

## **Water Quality Enhancement Activity – WQL20 – *Transition to Organic Cropping Systems***

### **New Jersey Addendum**

#### **Enhancement Description**

Transition to Organic Cropping Systems supports the conversion of a conventional to an organic cropping system. Key to the enhancement is the inclusion of management activities that improve soil and water quality in an “Organic System Plan” that adheres to the National Organic Program (NOP) 205.201 criteria. **The cited regulations are attached. Also see NOP website at: <http://www.ams.usda.gov/AMSV1.0/NOP>.** Included in the plan are specifics on how producers will manage pests, weeds, diseases, and plant nutrients by following a crop rotation that incorporates cover crops. Additional considerations for using manure, compost, and source of seed are also addressed.

#### **Land Use Applicability**

This enhancement is applicable on cropland.

#### **Benefits**

Environmental benefits will be operation specific. Benefits may include, but are not limited to improving soil quality through reduced erosion, increased organic matter, and balancing plant nutrients; and reducing impact of the farming operation on water quality achieved by managing pests, weeds, and diseases using biological, mechanical, and/or physical practices that eliminate the need for synthetic pesticides.

#### **Criteria for Transition to Organic Cropping Systems**

- Implement a crop rotation that improves soil quality using a sod-based rotation, inclusion of high residue crops, addition of cover crops during non crop periods, reduced tillage, and/or other soil improving practices.
- Manage plant nutrients using agronomic practices such as cover crops to provide or trap nutrients and/or a crop rotation that mixes high and low nutrient feeding crops.
- Incorporate manure when applied within the time limit specified in the NOP 205.203c1.
- Compost manure and plant material for plant nutrient use according to NOP 205.203c2 before land application.
- Apply additional plant nutrient supplements to ensure they do not contribute to contamination of crops, soil, or water by following criteria in NOP 205.203d & e.
- Manage pests through a strategy that incorporates:
  - prevention management practices e.g. crop rotation, sanitation measures and selection of resistant crop varieties
  - scouting and monitoring
  - suppression by using biological, mechanical, or physical practices (e.g. introduction of predators or parasites of the pest species, cultivation or weed flaming, mulching).
- Apply all materials, including plant nutrients and pesticides for crop production in accordance with the National List of Allowed Synthetic and Prohibited Natural Substances.

- Apply no prohibited substances, as listed in NOP §205.105 to the land for a period of 3 years immediately preceding harvest of the crop.
- Establish distinct, defined boundaries and buffer zones between fields and adjacent lands to prevent the unintended application of a prohibited substance to the crop or contact with a prohibited substance applied to adjoining land that is not under organic management.
- Complete organic transition within three (3) years as verified by obtaining an approved Organic System Plan from a valid certifying agency.

### **Documentation Requirements for Transition to Organic Cropping Systems**

1. Written narrative of practices used to:
  - Improve soil quality including crop rotation, cover crops and other associated practices
  - Provide plant nutrients
  - Control pests in the cropping system
2. Map showing field boundaries and buffer zones
3. A record of the application of inputs according to the NOP rules, e.g., type, date, rate, and amount of allowed nutrients and pesticides
4. Documentation of practices applied and steps taken to receive organic certification based on consultation with an accredited organic certifier
5. Copy of the Organic System Plan when approved by certifying agent

### **Cited NOP Regulations**

#### **§ 205.105 Allowed and prohibited substances, methods, and ingredients in organic production and handling.**

To be sold or labeled as “100 percent organic,” “organic,” or “made with organic (specified ingredients or food group(s)),” the product must be produced and handled without the use of:

- (a) Synthetic substances and ingredients, except as provided in §205.601 or §205.603;
- (b) Nonsynthetic substances prohibited in §205.602 or §205.604;
- (c) Nonagricultural substances used in or on processed products, except as otherwise provided in §205.605;
- (d) Nonorganic agricultural substances used in or on processed products, except as otherwise provided in §205.606;
- (e) Excluded methods, except for vaccines: *Provided*, That, the vaccines are approved in accordance with §205.600(a);
- (f) Ionizing radiation, as described in Food and Drug Administration regulation, 21 CFR 179.26; and
- (g) Sewage sludge.

