

Materials List - 2003

All materials in the Materials List have one of the following designations:

"ALLOWED" (A) materials may be used on land and crops in the MENDOCINO RENEGADE certification program.

"RESTRICTED" (R) materials are allowed by MENDOCINO RENEGADE only with certain restrictions, and only if no alternatives are feasible. The use of these materials is discouraged. In many cases, the permitted use of these materials is dependent on the specific source, and demonstration that the material is free from contamination.

"PROHIBITED" (P) materials may not be used on land in the certification program, or in the production of any crops grown on land in the certification program. At least three years must pass after the application of any prohibited substances before that land may be certified. MENDOCINO RENEGADE buffer zone and/or acreage withdrawal requirements may apply.

A

R - Adjuvants. See Spray Adjuvants.

A - Alcohol. Ethanol and methanol are allowed, isopropyl alcohol is prohibited.

A - Alfalfa Meal.

P - All synthetically derived pesticides not specifically mentioned by name.

A - Amino Acids.

P - Ammonia Products.

R - Ammonium Carbonate. For use in insect traps only. Cannot be used for fertilizer.

A - Ammonium Soaps.

P - Animal By-Products. Includes meat, bone meal, and urine. Leather by-products are prohibited.

A - Animal Manures. See Manures, Animal

R - Antibiotics. May be used to treat specific maladies in livestock. Animal products cannot be sold as organic within 90 days of treatment or twice the FDA withdrawal period, whichever is longer. Subtherapeutic feeding of antibiotics is prohibited.

Antibiotics from natural sources may also be used for disease & pest control in plant crop production (e.g. streptomycin for fireblight control).

P - Anti-Coagulant Rodent Baits. Includes diphacinone and chlorophacinone. May not be used directly or in bait stations on certified land.

A - Aquatic Plant Products. May be stabilized with preservatives that are EPA List 4 or the FDA Generally Regarded as Safe list.

P- Arsenic. Arsenic applied to crops for pest control is prohibited. All possible alternatives to pressure treated lumber should be explored. See Pressure Treated Lumber.

R - Ash. Ash from plant and animal sources only. Mineral and manure ashes are prohibited. Burning of field crop stubble is prohibited. Components of ash may not contain any prohibited materials. Growers who use ash obtained from off-farm are required to obtain an analysis of contaminants, including arsenic, cadmium, chromium, lead

B

- A - Bacillus Thuringensis. Formulations containing synthetic inerts are prohibited.
- A - Beneficial Organisms. Including but not limited to: viruses, bacteria, protozoa, fungi, insects, nematodes, plants, and animals. No genetically engineered organisms.
- A - Biodynamic Preparations.
- A - Biological Controls such as microbes or insects. No genetically engineered organisms.
- P - Bird Baits, poisons.
- P - Bleach. Includes calcium hypochlorite and sodium hypochlorite. Hydrogen Peroxide or Peracetic Acid can be used to flush irrigation systems, tanks, and barrels. Use food grade Hydrogen Peroxide for sanitizing food equipment
- P - Blood Meal & Blood.
- P - Bone Meal & Bones.
- A - Borate for soil use from a mined source.
- A - Bordeaux Mixes*. Mined materials preferred. Use with caution. Build-up of copper in soil may prohibit future use. These shall include fixed copper groups which do not require a tolerance level set by federal agencies: hydroxides, basic sulfates, oxychlorides and oxides. No visible residue is allowed on harvested crops.
- A - Boric Acid. Not for use on edible product parts. Cannot be in direct contact with soil or plant tissue.
- A - Boron Products, Soluble. May only be used if tests show deficiency.
- R - Boron, Synthetic. May be used only with a documented deficiency.

