

Moving Floor Concept

– patented new technology for automatic cleaning in pig barns



No water

Improved hygiene

Increased profitability



www.movingfloor.se



We are committed to improving the animal hygiene

We are automating an area within the barn that has not until now been automated - the area where the animals lay down. Many other areas have already been automated.

"Automatically cleaning the laying areas for animals is the cornerstone that has been missing in the completely automatized barn."

Look at what mechanization has done to feeding or what programming has done to ventilation. Automatically cleaning the laying areas for animals is the cornerstone that has been missing in the completely automatized barn.

We are convinced that automation is the best way to get the best results, nevertheless the most cost-effective solution. We will keep on working with unique and patented products to improve the animal hygiene.

"We are convinced that automation is the best way to get the best results."

Peg Söderberg & Katja Lindvall,
Owners and directors of Moving Floor AB

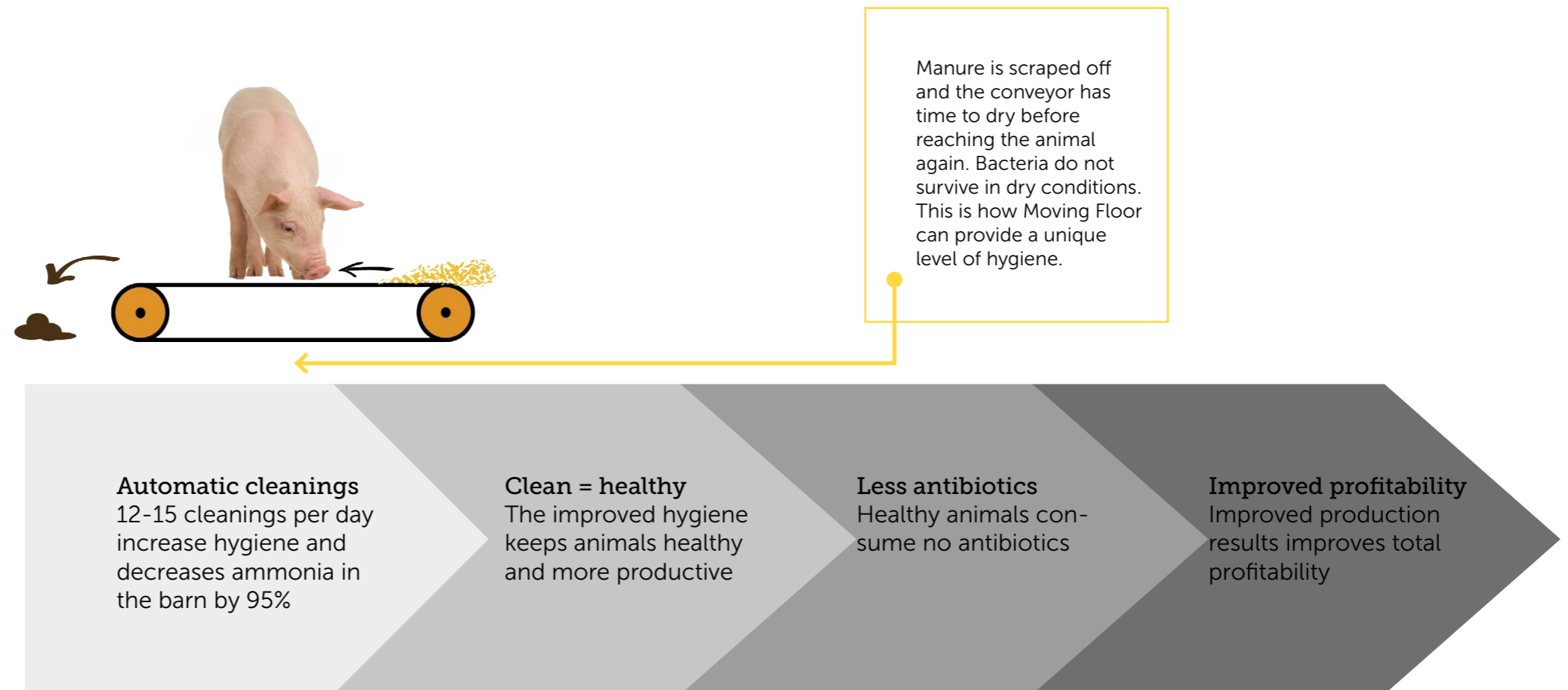


What is Moving Floor?

