Poultry litter. Chesapeake Bay. Four words in a search engine pulled up results quicker than a waterman can pull up a crab pot. (Said waterman would also have to pull up 45,000+ crabs to match my search results). Poultry integrator or environmental activist these few words say oh-so-much for many sides of Bay issues.

According to the 2013 West Virginia Agricultural Statistics Bulletin 94 million broiler chickens, 3.3 million turkeys and 1.9 million non-broiler chickens were raised here in 2012. It is known that as long as people eat and raise birds, selfsame birds are going to poop. We also know proper storage and application of poultry litter benefits soil nutrition and ensuing crop production while protecting the Chesapeake Bay--but what to do with litter if it outpaces the soil deficiency in the locality?

On Tuesday November 12 concerned farmers, investors and business innovators met in the Moorefield Fire Company bingo hall to hear a presentation on the possibility of creating a litter baling operation in the area. In a nutshell this business would convert raw poultry litter into compressed, tested, moisture adjusted, bagged or baled composted fertilizer.

Mike Weaver, a local broiler producer, led the meeting. He actively practices soil nutrient management on his farm, soil testing then applying only as much litter as is recommended. This has led to a problem for him and other farmers.

“My land applicable litter (litter required to make a proper soil nutrient balance) has been cut 2/3 in 10 years from 3 tons to acre to 1 ton an acre” said Weaver. He went on to point out that sometimes he gives litter away just to get rid of it, other producers nodding in agreement.

The problem (and perhaps the solution) is that litter is higher in phosphorus, a soil macronutrient, than in nitrogen which is also a necessary macronutrient. Farmers must fertilize their fields every year to replenish nutrients used by last year's crop. Simply stated, if you try to add enough litter to soil to build up nitrogen levels, you have too much phosphorus. The solution to best utilize this excess litter could lay in the fact that other farming areas may need these nutrients more than West Virginia.

"Litter is a desirable fertilizer that builds soil structure, has micro and macro nutrients, increases soil holding capacity and boosts organic matter; all good soil additives that commercial fertilizers can't do", commented Jason Dalrymple, who works as a Nutrient Management Specialist for the West Virginia Department of Agriculture.

"Phosphorus in the Midwest is mined in Florida, and has to be shipped to the Midwest, which ships the corn to the growers here", he further stated. "Some farmers built poultry houses here just for the litter, for the cheap fertilizer".

Troy Truax and Lisa Byers, of Michael Baker Jr. Inc. presented the case for litter baling, explaining both the physical process and the business model.

The operation occurs in a baler designed and built by the White River Fertilizer Supply based on a trash compacter design. The baled product could be shrink-wrapped with an environmental resistant plastic with a shelf life of 3 years. A composting heating process occurring over the next few days has a 99% effective kill rate. The 4 foot square bale will weigh approximately 1.5 tons, is easily transported and stored.

Another option for processing and storage is a processor that vibrates the litter, causing it to settle compactly, rather than using compression to bale it. This product could be

placed in a reusable “Super-Sak” bag that can handle 1-2 tons. This processor model could also be mobile, pulled from farm to farm by a tractor-trailer truck. Judging by reactions it is the less favored of the two, the bio security of a litter processor moving from farm to farm being an issue.

Traux feels that a co-operative would be the best way to structure the business. Everyone who sells litter through it must buy into it as a share holder. (Extra plus: in addition to the money from selling your litter you get a piece of the co-op profits). A manager co-ordinates pick up and processing and directs employees who operate the machinery and warehousing. A broker contacts buyers, handles sales and arranges delivery.

In terms of numbers it will take 5 to 10 employees to operate the business. $400,000 for the mobile baler or $700,000 for the stationary. 2-3 acres of land, leveled, graveled and with warehouses to store the machinery and product. Litter is bought from the farm at $15 a ton and sold for $48 plus delivery. (Farmers who spoke up would be happy to sell at the $15 a ton the plan offers, most reported getting $8-10). It will take 24 (mobile unit) or 45 (stationary unit) thousand tons a year to make bottom line.

The cost of equivalent of commercial fertilizer at the same nutrient value would be $101 a ton, though it lacks the micronutrients and other positive characteristics of poultry litter. Despite the advantages supporting its use, would there be enough demand from the grain growers?

“Besides corn and bean growers in the Midwest, we have looked at reclaiming strip mine lands in Pennsylvania, West Virginia, and Virginia. A study showed 10-40 tons

per acre may be required to restore these lands. Additional demand could come from organic producers” said Traux.

Ironically, the biggest setback voiced may be *not having enough* litter. To generate better follow up information, however, producers were given statements of intent, a form letter that states how much litter they could ship a year for the co-op. Extra copies were provided to take for neighbors.

This meeting was a proactive step forward that could potentially have some positive and far reaching effects. It could provide local poultry integrators with a profitable way to easily dispose of litter. Soils in other areas could benefit from nutrients that may not be necessary here. The grain that feeds our chickens could be nurtured by them in return. There was a huge positive note underlying this meeting, regardless of whether or not the litter baler model becomes a reality. It was also a model of agribusiness seeking environmentally beneficial solutions that also help the farmer. Everyone can smile at that.

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