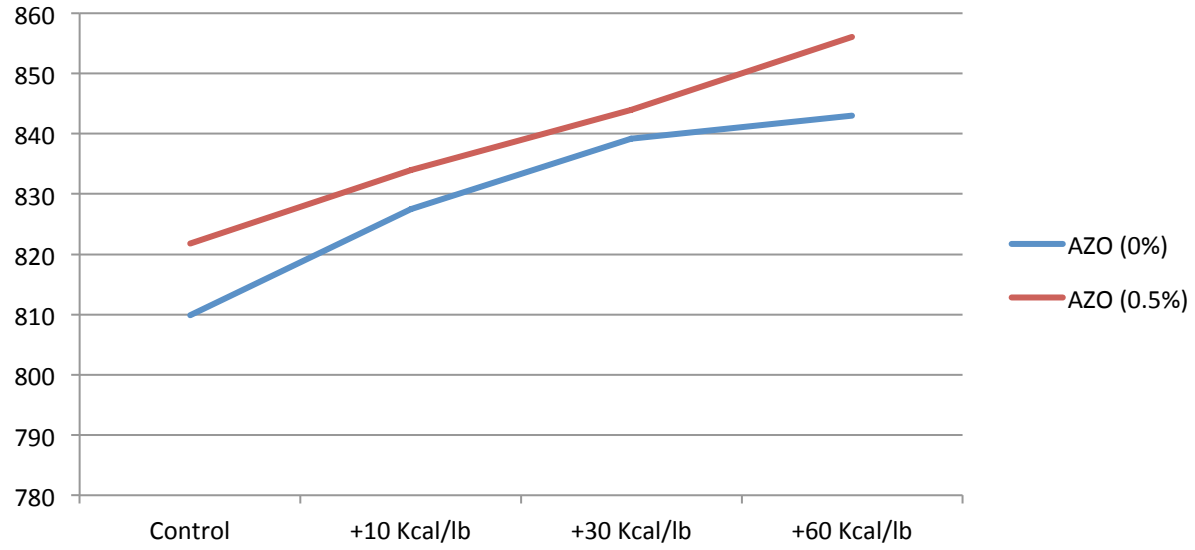
Accredited Broiler Research Data

AZOMITE® Supplementation Comparisons at 21 and 45 days

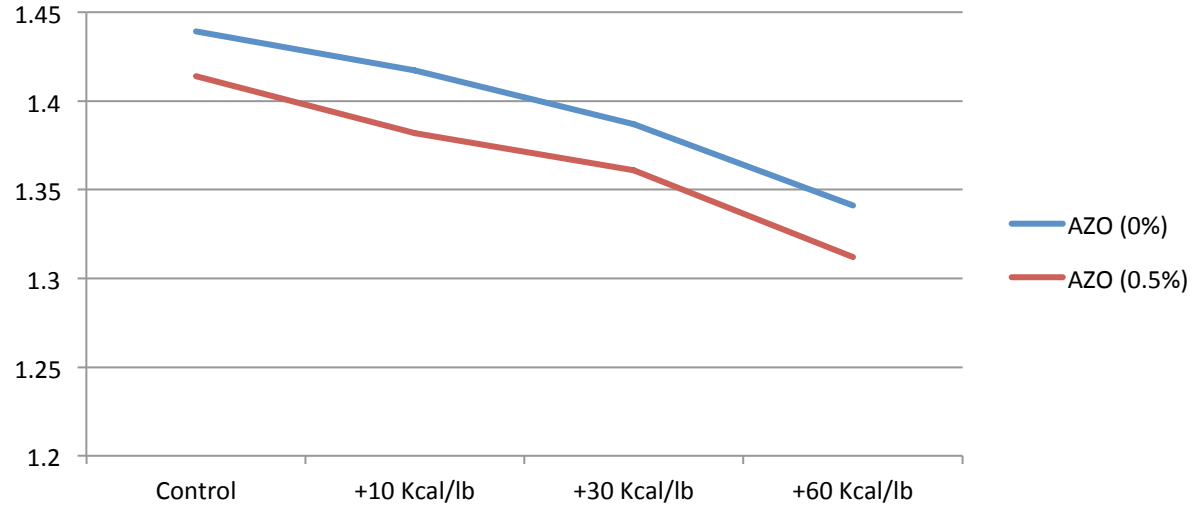
Figure 1. Body Weight (g) at 21 Days by AZOMITE Level (0 vs 0.5%)



