

**National Organic Standards Board  
Handling Committee  
Petition Proposal  
*Citrus hystrix* leaves and fruit**

**March 31, 2012**

**Introduction**

A petition has been received to add the leaves and fruit of *Citrus hystrix* to §205.606- Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.” The species is also known by several common names including kieffer lime, kaffir lime, and makrut lime.

**Background**

*Citrus hystrix* leaves and fruit are traditional ingredients in Lao and Thai cuisine/curries. The ingredient is known for its “bumpy” skin and for imparting a unique intense flavor and aroma in foods (particularly curries) due to its high concentration of essential oils. *Citrus hystrix* is not a common crop in the United States; and is limited in its potential to be cultivated in that there a plant quarantine exists from the USDA due to citrus greening disease (Asian citrus psyllid) and the threat of spreading this debilitating plant disease throughout the country. Citrus greening disease is not limited to *Citrus hystrix* and it may be spread to other varieties of citrus. Due to this threat of disease, and the relatively unknown status of the ingredient in cuisines most common in the United States, this plant and its products are currently not well known or propagated.

**Relevant areas in the Rule**

§ 205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”

**Discussion**

Searches of the NOP database and two major organic certifiers’ online databases (QAI) and directories (CCOF) have yielded exceedingly few suppliers for *Citrus hystrix* fruit or its products. The NOP database was the only source that identified a supplier (two distinct organic certificates but one farm name) that has these items listed in the NOP database. Given the limited supply availability, and the threat of spreading the area afflicted by citrus greening disease, there appears to be little likelihood of procuring organic *Citrus hystrix* leaves and fruit in the immediate future in any significant quantity. With this knowledge, and the considerations of commercial availability as defined in under §205.2 (appropriate form, quality, quantity) it seems that *Citrus hystrix* is not commercially available for organic producers in the quantity that is required and should be listed on §205.606.

**Evaluation Criteria**

(Applicability noted for each category; Documentation attached)  
“B” below)

**Criteria Satisfied? (see**

- |  |       |                             |                              |
|--|-------|-----------------------------|------------------------------|
| 1. Impact on Humans and Environment  | x Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Essential & Availability Criteria   | x Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Compatibility & Consistency   | x Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Commercial Supply is Fragile or Potentially Unavailable as Organic (only for § 205.606) | x Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Substance Fails Criteria Category: [ ] Comments:**

**Proposed Annotation (if any):**

**Basis for annotation:**  To meet criteria above  Other regulatory criteria  Citation

Notes:

**Recommended Committee Action & Vote**, including classification recommendation (state actual motion):

**Classification Motion:** Motion to determine substance as non-synthetic.

Motion by: John Foster                      Seconded by: Harold Austin

Yes: 5    No: 0    Absent: 1    Abstain: 0    Recuse: 0

**Listing Motion:** Motion to add *Citrus hystrix* leaves and fruit

to §205.606- Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”

Motion by: John Foster                      Seconded by: Joe Dickson

Yes: 5    No: 0    Absent: 1    Abstain: 0    Recuse: 0

<b>Crops</b>	<input type="checkbox"/>	<b>Agricultural</b>	<input type="checkbox"/>	<b>Allowed<sup>1</sup></b>	<b>x</b>
<b>Livestock</b>	<input type="checkbox"/>	<b>Non-synthetic</b>	<b>x</b>	<b>Prohibited<sup>2</sup></b>	<input type="checkbox"/>
<b>Handling</b>	<b>x</b>	<b>Synthetic</b>	<input type="checkbox"/>	<b>Rejected<sup>3</sup></b>	<input type="checkbox"/>
<b>No restriction</b>	<input type="checkbox"/>	<b>Commercial unavailable as organic</b>	<b>x</b>	<b>Deferred<sup>4</sup></b>	<input type="checkbox"/>

<sup>1</sup>Substance voted to be added as “allowed” on National List to § 205. with Annotation (if any):

<sup>2</sup>Substance to be added as “prohibited” on National List to § 205. with Annotation (if any):

Describe why a prohibited substance:

<sup>3</sup>Substance was rejected by vote for amending National List to § 205. . Describe why material was rejected:

<sup>4</sup>Substance was recommended to be deferred because

If follow-up needed, who will follow up:

