



# THE LOOSE HOUSING FARROWING PEN IN PRACTICE.



At the DenkaFarm Innovation Centre in Stroe (Municipality of Voorthuizen), the Netherlands, the team has been working on the Coppens Loose Housing Farrowing Pen since 2016. Arnold Groot Wassink is manager of the DenkaFarm Innovation Centre and has been involved from the very beginning in the development of the loose housing farrowing pen. In the first instance, a number of 'test pens' were tested and further developed at the test farm, before a new barn was built with the Coppens Loose Housing Farrowing Pen. Arnold weekly gives visitors a tour at the DenkaFarm Pig Farm; the location where sows and piglets are kept. DenkaFarm's motto is: create knowledge to share knowledge. This motto is clearly implemented when a few Coppens Stal-techniek employees visit the DenkaFarm Pig Farm with a customer. In this 'Koploper Kennis' article (2nd issue) we will tell you more about the knowledge gained and the development of the Coppens Loose Housing Farrowing Pen.

## Safety and ease of work come first

The Coppens Loose Housing Farrowing Pen can be set to multiple positions; little freedom of movement for the sow (figure 1) during farrowing and days following, or rather a lot of freedom of movement (figure 2). The sow's freedom of movement extends to an area of up to 5 m<sup>2</sup>.

## Safe and efficient

Adjusting the position (the mechanism acts as a kind of lever) works simply, efficiently and safely, according to manager Arnold Groot Wassink. The 'step through' access (photo 2) is also particularly useful and functional. The step through was developed by Coppens Stal-techniek and tested for use with gestating sows. In addition, it is also easy to lock up and release sows. The sows enter the farrowing pen after being showered, whereby the rough prefab floor prevents slipping in the walkway. Bringing in and removing sows is always done by two people!

## Covered piglet nest

"The covered piglet nest was the biggest challenge for us", says Arnold Groot Wassink.

**"DOING WHAT IS REQUIRED; A LITTLE OR A LOT OF FREEDOM OF MOVEMENT."**

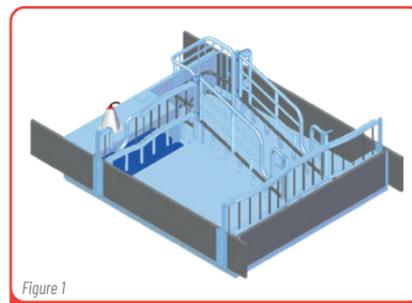


Figure 1  
Coppens Loose Housing Farrowing Pen in the smallest position (fixed)

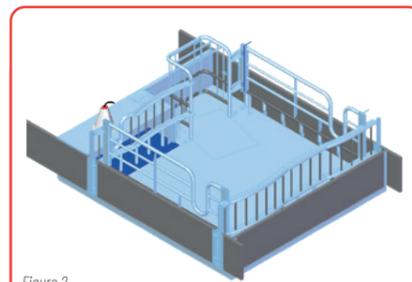


Figure 2  
Coppens Loose Housing farrowing Pen with full freedom of movement (5m<sup>2</sup>)

Ultimately, we opted for a covered piglet nest that does not have an entrance and exit, but where the piglet cover is open on one side (the long side). This ensures sufficient fresh air in the piglet nest and results in good air quality.

The piglet nest stands out for its simplicity. The floor is insulated but has no heating. The piglet nest is in fact heated by the VengSystem®. With this system the temperature is controlled by means of a sensor and the use of an infrared lamp. The piglet cover contains only one lamp, which is mounted watertight so no water can get to it. This allows the cover - including the lamp - to be cleaned with high pressure after farrowing.

The fact that a covered piglet nest functions well in this way is demonstrated by DenkaFarm's experiences: at outside temperatures up to 32-33°C, the piglet nest is soiled in less than 1 in 36 pens! According to Arnold Groot Wassink, the piglet nest also has an important secondary function; safety for the piglets. For example, when catching the piglets, they flee into the nest, making it easy to pick them up.

**"THE PIGLET NEST HAS AN IMPORTANT SECONDARY FUNCTION; SAFETY FOR THE PIGLETS."**

## Coppens Loose Housing Farrowing Pens slatted floor

The Super Coated slats from Nooyen are made of a type of woven wire with a (fire-retardant) coating. The advantage is that this type of slats can be supplied prefabricated and tailored at the farm. The coating provides a comfortable floor for both sow and piglets. "We are often asked whether the slatted floors or even the feeding trough are soiled when the sows are housed loose. This is rarely the case. Sows mainly choose the rear corners to defecate. Soiling of feeding troughs actually never happens", says Arnold Groot Wassink.