AZOMITE (0%) Body wt 21 days = 817.506 + 0.49614(Kcal/lb increase) $P = 0.1184$ $R^2 = 0.7773$
AZOMITE (0.5%) Body wt 21 days = 825.511 + 0.53664(Kcal/lb increase) $P = 0.0251$ $R^2 = 0.9503$

AZOMITE (0%) Average 829.91^b g $P = 0.0211$ n = 4 treatments
AZOMITE (0.5%) Average 838.93^a g (difference 9.02 g)

Figure 2. Mortality Adjusted FCR at 21 Days by AZOMITE Level (0 vs 0.5%)



AZOMITE (0%) Mort-Adj FCR 0-21 days = 1.43600 – 0.00160(Kcal/lb increase) $P = 0.0019$ $R^2 = 0.9963$
AZOMITE (0.5%) Mort-Adj FCR 0-21 days = 1.40719 – 0.00160(Kcal/lb increase) $P = 0.0123$ $R^2 = 0.9755$

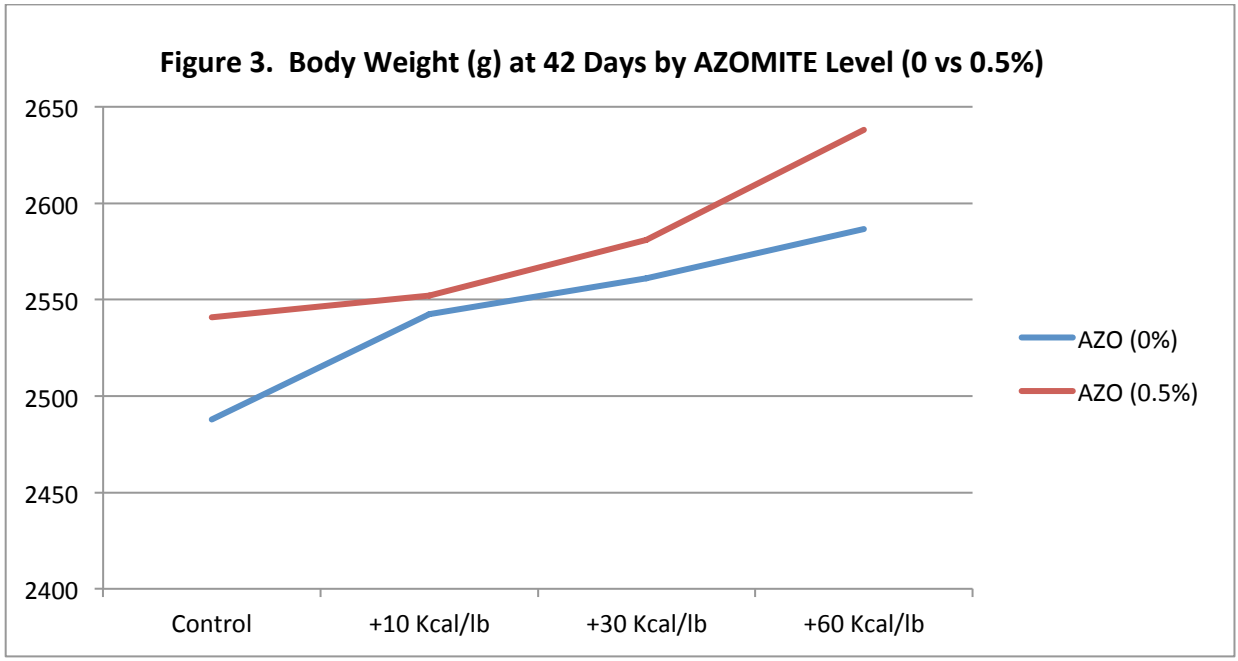
AZOMITE (0%) Average 1.3960[a] $P = 0.0010$ n = 4 treatments
AZOMITE (0.5%) Average 1.3673[b] (difference 0.0287)

