

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

**Date:** August 17, 2005

**Subject:** Sucrose octanoate esters

**Chair:** Jim Riddle  
(sign)

**Recommendation**

The NOSB hereby recommends to the NOP the following:

Rulemaking Action:   X  

Guidance Statement:           

Other:           

**Statement of the Recommendation (including Recount of Vote):**

The NOSB recommends that sucrose octanoate esters be added to 205.601 for use in organic crop production, with no annotation, and to 205.603 for use in organic livestock production, with no annotation.

**Board vote – August 16, 2005**

For use in crop production – 13 yes, 0 no, 1 absent

For use in livestock production – 13 yes, 0 no, 1 absent

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

Rationale provided in text of recommendation below.

**Response by the NOP:**

*Updated 2/25/05*

EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

**Category 1. Adverse impacts on humans or the environment?**

Substance Sucrose Octanoate Esters

Question	Yes	No	N/A <sup>1</sup>	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		
3. Is the substance harmful to the environment? [§6517c(1)(A)(i);6517(c)(2)(A)i]		X		Esters biodegrade rapidly; are not toxic to mammals and other target organisms; the amount used will not “substantially increase amount of these esters in environment.” TAP pg 5, lines 234-241.
4. Does the substance contain List 1, 2, or 3 inerts? [§6517 c (1)(B)(ii); 205.601(m)2]			X	
5. Is there potential for detrimental chemical interaction with other materials used? [§6518 m.1]		X		SOE does not persist; unlikely to interact with other materials used organic production,. TAP pg 5, lines 243-248.
6. Are there adverse biological and chemical interactions in agro-ecosystem? [§6518 m.5]		X		Non toxic to honey bees and many beneficial insects. Not phytotoxicity to many crops; biodegrades quickly TAP pg 6, lines 253-276.
7. Are there detrimental physiological effects on soil organisms, crops, or livestock? [§6518 m.5]		X		No specific data exist on soil organisms but based upon available data, including the rate of decomposition, no adverse impacts are expected. TAP pg. 6 lines 266-276.
8. Is there a toxic or other adverse action of the material or its breakdown products? [§6518 m.2]		X		Sucrose, fatty acids carbon dioxide and water are the breakdown products. None are toxic. TAP pg 6, lines 281-282.
9. Is there undesirable persistence or concentration of the material or breakdown products in environment?[§6518 m.2]		X		SOEs degrade rapidly and do not resist or accumulate in the environment. TAP pg 6, line 287.
10. Is there any harmful effect on human health? [§6517 c (1)(A)(i) ; 6517 c(2)(A)i; §6518 m.4]		X		No subchronic, chronic, immune, endocrine issues have been identified. EPA estimates ADI for humans is 2.82 lbs for a 176 lb person. An ocular risk exists but is unlikely if product is used according to label. TAP pg 6, lines 292-300. Used in foods. TAP pg 2, lines 65-67 & pg 3, lines 99-109.
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? [§205.600 b.5]			X	

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

**Category 2. Is the Substance Essential for Organic Production?** Substance Sucrose Octanoate Esters

Question	Yes	No	N/A <sup>1</sup>	Documentation (TAP; petition; regulatory agency; other)
1. Is there a natural source of the substance? [§205.600 b.1]			<b>X</b>	
2. Is there an organic substitute? [§205.600 b.1]			<b>X</b>	
3. Is the substance essential for handling of organically produced agricultural products? [§205.600 b.6]			<b>X</b>	
4. Is there a wholly natural substitute product? [§6517 c (1)(A)(ii)]	<b>X</b>			Other materials, e.g., nonsynthetic oil are alternatives for some or all of the targeted crops. TAP pgs 7, lines 309-335. Limited efficacy and a need for alternatives exist.
5. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]			<b>X</b>	
6. Is there any alternative substances? [§6518 m.6]	<b>X</b>			Other approved materials, e.g. soaps, are alternatives for some or all of the targeted crops. TAP pgs 7, lines 340-344 Limited efficacy and a need for alternatives exist.
7. Is there another practice that would make the substance unnecessary? [§6518 m.6]	<b>X</b>			Numerous practices are available to reduce the need for this material. These practices would have to be implemented prior use of this material. This material would provide farmers with a means to control insects when other practices have failed. TAP pg 8, lines 351-355.

