

Piglet Viability

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Increasing Piglet Viability, Pre-Weaning

As we continue to select sow genetics for increased litter size we also increase the number of low birth weight piglets and greater variability in piglet body weights.

Piglet with lower birth weights usually:



- Have a decreased survival rate throughout the production system
- Experience poorer weight gains throughout the production system
- Have more days to market than their larger litter mates

Dr. Ruth Wonfor: IBERS, Aberystwyth University

Emma Catharine Greenwood , Thesis, 2012

Birth weight is one of the major factors shown to be positively correlated with piglet survival. It is estimated that an increase in birth weight of 200g can increase weight gain from birth to slaughter by 24 g a day (King et al. 2006). (Reference 2)

Table 1. Weights of piglets and litters depending on the number of piglets born alive per litter.

This chart clearly shows what happens to avg piglet weight and % of low viable pigs as born alive numbers goes up.

Piglet born alive →	8	9	10	11	12	13	14	15	16	17	19
Average piglet weight, kg	1.64	1.65	1.65	1.45	1.36	1.31	1.25	1.25	1.25	1.20	1.18
Average litter weight, kg	13.2	14.8	16.5	16.1	16.5	16.8	17.4	19.0	19.9	20.4	22.9
% of piglets <1kg	0	0	0	9	13	15	21	13	18	29	31
% of piglets <1.3kg	13	12	10	27	41	46	55	53	55	59	52

J Anim Sci.

FACT: There is a linear relationship between weaning weight and ADG in the post-nursery phase of growth. We have concluded that a weaning weight of less than 5.0 kg imposes the greatest marginal loss in production output for a 20 day weaned piglet. (Reference 1)



A trial that shows Birth weight is the main factor affecting performance

Pigs were divided into four groups depending on birth weight: <1kg, from 1 to 1.3 kg, from 1.3 to 1.7 kg and >1.7 kg. The average parity of the four groups was similar. However, litter size decreased from 14.0 piglets to 11.2 piglets as the birth weight increased. The initial difference in the average weight of the animals in groups <1 and >1.7 kg at birth was around 1kg and it became a 21 kg difference at slaughter. **When calculated by regression, 100g of a difference in birth weight became 1.3 kg of a difference in carcass weight.** Www.Pig333.com
(Reference 3)

Proper sow nutrition during pregnancy is an important detail that will help to increase number of pigs born and piglet birth weight. Your nutritionist will be a big help in building a solid sow feeding program that will lead to bigger piglets being born and the sow having the capacity to provide ample milk for a larger litter.

Having a feed delivery system that is dependable is important to litter size. Missing a feeding here and there at critical times during pregnancy can have a significant role in the piglet numbers and birth weight.

With a sow record keeping system in place, it could be beneficial to try different trials to target in on the best feeding strategy for your sows.

Below are a number of facts that show the importance of your piglets getting off to a strong start.

Kathryn Reid in the latest Teagasc Advisory Newsletter.

Did you know?



- 60 per cent of fetal growth occurs in the last 30 days of gestation.
- Farrowing house temperature should be increased to 24°C before the first piglet is born.
- Farrowing should be complete within five hours; exceeding six hours can double incidence of stillbirths.
- After stillbirths, crushing is the second biggest cause of piglet mortality.
- (Small weak piglets are much more likely to not be able to get out of the way of the sow)
- Pre-weaning mortality can be reduced by 18% and stillbirths halved with good supervision. However, excessive disturbance can stress sows, prolonging farrowing and increasing pre-weaning mortality.
- Cross fostering can reduce pre-weaning mortality by 40 per cent.
- Colostrum antibody levels drop 50 per cent within six hours of the first suckling.

(Reference 4)

Dr Keelin O'Driscoll and Dr Peadar Lawlor of Moorepark

Management strategies to keep young pigs alive

Once these low viable pigs are born the focus will then be on investigating methods to keep them alive. Again, nutritional strategies must be explored to ensure that colostrum quality is optimized.

