

Customer-Initiated In-Field Validation Demonstrates Reduced Stillborn Variability with SQM[®] Iron

Real-World Results from Commercial Sow Production

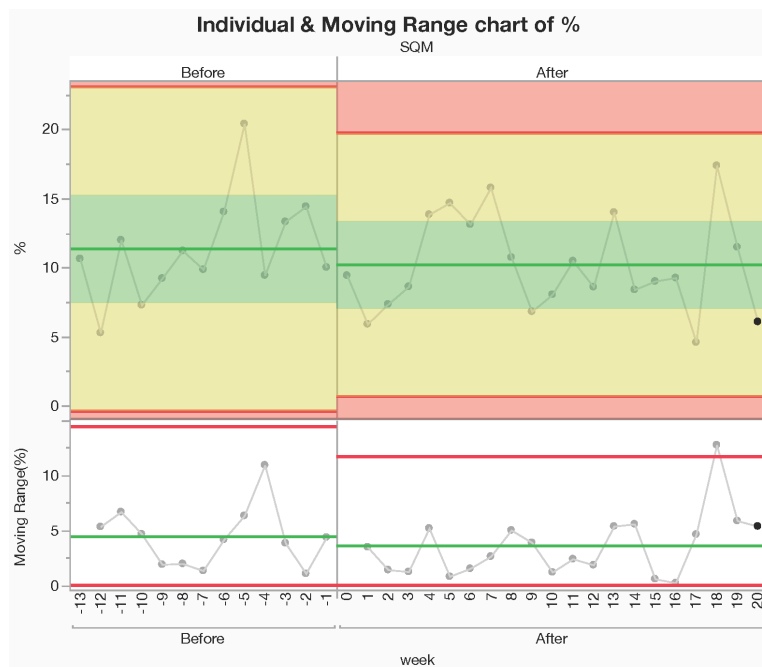
An intermediate-sized integrated swine production company — ranked among the top 25 U.S. sow systems — initiated an in-field evaluation after identifying a significant anemia challenge within its sow herd. The production team implemented a change in iron source, replacing their previous iron program with SQM[®] Iron at an inclusion rate of 125 ppm, then tracked herd performance over time.

The process control chart shown here illustrates stillborn percentage before and after the dietary transition to SQM

Iron. The data includes multiple weeks prior to implementation and 21 weeks following the change. The chart format, commonly used in manufacturing and systems analysis, evaluates variability over time and helps identify meaningful process improvements.

Key Findings

- ▶ A measurable step-change reduction in stillborn percentage was observed after implementation of SQM Iron.
- ▶ Results reflected an approximate reduction of 0.2 stillborn pigs per litter — a practically meaningful improvement in commercial production.
- ▶ Variability narrowed substantially following the transition, indicating more consistent farrowing performance across the sow herd.
- ▶ Weekly averages remained closer to the desired operating range, with fewer excursions into higher-risk performance zones.



% Limit Summaries

Points plotted	SQM	LCL	Avg	UCL	Limits	Sigma	Subgroup Size
Individual	Before	-0.39075	11.33846	23.06767	Moving Range		1
Individual	After	0.670316	10.19238	19.71445	Moving Range		1
Moving Range	Before	0	4.411667	14.41085	Moving Range		1
Moving Range	After	0	3.5815	11.69908	Moving Range		1

In the chart:

- ▶ **Green zones** represent the desired operating range.

- ▶ **Yellow zones** indicate elevated but manageable variation.
- ▶ **Red zones** suggest performance outside expected process control limits and warrant investigation.

The tighter clustering of data points after SQM Iron implementation demonstrates improved consistency — a critical driver of predictability and production efficiency in sow systems.

Supporting Research Behind SQM Iron

This customer-initiated field project aligns with controlled university research evaluating SQM Iron supplementation in gestating sows. Research conducted at South Dakota State University demonstrated that SQM Iron:

- ▶ More than doubled sow serum ferritin concentrations versus control diets, indicating significantly improved iron stores.
- ▶ Reduced anemia prevalence in piglets at birth.
- ▶ Tended to improve litter birth weight.
- ▶ Increased the percentage of pigs weaned.

Why SQM[®] Iron?

SQM Iron is designed to support:

- ▶ Improved sow iron status during gestation
- ▶ Enhanced fetal iron transfer
- ▶ Stronger piglet vitality and survivability
- ▶ Greater consistency in farrowing outcomes
- ▶ Improved weaning performance

By supporting iron status in both sows and developing litters, SQM Iron helps producers target stronger starts and better downstream performance.

STRONG STARTS. BETTER FINISHES.