

CROP Production Materials

Class Coding

Crop production materials are classified by OMRI according to the following uses and applications:

CF: Crop Fertilizers and Soil Amendments

CP: Crop Pest, Weed, and Disease Control

CT: Crop Management Tools and Production Aids

Crop fertilizers (CF) contain one or more recognized plant nutrients. Used primarily for their plant nutrient content, they may be applied to the soil or to the foliage of plants. They include compost, animal manures, blended fertilizers, mined minerals, micronutrients, blend/bone meals, and plant extracts that make plant nutrient claims. Soil amendments include liming/acidification materials, worm castings, peat moss, mulch, and any other input that is applied as a soil conditioner. Use of fertilizers and soil amendments must meet the NOP Rule* §205.203 management practice standards.

Crop pest, weed, and disease control (CP) substances are used as pesticides for plant disease control, invertebrate pest control, vertebrate pest control, weed control, or as plant growth regulators. They may be applied to either plants or soil unless restrictions specify otherwise. Substances that are allowed only for disease control may not be used for insect or weed control. Most products sold with pesticide or growth regulator claims in the United States must be registered with the US Environmental Protection Agency unless they are exempt from registration. See the INERTS entry in this list for restrictions on their use in formulated products. Use of crop pest, weed, and disease control materials must meet the NOP Rule §205.206 management practice standards.

Crop management tools and production aids (CT) include inputs that do not provide a recognized plant nutrient, soil conditioning, or crop protection function. This group includes adjuvants, equipment cleaners, insect traps, compost inoculants, and plant extracts without nutrient or pest control claims. Many of these products are nonsynthetic and, there-

fore, are not included on the National List. In cases where their use is not specifically addressed in the NOP Rule, the provisions of §205.105 apply a general allowance of nonsynthetic substances, except for those produced by excluded methods or with ionizing radiation or sewage sludge.

Status

Crop production materials have one of the following OMRI Status designations:

Allowed substances include nonsynthetic materials that are not specifically prohibited by NOP Rule §205.602 and synthetic materials that are specifically allowed by NOP Rule §205.601. The OMRI Allowed status indicates that these materials are not subject to restrictions that limit their use.

Allowed with Restrictions substances are allowed in organic production subject to use restrictions. Please see the National Organic Standards in Appendix B for more information. Materials that are Allowed with Restrictions include substances subject to the following regulations: (a) soil fertility and crop nutrient management practice standards (NOP Rule §205.203); (b) crop pest, weed, and disease management practice standards (NOP Rule §205.206); and (c) specific annotations detailed in the National List of allowed synthetic substances (NOP Rule §205.601). Otherwise prohibited nonsynthetic substances for which there are exceptions (NOP Rule §205.602) are also designated with an Allowed with Restrictions status to indicate their special use limitations.

Prohibited substances in crop production are generally defined in NOP Rule §205.105. This group includes synthetic substances that are not specifically listed in NOP Rule §205.601 and nonsynthetic substances that are specifically prohibited in NOP Rule §205.602.

* For full text of the NOP Rule, see Appendix B

Class Codes

CF: Crop Fertilizers and Soil Amendments

CP: Crop Pest, Weed, and Disease Control

CT: Crop Management Tools and Production Aids

LISTINGS

1, 4 Dimethyl-naphthalene

Class: CT

NOP Rule: 205.105(a)

Prohibited

Synthetic

Acetic Acid – nonsynthetic

Class: CF, CT

Uses for nonsynthetic (natural) acetic acid include drip irrigation cleaner, adjuvant to adjust the pH of sprays, stabilizer for liquid fish products, and minimum risk inert (List 4B) in a pesticide formulation. Solutions that contain less than 8% acetic acid are vinegar. See also VINEGAR – NONSYNTHETIC and INERTS – LIST 4.

NOP Rule: 205.105 & 205.601(m)

Allowed

Nonsynthetic

Acetic Acid – nonsynthetic, pesticide

Class: CP

May be used as a pesticide only if the requirements of 205.206(e) are met. See Glossary for definition of “pesticide.”

NOP Rule: 205.206(b)(3), 205.206(d)(2) & 205.206(e)

Allowed with Restrictions

Nonsynthetic

Acetic Acid – synthetic

Class: CP

Synthetic sources not permitted as active pesticidal ingredients. May be used as either an adjuvant or inert ingredient in combination with active pesticidal substances [excluding 25(b) exempt pesticides]. Solutions that contain less than 8% acetic acid are vinegar. See also VINEGAR – SYNTHETIC and INERTS – LIST 4.

