

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

Date: March 2, 2005

Subject: Addition of Ferric Phosphate to National List

Chair: Jim Riddle

Recommendation

The NOSB hereby recommends to the NOP the following:

Rulemaking Action: X

Guidance Statement: _____

Other: _____

Statement of the Recommendation (including Recount of Vote):

Add Ferric Phosphate to section 205.601 H of the National List.

Vote: 10 yes, 0 no, 2 abstain, 2 absent

Rational Supporting Recommendation (including consistency with OFPA and NOP):

The material is consistent with OFPA and meets the three criteria – minimal impact on humans and environment, no non-synthetic substance is available for mollusk control, and the material is compatible and consistent with organic production practices.

Response by the NOP:

DRAFT

EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

Category 1. Adverse impacts on humans or the environment? Substance Ferric Phosphate

Question	Yes	No	N/A ¹	Documentation (TAP; petition; regulatory agency; other)
1. Are there adverse effects on environment from manufacture, use, or disposal? [§205.600 b.2]			X	
2. Is there environmental contamination during manufacture, use, misuse, or disposal? [§6518 m.3]	X			Accidental release to water can result in the death of mollusks; it is registered for use by EPA on snails and slugs but cannot be used near water (TAP, pg. 3)
3. Is the substance harmful to the environment? [§6517c(1)(A)(i);6517(c)(2)(A)i]		X		Ferric phosphate occurs naturally in soils; it is GRAS (TAP pg. 5 & 6). Only a problem if it comes in contact with water.
4. Does the substance contain List 1, 2, or 3 inerts? [§6517 c (1)(B)(ii); 205.601(m)2]		X		No inert ingredients were identified by the U.S. EPA's office of Pesticide Programs (TAP, pg 6).
5. Is there potential for detrimental chemical interaction with other materials used [§6518 m.1]		X		No potential for detrimental chemical interactions are expected with other materials used. (TAP pg 6 & 7). Ferric phosphate has low water solubility. (TAP pg 17 & 21)
6. Are there adverse biological and chemical interactions in agro-ecosystem? [§6518 m.5]		X		No potential for detrimental chemical interactions are expected within an agroecosystem (TAP pg 6 & 7). The material should not be used near ponds, streams, etc.
7. Are there detrimental physiological effects on soil organisms, crops, or livestock? [§6518 m.5]		X		Ferric phosphate is abundant in soil; it is not expected to cause detrimental physiological effects to soil organisms, crops or livestock. (TAP pg 7)
8. Is there a toxic or other adverse action of the material or its breakdown products? [§6518 m.2]		X		No toxic or other adverse actions are expected. Under conditions of extreme temperatures (>50C, which does not occur 'naturally') does the material release toxic fumes. (TAP pg. 4 & 7)
9. Is there undesirable persistence or concentration of the material or breakdown products in environment? [§6518 m.2]		X		The amount of ferric phosphate used to control snails and slugs is miniscule compared to the amount of this material naturally in soil (TAP pg. 7). Breakdown products are used by other soil organisms resulting in a very low persistence (TAP pg 22).
10. Is there any harmful effect on human health? [§6517 c (1)(A)(i) ; 6517 c(2)(A)i; §6518 m.4]		X		Ferric phosphate is a GRAS substance (TAP pg 6 & 22). Only under conditions of excessive ferric phosphate exposure are there any harmful impacts to humans. LD50 is >5000mg/kg. (TAP pg 7) The LD50 of NaCl is 4000 mg/kg. (Ostiguy)
11. Is there an adverse effect on human health as defined by applicable Federal regulations? [205.600 b.3]			X	
12. Is the substance GRAS when used according to FDA's good manufacturing practices? [§205.600 b.5]			X	
13. Does the substance contain residues of heavy metals or other contaminants in excess of FDA tolerances? [§205.600b.5]			X	

¹If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

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Category 2. Is the Substance Essential for Organic Production? Substance Ferric Phosphate

