Navigating the National Organic Program (NOP)

Organic Crops

Contents

Acknowledgements

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1. Introduction

Organic agriculture means many things to many people. The most widely used definition, and one that has been adopted by the National Organic Standards Board, is "an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony."

As the organic industry expanded during the 1980s, differences among certifier standards, barriers to trade, and incidents of fraudulent marketing led many to believe that more regulation was needed. In 1990, Congress passed the Organic Foods Production Act (OFPA). The OFPA mandated creation of the National Organic Program (NOP) and an advisory body, the National Organic Standards Board (NOSB). The OFPA paved the way for creating a single set of US standards for organic production, labeling, and marketing, which now exists in the form of the National Organic Program (NOP).

The Maryland Department of Agriculture Organic Certification Program (MOCP) was accredited by the USDA for compliance with the NOP in 2002. Prior to this national accreditation, Maryland had a state organic program with its own requirements established by state regulations. ***Navigating the National Organic Program (NOP) -- Organic Crops*** was created to address frequently asked questions regarding crop production from organic operations in Maryland. Throughout this guide, you'll see reference to numbers, i.e. §205.204. These are the section numbers as they relate to the NOP. MOCP will be creating a *Navigating the National Organic Program (NOP)--Livestock* in the near future. If there are other issues that need to be addressed in this document, please notify the Organic Certification Program Manager.

2. Certification

As mentioned earlier, certification under the National Organic Program (NOP) is required to label, represent, and market products as organic. Producers can obtain certification from a state certifier, such as MOCP, or private certifiers that are accredited by the National Organic Program. Under the NOP regulations, all operations or portions of operations that produce or handle agricultural products that are intended to be sold, labeled, or represented as organic must be certified. Non-certified producers who represent themselves or their products as organic risk prosecution and fines. The only exemption is for producers with organic sales of less than $5,000.00 annually.

In addition to the NOP regulation of substances used in organic processing and handling, other Federal, State, and local laws and regulations apply to protect food safety and public health. The authority of these laws supersedes any organic standards and organic producers must comply with these other laws pertaining to their organic operation. Other applicable laws do not provide exemption for use of prohibited substances. It is important to recognize that organic certification addresses the *process* involved in producing and handling a product. Organic certification is *voluntary* and it assures the consumer that the product was grown using organic methods, and no synthetic pesticides, fertilizers, and genetically engineered organisms were used in production, and that precautions were taken to prevent contamination from the outside.

Exemption

Producers who market less than $5,000.00 of organic products annually are not required to apply for organic certification, they are considered "exempt." They must, however, comply with the organic production and handling requirements of the NOP. The products from such non-certified operations cannot be used as organic ingredients in processed products produced by another operation; such non-certified products are also precluded from displaying the USDA organic seal. In Maryland, a producer can register its exempt operation with MOCP for an annual fee of $25.00.

Transition
A three-year conversion period is required to achieve full organic status for crops. In other words, no prohibited substances may be applied to the land for 36 months prior to the harvest of any product that will be labeled or otherwise represented as organic [§205.202(b)].

Land Affidavit
If you are purchasing or renting land that is not currently certified and you wish to document that it has not had prohibited substances applied, you must provide a land use affidavit from the previous landowner or manager. If you are applying for the first time for certification of land that has already gone through transition, you must complete the land use verification form.

Inspection
Annual inspections are part of the certification process. The inspector is an agent of the MOCP. It is the inspector's responsibility to verify compliance with the NOP rule through a review of documentation and other indicators. The inspector must have complete access to the operation, including all production facilities and offices [§205.400(c)]. Additional inspections may be announced or unannounced at the discretion of the MOCP [§205.403(a)(2)(iii)].

Continuing Certification
Once certification has been granted, it is granted in perpetuity unless surrendered, suspended, or revoked. For certification to continue, annual certification fees must be paid, the Organic Farm Plan must be updated yearly, and previous non-compliances must be addressed per the NOP §205.406. Any action to suspend or revoke certification must be handled in the manner prescribed per the NOP §205.660–§205.664. If the status of your certification is threatened and you wish to dispute it, the process for seeking mediation is specifically covered under §205.663.