C

- A - Calcium, Natural Sources.
- P - Calcium, Synthetically Derived.
- A - Calcium Carbonate. See limestone.
- R - Calcium Chloride. Natural sources only. Discouraged for soil application because of very high chloride content.
- R - Calcium Lignosulfate. See Lignin sulfonate.
- P - Calcium Nitrate.
- A - Calcium Sulfate. See gypsum.
- P - Carbamates.
- A - Carbon Dioxide Gas. Permitted for post-harvest, greenhouse, and soil use.
- R - Cardboard. Wax or fungicide impregnated wax is prohibited for use a mulch or compost ingredient. Fungicide impregnated boxes are also prohibited.
- P - Carrot Oil.
- R - Chelates. Natural chelates are allowed
(A). Synthetic chelating agents are restricted for use only with micronutrient sprays for a documented deficiency. All other uses of synthetic chelates are prohibited. EDTA, lignin sulfonate and lignosulfonic acid are considered to be synthetic chelating agents.
- P - Chilean Nitrate. See SodiumNitrate.
- P - Chlorinated Hydrocarbons.
- R - Chlorine*. See Bleach.
- A - Citric Acid, if from a natural source.

A - Citrus Products.

R - Cocoa Bean Hulls. May contain residues of pesticides banned in U.S. Use only if documented to be residue-free.

A - Composts. Composting refers to the carefully managed process in which organic materials are digested aerobically or anaerobically by microbial action. In order to effectively stabilize the nutrients in compost, neutralize pesticide residues and kill weed seeds and pathogens, aerobic compost piles must reach a temperature of 130-140 degrees (40-50 degrees Centigrade) for a period of several days and then finish decomposing for about 6 weeks. Compost should remain moist but not waterlogged for the whole decomposition period for best results. Written documentation of source of off-farm materials is required. No prohibited materials may be used in composting, including no synthetically "fortified" compost starters. Growers should obtain a list of the main ingredients in any purchased composts. See also Microbial Compost Inoculants.

A - Compost Tea. Compost must be made from material which meets compost standards.

A - Copper, Fixed. Allowed because they are exempted as Bordeaux mixes and are exempt from tolerance by the EPA. See Bordeaux mix.

R - Copper Sulfate*. Considered a Bordeaux. See Bordeaux mix. May be used as a footbath for livestock.

R - Copper Hydroxide*. Considered a Bordeaux. More toxic than copper sulfate, but application rate is less. See Bordeaux mix.

A - Corn Calcium.

R - Cotton Gin Trash from organic sources only. Composting is REQUIRED before use. See Cottonseed Meal

R - Cottonseed Meal from organic sources only.. Use only if documented to be residue-free or it MUST be composted prior to use. Proper composting has been shown to break down most toxic residues.

R - Cryolite, Mined Sources. See Sodium Fluoroaluminate.

P - Cryolite, Synthetic. Very high environmental persistence. See Sodium Fluoroaluminate.

A - Cytokinins.

D

R - Detergents*. Includes surfactants which are exempted by the Organic Foods Act.

A - Diatomaceous Earth. Non-heated forms only are allowed. Use a dust mask when applying to prevent lung irritation. Make sure no synthetic pesticides or synergists are added.

P - Dimethyl Sulfoxide.

R - Dolomite. May cause build-up of Magnesium. Use with caution. Must be from a natural source, slaked sources prohibited. See Magnesium oxide and Magnesium carbonate.

R - Dormant Oils*. Non-petroleum sources only. Approved for use as a dormant spray on woody plants only. May not contain any prohibited insecticides or other ingredients. See Suffocating Oils.

A - Drip Irrigation Cleaners, Natural.

P - Drip Irrigation Cleaners, Synthetic.

E

A - Enzymes. Acceptable if derived microbiologically from natural materials and not fortified with synthetic plant nutrients.

A - Epsom Salts. Natural source only.

P - Ethylene Gas, synthetic.

P - Exhaust Fumes. Injection in rodent holes is prohibited.

F

A - Feather Meal. Use organic sources only (other sources subject to review/and/or residue testing)

A - Feldspar. See Mined Minerals.

P - Fertilizers, Blended. Prohibited if the product contains any prohibited materials.

R - Fertilizers, Blended. Restricted if the product contains at least one restricted and no prohibited materials.

A - Fertilizers, Blended. Allowed if composed entirely of allowed materials. See classification for each separate ingredient. Inert ingredients for pelletizing, etc. must be from natural sources.

A - Fish Emulsions. Cannot be from fish farms or farmed sources which often contain GMO fish. Forms which are "fortified" with synthetic plant nutrients are prohibited. Stabilized products are acceptable. Phosphoric acid used as a stabilizer in fish emulsion is permitted to lower the pH to 3.5.

