

Spread poultry litter over more acres.

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Poultry litter has become a primary source of plant nutrients for many central Mississippi farmers. This byproduct of the poultry industry was for many years considered a nuisance; but currently producers and vendors must compete for it. In many cases, litter is committed to someone before it is removed from the production house.

Only a few years ago, most poultry litter was applied to pastures and hay fields, with only a few people “experimenting” with it in row crops. Poultry producers utilized litter to fertilize hay and pastures, and to graze beef cattle as a secondary source of income. Even these uses could not remove the phosphorus derived from litter fast enough to prevent excessively high levels of this element which can cause surface water contamination. Fields near poultry houses, where much of the litter had been applied for years, began testing so high in phosphorus that soil testing labs had to develop special procedures to deal with the levels in samples.

Then, when the new technology of “Nutrient Management” began to test its wings, poultry producers were “encouraged” to avoid applying litter to fields with high soil test levels of phosphorus. This was the time when other farmers started getting a chance to apply litter to fields where it had not been used before; and a few people started trying it on crops. Several researchers, in particular Dr. Charlie Mitchell at Auburn, started working with litter from several perspectives, including crops like cotton, corn, and soybeans. The results were very encouraging, and the ideas began spreading to farms adjacent to poultry production areas.

We are still in what you might call a “steep learning curve” when it comes to the application of poultry litter to crops. It gets complicated, since litter varies greatly in its content of plant nutrients. One sample of broiler litter may contain 50 pounds of N, 70 pounds phosphate, and 30 pounds of potash per ton; and one from another poultry farm may contain only 30 pounds of N, 40 pounds of phosphate, and 60 pounds of potash. These numbers may sound strange even to those who have used litter; but I have seen sample analyses like these. Then, if you get “hen-house” litter or “pullet-house” litter the numbers can be much different from broiler litter which is the most common.

In many situations, growers who have good access to litter may apply some fairly high rates, and this may be justified for a basal application on soils that have not been well cared for in a long time. However, after soil pH has been corrected with lime, and soil P and K levels have been brought into the high (H) to very high (H+) range, litter rates can (and should) be reduced. After this point, the soil should be tested routinely to know how much litter to apply. At the same time, the litter itself should be tested so give at least an estimate of the amount of plant nutrients it contains.

The price of all fertilizers (including poultry litter) has increased dramatically in recent years. If we manage this valuable resource well, more of our area producers can take advantage of it. Moderate levels of litter application will actually be better for our soils, our crops, and for the environment. Thanks for your time.