

To provide optimum calf environment

The research speaks clearly

The Moving Floor Calfbboxes have gone through tests at the Swedish university of Agriculture in Uppsala, Wageningen in Holland, Raumberg Gumpenstein in Austria and the HINT in Norway. Our own experience together with general research on calves have led us to draw following conclusion on what is optimum environment for calves;

WIND DRAFT
It is important that the calf is not exposed to draft. The definition of draughty is 0.3 m/s, which is barely perceptible us. Smoke rises straight up at about 0-0.2 m/s and is a good way to check air movement.

DRAFT-FREE
Moving Floor's calf boxes have dense walls that tests show gives a draft-free environment. (HINT 2013)

UNCHANGED BEHAVIOUR
The calves are not affected by the floor moving. (Wageningen 2012)

INCREASED GROWTH
By optimizing the calf's environment, we now see how calves on Moving Floor grow 20-30% faster than calves in conventional systems. The calves are also healthier and antibiotic use decreases significantly with Moving Floor. (HINT 2013, MF Farm observations)

INFECTION PRES-SURE
At health disorders like diarrhea calf medicine cannot replace hygiene. Among the recommendations are: keep the calves in small groups, keep them dry and clean. (SLU, Silverlås, 2013)

GROWTH PHASE
The calf's main growth phase is 0-3 months, after 3 months of age it reaches puberty and the calf must then grow at a slower pace to let the udder develop well. Since weight and body condition largely determines sexual maturity the calf's growth in the first three months of life most significantly affect insemination age **.

TEMPERATURE
During the calf's first month of life, it has a thermo neutral zone at 10-26 degrees C. After a month this changes to 0-23 degrees C *.

RELATIVE HUMIDITY
Appropriate relative humidity for a calf is around 50% *.

ENERGY NEEDS
If the calf experiences temperatures outside the thermo-neutral zone it will have an increased energy need. At minus degrees the energy need increases up to 40%***.

INSULATED BARN
In colder climates we recommend an insulated barn with controlled ventilation and where the relative humidity can be closely monitored. By creating an environment according to the calf conditions a feed optimization can be made. Not all climates require insulated barns - it is also possible to use Moving Floor outdoors with good results.

