

National Organic Standards Board
Crops Subcommittee Petitioned Material Discussion Document
Calcium Acetate
August 21, 2018

Summary of Petition for [Calcium acetate](#):

Calcium acetate is being petitioned for use as a plant micronutrient for the prevention of calcium deficiencies and as a product to help prevent sunscald. The petitioner notes that because calcium acetate is highly water soluble, it is immediately available for uptake by plants. Other forms of calcium may not become water soluble until exposed to soil microbes and/or acidic conditions. Lime, for instance, may take up to six months to become available for uptake by plants. Products that include calcium acetate coupled with less soluble forms of calcium could have an immediate impact and an "extended release" effect.

Calcium, in addition to being necessary for cell wall formation, also aids in the uptake of other micronutrients, producing healthier plants. Plants with strong cell walls produce fruits and vegetables with a longer shelf life and a greater resistance to pests. A deficit of calcium produces disease in many crops. Examples include hollow heart in potatoes and bitter pit in apples. Some plants, like peanuts and soybeans, produce fewer "pops" or empty spots in shells when grown with adequate calcium.

Calcium products such as gypsum, limestone, dolomite lime, and ground oyster shell flour can take up to six months to become available for uptake by crops. Gypsum and oyster shell flour frequently contain traces of heavy metals. Other calcium products, such as calcium chloride, must be applied in very small amounts when used as a foliar spray to avoid burning a crop. Calcium acetate does not have this issue or limitation. Calcium acetate can also reduce sunlight transmission and may be used over black plastic to reduce heat loading.

Calcium acetate is a calcium salt of acetic acid. It does occur naturally but is most often manufactured. Calcium acetate can be prepared by soaking calcium carbonate (found in eggshells or in common carbonate rocks, such as limestone or marble, or hydrated lime) in vinegar.

Questions:

- 1) Is another calcium material necessary for organic crop production?
- 2) Does this material have a unique mode of action that differentiates it from other calcium materials allowed for organic production?
- 3) Is there a need for a material to prevent sunscald in organic production?

Motion to accept the discussion document on calcium acetate

Motion by: Steve Ela

Seconded by: Eric Schwartz

Yes: 7 No: 0 Abstain: 0 Absent: 1 Recuse: 0

Approved by Steve Ela, Subcommittee Chair to transmit to NOSB, August 21, 2018