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The Twelve Basic Rules of Organic Production: An Introduction and Summary of the USDA NOP Final Rule Governing Organic Production in the U.S.

Introduction

This guide is meant to be a quick reference and a greatly abridged summary of the USDA NOP organic regulations which govern organic production in the U.S. It is no substitute for reading the regulation itself. It is intended to lay out the basics of organic production under the regulation. There are additional detailed provisions in the regulation that may or may not apply to your operation. Do not rely on this guide as a substitute for reading the regulation itself.

The Twelve Basic Rules of Organic:

1. To Represent Your Product as Organic You Must Be Certified.

Section 205.100 of the USDA NOP organic regulations require that to sell or represent agricultural products as organic, a producer must be certified by a USDA accredited certifying agent who verifies that the product was produced in accordance with the regulations. There are exemptions for operations who have \$5,000 or less in organic sales, but there are requirements and restrictions for operations which are exempt. Even operations with \$5,000 or less in organic sales will have a hard time marketing their product unless it is marketed direct to consumers such as at a farmer's market.

2. You Must Keep Detailed Records.

Section 205.103 of the USDA NOP organic regulations require that operations producing organic agricultural products must keep records which fully disclose all activities and transaction in sufficient detail to be easily understood and audited and which demonstrate compliance with the regulations. Records must be kept for 5 years, and must be made available to the USDA, state regulators, and the certifier. Typical records kept to demonstrate compliance include all invoices and sales receipts for

fertilizers, seeds, pesticides, and other products used, logs of activities such as planting, weeding, applications of inputs, and harvest, as well as sales records and sales receipts.

3. You Must Not Use Synthetic Substances (Unless . . .)

Section 205.105 of the regulation prohibits the use of most synthetic fertilizers, pesticide, herbicides, and other chemicals. There are some very limited exceptions listed in the regulation. This prohibition applies to seed treatments and other uses of chemicals which might not readily come to mind. Always get approval from your certifier before you apply anything that might contain a synthetic chemical.

4. You Must Not Use Prohibited Natural Products

Most of the time natural products are allowed in organic production, but there are some products which although natural, have been prohibited in organics. Section 205.105 prohibits the use of natural products which have been specifically listed in the regulation. Always check with your certifier before you apply any chemical or product to make sure that it is allowed.

5. You Must Not Use “Excluded Methods” aka “Genetically Modified Organisms” or “Genetically Engineered Organisms”

Genetically modified organisms (“GMOs”) and genetically engineered organisms (“GE”) both refer to the same thing---organisms which have been modified on a genetic level using some specified technologies as listed in the regulation. This includes commonly used GMO seeds, as well as some GMO inoculants, as well as any other crop input which contains GMO ingredients. Always check with your certifier before you apply any product to make sure that it is allowed. GMO and GE organisms are prohibited in section 205.105 of the regulation.

6. You Must Not Use Sewage Sludge

This one sounds easy, but you may be surprised. Some fertilizers, including some that are labeled as “organic” are in fact made using treated sewage sludge and bio-solids. Section 205.105 of the regulation prohibits the use of sewage sludge and bio-solids.

7. You Must Not Use Irradiation or Ionizing Radiation

Irradiation of harvested crops has become more common as a way to prevent food borne illness. However, in organics it is prohibited. The regulation references a specific technical definition of what constitutes ionizing radiation, so if you have questions . . . contact your certifier. Section 205.105 of the regulation prohibits the use of ionizing radiation in organic operations.

8. You Must Have Three Years Free of Prohibited Substances Before Certification

Section 205. 202 of the regulation requires that for land to be certified organic, it must have been free of the application of prohibited substances for three years at the time of the first harvest. This means

that at the time of the first harvest of organic products, three years must have passed since the last time that any of the prohibited substances were applied to the land. The three year time frame is verified through a combination of affidavits, records, and in some cases, soil and tissue samples.

9. You Must Have a Soil Fertility and Crop Nutrient Management Plan in Place

Section 205.203 requires that an operation wishing to get or stay certified must have a soil fertility and crop nutrient management plan in place which uses, as applicable, tillage and cultivation practices which maintain or improve the condition of the soil and minimizes erosion, which uses (as applicable) crop rotations, cover crops, and the use of approved inputs for fertility. Additionally, the plan must maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances. Specific rules apply to the use of manure and compost. Burning of crop residues in the field is generally prohibited, but it can be used when it is used to suppress the spread of disease or when used to stimulate seed germination. The good news is that the application you use to apply for certification will, in most cases, function as your plan and address all of these points by asking you a series of relevant questions.

10. You Must Use Organic Seeds When Available and Cannot Use Treated Seeds

Section 205.204 of the regulation requires the use of organic seeds, unless they are not commercially available in the quantity, form, or quality required by the operation. If not commercially available, non-organic seeds can be used, but the operator has to document and prove that organic varieties of the seed were not commercially available. Seeds treated with a prohibited synthetic cannot be used in organic production. Similar rules apply to planting stock and bedding plants, and perennials. Check with your certifier before you use any seed or planting stock to make sure that it is allowed.

11. You Must Use Approved Methods for Pest, Weed, and Disease Management

Section 205.206 of the regulation requires that pests, weeds, and disease management must be conducted in a specific fashion. Generally, operations must focus primary efforts to prevent pests, weeds, and disease in crops on crop rotation, soil fertility and crop nutrient practices, sanitation and habitat management, and cultural practices such as choosing resistant varieties of crops. Additional measures can be undertaken including, for pests, the introduction of predators and parasites, development of habitat for enemy species, and non-synthetic lures, traps, and repellants. Additional measures which can be used for weed management include mulching with bio-degradable materials (plastic mulch can be used if fully removed at the end of the growing season), mowing, livestock grazing, hand or mechanical weeding and cultivation, the use of flame, heat, or electrical means. Additional disease management practices that can be used include the use of general management practices which reduce the spread of disease or the use of non-synthetic biological, botanical, or mineral inputs. If the previously listed methods of controlling pests, weeds, or disease are insufficient to manage pests,

weeds, or disease, biological, botanicals, and approved synthetic materials listed in the regulation can be used, as long as the conditions for use are documented and approved by the certifier.

12. Organic Production Areas Must Have Distinct, Defined Boundaries, and Buffer Zones

Section 205.202 of the regulation requires that fields or farm parcels that will produce certified organic products must have distinct and defined boundaries. This means that it must be clear to an observer where the organic fields begin and end. This can be accomplished through fences, signs, or other methods, but the fields and production areas must be clearly defined so that the boundaries of the certified organic production area are distinct. Additionally, depending on the surrounding land use, there must be adequate buffer zones to prevent contamination of organic crops with prohibited substances from surrounding land use. Buffer zones can include space and distance, ditches, hedgerows, or other features that reduce the likelihood of unintentional contamination from surrounding land use. There is no hard and fast rule about what makes an adequate buffer. A lot depends on the surrounding land use. An organic field surrounded by conventional fields where aerial spraying takes place will have to have significantly stronger buffer zones and features to meet the regulation than will a farm which is surrounded on three sides by a conservation area where no agriculture takes place. The sufficiency of buffer zones and features is decided by the certifier on a case by case basis.

Input Guidelines, or So What *Can* I Use?

Making sure you can use a specific product *before* you use it, is one of the most critical steps of becoming or staying certified as an organic producer. Get this wrong and you lose certification or you lose the ability to get certified and have to start back with a long three year wait to try again. And of course, this is also one of the most confusing aspects of the regulation. Where can one look to find organic approved inputs? The following guidelines should help.

1. CHECK THE REGULATION! Sections 205.601, Synthetic Substances Allowed for Use in Organic Crop Production, and 205.602, Nonsynthetic Substances Prohibited for Use in Organic Crop Production are the relevant lists to review. If you do not have a hard copy of the standards, they can be viewed online by first going to the USDA NOP website at www.ams.usda.gov/nop, then look for the link on the right which reads "Regulations".
2. ASK YOUR CERTIFIER!!!! Part of their job is to approve inputs for use in organic production, so make them earn their money. It can take a long time to conduct this review however, so look at the rest of the guidelines first. There might be an easier way.
3. CHECK TO SEE IF YOUR CERTIFIER RECOGNIZES OTHER CERTIFIERS' OR OTHER ORGANIZATIONS' MATERIAL REVIEW DETERMINATIONS: There are many great and reputable certifiers and at least one

other organization which makes their material review determinations public. See if your certified accepts the determinations of any of the following organizations. If they do, you can use the organizations' publicly available lists of approved products to see what products you can use. If you do this however, still check with your own certifier before use, because it's YOUR certification at stake!

Organic Materials Review Institute (OMRI) has maintained a publicly available list of substances and products (by generic or name brand) on their website at www.omri.org. Not a certifier, but one of the most highly respected materials review programs in the world when it comes to the USDA NOP organic regulations.

Washington State Department of Agriculture (WSDA) is a highly respected accredited certifying agent which makes its material review determinations available to the public on its website at <http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>. Most certifiers, including OIA North America recognize the materials review determinations of the WSDA program.

4. CHECK WITH YOUR CERTIFIER!! Regardless of what you think you know, or what someone has told you, always check with your certifier to make sure a product is allowed before you use it. The consequences of being wrong are high. Contact your certifier!

205.601, Synthetic Substances Allowed for Use in Organic Crop Production

As of January 7, 2010

In accordance with restrictions specified in this section, the following synthetic substances may be used in organic crop production: *Provided*, That, use of such substances do not contribute to contamination of crops, soil, or water. Substances allowed by this section, except disinfectants and sanitizers in paragraph (a) and those substances in paragraphs (c), (j), (k), and (l) of this section, may only be used when the provisions set forth in §205.206(a) through (d) prove insufficient to prevent or control the target pest.

(a) As algicide, disinfectants, and sanitizer, including irrigation system cleaning systems.

- (1) Alcohols.
 - (i) Ethanol.
 - (ii) Isopropanol.
- (2) Chlorine materials— *Except*, That, residual chlorine levels in the water shall not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act.
 - (i) Calcium hypochlorite.
 - (ii) Chlorine dioxide.
 - (iii) Sodium hypochlorite.
- (3) Copper sulfate—for use as an algicide in aquatic rice systems, is limited to one application per field during any 24-month period. Application rates are limited to those which do not increase baseline soil test values for copper over a timeframe agreed upon by the producer and accredited certifying agent.
- (4) Hydrogen peroxide.
- (5) Ozone gas—for use as an irrigation system cleaner only.
- (6) Peracetic acid—for use in disinfecting equipment, seed, and asexually propagated planting material.
- (7) Soap-based algicide/demossers.

(b) As herbicides, weed barriers, as applicable.

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

(2) Mulches.

(i) Newspaper or other recycled paper, without glossy or colored inks.

(ii) Plastic mulch and covers (petroleum-based other than polyvinyl chloride (PVC)).

(c) As compost feedstocks—Newspapers or other recycled paper, without glossy or colored inks.

(d) As animal repellents—Soaps, ammonium—for use as a large animal repellent only, no contact with soil or edible portion of crop.

(e) As insecticides (including acaricides or mite control).

(1) Ammonium carbonate—for use as bait in insect traps only, no direct contact with crop or soil.

(2) Boric acid—structural pest control, no direct contact with organic food or crops.

(3) Copper sulfate—for use as tadpole shrimp control in aquatic rice production, is limited to one application per field during any 24-month period. Application rates are limited to levels which do not increase baseline soil test values for copper over a timeframe agreed upon by the producer and accredited certifying agent.

(4) Elemental sulfur.

(5) Lime sulfur—including calcium polysulfide.

(6) Oils, horticultural—narrow range oils as dormant, suffocating, and summer oils.

(7) Soaps, insecticidal.

(8) Sticky traps/barriers.

(9) Sucrose octanoate esters (CAS #s—42922–74–7; 58064–47–4)—in accordance with approved labeling.

