

Chapter 12. Aggression in pigs

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Injuries following mixing of sows

Introduction

When unfamiliar pigs are mixed with each other they will attempt to establish a social hierarchy or pecking order by avoidance, aggression and fighting. Once the hierarchy is established, future disputes between animals can then be settled with minimal aggression. Any further outbreaks of aggression are usually much less intense unless resources such as food or space become limited.

Domestic pigs have retained the same fighting tactics as the wild boar that are broadly similar for all age groups of pigs (Rushen and Pajor, 1987). They attempt to bite their opponents, particularly the head region, whilst avoiding being bitten. This gives rise to the commonly observed 'head to tail' or 'inverse parallel' posture. In established groups, aggression is regulated through an 'avoidance order' whereby the display of certain behaviours can limit the attacks made by dominant individuals (Jensen, 1982). In general, larger/older members of the group initiate and win most fights.

Aggression can have serious consequence for the welfare of the individual. In addition to the injuries caused by fighting, it can lead to the production of 'stress' hormones such as adrenaline and cortisol. The high level of both physical and psychological stress associated with aggression has led the UK Welfare Codes to recommend that 'pigs should be kept in stable groups with as little mixing as possible'. The stockperson should ensure that persistent bullying, leading to severe injury or food deprivation, does not take place.

It is therefore important to avoid mixing wherever possible. This can be done by keeping pigs in their original groups. When sows are weaned, they should also be returned to their original groups as far as possible.

Where mixing is unavoidable, the key point is to reduce the level of aggression by allowing losers of fights and weaker pigs to flee from, and avoid, the dominant pigs. The following general points should be considered:

- Reduce group size so there are fewer hierarchy positions to settle and hence less fighting
- Provide more space so that pigs have a greater chance of fleeing attacks and avoiding aggression
- Provide dividers or barriers to increase the chance that pigs can flee attacks and avoid aggression
- Provide good ventilation because pigs can quickly overheat during fighting
- Provide straw bedding to ensure good foothold thereby reducing injuries
- Ensure that any sharp projections, e.g. drinkers, are protected
- Ensure that weaker individuals can get access to food, particularly where it is restricted
- Provision of bedding and high fibre food reduces hunger in food-restricted sows and may reduce the tendency to aggression at feeding time
- Feeding sows separately and dispersing food widely also reduce aggression at feeding time

According to the Danish Pig Board, hunger caused by restrictive feeding is likely to be a reason for unrest and aggressive behaviour amongst group-housed, gestating sows. They found that sows fed ad lib had significantly fewer bites than those restrictively fed (National Committee for Pig Production, 2003). There are good health and production reasons for not providing concentrated food ad lib, but access to high-fibre food and bedding they can root in is likely to make sows less aggressive. This may explain the belief of some free-range producers that their sows are calmer because they are kept outdoors with access to pasture they can root in.

Case Study**Eastbrook farm, United Kingdom**

Eastbrook organic farm reduces the stress of mixing by placing sows, before farrowing, in individual pens which are separated by an electric

fence. The piglets are free to move between the pens since they can pass underneath the electric wire, and the groups can get to know each other at their own time and rate.

When the piglets are five weeks old, the fences separating the pens are removed and the families are free to mix. This mimics the natural system where sows introduce their piglets to the family group at a few weeks old, and helps to minimise the stresses of mixing.

When the piglets are weaned at 8-10 weeks old, they are kept together as a group. This system not only minimises the stress of weaning and mixing; it also ensures that these two stressful experiences do not happen simultaneously.

Case Study**Davidsta farm, Gnesta, Sweden**

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Davidsta organic farm avoids unnatural mixing entirely by keeping the sows in their natural groups. Before farrowing, they are transferred to farrowing paddocks. Each is provided with a farrowing arc deep bedded with straw. A restraining barrier keeps the piglets inside the arc.

When the piglets are seven days old, the barriers are removed and the piglets can mix as they would naturally do. When they are weaned at eight weeks old, the piglets are kept in stable groups without mixing. The sows also remain in their permanent groups.

See Case Studies United Kingdom 4 and Sweden 1 for fuller accounts

Summary

Some aggression is natural in pigs, but is usually kept within reasonable bounds provided:

- A dominance order has been established
- Subordinate pigs have space to escape from aggression
- Essential resources like food are not restricted

Problems with aggression in domesticated pigs can be increased by:

- Mixing groups of unfamiliar pigs together
- Keeping pigs in unnaturally large groups

- Stress caused by lack of space and hunger
- Provision of unnaturally concentrated food, poorly distributed

Aggression can be reduced, without undue confinement, by:

- Keeping pigs in stable groups as far as possible
- Keeping group size and stocking density low
- Providing space and escape areas
- Avoiding hunger by providing access to straw or other high-fibre foods
- Various techniques for keeping sows apart at feeding time