

The first few days



For the first few days after birth, only one thing really matters: making sure the piglet drinks as much colostrum as possible. Otherwise, problems develop in the farrowing room; lack of colostrum can lead to a sick piglet, even as far as the finishing stage.

A lovely sight: a neat row of piglets drinking the vital colostrum.

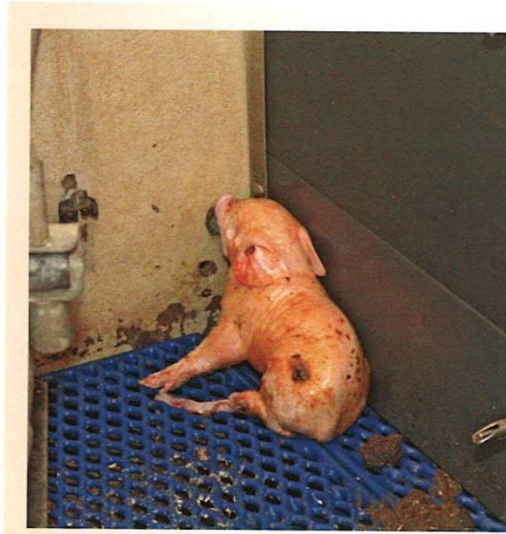
Piglets are born into relatively cold surroundings behind the sow. Their skin is wet so they lose a lot of heat. They have low fat and glycogen reserves and lack the 'brown' fat that human babies have. Their reserves are enough to last a day at most. So the piglet has to drink colostrum as quickly as possible in order to convert it into body heat. Piglets are extremely sensitive to temperature in the first few days. The ideal ambient temperature is 32 to 35°C. Create a microclimate for the piglets: a lamp is lovely and warm, but newborn piglets prefer half-light so sometimes avoid the light from the heat lamp. To be on the safe side, use a red lamp. The piglets' lying behaviour will tell you if they are OK!



Small piglets lose relatively large amounts of heat due to their relatively greater surface area. 2 kg piglets can withstand cold 1.75 times longer than 1 kg piglets. Make sure the piglets stay warm by hanging a lamp with an adequate heat output and by providing floor heating, a straw bed and/or a covered nest. Roll the piglets in drying powder. Piglets lying in a corner of the pen and cooling down as a result should be moved back to the nest.

Straight to the teat

The peak time for piglet losses is during the first three days after birth. This is a critical period in which piglets must be closely supervised and action taken where necessary. At a low ambient temperature piglets need energy in order to keep their bodies warm. They adapt their behaviour: they huddle together with littermates and shiver. Their respiration rate increases and with it their oxygen consumption. The greater amount of energy needed in order to stay warm comes at the expense of growth. Besides having low body reserves, piglets have no antibodies in their blood at birth. For heat generation and antibodies, therefore, they are wholly dependent on the sow's colostrum.



