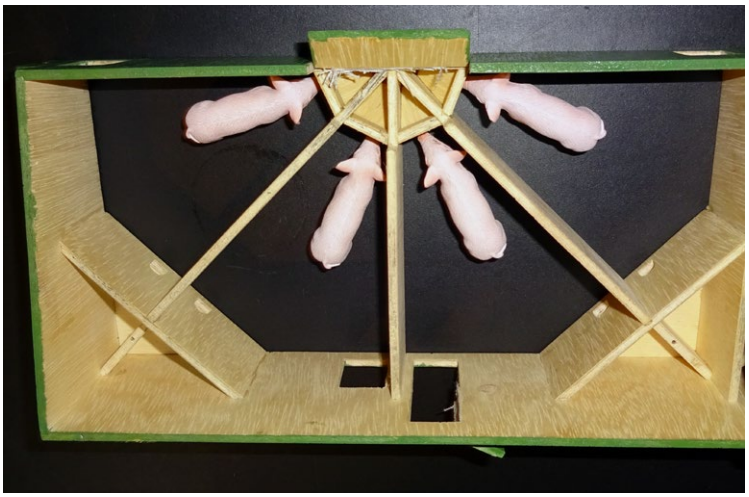
Innovative farming in Denmark: special huts for sows on the pasture

Description

Sows are outdoors all year round, except for six days during service when they are kept indoors. They are kept in groups of 12 sows in a large bedded area with individual feeding stalls and an outdoor run during this period.

Lactating sows are housed on the pasture with access to huts designed by the farmer (see picture 1, page 2). Each hut houses four sows in individual sections (see illustration, page 3), with individual paddocks. Feed and water are located within the hut. In hopes of preventing the sows from lying on their piglets, the farmer installed bars on the walls of the lying area, and there is a heated piglet nest (see picture 2, page 2). The huts can be relocated by tractor, and fencing is easily moved using a smart device on the huts, where wires are coiled.

Pregnant sows are housed in an average group of 12 sows on the pasture with access to large huts that the farmer also designed. Piglets are sold directly when weaned at seven weeks of age.



Pasture management

Sows stay on the same paddock area for approximately six months. The cultivated pasture on a paddock is first used by lactating sows for nine weeks and then by pregnant sows for 16 weeks. Subsequently, the paddock is used for cultivation during 1.5-2 years. When pregnant sows come on the paddock area, the area is extended to disperse manure deposition.

To keep a high vegetation cover, all sows noses are ringed. During the project period, on paddocks with lactating sows, the vegetation cover was 80-90 % during spring, summer and autumn, while 70 % in winter. For pregnant sows, the vegetation cover was 70-80 % in summer and autumn, 50 % in spring and 40 % during winter. This reflects the fact that pregnant sows take over paddocks from lactating sows.

Farm portrait

Location
Northern Jutland, Denmark
Topography
Flat
Farmland
30 ha: 23 ha temporary grass land
Size of pig herd
112 sows
Farming system

- Pregnant and lactating sows are housed on the pasture with huts, designed by the farmer.
- During service, empty sows are housed indoors for 6 days.

Picture 1: The hut for lactating sows grants access to the pasture for the sows, but a barrier, that the suckling piglets cannot cross prevents them to from getting on the pasture the first week after birth.

Animal welfare

No major welfare issues were found on either pregnant or lactating sows. During the project period, only 1 of 76 lactating sows had a vulva lesion and none had deformations. Hardly any lame or too thin sows can be found in this system. Also, skin lesions are rare, indicating good management of group formation. Soiling is not widespread among the sows, and in summer, only some sows have sunburns on their ears.

No negative behavioural manipulation was found among pregnant sows.

Table 1: Welfare assessment

Age group	Welfare parameter	Assessment during project period
Sows, all	Soiling, in summer	Only a few
Sows, all	Sunburns on ears	6 out of 104 sows
Sows, lactating	Vulva lesions	1 out of 76 lactating sows
Sows, lactating	Vulva deformations	Not detected
Sows, lactating	Lameness	1 out of 76 lactating sows
Sows, pregnant	Manipulation of other sows or equipment	Not detected