## Loose housing or not?

On the DenkaFarm Pig Farm, the pens are placed in the stand with the most freedom of movement (fully loose housed) before the sows start farrowing. On the day that sows start farrowing, the pens are set to the smallest position. In practice, this means that the (farrowing) sows are locked up on Sunday evening. The sows that have not yet farrowed on Monday morning are put back in the position with the most freedom of movement.

The farrowing pen then remains at the smallest position for 3 to 4 days after farrowing. On these days - the most critical period when it comes to piglets being crushed/overlaid - all piglets are treated.

If Arnold Groot Wassink can think of one disadvantage of the loose housing farrowing pen, it is the short space between the wall and the side rail. In the smallest position, this results in little space between the sow and the wall. "Every disadvantage has its advantage, because a cold piglet would be placed in that exact spot by the assistant. The piglet will warm up very quickly like that." The loose housing farrowing pen at the DenkaFarm Pig Farm has a width of 2.40 metres. The standard loose housing farrowing pen is therefore being designed at a width of 2.60 meters. This results in a minimum distance of 60 cm between the side rail and the wall. [see also red box]



Photo 2. The 'step through' access Coppens Loose Housing Farrowing Pen

## Added value in numbers

An important question for DenkaFarm: how do we achieve equally good results with the loose housing farrowing pen as with the traditional farrowing pen? Arnold Groot Wassink explains that the loose housing farrowing pen is more expensive but has a greater yield (Figure 3). On average 13.3 piglets are weaned per litter, with an average weaning weight of 8.3 kg. This translates into more than 110 kg piglet weaned per sow. Annually this means that a sow in the loose housing farrowing pen yields an average of 275 kg piglets up to weaning!

|                                     |            |
|-------------------------------------|------------|
| Average birth weight                | 1350 grams |
| Number born alive                   | 15,7       |
| Number stillborn                    | 1,1        |
| Average weaning weight              | 8,3 kg     |
| Number of piglets weaned per litter | 13,3       |
| Weaned / sow / year                 | 33,2       |

Figure 3. Technical results of the DenkaFarm Pig Farm 2018

## Feed intake

Sow feed intake has a major influence on this. This remains at a fairly high level in the free-farrowing pen during lactation. The sows are fed three times a day via a sensor-controlled system. Here the sow decides for herself whether to take her feed portion for that part of the day in one go or in portions. The advantage of this is that the feed stays fresh and the sow does not 'overeat' herself.

According to Arnold Groot Wassink, it takes approx. 4 to 6 months before you are really used to the loose housing farrowing system. He urges pig farmers who are considering switching to loose housing farrowing pens to take this into account.

"The DenkaFarm Pig Farm is a wonderful stable to work in", Arnold Groot Wassink concludes the tour, with a glimpse into the future: "The challenge for the near future remains allowing sows to farrow with complete movement of freedom. Research shows that this results in fewer stillborn piglets. A more than motivating challenge for that reason alone."

## About DenkaFarm

Arnold Groot Wassink (49) is manager of the DenkaFarm Innovation Centre, of which the DenkaFarm Pig Farm is a part. DenkaFarm is a producer of feeds for young animals in livestock farming (beef calves, breeding calves, piglets and lambs). From the head office in Voorthuizen, an (inter)national sales team is responsible for sales in over 60 countries around the world.

The market and society have been demanding increased animal welfare for years. DenkaFarm responds to this and wants to assist customers when considering this way of housing. Internationally, the focus on the loose housing farrowing pen has increased rapidly in recent years. DenkaFarm Innovation Centre is a visit- and research company that receives many (international) visitors every week.

## Any questions?

Do you have any questions? Please contact the author of this article; Nienke Dirx. She works as an internal sales service and process optimiser at Coppens Stal-techniek. You can contact Nienke on +31(0)40 208 20 70 and [n.dirx@coppensstal.nl](mailto:n.dirx@coppensstal.nl)

## Various types of farrowing pens

Multiple roads lead to Rome. This of course also applies to housing sows and piglets. The Coppens Loose Housing Farrowing Pen represents a total concept; a good microclimate (through the VengSystem®), controlled feeding of sows and of course the high level of safety and ease of work. However, Coppens Stal-technology has introduced several types of farrowing pens. Specific requirements of pig farmers are always leading in coming to a solution that stands for smarter, more effective and more efficient business.

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