

Products Compatible with Organic Landscape Management

Organically managed playing field in Marblehead, Massachusetts.

THE MARKET FOR
GREENER PEST MANAGEMENT
MATERIALS GROWS

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With communities across the country adopting organic landscape management practices and policies for lawns, playing fields, and parks, identifying products that are compatible with the sustainable approach is a central concern for managers and residents. Organic systems nurture soil biology to support the natural cycling of nutrients, resulting in resilient turf systems and plants. Because the use of toxic materials undermines the organic system by harming the soil microbial life, identifying compatible products is an essential component of the system. To assist communities in identifying products and complying with local laws, where they exist, that restrict products to organic compatible materials, Beyond Pesticides has developed the *List of Products Compatible with Organic Landscape Management*.

The List is based on two established lists of materials and products: (i) the National List of Allowed and Prohibited Substances of the Organic Foods Production Act (OFPA), passed by the U.S. Congress in 1990 and overseen by a stakeholder board created by the statute, the National Organic Standards Board (7 C.F.R. 205.601 and 602), and (ii) the U.S. Environmental Protection Agency's list of exempt pesticides, Section 25(b) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (40 C.F.R. 152.25).

BACKGROUND ON UNDERLYING LIST

In creating the National List, the authors of OFPA recognized the (i) inherent safety of most natural materials that results from a long history of exposure and adaptation, and (ii) need to assess synthetic chemicals that may cause harm to health and ecology. Thus, the National List allows natural materials to be used in organic crop production unless found to be harmful, but prohibits synthetic materials unless recommended by the NOSB and codified. Three criteria are applied in de-

termining whether a material should be allowed on the National List: no adverse effects to humans or the environment, need for the material (essentiality) in an organic system, and compatibility with organic practices. OFPA outlines a number of impacts that must be considered in this evaluation.

Because continuous improvement is a principle in the organic law, the National List is under a five-year sunset and review cycle to evaluate new information about environmental and health impacts, which may require a change in a listing. A petition process allows the NOSB to evaluate proposed additions or adjustments to the National List.

Tying the *List of Products Compatible with Organic Landscape Management* to the National List allows communities to take advantage of the evaluation, and regular re-evaluation, performed by the NOSB's public process. The list of organic landscape management products also incorporates EPA's list of active ingredients that do not need to be registered as pesticides. This is a short list of materials, most of which are nonsynthetic and are allowed in organic production.

Beyond Pesticides encourages residents to advocate in their community for pesticide policies with the above criteria. The list can be used as a guide for inputs in all organic lawn care practices community-wide. Organic turf management is not a product-based approach, and since all products have some degree of risk, Beyond Pesticides urges that all products are used as a last resort. For assistance in adopting an organic landscape management policy and practices in your community, visit bit.ly/ToolsForChange and contact Beyond Pesticides at info@beyondpesticides.org or 202-543-5450.

Contributors to this article include Drew Toher, Terry Shistar, PhD, and Jay Feldman. See chart at bit.ly/OrganicCompatible.

List of Products Compatible with Organic Landscape Management

Note that there may be other formulations of a product under a similar brand name (e.g., many brands sell both ready to use and concentrate versions of their products). The allowed list describes: (i) active ingredient in product; (ii) product name; (iii) pesticide category [i.e., insecticide, herbicide, fungicide, etc.], and (iv) regulatory status [organic or exempt from EPA registration, 25b].

