

**FORMAL RECOMMENDATION BY THE  
NATIONAL ORGANIC STANDARDS BOARD (NOSB)  
TO THE NATIONAL ORGANIC PROGRAM (NOP)**

**Date:** November 30, 2007

**Subject:** Sunset- Calcium chloride

**Chair:** Andrea M. Caroe

**Recommendation**

The NOSB hereby recommends to the NOP the following:

Rulemaking Action:   X    
Guidance Statement:         
Other:       

**Statement of the Recommendation (including Recount of Vote):**

To retain calcium chloride on §205.602(c) Non-synthetic substances prohibited for use in organic crop production.

(c) Calcium chloride, brine process is natural and prohibited for use except as a foliar spray to treat a physiological disorder associated with calcium uptake.

**NOSB Vote:    Motion: G. Davis    Second: T. Ellor**

*Board vote: Yes - 15   No- 0   Abstain- 0   Absent - 0*

**Rationale Supporting Recommendation (including consistency with OFPA and NOP):**

Potential overuse of this natural substance and resultant subsoil, surface water and ground water contamination warrants continued limitation of use.

Sunset Material Vote

**Response by the NOP:**

**I. List: §205.602 Non-synthetic substances prohibited for use in organic crop production****II. Prohibited non-synthetic substance****(c) Calcium chloride****III. Committee Summary:**

**Calcium chloride** is currently on the National List of non-synthetic materials prohibited for crop production with the annotation ... **“brine process is natural and prohibited for use except as a foliar spray to treat a physiological disorder associated with calcium uptake.”** In considering crop materials as part of the ongoing sunset process, the Crops Committee reviews the previous NOSB work pertaining to the material as well as any new information that has become available since the original board decision.

Brine process calcium chloride would be classified as a mined substance of high solubility as mentioned in §205.203(d)(3) and as such its use is subject to the conditions established on the National List of non-synthetic materials prohibited for crop production. The foundational principle for placing high solubility materials such as calcium chloride, potassium chloride, etc. on a prohibited non-synthetic materials list is spelled out in §205.203(d) – Soil fertility and crop nutrient management practice standard. “A producer may manage crop nutrients ... in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients...”. The current Crops Committee respects the intent of the earlier NOSB to annotate the prohibition on this material in such a way as to accomplish these nutrient management goals. Public comment on the present annotation has expressed several concerns:

- 1) It is overly prescriptive in its foliar spray use guideline. Modest application rates applied with the proper methods in irrigation water can supply calcium nutrient without significant soil or water contamination and with less salt burn to the crop foliage, particularly in sensitive vegetable and greenhouse crops.
- 2) The current annotation does not address the fact that chloride is an essential plant nutrient and can be deficient in some situations. In addition, some irrigation waters have almost no dissolved minerals (including chlorides and calcium) which can cause poor soil infiltration rates. Small amounts of calcium chloride added to irrigation water would be a very appropriate management choice to provide nutrients and improve the infiltration rate.
- 3) The limitations on calcium chloride use are much more restrictive than the other mined natural chloride materials allowed in organic farming. The potassium chloride annotation reads “unless derived from a mined source and applied in a manner that minimizes chloride accumulation in the soil”. Magnesium and sodium chloride, although high solubility mined substances, are not on the prohibited non-synthetic list at all. Some consistency is needed in how these materials are listed.

Further public comment suggested capturing the intent of the regulation in §205.203(d) and bringing consistency within §205.602 with the following annotation language:

Generic chloride – unless derived from a non-synthetic mined and/or brined source and applied in a manner that minimizes chloride accumulation in soils, sub-soils, surface waters or groundwater.

The Crops Committee acknowledges that annotations can not be changed during the sunset review process and can only be changed through the petition process.

**IV. Committee Recommendation:**

Recommendations based upon comments received-

The Crops Committee recommends that the following material be retained on §205.602 of the National List.

**(c) Calcium chloride**, brine process is natural and prohibited for use except as a foliar spray to treat a physiological disorder associated with calcium uptake.

Moved: Ellor      Second: Engelbert  
Committee vote: Yes: 5 No: 0 Absent: 1

**Board vote:**