

Piglet feeding management with dry lacto-initiator feed

The objective of applying creep feeding techniques (supplementing the milk of suckling piglets with feed), is to get them to start eating solid feed as soon as possible. This will produce more homogeneous piglets with higher weights that, most importantly, can better adapt to the delicate weaning phase.

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The benefits of creep feeding include:

- It favours the adaptation of the piglets to weaning, as if they have eaten feed during the suckling period, the latency period (the time between weaning and the first intake of feed) is reduced and hence, the post-weaning weight loss, making it possible to prevent loss of appetite and anorexia situations.
- It stimulates maturity and the enzymatic capacity of the piglet's digestive system, thus preventing diarrhoea and favouring the digestion of starch and protein, and adaptation to the transition from a liquid milk-based diet to a solid diet of plant origin.
- It improves piglet productivity, as it accelerates their growth and reduces heterogeneity during suckling and the first weeks after weaning.
- It reduces the mortality of suckling piglets.
- It supplements the absence of the mother's milk by partly covering the growth needs of the piglet, particularly in the case of the smallest ones.
- It improves the bodily condition of the sows at the end of the suckling period (especially in weaning periods of 28 days), increasing their fertility potential.

Management tips

The best option would be to offer feed at an early age, and for the piglets to eat it. However, it is no easy task to get them to eat. Regardless of the characteristics of each farm, there are general guidelines that can be applied:



- To start with, offer a small quantity of feed (50g/litter) and often (three times a day).
- If they finish it between each feeding session, clean the dish and give them more.
- If they do not finish it between each feeding session, remove it, clean the dish and replenish with fresh feed. Never throw fresh feed onto old feed, as it could be soiled and lose its palatability and aroma.
- Then increase the quantity of food offered as the appetite of the piglets increases.
- It is very important that the dishes are easy to transport, put in place and remove, in order to keep them clean and dry.
- Place the dishes at a distance from heat sources, corners and the sow. Whenever possible, they must not be near the place where the sow urinates and defecates, to

If access to water is improved, feed consumption increases.



prevent splashing and droppings adhered to the legs of the sow from being transferred to the dish. A good location is near the sow's feeding trough, so that the piglets can imitate the behaviour of their mother at feeding time. It is also a good idea to put the dish near a drinking trough installed for the piglets.

- Offer the feed when the piglets are awake, to arouse their curiosity. It is important for them to see the operator handling the dish or throwing in the feed.
- The feed must be stored tightly closed in a cool, dry place to ensure it conserves all its nutritive and sensory properties.

Piglet water consumption in the farrowing pens

The water content for a newborn piglet is around 80% of its bodyweight. A water loss of just 10-15% can cause death due to dehydration.

At birth, a piglet consumes water through its mother's milk (which has a proportion of water of 80%). However, it is well known that not all newborn piglets have the same opportunities of suckling and consuming the necessary quantity of milk for their correct development.

In such cases, a water deficit reduces their appetite and has a direct effect on the development of diseases such as diarrhoea, cystitis, oedema and others. Furthermore, as the piglets grow and are given lacto-initiator

feed, the water consumption stimulates the intake of dry feed and thus ensures their correct adaptation after weaning.

Many studies show that when access to water is improved, the feed intake increases and that the quantity of feed eaten by the piglet depends on the quantity of water it drinks.

How to satisfy the piglet's water needs?

● Type of drinking trough:

Bowl-type drinking troughs are much more effective than nipple-type ones, as the latter are more difficult for the piglets to find and use.

● Drinking trough location:

Place near the piglets' comfort area, and also

near the dish where the feed is placed. A water flow rate of 300ml/minute is recommended, and bowl-type drinking troughs must be placed at a height of between 5-8cm from the ground.

Factors that influence water consumption

- Room temperature.
- The sow's capacity to produce milk.
- Water temperature and quality.
- Quality of the lacto-initiators.
- Need to evaporate water from the lungs (directly related to the room temperature).
- Piglet stress level.
- Number of drinking troughs, their position and the water flow rate.
- Sanitary conditions.

Practical tips for increasing water consumption

- Facilitate access to water by providing an additional dish (such as the feed dish) filled with water from the day of birth.
- Add a palatability enhancer to the water.

Water management

- Daily cleaning (as often as required) of bowl-type drinking troughs and supplementary dishes, and checking of their correct operation.
- Checking of the water flow rate and its adjustment to the age/needs of the piglets.
- Regular water analyses.
- Consumption of 100-200ml/day/piglet is recommended.

Feed bases for piglets in transition

From a humane perspective, it is easy to understand that weaning a piglet, especially during the first few days, is an extremely stressful period in its life. In natural conditions, suckling lasts about 70 days and the transition to a solid diet is gradual.

At present, weaning is done when the piglets are between 21-28 days old, leading to an early and sudden change for the piglet, not only in terms of its diet, but also in social and environmental terms.