NOP Rule: 205.105(a) & 205.601(m)

Prohibited

Synthetic

Adjuvants – for pesticide use

Class: CT

Synthetic adjuvants must explicitly appear on the National List for this application or use. EPA Inert Ingredients List 4 are restricted and may be used only with EPA registered pesticides or active ingredients considered “25b exempt” from FIFRA registration. See also OILS, PETROLEUM-BASED – NARROW RANGE; SOAPS, AMMONIUM and INERTS listings. List 3 inert ingredients may be used only in passive dispensers of EPA registered pheromones. See Glossary for definitions of “adjuvants” and “pesticide.”

NOP Rule: 205.601(m) *As synthetic inert ingredients as classified by the Environmental Protection Agency (EPA), for use with nonsynthetic substances or synthetic substances listed in this section and used as an active pesticide ingredient in accordance with any limitations on the use of such substances at: (1) EPA List 4—Inerts of Minimal Concern. (2) EPA List 3—Inerts of Unknown Toxicity allowed: (i) ingredients may be used only in passive dispensers of EPA registered pheromones.*

Allowed with Restrictions

Synthetic

Adjuvants – nonsynthetic

Class: CT

Allowed unless explicitly prohibited. See Glossary for definition of “adjuvants.”

NOP Rule: 205.105

Allowed

Nonsynthetic

Adjuvants – synthetic

Class: CT

All synthetic adjuvants that are not listed as allowed or restricted are prohibited. Specifically, aromatic petroleum solvents and materials on EPA Inert Ingredients Lists 1, 2, and most of 3 are prohibited. See also INERTS listings. See glossary for definition of “adjuvants.”

NOP Rule: 205.105(a)

Prohibited

Synthetic

Alcohol

Class: CT

NOP Rule: 205.105 Allowed from nonsynthetic sources.

Allowed

Nonsynthetic

Alcohol, Ethyl (Ethanol)

Class: CT

May be used as an algicide, disinfectant or sanitizer, including irrigation system cleaner. May be used as an adjuvant or inert ingredient in combination with active pesticidal ingredients [excluding 25(b) exempt pesticides]. See also INERTS – LIST 4.

NOP Rule: 205.601(a)(1)(i)

Allowed with Restrictions

Synthetic

Alcohol, Isopropyl (Isopropanol)

Class: CT

May be used as a disinfectant or inert ingredient.

NOP Rule: 205.601(a)(1)(ii) *Isopropanol may be used as an algicide, disinfectant, and sanitizer, including irrigation system cleaning systems.*

Allowed with Restrictions

Synthetic

Alfalfa Meal or Pellets

Class: CF

Pelletization process must not involve prohibited materials.

NOP Rule: 205.203(c)(3) *Uncomposted plant materials.*

Allowed

Nonsynthetic

Algae

Class: CF

See also AQUATIC PLANT PRODUCTS listings.

NOP Rule: 205.203(c)(3) *Uncomposted plant materials.*

Allowed

Nonsynthetic

Amino Acids – nonsynthetic

Class: CF, CT

Amino acids produced by plants, animals, and microorganisms that have not been genetically modified (see Glossary) and are extracted or isolated by hydrolysis, or by physical or other nonchemical means are considered nonsynthetic. Nonsynthetic amino acids may be used as plant growth regulators and chelating agents.

NOP Rule: 205.105

Allowed

Nonsynthetic

Amino Acids – synthetic

Class: CF, CT

Amino acids that are considered to be synthetically produced and/or produced from genetically modified organisms are prohibited. See also GENETICALLY MODIFIED ORGANISMS.

NOP Rule: 205.105(a) & (e)**Prohibited**

Synthetic

Ammonia Products

Class: CF

All synthetic ammonia products are prohibited for crop nutrition including: anhydrous ammonia, aqua ammonia, ammonium forms of micronutrients (see also AMMONIATED MICRONUTRIENTS), ammonium nitrate, ammonium phosphate, ammonium sulfate, and ammonium soaps.

NOP Rule: 205.105(a)**Prohibited**

Synthetic

Ammoniated Micronutrients

Class: CF

Includes ammonium molybdate, ammonium pentaborate, ammoniated zinc chloride, and ferrous ammonium sulfate. See also MICRO-NUTRIENTS – SYNTHETIC listings.