Question	Yes	No	N/A ¹	Documentation (TAP; petition; regulatory agency; other)
1. Is there a natural source of the substance? [§205.600 b.1]			X	
2. Is there an organic substitute? [§205.600 b.1]			X	
3. Is the substance essential for handling of organically produced agricultural products? [§205.600 b.6]			X	
4. Is there a wholly natural substitute product? [§6517 c (1)(A)(ii)]		X		The other options, including biological, barrier, repellents, physical and cultural control, are effective but all have their limitations (TAP pg9). These options are not effective in most circumstances
5. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]			X	
6. Are there any alternative substances? [§6518 m.6]		X		The other options, including biological, barrier, repellents, physical and cultural control, are effective but all have their limitations (TAP pg9). These options are not effective in most circumstances
7. Is there another practice that would make the substance unnecessary? [§6518 m.6]		X		The other options, including biological, barrier, repellents, physical and cultural control, are effective but all have their limitations (TAP pg9). These options are not effective in most circumstances

¹If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

DRAFT

Category 3. Is the substance compatible with organic production practices? Substance Ferric Phosphate

Question	Yes	No	N/A ¹	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance compatible with organic handling? [§205.600 b.2]			X	
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]	X			“When used as a molluscicide, ferric phosphate is consistent with organic farming and handling. Ferric phosphate is not harmful to humans, animals, plants, non-target insects, or soil microbes. (It) is a stable compound that does not persist or form undesirable products in the environment under normal conditions of use and storage.” (TAP pg. 10)
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]	X			When used as a molluscicide, ferric phosphate is compatible with a system of sustainable agriculture. “Ferric phosphate is not harmful to humans, animals, plants, non-target insects, or soil microbes. (It) is a stable compound that does not persist or form undesirable products in the environment under normal conditions of use and storage. (TAP pg. 10)
4. Is the nutritional quality of the food maintained with the substance? [§205.600 b.3]			X	
5. Is the primary use as a preservative? [§205.600 b.4]			X	
6. Is the primary use to recreate or improve flavors, colors, textures, or nutritive values lost in processing (except when required by law, e.g., vitamin D in milk)? [205.600 b.4]			X	
7. Is the substance used in production, and does it contain an active synthetic ingredient in the following categories:				
a. copper and sulfur compounds		X		
b. toxins derived from bacteria;		X		
c. pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals?	X			The material is a mineral.
d. livestock parasiticides and medicines?		X		
e. production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleaners?		X		

¹If the substance under review is for crops or livestock production, all of the questions from 205.600 (b) are N/A—not applicable.

NOSB RECOMMENDED DECISION

Form NOPLIST2. Full Board Transmittal to NOP

For NOSB Meeting: March 2, 2005

Substance: Ferric Phosphate

A. Evaluation Criteria (Documentation attached; committee recommendation attached)

- | | Criteria Satisfied? |
|-------------------------------------|---|
| 1. Impact on humans and environment | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below) |
| 2. Availability criteria | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below) |
| 3. Compatibility & consistency | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below) |

B. Substance fails criteria?

Criteria category: _____

Comments: _____

C. Proposed Annotation: _____

Basis for annotation: _____

To meet criteria above: _____ Criteria: _____

Other regulatory criteria: _____ Citation: _____

D. Final Board Action & Vote: Add to ferric phosphate to section 205.601 H

Motion by: Nancy Ostiguy Second: Rose Koenig

Vote:
 Yes: 10
 No: 0
 Abstain: 2
 Absent: 2

Agricultural		Nonagricultural		Crops	<input checked="" type="checkbox"/>
Synthetic	<input checked="" type="checkbox"/>	Not synthetic		Livestock	
Allowed ¹	<input checked="" type="checkbox"/>	Prohibited ²		Handling	
No restriction	<input checked="" type="checkbox"/>	Deferred ⁴		Rejected ³	

1—substance voted to be added as "allowed" on National List

Annotation: _____

2—substance to be added to "prohibited" paragraph of National List

Describe why a prohibited substance: _____

3—substance was rejected by vote for amending National List

Describe why material was rejected: _____

4—substance was recommended to be deferred

Describe why deferred; if any follow-up is needed. If follow-up needed, who conducts follow-up. _____

