

AMENDING SOIL PROPERTIES WITH GYPSUM PRODUCTS

DEFINITION

Using gypsum (calcium sulfate dihydrate) derived products in an attempt to change the physical and/or chemical properties of soil.



Gypsum stockpile in the field for post-harvest application.

PURPOSE

- Improve soil health by improving physical/chemical properties and increasing soil infiltration.
- Improve surface water quality by reducing dissolved phosphorus concentrations in surface runoff and subsurface drainage.
- Improve soil health by ameliorating subsoil aluminum toxicity.
- Improve water quality by reducing the potential for pathogens and other contaminants transport from areas of manure and bio-solids application.

NOTE: Gypsum has been used on many soils in Wisconsin with mixed results due to climate factors and soil variables. There is evidence this product has demonstrated some added value to dense material soils where drainage may be restricted.

PLANNING REQUIREMENTS

This practice applies where land application of gypsum products will be used to alter the physical and/or chemical characteristics of soil to help achieve one of the above purposes.

- This practice can be used when the applied conservation management system soil loss computations equal or less than T, and a minimum of 30% residue is present at the time of gypsum application and planned or expected throughout the rotation. Other management options such as cover crops maybe used to increase surface residue.
- This practice does not apply to organic soils.
- Current soil test must meet the requirements of A-2809 Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops and shall be no older than 1 year.
- Soil test phosphorus (STP) must be High or greater.
- Soil test must verify the following: 1) CEC of greater than 5, 2) soil test pH greater than 5.5 and pH must equal or exceed the needs of the most pH sensitive crop in the rotation and 3) soils with an extractable Mg greater than 200 lb./ac.
- Broadcast applications are to be made on the soil surface and not incorporated.
- The gypsum derived product must have a particle size of less than 1/8 inch and meet all applicable local, state and federal laws for land application.
- A chemical analysis of the gypsum is required prior to application.

OPERATION AND MAINTENANCE

- Do not allow livestock access to stacked gypsum.
- Do not resume grazing until rainfall or irrigation has washed gypsum off the vegetation.
- Do not apply gypsum after the soil test calcium level exceeds the maximum level established by the LGU.

PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared for each field site where gypsum products will be applied;

- Gypsum product used
- Plan map with fields/acres receiving Gypsum.
- Purpose(s) for its use and the planned outcomes.
- Chemical analysis of the amendment product.
- Soil analyses demonstrating the need for the amendment.
- Application method, rates, timing, sequence of application with other nutrient materials (i.e., manures, bio-solids, fertilizers), mixing instructions when mixed with manure prior to field application.
- Required soil and/or plant analyses after application to determine the effectiveness of the amendment.

REQUIRED COST SHARE DOCUMENTATION FOR CASE FILE

- Practice amount applied is field verified

by: _____

on: _____

- Before payment is made, the following information is required to be in the case file:
 - ≡ Photographs of established practice must include:
 - » Statement “Photo was taken in the field by (enter name)”
 - » Date photo was taken in the field
 - » Statement of what the photo represents if it needs clarification
 - ≡ Field verification is documented and a certified planner verified “as installed” this practice meets NRCS standards and specifications.

Practice Certification (NRCS USE ONLY)

I certify that the practice as installed is complete and meets the applicable Wisconsin NRCS Conservation Practice Standard and all applicable practice specifications. Any changes to the original practice design have been approved and are documented on the original practice design “as installed.”

Certified Planner (print)

Certified Planner (sign)

Date

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Client Name: _____ Planner Name: _____

Practice Purpose: _____

PLANNED PRACTICE LOCATION AND EXTENT

Contract Number	Contract Identification Number (CIN)	Tract Number	Field Number(s)	Acres Contracted	Acres Planned	Actual Acres Applied (NRCS USE ONLY)

A completed copy of this page must be submitted for a financial assistance payment to be processed.

Additional Information:

Tract: _____ Gypsum Product Used: _____

Field Number	Crop Acres Receiving Gypsum	Soil Analysis "Need"	Application Method	Rate	Timing	Plant or Soil Test Post Application