3. Record Keeping - §205.103

Record keeping is a critical tool for organic crop production. The documentation of how and where a crop was raised, what products were applied and when, which container it was stored in, is very important to establishing the integrity of the product. If you cannot provide reasonable documentation that your crop was organically grown, that it has not been contaminated with chemicals, and that it has not been commingled with a similar conventional product, then certification may be questioned and possibly denied. Records must be available for inspection and be maintained for not less than 5 years beyond their creation. In addition to records required to be maintained for compliance with the NOP, all operations certified must maintain a complaint log as part of MDA's ISO Guide 65 Accreditation. A standard form has been developed by MDA that can be used to fulfill this requirement.

In your application, a checklist is provided to help you determine what needs to be attached to your application and what must be available to the inspector during your inspection.

Attach to Application

- Farm map as described in Section II.
- Soil test

- If new applicant or renewing applicant that is bringing in newly rented or purchased fields, field histories for previous 3 years and signed documentation of previous land use by owner for rented land or former owner of newly purchased land
- All MSDS's and product labels for any product identified in "The Medicine Chest" or soil amendments.

Required to be available during inspection

- Labels of all purchased inputs
- Materials Safety Data Sheets (MSDS) for all pest management materials
- Receipts\bills of lading for purchased inputs
- Field activity logs or journals and crop health monitoring observations
- Input records for soil amendments, seeds, manure, foliar feeding, pest management materials
- Compost production records
- Field history sheets for previous 3 years
- Documentation of efforts to source organic seed and\or planting stock if any non organic seed or planting stock is used.
- Documentation of organic seedlings
- Equipment cleaning records, if required (can be a part of field activity logs)
- Harvest records that show field numbers, date of harvest and harvest amounts
- Storage records that show storage location, storage identification, field numbers, amount stored, inventory control, and cleaning activities
- Clean transport records
- Sales records (purchase order, contract, invoice, cash receipts, cash receipt journal, sales journal) showing your ID system
- Transaction certificate
- Documentation of communication with managers of adjoining land that pose contamination risk

4. Compost Production & Manure Application – §205.203

Below is a summary of recommendations from the NOSB on compost production and manure application:

Standard Compost Production - must keep a log documenting your efforts

- Initial carbon to nitrogen ratio between 25:1 to 60:1
- Pile maintained for at least 60 days
- Minimum Temperature achieved of 131 ºF
- Temperature maintained for a minimum of 3 days after each major turning to incorporate materials from all parts of the pile

Vermicompost Production (Worm composting) – (NOSB Recommendation: http://www.ams.usda.gov/nosb/NOSBrecommendations/Compost.pdf)
NOSB recommended method and duration includes:

- Outdoor windrows (6-12 months)
- Angled wedge systems (2-4 months)
- Indoor container systems (2-4 months)
- Continuous flow reactors (30-60 days)

Are the following records maintained?

- Regular additions of organic matter
- Temperature maintained below 95°F
- Addition of moisture
- Number of months system is maintained

Compost vs. Animal Manure

If the NOP Rule is not followed and records not kept, then the "compost" is treated as raw manure regardless of its age and it needs to adhere to the federal and state manure application requirements.

- Incorporate into the soil a minimum of 120 days prior to harvest when the edible portion of the crop has soil contact, i.e. vegetables, especially crops like leafy greens, potatoes, carrots, radishes and non-staked tomatoes.
- Incorporate into the soil a minimum of 90 days prior to harvest of all other food crops.

Sources of Commercial Compost

- Some sources use sewer sludge which is not allowed in organic production
- Some sources use municipal lawn waste which may have herbicides that have not degraded – this can kill plants and build up residue

5. Certified Organic Seed and Planting Stock Procurement – §205.204

Per the NOP Rule §205.204, *the producer must use organically grown seeds, annual seedlings, and planting stock* (i.e. onion sets, potatoes, sweet potato slips, and strawberry plugs): Except.....

- *Nonorganically produced, untreated seeds and planting stock may be used to produce an organic crop when an equivalent organically produced variety is not commercially available, Except, That, organically produced seed must be used for the production of edible sprouts;*
- *that have been treated with a synthetic substance on the NOP list - and none are currently listed*.

In other words, certified organic producers need to demonstrate that they are seeking organic seed and planting stock. If the *Appropriate Form, Quality*, or *Quantity (see Commercial Availability)* of certified organic seed or planting stock is not commercially available to the producer, the producer needs to document that they could not find organic seed or planting stock.

