

Dietary Sodium Level and Litter Moisture in Broilers
 July 26, 1999

Data from a recent study with S-Carb®, purified sodium sesquicarbonate, and broilers show that by raising the dietary sodium there is a drying of litter. The trial tested two levels of sodium addition, from either sodium bicarbonate or S-Carb, diets were all isochloride, with similar levels of salt inclusion. Litter moisture was tested at several days throughout the study.

Treatments were:

Source	Low	High
Sodium Bicarbonate		
Lbs/ton added	4	6
Dietary Sodium Added	0.054 %	0.085 %
S-Carb®		
Lbs/ton added	3.75	5.60
Dietary Sodium Added	0.054 %	0.085 %

The results are shown below:

Percent litter Moisture

	21 days	28 days	35 days	42 days	49 days
Control	45.30%	48.68% _{oc}	51.91% _{ob}	52.43% _{od}	56.23% _{oc}
Sodium Bicarb. Low	45.53%	46.14% _{bc}	49.28% _b	49.14% _c	54.44% _{ba}
Sodium Bicarb. High	43.12%	43.15% _{ab}	45.21% _a	46.17% _{ab}	49.15% _a
S-Carb Low	44.79%	45.16% _{ab}	48.95% _b	48.86% _{bc}	51.11% _{ab}
S-Carb High	42.98%	42.71% _a	45.03% _a	45.97% _a	49.88% _a

_{a,b} indicate significant differences $p < 0.05$.

As shown, the results indicate a linear response between dietary sodium level and lower moisture. Higher levels of sodium addition resulted in lower litter moisture. This response can be useful when concerns are present over litter moisture.

As S-Carb is higher in sodium than bicarbonate, fewer pounds per ton are required to raise the dietary sodium level. This may be of significant economic impact when determining appropriate ration balance.