

A study of the effects of litter treatments on commercial broilers.

Performed by Highlander Research & Consulting L.L.C.



Background

Previous study of Litter Life treatment demonstrated that by introducing natural non-pathogenic bacteria in conjunction with a rich carbon source to the litter bed will cause a rapid natural release of ammonia prior to placement of the animals and reduce the occurrence of harmful pathogens, thus resulting in a healthier environment for the animals to thrive.

Study Design

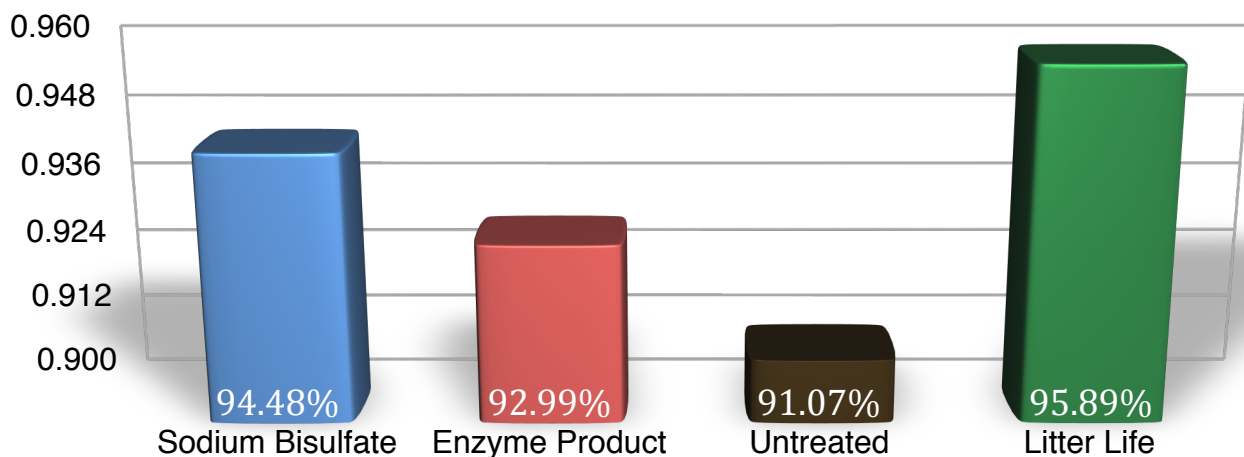
The study is designed to compare the effectiveness of Litter Life against current litter treatments. The study performed at a commercial poultry facility under Pilgrim's Pride: 12 barns were compared, three were treated with Sodium Bisulfate (PLT), three with an Enzyme product (ESS), four were treated with Litter Life, and two were untreated as controls. 15,000 High Y and Ross cross chicks were placed in each barn. The barns were maintained in similar manners of temperature and general environmental conditions, feed and vaccinations were consistent between the barns.

Results of Study

Livability

Percentage Livability in the Sodium Bisulfate barns was 94.48%, Enzyme product was 92.99%, Litter Life was 95.89%, and the untreated control was 91.07%. The results of the 12 houses compared, yielded a greater livability in the Litter Life treated barns over all other compared treatments.

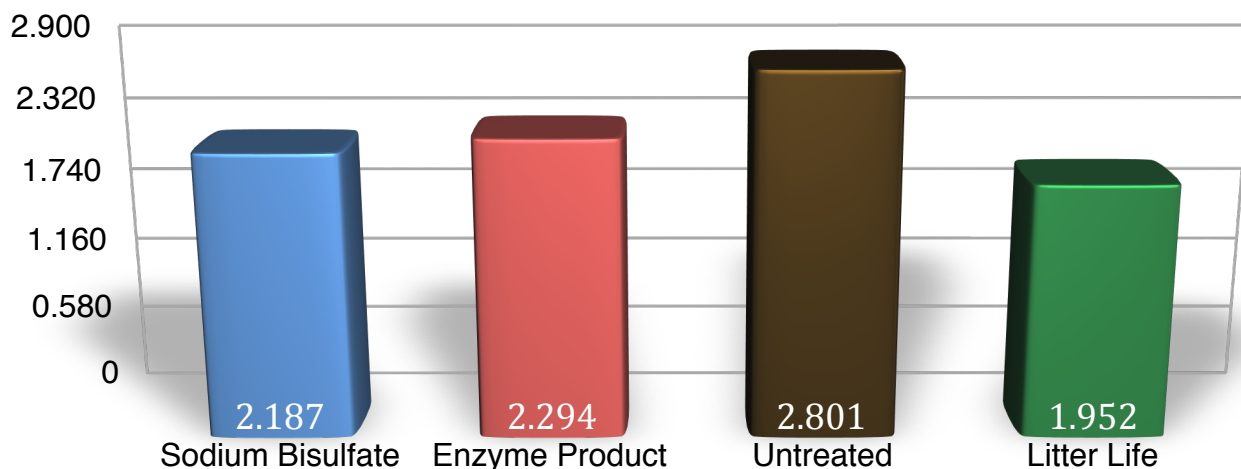
- ★ Litter Life yielded a 1.47% greater livability compared to Sodium Bisulfate.
- ★ Litter Life yielded a 3.02% greater livability compared to the Enzyme product.
- ★ Litter Life yielded a 5.02% greater livability compared to untreated control.



Feed Conversion

Feed conversion in the 12 barns of the study, in the Sodium Bisulfate barns was 2.18, Enzyme product was 2.29, Litter Life was 1.95, and the untreated control was 2.80. The results of the 12 houses compared, yielded a greater feed conversion in the Litter Life treated barns over the control and competitors barns.

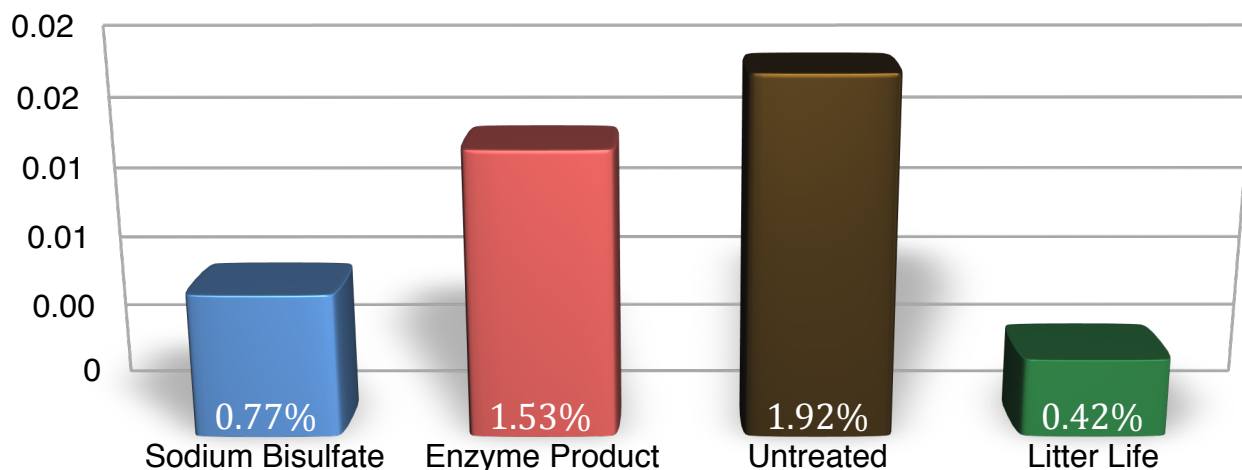
- ★ Litter Life yielded 11.79% improvement in feed conversion compared to Sodium Bisulfate.
- ★ Litter Life yielded 17.43 improvement in feed conversion compared to the Enzyme product.
- ★ Litter Life yielded 43.58% improvement in feed conversion compared to untreated control.



