



Design of innovative farrowing huts with PPILOW farmers and involved partners

Vanggaard Staldmontage ApS



PPILOW Final conference – Africa Museum, Tervuren (Brussels)

11th-12th June 2024

Vanggaard Staldmontage is a small Danish company with more than 25 years of experience with setting up pig barn equipment in conventional agriculture.

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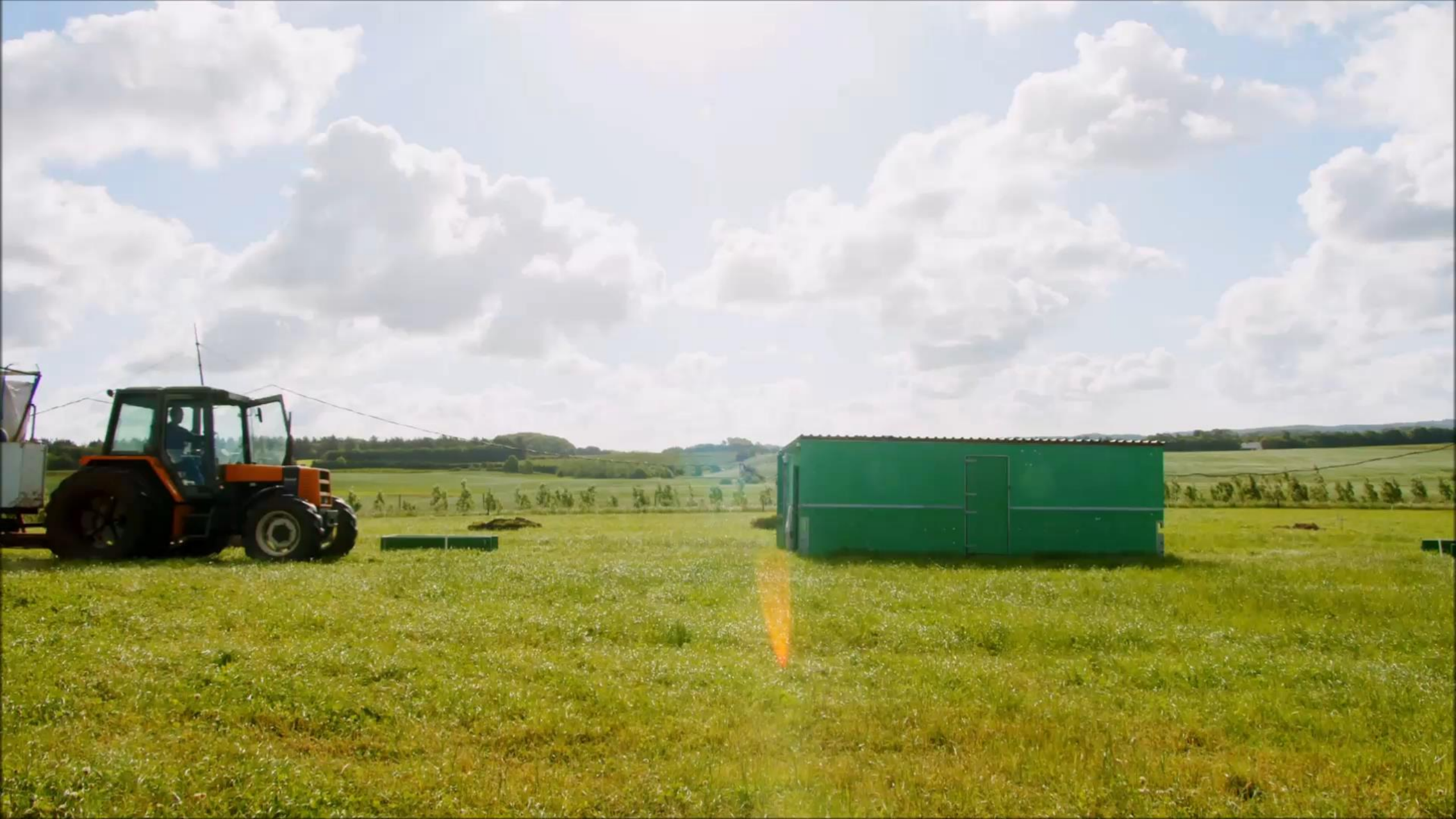