Solving equations for 0, 10, 30, and 60 Kcal/lb increases:

AZOMITE (0%)	+ 0 = 1.4360	------	AZOMITE (0.5%)	+ 0 = 1.4072	
AZOMITE (0%)	+10 = 1.4200	(-0.016)	AZOMITE (0.5%)	+10 = 1.3912	
AZOMITE (0%)	+30 = 1.3880	(-0.048)	AZOMITE (0.5%)	+30 = 1.3592	
AZOMITE (0%)	+60 = 1.3400	(-0.096)	AZOMITE (0.5%)	+60 = 1.3112	
Average	+25 = 1.3960		Average	+25 = 1.3672	(difference -0.0288)

Conclusion:

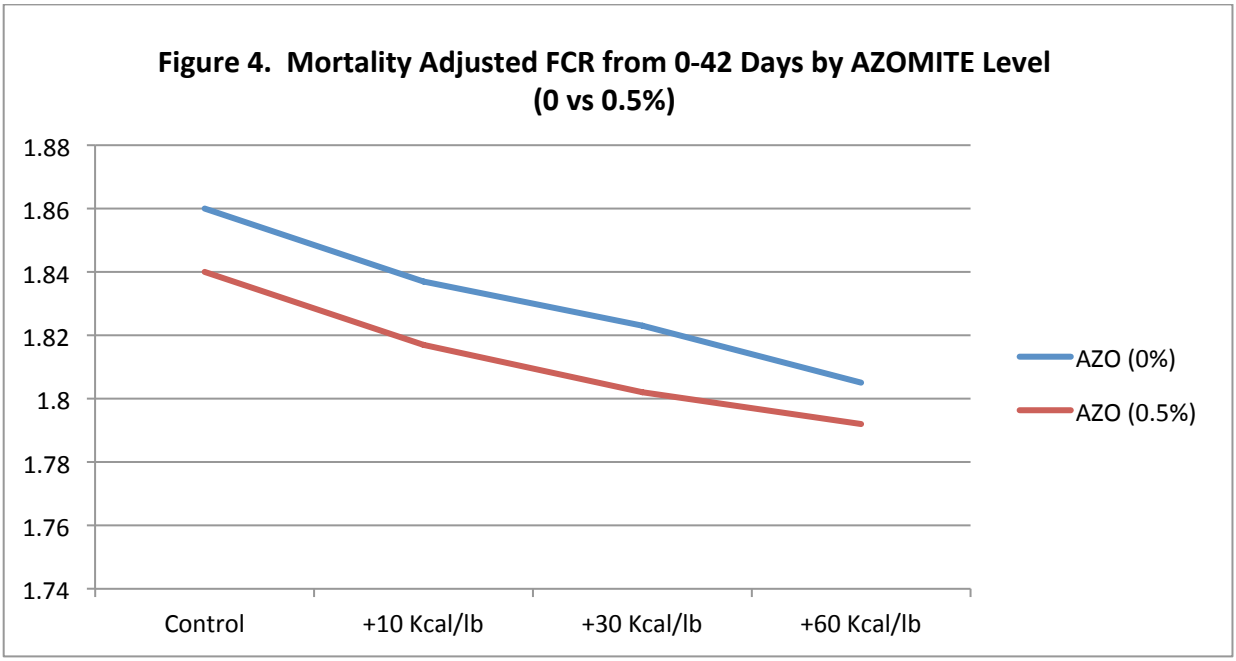
On average, for each 10 kcal ME/lb increase in the unsupplemented (0% AZOMITE) diets there was 0.016 reduction in mortality adjusted 0-21 day FCR. There was a difference of 0.0287 between treatments (0 vs 0.5% AZOMITE), favoring supplemental AZOMITE, based on an average increase of 25 kcal ME/lb in diets for each series of treatments. If 0.0287/0.016 is 1.79375, then 10 kcal/lb x 1.79375 amounts to 17.94 kcal ME/lb increase for supplemented treatment groups compared to the unsupplemented ones. Therefore, each 1 lb of AZOMITE (of the 10 lb/ton total) contributed 1.794 kcal ME/lb of diet in this trial. This is equivalent to **AZOMITE** containing (or having the capacity to generate) **3,588 kcal ME/lb** which is approximately the same as animal fat (that is, 1.794 x 2,000 lb = 3,588).



