

Creep feeding in piglets:

Technology for enhancing pig productivity

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Modern pig production system should be efficient, highly productive, animal welfare centric and sustainable. There is growing emphasis to produce more pork from fewer animals with a target to get average 2–2.2 farrowing and minimum 30 piglets per sow per year. To achieve this, the modern swine production system relies heavily on genetics, nutrition and reproductive technologies for enhanced productivity. Nutrition strategies and precision feeding plays an important role in pig production starting from early life of piglet. Creep feed is one such nutritional intervention for production of healthy piglets. During initial phase of piglets, feed efficiency is maximum and feed conversion ratio is minimum. Therefore, creep feed ensure maximum growth rate. It also ensures early weaning at 30–35 days of age, thereby ensure proper body condition of sow. In conclusion, creep feed is recommended for efficient and profitable pig production.

Keywords: Creep feeding, Feed efficiency, Healthy piglets, Nutrition

CREEP-feeding is defined as a highly palatable and easily digestible solid diet provided to the young piglets while still sucking the mother in a separate enclosure which cannot be accessed by the sow. Creep feeding piglets provides opportunities to increase weaning weight and ease the transfer from sow's milk to solid food, promoting a suitable transition at weaning and improving general health. Weaning exposes the piglet to a number of environmental and social challenges as it adjusts to a new environment and nutrition source. After weaning, piglets have to rely on a less-digestible plant-based diet when they still have reduced digestive enzymatic activity for these ingredients. This often results in intestinal dysfunctions, leading to decreased health, feed intake, and growth performance and may result in reduced lifetime performance. The provision of a (solid) creep feed during lactation tries to reduce this growth check by easing the transition from sow's milk to solid

nutrition before weaning.

Benefits of creep feeding

The early introduction to supplementary nutrition offers numerous benefits and addresses several key challenges in piglet management. Some of the benefits of introducing creep feeding are listed below:

Accelerate growth rate: Piglets grow rapidly, and their nutritional needs increase as they develop. Sow's milk alone is typically insufficient to supply these increasing demands, particularly as the piglets near weaning age. Creep feeding introduces solid feed, which helps meet these nutritional requirements, resulting in faster growth rates.

Eases Weaning Transition: Weaning is a stressful and critical stage for piglets, often accompanied by a reduction in feed intake and a temporary drop in body growth. Creep feeding eases the transition by introducing piglets to solid meal before they are weaned. Piglets exposed to creep feed are more

likely to continue eating solid feed after weaning, resulting in a smoother transition and fewer growth setbacks.

Enhances Digestive Health: Early exposure to solid feed stimulates the development of the piglets' digestive tracts. It promotes the growth of healthy gut bacteria and helps digestion. Creep feeding thus allows piglets to progressively adapt to solid feed, reducing digestive disturbances and improving nutrient absorption as they fully transition to a solid diet.

Supports Immune System Function: High-quality creep feed is frequently supplemented with vitamins, minerals, and other substances that promote immune system development. This nutritional boost helps pigs establish a stronger immune system, improving their resistance to illnesses and infections.

Improves Sow Health and Productivity: Creep feeding lessens the sow's nutritional burden since piglets ingest some of the nutrients



Creep feeding of piglets



Creep Feeder

from the additional feed. This can reduce stress for the sow and improves her general health and reproductive efficiency. Creep fed piglets can be weaned early (30–35 days) thereby allowing the sow to reproduce early. Early weaned sow has less weaning to estrus interval (4–7 days) as their general body condition is good.

Enhances Overall Farm Productivity: Healthy, well-nourished piglets that wean smoothly are more likely to reach peak growth rates and perform better throughout their production cycle. This results in higher overall productivity and profitability for the farm.

