

FOR IMMEDIATE RELEASE

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Research shows gypsum enhances moisture availability and reduces non-point pollution while improving crop yields

Gypsum event to be held with OSU conservation tillage meeting March 7th at Ada, OH

February 13, 2013, (AgPR), Chicago, IL...Gypsum, used as a soil amendment to supply soluble calcium and sulfate sulfur, helps soils absorb more water during rainfall, according to USDA ARS research studies. That means more water goes into the soil reserves to be tapped by crops when rains are scarce later in the season.

"The key to getting through drought is to capture all the water you can when you do get rain," says Allen Torbert, research leader at the USDA-ARS National Soil Dynamics Lab at Auburn, AL. "Better soil structure allows all the positive benefits of soil-water relations to occur and gypsum helps to create and support good soil structure properties."

In addition to improving moisture utilization, gypsum helps to keep phosphorus and other nutrients from leaving farm fields. "Using gypsum as a soil amendment is the most economical way to cut the non-point runoff-pollution of phosphorus," says retired soil scientist Darrell Norton who conducted decades of gypsum research while at the USDA-ARS National Soil Erosion Laboratory at Purdue University.

A testament to its positive contribution to soil and water quality, gypsum application to agricultural fields was recently added to Ohio's conservation practice standards issued by the Natural Resources Conservation Service (NRCS), notes Warren Dick, professor, Environmental and Natural Resources, The Ohio State University (OSU), Wooster, OH.

Dick is the lead researcher for a number of research projects studying gypsum's impact on soil and water quality, as well as crop productivity. Gypsum has been shown to boost corn yield by as much as eight percent¹ and alfalfa yield by as much as 18 percent² in OSU research.

Dick, Torbert and Norton, along with several other gypsum researchers, industry experts and growers and consultants experienced using gypsum, will be featured speakers at the Midwest Soil Improvement Symposium: *Research and Practical Insights into Using Gypsum* to be held March 7 at Ada, OH. Dr. David R. Montgomery, professor of geomorphology in the Department of Earth & Space Sciences at the University of Washington, and award-winning author of "*Dirt: The Erosion of Civilizations*," will present the keynote. Sponsors for the program are GYPSOIL, OSU and the Conservation Technology Information Center. (See sidebar.)

Gypsum, or calcium sulfate dihydrate, has been used for centuries, and was promoted by Benjamin Franklin and George Washington. Colonial crop growers observed fields that were green and lush when mined gypsum or "land plaster" was applied. The cost of mining and shipping gypsum to crop producers, however, caused agricultural use of gypsum to dwindle over time except for on high value crops like potatoes, tomatoes and peanuts.

But thanks to the 1990 Clean Air Amendments, there is a new supply of high quality and lower cost synthetic gypsum available called flue gas desulfurization gypsum or FGD gypsum. FGD gypsum is produced as a co-product in wet scrubbing systems used to clean emissions at certain coal-fired utilities. Gypsum is also a co-product from some food-grade manufacturing processes.

FGD gypsum contains 20 percent soluble calcium or about 400 lbs./ton and 16 percent sulfur (in the sulfate form) or about 320 lbs./ton, explains Ron Chamberlain, director of gypsum programs for Chicago-based Beneficial Reuse Management, which markets GYPSOIL brand gypsum. Chamberlain will discuss gypsum spreader set-up and application tips at the March 7 program.

"Gypsum is a fine dry material that many growers and applicators are unfamiliar with handling so a little instruction is often needed," says Chamberlain. "For best results, gypsum can be applied using a fertilizer or litter spreader designed for bulk materials with just a minimum set-up."

Gypsum offers a host of benefits to improve agricultural productivity and soil and water quality. For more information, plan to attend the March 7 event. Learn more at www.gypsoil.com.

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IF YOU GO:

Mark your calendars today. Plan to attend.

Gypsum event to be held with OSU conservation tillage meeting March 7th at Ada, OH

Ada, Ohio, (AgPR), February 13, 2013...The third annual Midwest Soil Improvement Symposium: Research and Practical Insights into Using Gypsum is planned for March 7, 2013, in conjunction with The Ohio State University's (OSU) Conservation Tillage and Technology Conference (CTC) in Ada, OH. The CTC is scheduled for March 5-6. Both events will be held at the McIntosh Center on the campus of Ohio Northern University.

Co-sponsors for the Midwest Soil Improvement Symposium are the GYPSOIL division of Beneficial Reuse Management, Chicago, IL; the Conservation Technology Information Center, West Lafayette, IN; and The Ohio State University.

Confirmed speakers for the March 7 event include:

Keynote by **Dr. David R. Montgomery**, author of *Dirt: The Erosion of Civilizations* (2007) and a professor of geomorphology in the Department of Earth & Space Sciences at the University of Washington. Dr. Montgomery is a MacArthur Fellow and a two-time winner of the Washington State Book Award;

Dr. Warren Dick, professor, Environmental and Natural Resources, Ohio State University, Wooster, OH;

Dr. Darrell Norton, soil scientist recently retired from the National Soil Erosion Research Lab, USDA-Agricultural Research Service, West Lafayette, IN;

Dr. Jerry Bigham, professor (retired), Environmental and Natural Resources, The Ohio State University, Wooster, OH;

Dr. Allen Torbert, research leader, National Soil Dynamics Laboratory, USDA-Agricultural Research Service, Auburn, AL;

Dr. Ray Bryant, research soil scientist, Pasture Management and Watershed Management Research Unit, USDA-Agricultural Research Service, University Park, PA;

John Andersen, president, Greenleaf Advisors, Chicago, IL;

Ron Chamberlain, agronomist and director of gypsum programs for Beneficial Reuse Management, marketer of GYPSOIL™ brand gypsum;

Mr. Greg Kneubuhler, owner and consultant for G & K Concepts, Inc., Harlan, IN;

Clint Nester, consultant, Nester Ag, Bryan, OH;

Moderated by Randall Reeder, agricultural engineer (retired), the Ohio State University.

Background on gypsum use, research highlights, and gypsum impacts to soil and water quality and crop productivity, plus tips for gypsum application, will be discussed. In addition, there will be panel discussions with growers experienced at using agricultural gypsum.

The **Midwest Soil Improvement Symposium** is designed for certified crop consultants, university and extension personnel, farm managers, farm producers and others interested in soil science. Last year's symposium was held at Rulon Enterprises in Arcadia, IN, and drew nearly 200 people. Continuing Education Unit credits for Certified Crop Advisers will be available.

For more information about the **Midwest Soil Improvement Symposium**, or to register, please visit www.gypsoil.com/symposium or call 563-320-2247.

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The **Conservation Technology Information Center** champions, promotes and provides information on technologies and sustainable agricultural systems that conserve and enhance soil, water, air and wildlife resources and are productive and profitable. www.ctic.org

GYPSOIL is a division and tradename of Beneficial Reuse Management LLC. Its mission is to make a positive impact in its customers' soil and crops while conserving natural resources and protecting the environment. GYPSOIL identifies gypsum supplies, assists in meeting regulatory compliance, helps growers understand the agronomics and application methods in using gypsum, and develops cost-effective distribution and transportation networks. GYPSOIL brand gypsum is distributed to crop growers in the Midwest, Delta and Southeast. www.gypsoil.com.

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References

¹ Chen et al, Flue Gas Desulfurization Products as Sulfur Sources for Corn, Soil Science Society of America Journal, VOL. 72, No. 5, September-October, 2008.

²Chen et al., Flue Gas Desulfurization Products as S for Alfalfa and Soybean Agronomy Journal, VOL. 97, January–February 2005.