AZOMITE (0%) Body wt 42 days = 2508.76 + 1.42874(Kcal/lb increase) $P = 0.0970$ $R^2 = 0.8155$
AZOMITE (0.5%) Body wt 42 days = 2537.11 + 1.63686(Kcal/lb increase) $P = 0.0045$ $R^2 = 0.9911$

AZOMITE (0%) Average 2544.5 g $P = 0.0559$ n = 4 treatments
AZOMITE (0.5%) Average 2578.0 g (difference 33.5 g)

Figure 4. Mortality Adjusted FCR from 0-42 Days by AZOMITE Level (0 vs 0.5%)



AZOMITE (0%) Mort-Adj FCR 0-42 days = 1.85226 – 0.0008405(Kcal/lb increase) $P = 0.0421$ $R^2 = 0.9175$
AZOMITE (0.5%) Mort-Adj FCR 0-42 days = 1.83090 – 0.0007262(Kcal/lb increase) $P = 0.0794$ $R^2 = 0.8475$

AZOMITE (0%) Average 1.8312^a $P = 0.0021$ n = 4 treatments
AZOMITE (0.5%) Average 1.8127^b (difference 0.0185)

Solving equations for 0, 10, 30, and 60 Kcal/lb increases:

AZOMITE (0%)	+ 0 = 1.8523	------	AZOMITE (0.5%)	+ 0 = 1.8309	
AZOMITE (0%)	+10 = 1.8439	(-0.0084)	AZOMITE (0.5%)	+10 = 1.8236	
AZOMITE (0%)	+30 = 1.8270	(-0.0253)	AZOMITE (0.5%)	+30 = 1.8091	
AZOMITE (0%)	+60 = 1.8018	(-0.0505)	AZOMITE (0.5%)	+60 = 1.7873	
Average	+25 = 1.8313		Average	+25 = 1.8127	(difference -0.0186)

Conclusion:

On average, for each 10 kcal ME/lb increase in the unsupplemented (0% AZOMITE) diets there was 0.0084 reduction in mortality adjusted 0-42 day FCR. There was a difference of 0.0185 between treatments (0 vs 0.5% AZOMITE), favoring supplemental AZOMITE, based on an average increase of 25 kcal ME/lb in diets for each series of treatments. If 0.0185/0.0084 is 2.20238, then 10 kcal/lb x 2.20238 amounts to 22.02 kcal ME/lb increase for supplemented treatment groups compared to the unsupplemented ones. Therefore, each 1 lb of AZOMITE (of the 10 lb/ton total) contributed 2.20238 kcal ME/lb of diet in this trial. This is equivalent to **AZOMITE** containing (or having the capacity to generate) **4,405 kcal ME/lb** which is greater than that of soybean oil (that is, 2.20238 x 2,000 lb = 4,405). With **3,588 kcal ME/lb** AZOMITE in **starter** (19.71% of feed, 0-21 days) and 4,405 kcal ME/lb AZOMITE during the entire growout (0-42 days), the AZOMITE is estimated to have **4,606 kcal ME/lb** during the **grower-finisher** period (80.29% of feed, 21-42 days). Calculations are 3,588 x 0.1971 = 707 and 4,606 x 0.8029 = 3,698, so 707 plus 3,698 weighted values equal 4,405 total.