



BEYOND PESTICIDES

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Ms. Michelle Arsenault
National Organic Standards Board
USDA-AMS-NOP
1400 Independence Ave. SW.,
Room 2648-S, Mail Stop 0268
Washington, DC 20250-0268

Re. CS: 2017 Sunset: Ash from manure burning, arsenic, lead salts, potassium chloride, sodium fluoaluminate, strychnine, and tobacco dust (nicotine sulfate).

These comments to the National Organic Standards Board (NOSB) on its Spring 2015 agenda are submitted on behalf of Beyond Pesticides. Founded in 1981 as a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to bridge the interests of consumers, farmers and farmworkers, Beyond Pesticides advances improved protections from pesticides and alternative pest management strategies that reduce or eliminate a reliance on pesticides. Our membership and network span the 50 states and groups around the world.

The NOSB and NOP must support the listings of materials on §205.602 with a solid rationale, based on OFPA and science.

Although some of the materials on §602 are prohibited from use in organic production directly by the Organic Foods Production Act (OFPA), and others, it appears, are listed based on common sense, good government requires that regulations be backed up by reference to legal criteria. Therefore, we were pleased to see that several of the materials on §602 have been supported by checklists. We hope that before the next meeting at which the NOSB votes on relisting these materials on the National List, such justification is produced for the remaining materials.

Current Listings

§205.602 Nonsynthetic substances prohibited for use in organic crop production.

The following nonsynthetic substances may not be used in organic crop production:

- (a) Ash from manure burning.
- (b) Arsenic.
- (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.
- (d) Lead salts.
- (e) Potassium chloride—unless derived from a mined source and applied in a manner that minimizes chloride accumulation in the soil.
- (f) Sodium fluoaluminate (mined).

(g) Sodium nitrate—unless use is restricted to no more than 20% of the crop's total nitrogen requirement; use in spirulina production is unrestricted until October 21, 2005.

(h) Strychnine.

(i) Tobacco dust (nicotine sulfate).

Ash from manure burning

Ash from manure burning should remain on §602. Burning a material that is central to maintaining soil fertility and tith in organic soils would be incompatible with organic production systems.

Arsenic

The use of arsenic in organic production is specifically prohibited by OFPA. It is persistent, toxic to humans and other animals, is taken up by plants, and has a wide range of toxic effects. It is unnecessary in organic production. It should remain on §602.

Lead salts

OFPA specifically prohibits the use of lead salts in organic crop production. They are no longer registered for pesticidal use by EPA. They are highly toxic and persistent, bioconcentrate in plants and animals, and cause a number of toxic effects, including the impairment of neurological development in children. It should remain on §602.

Potassium chloride

Potassium chloride is an extremely soluble form of potassium. The main environmental and compatibility concern is related to excess use, which can result in chloride accumulation in the soil and inhibit nitrification. Therefore, the NOSB recommended that soil testing may be required to verify the absence of chloride build-up. Potassium chloride should remain on §602.

Sodium fluoaluminate (cryolite)

Cryolite is harmful to human health and the environment. It is a nonselective pesticide, and there are alternative materials and management practices.

Cryolite is harmful to human health and the environment.

It is applied as a dust, so movement off the target plant is likely.¹ Natural cryolite is made into product by crushing rocks, making powder that is likely to move in air, water, and soil. Workers engaged in crushing and refining cryolite were found to have silicosis, a sclerotic affection of bones, ligaments, and muscular attachments, probably due to the deposition of calcium-fluoride in the bones, corrosion of the mucous lining of the stomach, and a pronounced oligemia, found in 11 of the 30 workers in whom pathological changes in the bones were observed.² Dental fluorosis is also a problem.³ Cryolite breaks down to sodium, fluoride, and aluminum, which may lead to increases of fluoride and aluminum in the soil.⁴

¹ Cryolite RED. <http://www.epa.gov/pesticides/reregistration/REDS/0087.pdf>.

² PF Moller and SV Gudjonsson, 1932. Massive Fluorosis of Bones and Ligaments, *Acta Radiologica*, 13:269-294.

³ http://www.icca-chem.org/Portal/SafetySummarySheets/634593802744407699_PSS%20Cryolite_V01.pdf.

⁴ Cryolite RED. <http://www.epa.gov/pesticides/reregistration/REDS/0087.pdf>.

Exposure to fluoride is in addition to that from fluoridated water, which is already excessive for some people.⁵

Cryolite is unnecessary in organic production.

Cryolite is used on many conventional fruit and vegetable crops, and there are alternative substances available that do not pose so many hazards.

Cryolite is incompatible with organic production systems.

Cryolite is a non-selective insecticide. Little is known about its non-target effects, but use of a broadly-toxic material is not compatible with organic methods. It does not “promote plant and animal health by enhancing soil physical, chemical, or biological properties.”

Conclusion

Sodium fluoaluminate (cryolite) should remain on §602.

Strychnine

Strychnine is highly acutely toxic and has been found to be responsible for secondary poisonings. People affected by strychnine poisoning are not likely to survive. There are numerous alternative materials and practices.

Strychnine cause harm to humans and the environment.

Since strychnine baits are inserted underground, the ability to collect unused bait is small, increasing the likelihood of nontarget poisoning. Strychnine has resulted in secondary poisoning in pets that ate poisoned rodents.⁶ Although all animals are susceptible, birds are more often affected. For example, species poisoned by strychnine in Michigan are rock dove, cardinal, Canada goose, dark-eyed junco, mallard duck, common grackle, blue jay and house sparrow.⁷ People who are severely affected by strychnine poisoning are not likely to survive.⁸

Strychnine is not necessary.

There are many less dangerous materials and methods. They include: trapping, supporting predator habitat, flooding, ecologically-based rodent management,⁹ habitat modification,¹⁰ and encouraging predators.¹¹

⁵ <http://www.fluoridealert.org/wp-content/uploads/10facts.pdf>.

⁶ National Pesticide Information Center, Rodenticides Topic Fact Sheet. <http://npic.orst.edu/factsheets/rodenticides.pdf> Accessed 6/23/2014.

⁷ Michigan Dept. of Natural Resources, Strychnine Poisoning. https://www.michigan.gov/dnr/0,4570,7-153-10370_12150_12220-27278--,00.html Accessed 6/23/2014.

⁸ Center for Disease Control and Prevention, 2013. Facts About Strychnine. <http://www.bt.cdc.gov/agent/strychnine/basics/facts.asp> Accessed 6/23/2014.

⁹ Propane TR TR lines 340-367.

¹⁰ <http://environmentalchemistry.com/yogi/environmental/200704prairiedogcontrollethal.html>.
<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7438.html>.
<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7433.html><http://environmentalchemistry.com/yogi/environmental/200706prairiedogreconciliation.html>.

¹¹ <http://people.uleth.ca/~michener/predators.htm>.
<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7433.html>.

Strychnine is incompatible with organic practices.

Strychnine is highly toxic to humans and other species, causes secondary poisoning, and has many nontarget effects. It does not “promote plant and animal health by enhancing soil physical, chemical, or biological properties.”

Conclusion

Strychnine should remain on §602.

Tobacco dust (nicotine sulfate)

Tobacco dust/nicotine sulfate is very toxic. The production of tobacco requires high inputs of fertilizer and pesticides and results in water pollution. In 2008, EPA received a request from the registrant, to cancel the registration of the last nicotine pesticide registered in the United States, and since January 1, 2014, nicotine sulfate has not been available for sale.¹²

Tobacco production causes environmental damage.

Tobacco production requires the use of a large amount of pesticides. Tobacco companies recommend up to 16 separate applications of pesticides just in the period between planting the seeds in greenhouses and transplanting the young plants to the field. These pesticides as well as fertilizers, end up in the soil, the waterway and the food chain.¹³ Tobacco leaches nutrients, such as phosphorus, nitrogen and potassium, from the soil at a high rate.¹⁴

Tobacco dust/nicotine sulfate is not necessary or compatible with organic and sustainable agriculture.

Nicotine sulfate is an extremely toxic pesticide that is no longer available in the United States.

Conclusion

Although tobacco dust/nicotine sulfate is no longer available for sale in the United States, it should remain on §602 to discourage use of homemade tobacco dust.

Thank you for your consideration of these comments.

Sincerely,



Terry Shistar, Ph.D.
Board of Directors

<http://yardener.com/YardenersPlantProblemSolver/DealingWithPestAnimals/Gophers/SolutionsForGophers/DispatchTheGopher>.

¹² http://en.wikipedia.org/wiki/Nicotine_sulfate#Use_as_an_insecticide Accessed 6/23/2014.

¹³ http://en.wikipedia.org/wiki/Cultivation_of_tobacco Accessed 6/23/2014.

¹⁴ http://en.wikipedia.org/wiki/Cultivation_of_tobacco Accessed 6/23/2014.