Moving Floor is an endless conveyor which rotates, is scraped off in one end and refilled with bedding in the opposite end. A simple idea of keeping animals on moving surfaces for;

- Clean and healthy animals
- Reduction of labor
- Increased profitability
- No water usage

The idea is to remove the manure from the barn within two hours, in order to minimize ammonia emissions within the building.

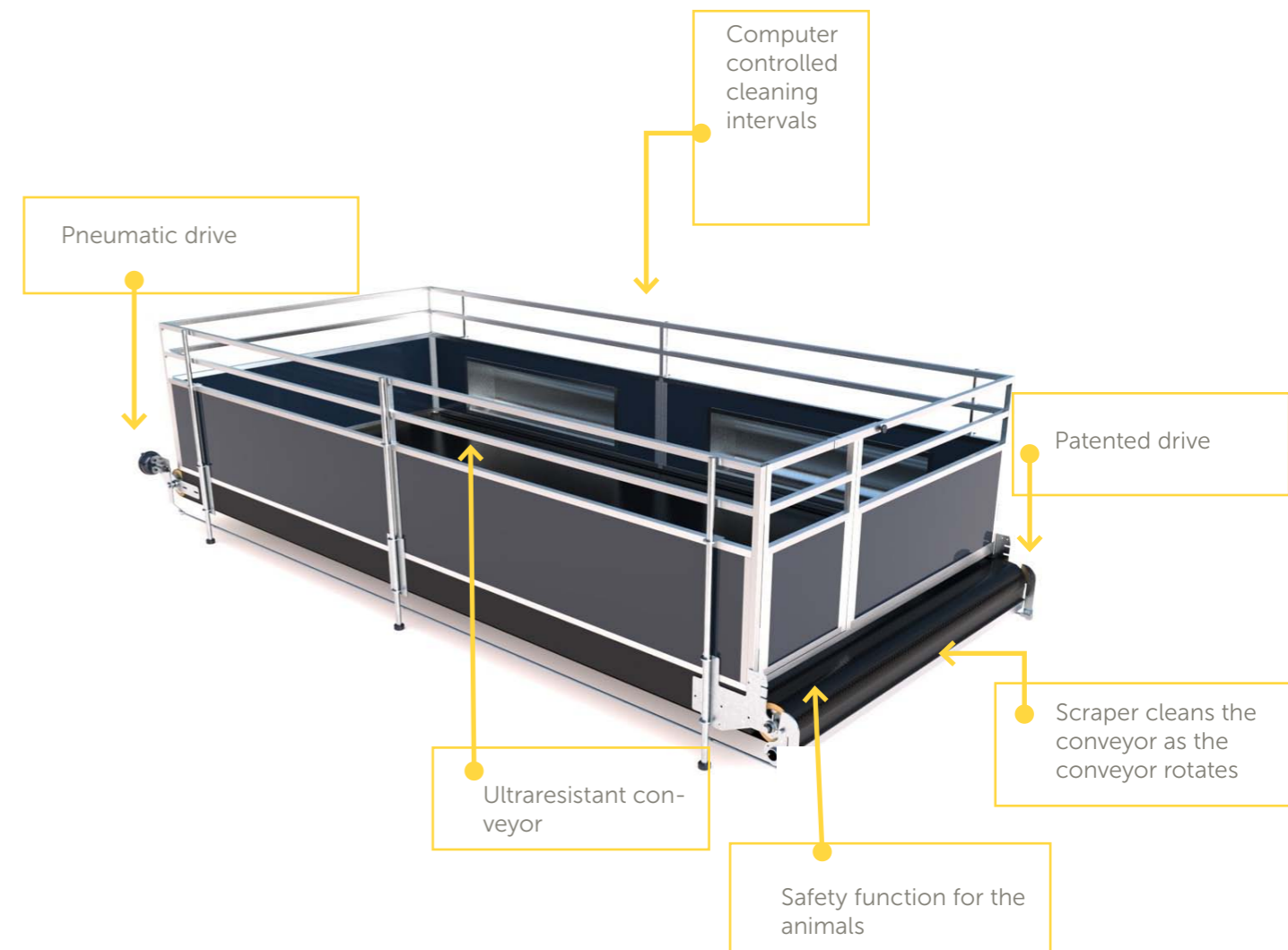


Moving Floor Pig

Moving Floor Pig is a comfortable self-cleaning floor for pigs that is automatically cleaned and refilled with bedding (optional). The cleaning intervals are controlled by a computer and the keeper sets the intervals simply by pushing a few buttons. The idea is to remove the manure from the barn within two hours, in order to minimize ammonia emissions within the barn. Research has shown that the ammonia emissions can be reduced up to 95% in Moving Floor Pig barns.