If we focus on the transition diet, it must always be gradual and gentle, to facilitate the difficulty in adapting and the development of the digestive and immune systems.

to slow down, and some even lose weight. For this reason it is very important to help them adapt in terms of their diet and socially, and provide them with facilities.

First of all, during the suckling phase, it is advisable to give the piglets food and water often and in small quantities. Piglets that eat feed during farrowing start to develop their enzymatic system, which helps them adapt better to a diet with compound feed once weaned, so they start to eat and grow earlier and have greater daily weight gains.

Once weaned, it is very important for the piglets to start drinking as soon as possible. For this reason, the use of drinking troughs that require no learning is recommended, such as those with water levels and no mechanisms, or where there is water left by

more advanced pigs that is accessible for the lagging ones, such as bowls. They must be installed at an appropriate height to facilitate access to the water.

As for the feeding troughs, as the farrowing animals each consume small quantities of milk on their nipple simultaneously approximately every hour, it is important to temporarily increase the feeding spaces with extra dishes, until the piglets create the hierarchy to use the feeding troughs in turns, reduce the number of feeding times per day and increase their feeding rate.

Offer soft food

Feeding troughs can also be used to prepare soft foods during the first few days, making the change from liquid to solid food more gradual. Soft food provides the piglets with both water and feed and as they eat in a group, this method also reproduces the pull effect (as with their mother). Initially the soft food must be prepared with lukewarm

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Piglets need to adapt

Changing from milk, whose energy and protein values are of great biological value, to feed in which carbohydrates are the main source of energy, is by no means an easy task. After weaning, the piglets must adapt to their new surroundings, a different group of animals and a new hierarchy.

Apart from the change in their diet, the water is different and the animal must learn to differentiate between thirst and hunger. Some studies show that up to 40% of piglets take more than 10 hours to eat again after being weaned, 10% more than 40 and some up to 100 hours.

All this means that it is quite usual for the growth rate of most recently-weaned piglets



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water, the dish must be clean and the frequency, three times a day.

The quantity must be in proportion to the number of piglets in the pen and their feeding rate. The idea is to provide it in the freshest possible condition, without it remaining in the dish for too long, but taking care not to offer too much a day, as they will become too accustomed to it and not go to the hopper with the dry feed. The proportion of water to feed must be reduced gradually, making it more and more concentrated. Its withdrawal must not coincide with a change in feed (lacto-initiator/prestarter).

During the growth phases, the animals usually consume freely available water and feed (*ad libitum*) to maximise food consumption and growth. Feeding with pellets (instead of flour) and water in the feeding trough (instead of dry feed) usually increases the feeding rate and total consumption of the food, with the ensuing improvement in the growth rate.

But offering moist feed requires adequate handling, as an excess or lack of feed flow due to poor adjustment, or the degradation of the feed due to remaining moist for an excessively long time may lead to problems in adapting, low consumption or an increase in waste.

The nutritional requirements of the pigs vary as they grow, and it is very important to

change the feed composition, to guarantee that the animals have a diet adapted to their needs and reduce the cost of food and the nitrogen and phosphorus content of their droppings, caused by undigested excess protein in their diet.

It should be considered that the feed transition is both nutritional and related to the ingredients it contains.

Gradual changeover

The piglets gradually adapt from metabolising proteins of animal origin to proteins of plant origin. So, the composition of the feed will also change to more and more basic ingredients with lower digestibility, changing from the highest to the lowest amino acids and from the lowest to the highest energies.

For this reason it is important to consider that changing from one feed to another must be done gradually over a period of at least three days.

The feeds must be mixed as homogeneously as possible to prevent sudden imbalances in the intestinal flora and without affecting the average daily consumption by applying a drastic change in terms of nutrition.

This is even more important after limiting the use of antimicrobial agents in the feed, such as antibiotics and zinc oxide.

It is of the utmost importance to keep in mind that in most facilities, the total capacity of the feeding trough hopper per animal is much greater than the quantity of feed the animals can eat in a day, and it may contain food for more than one week if the animals are smaller.

For this reason, telescopic tubes must be installed, allowing them to be partially filled so that the feed does not remain for too long in the hopper and lose its properties, and to guarantee that changes in feed are made correctly.

So, during the first few days it is advisable to dispense the feed they will eat in 24 hours, keep the feed opening correctly regulated and always keep the feeding troughs as clean as possible, with no remains of soiled feed. Lastly, it should be considered that any reduction in weight in a weaned piglet or a delay in weight gain after weaning is amplified negatively in the growth curve during the period from weaning to sacrifice, increasing the variability in weight among animals of the same age.

The objective of ensuring a good feed transition is to prevent a halt or a reduction in growth and the proliferation of enteric diseases. If we achieve that end, it will be much easier for us to preserve and maintain the health of the piglets and thus reduce production costs during this delicate phase in pig farming. ■