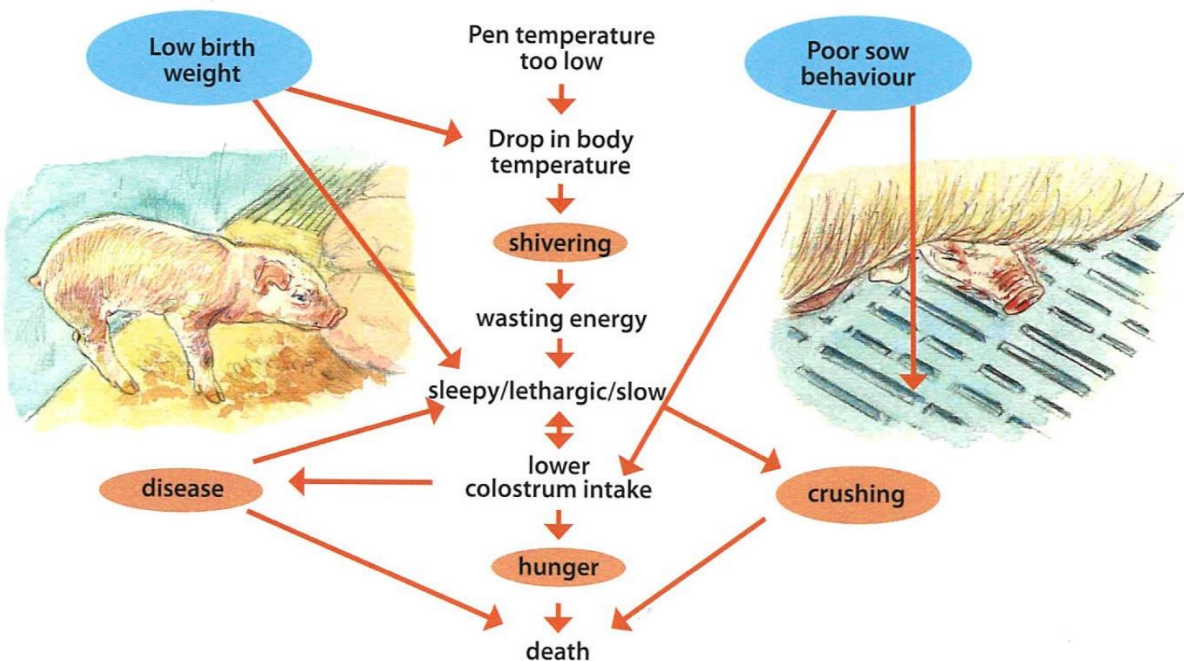
While searching for the udder, newborn piglets often get stuck in a corner. Place them next to a teat or under the lamp. Piglets on a hunt for colostrum pay attention to:

- the smell of amniotic fluid
- the smell of milk or carpal glands
- grunting noises from the sow
- the sound of other piglets
- the hair pattern of the sow
- warmth
- half-light

Use an infrared thermometer to identify piglets that are cold, so need more attention. A skin temperature of less than 32°C reduces their chances of survival.

The trap of cold and not enough colostrum

Piglets that drink little colostrum have no fuel to heat their bodies. As a result they become lethargic, which in turn causes them to drink even less colostrum. The situation goes from bad to worse and in the end these piglets die. Make sure the nest is warm and encourage colostrum intake as much as possible.



Importance of colostrum

In the final weeks of gestation the sow produces the building blocks for colostrum. This is the first milk produced by the udder when the sow farrows. After a day or two the colostrum changes to ordinary milk. This change mainly involves a drop in the concentrations of nutrients and antibodies. The latter protect the newborn piglet against a pathogen-laden environment.

Colostrum/milk contains:

- antibodies to pathogens
- fat as a fuel for heat
- essential amino acids for growth
- anti-infection agents to prevent enteritis
- hormones (insulin, cortisol, thyroxin) to promote growth and change of the intestinal wall (including closing to large molecules)
- growth factors to stimulate intestinal growth
- opium-like proteins that enhance the bond between piglet and sow and make the piglet sleepy

Opium-like substances in milk have a calming effect; the piglet becomes sleepy after drinking. They also have a slightly addictive quality, which causes the piglet to crave more milk.

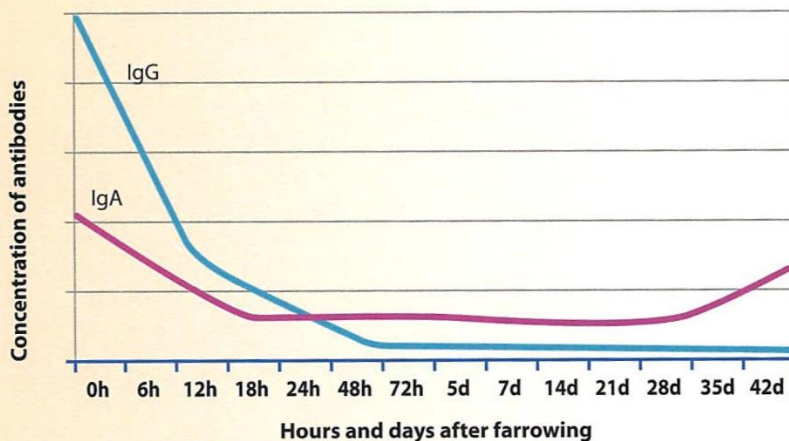
Types of antibodies

Antibodies (immunoglobulins) are produced against pathogens with which the sow has come into contact. The following types are differentiated:

