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

Date: 6-3-06

Subject: Sunset Review - 205.601 Synthetic substances allowed for use in organic crop production

Chair: Kevin O'Rell

Recommendation

The NOSB hereby recommends to the NOP the following:

Rulemaking Action:	_XXXXXX_
Guidance Statement:	_____
Other:	_____

Statement of the Recommendation (including Recount of Vote)**:**
See attached Recommendation for Renewal of Streptomycin and Tetracycline as Synthetic substances allowed for use in organic crop production on 205.601, category use (i) as plant disease control.

NOSB Vote:
Moved: Gerald Davis **Second: Nancy Ostiguy**
Yes – 7
No – 4
Abstain – 1
Absent – 2

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

NOSB Sunset Material Vote

Response by the NOP:

NOSB- Crops Committee
Streptomycin and Tetracycline - Sunset Recommendation
Final NOSB Recommendation 4/20/2006

I. List: 205.601 Synthetic substances allowed for use in organic crop production

II. Category Use
(i): As plant disease control.

III. Committee Summary: Several commentors were proponents of keeping Streptomycin and Tetracycline for fire blight control in apples and pears on the National List. Upon subsequent Crops Committee contacts with these commentors as well as several organic pear growers and crop consultants in Washington and California, it is clear that there is extensive support for the continuation of these materials on the list. The fire blight disease is deadly to pear trees and all of the growers and consultants surveyed had tested the alternative materials listed in the TAP report. All had the opinion that the alternate materials mentioned were very much below the efficacy of Streptomycin and Tetracycline and did not prevent fire blight to a high enough degree to keep trees from succumbing to the disease. One commentor noted streptomycin and oxytetracycline for removal from the list, mentioning two of the alternative materials alluded to above (Blight Ban and Serenade) as viable control options. Some commenters objected to any synthetics being used in organic production.

Reviewing the Technical Evaluation Reports for these two materials shows that both materials are created by Streptomyces soil bacteria through natural processes and are produced in commercial quantities through a fermentation process with subsequent chemical processes to isolate and purify the substance produced by the bacteria. Tetracycline (oxytetracycline calcium) is presumed to undergo a chemical change from the natural oxytetracycline to calcium oxytetracycline. It was unclear to the reviewer if streptomycin undergoes a chemical change during the manufacturing process. Assuming that the manufacturers comply with applicable water and air regulations, it is unlikely that environmental contamination will result from the fermentation processes. When applied as directed for fire blight control in apples and pears, both materials are unlikely to contaminate the environment. If used in accordance with NOP regulations for the intended purpose, it is unlikely that either material would cause detrimental chemical interaction with other substances used in organic farming or cause any adverse chemical or biological interactions in the agro-ecosystem. Both materials have the potential to be toxic to some microorganisms in the soil, although one study on streptomycin showed that commercial rates of application to soil did not have significant effect on total bacterial and fungal numbers in the short term(several weeks). Streptomycin is known to be toxic to algae and the EPA requires pesticide products containing it to be labeled as potentially hazardous to aquatic plants and not to be applied to water or in areas where surface water is present.

EPA determined that both materials are practically non-toxic to birds, freshwater invertebrates, and honeybees. Streptomycin is slightly toxic to fish, oxytetracycline is not. Both carry the lowest level rating for acute toxicity (EPA Category IV). Decades of use of these materials in humans has shown many beneficial effects mixed with some negative side effects (skin sensitivity to sunlight, allergicity, etc.). Neither material seems to be persistent or concentrated in the environment as used in these two crops. EPA concluded that streptomycin and oxytetracycline pose no significant dietary exposure risk due to lack of detectable residues and long preharvest intervals on pears (30 days) and apples (50 days). In actual practice in Washington state, the usual interval between the last application (bloom time) of tetracycline calcium on organic pears and harvest is 90 + days depending on the variety.
A wholly natural substitute product mentioned in the report is noted above along with one other that was noted by a commentor. Other already allowed substances that could be substituted are peracetic acid and copper materials such as Bordeaux mix. The tendency for fruit scarring and cracking from copper use on apples and pears (especially Bosc) is well documented and avoided by pre-bloom use only, whereas the bloom period is the usual time of fireblight infection. No known crop labeled formulation of peracetic acid is available at this time.

IV. Committee Recommendation:

Recommendations based upon comments received- 205.601(i)

The Crops Committee recommends renewal of the following substances to the use category:

(i) As plant disease control.
(10) Streptomycin, for fireblight control in apples and pears only.
(11) Tetracycline (oxytetracycline calcium complex), for fireblight control only.

Moved: Kevin Engelbert Second: Jeff Moyer
Committee vote: 2-1 2 absent (Delgado, Ostiguy)

NOSB vote:
Moved: Gerald Davis Second: Nancy Ostiguy
Yes – 7
No – 4
Abstain – 1
Absent – 2