



**Newly weaned piglets often show reduced and variable feed intake, digestive disorders and poor growth and development. These problems can be reduced by the use of antibiotic growth promoters (AGPs), copper sulphate and zinc oxide. The routine use of AGPs in feed was banned in the EU from January 2006 and, due to environmental concerns, dietary inclusion levels of copper and zinc are limited by regulation and may be further reduced in the future.**

Weaning pigs at a later age, when their digestive and immune systems are more mature, has been suggested as one way to reduce the negative effect of the AGP ban on pig productivity. The AGEWEAN project was funded by Defra to evaluate the practical impact of this approach under British farm conditions for lifetime health and performance of sows and their progeny, the overall cost of production and environmental impact.

## TRIAL DETAILS

Three different weaning ages were compared at each of 6 separate farms (4 indoor and 2 outdoor) involving a total of 570 sows. Piglets were weaned according to a specified weekly batch management programme:

- **4 week weaning (weaned at 21-28 days of age; mean 26 days)**
- **6 week weaning (weaned at 35-42 days of age; mean 40 days)**
- **8 week weaning (weaned at 49-56 days of age; mean 53 days)**

On each farm gilts were allocated at the point of farrowing and were followed through four consecutive litters. A proportion of their offspring (~6,000 pigs) were monitored through to slaughter.



## TRIAL RESULTS

- Pigs weaned at 8 weeks had a better gut flora, higher feed intake and better growth in the immediate post-weaning period. Conversely, from 30 kg to slaughter, pigs weaned at 4 weeks of age had higher liveweight gain than other groups. Lifetime performance therefore showed no meaningful difference between treatments
- Major health problems were not seen, despite absence of all AGPs; pig losses and treatment rates were low. Although more 4-week weaned pigs were lost between weaning and slaughter, fewer were lost in the shorter lactation period so that total losses between birth and slaughter did not differ between treatments
- There was no effect of weaning age on subsequent sow litter size. However, the extended lactation period reduced litters per sow per year. Sows weaned at 8 weeks produced, on average, 4 less piglets per year than sows weaned at 4 weeks.
- Pigs weaned at 8 weeks of age required over 10g more phosphorus and over 500g more nitrogen from feed inputs to reach slaughter weight when compared to 4 week weaned pigs, indicating higher environmental impact.
- When results were used to calculate total cost of production in different systems, pigs weaned at 4 weeks had a lower cost in comparison to 6 or 8-week weaning (by approximately 3 p/kg carcass weight at 2007 costs)

## CONCLUSIONS

Under current UK conditions, and with appropriate nutrition and management, later weaning of piglets at 6 or 8 weeks of age offers no significant benefits for health or performance of the progeny which outweigh the reduction in sow output when compared to the current industry norm of 4 week weaning. Both economic and environmental evaluations indicated best efficiency for the 4 week system.



## PROJECT PARTICIPANTS

