



## AMENDING SOIL PROPERTIES WITH GYPSUM PRODUCTS (Code 333) *Conservation Practice Job Sheet*

**Description** - Using gypsum (calcium sulfate dihydrate) derived products to change the physical and/or chemical properties of soil.

**Purposes** (check all that apply)

Improve soil health by increasing infiltration and improving physical/chemical properties of the soil.

Improve surface water quality by reducing dissolved phosphorus concentrations in surface runoff and/or subsurface drainage

Improve water quality by reducing the potential for pathogens and other contaminants transport from areas of manure and biosolids application.

Ameliorate subsoil Al toxicity.

**Where Used:**

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.

It does not apply to organic soils or to remediate sodic soils.



**Applications:**

Application must be based on a current soil test and be made in conjunction with the implementation of an overall system to improve soil health and reduce nutrient loss risk.

The soil samples taken that are going to be the bases for application rate and/or the need for the application must be representative of the entire management area. Field history, topography, soil type, past yields and other factors should be used to divide the landscape into areas with similar crop response. Even after careful consideration to the field landscape and variability, no individual sample zone should represent more than 25 acres. For a detailed explanation of this process see "Sampling Soils for Fertilizer and Lime Recommendations" MSU Extension Bulletin E 498.

Application rates should be made in accordance with Fig 1. If applications are made at a rate greater than indicated in fig 1 the gypsum application may reduce plant uptake other needed nutrient and may negatively affect crop yields. However additional applications may be needed to meet the desired purpose but should only be made after the next normal soil test cycle and a reevaluation of these results indicate an additional application is needed.

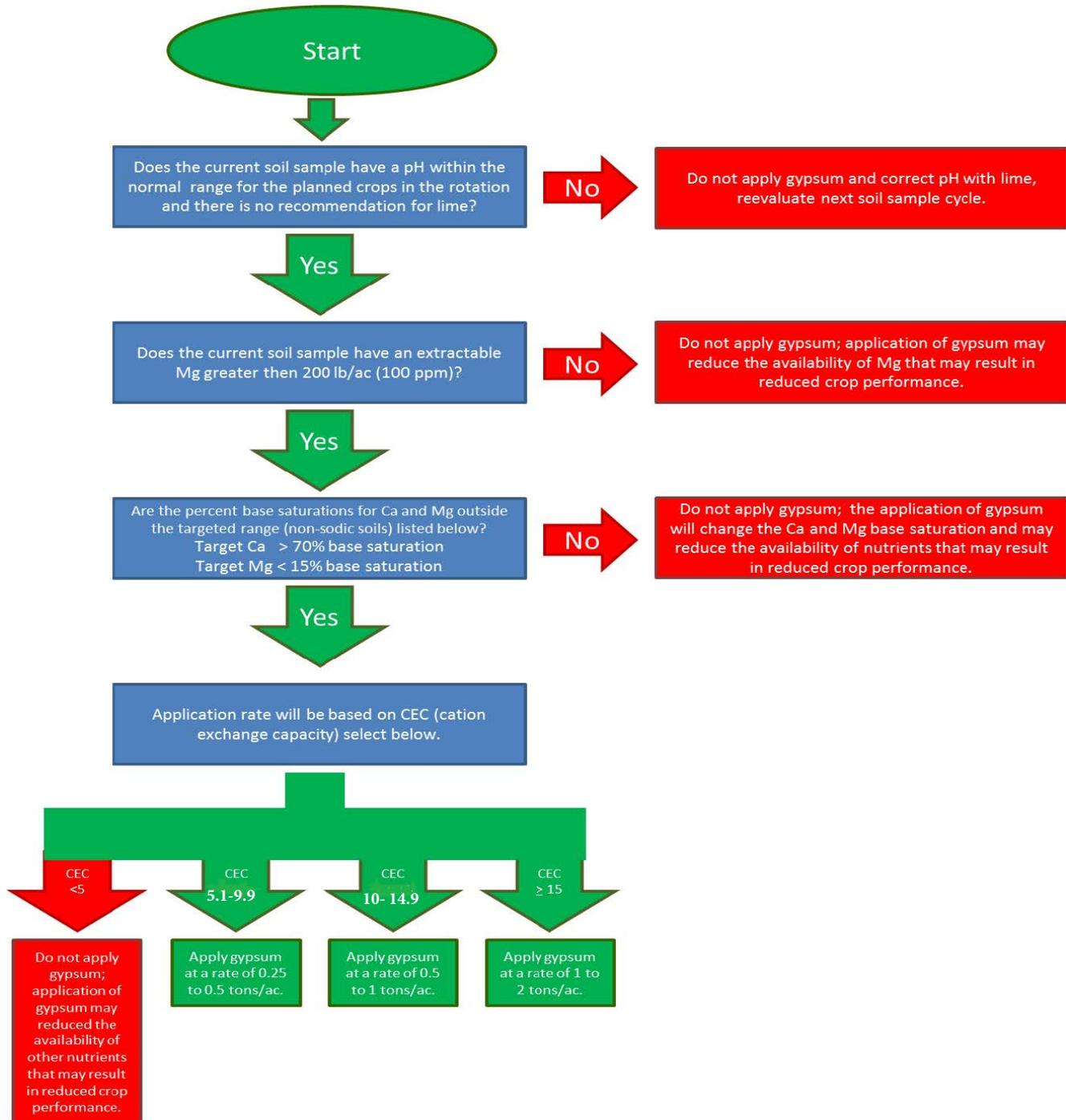
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Fig 1: Flow chart to be used to determine correct application rate of gypsum on non-sodic soils. Application should be based on a current soil sample, additional applications may be needed but should be based on the next soil sample after application (maintain current soil sample cycle). With additional applications start over with flow chart to determine correct rate.





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|                  |               |
|------------------|---------------|
| <b>Producer:</b> | <b>Tract:</b> |
| <b>Fields</b>    |               |
|                  |               |
|                  |               |
|                  |               |
|                  |               |

| Fields | Sub-field | Area (ac) | Soil Test indicated Need                                 | Application Rate (tons/ac) | notes |
|--------|-----------|-----------|--|----------------------------|-------|
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |
|        |           |           | <input type="checkbox"/> Yes <input type="checkbox"/> No |                            |       |

Maps displaying the needed parameters (pH, soil test Mg, percent base saturation of Ca and Mg, and CEC) to determine application rate and a map of the site specific application rate are attached. If attached the above table is blank.

For Questions Regarding the Application Contact: