# DNA GENETICS RESEARCH TRIAL

## The influence of sow loading strategy on litter performance

### COMPLETION DATE
Spring 2025

### RESEARCH OBJECTIVE
To investigate the impact of functional teat count, loading strategy and parity on the DNA Line 241's litter performance during lactation.

### TRIAL OVERVIEW
This retrospective study utilized data from 1,200 DNA Line 241 multiparous females to determine the impact of loading strategy (LS) on litter performance. The trial included three groups (LS -3 to +3) in which the loading strategy was based on the number of piglets after 24 hours and the sow's functional teat count. For example, -2 would be a sow nursing 2 pigs less than functional teat count, and a +2 would be a sow nursing two pigs more than teat count. Researchers recorded the functional teat count—defined as any teat capable of producing milk, regardless of location—along with the number of pigs weaned, pre-weaning mortality, and weaning weight.

### KEY TAKEAWAYS
- An increase in functional teat count to and above 14 resulted in an increase in pigs weaned, but litter weaning weight did not change at and above 14 pigs nursed, indicating individual pig weaning weight decreased.
  - Parity 1 sows weaned the fewest pigs, while parity 2, 3 and 4+ did not differ in the number of pigs weaned.
  - Parity 2 had the highest litter wean weight, indicating improved sow performance after parity 1.
- The number of pigs weaned significantly increased from a loading strategy of -3 to +1 without affecting pre-weaning mortality; however, mortality increased when the loading strategy exceeded +1.
- There was no difference in functional teat count between parity groups, indicating very high retention of functional teats between parities for the Line 241 female.

### PRODUCER IMPLICATIONS
These findings reinforce the recommendation for producers to load the DNA Line 241 sow with one piglet over her functional teat count to optimize pigs weaned per farrowing crate without compromising piglet survivability.

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

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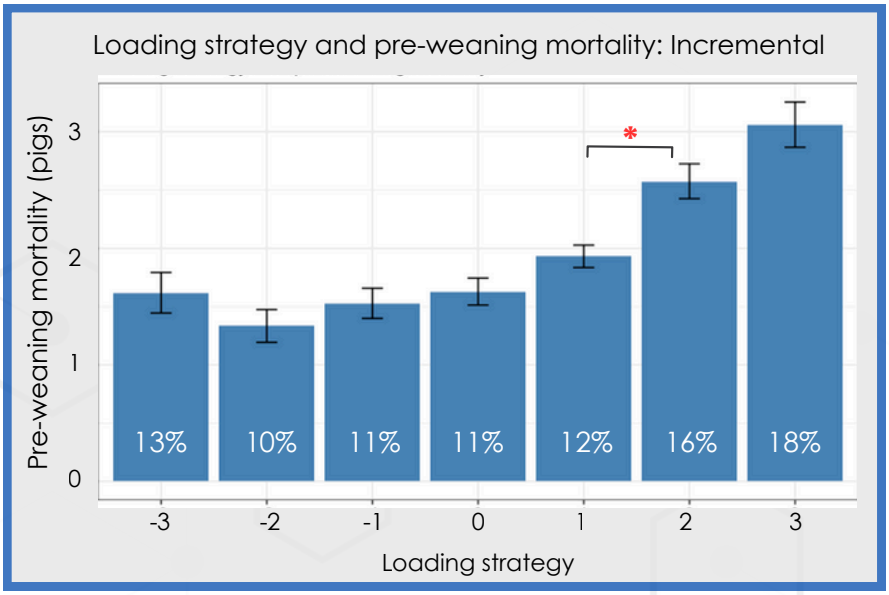


**Pre-weaning mortality increased by 0.64 pigs from LS +1 to +2.*

### LITTER WEAN WEIGHT AND PARITY

| Parity | Average wean weight (lbs.) |
|---|---|
| 1 | 157.41 |
| 2 | 171.30 |
| 3 | 165.79 |
| 4+ | 163.36 |

### LOADING STRATEGY AND NUMBER WEANED

| Loading strategy (LS) comparison | Difference of pigs weaned | P-Value |
|---|---|---|
| LS -2 vs. LS -3 | 0.88 | <0.001 |
| LS -1 vs. LS -2 | 0.73 | <0.001 |
| LS 0 vs. LS -1 | 0.62 | <0.001 |
| LS +1 vs. LS 0 | 0.61 | <0.001 |
| LS +2 vs. LS +1 | 0.35 | 0.097 |
| LS +3 vs. LS +2 | 0.27 | 0.725 |

### AVERAGE FUNCTIONAL TEAT COUNT BY PARITY

| Parity | Average functional teat count |
|---|---|
| 1 | 14.6 |
| 2 | 14.7 |
| 3 | 14.7 |
| 4+ | 14.6 |

### VALUE OF FUNCTIONAL TEATS

| Functional teat count comparison | Difference of pigs weaned | P-Value |
|---|---|---|
| 14 vs. 13 | 0.31 | 0.326 |
| 15 vs. 14 | 0.37 | **0.001** |
| 16 vs. 15 | 0.03 | 0.995 |