

SUPPORT YOUR SOWS through transition challenges



Breeding sow lines today have a high genetic potential, with numbers well over 30 piglets weaned per sow per year being achievable for more and more farms. The question is how management and feeding practices can support this level of production in terms of sow longevity and piglets' livability and growth. New feeding concepts enable nutritionists and producers to provide for the sows' nutritional needs at each stage of production in a more targeted and cost-effective way.

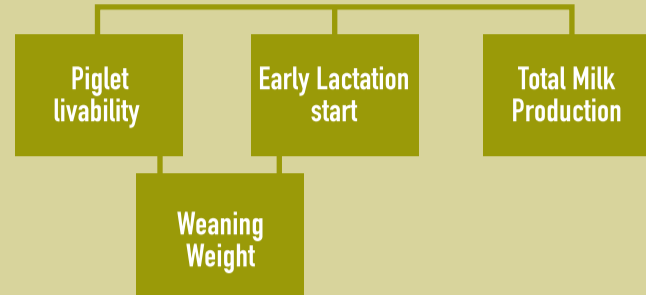
1 Transition Period A particularly challenging phase for the sows, defined as the last 10 days of gestation and the first 7 days of lactation.

Why is it challenging?

The sow becomes catabolic due to high priority of milk production and to current feeding practices, when more nutrients are needed for:

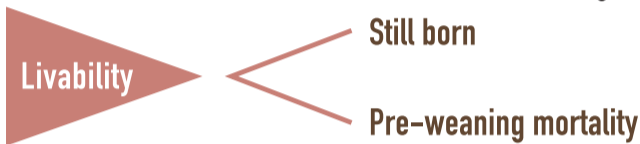


Transition period affects



2 What is piglet livability?

Livability= the number of new born piglets that a sow can raise until weaning



$$\text{Livability (\%)} = 100 - \{(\text{still born} + \text{pre-weaning mortality}) / \text{total born}\}$$



A Physiology behind a still born piglet

A Lack of oxygen in material blood

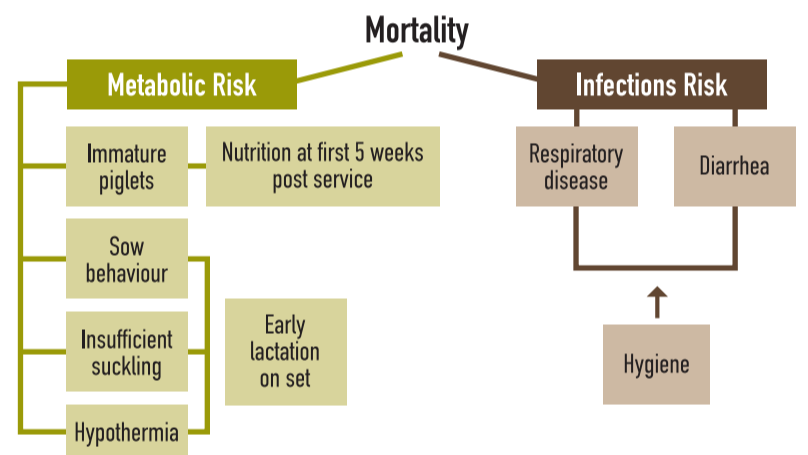
B Premature disattachment of placenta



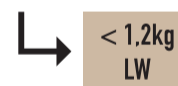
C Loss of umbilical cord functionality

D Long farrowing process

B Factors affecting pre-weaning mortality



Small piglets have increased % of livability when placed in uniform litter



3 Transition feeding around farrowing

A Improve energy metabolism - Cover the increased needs for energy and nitrogen

(essential + non-essential aminoacids) and support fetus growth and late embryo development and colostrum production.

B Avoid constipation. High density diets are usually inadequate in potassium. Low potassium levels will reduce the contraction of the hind gut and lead to constipation.

C Mineral content and the resulting differentiation of the dEB (Dietary Electrolyte Balance= $\text{Na} \times 1000/23 + \text{K} \times 1000/39 - \text{Cl} \times 1000/35.5$) value between gestation and lactation feed. Adjust the dEB (Dietary Electrolyte Balance) of the feed 10 days prior to farrowing.

The aim is to decrease dEB because:

Low dEB will mobilize Ca

→ Support colostrum production and stimulate milk production

Low dEB levels will decrease urine pH

→ Less active bacteria and less chances of urinary track infection

Low dEB levels will decrease urine pH

→ Less endotoxins production which is negatively related to prolactin and milk production
Stimulate early milk production

Several trial show

→ An increase in piglet survivability at lower dEB (due to increased birth weight and early lactation start).

D Improve feed's antioxidant and anti-inflammatory properties → reduce oxidative stress → boost immune reaction
→ enhance late embryo development → increase livability

E Implementation of functional fibers to improve sows energy metabolism.