

KT Program

Activity 1.2 – Enrichment + fiber

Interview questionnaire – End of project

Saniben Farm, Recorded interview on 2023-01-23

Verbal Questions to prepare (the answers will be filmed)

1. Do you plan to continue to use enrichments in your group sow housing facility in the future?
 - a. Why or why not?

Yes, we will continue the use of enrichments because we had already started before the project, and we saw the advantages that it could have to decrease the stress of the sows and to keep them busy. We intend to continue with the enrichments for group-housed sows.

2. Do you think enrichments effectively reduced lameness or aggression in the sow herd?
 - a. Why or why not?

First of all, in my opinion, enrichments are part of the recipe to have homogeneous groups of sows where there is no or little aggressiveness and lameness, to decrease all the impacts in terms of sow aggressiveness and lameness, it's rather a recipe in general that you have to consider, because I think there are more important elements than enrichment before you get to that. I'm thinking of the basics like pen design, rest areas, water source location, type of feeding system and ventilation for example. There is a chain to respect and I think that once all these things are in place and it's going well, there is a way with enrichments to first of all get organized so that sows go to certain places rather than others. For example, if you don't want them to lie down in a place where you would prefer they defecate, for example, by putting the enrichment in that place it will create activity so the sows won't tend to go to lie down where there is enrichment.

I don't think it decreases aggression and lameness significantly, but I think it can help when all the other things are in place too. Where there is the most aggressiveness is when you go to form groups and that's when the sows will fight together. With the enrichment, it keeps the sows busy, because without it, the only thing they have to do is fight, the dominant ones will take their place and you can't change that, but with the enrichment, they'll fight more to get the enrichment instead of fighting with each other. This keeps the sows busy with other things. The same thing if there is a problem with the feeding systems or whatever, it helps to control and help the lameness and aggression but not to reduce it drastically.

3. When we first spoke, you mentioned hoping to see (review past interview).

I think that with the enrichments we will perhaps succeed in reducing the aggressiveness and the fights between the sows and remove certain bad habits they have. We will obtain more natural behaviours from the

animal. Perhaps we will have an improvement in behaviour, and I think the rotation will allow us to keep them interested in the enrichment objects.

Did this come to be? What expectations were met and not met?

I think it worked because in some pens we had enrichment and in others we didn't, and it kept the sows busy because there was always a sow playing with the enrichment. We know that the pig, in its natural behaviour, will always try to play with something and if we have nothing or no bedding for it to do that, having enrichment decreases the misbehaviour and the closer we get to the animal's natural behaviour, the more comfortable the animal will be. In general, we have seen benefits with enrichment in the pens.

4. Your main concern was (review past interview) - did this happen?

Enrichment is material that is brought into the farm and the rotation of enrichment objects means that material is brought into the farm more frequently, so there is some concern in terms of biosecurity. For the upkeep or maintenance also because in the farms we have a lot of maintenance and already several daily tasks to do so to add a task like that I am afraid that it will be left aside and that through the rest we forget or we stop doing it so I think it will require some rigour in that.

For biosecurity, I think it's a bit like all the material that enters in the farm, so to consider, we try to have material entry as little as possible. You must think about it and get more of it in at a time but other than that it's not a hurdle if it's set up right. The other thing I was afraid would happen finally happened, because we had a disease crisis and at that time, we left the enrichment for the sows aside a bit because we had to concentrate on more important tasks since we were in crisis management mode. It didn't come naturally yet to start using the enrichment objects again because it wasn't the first thing to be put back in place when we started again with the sows. The only enrichment objects that stayed were the ones that were sustainable and didn't need to be rotated, such as the chain. The chain is the only one that remained in place, the other ones like the piece of wood, the rope and the fiber, which required a more frequent action, were abandoned while in the pens where there were the chains, they are still there, and the sows still play with them. This concern occurred, it was not dramatic, and it allowed me to see that.

5. Do you think there was a benefit in rotating the enrichments?

a. Please provide details on your observations

I think that yes, it was beneficial because we always noticed that at the time of the rotation, there was an increase in the interest of the sows for the enrichment. When we did a rotation, there was more interest from the sows but it's certain that after 3 to 5 days maximum, there is a rapid disinterest and occasionally you see a sow that will go and play with it but when we changed the enrichment the sows screamed more, maybe also because of curiosity but it created activity for the sows, which was an entertainment. So I think that yes, there was an advantage to the rotation.

6. Which enrichment do you think was the most effective in your system? Which was the least effective enrichment?
 - a. Please provide details.

It depends on what you mean by efficient, because the enrichments that gave the most interest to the sows were also the ones that were destroyed the fastest, for example the rope was the one that broke down the fastest, so the faster it broke down, the more interest the sows had in playing with it to destroy it, as if there was a gain. The piece of wood took longer to destroy, so the sows that were more persistent were the ones that continued to destroy it. The chain, on the other hand, was not destroyed, so the sows would play with it, but there was no point in trying to eat more of it or get anything out of it. The most effective at distracting the sows was the rope, but this was the one where the pen could sometimes go a week or two without enrichment because the rope was eventually all eaten and the employee didn't change it. So there are pros and cons, but the enrichments that are destroyed the fastest are the ones that provide the highest benefit to the sows.

