

DATE COMPLETED

September 2023

OBJECTIVE

Evaluate the impact of three different floor space allowances on nursery pig growth performance and health.

TRIAL OVERVIEW

- Floor space in swine production systems is often a limiting factor, as it is a fixed cost that directly affects production economics. One method to reduce these fixed costs is to utilize this space more efficiently by reducing floor space per pig. However, too little floor space may impact important performance metrics.
- At weaning, 2176 pigs (DNA 600 x 241) were randomly assigned to one of three space per pig treatments. Treatments were applied to pens and feeder space per pig, which was not standardized across treatments. At 28, 22, and 18 pigs per pen, the treatments were 3.1 ft², 2.5 ft², and 2.0 ft². Feed intake was available by pen, and pigs were weighed individually at the start and end of the 42-day nursery period.

KEY TAKEAWAYS

- Pigs provided 3 ft² tended to have greater end body weight and higher feed intake compared to pigs provided 2 and 2.5 ft².
- Pigs provided 3 ft² had lower mortality and tended to have lower treatment rates compared with pigs provided 2 and 2.5 ft².

PRODUCER IMPLICATIONS

Increasing nursery pen stocking density from 2.0 to 2.5 and from 2.5 to 3.0 results in an increase in growth and a reduction in mortality during the nursery phase. This data enables each producer to economically model the impact of space costs vs. the reduction in performance.

PRIMARY PERFORMANCE DATA

Table 1:

The Effects of Floor Space Allowance on the Nursery Pig

Space allowance, Sq Ft	3.1	2.5	2.0	SEM	P=
Pigs per pen	18	22	28	-	-
Starting body weight, lb.	13.3	12.8	13.0	0.03	0.19
Ending body weight, lb.	52.5	50.6	49.6	0.10	0.10
Average daily gain, lb.	0.95	0.93	0.90	0.02	0.28
Average daily feed intake, lb.	1.37	1.28	1.30	0.02	0.06
Gain to feed ratio	1.47	1.43	1.49	0.04	0.13
Injectables, number/pig	0.5	1.47	1.82	0.41	0.07
Mortality, %	0.64 ^a	1.63 ^b	2.15 ^b	0.33	0.01

For more information on this study, please contact your National Account Leader.