TABLE 1: **Fungicides**

Active Ingredient	Product Name	Regulatory Status
Fungicide		
Bacillus subtilis GB03	Companion Liquid Biological Fungicide	Organic
Bacillus subtilis QST 713 strain	Rhapsody	Organic
Bacillus subtilis QST 713 strain	Serenade Garden Disease Control RTU	Organic
Bacillus subtilis QST 713 strain	Natria Disease Control RTU	Organic
Essential Oil (Cinnamon/Clove)	Blizzard Organic Fungicide	25b
Essential Oil (Clove/Cinnamon)	Bravado Organic Fungicide	Organic
Gliocladium catenulatum Strain J1446	Prestop Biofungicide Powder	Organic
Oil (Cottonseed, Corn, Garlic)	Mildew Cure	Organic
Potassium Bicarbonate	Greencure Fungicide	25b
Potassium Bicarbonate	Kaligreen	Organic
Potassium Bicarbonate	Bi-Carb Old Fashioned Fungicide	Organic
Potassium Bicarbonate	Carb-O-Nator	Organic
Pythium oligandrum DV 74	Polyversum	Organic
Streptomyces lydicus	Actinovate Lawn and Garden Fungicide	Organic
Trichoderma harzianum Rifai strain T-022	Rootshield Seed Treatment	Organic
Trichoderma harzianum Rifai strain T-22 and Trichoderma virens strain G-41	TurfShield PLUS WP Biological Fungicide	Organic
Trichoderma spp.	Tenet WP	Organic

TABLE 2: **Herbicides, PGRs**

Active Ingredient	Product Name	Regulatory Status
Herbicide		
Acetic Acid	SummerSet AllDown	Organic
Acetic Acid	Vinagreen Natural Non Selective Herbicide	Organic
Acetic Acid, Citric Acid	Black Jack 21	25b
Ammoniated Soap of Fatty Acids	Final-San-O	Organic
Ammonium Nonanoate	Mirimichi Green Pro Concentrate	Organic
Ammonium Nonanoate	Emerion 7020 Concentrate	Organic
Ammonium Nonanoate	Emerion 7020 Concentrate	Organic

TABLE 2: **Herbicides, PGRs (CONTINUED)**

Active Ingredient—Herbicide	Product Name	Regulatory Status
Herbicide		
Ammonium Nonanoate	Mirimichi Green Effective Earth Solutions Grass & Weed Control Ready To-Spray	Organic
Ammonium Nonanoate	BioSafe Weed Control	Organic
Ammonium Nonanoate	AXXE	Organic
Caprylic Acid, Capric Acid	Suppress Herbicide EC	Organic
Citric acid, Essential Oil (Clove), Malic Acid	Phydura	25b
Corn Gluten	Concern Weed Prevention Plus	25b*
D-limonene	Avenger Weed Killer	Organic
Essential Oil (Clove/Cinnamon)	JH Biotech Weed Zap	Organic
Essential Oil (Clove/Cinnamon)	Safer Grow Weed Zap	Organic
Eugenol, Essential Oil (Clove)	Halo	25b
Oil (Soybean)	EcoBlend Weed and Grass Burndown	Organic
Oil (Soybean)	Preem	25b
Potassium Salt of Fatty Acids	Safer Brand Weed and Grass Killer	Organic
Potassium Salt of Fatty Acids	Safer Brand Fast-Acting Weed and Grass Killer Concentrate	Organic
Sodium Chloride	A.D.I.O.S	Organic
Sodium Lauryl Sulfate, 2-Phenethyl Propionate	EcoSmart Weed and Grass Killer	25b
Mossicide/Algaecide		
Ammoniated Soap of Fatty Acids	Quik-Fire	Organic
D-limonene	Monterey Moss Stopper	Organic
D-limonene	Moss Melt Concentrate	Organic
Oil (Cottonseed, Garlic), Essential Oil (Clove)	No Moss	Organic
Potassium Salt of Fatty Acids	Safer Brand Moss and Algae Killer and Surface Cleaner	Organic
Plant Growth Regulator (PGR)		
Gibberellic Acid	GibGro 4LS	Organic
Gibberellic Acid	N-Large Plant Growth Regulator Solution	Organic

* Only corn gluten that is not derived from genetically engineered corn may be used in organic production.