Management strategies to reduce pre-weaning mortality in large litters:

- Strategic use of nurse sows to reduce piglet mortality*
- Strategic use of Rescue Decks to reduce piglet mortality*
- Strategic use of energy supplements to reduce piglet mortality*

Producers have tried to improve results by cross fostering or using foster sows. But the results were not always satisfactory and this procedure does not suit all-in-all-out management. It became clear that help was needed to improve survival rates in the farrowing house using a new and different approach. (Reference 5)

Creep feed provision during suckling By Dr. Ruth Wonfor: IBERS, Aberystwyth University

In order to reach growth and efficiency potential, of even traditional breeds, you should really work out how best to support the nutrient supply to the piglet from the sow's milk production. Milk replacers can be provided to piglets whilst they are still suckling, although intake is variable before piglets are weaned. Creep feeding at an early stage often gives piglets an extra enhancement in growth rate, especially in larger litter sizes. The creep feed also helps to better prepare the piglet for weaning making the gut adapt to a different feed source, which better equips them to digest the feed given at weaning. However, it must be noted that although this will better prepare piglets for the weaning period, the management strategy has minimal effects on piglet survival, and does not benefit piglet mortality in the first 3 days after birth. Therefore, creep feeding is something to be considered before weaning to ease the transition. The use of creep feed is also likely to have a benefit on the sow's body condition through a reduction in piglet dependence on the mother's milk and also eating of her food. An elongated reliance on the sow without the use of a creep feed will manifest on further production traits of the mother related to getting the sow pregnant again soon. (Reference 6)

Dwyer Mfg is proud to offer the MIK creep feeding pan for feeding dry feed or milk replacer to piglets in the farrowing or nursery room.



This 3.5 liter (29.5 cm/11 inch) feeder is made from high quality plastic that easy to clean. The six space stable divider and high sides keeps feed wastage to a minimum.

We would be happy to price one feeder for your trial or enough to give all your piglets that important early boost that will benefit it's growth the whole way through the production system.

Dwyer Mfg Milk Replacer System



The Milk Replacer Bowls can be in a rescue deck or in the creep area depending on the individual production style and barn layout. The bowl itself has a specially

designed drinker nipple that does not let the liquid siphon back into the system or let the liquid overflow the bowl which leads to spoilage and wastage.

Milk replacer is supplied to the bowls through a precision pumping system from a storage tank through PVC pipe and specially made long elbows to keep pressure reduction to a minimum. A rescue deck would contain three cups: one for the water and two for milk.

The equipment is supplied by Dwyer Mfg and the milk replacer comes from Purina Agribands. Bob TenHove can be counted on to help design a feeding strategy that works best for your farm. 519-440-6510