NOP Rule: 205.105(a)**Prohibited**

Synthetic

Ammonium Carbonate

Class: CT

For use as bait in insect traps only. Cannot be in contact with crop or soil.

NOP Rule: 205.601(e)(1)**Allowed with Restrictions**

Synthetic

Animal By-products and Materials

Class: CF

Parts of an animal and animal by-products that have specific uses in soil fertility are allowed. Includes meat, bone meal, and animal urine that have been treated or handled in a way that reduces contamination by specified risk materials and food-borne pathogens and meets standards for indicator pathogens. See listings under individual generic materials.

NOP Rule: 205.105**Allowed**

Nonsynthetic

Animal By-products and Materials

Class: CF

Leather by-products and other synthetic chemically-treated animal by-products are prohibited.

NOP Rule: 205.105(a) & (e).**Prohibited**

Synthetic

Animal By-products and Materials

Class: CF

Animal by-products that have not been treated or handled in a way that reduces contamination by specified risk materials and food-borne pathogens or do not meet standards for indicator pathogens. Must be managed in a manner that does not contribute to contamination of crops soil or water.

NOP Rule: 205.105(a) & (e).**Allowed with Restrictions**

Nonsynthetic

Antibiotics

Class: CP

Synthetic antibiotics are prohibited unless explicitly listed. Avermectin is prohibited in plant crop production.

NOP Rule: 205.105(a)**Prohibited**

Synthetic

Antibiotics, Avermectin

See AVERMECTIN.

Antibiotics, Streptomycin Sulfate

Class: CP

Permitted for use as a fire blight control in apples and pears only. See also STREPTOMYCIN SULFATE.

NOP Rule: 205.601(i)(11) *As plant disease control... For fire blight control in apples and pears only. [Lists as streptomycin.]*

Synthetic

Antibiotics, Tetracycline (Oxytetracycline**Calcium Complex)**

Class: CP

Permitted for use as a fire blight control in apples and pears only. See TETRACYCLINE.

NOP Rule: 205.601(i)(12) *As plant disease control... For fire blight control only. [Lists as Tetracycline.]***Allowed with Restrictions**

Synthetic

Anti-coagulants

Class: CP

Prohibited anti-coagulants include diphacinone and chlorophacinone. May not be used directly or in bait stations on certified land.

NOP Rule: 205.105(a)**Prohibited**

Synthetic

Aquatic Plant Products

Class: CP

Aquatic plant products are prohibited if they contain synthetic preservatives such as formaldehyde, are extracted by synthetic solvents not on the National List, or are fortified with otherwise prohibited plant nutrients, including phosphoric acid or solvents that exceed the amount necessary for extraction. Potassium hydroxide extracted aquatic plant products may not be blended with synthetically extracted humic acid derivatives. Aquatic plant products that are chemically reacted with extractants may not be used as plant growth regulators.

NOP Rule: 205.105(a)**Prohibited**

Synthetic

Aquatic Plant Products – nonsynthetic

Class: CF

Aquatic plants that have not been synthetically extracted or stabilized are allowed.

NOP Rule: 205.203(c)(3) *Uncomposted plant materials.***Allowed**

Nonsynthetic

Aquatic Plant Products – synthetically extracted

Class: CF

Nonsynthetic extracts are allowed. Synthetic extraction process is limited to the use of potassium hydroxide or sodium hydroxide; solvent amount used is limited to that amount necessary for extraction. Aquatic plant products are prohibited if they contain synthetic preservatives such as formaldehyde, or are fortified with otherwise prohibited plant nutrient sources.

NOP Rule: 205.601(j)(1) *As plant or soil amendments... Aquatic plant extracts (other than hydrolyzed)—Extraction process is limited to the use of potassium hydroxide or sodium hydroxide; solvent amount used is limited to that amount necessary for extraction.***Allowed**