The unit is driven by compressed air only and the cleaning intervals are programmed in a PLC. In a farrowing pen a sensor will tell when the sow is standing up and then allow the clean out to start. The floor never moves when the sow is laying down. A safety feature will stop the movement of the floor if a pig or piglet gets too close to the clean out zone. The closed and soft floor creates a pleasant environment and spares hooves, teets, knees and joints.

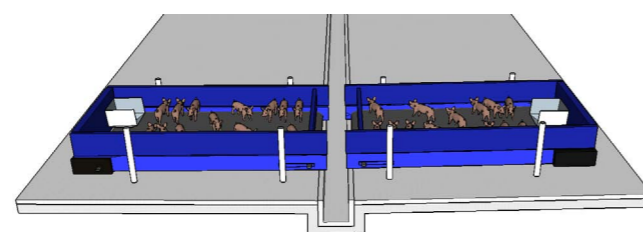
The self-cleaning unit can be placed in old as well as new buildings – all you need is a fairly flat floor. Less investment is needed when only a fairly flat floor is required for installation of the Moving Floor. With reduced labour and healthier animals the Moving Floor Concept is without doubt a profitable alternative.



The difference between conventional barns and Moving Floor



The conventional solution with slatted flooring means substantial ground and concrete works.



The Moving Floor solution needs only a flat flooring and a manure channel. This means significantly less ground and concrete works.

Quick facts

Two sizes (approx inside measurements)

Farrowing
Length: 2800 mm
Width: 1800 mm
Height: 1300 mm

Weaning & Fattening
Length: 5000 mm
Width: 2000 mm
Height: 1300 mm

Installation

To be placed on a flat surface in new or existing barns.

Drive

Mechanical drive by compressed air.

Conveyor

Thickness: 4 mm
Material: Plastic

Penning:

Thickness: 3 mm
Material: galvanized steel

What can Moving Floor Concept contribute with?

Less labor

The Moving Floors makes innumerous automatic cleanings in programmed intervals.

No water

The water usage for daily cleaning in conventional pig barns are 5-10 times the amount of water that the pigs drink everyday. Moving Floor uses no water for daily cleaning.

Clean animals

Unlimited amount of cleanings results in clean animals - a basis for keeping them healthy. The cleaning intervals should be adapted to the condition of the animals, e.g if they get sick the number of cleanings can be increased.

Ammonia

Emissions of ammonia from the manure handling is quite significant, affecting the animals, the humans and the environment in total. Research made on Moving Floor for pigs have proved the Moving Floor Concept to be very efficient when it comes to lowering the ammonia emissions within the barn. Reductions up to 95% were made, averaging a level of 1 ppm ammonia in the barn. These results state the importance of a quick manure removal from the barn.

Energy consumption

Since the Moving Floor products are driven by compressed air the energy consumption is low. The energy providing a pig with cleaning and bedding equals the amount of energy a light bulb consumes per year!

General pay back on Moving Floor products are 2-3 years, counted only savings in operational costs and no animal health benefits

Small groups

It is commonly agreed that a high level of hygiene for the animals must be maintained in order to have healthy animals. The task to combine animal health with growing herd sizes is a challenge. Moving Floor Concept allows affordable mechanization even for small groups of animals.

Less antibiotics

The cleaner animals the healthier animals. Healthy animals need no antibiotics. Moving Floor can maintain high growth rate without adding antibiotics or hormones.

Easy manure collection

Moving Floor makes the collection of manure easier. When no water is added to the manure the total quantity is less to transport or treat. Less antibiotics is good for the biogas production.