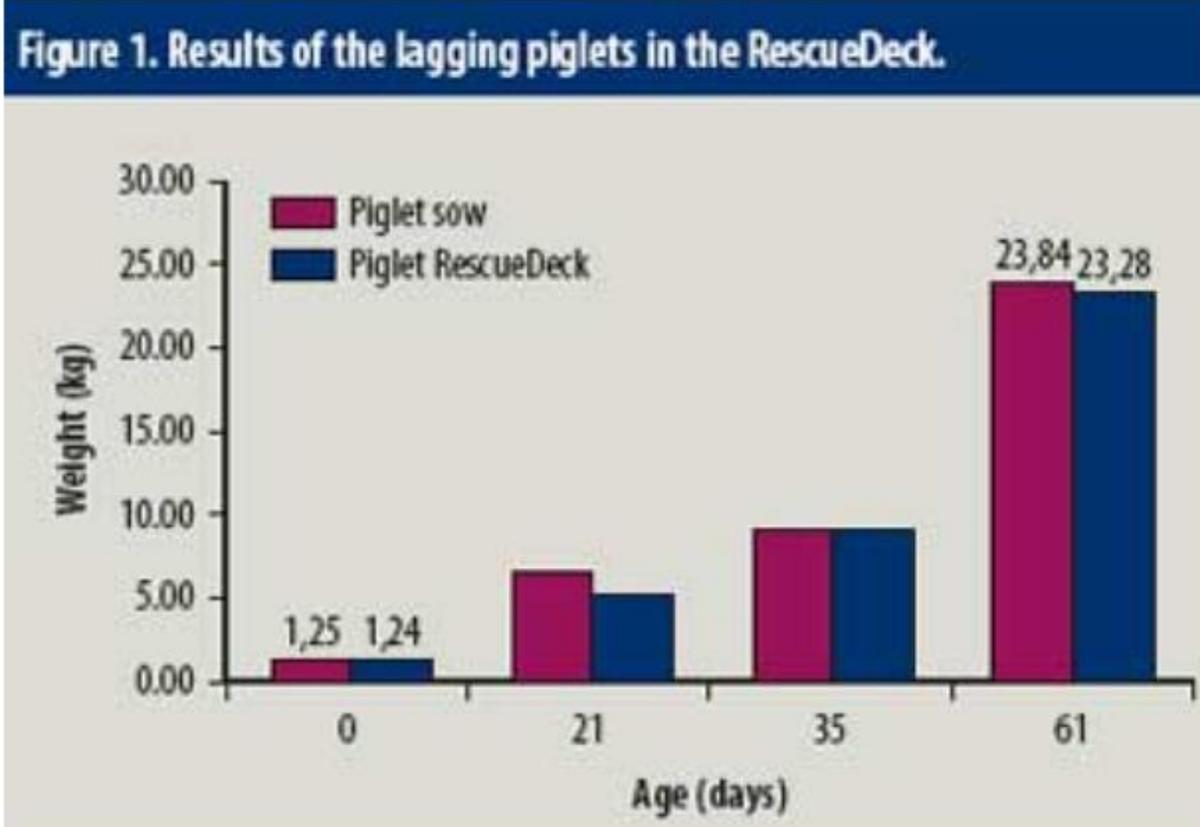


Purina has two quality liquid products that the system can use.

Pig Tech RescueMilk is specially formulated, highly palatable milk replacer for light and weak piglets. It is designed as a replacement to sows' milk, for orphan and starve-out pigs or as a management tool to supplement large litters. Click on link for detailed info: [Purina RescueMilk](#)

Pig Tech Smooth is a specially formulated liquid prestarter for extra high feed intake and smooth weaning. It is designed to complement sow's milk and bridge the nutritional gap between what she can produce and what her piglets require for optimum growth. Smooth is a unique replacement for sow's milk or older pigs up to 10 days old. Click on link for detailed info: [Purona Pig Tech Smooth](#)

Outperforming litter mates



By Pieter Wolleswinkel, Provimi, the Netherlands

Research indicates that all piglets perform well in a Rescue Deck: healthy piglets, small piglets and lagging piglets. Piglets with a normal birth weight were selected and placed into a Rescue Deck as they had insufficient sow milk intake at day 4 (limited stomach fill). These piglets recovered in a Rescue Deck and by day 14 post-weaning they had equaled piglets raised on the sow. This demonstrated the positive effect of the Rescue Deck system on gut development, where piglets hardly faced a weaning dip. This is a result of the high feed intake in the Rescue Deck – piglets could typically achieve intakes of 3 kg of Rescue Milk and 3kg of prestarter until weaning.

In general, the Rescue Deck reduces piglet mortality by 3% to 5% depending on the initial situation. Average weaning weight improves by approximately 350 g for all piglets as the remaining piglets have more space at the udder. And finally, the litter index improves as less foster sows are required. To obtain these results, one Rescue Deck per 12 sows is needed but this ultimately depends on the litter sizes.

Looking at the bottom line, A well managed milk replacer system can deliver:

- *4% reduction in piglet mortality. That means 635 piglets extra weaned per year on a 500 head sow herd.*
- *350 g increase in weaning weight. 5,000 kg extra weaning weight per year.*

*The payback time is less than 1 year, **not** including growth benefits in the grower and finisher barn (24 grams per day benefit x 170 days = 4 kg).*

Given the ongoing development of pig production such investments are required to keep performance at the required level. These tools can be cost-effective. Most importantly, they provide a means of harnessing the progress made in litter sizes and ensuring that piglet output moves in the same direction.

(Reference 7)

Dwyer Mfg and Purina Agribrand are ready to help you make your operation the best it can be.

Feel free to talk to Mike or Joe for equipment options and pricing.

519-527-2285 or 1-800-323-3405
www.dwyermfg.com

Reference sources:

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