Tips on barn climate and barn layout

August 2023:

Stress in waiting area.

It is ideal if a waiting area behind the milking robot has ample capacity to receive cows that can be milked in about an hour.
So approx. 8 or more per robot.

But it’s no fun to be a cow and being in the waiting area for an hour (or longer…) !

This most often happens with cows that are frightened, new, recently calved, in pain, or are bothered by something or don’t like being in the robot.

Make sure that these cows in particular are in the waiting area for as short a time as possible.
Stress before milking should never last long, these are bad experiences and will prevent the cow from coming and walking on her own next time.

April 2022:

Stray currents and Earth rays.

Stray currents are electrical currents that take a different path than the desired circuit.
The damage from stray currents with direct current (for example in the Netherlands and Belgium) is approximately one hundred times greater than that of stray currents when using alternating current.
The explanation must be sought in Lenz’s law, which ensures

that conductive loops are kept as small as possible. In other words, the return current always flows close to the associated supply current and provides voltage for the environment.
(Wikipedia) Also think of rolled up power cables that are too long.

When stray current cannot take the desired path, she takes the cow as a path to earth.
A cow does not like that…. She will avoid the place where she experiences that and will not like to come back to that place.
Stray current can occur on all metals, including milking robots, concentrate boxes, drinking troughs, but also, for example, on the (feed) fences in the barn.
It can be due to insufficient grounding, sometimes because certain parts are insufficiently grounded or are insufficiently connected, i.e. voltage differences, to properly grounded parts.
It often helps to couple better or place a (much) larger or deeper earth stake.
But not good grounding can also be caused by damage to power cables, for example due to wear, age, overload, or mice?
Or due to damage to electrical equipment.

When the problem has been solved, the cow will first have to experience that the place is “clean” again. That can take time, but a cow is a herd animal, so if a few cows are normal again, the rest will do the same sooner.
Are you in doubt? Voltage differences are quite easy to measure and you can do this yourself.

Another phenomenon are **Earth rays.**
Earth rays have never been scientifically proven. Yet many livestock farmers know that cows, and especially horses, often had preferences for certain places in the pasture to lie down. And that didn’t always have to do with a drier place.
Also the experiences of livestock farmers who have started working with (source) correctors. Most experience significant improvements. That may indicate that there are places where

animals, but sometimes also people, feel something that makes them not happy to stay in that place.
Increased cell counts are often seen in cows without pathogens being detected in quarter-milk samples.
So the cow’s immune system is in a heightened alarm phase for some reason!?!
A reduced drinking water intake could also be observed when terrestrial radiation flows through the drinking troughs.
You sometimes see that part of the barn is used less than other parts. And sometimes not always. Or that things get much worse in the stable after heavy rainfall, because the water veins transport large amounts of water. Why is this happening?
Underground water veins or impermeable soil or petrified layers or breaks in the layers would ensure that the earth rays cannot leave or take a certain route and are therefore felt by humans and animals and are experienced as very unpleasant.

Also here: Are you in doubt? There are also people here who specialize in this.
Causes of disappointing results should be excluded as much as possible.

March 2020:

Fresh air!

Stagnant water, such as that in ponds and ditches, is known to allow dirt, bacteria and germs to survive and spread easily. That is usually easy to see. They often become “stink ditches”.
Drinking troughs could have the same effect. Therefore, watertroughs has to easily be able to flushed easily and / or be refreshed regularly.

However, also not moving air is bad. Since you can’t see that and we get used to the smell of the stall, it doesn’t stand

out.

Especially the highly producing or unfit cows have issues with effects deriving from still air.
Cows that have to produce a lot of milk also need a lot of oxygen.

Always ensure that there is moving air in the house!
Fresh air is a pleasure for the cows as for people, also in the robot room or milking parlor.

Fans on, at least on lowest setting, curtains on or one side of the stable open more and earlier!
Consider how saturated air can be replaced by fresh air in the stable, even in the winter when it is not even warm!

January 2020:

A smooth feeding area (in front of the feeding fences)

When the feeding spot in front of the feeding fence is nice and smooth, you can move the feed more easily and clean up the feed residues easily. Besides that, the cows also eat cleaner.

Rough floors are harder to keep clean and more fungi and bacteria hide in them. That means the food is less tasty, it sometimes stinks.

