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

Date: <u>11-</u>	-25-06
Subject: Sødiu	m Lauryl Sulfate – Crops.
Chair:	Kevin O'Rell
	Recommendation .
Rulema	by recommends to the NOP the following: king Action: ce Statement: XXX
The Crops Com	e Recommendation (including Recount of Vote): mittee recommends that the NOSB reject a petitioners request for the addition of Sulfate for use in Crop Production.
NOSB Vote: Yes - 14 No - 0 Abstain - 0 Absent - 0	Motion: Gerald Davis Second: Dan Giacomini
This substance v 3 question #2). T	orting Recommendation (including consistency with OFPA and NOP): vould violate current regulations (see attached criteria evaluation forms Category There are other materials currently available that could be used, which are organic production.
Response by the	e NOP:

NOSB COMMITTEE RECOMMENDATION Form NOPLIST1. Committee Transmittal to NOSB

For NOSB Meeting:		Sodium Lauryl	l Sulfate						
Committee: Crops X Livestock Handling									
A. Evaluation Criteria (Documentation attached; committee recommendation attached)									
Criteria Satisfied? 1. Impact on humans and environment Yes X No (see B below)									
Availability criteri Compatibility & c			(see B below)						
B. Substance fails criteria?									
Criteria category: 2 & 3		Basis fo	or annotation			anning and a principle and a p			
Comments:		To mee	et criteria abc	ove:	Criteria:	ununnuu ammaan amnaunava			
		Other re	egulatory crit	teria:	Citation:				
D. Recommended Commi	ttee Action & Vote								
						OURSEASTING THE STATE OF THE ST			
Vote:	Agricultural		onagricultura	al	Crops	X			
Yes:5	Synthetic Allowed ¹		ot synthetic rohibited ²		Livestock				
No: _0	No restriction		onibilea eferred4		Handling Rejected ^a	X			
Abstain: 0	enanamanamanamanamanamanamanamanamanaman	namman kamanan	orraction transfer and in the contraction of the co	11111111111111111111111111111111111111	менноменных менянский политиванных и	amananana E			
Annotation:	-substance vote	d to be a	added as "al	lowed" on	National List				
Describe why a prohibited s	substance to be substance:		to "prohibite						
3substance was rejected by vote for amending National List Describe why material was rejected: Substance would violate current regulations (see Category 3 question 2). Other materials are currently available which are consistent with organic production (See Category 2, question 4, 6, & 7) 4-substance was recommended to be deferred Describe why deferred; if follow-up is needed. If follow-up needed, who will follow up									
E. Approved by Committee Chair to transmit to NOSB:									
Committee Chair Date									

EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

Category 1. Adverse impacts on humans or the environment? Substance Sodium Lauryl Sulfate

Category 1. Adverse impacts on l	umans	or th	e enviror	ment? Substance Sodium Lauryl Sulfate
Question	Yes	No	N/A	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	10-1	SLS is unlikely to cause environmental contamination. It is rapidly degraded. (TAP lines 144-141) Misuse of material could lead to environmental contamination.
3. Is the substance harmful to the environment? [§6517c(1)(A)(i);6517(c)(2)(A)i]	x			SLS is unlikely to harm to environment because it rapidly biodegrades and has a low bioaccumulation potential. SLS can be toxic to aquatic organisms (TAP lines 179-196
4. Does the substance contain List 1, 2, or 3 inerts? [§6517 c (1)(B)(ii); 205.601(m)2]		Х		
5. Is there potential for detrimental chemical interaction with other materials used? [§6518 m.1]		X		SLS should not react with other materials used because it is a soap and is not reactive. (TAP lines 27-45)
6. Are there adverse biological and chemical interactions in agroecosystem? [§6518 m.5]	X			SLS disrupts cellular structure, leading to dehydration and death; it can kill insects, beneficial soil organisms, and plants. If used to excess adverse biological interactions are possible. TAP lines 86-96
7. Are there detrimental physiological effects on soil organisms, crops, or livestock? [§6518 m.5]	Х			SLS is slightly to moderately toxic in aquatic ecosystems. SLS stimulates algal growth at low concentrations but at high concentrations it inhibits growth. Improper use could "adversely affect the survival and function of soil organisms". (TAP lines, 225-244)
8. Is there a toxic or other adverse action of the material or its breakdown products? [§6518 m.2]	X			SLS is slightly to moderately toxic in aquatic ecosystems. (TAP lines, 225-244) SLS disrupts cellular structure, leading to dehydration and death; it can kill insects, beneficial soil organisms, and plants. (TAP lines 86-96) If used properly, there would be no toxic or other adverse impacts from the use of SLS or its breakdown products. (TAP lines, 205-268)
9. Is there undesirable persistence or concentration of the material or breakdown products in environment?[§6518 m.2]		х	The state of the s	SLS is biodegraded and its breakdown products are carbon dioxide and saturated fatty acids. (TAP lines 157-158 & 184-187)
10. Is there any harmful effect on human health? [§6517 c (1)(A)(i) ; 6517 c(2)(A)i; §6518 m.4]		X		SLS is a food additive and is GRAS. (TAP lines 73-77) Occupational exposure requires safety goggles, rubber gloves and proper ventilation because SLS is an eye, skin, respiratory and gastrointestinal tract irritant. It can cause nausea, vomiting and diarrhea. (TAP lines 285-293)
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	

