



## The National Organic Program's Permitted Pest and Weed Management Practices

*Carlene A. Chase*

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### Crop pest, weed, and disease management practice standard

- ❖ Promotes a holistic approach to pest management.
- ❖ Discourages product substitution.
- ❖ Crop management practices must be used to limit buildup of and to manage crop pests, weeds, and diseases.
- ❖ Three levels of pest management.

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### Objectives

Students will be able to discuss:

1. The NOP's 3-tiered approach for pest management
2. Permitted practices for weed management
3. The Organic Materials Review Institute (OMRI) and the Washington State Department of Agriculture (WSDA) Organic Food Program

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### Level A – Design a System Resilient to Pests

1. Preventive measures
2. Crop rotation
3. Soil and crop nutrient management
4. Cultural practices that enhance crop health

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### Pertinent regulations

Subpart C - Organic Production and Handling Requirements

- ❖ § 205.206: Crop pest, weed, and disease management practice standard.

Subpart G – Administrative: The National List of Allowed and Prohibited Substances.

- ❖ § 205.601: Synthetic substances allowed for use in organic crop production.

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### Level B

Mechanical, physical and biological methods

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**Weed Management Practices – Level B**

1. Mulching with fully biodegradable materials.
2. Mowing.
3. Livestock grazing.
4. Hand weeding and mechanical cultivation.
5. Flame, heat, or electrical techniques.
6. Plastic or other synthetic mulches:
  - *Must be removed from the field at the end of the growing season.*

**Citric Acid Types**

- Active Ingredient: Citric Acid
- Vinegar included as an inert ingredient
- Alldown, Ground Force



**Level C**

**Biopesticides and National List Allowed Materials**

- Biological or botanical substance.
- Materials from the National List of Allowed and Prohibited Substances.
- *Document conditions for use in the organic system plan.*

**Vinegar as Active Ingredient**

**WEED PHARM**  
For Organic Production  
**WEED & GRASS KILLER**  
1 gal. Ready-to-Use

**A HORTICULTURAL BIOPESTICIDE**  
For immediate control of herbaceous broadleaf weeds and some grasses which, increased field crops, reduced erosion and non-persistent agricultural, forestland, right-of-way, and institutional land sites.

**Pharm Solutions, Inc.**  
3023 E. Sims Way, Suite 358  
Port Townsend, WA 98368  
www.pharmsolutions.com

**KEEP OUT OF REACH OF CHILDREN  
DANGER - PELIGRO**

Si usted no entiende, busque a alguien para que se le explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Registration No. 61306-1-61303  
EPA Establishment No. 80604-NC-001  
Batch Code: \_\_\_\_\_

**Active Ingredients by WT:**  
Citric Acid..... 20.0%  
Other Ingredients..... 79.9%

Total weight 100 gram weight by volume.

**FIRST AID:**  
If in eyes: Flush with water and flush with a weak vinegar solution of water to 1:20 dilution.  
Remove contact lenses, if present, after the first 15 minutes. Use caution during eye.  
Call a poison control center or doctor for further advice.

**IF ON SKIN OR CLOTHING:**  
Wash off contaminated clothing. Wash skin immediately with plenty of water for 15-20 minutes.  
Call a poison control center or doctor for further treatment advice.

**IF SWALLOWED:**  
Call a poison control center or doctor immediately for treatment advice.

**PRECAUTIONARY STATEMENTS**  
Hazards to Humans and Domestic Animals

**DANGER: Corrosive** - causes irreversible eye damage. Wear goggles or face shield when handling. Harmful if absorbed through skin. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists. Wash thoroughly with soap and water after handling. Wear personal protection equipment when handling and/or applying.

**Biological or Botanical Substances**

**Nonsynthetic Herbicides**

**Biological or Botanical Substances**

**Nonsynthetic herbicides**

Essential oil types:

Matran EC, Avenger AG and GreenMatch EX, Weed Zap



### Essential Oil Types

Matran EC, Avenger AG and GreenMatch EX, Weed Zap

- 50% clove leaf oil
- 55% d-limonene
- 50% lemon grass oil
- 45% clove oil
- 45% cinnamon oil



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### Corn Gluten Meal

- ❖ Byproduct of the corn wet-milling process.
- ❖ Potential as a natural preemergence herbicide.
- ❖ Inhibits root growth of germinating plants.
- ❖ Contains 10% nitrogen.



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### Medium-chain Fatty Acids

Active ingredients:

- ❖ 47% Caprylic acid
- ❖ 32% Capric acid



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### Allowed Synthetic Substances

- 1) Herbicides, soap-based—for use in farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops.

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### Organisms or their extracts

# OPPORTUNE™

Pre and Post-Emergent Herbicide

For the control of listed annual grasses, broadleaf and sedge weeds.

Active ingredient: Killed, non-viable *Streptomyces acidiscabies* strain RL-110<sup>1</sup> cells and spent fermentation media\* .....17%  
 Other ingredients: .....83%  
 Total: .....100%

\* Product contains not less than 4 mg/ml Thaxtomin A.

EPA Reg. No. 84059-12

EPA Est. No. 84059-MI-001

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### Soap-based Herbicides

- Racer Concentrate Non-Selective Herbicide
- Final-San-O
- Axxe



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### Allowed Synthetic Substances

- 1) Herbicides, soap-based—for use in farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops.
- 2) Mulches
  - i. Paper
  - ii. Plastic mulch
  - iii. *Biodegradable biobased mulch film*

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### Biodegradable Biobased Mulch Film

- Must be produced without organisms or feedstock derived from excluded methods.



- Mulch and pigment made from Mater-Bi corn starch.

<http://www.duboisag.com/en/biodegradable-and-compostable-black-mulch-film-bioplus.html>

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### Paper Mulches

- Newspaper or other recycled paper, without glossy or colored inks.



<https://www.weedguardplus.com/categories.php>

<http://agsyst.wsu.edu/MulchReport03.pdf>

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### Allowed Synthetic Substances

Use of such substances must not contribute to contamination of crops, soil, or water.

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### Plastic Mulches

- Plastic mulch and covers: petroleum-based but not polyvinyl chloride (PVC)



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### Figuring out what is allowed

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## Organic Materials Review Institute

[www.omri.org](http://www.omri.org)

- ❖ Nonprofit organization
- ❖ Reviews of substances for use in organic production, processing, and handling.
- ❖ Provides guidance on the suitability of material inputs under the USDA NOP standards.

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## What OMRI does not do

1. Review based on ingredients not on effectiveness.
2. Indicate whether federal and state registration has been obtained.

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## OMRI Brand Name Product List

Product applications are reviewed by OMRI staff. Summary and recommendation evaluated by an independent Review Panel of experts for compliance with the NOP National List.

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## Products listed by OMRI as restricted:

- May be used only for certain uses or only under specific documented conditions.
- Organic certifying agency should be consulted on use of restricted products.

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## OMRI Brand Name Product List

Products that comply are listed.

Allows use of the OMRI Listed<sup>®</sup> seal

- on labels and in advertising and promotions, indicating suitability for use in certified organic production.



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## Washington State Department of Agriculture



- Reviews products for compliance with the National Organic Standards.
- Issues a material registration certificate.

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