(f) As insect management. Pheromones.

(g) As rodenticides.

(1) Sulfur dioxide—underground rodent control only (smoke bombs).

(2) Vitamin D₃.

(h) As slug or snail bait. Ferric phosphate (CAS # 10045–86–0).

(i) As plant disease control.

(1) Coppers, fixed—copper hydroxide, copper oxide, copper oxychloride, includes products exempted from EPA tolerance, *Provided*, That, copper-based materials must be used in a manner that minimizes accumulation in the soil and shall not be used as herbicides.

(2) Copper sulfate—Substance must be used in a manner that minimizes accumulation of copper in the soil.

(3) Hydrated lime.

(4) Hydrogen peroxide.

(5) Lime sulfur.

(6) Oils, horticultural, narrow range oils as dormant, suffocating, and summer oils.

(7) Peracetic acid—for use to control fire blight bacteria.

(8) Potassium bicarbonate.

(9) Elemental sulfur.

(10) Streptomycin, for fire blight control in apples and pears only.

(11) Tetracycline (oxytetracycline calcium complex), for fire blight control only.

(j) As plant or soil amendments.

(1) 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.

(2) Elemental sulfur.

(3) Humic acids—naturally occurring deposits, water and alkali extracts only.

(4) Lignin sulfonate—chelating agent, dust suppressant, floatation agent.

(5) Magnesium sulfate—allowed with a documented soil deficiency.

(6) Micronutrients—not to be used as a defoliant, herbicide, or desiccant. Those made from nitrates or chlorides are not allowed. Soil deficiency must be documented by testing.

(i) Soluble boron products.

(ii) Sulfates, carbonates, oxides, or silicates of zinc, copper, iron, manganese, molybdenum, selenium, and cobalt.

(7) Liquid fish products—can be pH adjusted with sulfuric, citric or phosphoric acid. The amount of acid used shall not exceed the minimum needed to lower the pH to 3.5.

(8) Vitamins, B₁, C, and E.

(k) As plant growth regulators. Ethylene gas—for regulation of pineapple flowering.

(l) As floating agents in postharvest handling.

(1) Lignin sulfonate.

(2) Sodium silicate—for tree fruit and fiber processing.

(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.

(1) EPA List 4—Inerts of Minimal Concern.

(2) EPA List 3—Inerts of Unknown Toxicity allowed:

(i) Glycerine Oleate (Glycerol monooleate) (CAS #s 37220–82–9)—for use only until December 31, 2006.

(ii) Inerts used in passive pheromone dispensers.

(n) Seed preparations. Hydrogen chloride (CAS # 7647–01–0)—for delinting cotton seed for planting.

(o)–(z) [Reserved]

[65 FR 80637, Dec. 21, 2000, as amended at 68 FR 61992, Oct. 31, 2003; 71 FR 53302 Sept. 11, 2006; 72 FR 69572, Dec. 10, 2007]

**§ 205.602 Nonsynthetic substances prohibited for use in organic crop production.
As of January 7, 2010**

The following nonsynthetic substances may not be used in organic crop production:

(a) Ash from manure burning.

(b) Arsenic.

(c) Calcium chloride, brine process is natural and prohibited for use except as a foliar spray to treat a physiological disorder associated with calcium uptake.

(d) Lead salts.

(e) Potassium chloride—unless derived from a mined source and applied in a manner that minimizes chloride accumulation in the soil.

(f) Sodium fluoaluminate (mined).

(g) Sodium nitrate—unless use is restricted to no more than 20% of the crop's total nitrogen requirement; use in spirulina production is unrestricted until October 21, 2005.

(h) Strychnine.

(i) Tobacco dust (nicotine sulfate).

(j)–(z) [Reserved]

[68 FR 61992, Oct. 31, 2003]

WHO WE ARE

OIA North America is accredited by the USDA National Organic Program to Provide Organic Certification. Additionally, through relationships with the OIA family of companies OIA North America can also provide access to European Union organic certification, IFOAM organic certification, JAS (Japan) organic certification, and access to markets worldwide. Contact us for information about our international programs.