

# Effects of Fostering on Piglet Performance

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Fostering is a technique commonly employed in the swine industry. Reasons for fostering include standardization of litters and improved survival and growth of smaller piglets. It is expected that fostering a piglet enables the piglet to maximize its growth potential, and therefore a fostered piglet should have a growth rate similar to its original littermates. Early fostering of piglets is preferred as it improves the piglet's adaptation to the new litter, however there exists controversy as to the optimum time of fostering. One belief is that fostering after 24 h of age can lead to compromised growth of the fostered piglet due to factors such as rejection of the foster piglet by the new sow and inability of the foster piglet to gain easy access to teats. The purpose of this analysis was to determine whether fostering at 48 h of age or less is advantageous to piglet growth.

The data was collected at the University of Alberta Swine Research Unit and consisted of parity 1 through 3, F1 Genex Manor Hybrid females having 3385 piglets (average litter size weaned (mean  $\pm$  standard deviation), 8.85  $\pm$  1.69 piglets, across parities). Of these piglets, 331 (9.78 %) were fostered, with 266 (80.4 %) fostered at 48 h of age or less. The data were analyzed to determine whether fostered piglets performed as well as the piglets of their original litter, and to compare the weaning weights and growth rates of the fostered piglets with the averages of their foster litters. In addition, the fate of all fostered piglets was determined.

The weaning weight of fostered piglets was significantly ( $P=0.006$ ) greater than the average of their original litter. The weaning weights and growth rates of fostered piglets were not significantly different from the average growth rates and weaning weights of their foster litters. Of the 266 piglets fostered within 48 h of birth, 263 were weaned while 3 were sold.

## Implications

The data suggests that piglets can be fostered up to 48 h of age with no detrimental effects to growth. In fact, the data shows that fostered piglets perform as well as, or better, than their original littermates. That there is no significant difference in either weaning weight or growth rate between the fostered piglets and their foster litter indicates that survival and growth of early (<48 h) fostered piglets is enhanced rather than compromised.