Condemned by Weight

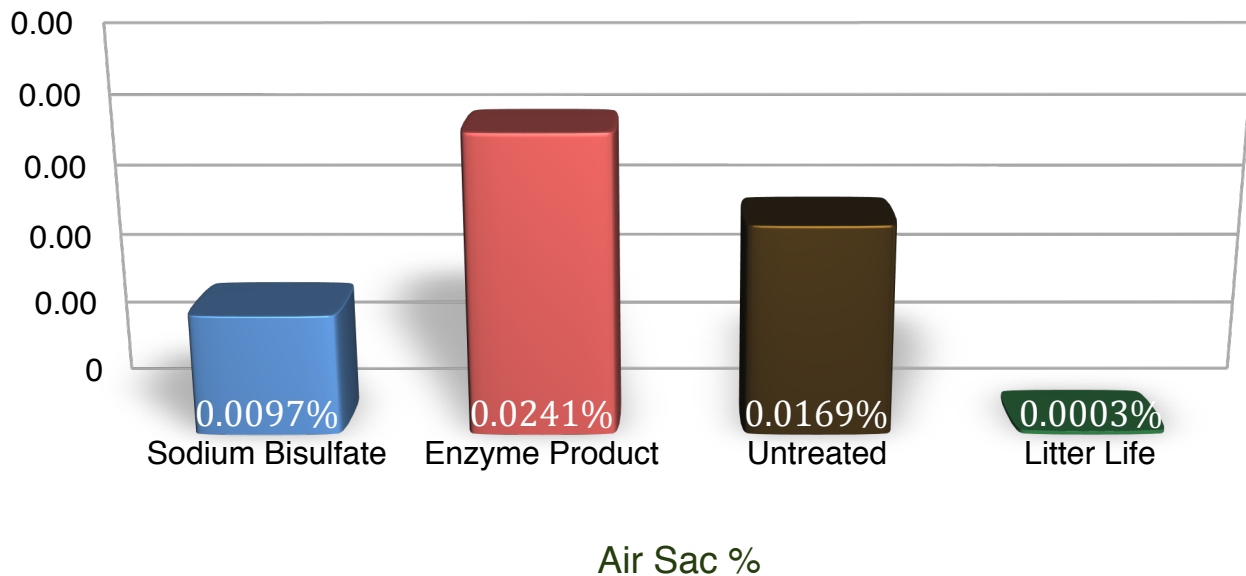
Total condemned pound of harvested product is the amount condemned due to a condition rendering either a portion of or the entire carcass unfit for human consumption. In the 12 barns of this study, in the Sodium Bisulfate barns condemnation was 0.77%, Enzyme product was 1.53%, Litter Life was 0.42%, and the untreated control was 1.92%. The results of the 12 houses compared, provided a greater processed pounds in the Litter Life treated barns over the control and competitors barns.

- ★ Litter Life yielded .35 less total condemnation compared to Sodium Bisulfate.
- ★ Litter Life yielded 1.11 less total condemnation compared to the Enzyme product.
- ★ Litter Life yielded a 1.5 less total condemnation compared to untreated control.



Air Sac Condemnation

There was a significant decrease in the Air Sac condemnation; there was also a significant decrease in the occurrence rate of salvageable air sac lesions. Litter Life yielded a 95% reduction in airsaculittis condemnation and reprocessing over the other products compared in this study.



Hypothesis: The reduction in airsaculitis is believed to be based upon regeneration of the litter bed, the core principle behind the action of Litter Life. Studies performed confirm that birds exposed to high ammonia levels are at greater risk of e-coli infections resulting in airsaculittis.

<http://www.wam.umd.edu/~iestevez/extension/ppv4n1.pdf>

The hypothesis stated are to be followed with studies confirming the reduction in ammonia exposure to flocks, and the competitive inhibition of pathenogenic organisms on poultry litter.

Conclusions

The results of this study indicate the use of Litter Life significantly increased the livability and decreased the feed conversion rates of the flocks compared, while decreasing total condemned % and Airsaculittis incidence rates. Based on the data in this study, poultry producers could anticipate improved farm productivity and plant cost reductions in condemnation and labor hours due to reprocessing. While removing the possible chemical contaminates to the farm traditional treatments currently use, Litter Life provides a nontoxic environmentally compatible alternative.