A - Fish Hydrolysate. From non-farmed fish sources only. See fish emulsion.

A - Fish Meal. From non-farmed sources only. See above. Hydrolyzed with acid is prohibited.

P - Foliar Sprays. Prohibited if product contains any prohibited materials.

R - Foliar Sprays. Restricted if product contains at least one restricted material and no prohibited materials.

A - Foliar Sprays. Allowed if composed entirely of allowed materials. Foliar feeding programs are not a substitute for a soil building program, which is required for MENDOCINO RENEGADE certification.

P - Formaldehyde.

P - Fruit Waxes. Must not contain any prohibited synthetic substances. Acceptable sources include caruba or wood-extracted wax. Starting in January 1992, products which are coated with approved wax must be indicated as such on the shipping container.

P - Fumigants.

P - Fungicides & Bactericides, Synthetically Derived. Includes fumigants and fungicide impregnated papers used in packaging.

G

A - Garlic.

P - Genetically Engineered Organisms.

P - Gibberellic Acid. Acceptable if made from a fermentation process and not fortified with prohibited synthetic substances.

A - Granite Dust. see Mined Minerals.

P - Grape and Other Pomaces. Non-organic sources subject to Review and/or testing for pesticide residues. Aerobic composting required before use.

A - Greensand. see Mined Minerals.

A - Growth Enhancers. Must not contain prohibited synthetic substances.

P - Growth Regulators, Synthetic. Includes all formulations of the propagation hormone IBA (Indol-3-butyric acid), as well as the growth regulator NAA (1-Naphthalene acetic acid). IAA (Indol acetic acid) is a natural growth regulator. Hormones are prohibited for livestock production.

R - Guano, Bat or Bird. See Manures, Animal.

A - Gypsum. Only mined forms are acceptable.

P - Gypsum By-Product. Can contain large quantities of herbicide and pesticide residues. Much of it is also the by-product of sheet rock manufacture and may contain fungicides, fire retardants and other harmful chemicals. Mined gypsum is a reasonably priced alternative and is strongly recommended.

H

R - Herbicides, Plant and Animal Derived.

P - Herbicides, Synthetic.

P - Hoof and Horn Meal.

A - Humates. Humates are usually natural deposits which are mined and may have high trace mineral contents. Acceptable if derived from Leonardite, lignite, or coal; not acceptable if fortified with synthetic nutrients.

R - Humic Acid Derivatives. These are extracts of humates which may be made with either natural or unnatural processes. Only allowed if derived from natural sources and not fortified with synthetic nutrients. Prohibited if extracted by ammonium hydroxide, potassium hydroxide, sodium hydroxide or other synthetic base.

R - Hydrated Lime*. Foliar application as a fungicide only.

R - Hydrogen Peroxide.

A - Inoculants. See Microbial Inoculants.

A - Insect Extracts. "Bug juice", etc.

R - Iodine. External disinfectant and footbath for livestock. Natural sources allowed, synthetic sources prohibited.

P - Ionizing Radiation. i.e. irradiation or pico-waved.

K

A - Kelp Extracts. Not acceptable if containing formaldehyde or fortified with synthetic plant nutrients. Potassium phosphate or phosphoric acid used as a stabilizer in kelp extract cannot exceed 1 % by weight of P₂O₅.

A - Kelp Unprocessed & Meal.

L

R - Langbeinite. see. Sulfate of Potash Magnesia.

P - Leather Meal, Leather Tankage and Leather Dust. Residue from hide processing. Likely to be highly contaminated with Chromium and other metals or solvents which are used in leather processing.

R - Lignin Sulfonate. For use only with chelated micronutrients with a documented deficiency.

P - Lime, Slaked & Burned. Also known as Calcium Oxide.

A - Limestone. Oystershell flour, dolomite (not slaked), aragonite, and mined CaCO₃ are acceptable. Sugarbeet lime is a restricted material. See Sugar Beet Lime.

R - Lime Sulfur* (includes Calcium Polysulfide). Foliar application as a fungicide allowed. May be used as an insecticide only if there are no feasible alternatives.