**A new industry standard
increases profitability**



Combine Moving Floor with composting or biogas



Biogas



Composting / organic fertilizer

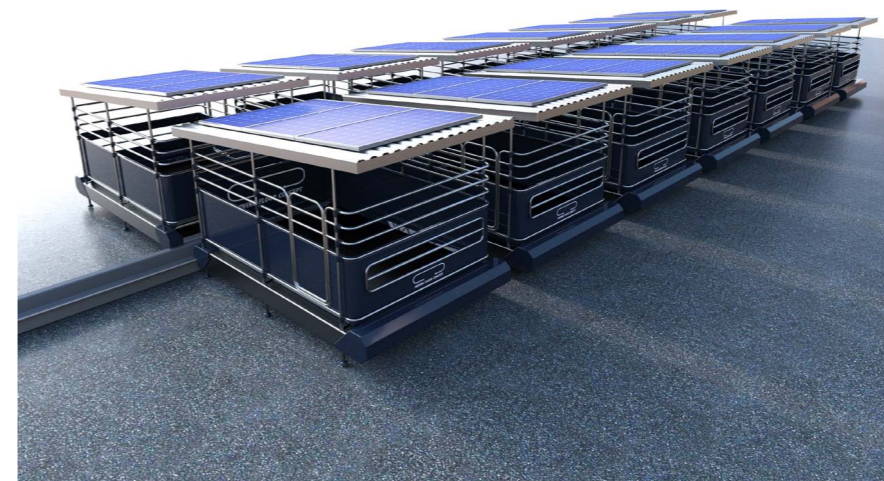
Automatic cleaning brings the manure out of the barn within two hours, before the peak of ammonia emission occurs at 4-6 hours after the manure left the animal body. The manure has less residues of antibiotics which is positive to a biogas operation. Most importantly the manure contains no added water which makes separation processes unnecessary. It is also easier to transport the manure.