TABLE 3: Insecticides, IGRs, Repellents

Active Ingredient	Product Name	Regulatory Status
Animal Repellent		
Coyote/Fox Urine	Shake-Away Coyote/ Fox Urine Granules	Organic
Dried Red Pepper and Dried Blood	Uncle Ians Dog and Cat Repellent	Organic
Dried Red Pepper and Dried Blood	Uncle Ians Mole and Gopher Deer Rabbit and Squirrel Repellent	Organic
Piperine/Oil of Black Pepper/Capsaicin	Havahart Critter Ridder	Organic
Porcine/Bovine Dried Blood	Plantskydd Granular Repellent for Rabbits and Small Critters	Organic
Porcine/Bovine Dried Blood	Plantskydd Granular Repellent for Deer, Rabbits, and Elk	Organic
Putrescent Whole Egg Solids/Capsaicin/ Garlic	Deer Off Deer and Rabbit Repellent	Organic
Insect Growth Regulator (IGR)		
Azadirachtin	Neemix 4.5	Organic
Azadirachtin	Azatin O	Organic
Insecticide		
Bacillus thuringiensis	Safer Brand Garden Dust and Caterpillar Killer	Organic
Bacillus thuringiensis	DiPel® PRO DF Biological Insecticide Dry Flowable	Organic
Bacillus thuringiensis	Thuricide BT Caterpillar Control	Organic
Bacillus thuringiensis	Summit Biological Caterpillar and Webworm Control	Organic
Chromobacterium subtsugae	Grandevo	Organic
Citric Acid	Flying Skull Nuke 'Em Insecticide	Organic
Diatomaceous Earth	Perma-guard	Organic
Diatomaceous Earth	Safer Brand Ant and Crawling Insect Killer	Organic
Diatomaceous Earth	Desect Diatomaceous Earth Insecticide	Organic
D-limonene	Orange Guard Fire Ant Control	Organic
D-limonene	Orange Guard Ornamental Plants Insecticide	Organic
Essential Oil (Blend)	Dr. Earth Yard and Garden Insect Killer	Organic
Essential Oil (Blend)	Mantis Botanical Insecticide/Miticide	Organic
Essential Oil (Cedar)	CedarGuard	Organic
Essential Oil (Cedar)	CedarCure	25b

Active Ingredient	Product Name	Regulatory Status
Insecticide		
Essential Oil (Cedar), Oil (Soybean)	EcoShield Botanical Insecticide	Organic
Essential Oil (Clove/ Cinnamon)	Aramite Organic Acaricide- Insecticide	Organic
Essential Oil (Rosemary/ Peppermint)	Ecotec	Organic
Essential Oil (Thyme)	HumaGrow Proud3	Organic
Iron Phosphate	Garden Safe Slug and Snail Bait	Organic
Iron Phosphate	Miracle-Gro® Nature's Care Slug & Snail Control	Organic
Iron Phosphate	Whitney Farms Slug and Snail Killer	Organic
Iron Phosphate/ Spinosad	Brandt Antixx Plus Ant and Crawling Insect Killer	Organic
Iron Phosphate/ Spinosad	Sluggo Insect, Slug, and Nail Pellets	Organic
Milky Spore	St Gabriel Organic Milky Spore Granular	Organic
Neem Oil	Safer Brand Garden Defense	Organic
Nematodes: Steinernema carpocapsae	Ecomask Topdressing	25b
Nematodes: Steir- nema carpocapsae and Heterorhabditis bacteriophora	Grub Guard	Organic
Nematodes: Steinernema feltiae	Scanmask Topdressing	25b
Nematodes: Steinernema glaseri	Environmental Factor Inc	25b
Oil (Cottonseed)	Safer Gro PestOut	Organic
Oil (Cottonseed)	AntOut	Organic
Potassium Salt of Fatty Acids	Safer Insect Killing Soap	Organic
Potassium Salt of Fatty Acids	Safer Brand Grub Killer	Organic
Potassium Salt of Fatty Acids/Neem Oil/Natural Pyrethrin (without PBO)	Safer Brand End ALL Insect Killer	Organic
Spinosad	Green Light Garden Spray	Organic
Spinosad	Seduce Insect Bait	Organic
Spinosad	Conserve Naturalyte Insect Control	Organic
Spinosad	Monterey Garden Insect Spray	Organic