P - Lye.

M

A - Magnesium Carbonate.

R - Magnesium Chloride. Natural sources only. Discourages because of high chloride content.

P - Magnesium Oxide.

A - Manures, Animal. Must be aerobically composted, preferably by turning and keeping moist and warm until well broken down. Raw manures are considered restricted materials. See definition of composting under "Compost," and see Manures, Raw.

R - Manures, Raw. Must be composted at least 90 days. Can be harmful to soil life and cause unhealthful levels of nitrates in produce and salt buildup in soils. Can also contain pesticide residues depending on what the animal has been eating. Composting strongly recommended since it can stabilize the nitrogen content, kill weed seeds, and help neutralize pesticide

residues. See Manures, Animal. Fresh and "sheet composted" manures are allowed only in MODERATE amounts and as a supplement to other soil-building practices. It should be applied when the soil is sufficiently warm (about 50 degrees Fahrenheit) and moist to ensure active microbial digestion. Please be especially careful when using on crops which can accumulate nitrates such as leafy greens, radishes and beets.

R - Manure tea. See Manures, Raw. Must be used in conjunction with other soil building practices.

A - Mechanical and Cultural Controls.

P - Methyl Bromide.

P -Methyl sulfoxide.

A - Microbial Soil, Compost, Plant & Seed Inoculants. Allowed plant inoculants include Rhizobium bacteria, mycorrhizal fungi, Azolla, and other microbes. Genetically engineered organisms or viruses are not allowed. Synthetic preservatives and fortifications, including sodium sulfites are prohibited in the final product.

The liquid preparations often contain sodium sulfites. Manufacturers please request more guidelines from MENDOCINO RENEGADE.

R - Micronutrient Sprays*. Materials derived from natural sources are recommended. Synthetic sources of micronutrients are exempted under the state law and are allowed only to correct for deficiencies determined by soil or plant tissue tests.

A - Mined Minerals. A mined mineral must not have undergone any change in the molecular structure through heating or combining with other substances. Some of the minerals which are mined can also be made synthetically or are by-products of industry; investigate the source of any new material. Acceptable if the material is not processed or fortified with synthetic chemicals.

P - Moth Balls and Moth Crystals.

A - Mulches. See restrictions under Plastic Mulch.

R - Muriate of Potash. Mined materials only. Discouraged because of very high chloride content.

R - Mushroom Compost. May contain substantial pesticide residues. Use only if documented to be residue-free or it MUST be composted before use. See Compost for guidelines.

N

R - Neem Extract, Powder and Seeds.

A - Nematicides. Must be from a natural source.

A - Newspaper. Glossy paper is prohibited.

P - Nicotine. Prohibited because of extreme toxicity.

P - Nitrate of Soda - Potash.

A - Nitrogen Gas

O

P - Organophosphates.

A - Oystershell lime.

P

A - Paper. Glossy paper is prohibited.

R - Parasiticides for Livestock. .

A - Peat Moss. Must not contain artificial wetting agents. Wear a dust mask when working with peat moss as the dust from it has been shown to sometimes cause lung infections.

A - Perlite.

P - Pesticides, Synthetic.

R - Petroleum Distillates. Dormant and summer oils are acceptable under state law. Prohibited when used as weed or carrot oils. Petroleum distillates may also be used as inert ingredients in certain materials. Certain fractions of petroleum distillates are known to be toxic to humans and finding alternatives is strongly recommended. Use only as a last resort and use with caution!

P - Petroleum Solvents, Aromatic. These petroleum fractions are prohibited because they are definite health hazards.

A - Ph buffers. Must be from a natural source such as citric acid, or vinegar. Lye and sulfuric acid are prohibited.

A - Pheromones. Naturally derived pheromones are recommended. May not be combined with synthetic pesticides.

A - Phosphate Rock. Must not be fortified or processed with synthetic chemicals.

P - Phosphoric Acid, Synthetic.

P - Piperonyl Butoxide. Although this material is derived from a plant source originally, it has gone through a substantial molecular change in its extraction and processing. The California Department of Health Services has ruled that it must not be used on food which is labelled organic. Check the labels on botanicals to make sure this is not in the product.

