

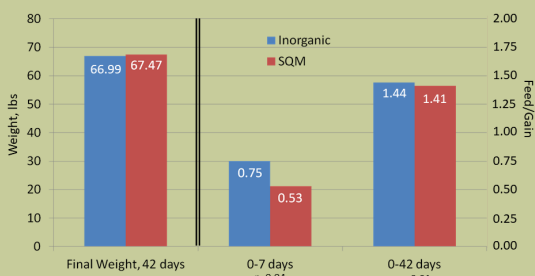
SQM[®] trace minerals and pig performance



Background

- Zinc, copper, manganese and iron are all necessary for optimum swine growth and performance. The use of SQM forms provides additional assurances that they are delivered in a form that allows them to be absorbed and utilized by the pig.
- Maintaining the proper ratio of these elements in the diet is critical to avoid antagonistic interactions and to optimize absorption.
- For iron in particular, that balance is extremely important. The standard practice of feeding piglets therapeutic levels of zinc oxide to reduce the incidence of Escherichia coli diarrhea can result in iron deficiency, as zinc oxide limits dietary iron absorption (Perri et al, 2016).
- Additionally, high concentration of iron in the diet and/or high iron levels reaching the lower gut have been shown to compound the E. coli problem, both in swine (Kadis et al, 1984) and in poultry (Garrett et al, 2019).

Influence of SQM Zinc compared to inorganic zinc on baby pig performance



Research

- Study 1, Graph 1: The use of SQM zinc at 60% of the inclusion rate of therapeutic zinc oxide and fortification with zinc sulfate resulted in baby pig feed efficiency that was optimized through 42 days of feeding with similar growth rates. This study indicates that providing SQM zinc in the nursery phase of pigs has the potential to be an environmentally beneficial program along with optimizing the overall performance of the pigs. Additionally, the fecal scoring of the SQM treatment pigs was lower numerically in all time periods compared to the control pigs.

Table 2. Performance of baby pigs receiving diets containing inorganic or SQM trace minerals (zinc, copper, manganese and iron).

Item	Control	50:50	100	SEM	p-value
Body weight, lbs					
Initial	8.84	8.78	8.95	0.143	0.710
Day 7	10.20 ^a	10.73 ^b	10.91 ^b	0.144	0.009
Day 14	15.44 ^a	16.04 ^b	16.39 ^b	0.129	0.001
Day 39	29.92 ^a	30.93 ^b	31.65 ^c	0.193	0.001
Day 60	59.22 ^a	60.98 ^b	62.24 ^c	0.403	0.001
Feed conversion, feed/gain					
0-7 days	1.130	1.136	1.139	0.011	0.830
0-14 days	1.434 ^a	1.409 ^{ab}	1.382 ^b	0.013	0.048
0-39 days	1.732 ^a	1.676 ^b	1.651 ^b	0.016	0.011
0-60 days	1.938 ^a	1.887 ^b	1.855 ^b	0.013	0.001

^{a,b,c} Means in the same row with different superscripts differ (p<0.05)

Research

- Study 2, Table 2: The addition of supplemented trace minerals (zinc, copper, manganese and iron) in the form of SQM helps to optimize growth and feed efficiency during those first weeks after weaning. Formulating with SQM trace minerals minimizes the negative impact of antagonist ingredients in the diet, such as the potential negative interaction between trace minerals during absorption. This study shows that fortifying diets with SQM trace minerals is a key component to optimize performance of baby pigs post weaning.

Benefits

- SQM protected minerals with proprietary PolyTransport[®] Technology safeguard the integrity of the minerals until they reach the point of optimal absorption.
- SQM trace minerals can help optimize nursery pig performance.
- Talk to your QualiTech representative to find out how SQM Iron can benefit your operation!

To learn more about the benefits of SQM trace minerals, visit us at qualitechco.com or email info@qualitechco.com.