SA’s By-product Gypsum Uses in Agriculture Community provides a forum to share research ideas and results on flue gas desulfurization (FGD) gypsum uses in agricultural systems. Removing sulfur from the emissions of U.S. coal-burning power plants for electricity production yields more than 20 million tons of gypsum annually as a by-product of the scrubber process. Only half of this supply finds a beneficial use, primarily for wallboard production.

The beneficial use of gypsum on agricultural land would provide an additional market for FGD gypsum, and agricultural soils could potentially benefit from the addition of gypsum in a variety of ways. For instance, gypsum can be used to provide a source of calcium and sulfur for crops; as a soil conditioner to improve soil physical properties; to remediate sodic soils; to reduce effects of sub-soil acidity; and to reduce nutrient and sediment movement to surface water. However, there is a paucity of information about the use of this industrial by-product on agricultural land. Research is needed to assess the agronomic and environmental impacts of FGD gypsum application to soils.

Currently, the beneficial use of FGD gypsum is under a cloud of proposed USEPA regulation as a toxic waste. This year, at the 2013 Annual Meetings in Tampa, the community has organized a special panel discussion on the environmental risks and regulation of FGD gypsum. Invited speakers include researchers, regulators, power industry representatives, and agriculturalists. Beneficial Reuse Management, which markets GYPSOIL Brand Gypsum, is co-sponsoring this session that will take place on Monday, 4 November at 10:00 am.

Additionally, the By-product Gypsum Uses in Agriculture Community and the Adaptive Nutrient Management Community are co-sponsoring an oral technical session titled “By-Product Gypsum: Beneficial Uses in Agriculture” on Tuesday, 5 November at 10:00 am and a poster session on the same subject on Wednesday, 6 November at 2:30 pm. The goal of these sessions is to highlight research that documents beneficial uses, assesses potential environmental impacts, and identifies new uses for FGD gypsum in agriculture.

For more information, please visit our website: www.agronomy.org/membership/communities/by-product-gypsum-uses-in-agriculture or contact one of the officers listed below. To add the By-product Gypsum Uses in Agriculture Community to your ASA membership, visit: www.agronomy.org/account/communities/asa.

Ray Bryant, 2013 Community Leader (ray.bryant@ars.usda.gov); Arthur Allen, 2014 Community Leader (alallen@umes.edu); Mark Reiter, 2015 Community Leader (mreiter@vt.edu); Dexter Watts, 2011 and 2012 Community Leader (dexter.watts@ars.usda.gov).

Current Community Leader, Ray Bryant (left) and Vice-Leader, Arthur Allen (right) monitoring the edge-of-field use of by-product gypsum to prevent phosphorus and arsenic movement to drainage waters. Photo by Stephen Ausmus (USDA-ARS).