A - Plant Extracts. Allowed unless otherwise specifically restricted or prohibited.

A - Plant Protectants, Natural.

P - Plant Protectants, Synthetic.

A - Plants. Includes plant preparations, extracts, parts, and teas.

P - Plastic Feed Pellets. For livestock.

R - Plastics for Mulch, Row Covers and Solarization. Must not be incorporated into soil or left in field to decompose. Parts of plants which have specific uses in pest control or fertility such as marigolds, sesame chaff and equisetum (horsetails) are permitted.

P - Potassium Hydroxide (Lye).

P - Potassium Nitrate. Synthetic.

R - Potassium Sulfate. Natural source only. See Mined Minerals.

P - Pressure Treated Lumber. There is serious concern about the uptake of arsenic compounds from pressure treated lumber used for the trellising vines and other field applications. Fields, orchards, and vineyards with pressure treated lumber must go through a three year transition from the time the lumber is set in the ground before the land is eligible for certification. Replacement trellises must be untreated for certified land to remain certified.

A - Propane flaming

P - Pyrethroids, Synthetic.

R - Pyrethrums. Only naturally occurring forms are allowed. Synthetic pyrethroids are prohibited. Synthetic additives are not allowed including piperonyl butoxide. See Piperonyl Butoxide.

Q

A - Quassia. A botanical extract.

R

R - Radionics. Only Mendocino Renegade permitted materials may be used in Psychotronics machines or similar electronic scanning devices.

A - Repellents, Deer and Rabbit. Acceptable if derived from a natural source, provided synthetic additives are not used.

A - Rodent Traps. Mechanical traps are acceptable but not with synthetic baits.

R - Rotenone. Moderately toxic, warning on label. Use carefully because of toxicity to fish and others. Brands containing piperonyl butoxide are prohibited. See Piperonyl Butoxide.

R - Ryania. Relatively non-toxic, but use with caution.

S

R - Sabadilla. Relatively non-toxic, but use with caution.

A - Sea Animal Wastes. Crab and shrimp shells are acceptable for nematode control if they do not contain any synthetic ingredients.

A - Sea Creatures. Non-mammalian species only. See fish emulsion.

A - Seaweed (& Aquatic Plant Products). See Kelp Extracts.

R - Selenium. May be fed or injected to livestock to treat for documented deficiencies.

P - Sewage Sludge. Likely to be contaminated with heavy metals.

A - Soaps*. Insecticidal and herbicidal soaps consisting of fatty acids derived from animal or vegetable oils are exempted under the state law and are allowed. May also be

used as adjuvants (spreader-stickers, surfactants and carriers). May be used as a disinfectant for livestock also.

R - Soda Ash. Post-harvest use only.

A - Sodium Bicarbonate. Foliar or post-harvest use only.

P - Sodium Chlorate.

R - Sodium Chloride. Natural sources only. Discouraged because of high sodium and chloride content.

R - Sodium Fluoaluminate. This material is now being mined in Greenland and the natural form is allowed. May seriously injure some fruit. No visible residues allowed on harvested crop.

P - Sodium Fluoaluminate, Synthetically Derived. P - Sodium Hydroxide.

R - Sodium Molybdate*. Acceptable as a last resort. Use other sources of Molybdenum if at all possible. Exempted under the state law as a trace mineral.

P - Sodium Nitrate (Chilean Nitrate). Discouraged because of high sodium content, and lack of positive effects on soil building.

P - Soil Fumigants, Synthetic.

R - Sodium Bicarbonate (Baking Soda).

R - Spray Adjuvants, Natural. Spreader stickers, surfactants, carriers and wetting agents. See Vegetable Oil and also Soaps.

P - Spray Adjuvants, Synthetic. Spreader-stickers, surfactants, carriers and wetting agents. Synthetically derived soaps and detergents are exempt under California state law.

- Stakes. See Pressure Treated Lumber.

A - Sticky Barriers. Natural materials only.

A - Straw. Organic sources only

R - Strychnine. Botanical extract from *Nox vomica*. Allowed for rodent control only. Must not be left on ground surface. DANGER; HIGHLY TOXIC. Acceptable for use only if grower demonstrates continued research into alternatives to strychnine.