No water added

Quick removal of manure

Less antibiotics

Simplified manure handling



Future solution with solar panels

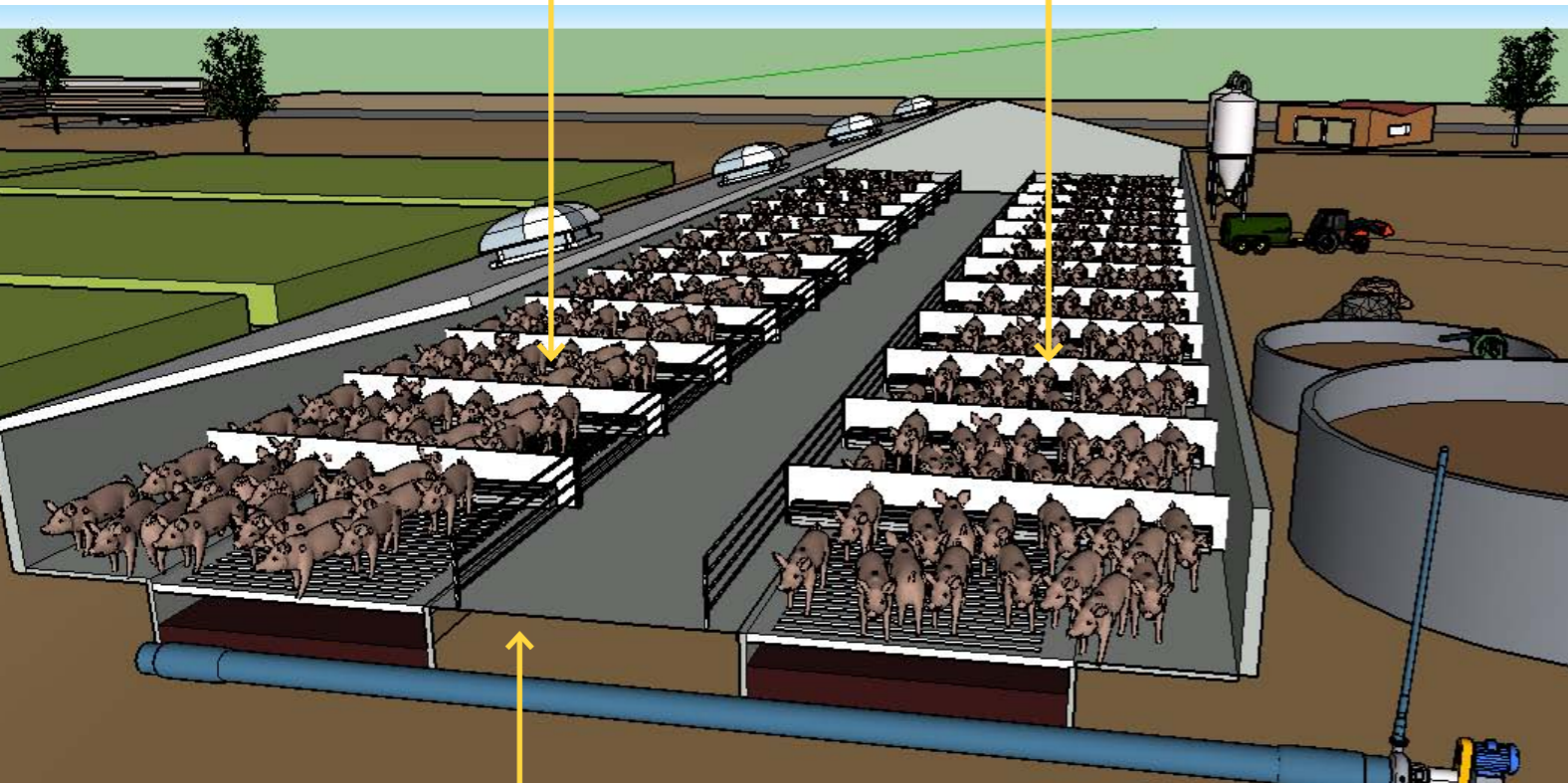
Environment

Environmental threats in conventional barns

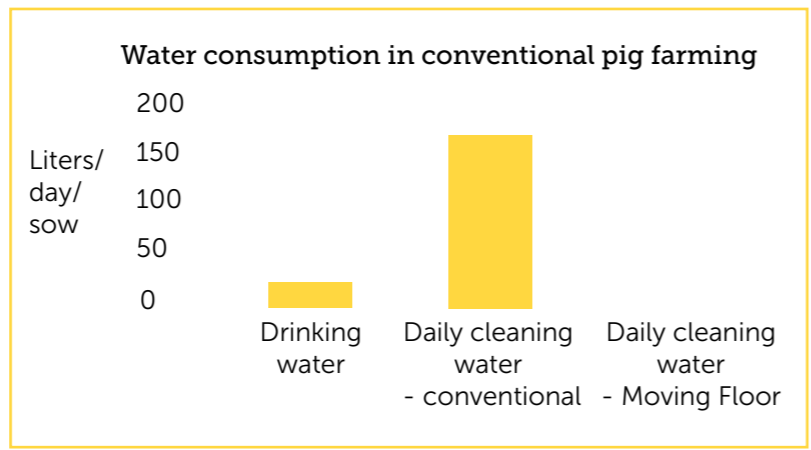
Approx 250 mg antibiotics is needed for every kilo meat produced.

According to FAO up to 170 liters of water is used daily to clean for one pig

High levels of ammonia, NH₃, normally 15-20 ppm in the barn.



Manure stored in pits for months. Highest release of ammonia 4-6 hours after the manure left the animal.

