



***This note is based on the BPEX-sponsored project 'An investigation into the effect of milk supplementation, using a milk line system, on performance and behaviour in naturally suckled piglets' conducted by Harper Adams University College during 2007–2008.***

**With increasing sow prolificacy, it is now common for sows to farrow litters of 14 or more piglets, although the sow herself may not have 14 functional teats. This means that the surplus piglets have to be cross fostered (if spare places are available) or artificially reared. The sow's ability to produce a sufficient quantity of milk to sustain these litters in late lactation and the competition at the udder for teat space in early lactation can lead to a high variation in individual piglet performance.**

Systems for delivering supplementary milk have been used by a minority of farmers for over 30 years. Given the large litter size now expected from sows and the competition at the udder, there is a renewed interest in the potential of the 'Milk Line System' where piglets have access to milk replacer ad-lib from birth.



Anecdotal evidence from two commercial systems indicate higher numbers weaned (+0.4 pigs/litter from before and after the introduction of milk line) and lower within litter variation in systems where 10.7+ pigs are weaned per litter. It is also noted that the benefits at weaning are seen to continue post weaning. If this level of improvement can be verified, then there is major potential saving to the industry as a whole.

During 2007–2008 Harper Adams University College conducted a study (sponsored by BPEX) to establish the benefits of the milk line system in a controlled scientific environment and to provide producers with information of how it is best utilised.

Two trials took place:

- Trial 1:** Three treatments, either with supplementary milk being available from birth or day 7, or no supplementary milk.
- Trial 2:** Four treatments in a factorial design, including treatments with or without supplementary milk available from birth or creep feed available from day 14.

Taken together these trials indicate that supplementary milk from farrowing has a beneficial effect on late lactation mortality of between 0.5 and 1.0 pig per litter depending on sow parity and level of output. There is little evidence for effects on long term performance although performance and behaviour in the initial five days post weaning may be enhanced by supplementary milk.

The labour input was 10 minutes a day and one hour a month for cleaning the pipe work for up to 70 crates. Given that the need to deal with fading pigs is all but eliminated, the system offers major cost savings in terms of time and capital in comparison to alternative systems such as shunt fostering and specialist feeding facilities for early weaned individuals.

Economically the following conclusions can be drawn:

- At 24 litres per litter the cost of the supplementary milk was approximately £6.50 per litter; this cost was more than offset by the increased output of piglets
- The milk line system is easily managed and removes the need for early weaning alternatives by keeping piglets on the sow in the farrowing pen
- The milk line system is cost effective and does not add to the work burden when compared to alternative methods of keeping poor doers alive
- When averaged across the two trials the pay back period for the equipment would be 12 months; in situations where parity structure is older then the pay back period would be less than 12 months.

Extra performance pigs/litter	0.25	0.5	1.0
Capital cost of kit based on a single pump and 70 dispensers (£/farrowing pen) *	£65	£65	£65
Marginal value of one extra pig at weaning	£20	£20	£20
Cost of milk (£ per litter)	£6.50	£6.50	£6.50
Labour (£/litter)	£0.50	£0.50	£0.50
<b>Pay back time of equipment</b>	<b>24 months</b>	<b>12 months</b>	<b>6 months</b>

\* Assumes farm staff installation zero cost

Although the above figures were calculated using milk replacer prices during 2008 the current (Spring 2011) cost of milk replacer remains at around £6–12 per litter, depending on the size of the litter and piglet consumption. This is also based on a minimal purchase and the price would decrease with increasing quantities purchased.

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