E. Approved by NOSB Chair to transmit to NOP:

 Jim Riddle, NOSB Chair

March 2, 2005
 Date

F. NOP Action: Include in FR to amend National List:

Return to NOSB Reason: _____

 Richard H. Mathews, Program Manager

 Date

NOSB COMMITTEE RECOMMENDATION

Form NOPLIST1. Committee Transmittal to NOSB

For NOSB Meeting: <u>March 2, 2005</u>	Substance: <u>Ferric Phosphate</u>																								
Committee: Crops <input checked="" type="checkbox"/> Livestock <input type="checkbox"/> Handling <input type="checkbox"/>																									
<p>A. Evaluation Criteria (Documentation attached; committee recommendation attached)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;"></td> <td style="text-align: right;">Criteria Satisfied?</td> </tr> <tr> <td>1. Impact on humans and environment</td> <td style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below)</td> </tr> <tr> <td>2. Availability criteria</td> <td style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below)</td> </tr> <tr> <td>3. Compatibility & consistency</td> <td style="text-align: right;">Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below)</td> </tr> </table>			Criteria Satisfied?	1. Impact on humans and environment	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below)	2. Availability criteria	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below)	3. Compatibility & consistency	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see B below)																
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<p>B. Substance fails criteria?</p> <p>Criteria category: <u>2.</u></p> <p>Comments: There are other materials and methods available for controlling snails and slugs</p>	<p>C. Proposed Annotation: _____</p> <p>Basis for annotation:</p> <p>To meet criteria above: ____ Criteria: _____</p> <p>Other regulatory criteria: ____ Citation: _____</p>																								
<p>D. Recommended Committee Action & Vote: Add to ferric phosphate to section 205.601 H</p> <p>Motion by: <u>Rose Koenig</u> Seconded: <u>Nancy Ostiguy</u></p> <p><u>Vote:</u></p> <table style="border-collapse: collapse; margin-left: 20px;"> <tr> <td style="padding: 2px;">Agricultural</td> <td style="width: 20px;"></td> <td style="padding: 2px;">Nonagricultural</td> <td style="width: 20px;"></td> <td style="padding: 2px;">Crops</td> <td style="width: 20px; text-align: center;">X</td> </tr> <tr> <td style="padding: 2px;">Synthetic</td> <td style="text-align: center;">X</td> <td style="padding: 2px;">Not synthetic</td> <td></td> <td style="padding: 2px;">Livestock</td> <td></td> </tr> <tr> <td style="padding: 2px;">Allowed¹</td> <td style="text-align: center;">X</td> <td style="padding: 2px;">Prohibited²</td> <td></td> <td style="padding: 2px;">Handling</td> <td></td> </tr> <tr> <td style="padding: 2px;">No restriction</td> <td style="text-align: center;">X</td> <td style="padding: 2px;">Deferred⁴</td> <td></td> <td style="padding: 2px;">Rejected³</td> <td style="text-align: center;">X</td> </tr> </table> <p>Yes: <u>5</u></p> <p>No: <u>0</u></p> <p>Abstain: <u>0</u></p> <p style="margin-left: 40px;">1—substance voted to be added as “allowed” on National List</p> <p>Annotation: _____</p> <p style="margin-left: 40px;">2—substance to be added to “prohibited” paragraph of National List</p> <p>Describe why a prohibited substance: _____</p> <p style="margin-left: 40px;">3—substance was rejected by vote for amending National List</p> <p>Describe why material was rejected: _____</p> <p style="margin-left: 40px;">4—substance was recommended to be deferred</p> <p>Describe why deferred; if follow-up is needed. If follow-up needed, who will follow up</p> <p>_____</p> <p>_____</p>		Agricultural		Nonagricultural		Crops	X	Synthetic	X	Not synthetic		Livestock		Allowed ¹	X	Prohibited ²		Handling		No restriction	X	Deferred ⁴		Rejected ³	X
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