

## NOSB COMMITTEE RECOMMENDATION

Form NOPLIST1. Committee Transmittal to NOSB

For NOSB Meeting: Fall 2012, Savannah, GA	Substance: Odorized propane																								
Committee: Crops <input checked="" type="checkbox"/> Livestock <input type="checkbox"/> Handling <input type="checkbox"/> Petition is for: addition of odorized propane on the National List § 205.601.																									
<b>A. Evaluation Criteria</b> (Applicability noted for each category; Documentation attached) <span style="float: right;"><b>Criteria Satisfied? (see B below)</b></span>																									
1. Impact on Humans and Environment	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>																								
2. Essential & Availability Criteria	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>																								
3. Compatibility & Consistency	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>																								
4. Commercial Supply is Fragile or Potentially Unavailable as Organic (only for 606)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>																								
<b>B. Substance Fails Criteria Category:</b> 2 Comments: Majority of CC members believe adequate alternatives exist and questioned the materials efficacy.																									
<b>C. Proposed Annotation (if any):</b> _____ Basis for annotation: To meet criteria above: _____ Other regulatory criteria: _____ Citation: _____																									
<b>D. Recommended Committee Action &amp; Vote (State Actual Motion):</b> To amend the National List, Synthetic substances allowed for use in organic crop production, § 205.601(g)(3) – Rodenticides, to include odorized propane as petitioned. <i>Motion by: John Foster Seconded: Tina Ellor Yes: 3 No: 4 Absent: _____ Abstain: _____</i>																									
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Crops</td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Agricultural</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Allowed<sup>1</sup></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">Livestock</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Non-Synthetic</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Prohibited<sup>2</sup></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">Handling</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Synthetic</td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;">Rejected<sup>3</sup></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">No restriction</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Commercially Un-Available as Organic<sup>1</sup></td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Deferred<sup>4</sup></td> <td style="padding: 2px;"></td> </tr> </table>		Crops	<input checked="" type="checkbox"/>	Agricultural		Allowed <sup>1</sup>		Livestock		Non-Synthetic		Prohibited <sup>2</sup>		Handling		Synthetic	<input checked="" type="checkbox"/>	Rejected <sup>3</sup>	<input checked="" type="checkbox"/>	No restriction		Commercially Un-Available as Organic <sup>1</sup>		Deferred <sup>4</sup>	
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1) Substance voted to be added as "allowed" on National List to § 205. _____ with Annotation (if any) _____ _____																									
2) Substance to be added as "prohibited" on National List to § 205. _____ with Annotation (if any) _____ _____ Describe why a prohibited substance: _____ _____																									
3) Substance was rejected by vote for amending National List to § 205.601. Describe why material was rejected: Majority of CC members believe adequate alternatives exist and did not believe the material to be effective.																									
4) Substance was recommended to be deferred because _____ If follow-up needed, who will follow up _____																									
<b>E. Approved by Committee Chair to transmit to NOSB:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>John Foster</b>            Committee Chair         </div> <div style="width: 45%; text-align: right;"> <b>10/7/11</b>            Date         </div> </div>																									

## EVALUATION CRITERIA FOR SUBSTANCES ADDED TO THE NATIONAL LIST

**Category 1. Adverse impacts on humans or the environment?**    Substance: Odorized Propane

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	x		Long term no, short term yes, and then when misused or mishandled. TR 250
3. Is the substance harmful to the environment? [§6517c(1)(A)(i);6517(c)(2)(A)i]		x		See #2 above.
4. Does the substance contain List 1, 2, or 3 inerts? [§6517 c (1) (B)(ii); 205.601(m)2]			x	Given the EPA's reclassification of inerts.
5. Is there potential for detrimental chemical interaction with other materials used? [§6518 m.1]		x		TR 265. Other than flammability with oxygen, no interactions between propane and other common substances used in agriculture were identified.
6. Are there adverse biological and chemical interactions in agro- ecosystem? [§6518 m.5]	x			TR 276. These are highly localized and not persistent.
7. Are there detrimental physiological effects on soil organisms, crops, or livestock? [§6518 m.5]	x			TR 276. These are highly localized and not persistent.
8. Is there a toxic or other adverse action of the material or its breakdown products? [§6518 m.2]		x		TR 276. These are highly localized and not persistent.
9. Is there undesirable persistence or concentration of the material or breakdown products in environment?[§6518 m.2]		x		TR 276. These are highly localized and not persistent.
10. Is there any harmful effect on human health? [§6517 c (1)(A) (i) ; 6517 c(2)(A)]; §6518 m.4]		x		Not when used as directed. TR 276. These are highly localized and not persistent.
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 Odorized propane

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]			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		
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			However none of them have acceptable availability, applicability, functionality or efficacy. TR 316 Pet. pg. 7
7. Is there another practice that would make the substance unnecessary? [§6518 m.6]	x			Tillage, flooding, long-term fallow, smoke bombs, biological controls, removal of food, CO2, anticoagulants, trapping TR 312, 338
8. Is the substance used in handling, not synthetic, but not organically produced? [§6517 c (1)(B)(iii)]			x	See #5 above
9. Is there any alternative substances? [§6518 m.6]	x			See #6 above
10. Is there another practice that would make the substance unnecessary? [§6518 m.6]	x			See #7 above

<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 Odorized propane

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]			X	
2. Is the substance consistent with organic farming and handling? [§6517 c (1)(A)(iii); 6517 c (2)(A)(ii)]	x			It is a physical control, consistent with preferred pest control methodologies; propane is currently in use as vertebrate deterrent and fuel for thermal weed control. The material was allowed by the majority of private certification standards pre-NOP and was allowed under the NOP until 2007, when the substance was summarily prohibited pending successful petition and inclusion on the National List. (Petition+TR)
3. Is the substance compatible with a system of sustainable agriculture? [§6518 m.7]	x			See above.
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.