Synthetic

Class Codes

CF: Crop Fertilizers and Soil Amendments

CP: Crop Pest, Weed, and Disease Control

CT: Crop Management Tools and Production Aids

<p>Arsenate-treated Lumber Class: CT Includes copper chromium arsenate. Trellises, stakes, and other structures using arsenate treated lumber may not be installed or used for replacement purposes when in contact with soil or livestock. Arsenate-treated lumber cannot be in contact with soil used to grow crops. NOP Rule: 205.105 & 205.206(f) <i>The producer must not use lumber treated with arsenate or other prohibited materials for new installations or replacement purposes in contact with soil or livestock. [Also see Vol. 65, No. 246 of the Federal Register, page 80566 for treated lumber reference.]</i></p>	<p>Prohibited Synthetic</p>	<p>Bacterial Preparations See MICROBIOLOGICAL PREPARATIONS.</p> <p>Bactericides Class: CP All synthetic bactericides that are not explicitly permitted are prohibited. See Glossary for definition of "bactericides." NOP Rule: 205.105(a)</p> <p>Bark Class: CF See also PLANTS. NOP Rule: 205.203(c)(3) <i>Uncomposted plant materials.</i></p>
<p>Arsenic Class: CP Arsenic applied to crops for pest control is prohibited. See also ARSENATE-TREATED LUMBER for more information on other uses. See Glossary for definition of "arsenic." NOP Rule: 205.602(b)</p>	<p>Prohibited Nonsynthetic</p>	<p>Basalt Class: CF See also MINED MINERALS – UNPROCESSED. NOP Rule: 205.203(d)(2) <i>A mined substance of low solubility.</i></p>
<p>Arthropods Class: CP See also BIOLOGICAL CONTROLS and PREDATORS & PARASITES. NOP Rule: 205.206(b)(1) <i>Augmentation or introduction of predators or parasites of the pest species.</i></p>	<p>Allowed Nonsynthetic</p>	<p>Basic Slag Class: CF NOP Rule: 205.105(a)</p> <p>Beauveria spp. Class: CP See also BIOLOGICAL CONTROLS. NOP Rule: 205.206(e)</p>
<p>Ascorbic Acid Class: CF NOP Rule: 205.105(a)</p>	<p>Allowed Nonsynthetic</p>	<p>Bentonite Class: CF See also MINED MINERALS – UNPROCESSED. See also BENTONITE – PESTICIDE. NOP Rule: 205.203(d)(2) <i>A mined substance of low solubility.</i></p>
<p>Ascorbic Acid Class: CF Synthetic sources may only be used as plant or soil amendment. NOP Rule: 205.601(j)(8) <i>As plant or soil amendments... Vitamins B1, C, and E</i></p>	<p>Allowed with Restrictions Synthetic</p>	<p>Beeswax Class: CF Animal material. NOP Rule: 205.105(a)</p>
<p>Ash – plant or animal Class: CF Ash from plant and animal sources only. Ashes from burning minerals, manure, or prohibited materials are prohibited. See also MANURE ASH. NOP Rule: 205.203(d)(4) & 205.602(a) <i>Ash obtained from the burning of a plant or animal material... [t]hat has not been treated or combined with a prohibited substance.</i></p>	<p>Allowed Nonsynthetic</p>	<p>Bentonite – Pesticide Class: CP For use as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes only if the requirements of 205.206(e) are met. See Glossary for definition of "pesticide." NOP Rule: 205.206(b)(3), 205.206(d)(2) & 205.206(e)</p>
<p>Avermectin Class: CP NOP Rule: 205.105(a)</p>	<p>Prohibited Synthetic</p>	<p>Biodynamic Preparations Class: CT Includes horn manure spray (500) horn silica (501), yarrow flowers (502), chamomile (503), stinging nettle (504), oak bark (505), dandelion (506), valerian (507), and horsetail (equisetum) spray (508). NOP Rule: 205.105(a)</p>
<p>Azadirachta indica Class: CP May be used as a pesticide if the requirements of 205.206(e) are met. See also NEEM EXTRACT AND DERIVATIVES, NEEM AND NEEM DERIVATIVES – NATURAL, and BOTANICAL PESTICIDES. NOP Rule: 205.206(e)</p>	<p>Allowed with Restrictions Nonsynthetic</p>	<p>Biological Controls Class: CP Living organisms and viruses that are not regulated as Biopesticides. No genetically modified organisms. See also PREDATORS & PARASITES. NOP Rule: 205.206(b)(1) & 205.206(d)(2)</p>
<p>Bacillus thuringiensis Class: CP May be used as a pesticide if the requirements of 205.206(e) are met. NOP Rule: 205.206(e)</p>	<p>Allowed with Restrictions Nonsynthetic</p>	