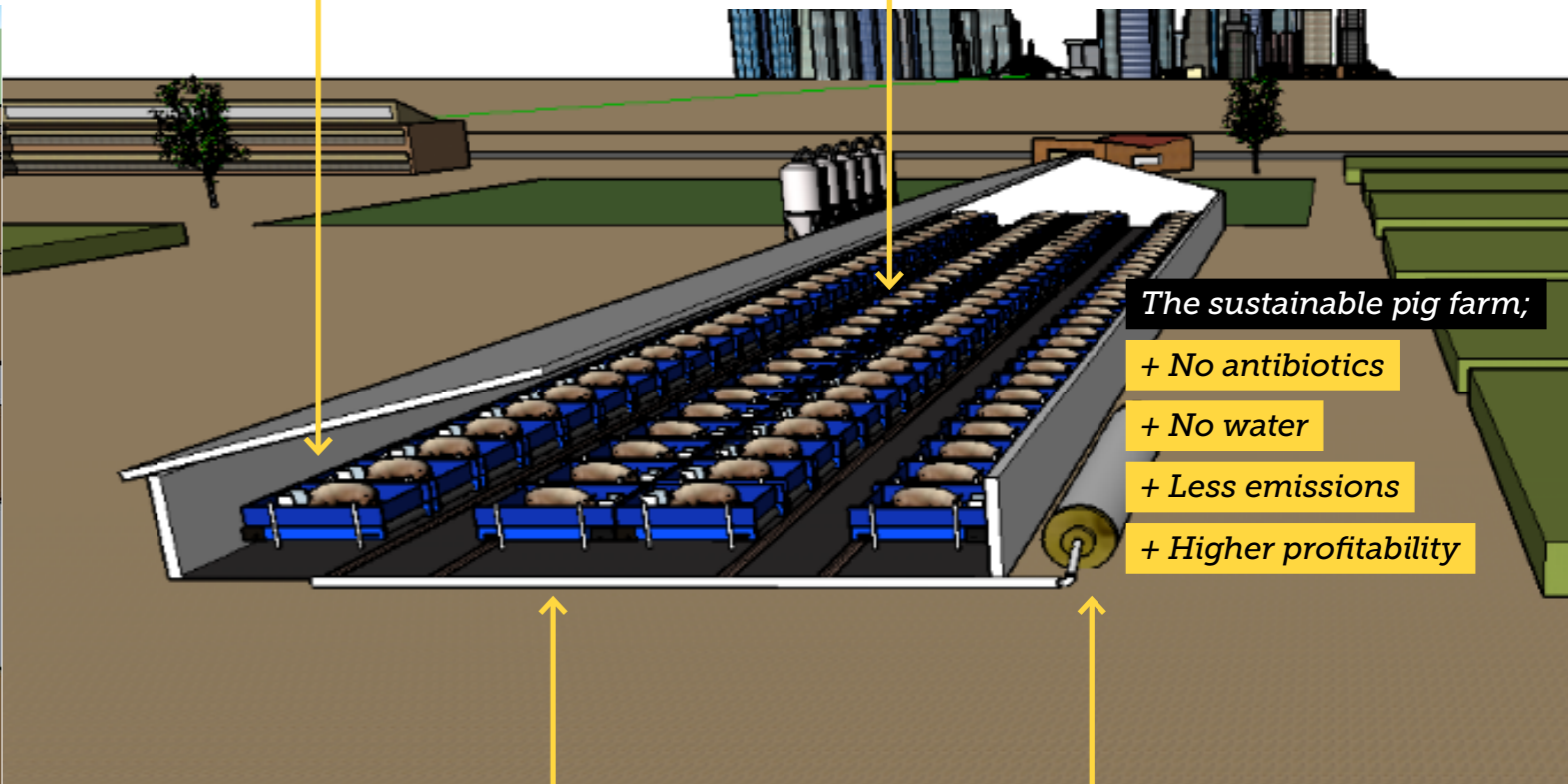


Source: FAO/UN

The Moving Floor solution

No (0) water for daily cleaning. 100% water reduction.

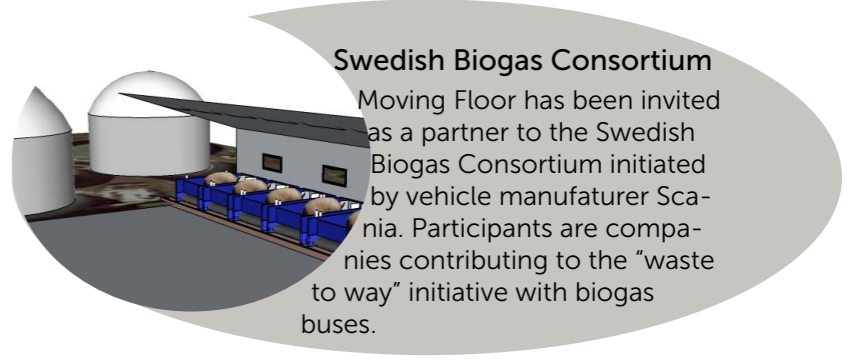
Significant reduction of antibiotics.



- The sustainable pig farm;**
- + No antibiotics
 - + No water
 - + Less emissions
 - + Higher profitability

Manure is removed from barn within 2 hours from it left the animal.

95% reduction of ammonia in the barn (1-2 ppm)



Swedish Biogas Consortium
 Moving Floor has been invited as a partner to the Swedish Biogas Consortium initiated by vehicle manufacturer Scania. Participants are companies contributing to the "waste to way" initiative with biogas buses.

Moving Floor Concept

A new industry standard that increases the profitability of pork production and reduces its negative environmental impact

