will cover the details of each of these and common layouts for group housing and feed stations including training area and sow selection.

Two modern ESF stations: all characteristics at a glance

Key:

- Entrance gate
- Light barrier
- Manual control unit
- Feed hopper
- Exit gate
- Selection exit gate
- Station computer



For the complete Big Dutchman PDF file of the two feeding stations [CLICK HERE](#)