

Use of biosolids explained at unique field day

By JEANNINE OTTO
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MANHATTAN, Ill. — It's free fertilizer that provides corn a slow-release source of nitrogen while increasing yields and also holding in moisture in times of drought.

So if this is so great, why aren't people standing in line for it?

They are.

Biosolids, the topsoil-textured product that is the product of sewage treatment plants and water reclamation districts, was the subject of a demonstration conducted recently by the Metropolitan Water Reclamation District of Greater Chicago, the Will/South Cook Soil and Water Conservation District and Synagro, a Houston, Texas-based residuals management company with offices in Sugar Grove, Ill., that processes the sludge into biosolids and then delivers it to farmers.

The field day was conducted to answer questions and give information and to clear up any misconceptions that the public may have about this home-grown fertilizer.

"There are a lot of misconceptions about the biosolids industry," Randy Goldman, technical services director for Synagro, said.

"So public relations is a big part of it. It's generally pretty easy to find a farmer relatively close who's willing to take the material."

In fact, it's so easy that there is a waiting list to take the biosolids that Synagro handles. Application is made in the spring, fall and, for wheat farmers, after the wheat is harvested.

"We have interest in the material coming from four and five counties away," Goldman said.

"One of the misconceptions is that well, you're just looking for a place to dump this. That couldn't be further from the truth. We actually have waiting lists of farmers who want this material."

The material also has been



AgriNews photos/ Jeannine Otto

Lakhwinder Hundal, soil scientist for the Metropolitan Water Reclamation District of Greater Chicago, describes the use of biosolids as a fertilizer on corn

fields as farmers Sue and Don Nugent listen. The Nugent farm in Will County is the site of test plots that the district uses to demonstrate the use of biosolids.

used to fertilize golf courses and high school athletic fields.

"It's free to the farmers," Goldman said. "Everything we do for the farmers, including soil testing, the delivery, the application — and we do the incorporation — and that's free to the farmers. We get paid by the treatment plant to remove the material."

"The purpose of this demonstration is a show and tell, basically," Lakhwinder Hundal, soil scientist for the water reclamation district, said.

"The purpose here is for the farmers and the community to come out and see what is really going on with local biosolids on a local farm."

Farmer Don Nugent, who farms the test plots and who has been using biosolids for

about six years, said he was very willing to show off the results of biosolids.

Nugent raised wheat and was approached by a representative of Synagro who asked if he wanted to try out the free fertilizer.

"I didn't know anything about it at the time," he said. "He told me about the program. The next year I started using the biosolids and it's been great for the crops."

"I'd say it saves me about \$100 an acre in fertilizer costs," Nugent, who farms a total of 10,000 acres, said. "Yields have gone up. For the first year, I had my best corn with biosolids. As we've used it more and more, yields have kept going up."

The district has been studying the soil, water and plant results at the plots since 2004.

That includes studying levels of various nutrients in the soil over time, monitoring runoff with lysimeters and also testing for the presence of any heavy metals that may be present.

Hundal said the danger of buildup of heavy metals has been addressed by Clean Water Act rules that limit what industries can release into the sewer system.

In addition, the water reclamation district has its own

industrial waste control division that polices discharge into the sewer system from industries within the district.

Another goal of the test plots is to test how biosolids perform against commercial nitrogen fertilizer.

"The goal is to compare commercial fertilizer applications with biosolids," Lakhwinder Hundal, soil scientist for the water reclamation district, said.

"Another goal is to compare yield results. The goal here is to maximize farmers' benefit from biosolids but not at the expense of the environment."

The process that brings sewer sludge to the biosolid form that is incorporated into farm fields starts at least a year and a half before the material is brought to the field.

The water reclamation district puts wastewater through a series of screenings, treatment with microorganisms and multiple processes that kill any disease-causing organisms and reduce odor of the biosolids.

The biosolids are stored in lagoons for a minimum of 18 months and then the biosolids are placed on pads for air drying.

That process brings the biosolids to the topsoil-form that is spread on the fields.

rate of biosolids is about 40 tons per acre, based on a corn yield rate of 180 to 190 bushels per acre.

On the Will County farm, Hundal said the yields on the plots using biosolids have averaged 200 bushels per acre.

While producers must be granted EPA permits before applying biosolids on any crops direct for immediate human consumption, there are no restrictions on the use of biosolids for grain crops. The Illinois EPA does have setback requirements.

Nugent said the only issue his neighbors have really had with the fertilizer is the dust kicked up by the trucks bringing the fertilizer to the fields.

"Some people see it sitting in the fields and they realize what it is and they think it's dangerous," he said. "But once the Synagro representative talks to them, they're usually fine with it."

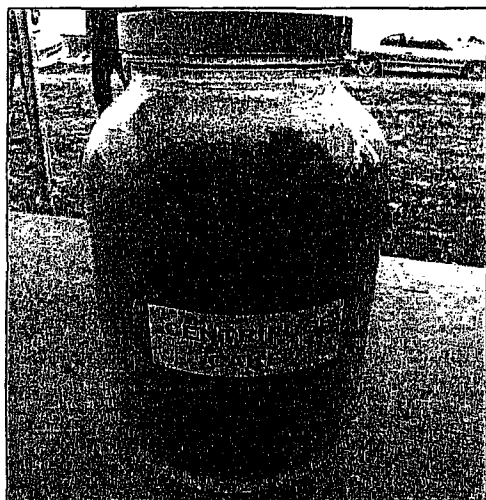
Education is an important part of using biosolids, a Natural Resources Conservation Service official agreed.

"I would hope that farmers and decision-makers for municipalities would take the time to come out and get educated," Bob Jankowski, district conservationist for the Will/South Cook NRCS. "I think it's an education process."

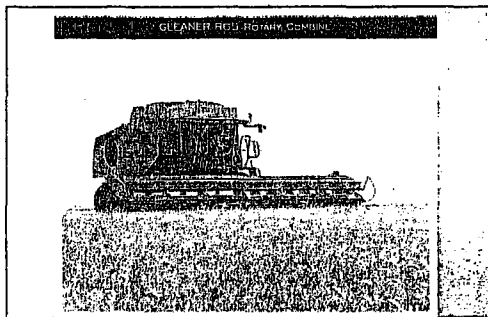
Jankowski said that local NRCS offices can offer assistance to producers who are thinking about using biosolids on cropland.

For more information on the biosolids program at the Metropolitan Water Reclamation District of Greater Chicago, go to www.mwrddg.dst.il.us.

For information on the availability of biosolids, contact Randy Goldman at Synagro at (630) 466-7892 or visit www.synagro.com.



Biosolids in the form that is incorporated into farm fields are displayed. The material, also called centrifuge cake, undergoes at least a year and a half of processing. It arrives at fields in a form similar to compost.



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