MANAGING THE SOCIAL SYSTEM IN GROUP HOUSING

EUWelNet
Coordinated European Animal Welfare Network

Appropriate environmental design and good management of the social and feeding systems are of paramount importance when keeping group housed sows.
Some influential features are described below:

TIMING OF GROUP HOUSING

Pregnant sows must be kept in groups from four weeks after the service to one week before the expected time of farrowing at least. To safeguard embryonic survival, sows are usually only grouped after pregnancy confirmation (particularly important for new gilts). Implantation occurs between days 10 to 21 of pregnancy and this is a high risk period during which stressors such as mixing should be avoided.

Grouping can also occur earlier and some farms report no detrimental effect on reproduction when grouping the sows just after weaning. A large research project in Denmark shows that it is possible to group sows 4 days after service in all group housing system. The experience of farmers in Sweden and Switzerland, where grouping occurs no later than 10 days after weaning is positive.

Shortly before farrowing group housed sows may bite and injure each other. If this becomes a problem the injured sows should be removed from the group one week before farrowing.

GROUP SIZE AND COMPOSITION

It is preferable to house sows and pregnant gilts in separate pens because pregnant gilts eat more slowly and are smaller than and submissive to the larger sows. Thus, they may not compete well for access to resources such as feed and a comfortable lying space.

Scratches on the body due to fights

!!! NOTE: We must remember that every mixing event carries risk of aggression, lameness, skin lesions and temporarily reduced feed intake

SYSTEM DESIGN AND MANAGEMENT: EACH FARM MAY REQUIRE A SPECIFIC APPROACH

✓The **number of batches** of sows that the gestation unit must accommodate should be calculated.

✓A decision must be made on **group size**. Sows may be housed in small (5-10 pigs), large (20-60) or very large groups (> 100 pigs) depending on management skills and farm facilities. Using large groups may incur a lower capital cost in terms of space and facilities, but management may be more difficult. On the other hand, there is more space for the animals to escape from aggressive encounters in large groups, and aggression towards new sows may be relatively low because it is less easy to detect newcomers in a large group.

✓**Sows can be managed in static or dynamic groups.** This decision will depend on the design of the farm and should be in accordance with the feeding system.

✓**Static groups** are established at weaning or after service so the sows are mixed only once per gestation cycle. This is usually easier with small groups of 5-10 animals.

✓Larger groups (more than 60 sows) tend to be managed in a **dynamic** fashion. In dynamic groups, sows may be mixed 3 to 12 times per gestation cycle, depending on whether farrowings are batched weekly or monthly.

AVOIDING AGGRESSION

BASIC REQUIREMENTS TO MINIMIZE AGGRESSION AND ITS CONSEQUENCES ON HEALTH, STRESS AND PERFORMANCE :

1 – Establish stable groups
2 – Ensure the possibility to escape from an aggressive sow
3 – Use non-competitive feeding systems and enough drinkers
4 – Provide access to bedding/manipulable material

Competition for food at the feed station

FIGHTING CAN STILL OCCUR AT TWO HIGH RISK TIMES:

1 – During each social mixing
2 – During competition for a valued resource such as food or comfortable resting places

!!! NOTE: When sows are hungry they are more likely to react aggressively

OTHER TIPS FOR MINIMIZING AGGRESSION INCLUDE:

✓In large dynamic groups (> 60 animals), fighting is reduced if only of 4-6 sows are introduced at a time rather than 10 or animals.

✓In dynamic systems, incorporating walls to **subdivide the pen** into distinct lying areas where sows can hide and providing **sufficient space** for them to escape can have long term advantages in reducing aggression.

✓**Non-slippery dry floors** are highly recommended to reduce the risk of lameness and injuries as a consequence of aggressions.

✓**Pre-exposing sows** to each other prior to mixing using simple management strategies is advantageous. Allowing gilts controlled mixing with older sows lets them gain some appropriate social experience, e.g. they learn to withdraw when approached by an older sow

!!! NOTE: Providing sows with roughage decreases the incidence of aggression and vulva biting during competition for high valued resources, but does not seem to reduce aggression at mixing

✓Using **non-competitive feeding systems can significantly decrease aggression.**

✓There should be **enough drinkers** to avoid competition and allow permanent access to fresh water.

✓Providing sows with **high fibre diets** reduce aggression and improve welfare. This may reflect the increased time spent feeding and/or enhanced satiety.

✓**Providing straw or other types of roughage** in the lying area can reduce aggression during feeding. Sows can eat and investigate the roughage, reducing their hunger and satisfying their motivation to explore. It also provides better grip than barren floors, leading to fewer aggression-related injuries.

✓**The presence of a boar** can effectively reduce aggression between sows, especially during the 28 hours post-mixing. Placing boar pens next to sow pens also facilitates detection of returns to oestrus.

✓Aggressiveness can differ between **genetic lines** and between individuals within lines. **Selection for less aggressive sows may be a valuable strategy to reduce fighting in groups.**

✓There is some evidence suggesting that the synthetic **pig appeasing pheromone (PAP)** can reduce social stress in adult pigs. The use of PAP may be a complementary strategy to reduce fighting during mixing.

!!! NOTE: Mixing during darkness does not reduce aggression, and using psychoactive drugs such as Stresnil® to sedate mixed animals, or providing distractions such as food or straw at the time of mixing, usually tend simply to postpone rather than eliminate aggression