The cow’s nose is, not coincidentally, very close to the mouth and the result is logically: less feed intake. And with feed intake, some fungi, pathogens and infections come in easily. A rough feeding place is not only for feed intake, and therefore milk production but also bad for the resistance of the cow.

So, investing in a smooth eating area is not a luxury.

November 2018:

Daylight in the stall.

In nature, history, cows mated during summer and were calving next spring. This is when grass is at its best for optimal milk production and so for the growth of their calves.
This is what the cow is used to, so she is evolved.

That is why it is important to simulate for the milking cows the "May-Situation" year-round through mimicking daylight hours in de stall and give them the best, fresh, tasty "May-quality" feed.

In terms of light in the barn: milking cows need about 16 hours daylight while dry cows and highly pregnant heifers should have only 8-12 hours a day.
The former simulates the summer while the latter represents the winter setting.

Young cattle also need 16 hours a day for growing and to be more fertile!

A good check of what is good daylight is: "Can you read your newspaper in the entire barn ?"

Mai 2018:

Cow brush.

A cow brush is nice for a cow but where does it hang?
Does it still function properly? It is easily accessible for any cow without any constrictions?
Think about the dominant cow that take ownership of all the available space.
In Denmark there is a law requiring 1 brush per 50 cows!

Are the flies starting to lay eggs again? Have you taken proper measures?

July 2015:

Match the hot weather.

Cows create sodium bicarbonate in saliva and thus good ruminating is therefore very important.
Both the creation and rumination decreases in hot weather like this past week.

Even rapid breathing caused by hot weather affects the production of bicarbonate.

That is why an extra addition to the ration in this weather is very useful!

Also, what you have learned about the quantity of drinking water: during warm days like these cows might drink 30-50 liters more!

Do you have plenty, clean water ready at their disposal?

March 2013:

Drinking space per cow.

Provide enough room to drink, about a 10 cm drinking trough per cow. Make sure the drinking troughs are well placed. We know that a cow that has just come out of a VMS is thirsty, causing her to eat more forage than with a dry mouth. A cow that has just calved is also thirsty!

The place where the cows drink from their troughs should be a calm place. In a stable the preference goes to passages where a cow feels safe, not a place where a more dominant cow can push other cows in a corner. If this is the case, that a more dominant cow pushes a low ranking cow against the fence, then a low ranking cow will only drink when needed and most needed.

Or not use the passage.

In conclusion: the best place to put a trough is at the end of the passage that guides the cow away from the VMS, in the birthing box or a place with enough room for the cow to move.

Of course, these drinking troughs and places should be easy to clean. You could also get pre-cooled water which tastes better for the cow but is more prone to bacteria.

If you have, for example, 60 cows, it would be best to have 3 drinking troughs with the length of 2 meters each.

August 2011:

Ventilation plan.

This year with its varying temperatures and humidity shows once again that good ventilation and fresh air is as much as an absolute requirement for our increasingly producing dairy herd.
Cows need more and more fresh air and bacteria and viruses, so diseases, hate that!
You should not smell too long and too much manure, silage, etc. in your barn and avoid blind spots!

Make a good ventilation plan, watch the most frequent wind direction and take account if there are inhibiting factors such as buildings, trees etc. around the stables.
Open sides or sometimes even open “head sides” mostly do ensure adequate intake.

Fans move air only, so let them pull fresh air and let them create a circulating air flow through your barn.

We hope to see one blow towards the VMS, because cows like to walk and stand in the wind and then it is right in the waiting room and the robot room cooler and more comfortable for her.

And flies hate wind.

The other direction depends on the width and layout of the barn.

Depending on the content of the stable, they should almost always be turned on soft or harder!

Draft is unhealthy, (little) fresh wind is healthy!

June 2011:

Efficient layout barn plan.

Do you have renovation or new building plans?

Consider the following list:

I have in 3 minutes, or one person can (!):

- A newly calved cow brought into the VMS
- A lame cow in the treatment box
- Separate a cow to treat
- A dry cow moved to other group
- A calf moved to new group
- The young cattle moved to new groups

In my (new) walking route, I see three times a day:

- The milking cows
- The dry cows
- Newly calved cows
- Heifers
- Calves
- The sensors of the feed auger

My cows have to make as less short turns in barn and around VMS as possible to save their claws.
(Also -especially- the dry cows?)

And if you have no other possibility it is to consider to put rubber on these places on the racks!

And maybe you have for yourself even more ideas, good luck!