¹If 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 Sodium Lauryl Sulfate

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]			Х	
2. Is there an organic substitute? [§205.600 b.1]			Х	
3. Is the substance essential for handling of organically produced agricultural products? [§205.600 b.6]	ii.		х	
4. Is there a wholly natural substitute product? [§6517 c (1)(A)(ii)]	X			Corn gluten prevents sprouting seeds from developing normal roots. "Vinegar (acetic acid) is also considered to be a natural herbicide." "List 4A minimal Risk inerts" such as citric acid, safflower oil could be used. (TAP, lines 321-330)
5. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]			X	
6. Is there any alternative substances? [§6518 m.6]	X			List 4A minimal Risk inerts" such as citric acid, safflower oil could be used. (TAP, lines 328-330)
7. Is there another practice that would make the substance unnecessary? [§6518 m.6]	X			Crop rotation, use of allelopathic plants, "nurse" crops, and intercropping can also be used. (TAP, lines 355-372) Cultivation can replace intended petitioned use in crops.

 $^{^{1}}$ 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 Sodium Lauryl Sulfate

Question	Yes	No	N/A [‡]	Documentation (TAP: petition; regulatory agency: other)
1. Is the substance compatible with organic handling? [§205.600 b.2]			X	tree perion, regularly agoncy, outer)
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]	The state of the s	X		The intended use is beyond the intent of the regulation because the material would be used within crops. "Herbicides, soap-based – for use in farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops. (Section 205.206 of the regulation; 205.601(b)(1) and as per original NOSB recommendation September 1996)
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]	x	X	The state of the s	It is compatible for sustainable agriculture with maintenance per the regulation but not sustainable for crop production.
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	ten er bilder bin men nyer gen din men m	
c. pheromones, soaps, horticultural oils, fish emulsions, treated seed, vitamins and minerals?	Х			SLS is a soap.
d. livestock parasiticides and medicines?		Х		
e. production aids including netting, tree wraps and seals, insect traps, sticky barriers, row covers, and equipment cleaners?		Х		

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

EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

Category 1. Adverse impacts on humans or the environment? Substance Sodium Lauryl Sulfate

Category 1. Adverse impacts on i	HEIHH	3 W. LU	C CHYII O	nment? Substance Sodium Lauryl Sulfate
1. Are there adverse effects on	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
environment from manufacture,			X	
use, or disposal? [§205.600 b.2]				* *
2. Is there environmental				SLS is unlikely to cause environmental contamination. It is
contamination during		X		rapidly degraded. (TAP lines 144-141) Misuse of material
manufacture, use, misuse, or				could lead to environmental contamination.
disposal? [§6518 m.3]				
3. Is the substance harmful to the				SLS is unlikely to harm to environment because it rapidly
environment?	X			biodegrades and has a low bioaccumulation potential. SLS
[§6517c(1)(A)(i);6517(c)(2)(A)i]				can be toxic to aquatic organisms (TAP lines 179-196
4. Does the substance contain List				
1, 2, or 3 inerts?		X		
[§6517 c (1)(B)(ii); 205.601(m)2]		ļ		
5. Is there potential for				SLS should not react with other materials used because it is
detrimental chemical interaction		X		a soap and is not reactive. (TAP lines 27-45)
with other materials used?				
[§6518 m.1]			ļ	
6. Are there adverse biological				SLS disrupts cellular structure, leading to dehydration and
and chemical interactions in agro-	X			death; it can kill insects, beneficial soil organisms, and
ecosystem? [§6518 m.5]				plants. If used to excess adverse biological interactions are
				possible. TAP lines 86-96
7. Are there detrimental				SLS is slightly to moderately toxic in aquatic ecosystems.
physiological effects on soil	X			SLS stimulates algal growth at low concentrations but at
organisms, crops, or livestock?				high concentrations it inhibits growth. Improper use could
[§6518 m.5]				"adversely affect the survival and function of soil
r3 F 41 1 1	ļ			organisms". (TAP lines, 225-244)
8. Is there a toxic or other adverse	X			SLS is slightly to moderately toxic in aquatic ecosystems.
action of the material or its breakdown products?	A			(TAP lines, 225-244) SLS disrupts cellular structure, leading to dehydration and death; it can kill insects,
[§6518 m.2]				beneficial soil organisms, and plants. (TAP lines 86-96)
[802 to nitz]				If used properly, there would be no toxic or other adverse
				impacts from the use of SLS or its breakdown products.
				(TAP lines, 205-268)
9. Is there undesirable persistence				SLS is biodegraded and its breakdown products are carbon
or concentration of the material or		X		dioxide and saturated fatty acids. (TAP lines 157-158 &
breakdown products in				184-187)
environment?[§6518 m.2]				
10. Is there any harmful effect on				SLS is a food additive and is GRAS. (TAP lines 73-77)
human health?		X		Occupational exposure requires safety goggles, rubber
$[\S6517 c (1)(A)(i) ; 6517 c(2)(A)i;$				gloves and proper ventilation because SLS is an eye, skin,
§6518 m.4]				respiratory and gastrointestinal tract irritant. It can cause
				nausea, vomiting and diarrhea. (TAP lines 285-293)
11. Is there an adverse effect on				
human health as defined by			X	
applicable Federal regulations?				
[205.600 b.3]				
12. Is the substance GRAS when			37	
used according to FDA's good			X	
manufacturing practices?				
[§205.600 b.5] 13. Does the substance contain				
residues of heavy metals or other			х	
contaminants in excess of FDA			Δ.	
tolerances? [§205.600 b.5]				
~~x~xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx				

