

- **Sjørup Pig Farm by Mads Rauff Bjerre**
- **Plant manager Brian Søndergaard**
- **2800 sows with weaners og 12 employees**

Improved cleaning increases efficiency and stability

Deviations: Better cleaning of the grain means fewer deviations and declines in efficiency in the sow unit. At Sjørup Pig Farm they usually clean off between one to three percent of impurities from the grain.

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Every time they got close to reaching the bottom of one of the two grain silos, plant manager Brian Søndergaard knew that there would be two to four weeks for the sows with reduced feed intake, reduced milking ability, and sometimes brucellosis or rectal prolapses.

»We experienced this even though we almost constantly added between one and two kg toxin binders per ton feed«, he says.

There are two grain silos at the farm for barley and wheat, respectively. These run empty approx. every three months, and the problems with the sow unit used to begin a couple of weeks before the bottom was reached.

»With two silos each running dry every three months we actually had problems with the grain during a great deal of the year«, Brian Søndergaard says.

In the past, all feed grain was cleaned in a drum cleaner before grinding, but the capacity was too low when they got to the cone of the silos, where the content of impurities in the grain was larger.

Three initiatives

Last winter, this brought the owner and the plant manager to consider what to initiate to prevent these declines in efficiency.

They thought of three initiatives that they believed could make a difference.

»First of all, we wanted to avoid feeding with newly harvested grain, so we

Our efficiency is increasing, but first and foremost we have increased stability. We no longer have declines when we use the last grain in the silos.

Brian Søndergaard, plant manager

introduced two to three months transition grain«, Mads Rauff Bjerre says.

Therefore they filled both grain silos shortly before a new harvest. This way they got past October 1st before the herd got newly harvested grain.

Next step was to take a critical look at the two grain silos.

Both were originally sealed storage silos, but having been in use for almost 30 years they were no longer tight, and had not been used as sealed storage silos either in recent years.

»So last summer we cast a new bottom for the silos to enable aeration of the grain«, Mads Rauff Bjerre says.

This made the silos resemble aeration silos, only without the option of agitation.

As the last thing, they wanted to do something serious about cleaning the grain.

»We had discovered that the drum cleaner wasn't sufficiently efficient for removal of toxins, which was probably our biggest problem«, says the owner, who explored the market for grain cleaners.

He reached the conclusion that the Sigma cleaner from SKIOLD most probably was the most efficient cleaner for removal of the largest amount

of toxins.

»It was not among the least expensive on the market, but it seemed sturdy in both design and function«, Mads Rauff Bjerre says.

Mobile solution

The annual need for grain cleaning is 5000 tons for the sows, and 6000 tons for a flat storage plant located on another farm.

So they wanted to be able to move the cleaner from the sow farm to the other farm during harvest. This did not make the installation any easier.

»We had some challenges making room for the cleaner in the feed barn«, Mads Rauff Bjerre says.

The solution was to mount cleaner and aspirator on a steel frame, which could be moved from one farm to the other by means of a loader.

»During harvest, the cleaner is on the farm with the flat storage, cleaning all of the grain that we store there. Subsequently we move it to the sow farm until the new harvest«, Mads Rauff Bjerre explains.

The capacity of the cleaner is 80 tons per hour, but since the conveying equipment is designed for max. 40 tons per hour, the cleaner is far from reaching its max. capacity.

Effect

After putting the Sigma cleaner into use during harvest, the plant manager has observed a clear improvement in the housing unit.



Earlier the two silos were sealed storage. Today they work as aeration silos with a filling rate of 3-4 times per year with storable grain.

»After installing the Sigma cleaner, we no longer see the same declines in our production«, plant manager Brian Søndergaard (to the left) and owner Mads Rauff Bjerre say



1-3% waste removal

- The waste fraction was approx. 0.5% when all grain was cleaned in the drum cleaner.
- With the Sigma cleaner the waste fraction has increased and is typically between 1 and 2%, but sometimes as much as 3%.



Advantages

- Cleaning removes foreign bodies such as stones, rubble, dust, and chaff from the grain.
- The more thorough the cleaning is, the more toxins are removed from the grain.
- In addition to a more stable production, advantages achieved by having less toxins are less wear on augers, hammers, screens, conveying equipment, and all parts of the liquid feeding system.

The investment

3/4 m DKK all inclusive

Is an investment of 3/4m DKK expensive for efficient cleaning of your feed grain? Well, Mads Rauff Bjerre doesn't think so.

The Sigma cleaner is about half of it. The other half was used on the necessary conveying augers, chain conveyors, and not least the electrical installation. The fact that he chose to make the cleaner into a mobile unit also added to the cost.

»When we make an investment, we want everything to work when we are done«, he explains.

So now he has ordered a closed chaff truck to collect the waste and drive it away from the farm directly to avoid a lot of dust in the feed barn and on the farm.

»We no longer see those declines when we use the last grain in the silos, and our efficiency is increasing, but most important of all, our stability has increased«, Brian Søndergaard says.

The plant manager has also noticed fewer stoppages on the pump of the wet feeding system and fewer broken membranes. In addition, hammers, screens, and other wear parts for the mill last considerably longer.

Personally



Mads Rauff Bjerre, Sjørup Pig Farm.

"We need to research deeper"

Mads Rauff Bjerre is not done investigating the qualities of grain cleaning. He believes that we still have much to learn about toxins – a knowledge which could be beneficial in addition to the improved cleaning of the feed grain.

»We have decided to take more toxin samples in the future«, he says.

When they installed the Sigma cleaner, he and the plant manager expected that they could stop using toxin binders

. So from one day to the other they removed the 2 kg toxin binders they used to add per ton. That was not a good idea, so they quickly started to add 1 kg per ton – a level which they have maintained. In the future they will take more toxin samples from the grain and grade the level of toxin binders according to the sample results.

»We will actually try to grade the addition of toxin binders, so that we increase the quantity if we know that we start to feed with grain with a high content of toxins«, he explains.

In the time to come Mads Rauff Bjerre will pay more attention to any differences in occurrence of toxins in different cereals, and examine if the method of cultivation has any significance for the occurrence.