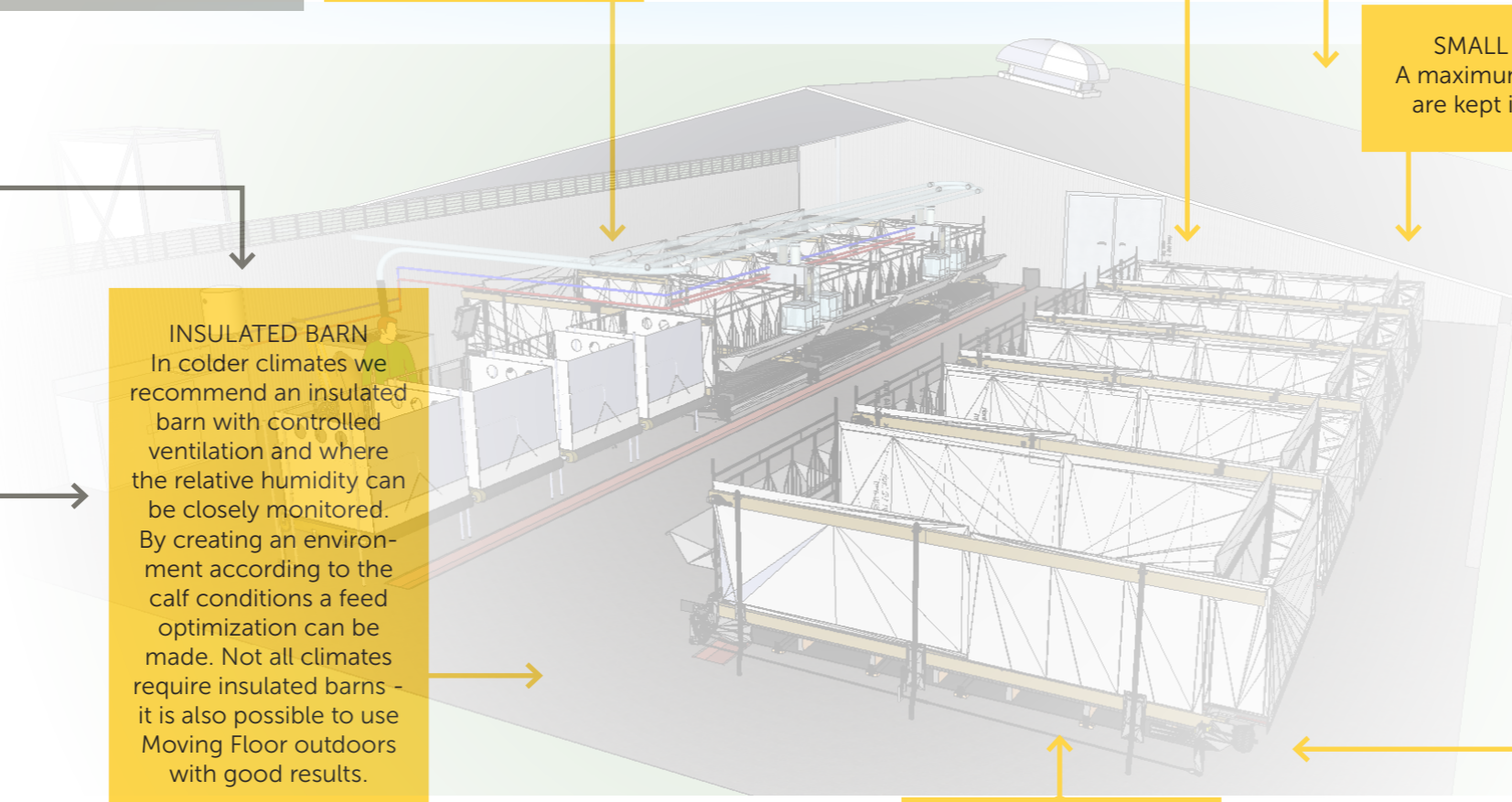
SMALL GROUPS
A maximum of 5 calves are kept in each box

BACTERIA
Bacterial growth occurs exponentially over time. New bedding on top of old bedding provides just a cleanly impression. A deep straw bedding can contain 10 billion bacteria ***.

HEALTHY CALVES
Continuous cleaning 10-15 times/day drastically reduces bacterial growth and reduce the infection pressure. Because the manure is transported out of the barns within two hours, the ammonia content in the air is reduced by up to 90%. The automatic cleaning can ensure clean and dry animals, which are also generally healthy animals. (SLU 2006, Lövsta 2002)

AMMONIA
A deep straw bedding absorbs urine and manure. When the calf is protected from wind drafts with a hutch, a micro-climate forms in the hutch with a substantial ammonia emission that may potentially affect the calf's airways *.

REDUCED WORK
The only work that remains, in addition to the supervision of the calf, is to refill bedding. (Raumberg Gumpenstein 2013)



Sources: *Ken Nordlund, Wisconsin university, **Renée Båge, SLU, ***Holm&Laue Calf Manual

Big difference between the systems

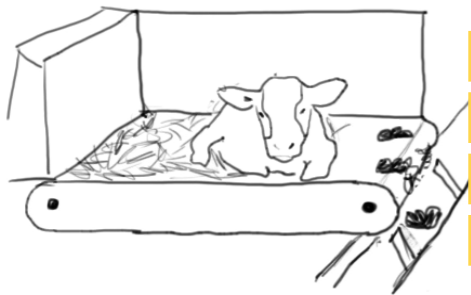
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Deep straw bedding



- Often visibly clean but actually damp and unclean environment
- Bed stuffed with bacteria
- Labor intensive system
- Fresh air, but in the hutch forms a microclimate with ammonia

Moving Floor



- + Clean and dry environment
- + Reduction of bacteria and ammonia by 90%
- + Substantial labor savings
- + Increased growth rate on calf

Did you know?

96%

of calves with diarrhea also get respiratory problems.
(Svensson, 2003, SLU)

200€

costs a diarrhea in direct costs

... and gives as a cow a reduced milk production due to illness during childhood up to

500€

(Lührmann, 2009, Chamber of Agriculture Lower Saxony)