¹If 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 Sodium Lauryl Sulfate

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)]	х		Corn gluten prevents sprouting seeds from developing normal roots. "Vinegar (acetic acid) is also considered to be a natural herbicide." "List 4A minimal Risk inerts" such as citric acid, safflower oil could be used. (TAP, lines 321-330)
5. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]		X	
6. Is there any alternative substances? [§6518 m.6]	X		List 4A minimal Risk inerts" such as citric acid, safflower oil could be used. (TAP, lines 328-330)
7. Is there another practice that would make the substance unnecessary? [§6518 m.6]	Х		Crop rotation, use of allelopathic plants, "nurse" crops, and intercropping can also be used. (TAP, lines 355-372) Cultivation can replace intended petitioned use in crops.

 $^{^{1}}$ 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 Sodium Lauryl Sulfate

1. Is the substance compatible				
with organic handling?		1	Х	
[\$205.600 b.2]				
2. Is the substance consistent				The intended use is beyond the intent of the regulation
with organic farming and		X		because the material would be used within crops.
handling? [§6517 c (1)(A)(iii);				"Herbicides, soap-based - for use in farmstead maintenance
6517 c (2)(A)(ii)]				(roadways, ditches, right of ways, building perimeters) and
				ornamental crops. (Section 205.206 of the regulation;
				205.601(b)(1) and as per original NOSB recommendation
~				September 1996)
3. Is the substance compatible				It is compatible for sustainable agriculture with
with a system of sustainable	X	X		maintenance per the regulation but not sustainable for crop
agriculture? [§6518 m.7]				production.
4. Is the nutritional quality of the			***	
food maintained with the			X	
substance? [§205.600 b.3]			X	· · · · · · · · · · · · · · · · · · ·
5. Is the primary use as a preservative? [§205.600 b.4]			А	
6. Is the primary use to recreate				
or improve flavors, colors,				
textures, or nutritive values lost			X	
in processing (except when			.СЪ.	
required by law, e.g., vitamin D				
in milk)? [205.600 b.4]				
7. Is the substance used in	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
production, and does it contain		X		
an active synthetic ingredient in				
the following categories:				
a. copper and sulfur compounds;				
	·····	ļ		
b. toxins derived from bacteria;		X		
c. pheromones, soaps,				SLS is a soap.
horticultural oils, fish emulsions,	X			Dad to a congr.
treated seed, vitamins and				
minerals?				
d. livestock parasiticides and				
medicines?		X		
			** * * * ** ** ** * * * * * * * * * * *	
e. production aids including				
netting, tree wraps and seals,		X		
insect traps, sticky barriers, row				
covers, and equipment cleaners?				

 $^{^{1}}$ 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 COMMITTEE RECOMMENDATION

Form NOPLIST1. Committee Transmittal to NOSB

For NOSB Meeting: Substance: Sodium Lauryl Sulfate									
A. Evaluation Criteria (Documentation attached; committee recommendation attached)									
Criteria Satisfied? 1. Impact on humans and environment Yes X No (see B be 2. Availability criteria Yes No X (see B be 3. Compatibility & consistency Yes No X (see B be							B below)		
B. Substance fails criteria	C. Proposed Annotation:								
Criteria category: 2 & 3		Bas	is for annotatio	n:					
Comments:		Tor	neet criteria ab	ove:	_ Criteria: _				
		Oth	er regulatory cr	riteria:	Citation:_				
D. Recommended Comm	D. Recommended Committee Action & Vote: Motion by: Nancy Seconded: Rigo								
<u>Vote</u> :	Agricultural	51111d)1411114	Nonagricultu		Crops	Х			
Yes: <u>5</u>	Synthetic	X	Not synthetic		Livestock				
No: Q	Allowed ¹		Prohibited ²		Handling				
Abstain: <u>0</u>	No restriction	rivincaliili	Deferred4		Rejected ³	Х			
Annotation:	1—substance vote			allowed" on	National List				
Describe why a prohibited	2—substance to t substance:								
3—substance was rejected by vote for amending National List Describe why material was rejected: Substance would violate current regulations (see Category 3 question 2). Other materials are currently available which are consistent with organic production (See Category 2, question 4, 6, & 7) 4-substance was recommended to be deferred Describe why deferred; if follow-up is needed. If follow-up needed, who will follow up up									
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