Management

by Stuart Lumb

Colostrum

If a piglet gets off to a good start in life then this impetus will be maintained right the way through its life.

To make this good start though it is essential that the newborn piglet quickly suckles and gets a good intake of the first milk, or colostrum. Colostrum has a very high solids content, with the protein fraction being particularly high (see Table 1).

It is essential that the newborn piglet suckles quickly and receives colostrum.

Colostrum contains special proteins – immunoglobulins. These have a vital function in terms of protecting the piglet against diseases found on the unit. These protein molecules are quite large, but the gut wall allows them to pass through and be absorbed, but only for the first 24 hours after farrowing. After 24 hours the gut structure changes and the immuno-globulins can not be absorbed.

This can be likened to passing peas through a sieve. Initially the holes in the mesh are large and the peas pass through, but later the holes become much smaller and the peas are retained in the sieve. Hence it is vital that special attention is paid to the newly farrowed sow and to ensure that all newborn piglets are seen to be suckling within that critical 24 hours.

Particular care must be given to the smaller piglets in the litter as they tend to get pushed down the udder by the bigger stronger piglets, which suckle the front teats. If staff are not sure that the small piglets have suckled then they should put them on to a teat and watch them suckle. Dabbing them with a marker will indicate that they have been suckling.

Admittedly all these jobs take time – but if productivity improves as a result then it will be cost effective. It is vitally important that piglets are kept warm at farrowing as they are born with very limited energy reserves.

If they become chilled then they will start to use their body glycogen reserves and, significantly, colostrum, to try to increase their body temperature.

With regard to farrowing area temperatures French researchers found that piglets kept in cold conditions just after farrowing consumed insufficient quantities of colostrum.

In a trial French researchers Le Dividich and Noblet allocated farrowing sows into two groups. Litters from group A sows were kept at 30-32°C, whereas litters from group B sows were housed at 18-20°C. Group A piglets consumed 37% more colostrum than group B piglets.

Reduced colostrum intake impairs the opportunity to acquire colostral immunoglobulins; 20% of the group B litters in fact consumed less than the 150ml of colostrum per kg of body weight considered the minimum requirement for normal development. It is probable that hypothermia induced by the cold reduced the piglets' vigour leading to less aggressive nursing behaviour and consequently reduced colostrum intake.

Hence it is imperative that piglets are kept warm either by the use of heat lamps, pads or a combination of the two.

Piglets are always wet at birth and this causes chilling. There are several powdered products on the market which, when applied to the piglet, dries their skin and so helps reduce chilling.

If a pig unit is blessed with large litters fostering may be necessary, but piglets naturally need to have obtained their colostrum before being switched to another sow.

Another confounding factor is that of PMWS. Whilst this syndrome has been seen in many European countries it could flare up in any country so Asian producers need to keep alert.

If a herd has PMWS then piglets must be fostered before they are 24 hours old, by which time they should have ingested adequate colostrum. In situations where sows have little or no milk then piglets need colostrum substitute.

Some years ago some UK producers used to routinely milk sows and chill or freeze the colostrum, generally to give to small piglets. The 20ml of colostrum was given by means of a stomach tube fixed on the end of a syringe.

Labour is a very scarce commodity in the UK industry these days but where labour is more plentiful this practice might be considered cost effective.

Cow's colostrum has also been used but this can contain antibodies which may give false positive results against some pig diseases if the pigs receiving the cow's colostrum are later blood tested.

Hence, producers who export breeding stock are advised not to use cow's colostrum, but to obtain a porcine colostrum substitute. Whatever the situation, getting plenty of colostrum into that piglet is a must! ■

	Total solids	Lactose	Fat	Protein	Ash
Colostrum	30.0	4.5	8.5	17.0	1.0
Milk	20.0	4.5	8.5	5.5	1.0

Table 1. The composition of sow colostrum and milk.

References

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