**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: Odorized propane

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

**National Organic Standards Board  
Crops Committee  
Proposed Recommendation  
Odorized Propane**

**October 7, 2011**

**List: § 205.601 Synthetic substances allowed for use in organic crop production**

**(g) As rodenticides.**

California Certified Organic Farmers, Inc. (CCOF) is petitioning to have odorized propane used in devices for control of burrowing pest animals added to the National List § 205.601, Synthetics for use in crop production.

In its pure form, (C<sub>3</sub>H<sub>8</sub>) propane is an odorless gas, but may also be compressed into a liquid (often called LPG). It is a constituent of natural gas and of crude petroleum, is isolated from these sources by a “stabilization process” using fractional distillation under pressure, and is highly flammable. It is readily available for home, transportation, farm, commercial, and industrial uses. Propane is not currently listed as an allowed substance for organic crop production under 7 CFR § 205.601. However, heat methods (fueled with propane) are allowed to control weeds and propane is used to create above ground explosions to deter birds and other vertebrate pests from orchards, vineyards, and berry farms previous to and through harvest. It is a physical control, consistent with preferred pest control methodologies. Prior to NOP implementation, the substance was allowed by multiple private certification standards and was allowed under the NOP until 2007, when the substance was summarily prohibited unless and until successfully petitioned and included on the National List.

The propane is mixed with oxygen and is exploded underground, causing a rapid expansion of gases that leads to concussive force that kills burrowing pest animals, with accompanying suffocation from consuming all the oxygen in the tunnel. The mixture is approximately 2% propane to 98% compressed oxygen, and the mixture is injected into the burrow for up to one minute before it is ignited. The Crops Committee has received a new Technical Report on this material and this has been posted by the Program for the Crops Committee, NOSB, and public review.

The Committee discussed the placement of this material on § 205.601, noting this is somewhat atypical given that the material’s efficacy is accomplished by physical action, either as an agent of concussive force or as an agent of oxygen displacement, either of which are physical control methods in common IPM parlance. The Committee discussed the possibility of creating a new subsection, § 205.601(o) – Pest control production aids, consistent with an option identified in the TR, line 171. The intent with that listing would be to provide a place on the National List for synthetic substances which are used up in their application and not present after the fact, somewhat analogous to processing aids used on food handling. While propane itself as applied is not a rodenticide, the Committee discussed the merits of classifying it under § 205.601(g) - Rodenticides. One Committee member felt strongly that propane should not be identified as a rodenticide *per se*, but ultimately agreed in framing the recommendation to place the material under § 205.601(g) in the interests of collaboration and consensus and

recognized that in fact the intended use was to control, in the main, rodents. Standards in Canada, EU and Japan either a) allow or b) do not prohibit the use of propane in organic production systems.

The Committee noted there are legitimate concerns over collateral damage from this method on endangered species. The Crops Committee wishes to make it clear to all concerned that use of the propane in a manner that violates the Endangered Species Act is a federal crime; the presumably provides adequate disincentive for such misuse.

In discussions, some members thought that this material was preferable to chemical controls currently allowed for use in organic production since it leaves no residue and complies with the mandates of § 205.206 which require that physical or mechanical controls be attempted prior to use of chemical controls. Other members felt that its use was unnecessary given the alternatives available for use, with discussion as to the applicability, efficacy, and functionality of those alternative methods. Allowed alternative methods discussed included flooding with water, a vacuum, CO<sub>2</sub>, vitamin D<sub>3</sub> baits, smoke bombs, and several cultural practices listed under § 205.206(a). Some members also questioned the efficacy of propane for the petitioned use. There was again discussion about the utility of these practices across the wide range of crops, conditions and environments where propane had been used under pre-NOP private certification standards and under the NOP, until 2007 and whether that was an appropriate criterion on which to base a decision.

Another relevant discussion item was that propane is currently allowed in organic production as a physical control agent to kill weeds by heat and flame and is presently and widely used in many crops and conditions in that capacity. It is also used for fuel in so called “propane cannons” to generate loud explosions that deter wildlife from crops around harvest time, generally in and around perennial crops such as orchards, vineyards and cane berries. The Committee understands that both uses are allowed under the NOP as they are considered physical pest control methods.

The Committee recognized that if this material is included on the National List, an organic operator would still have to demonstrate that cultural practices (repellants, rotations, irrigation management, etc.) and non-synthetic physical practices (trapping, etc.) have been determined to be inadequate prior to using this management method on organic farms. In other words, the inclusion of propane on the National List would not affect the obligation to abide by § 205.206.

With those discussions had, the majority of the Crops Committee voted not to recommend odorized propane be included on the National List.

### **Committee Recommendation**

The Crops Committee voted on the recommendation for propane to be added to the National List. The motion was as follows: To amend the National List, Synthetic substances allowed for use in organic crop production, § 205.601(g)(3) – Rodenticides, to include odorized propane as petitioned.

**Committee Vote**

Motion: John Foster  
Yes: 3      No: 4

Second: Tina Ellor  
Abstain: 0    Absent: 0