

**National Organic Standards Board  
Crops Committee  
2013 Sunset Proposed Recommendation  
Calcium chloride**

**October 7, 2011**

**List: §205.602 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.

**Committee Summary:**

Calcium chloride is currently on the National List of non-synthetic materials prohibited for crop production with the following 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 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.

An updated Technical Report (TR) on this material was requested, but not received prior to consideration. Review was made of the 2001 TR, as well as the other steps taken, including the 2007 NOSB Sunset Recommendation (as adopted).

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 previously considered annotation for Calcium chloride expressed concerns regarding;

- 1) application rates applied with the proper methods in irrigation water which 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 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, and,

3) 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. 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.

It is worth recognizing that these comments still have merit, and that petitions are a viable strategy for change. Yet, the Crops Committee acknowledges that annotations cannot be changed during the sunset review process, and can only be changed through the petition process.

### **Committee Recommendation**

Considering the fact that potential overuse of this natural substance, as well as resultant subsoil, surface water and ground water contamination warrant continued limitation of use, the recommendation is:

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

### **Committee Vote**

Motion: Colehour Bondera Second: Barry Flamm

Yes: 6 No: 0 Absent: 1 Abstain: 0 Recuse: 0