

Poultry Manure Strategies

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courses use it regularly.

He pointed to companies that market the Black Hen or Black Kow composted manure in bags. Big T Feeds in West Virginia feed a four-state area with enhanced pellets.

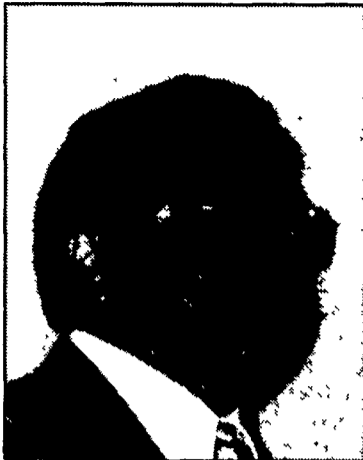
A Pennsylvania company even bags the composed manure for houseplant or container gardening.

Some concerns: quality control is an issue with the composted material. Its lack of uniformity; the need to add, in some cases, carbon sources; and lack of adequate chemical composition analysis have proved challenging. "No one knows what's really in the products," said Carpenter.

For many people, it's "much easier to make the product than to sell it." A market must be established before growers decide how to sell it.

Some growers use manure for electrical generation and cogeneration.

Many companies are becoming involved with technologies to convert the oversupply of manure into something useful, according to the ag agent.



Glenn Carpenter, area agent with North Carolina extension in Pittsboro, N.C., said Monday that the technology to convert poultry manure into a usable resource is there, but is "not nearly as good as it needs to be for a long-term, sustained market of poultry goods," he said.

"Things are finally starting to happen. We're not just 'talking' about it anymore," Carpenter said.

One such producer-marketer is Andy Rogowski with Daylay Egg Farm, West Mansfield, Ohio.

Daylay has about three million birds, including 2.6 million layers and 610 pullets on four farms.

Working closely with Ohio State University, Daylay has come up with ways to move manure as a product to help growers "build up" areas, he said, with low organic matter, low pH, and low soil nutrients in general.

There are several issues that the user must be aware of even when using such a product. Flies and beetles are issues, but the composted product in the Daylay system removes some of those challenges.

The product, in the end of the compost cycle is stable, uniform, and dry, and destroys weed seeds and pathogens, in addition to flies.

At one farm, Mad River Egg Farm, four buildings house one million layers. The composting is run on a four-day cycle with a "central design" system. Composting is done in a central building with a whisk aeration system. Air movement in the cages dries the moisture from 70-75 percent to 50 percent in four days.

Conveyor belts also help dry the manure. An infloor aeration system adds air to keep the material as aerobic as possible.

Rogowski's recipe for 60-day composting:

- Make sure there is proper feed supplied to the birds.
- The manure spends four days on the belts.

- The manure is whisked to aid in drydown.

- Manure is conveyed to composting.

- Work is done to maintain manure porosity.

- Use forced aeration.

- Eighteen lanes turn the material every three days.

"We want the manure on belts so there is no compaction and it can get as much air as possible," said Rogowski.

The material can be applied to the land with any conventional spreader. They use a "floater" type spreader.

The benefits for the soil additive compost: it improves soil moisture-holding capacity, tilth, nutrient retention, and decreases soil erosion.

Rick Koelsch, ag engineer with the University of Nebraska, spoke about a national poultry waste curriculum program established which is under review for universities to adopt. It will be another year before the curriculum material will be available to universities.

Alex Avery, Center for Global Food Issues, Churchville, Va.,

spoke about the "war" by the unknowing public on "confinement livestock agriculture." Avery said the challenge will be to double the world's annual food output in the next 50 years to meet demand globally for a population that keeps expanding.

Only today's highly intensive, concentrated, family-owned production systems can do the job, according to Avery. He pointed out he has a homemade bumper sticker that reads "Produce more per acre, save more for nature."

Peter Groot Koerkamp, Institute for Agricultural and Environmental Engineering, Wageningen, The Netherlands, spoke about the farm "emission quotas" their countries are under. But technological systems put in place have quite effectively, he noted, reduced ammonia emissions.

Preston Keller, Tyson Foods, Springdale, Ark., spoke about the Tyson Environmental Awards Program which rewards good players for the environ-

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