

REFINED ENVIRONMENT - CREATING AN ENRICHMENT ROOM FOR GÖTTINGEN MINIPIGS

Carina Christoffersen & Kirsten Rosenmay Jacobsen, Ellegaard Göttingen Minipigs A/S, Denmark

ABSTRACT

Environmental enrichment is an important part of refined housing and care for laboratory animals. It has wide-ranging physiological and behavioral effects and can be particularly effective to stimulate natural behaviors and reduce the incidence and/or severity of undesirable or abnormal behaviors. An ideal enrichment program is attractive to the animals and results in sufficiently sustained interest. However, in a laboratory setting, it is challenging to maintain a continuous stimulating environment program. Hence, creating a dedicated enrichment room allows the animals to engage in multiple behaviors e.g. play, manipulation, and complex social behavioral events for a dedicated time. Especially young pigs will benefit from this as addition, as play behavior is thought to train social skills and help develop the ability to express and understand communicative signals. Furthermore, an enrichment room increases positive interactions between the pigs and the staff, and thereby improves socialization and results in a more corporative environment.

BACKGROUND

The enrichment room is designed to stimulate Göttingen Minipigs from weaning to 10 weeks of age. This period is a stressful time, as the piglets are separated from the sow, their diet switches from a predominantly milk-based one to one based on solid food and they are often mixed with pigs from other litters in a new environment. These changes can induce behavioral problems such as fighting and belly nosing, tail biting etc. Furthermore, if not exposed to continuous interactions with humans, they can become nervous and stressed during husbandry or study related procedures. A dedicated enrichment pen is therefore of great value for this group of pigs.



Standard pen at the weaning section



Enrichment room consistent of two adjacent pens with two openings in the pen divider.

DESIGN AND USE

A standard pen at Ellegaard Göttingen Minipigs for young pigs consist of an area for rest/cover, and area for active behaviors and an area for manure. Straw is given twice daily to stimulate rooting behavior. The diet is fed on the floor to further increase this behavioral need. In the enrichment pen, we have added devices that are not standard in the home pen environment. This consists of various toys such as: Pool with balls, Porcicheew with various scents, Easyfix Luna at various sizes and hanging devices (e.g. Pig Play cross, Pig Play horizontal).

The pigs have access to the enrichment room on a weekly basis.