**Approved by Committee Chair to Transmit to NOSB**

**John Foster, Committee Chair**

**3/31/12**

**NOSB Evaluation Criteria for Substances Added To the National List**

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

**Substance:** *Citrus hystrix* leaves and fruit

<b>Question</b>	<b>Yes</b>	<b>No</b>	<b>N/A<sup>1</sup></b>	<b>Documentation (TAP; petition; regulatory agency; other)</b>
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 and biodiversity?		x		

[§6517c(1)(A)(i);6517(c)(2)(A)i]				
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		
6. Are there adverse biological and chemical interactions in agro-ecosystem? [§6518 m.5]		x		
7. Are there detrimental physiological effects on soil organisms, crops, or livestock? [§6518 m.5]		x		
8. Is there a toxic or other adverse action of the material or its breakdown products? [§6518 m.2]		x		
9. Is there undesirable persistence or concentration of the material or breakdown products in environment? [§6518 m.2]		x		
10. Is there any harmful effect on human health? [§6517 c (1)(A)(i); 6517 c(2)(A)i; §6518 m.4]		x		
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.

## NOSB Evaluation Criteria for Substances Added To the National List

### Category 2. Substance Essential for Organic Production?

Substance: *Citrus hystrix* leaves and fruit

Question	Yes	No	N/A <sup>1</sup>	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance formulated or manufactured by a chemical process? [6502 (21)]		x		
2. Is the substance formulated or manufactured by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral, sources? [6502 (21)]		x		
3. Is the substance created by naturally occurring biological processes? [6502 (21)]	x			
4. Is there a natural source of the substance? [§205.600 b.1]	x			
5. Is there an organic substitute? [§205.600 b.1]	x			But limited and uncertain supply
6. Is the substance essential for handling of organically produced agricultural products? [§205.600 b.6]	x			For those foods needing the profile the ingredient imparts
7. Is there a wholly natural substitute product? [§6517 c (1)(A)(ii)]			x	
8. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]	x			
9. Is there any alternative substances? [§6518 m.6]		x		
10. Is there another practice that would make the substance unnecessary? [§6518 m.6]		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.

## NOSB Evaluation Criteria for Substances Added To the National List

### Category 3. Substance compatible with organic production practices?

Substance: *Citrus hystrix* leaves and fruit

Question	Y e s	No	N/A <sup>1</sup>	Documentation (TAP; petition; regulatory agency; other)
1. Is the substance compatible with organic handling? [§205.600 b.2]	x			Petition
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]	x			
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]			x	
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:			x	
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	
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	

<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 Evaluation Criteria for Substances Added To the National List

**Category 4. Is the commercial supply of an agricultural substance as organic, fragile or potentially unavailable?** [§6610, 6518, 6519, 205.2, 205.105 (d), 205.600 (c) 205.2, 205.105 (d), 205.600 (c)]

**Substance:** *Citrus hystrix* leaves and fruit

Question	Yes	No	N/A <sup>1</sup>	Documentation (TAP; petition; regulatory agency; other)
1. <u>Is the comparative description provided</u> as to why the non-organic form of the material /substance is necessary for use in organic handling?	x			Petition
2. Does the current and historical industry information, research, or evidence provided explain how or why the material /substance cannot be obtained organically in the appropriate <b>form</b> to fulfill an essential function in a system of organic handling?			x	
3. Does the current and historical industry information, research, or evidence provided explain how or why the material /substance cannot be obtained organically in the appropriate <b>quality</b> to fulfill an essential function in a system of organic handling?	x			
4. Does the current and historical industry information, research, or evidence provided explain how or why the material /substance cannot be obtained organically in the appropriate <b>quantity</b> to fulfill an essential function in a system of organic handling?	x			
5. Does the industry information provided on material / substance non-availability as organic, include ( but not limited to) the following:	x			
a. Regions of production (including factors such as climate and number of regions);				
b. Number of suppliers and amount produced;	x			
c. Current and historical supplies related to weather events such as hurricanes, floods, and droughts that may temporarily halt production or destroy crops or supplies;		x		
d. Trade-related issues such as evidence of hoarding, war, trade	x			

barriers, or civil unrest that may temporarily restrict supplies; or				
e. Are there other issues which may present a challenge to a consistent supply?	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.