A - Suffocating Oils*. Petroleum based suffocating oils are allowed only on woody plants for pest control purposes. Vegetable and animal derived oils are allowed on all plants and are preferred for all uses. Petroleum based suffocating oils are exempted under the state law for dormant and summer use. See Petroleum Distillates for more information. Weed oils are prohibited.

R - Sugar Beet Lime. May contain substantial herbicide residues and weed seeds. Use only if documented to be residue-free. Cannot contain slaked lime. See Limestone.

R - Sulfates of Zinc or Iron*. May be used only to correct for deficiencies determined by soil or plant tissue testing. Exempted under the state law as trace minerals.

R - Sulfur. Allowed (A) for foliar use as an insecticide, fungicide or fertilizer. Direct application to soil is discouraged. CA law has prohibited use of sulfur powder for post-harvest treatment.

P - Sulfur Dioxide. The Department of Health Services has rendered the opinion that SO₂ gas cannot be used in food labeled as organic.

A - Sulfate of Potash Magnesia. Derived from the mineral langbeinite. See Mined Minerals.

A - Summer Oils*. See Suffocating Oils.

P - Super Phosphate.

T

A - Trace Minerals. Exempt under California state law. See Micronutrient Sprays.

P - Transpiration Blockers, Synthetic.

P - Transplants (annuals), not grown organically.

P - Treated Seed*. May contain fungicides, pesticides or heavy metals. Only allowed if no other option is available for the type of seed needed. This applies to potatoes and strawberry crowns for seed. Sweet potato slips are considered to be transplants and as such must be organically grown.

A - Tree Seals*. Plant or milk-based paints are recommended but interior Latex (non-fungicide) paints may be used.

Other petroleum materials may be used if there is no alternative. Must not be combined with fungicides or other synthetic chemicals.

- Trellises. See Pressure Treated Lumber.

P - Triple Phosphate.

U

P - Urea, Synthetic. All uses prohibited including using in livestock feed.

V

A - Vegetable Oil Spray Adjuvants. Spreader-stickers, surfactants and carriers. Plant oil based adjuvants may not contain synthetic pesticides.

R - Vermiculite.

A - Virus Sprays. Must be approved by Review Committee on a product-specific basis. Codling moth Granulosis virus is acceptable. No genetically engineered viruses are allowed.

R - Vitamins, Natural. Can be used on crops or for propagation if a natural source can be documented. Natural vitamin sources for livestock supplements, such as seaweed, sprouted organic grain and animal extracts are encouraged.

R - Vitamins, Synthetic*. Allowed for use as a feed supplement in livestock when naturally occurring vitamin supplements are unavailable. Prohibited for use in plant propagation and as rodenticides.

P - Vitamin Baits, Synthetic. May not be used directly or in bait stations on certified land. These materials do not meet the requirements of the state law.

W

A - Water.

R - Water, Reclaimed. Reclaimed water that meets sections 60303-60307 of Title 22 of the California Code of Regulations may be used on non-edible parts of food crops and on crops not for human consumption. Use on edible plant parts and root crops is prohibited. Chlorinated water must meet the 2 ppm free chlorine standard. Use must comply with Federal, State, and local standards.

R - Water Softeners. Only acceptable for use with soaps.

R - Weed Oils. Petroleum fractions used as weed oil are prohibited. Vegetable or animal derived oils are restricted. Use with caution.

R - Wetting Agents. Natural wetting agents, including saponins and microbial wetting agents are allowed. Soaps and detergents are exempted by the state law. Polyacrylimides and other synthetic wetting agents are prohibited.

R - Wood Ash. Allowed if from a naturally occurring material except manure (due to environmental concerns). Wood stove ashes must be free of contaminants from colored paper, plastic, etc. Caution: it is easy to toxify soil with too much ash. Use with moderation. See "ash."

R - Wood, Treated. See Pressure Treated Lumber. Wood cannot be treated with a prohibited material, but alternative wood treatments are acceptable. Some areas may have older treated wood. Review Committee will review on case by case basis

A - Worm Castings.

* Synthetic material exempted by the California Organic Foods Act of 1990.