- IgA: mainly in the mucous membranes (in the intestines for example), to fight off pathogens before they enter the body
- IgG: in blood, to neutralise any pathogens that do get through
- IgM: in blood, less effective than IgG but produced more quickly in the event of infection



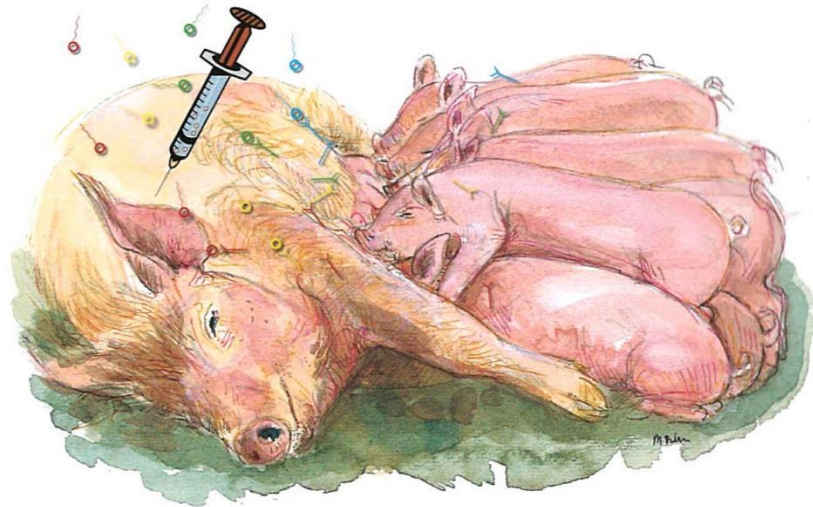
IgG in colostrum drops very quickly



The sow passes on antibodies to the piglets via the colostrum or milk. Just after birth, eighty percent of the antibodies consist of the immunoglobulin IgG, although that level falls quickly. The piglets' intestinal wall closes quickly to large molecules, including these antibodies, which is why piglets should drink as much colostrum as possible within the first 24 hours. Later on in lactation, IgA becomes more important. It is active in the intestines, where it offers resistance to bacteria and viruses via the milk drunk by the piglet.

Never enough antibodies

For each litter of piglets, the sow produces a fixed quantity of colostrum containing all the antibodies. The more piglets in a litter, therefore, the fewer antibodies are available for each piglet. The colostrum supply is triggered during farrowing and the initial concentration of antibodies falls very quickly. Mark the firstborn piglets and, once they have filled their bellies, put them behind a partition to allow the lastborn piglets to drink extra milk. Piglets born to gilts are even more susceptible: a gilt's immune system is not yet fully developed and she hasn't been exposed to all of the pathogens present on the farm. Plus gilts themselves excrete more pathogens than an adult sow, putting the piglets at greater risk of infection. Keep the piglets of gilts separate from those of adult sows and vaccinate the gilts to maximise their immune defences.



The level of antibodies in the colostrum depends on the number and type of pathogens to which the sow has been exposed, her reaction to them and the time of exposure. As a result, older sows often have more antibodies in their colostrum than gilts. Vaccinations for diseases such as circo or influenza may result in a higher concentration of antibodies to those specific pathogens in the colostrum.

Lack of little disease resistance

Does the piglet lack antibodies? Is this down to the farmer, the piglet or the sow?

- sow hasn't produced enough colostrum (quantity)
- sow doesn't have enough antibodies in the colostrum (quality)
- piglet hasn't drunk enough and/or has drunk too late



LOOK - THINK - ACT

What does this thin piglet tell you?

Crooked back, head down, sunken flanks and a thin rump. This piglet hasn't drunk enough colostrum. He runs a high risk of succumbing to disease. He doesn't have enough anti-infection agents in his intestines or antibodies in his blood. As a result, a pathogen could easily flourish in his intestines and infect him. In addition, his intestines won't develop so well because he lacks growth factors from the colostrum. Finally, he is not receiving the necessary nutrients and will starve, become chilled and then die.