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

**Category 3. Is the substance compatible with organic production practices? Substance SOE**

Question	Yes	No	N/A <sup>1</sup>	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance compatible with organic handling? [§205.600 b.2]			<b>X</b>	
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]	<b>X</b>			This material degrades rapidly, has very low toxicity, its breakdown products are non-toxic. It has minimal to no environmental risk. TAP pg 5, lines 230-248. Is an EPA registered biopesticide TPA pg 2, line 48.
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]	<b>X</b>			This material degrades rapidly, has very low toxicity, its breakdown products are non-toxic. It has minimal to no environmental risk. TAP pg 5, lines 230-248 The material increases the long-term viability of organic farms by providing a means to control insect damage with IPM and other tactics fail. This material is consistent with other allowed materials.
4. Is the nutritional quality of the food maintained with the substance? [§205.600 b.3]			<b>X</b>	
5. Is the primary use as a preservative? [§205.600 b.4]			<b>X</b>	
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]			<b>X</b>	
7. Is the substance used in production, and does it contain an active synthetic ingredient in the following categories:				
a. copper and sulfur compounds;		<b>X</b>		
b. toxins derived from bacteria;		<b>X</b>		
c. pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals?	<b>X</b>			This material works as a soap. TAP pg 1, lines 77-78
d. livestock parasiticides and medicines?		<b>X</b>		
e. production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleaners?		<b>X</b>		

<sup>1</sup>If 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: <u>August 2005</u>	Substance: <u>Sucrose Octanoate Esters</u>																														
<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 &amp; 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)																						
	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)																														
<p>B. Substance fails criteria?</p> <p>Criteria category: _____</p> <p>Comments: _____</p>	<p>C. Proposed Annotation: _____</p> <p>_____</p> <p>Basis for annotation:</p> <p>To meet criteria above: _____ Criteria: _____</p> <p>Other regulatory criteria: _____ Citation: _____</p>																														
<p>D. Final Board Action &amp; Vote: Motion by: <u>Nancy Ostiguy</u> Second: <u>Andrea Caroe</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;"> <p><u>Vote:</u></p> <p>Yes: <u>13</u></p> <p>No: <u>0</u></p> <p>Abstain: _____</p> <p>Absent: <u>1</u></p> </td> <td style="width: 80%; padding: 5px; border: 1px solid black;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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;"></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Synthetic</td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Not synthetic</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Livestock</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Allowed<sup>1</sup></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Prohibited<sup>2</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Handling</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">No restriction</td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Deferred<sup>4</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Rejected<sup>3</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </table> </td> </tr> </table> <p style="margin-left: 100px;">1—substance voted to be added as “allowed” on National List</p> <p>Annotation: _____</p> <p style="margin-left: 100px;">2—substance to be added to “prohibited” paragraph of National List</p> <p>Describe why a prohibited substance: _____</p> <p style="margin-left: 100px;">3—substance was rejected by vote for amending National List</p> <p>Describe why material was rejected: _____</p> <p style="margin-left: 100px;">4—substance was recommended to be deferred</p> <p>Describe why deferred; if any follow-up is needed. If follow-up needed, who conducts follow-up. _____</p>		<p><u>Vote:</u></p> <p>Yes: <u>13</u></p> <p>No: <u>0</u></p> <p>Abstain: _____</p> <p>Absent: <u>1</u></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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;"></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Synthetic</td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Not synthetic</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Livestock</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Allowed<sup>1</sup></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Prohibited<sup>2</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Handling</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">No restriction</td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Deferred<sup>4</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Rejected<sup>3</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </table>	Agricultural		Nonagricultural		Crops		<input checked="" type="checkbox"/>	Synthetic	<input checked="" type="checkbox"/>	Not synthetic		Livestock		<input checked="" type="checkbox"/>	Allowed <sup>1</sup>	<input checked="" type="checkbox"/>	Prohibited <sup>2</sup>		Handling			No restriction	<input checked="" type="checkbox"/>	Deferred <sup>4</sup>		Rejected <sup>3</sup>		
<p><u>Vote:</u></p> <p>Yes: <u>13</u></p> <p>No: <u>0</u></p> <p>Abstain: _____</p> <p>Absent: <u>1</u></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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;"></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Synthetic</td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Not synthetic</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Livestock</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Allowed<sup>1</sup></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Prohibited<sup>2</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Handling</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">No restriction</td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Deferred<sup>4</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Rejected<sup>3</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </table>	Agricultural		Nonagricultural		Crops		<input checked="" type="checkbox"/>	Synthetic	<input checked="" type="checkbox"/>	Not synthetic		Livestock		<input checked="" type="checkbox"/>	Allowed <sup>1</sup>	<input checked="" type="checkbox"/>	Prohibited <sup>2</sup>		Handling			No restriction	<input checked="" type="checkbox"/>	Deferred <sup>4</sup>		Rejected <sup>3</sup>				
Agricultural		Nonagricultural		Crops		<input checked="" type="checkbox"/>																									
Synthetic	<input checked="" type="checkbox"/>	Not synthetic		Livestock		<input checked="" type="checkbox"/>																									
Allowed <sup>1</sup>	<input checked="" type="checkbox"/>	Prohibited <sup>2</sup>		Handling																											
No restriction	<input checked="" type="checkbox"/>	Deferred <sup>4</sup>		Rejected <sup>3</sup>																											
<p>E. Approved by NOSB Chair to transmit to NOP:</p> <p>_____</p> <p>Dave Carter, NOSB Chair <span style="float: right;">_____</span></p> <p style="margin-left: 100px;">Date</p>																															
<p>F. NOP Action: Include in FR to amend National List: <input type="checkbox"/></p> <p>Return to NOSB <input type="checkbox"/> Reason: _____</p> <p>_____</p> <p>Richard H. Mathews, Program Manager <span style="float: right;">_____</span></p> <p style="margin-left: 100px;">Date</p>																															