7. Based on your observations, how were sows interacting with the enrichment objects?
 - a. Time spent interacting, one or more sows interacting at once

It was difficult to say which sow was playing with the enrichment and how long because we were not constantly watching them, but we know that there was always a sow playing with the enrichment that's for sure. During the enrichment rotation there were more sows, when we changed an object in a pen of 50 sows, there were about ten sows that would gather around the object to go and play, not necessarily to fight for the object, but they would line up to go and see the new thing in the pen. At the beginning of the enrichment installation, there were several animals attracted to the object, but then it was more like one at a time.

- b. Young versus older sows use of enrichment.

Then the dominant sows are the ones that go to enrichment first, the dominant sows are often the oldest, not always but often their larger size vs. the gilts will make the difference so they are the ones that tend to go first and when it was quieter, when the feeding was over and the majority was sleeping, that's when we would see the gilts, the second parities or the dominated sows that would go and play with it. The dominant often had access to enrichment before the dominated, but the dominated ended up going in their turn, it is the same principle as with the food in the pen where the dominant sows will go to eat first and the dominated sows wait their turn to go there, they know they will have the chance at some point to go.

8. How quickly do the objects wear and require replacement? How dirty do the enrichments get?

This is in the same order as the use and level of interest of the sows. The faster it had to be replaced, the more interested the sows were. In order, we have first the rope which was the one that was destroyed the most easily and that was replaced the most quickly, then there is the piece of wood that ended up wearing out and after the chain, it did not wear out, it was the most

durable. Finally, the last enrichment, the fiber, does not wear out, but it ends quickly. I would put it first because when we put it in the pen, it's like when sows are fed, they will eat it and it only lasts 5 minutes the time we put it.

In order we would have fiber, rope, piece of wood and chain.

9. Did the rotation of enrichments affect your daily work schedule?
 - a. Was it easy to accommodate?
 - b. Did it lengthen your workday?

It's a routine because when we add something to our work routine, we must find the rigour to do it, if it's written down that we have to do it, like a task list to check off to rotate the objects, it will be done after the routine is adopted, it also depends on the employees, some have more rigour than others. Adapting to this is not so difficult and it does not take much time depending on the time interval at which you do the rotation. Rotating is not long, it's more the fact of having and preparing the material that takes more time so maybe 1 hour per week to take care of the enrichments and to rotate. It also depends on the size of the farm and the number of pens. We were testing in only 3 pens but having to rotate through our 15 total pens would have taken more time.

10. How do you think we could increase the effectiveness of enrichments in group sow housing systems?

The more durable the enrichments are, the more effective over time they will be because they stay in place, and we don't have to change them. The chain or other durable enrichments, may have a better efficiency because once installed, we don't need to go and change it, we only install it once and we make sure that it will last over time. Whereas other elements that are less durable or require rotation, are more likely to be left out compared to the chain, but those requiring rotation have a better impact in terms of enrichment (more interesting for the sows).

11. What do you think is the main roadblock that stops producers from installing enrichments in their group sow housing system?

I think the reluctance is time, because money is not really involved since it doesn't cost much to add enrichment. It's more the interest. If producers were more aware of the benefits of having an enrichment, maybe they would take the time to install them, so maybe it's a lack of awareness of the benefits of enrichments. Time is a barrier too, you have to set it up and take the time to schedule it. Since it's not something that's mandatory in a routine, like feeding animals where we don't have the choice to feed them we'll definitely do it, but enrichment is more optional, so it is not a priority maybe.

12. How do you think we could get more producers to install enrichments in their facilities?

To encourage producers, I think it would be to make them more aware of the benefits of enrichment. Suggest solutions that are simple and effective and talk about them as much as possible so that people are aware of the benefits that can be achieved as well as the simplicity of adding enrichments.

13. What are the advantages / disadvantages of using the fibre enrichment?

The advantage I see is that it keeps almost all the sows busy at the same time. When we were pouring it on the floor for the sows, in a pen of 50 sows, there must have been 30, 40 if not 50 sows that had temporary access to enrichment for playing or chewing, so I think it's beneficial. I see a disadvantage in terms of equipment because it requires more. We were doing a test in a pen but if we had to do it for 600 sows, it would have taken more time and more material to bring in. It also brings more costs and it absolutely takes a full floor, because if you have a 100% slatted floor, you can't use that enrichment. Also it creates a certain feeling, not stress but a similar effect when you hand feed sows, for example sows that are used to being fed by humans when they see a human walk by at any time of the day, they will expect to get food and they will get excited, get up, scream and fight maybe a little bit thinking that they will get food. So that increased the activity level and maybe the stress level of the sows. We were dispensing it 3 times a week and it seemed to create an additional stress, I saw more disadvantages than advantages in using fiber for enrichment.

Written Questions to fill out/answer in advance (if possible)

For each gestation/pen where the project took place :

- a) What is your herd's performance numbers? (past 12 months: #total piglets born, #mommies, #piglets weaned, farrowing rate, sow mortality rate)

It is important to mention that the farm experienced health instability in 2021 that affected the herd's performances downward for the year 2021-2022. Please mention it.

Year 2022

Farrowing rate	86.36%
Total born	15.65
Live born	14.06
Stills	6.78
Mummified	3.40

Weaned per sow	26.98
Sow mortality	7.06%

- b) Based on your observations, what is the incidence of lameness within the herd?
(how many sows are affected (% of the group/herd))

I can't confirm that I have seen a decrease in lameness.

- c) Based on your observations, what is the incidence of sow aggression? (when do they fight? (eg. at time of mixing? before every meal?), frequency? % of sows affected?)

I believe this helps to reduce sow aggression in general and especially at critical times such as group formation, the beginning of feeding periods and when sows are bored.