**Homepage:
<https://staldmontage.dk>**



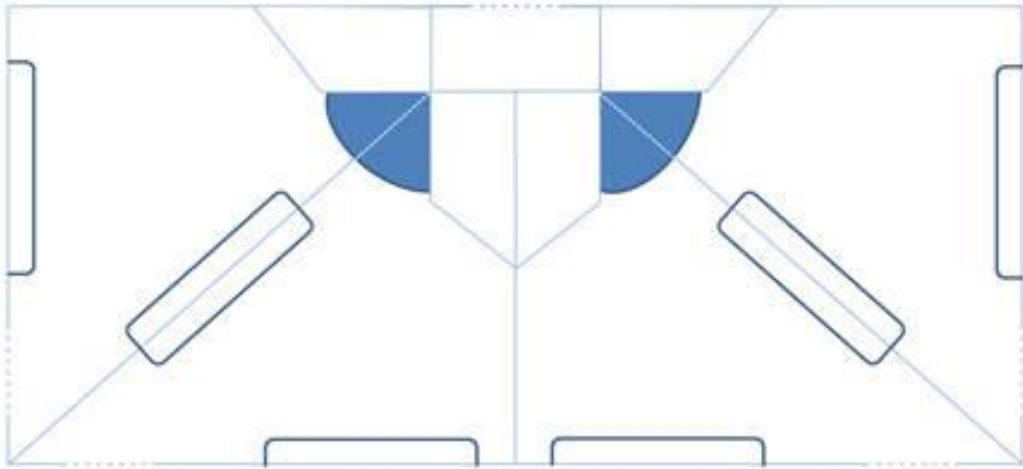
Introduction video of the Danish farrowing hut





PPILOW - Vanggaard's farrowing hut – from Danish design to EU design (2019)

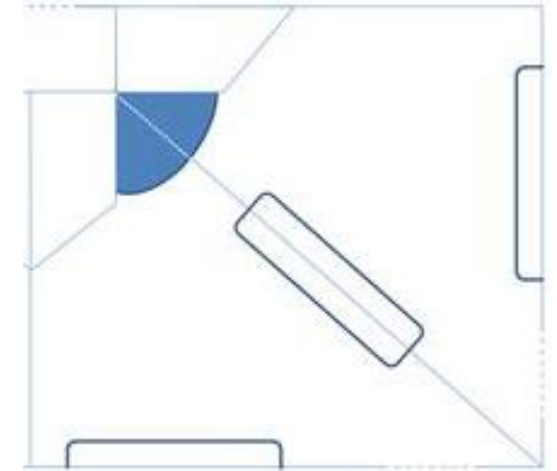
From 4 paths (Danish design)



Start PPILOW project end of 2019



To 2 paths (EU design)



Vanggaard's PPILOW GOAL:

Develop a farrowing hut;

- * With a high focus on animal welfare, reduction of piglet mortality,
- * A good working environment for the farmer,
- * Which could be used in all EU countries.



PPILOW - Test huts in:

- * **Denmark** -> one test farmer
- * **France** -> two test farmers
- * **Italy** -> two test farmers
- * **Belgium** -> one test farmer



Assembling / setting up test huts France



Assembling / setting up test huts Italy



Assembling / setting up test huts Belgium - Adjusted design during the project test period

Steel hoops with a support function for the sow when she lies down



steel hoops => to minimize straw in feed/water troughs



Transport wheels placed under the hut



wider doorway - sow entrance



wider roof overhang above the ventilation opening

Video: PPILOW-Workshop:

"How to Improve sow welfare and piglet survival through innovation within farrowing house design for outdoor rearing?"