# NOSB COMMITTEE RECOMMENDATION

Form NOPLIST1. Committee Transmittal to NOSB

For NOSB Meeting: <u>August 2005</u>	Substance: <u>Sucrose Octanoate Esters</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 &amp; 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)																								
	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)																																
<p>B. Substance fails criteria?</p> <p>Criteria category: _____</p> <p>Comments: _____</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 &amp; Vote: Motion by: <u>Rose</u></p> <p style="text-align: center;">Seconded: <u>Gerry</u></p> <p>Sucrose Octanoate Esters [(CAS NO. 42922-74-7 (monoactanoate), 58064-47-7 (diactanoate))] is synthetic and allowed as an insecticidal soap [205.601 (?)].</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><u>Vote:</u></td> <td style="width: 15%;"></td> <td style="width: 15%; border: 1px solid black;">Agricultural</td> <td style="width: 15%; border: 1px solid black;"></td> <td style="width: 15%; border: 1px solid black;">Nonagricultural</td> <td style="width: 15%; border: 1px solid black;"></td> <td style="width: 15%; border: 1px solid black;">Crops</td> <td style="width: 15%; border: 1px solid black;"></td> </tr> <tr> <td>Yes: <u>3</u></td> <td></td> <td style="border: 1px solid black;">Synthetic</td> <td style="border: 1px solid black;"><input checked="" type="checkbox"/></td> <td style="border: 1px solid black;">Not synthetic</td> <td style="border: 1px solid black;"></td> <td style="border: 1px solid black;">Livestock</td> <td style="border: 1px solid black;"><input checked="" type="checkbox"/></td> </tr> <tr> <td>No: <u>0</u></td> <td></td> <td style="border: 1px solid black;">Allowed<sup>1</sup></td> <td style="border: 1px solid black;"><input checked="" type="checkbox"/></td> <td style="border: 1px solid black;">Prohibited<sup>2</sup></td> <td style="border: 1px solid black;"></td> <td style="border: 1px solid black;">Handling</td> <td style="border: 1px solid black;"></td> </tr> <tr> <td>Abstain: <u>1</u></td> <td></td> <td style="border: 1px solid black;">No restriction</td> <td style="border: 1px solid black;"></td> <td style="border: 1px solid black;">Deferred<sup>4</sup></td> <td style="border: 1px solid black;"></td> <td style="border: 1px solid black;">Rejected<sup>3</sup></td> <td style="border: 1px solid black;"></td> </tr> </table> <p style="text-align: center; margin-top: 5px;">1—substance voted to be added as “allowed” on National List</p> <p>Annotation: _____</p> <p style="text-align: center; margin-top: 5px;">2—substance to be added to “prohibited” paragraph of National List</p> <p>Describe why a prohibited substance: _____</p> <p style="text-align: center; margin-top: 5px;">3—substance was rejected by vote for amending National List</p> <p>Describe why material was rejected: _____</p> <p style="text-align: center; margin-top: 5px;">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>		<u>Vote:</u>		Agricultural		Nonagricultural		Crops		Yes: <u>3</u>		Synthetic	<input checked="" type="checkbox"/>	Not synthetic		Livestock	<input checked="" type="checkbox"/>	No: <u>0</u>		Allowed <sup>1</sup>	<input checked="" type="checkbox"/>	Prohibited <sup>2</sup>		Handling		Abstain: <u>1</u>		No restriction		Deferred <sup>4</sup>		Rejected <sup>3</sup>	
<u>Vote:</u>		Agricultural		Nonagricultural		Crops																											
Yes: <u>3</u>		Synthetic	<input checked="" type="checkbox"/>	Not synthetic		Livestock	<input checked="" type="checkbox"/>																										
No: <u>0</u>		Allowed <sup>1</sup>	<input checked="" type="checkbox"/>	Prohibited <sup>2</sup>		Handling																											
Abstain: <u>1</u>		No restriction		Deferred <sup>4</sup>		Rejected <sup>3</sup>																											
<p>E. Approved by Committee Chair to transmit to NOSB:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border-bottom: 1px solid black;">Committee Chair</td> <td style="width: 50%; border-bottom: 1px solid black;">Date</td> </tr> </table>		Committee Chair	Date																														
Committee Chair	Date																																