TABLE 3: **Insecticides, IGRs, Repellents** (CONTINUED)

Active Ingredient	Product Name	Regulatory Status
Nematicide		
Paecilomyces lilacinus	Bio-Nematon	Organic
Quillaja saponaria saponins	Brandt Nema-Q	Organic
Quillaja saponaria saponins	Monterey Nematode Control	Organic

Active Ingredient	Product Name	Regulatory Status
Insect Repellent		
Garlic Extract	Biolink Insect and Bird Repellent	Organic
Garlic Extract	Garlic Barrier AG Insect Repellent	Organic

TABLE 4: **Multi-Category**

Active Ingredient	Product Name	Category	Regulatory Status
Azadirachtin	AzaSol	Insecticide/Miticide/Fungicide	Organic
Azadirachtin	SoluNeem	Insecticide/Miticide/Fungicide	Organic
Azadirachtin	Azatrol	Insecticide/Miticide/Insect Growth Regulator	Organic
Azadirachtin	Molt-X	Insecticide/Nematicide	Organic
Azadirachtin	Safer Brand BioNeed	Insecticide/Repellent/Insect Growth Regulator	Organic
Azadirachtin	Amazin 1.2 ME	Insecticide/Repellent/Insect Growth Regulator/Nematicide	Organic
Bacillus amyloliquefaciens strain D747	Monterey Complete Disease Control Brand RTU	Fungicide/Bactericide	Organic
Bacillus amyloliquefaciens strain D747	DoubleNickel LC Biofungicide	Fungicide/Bactericide	Organic
Essential Oil (Clove), Oil (Cottonseed, Garlic)	Pest Out	Insecticide/Miticide	Organic
Essential Oil (Thyme)	HumaGrow Promax	Nematicide/Fungicide	Organic
Essential Oils (Various)	EcoSmart Brands	Insecticide/Herbicide/Fungicide	25b
Fats and Oil, Azadirachtin	Debug Tres Emulsifiable Concentrate Antifeedant, Insect Repellent, Insecticide, Miticide, Fungicide & Nematicide	Insecticide/Miticide/Nematicide/Fungicide	Organic
Horticultural Oil (may be listed as mineral oil on label)	Civitas Turf Defense Pre-Mixed	Fungicide/Insecticide/Disease Suppression	Organic
Horticultural Oil (may be listed as mineral oil on label)	Civitas Turf Defense Ready-2-Mix	Fungicide/Insecticide/Disease Suppression	Organic
Neem Oil	70% Neem Oil	Insecticide/Fungicide	Organic
Neem Oil	Bayer Natria Neem Oil	Insecticide/Fungicide	Organic
Neem Oil	Triact 70	Insecticide/Miticide/Fungicide	Organic
Neem Oil	Trilogy	Insecticide/Miticide/Fungicide	Organic
Neem Oil	Monterey Neem Oil RTU	Insecticide/Miticide/Fungicide	Organic
Neem Oil	Triple Action Neem Oil	Insecticide/Miticide/Fungicide	Organic
Neem Oil	TerraNeem EC	Insecticide/Miticide/Nematicide/Fungicide	Organic
Neem Oil/and Natural Pyrethrin (without PBO)	Monterey Rose & Flower Spray Plus Broad Spectrum Insecticide, Fungicide, and Miticide	Insecticide/Miticide/Fungicide	Organic
Oil (Sesame)	Organicide 3 in One	Insecticide/Fungicide/Miticide	Organic
Potassium Salt of Fatty Acids	MPEDE	Insecticide/Fungicide	Organic
Potassium Silicate	Sil-Matrix	Insecticide/Fungicide	Organic
Sulfur	Sulfur DF	Fungicide/Miticide	Organic
Sulfur	Kumulus DF	Fungicide/Miticide	Organic