

Chlorine

Summary

Chlorine is a toxic chemical that should be eliminated from organic production as much as possible.

Change the Crops Committee recommendation to read:

Chlorine materials (calcium hypochlorite; chlorine dioxide; and sodium hypochlorite)—Residual chlorine levels in the water in direct crop contact or as water from cleaning irrigation systems applied to soil ***or for disinfecting and sanitizing equipment or tools*** should not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act.

Make the Handling Committee recommendation on food contact use consistent with the Crops Committee use.

More Details

There has been a confused history of guidance concerning the meaning of the current regulations concerning the use of chlorine compounds in organic production, and the background statement of the recommendation being considered at this meeting seem to have clarified that confusion.

Chlorine is the basis of a huge number of toxic chemicals. Chlorine exists in nature as the chloride ion—as in salt water and table salt. Chlorine in the form chlorine gas is produced by running an electrical current through salt water. Chlorine gas is very reactive and poisonous, and it is this reactivity that makes it useful as a disinfectant.

In its reactive forms—chlorine gas, hypochlorite, etc.--chlorine may react with organic matter to form organochlorines, which are generally persistent, toxic, carcinogenic, and often endocrine disruptors. Sometimes the reactions are purposeful, to create pesticides, solvents, pharmaceuticals, and other synthetic chemical products. Other times unintentional byproducts, such as chloroform or carbon tetrachloride, result from processes such as disinfection.

The fact that use of chlorine—as opposed to chloride—is so universally associated with the production of persistent toxic chemicals has led environmental groups such as Greenpeace to seek a ban on chlorine-based chemicals. We believe that organic production should, for the same reasons, avoid the use of chlorine as much as possible. The allowance of chlorine in the rule reflects the fact that many organic growers—like most of the rest of us—depend on water sources that have been treated with chlorine. We don't believe that organic producers should have to filter chlorine out of the water they use for irrigating, cleaning equipment, washing vegetables, or cleaning food-contact surfaces. But they should not be adding more chlorine.

There are practices and products that make all uses of chlorine unnecessary. Those applicable to the uses considered by this committee and considered by the TR include: nonsynthetic materials such as acetic acid, vinegar, citric acid, and other naturally occurring acids; steam cleaning.

Therefore, we support the recommendation of the Crops Committee insofar as it limits use of water containing chlorine to that which is allowed under the Safe Drinking Water Act. We do not support the use of chlorine for disinfecting and sanitizing tools and equipment. Change the Crops Committee recommendation to read:

Chlorine materials (calcium hypochlorite; chlorine dioxide; and sodium hypochlorite)—
Residual chlorine levels in the water in direct crop contact or as water from cleaning irrigation systems applied to soil ***or for disinfecting and sanitizing equipment or tools*** should not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act.

We are concerned that the recommendation of the Handling Committee, would allow higher concentrations of chlorine in contact with food seems to be in conflict with the Crops Committee recommendation, and we cannot find justification for the discrepancy in the documentation of the committees. We therefore suggest that the Handling Committee recommendation be changed to be consistent with the limitation on chlorine concentrations in direct crop or food contact in the Crops Committee recommendation.

The Handling Committee also recommends allowing higher levels in contact with food surfaces. Since chlorine compounds have so many adverse impacts in the production-to-disposal life of the materials, we ask that the NOSB form a working group to determine how organic production can move beyond reliance on chlorine-based materials. These are uses that the TR does not report as being allowed in the organic production in the EEC, which indicates that the allowance of chlorine materials for these uses may not be in conformance with international practice.

For More Information and To Submit Comments

More information about chlorine materials can be found in the Crops Committee and Handling Committee sections of the [NOSB meeting packet](#), and under the listing for chlorine in the [NOP Petitioned Substances Database](#).

You may submit comments at the [Regulations.gov website](#). Please identify your comments with “CC, HC: chlorine materials”. You will have 20 minutes to type comments of 2000 *characters* or less, or you may upload a file. You may see a list of all comments that have been submitted on all proposals [here](#).