

NADIS disease bulletins are written specifically for farmers, to increase awareness of prevalent conditions and promote disease prevention and control, in order to benefit animal health and welfare. Farmers are advised to discuss their individual farm circumstances with their veterinary surgeon.

## Navel Bleeding

Loss of blood through the navel of the newborn pig can result in severe anaemia, failure to grow and in the extreme early death. The condition is usually sporadic, although can occur in outbreaks and there may be a variety of causes.

### Clinical Signs

Following birth of the pig, a proportion of the blood volume will be left in the umbilical cord. This should constrict and “push” this blood into the body and the remaining blood immediately clot to prevent leakage. If this constriction does not occur fully – such as with the “black pudding” navel, or if relaxation recurs or if the blood fails to clot, loss of blood will occur.

On solid floor systems, blood will be evident in the pen and often over the bodies of other piglets 2-4 hours after birth. However, where a pen is fully or partially slatted, the blood may be less obvious, having dripped through the slats and all that will be seen in obvious pallor of the piglet. It is not uncommon for stockmen to believe that the piglets are actually born pale but this is rarely the case.

### Causes

A range of possible causes have been recognised as the trigger factors for navel bleeding.

- 1) Failure to clot. This is likely to result from either prematurity or a failure of the normal clotting mechanism due to outside chemical insult. Sows that have had access to rat bait (Warfarin) or Aspirin may pass this through to the piglets and disrupt the clotting mechanism. The most common cause of navel bleeding in the UK is likely to be the result of resins present within certain hardwoods that are periodically and erratically included in wood based bedding materials (shavings or sawdust – the latter being more of a problem). It is unknown whether these resins act locally on the navel (most likely) or more generally throughout the body. There are specific inherited clotting defects akin to haemophilia in humans but these tend to occur in pure breeds and are rare in commercial pig production (e.g. Von Willebrand’s Syndrome in the Poland China breed).

Some producers believe there is a link with Prostaglandin induction of farrowing and navel bleeding in piglets although it is unclear if this is a direct chemical effect or the result of premature farrowing.

- 2) Damage to the cord. Over enthusiastic breaking of the cord close to the pigs’ belly at birth can damage the blood vessels and allow leakage of blood. When a cord is left to trail, it can be damaged by getting caught in slats or trodden on by the sow. In general, physical damage to the cord is more likely to produce individual pale pigs rather than whole litters.

### **Control and Prevention**

If navel bleedings is widespread on a litter basis:-

- a) Replace wood shavings/sawdust with chopped straw or paper.
- b) Avoid inducing farrowing before the due date.
- c) Remove any possible sources of anticoagulant for sows (rat bait, aspirin).
- d) Inject sows with Vitamin K up to 24 hours prior to farrowing. (This is the usual treatment for Warfarin poisoning).
- e) Feed Vitamin C (Ascorbic Acid) to sows in tablet form for 7 days prior to farrowing (Vitamin C is not stable in feed and can only practically be given in this way). Dose rate is up to 5g per sow per day.
- f) Clamp navels at birth using proprietary human navel clamps, which can be re-used if cleaned and sterilised. They need to stay in place for 24 hours. Cut off trailing cord.
- g) Alternatively, if a long cord is left, tie a simple overhand knot in it close to the belly and cut off trailing cord.
- h) Do not tear off cords close to the belly as the pig is born – it is better to allow the natural process to occur.
- i) Iron injections. There is always a tendency to give pale pigs extra iron injection although great care is needed as this may be toxic. A normal dose should be given within 72 hours of birth and no more than a normal dose should be given again 7-10 days later. Provision of electrolytes will be beneficial to help restore fluid volume in the first 24 hours of life.