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Feed intake targets for modern lactating sows

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This issue examines how much feed a modern lactating sow should consume each day and argues that feed intake must be judged against litter demand, not against a traditional feeding curve.

Modern lactating sows are expected to nurse more piglets than previously, support faster litter growth, maintain body condition, and return to estrus quickly after weaning. This makes lactation one of the most demanding phases in swine nutrition. The practical question sounds simple: how much should a lactating sow eat each day? The answer is less simple because the sow is not only eating for herself. She is eating for the litter, for her own recovery, and for the next reproductive cycle.

A typical lactation diet may contain about 10 MJ net energy per kilogram. At that density, a sow consuming 6 kg/day receives only 60 MJ net energy per day. A sow consuming 8 kg/day receives 80 MJ net energy per day. This difference is not small. In high-output lactation, it may separate a sow that supports the litter mostly from feed from a sow that supports the litter heavily from her own body reserves.

Depending on stage of lactation, milk contains roughly 5 MJ/kg NE. A fast-growing suckling piglet will consume about 1 kg of milk per day during strong lactation, which means each piglet requires 5 MJ of milk energy per day. Thus, a sow nursing 14 active piglets needs to produce 14 kg of milk daily, representing 70 MJ of energy secreted as milk each day. In addition, the sow needs another 20 to 30 MJ NE/day for her own maintenance, bringing peak daily demand close to 100 MJ NE.

Litter demand drives intake needs

It is thus clear that the modern sow should not be evaluated by a fixed feed allowance alone. A sow nursing 10 moderate piglets does not have the same nutrient demands as a sow nursing 14 fast-growing piglets. Litter size, litter growth rate, milk output, parity, lactation length, and environmental temperature all change the answer. As a practical reference, many modern sows need to move beyond the traditional 6 kg/day target and approach 7 to 9 kg/day during strong lactation, especially near peak milk production. In modern systems, the real target is daily NE intake, not feed intake alone.

Average intakes hide problems

Average daily intake records are useful, but they can also be misleading. Early lactation intake is naturally lower, so the sow must climb quickly after farrowing and sustain high intake during the period of greatest milk demand. A sow averaging 6 kg/day may look acceptable on paper, but if she reaches peak intake too late, or drops feed during heat stress, the litter may still outgrow her feed curve. The question is not only how much feed she consumes over lactation. The question is whether she eats enough at the right time.

Six kilograms is not enough for every sow

In older systems, 6 kg/day was considered a good lactation intake. In modern systems, at 10 MJ net energy per kilogram feed, 6 kg/day supplies about 60 MJ net energy.

That may be adequate for some sows and litters, but it is unlikely to cover the full demand of a highly productive sow nursing a large, fast-growing litter. When intake falls short, the missing energy does not disappear. It comes from body fat, body protein, and future reproductive resilience.

Body reserves are not free feed

Some body mobilization during lactation is normal, but excessive body loss is not a feeding strategy. The sow can use body tissues to support milk production, but this has a cost. Excessive loss of weight, backfat, or muscle can delay recovery, weaken subsequent reproductive performance, increase culling pressure, and reduce lifetime productivity. A heavy litter at weaning is valuable, but not if it is purchased by damaging the sow that must produce the next litter. Mobilized body tissue is also an inefficient way to support milk production.

Water controls appetite and milk

Feed intake cannot be separated from water intake. Milk production requires water, and appetite depends on water availability, drinker flow, drinker position, water quality, barn temperature, and sow comfort. A lactation diet can be correctly formulated and still fail if the sow cannot drink enough. In warm conditions, this becomes even more important. Before increasing diet density or changing additives, the farm should confirm that every sow can drink freely and comfortably at all times.

The feed curve must follow the sow

A feed curve is useful only if it responds to the animal. Some farms restrict feed too long after farrowing. Others offer feed aggressively but fail to identify sows that are not eating. The right program encourages rapid intake increases, avoids stale feed, feeds more than once per day where labor or automation allows, and adjusts for parity, appetite, litter size, and temperature. The best lactation feeding program is not the one that offers the most feed. It is the one that gets the sow to consume enough feed without waste, refusal, or digestive disturbances.

In brief, the modern lactating sow should not be judged by yesterday's intake expectations. In most modern high-output systems, 6 kg/day is no longer enough for every sow. With diets around 10 MJ net energy per kilogram, practical targets often need to move closer to 9 kg/day during strong lactation.

Actual intake must be compared with litter demand. If the litter is large, growing fast, and drawing heavily on milk, the sow must either consume more feed or mobilize more body tissue. The difference will be paid somewhere.

Lactation feed intake is therefore not only a milk-production number. It is a measure of whether the sow can feed this litter and still remain fit for the next one.

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