

The Virginia Conservation Practice Standard *Amendments for Treatment of Agricultural Wastes (Code 591)* can be used to improve air and water quality, reduce energy costs, and improve animal health in poultry houses.

Chemical amendments to poultry litter are primarily used in poultry houses for the purpose of reducing the amount of ammonia in the air. Excess ammonia is detrimental to bird health, particularly when the birds are very young. One way to reduce the ammonia in the poultry house is to vent the ammonia to the atmosphere. This can result in odor complaints. Ammonia vented to the atmosphere also indirectly contributes to water quality impairments when the ammonia is transported into surface water by precipitation. Excessive ventilation will also increase energy usage and costs. One way to reduce the need for ventilation is to apply amendments, such as Klasp™, PLT, Al<sup>+</sup> Clear (alum), or other approved products, to the litter to reduce the conversion of ammonium to ammonia. Klasp™ and alum have the additional effect of binding phosphorus into a non-soluble form.

In the typical poultry operation, one or more of these type of amendments are applied to the brood chamber. In some places, additional amounts of amendment are applied to the rest of the house but typically in smaller quantities. More product is also used during the winter months to reduce the need to vent ammonia. This reduces the amount of heat vented with the ammonia.

Under the USDA program, payment would be for application of a designated amount of one or more approved amendment over the entire poultry house between every flock for a year except for before the first flock after the clean-out. The annual litter test results would be used to adjust the Nutrient Management Plan. Since it is a management practice, a producer can apply for this practice for up to three years. After that, there would be no financial assistance. Producers who are already applying an approved amendment at the rate required by Virginia Practice Job Sheet VA-591-JS, *Amendments for Treatment of Poultry Waste*, would not be eligible for this practice.

At the present time, the emphasis of the program is to use this practice to improve air quality. This will be done by applying the approved product(s) as shown on the Job Sheet. At a later time, the use of this practice specifically to improve water quality may also become a component of the program incentives.

#### Advantages

- Improve air quality in the poultry house and in the atmosphere
- Reduce energy costs for heat by reducing the need for ventilation in the winter
- Reduce odor complaints
- Increase the amount of nitrogen in the poultry litter
- Improve animal and worker health
- Reduce the amount of soluble phosphorus (if alum or Klasp™ are used)
- Increase the amount of litter that can be land-applied (if alum or Klasp™ are used)

#### Disadvantages

- Increased amendment and labor costs associated with year-round treatment

#### Notes:

Other products with ammonia and/or phosphorus-binding efficacy may be added to this list when scientific documentation becomes available.

Brand names are mentioned in this fact sheet for informational purposes only. NRCS does not intend any endorsement of brands mentioned or criticism of similar products not mentioned.