Advantages / Disadvantages - highlighted by test farmers France

Advantages:

- * **Comfort for piglets care**
- * Piglets easy to monitor
- * **Rot-proof hut**
- * Nest with radiant heater
- * **Animals can benefit from the shade provided by the hut**
- * Adjustable opening flap on the sow's nest
 - can be adjusted in size before/after farrowing.
- * **Safe working conditions – true advantage for farmers well-being**
- * The airflow system is well-done, especially during summer time
- * **Anti-crush bars -> Fewer piglets crushed**
 - you can save 3 or 4 piglets pr. Litter.



Disadvantages / suggestions for improvement:

- * **High Price**
- * Complicated for weaning
 - trailer has to be moved several times
- * **Difficult to move the hut and put the wheels on**
 - especially when you are alone
- * Too much volume in winter
- * **Feeding and watering on the ground**
 - cleaning often required of feed and water trough
- * Water tank often refilled, especially in summer
- * **Nest lid deforms, so not watertight**
- * Competition between sows,
 - disturbance during farrowing
- * **Suggests: Individual huts**
- * Suggests: Hatches for ventilation and for access



Test farmer comment: *"I have less piglets crushed in the Danish huts than in my regular huts, thanks to these anti-crush bars"*

Advantages / Disadvantages - highlighted by test farmers Italy

Advantages:

- * **Safety increase**
- * **Good thermal insulation - no ice water in winter**
– sows stay inside the hut when it's hot in the summer time
- * **Easy cleaning**
- * **Piglet caves are easy to use – easy to open/close**
- * **Heat in the piglet cave is good**
(- Piglets immediately found the cave)
- * **Monitor and handle piglets is very easy**
- * **Feed and water inside the hut is useful**
(- but lots of flour waste in the water)
- * **More space, more freedom of movement for the animals**
- * **Surviving pigs at weaning increased significantly**
- before Vanggaard hut more the 30 % / now 12-13 % mortality



Disadvantages / suggestions for improvement:

- * **Need more ventilation in the summer period**
- * **Difficult to move - fixed house / fixed fences**
- * **Water tank capacity to little - Especially summertime**
- * **Red light in the piglet cave (instead of aniheater)**



Test farmer comment: “Thanks Vanggaard because it (the farrowing hut) works”

Advantages / Disadvantages - highlighted by test farmer Belgium



Advantages:

- * Lot of overview for the farmer
- * Moving the hut is easy by tractor
- * No problem with temperature
- * Really organic production
- * Natural behaviour
especially when giving birth, more calmly than in indoor stables
- * No diarrhea at weaning as they are used to eat with the sow
- * Big piglets no iron injection is needed (eats well with the sow)
- * More customers buying meat from our farm
- they can see the pigs out in the field
- * Happy piglets, happy sows, happy farmer



Disadvantages / suggestions for improvement:

- * Filling of the water trough - often / difficult
- * Carrying of feed and water - not automated
- * Fencing had to be adapted for bio-security
(also requirements for other hut types)



Test farmer comment: "If I would have known these huts existed back in 2019, I would only have work with these."

Vanggaard's PPILOW GOAL



- Develop a farrowing hut
- ✓ With a high focus on animal welfare,
 - ✓ Reduction of piglet mortality,
 - ✓ A good working environment for the farmer,
 - ✗ Which could be used in all EU countries.



Biggest challenges:

- * **Weather conditions - cold / warm climate**
- * **Care management is very different from country to country / from farmer to farmer**
- it is not easy to change farmers' current form of animal care (e.g. water and feed indoors)
- * **EU requirements for organic / outdoor pig production are not the same in all EU countries**
- * **The price of the hut cannot be reduced so it matches common huts for outdoor pig production**



PPILOW PARTNERS



Fondazione Slow Food
per la Biodiversità
ONLUS



Harper Adams
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INSTITUUT voor Landbouw-
en Visserijonderzoek



Utrecht University



Thank you for your attention

www.ppilow.eu