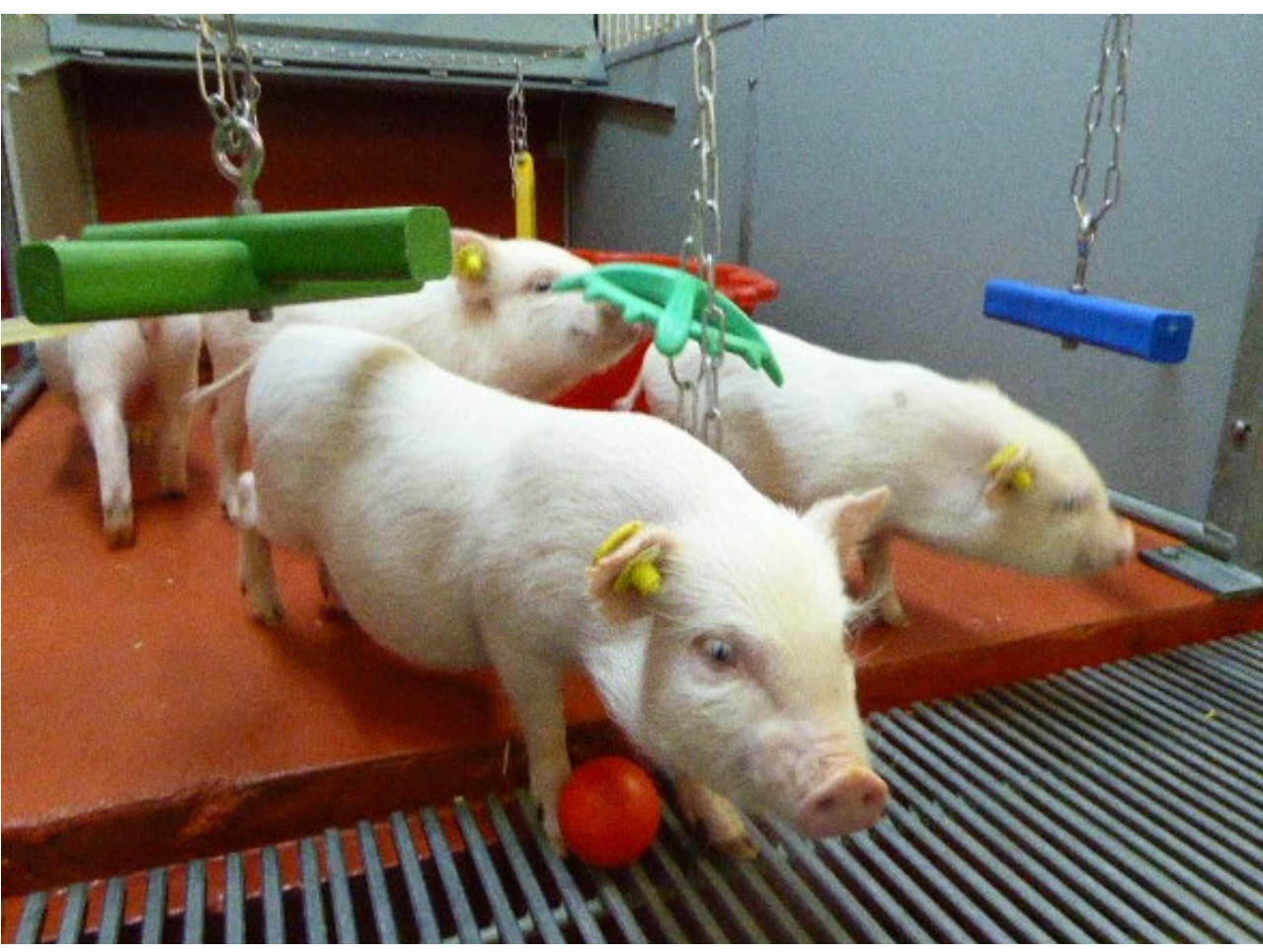
BEHAVIOR

Göttingen Minipigs are social animals. They develop a hierarchy from early on, however the positions may change and the pigs continuously interact with each other. These interactions may be positive resulting in a calm and stable group with play behavior in the young pigs. Negative behavioral interactions are typically seen as aggressions or fighting, tail biting, ear chewing, and belly nosing. The enrichment room is designed to stimulate play and to allow the pigs more space and a visual barrier from the other pigs. Furthermore, at this age, the pigs are very active and will engage in exercise and exploration when given the opportunity.



ENRICHMENT DEVICES

As pigs are capable of dichromatic vision, the devices provided were of bright colors. The specific color is however most likely not an important factor in the interaction. Devices that are chewable and odorous are of most interest. Furthermore, unattached objects presented at floor level are very attractive but lose their attractiveness when soiled with excreta. The devices available should be numerous to avoid competition and potential fighting, and adapted to the group of animals – e.g. older animals have a preference for food related enrichment.



IN-HOUSE EXPERIENCES

It is important that the devices used are safe and practical to use. They should be monitored to ensure that they do not cause health problems (e.g., choking, poisoning, obstruction of the digestive tract) and should be of a material that allows for easy cleaning. For pigs aged 4- 6 weeks a suitable time is around 30 minutes per enrichment session. Pigs 6-8 weeks old are entertained for up to 45 minutes and pigs 8-9 weeks old are active in 45-60 minutes. After this time the pigs should be allowed to rest in their home pen without further activities. Announcements of any actions improves the predictability of the environment (e.g. knocking on the door before entering), and studies indicate that announcement of enrichment increases anticipation and has a higher impact on the animals' welfare than the enrichment alone. We therefore recommend introducing a "signal" for play time.

CONCLUSION

The enrichment room is an effective way to increase behavioral diversity, and it is our experience that the room and its devices are of continuous interest. We believe that the enrichment room improves the pigs' adaptability to novelty and it may reduce fear in novel situations. Furthermore, the room enhances social interaction – both between the pigs and between the pigs and the staff. An enrichment room can be adapted to any facility and group of animals.