Creep feed composition and quantity to be fed

Table 1. Composition of different creep feed for piglets

Ingredients	Quantity (%)		
	I	II	III
Maize powder	45	35	25
Rice powder	-	10	20
Wheat bran	2	2	2
Skim milk powder	10	10	10
Soybean meal	6	6	6
Sesame oil cake	15	15	15
Groundnut cake	15	15	15
Molasses	5	5	5
Mineral mixture	1.5	1.5	1.5
Salt	0.5	0.5	0.5
Vitabland	25g	25g	25g

The amount of creep feed to be

fed to piglets pre weaning is given below in Table 2. Piglets should be allowed to get acclimatized to creep feed for two to three days before actual start of feeding. In general, 800–900 gram creep feed is required per piglet from day 7 to day 35 of age.

Table 2. Sample of creep feed to be given in suckling pigs

Age of the piglets (Day)	Feed intake (grams/piglet)
7–10	Few grams (to let the piglets get acclimatized to the feed)
11–15	10–20
15–20	35–40
20–25	40–55
25–30	65–70
30–35	75–80

Optimal time and duration of creep feeding

Starting creep feeding at the optimal time is critical for optimizing its benefits while also boosting piglet growth and health. Creep feeding usually begins when piglets are 7 to 10 days old, depending on their development, the sow's lactation stage, and the ambient conditions. Piglets at this age are developing physiological ability to digest solid feed and can benefit from the extra nutrients offered by creep feed. As piglets grow, their nutritional requirements increase, and sow's milk become insufficient to meet these needs. Studies have shown that during

the last period of lactation (21 to 28 days), milk production decreases by 12.5% and ME intake (kcal/day) of piglets increases 422 kcal/day. Thus, necessitating the need for extra sources of energy and nutrients for growth and development.

Effect of creep feeding on growth rate of piglets

A creep feeding trial was carried out at Pig Research Farm of ICAR Research Complex, Nagaland Centre, Medziphema. In this trial, 36 piglets belonging to 4 different litters were fed the creep feed from day 7–35 days of age and another 38 piglets of four different litters were kept as control. Body weight of piglets was measured weekly with electronic balance. Piglets in creep feeding groups attained significantly higher body weight as compared to control group.

Table 3. Effect of creep feed on body weight gain of piglets

Weeks	BW (kg)	
	Control	Treatment
7	2.24±0.03 ^a	2.20±0.03 ^a
14	3.0±0.03 ^b	3.53±0.03 ^a
21	4.04±0.04 ^b	4.61±0.03 ^a
28	5.07±0.04 ^b	5.66±0.03 ^a
35	6.04±0.05 ^b	7.0±0.03 ^a
42	6.79±0.03 ^b	8.08±0.03 ^a

0 week-Day 1 of feeding

Common challenges and solutions

While creep feeding offers numerous advantages for piglet growth and health, it also presents several challenges that producers must address to ensure its effectiveness. Understanding these challenges can help in developing strategies to overcome them and optimize the benefits of creep feeding. Some of the key challenges associated with creep feeding of piglets are listed below-

- **Feed Formulation:** One of the most difficult aspects of creep feeding is ensuring that the creep feed is properly designed to suit the nutritional requirements of the piglets. The feed must be balanced with the appropriate levels of nutrients

to ensure optimal growth and health. Fresh creep feed should be prepared to avoid mould growth. The ingredients should be of optimum quality.

- **Feed Costs:** High-quality creep feed can be expensive, making it difficult to manage feed expenses while maintaining appropriate nutrition. Balancing the expense of feed with the benefits of enhanced growth and health is critical to preserving profitability.
- **Feed Waste:** Piglets may initially



waste some feed. Using feeders with low spillage and modifying feed presentation can help reduce waste. Also, provide creep feed in creper area so that sow cannot have access to it.

SUMMARY

Creep feeding is a highly effective and precise management practice that offers multiple advantages for piglets and sows. Providing supplementary feed during the early stages of piglet


development, leads to accelerated growth rates, smoother weaning transition, enhanced digestive and immune health, and improved sow productivity. Thus, by addressing the nutritional needs of piglets at an early stage, creep feeding program can lead to healthier piglets, more efficient and sustainable production, and ultimately, greater success in pig farming.

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