Al+Clear® Poultry Grade Alum (Dry)
Al+Clear® A7 (Liquid)
TECHNICAL BULLETIN

Poultry House Floor (Pad) Treatment

Introduction

Traditionally, poultry house dirt floors (pads) have been treated with a variety of chemicals including salt, sulfur, various common disinfectants, and more recently, litter acidifiers, in an attempt to dry and sanitize pads prior to replacing the bedding with new shavings. Salt has been used primarily because of its low cost and its ability to dry pads.

A more effective approach is to use alum based products that not only dry pads but also acidify pads, without the adverse effects of adding sodium to the soil and litter. For every 100 lbs. of alum applied, 12 lbs. of water is chemically bound; Table 1. This drying effect reduces water activity (Aw) which is an essential factor in suppressing bacterial growth. Alum based products do not contribute sodium to the pad or litter. High salt (sodium) content in litter, used as fertilizer, can reduce plant yields.

Al+Clear® Poultry Grade Alum (Dry) and ***Al+Clear® A7 (Liquid)*** are a safe and cost effective way to treat pads and litter. Acid content and ammonia neutralization capability varies among the different litter amendments, with alum-containing products contributing more acid and greater ammonia neutralization capacity; Table 3 & Figure 1.

Table 1: Water Binding Capacity of Alum

Litter Amendment	Water Binding / 100 lbs. of Product[1]
Al+Clear® Poultry Grade Alum (dry)	Binds 12 lbs. of Water

[1]General Chemical LLC, 2008. *Wet Floors affect performance of all litter amendments.*

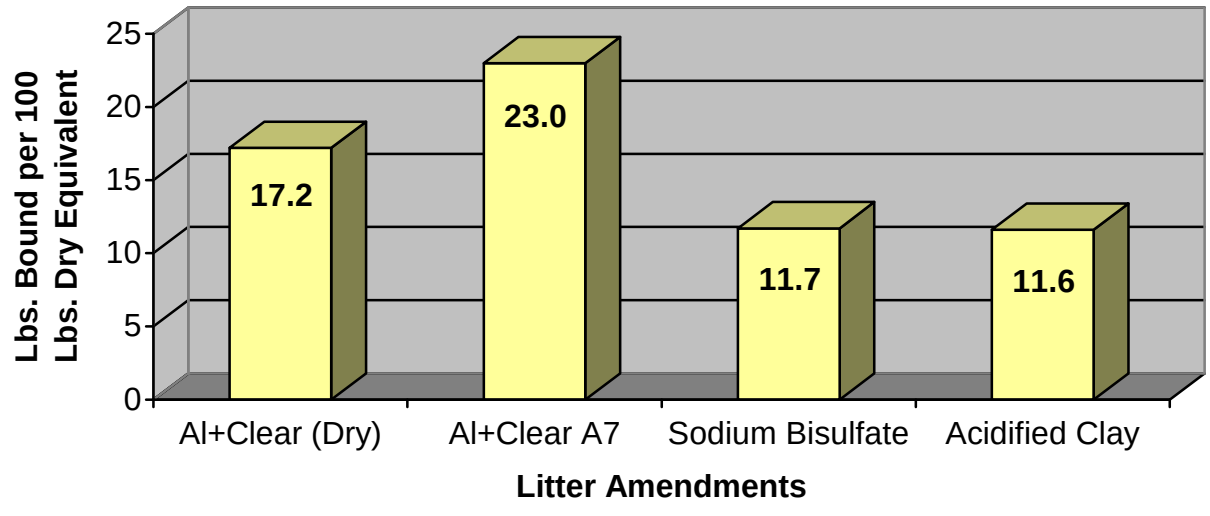
Table 2: Reducing pH with Alum

Amendment	pH at Placement	3 days	7 days	14 days	21 days
Al+Clear® Poultry Grade Alum (dry)	3.7	4.20	4.25	6.55	7.48
Sodium Bisulfate	3.9	5.42	5.55	6.73	7.51
Acidified Clay	3.2	6.29	6.69	6.69	7.72

Table 3: Acid Content of Different Litter Amendments

	Acid Content in Lbs. at Application Rate of			
Amendment	75 lbs/1000 ft^2	100 lbs/1000 ft^2	20 gal/1000 ft^2	25 gal/1000 ft^2
Al+Clear® Poultry Grade Alum (dry)	0.76	1.01		
Al+Clear® A7 Liquid			1.09	1.36
Sodium Bisulfate	0.59	0.79		
Acidified Clay	0.71	0.94		

Figure 1: Ammonia Binding



Al+Clear® Poultry Grade Alum (Dry)
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Routine Pad Treatment on Farms without Significant Disease Issues

1) Thoroughly remove litter from house, including around foundation.
2) Make any repairs to pad; making sure the dirt pad remains level. In houses that have not been cleanout out for a long period of time and where deep hard pan has accumulated, it may be necessary to remove the hardpan and add a fresh layer of clay or other pad surfacing material.
3) Apply 100 lbs. of ***Al+Clear® Poultry Grade Alum (Dry)*** or 20 - 25 US gallons of ***Al+Clear® Liquid A7*** per 1000 square feet of pad surface area.
4) Apply 3 - 5 inches of fresh shavings.

Treating Pads on Farms with Recurring Disease Problems

1) Thoroughly remove litter from house, including around foundation.
2) Make any repairs to pad; making sure the dirt pad remains level. In houses that have not been cleaned out for a long period of time and where deep hard pan has accumulated, it may be necessary to remove the hardpan and add a fresh layer of clay or other pad surfacing material.
3) Apply 100 lbs. [125 - 150 lbs. for additional drying] of ***Al+Clear® Poultry Grade Alum (Dry)*** or 20 - 40 US gallons of ***Al+Clear® A7 Liquid*** per 1000 square feet of pad surface area.
4) Apply 3 - 5 inches of fresh shavings.

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