Environmental Impact and Productivity

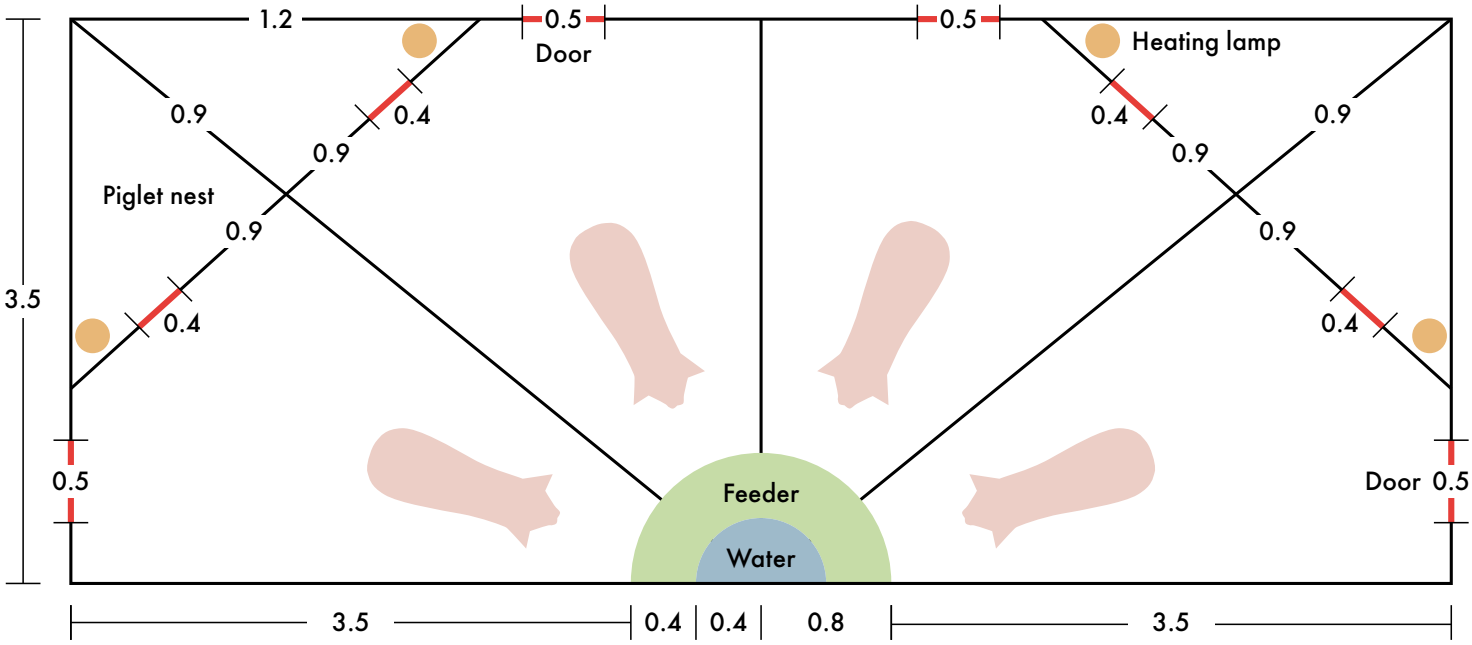
Table 2: Productivity

Productivity	Sow
Average no. of litters/sow/year	2.0
Average no. of born piglets/litter	17.1
Average no. of weaned piglets/litter	11.5
Average no. of litters/sow until culling	3
Feed usage/sow/year [kg]	1,760[1]

[1]concentrate + pasture

Picture 2: Inside the farrowing hut with the feeding area in front (picture on the right side) and the heated piglet nest in the back.

Picture 3: After sows are on a paddock for 6 months, it is then used for crop cultivation for 1.5–2 years.



Labour and cost

- The huts' were designed to replicate an indoor farrowing pen and implement this on pasture. An important feature of the design is that the farmer can stand up inside the huts to have good working conditions.
- The farmer would like to have an even more flexible grazing system and a better feeding routine for pregnant sows as this is a labor-intensive task.
- The farmer runs this farm on his own. He is spending approximately 20 % of his time on management and the remaining time taking care of the pigs.

Take away lessons

- The farmer succeeded in taking all the elements of an indoor farrowing pen and implementing them into a hut for the pasture.
- However, designing a system that will reduce piglet losses in the first days after farrowing is challenging. The idea with a piglet nest and bars on walls has not been working optimally. It takes a lot of effort for the farmer to adapt the newborn piglets to use the piglet nests.

Further Information

ICROFS (2021): Innovative pasture systems from Denmark and Italy. Video. International Center for Research in Organic Food Systems ICROFS, Tjele. Available in English: www.youtube.com [Link].

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