

Gypsum touted as potential soil builder

By Jim Massey

Editor

RIVER FALLS —

What once was considered a waste product from coal-burning power plants has become a soil-building amendment for some Midwestern farmers.

Synthetic gypsum is being recovered via flue-gas desulfurization at coal-fired power plants around the Midwest and being sold as Gypsoil, a product branded in 2006 by a company owned by Indiana businessman Ron Chamberlain. The company has since been sold to Beneficial Reuse Management in Chicago, but Chamberlain still works as the director of the company's Gypsoil division.

During an interview at Wisconsin Farm Technology Days near River Falls, Chamberlain said Gypsoil improves soil chemistry by flushing excess magnesium out of the soil and building calcium levels. The natural



Submitted photo

Gypsum is generally spread on fields at a rate of about 1 ton per acre.

mineral gypsum is composed of calcium and sulfate dihydrate.

"What we see here in Wisconsin is we have an excess of magnesium, which makes the soil tight, and a deficiency of calcium, which makes soils loose," Chamberlain said.

"The sulfate in gypsum flushes the magnesium out of the soil profile and calcium replaces that magnesium. Very quickly we begin to see a change in soil structure."

Reuse Management buys the gypsum from We Energies plants near Milwaukee and Pleasant Prairie in southeastern Wisconsin.

Chamberlain said gypsum is just beginning to catch on with farmers, although some have been using it for years.

Jack Maloney, a corn and soybean farmer in Brownsburg, Ind., said he has been using gypsum for nine years.

"It has helped us balance the magnesium and sul-

fur levels in our soil, and it helps flocculate the soils if you've got heavy clays. A lot of places are deficient in sulfur because we're not getting it in the rainfall like we used to," he said.

Maloney said he can see the biggest difference in fields where he has been using it the longest.

"It makes the soil a lot looser and makes the iron go through it a lot easier," he said.

Don Van Egtern of Waupun used Gypsoil for the first time this year, so he said it's a little early to tell how effective it might be.

"I think the water doesn't seem to be staying on top of the ground as long as it used to, for as much rain as

we had this year," he said. "That's supposed to be one benefit, loosening the soil so the water filtrates."

"We've been working on trying to build our calcium levels for quite a few years and we've used a few different products. The gypsum is a lot cheaper and you get your sulfur with it."

Van Egtern grows corn and alfalfa at his Waupun dairy farm. He said he heard about gypsum at the Wisconsin Public Service Farm Show last spring in Oshkosh.

"I also heard about it at a couple grazing meetings I went to, from a couple of graziers who thought it was helpful on their soils," he said. "I think this calcium thing is the right way to go. By raising calcium levels in the soil we'll get better fertility."

Grazier Carl Werner of Beaver Dam also has used Gypsoil.

"We're trying to change the calcium-magnesium balance in the soil," Werner said. "It frees up the elements in the soil that are already there so the crops can make better use of it."

Werner said he grazes a 45-cow dairy herd on about 50 acres of pasture. He applied Gypsoil to the pasture and his alfalfa.

Werner said the fertilizer cost \$30 to \$35 per ton delivered from Milwaukee. Chamberlain said farmers

generally apply about 1 ton per acre.

Tom Weaver, a dairy nutritionist and agronomist in Cuba City, said he has been recommending gypsum to many of his customers as a source of calcium and sulfate.

"It's pretty economical for those in southern Wisconsin, anyway," he said. "In the Upper Midwest, the benefit of calcium is a big deal. There are some studies that show double yields in alfalfa when the crop gets an adequate amount of sulfur."

Chamberlain said gypsum can help farmers improve their soils and increase their profitability.

"In one study we saw a 27-bushel yield difference in corn and in another a 12-inch difference in alfalfa between the first and second cutting," he said.

The product is available at some farm cooperatives and from other distribution points, Chamberlain said. The logistics of where farmers can get the product are still being worked out.

"We think it will take off," he said. "There are hundreds of thousands of tons being produced now for the first time by We Energies in Oak Creek, and it is going to be produced as long as we can see into the future."

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