#### **§ 205.201 Organic production and handling system plan.**

- (a) The producer or handler of a production or handling operation, except as exempt or excluded under §205.101, intending to sell, label, or represent agricultural products as “100 percent organic,” “organic,” or “made with organic (specified ingredients or food group(s))” must develop an organic production or handling system plan that is agreed to by the producer or handler and an accredited certifying agent. An organic system plan must meet the requirements set forth in this section for organic production or handling. An organic production or handling system plan must include:

- (1) A description of practices and procedures to be performed and maintained, including the frequency with which they will be performed;
  - (2) A list of each substance to be used as a production or handling input, indicating its composition, source, location(s) where it will be used, and documentation of commercial availability, as applicable;
  - (3) A description of the monitoring practices and procedures to be performed and maintained, including the frequency with which they will be performed, to verify that the plan is effectively implemented;
  - (4) A description of the recordkeeping system implemented to comply with the requirements established in §205.103;
  - (5) A description of the management practices and physical barriers established to prevent commingling of organic and nonorganic products on a split operation and to prevent contact of organic production and handling operations and products with prohibited substances; and
  - (6) Additional information deemed necessary by the certifying agent to evaluate compliance with the regulations.
- (b) A producer may substitute a plan prepared to meet the requirements of another Federal, State, or local government regulatory program for the organic system plan, provide that the submitted plan meets all the requirements of this subpart: NOP 205.230c1

**§ 205.203 Soil fertility and crop nutrient management practice standard.**

- (c) The producer must manage plant and animal materials to 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. Animal and plant materials include:
- (1) Raw animal manure, which must be composted unless it is:
    - i. Applied to land used for a crop not intended for human consumption;
    - ii. Incorporated into the soil not less than 120 days prior to the harvest of a product whose edible portion has direct contact with the soil surface or soil particles; or
    - iii. Incorporated into the soil not less than 90 days prior to the harvest of a product whose edible portion does not have direct contact with the soil surface or soil particles; NOP 205.203c2
  - (2) Composted plant and animal materials produced through a process that:
    - i. Established an initial C:N ratio of between 25:1 and 40:1; and
    - ii. (ii) Maintained a temperature of between 131 °F and 170 °F for 3 days using an in-vessel or static aerated pile system; or
    - iii. (iii) Maintained a temperature of between 131 °F and 170 °F for 15 days using a windrow composting system, during which period, the materials must be turned a minimum of five times.

**NOP 205.203d & e**

- (d) A producer may manage crop nutrients and soil fertility to 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 by applying:
- (1) A crop nutrient or soil amendment included on the National List of synthetic substances allowed for use in organic crop production;
  - (2) A mined substance of low solubility;

- (3) A mined substance of high solubility: *Provided*, That, the substance is used in compliance with the conditions established on the National List of nonsynthetic materials prohibited for crop production;
  - (4) Ash obtained from the burning of a plant or animal material, except as prohibited in paragraph (e) of this section: *Provided*, That, the material burned has not been treated or combined with a prohibited substance or the ash is not included on the National List of nonsynthetic substances prohibited for use in organic crop production; and
  - (5) A plant or animal material that has been chemically altered by a manufacturing process: *Provided* that the material is included on the National List of synthetic substances allowed for use in organic crop production established in §205.601.
- (e) The producer must not use:
- (1) Any fertilizer or composted plant and animal material that contains a synthetic substance not included on the National List of synthetic substances allowed for use in organic crop production;
  - (2) Sewage sludge (biosolids) as defined in 40 CFR part 503; and
  - (3) Burning as a means of disposal for crop residues produced on the operation: *Excep*, that burning may be used to suppress the spread of disease or to stimulate seed germination.