Commercial Availability

The National Organic Standards Board (NOSB) made recommendations on the criteria of "commercial availability" and developed methods to document your search for organic seed and planting stock. Listed below are examples of commercial availability as it relates to onion sets, potatoes, sweet potato slips, and strawberry plugs:

- Appropriate Form - i.e. variety desired by your market or optimal for your climate, soil, pelleting, planting cycle, disease history
- Quality - i.e. seed germination rates, seed purity, experience with company
- Quantity - grams, ounces v bushels

1. In your application, under *Section III. Organic Farm Plan A. Seeds, Seedlings and Planting Stoc*k, you define the criteria for *Appropriate Form, Quality, or Quantity,* as it relates to your seed and planting stock. Price cannot be one of the criteria.

2. The organic industry is aware that there is not enough certified organic seed in the marketplace to satisfy the demand by organic farmers. You must present ample documentation (*due diligence)* to support your decision to use nonorganic seed, including a record of attempts to locate organic seed sources. This could entail records of phone calls, letters, or emails to and from seed suppliers documenting your attempts to find an organic source. You need to contact at least 3 seed suppliers. A table is provided in your application to indicate what seeds are not certified organic.

Treated vs Untreated Seed

Federal Seed Act requires that:

- If the seed is treated, the package must be labeled along with the treatment used and the seeds in the package must be dyed a distinctive color.
- If the seed is untreated, then it does not have to say anything about its treatment status.

If you buy your seed in bulk from a local store, the seed container needs to be labeled according to the Federal Seed Act. If the store cannot or will not provide a label, then contact MDA's Turf & Seed Division at (410) 841-5960.

Conventional Annual Transplants and Treated Seed

Conventional annual transplants and treated seed (there are no synthetic treatments on the National List) cannot be used on an organic operation, unless you want to select a specific area, row or field that would no longer be certified organic that you set aside as a part of your Organic Farm Plan for trying new varieties of seed that you can only get treated. These products would not be organic, but you can save the seed and you would have conventional, untreated seed for the following year that you developed specifically for your operation, then the products of that crop would be organic as long as they are planted in an organic field and managed organically.

Seed Sources

- The Alternative Technology Transfer to Rural Areas (ATTRA) has a list of suppliers that carry at least some certified organic seed, ATTRA can be reached on-line at www.attra.org.
- Save Our Seed has created a free certified organic seed sourcing service. They can be reached at http://www.savingourseed.org/pages/sourcing.htm.
- OMRI has also created a list of seed sources: http://www.omri.org/OMRI_SEED_list.html.
- Southern Exposure Seed Exchange - http://www.southernexposure.com/
- Seed Savers Exchange - http://www.seedsavers.org/Home.asp
- Harris Seeds - http://www.harrisseeds.com/
- Territorial Seed Company - http://www.territorial-seed.com/stores/1/index.cfm
- Fedco Co-Op Garden Supplies - http://www.territorial-seed.com/stores/1/index.cfm
- Johnny's Selected Seeds - http://www.johnnyseeds.com/
- Seeds of Change - http://www.seedsofchange.com/default.asp
- Pennsylvania Certified Organic has a list of seed suppliers – www.paorganic.org
- *A special thanks goes to Jill Adhern of Cromwell Valley CSA for sharing her organic seed list*.

Inoculants

They cannot be genetically modified inoculants and they cannot be grown on genetically modified substrate or irradiated substrate. You can get an affidavit for this from the manufacturer. If the manufacturer will not provide this information, please provide a label for the inoculant to the MOCP and the manufacturer will be contacted.

6. Material Selection Guidelines - § 205.600 – The National List

As a producer, you should read the appropriate sections of the National List, search MDA's pesticide registration database, review OMRI's List of materials, and when in doubt, talk to MOCP. Note that in addition to the NOP Rule regulating substances used in organic production, other Federal, State, and local laws and regulations do apply. The authority of these laws supersedes any organic standards and organic producers must also comply with these laws. Other applicable laws do not provide exemption for use of prohibited substances.

Many products and materials are represented as "natural" or "organically acceptable" might be not be allowed under federal organic standards. When considering commercial products, you need to be aware of all ingredients, including inerts, to determine that none are prohibited. If a full disclosure of ingredients is not found on the label, details should be obtained from the distributor or manufacturer. This would involve a lengthy process and you might be better off to obtain a different material. When in doubt about the acceptability of any material or product for certified organic production, contact MOCP.

The NOP National List of Allowed and Prohibited Substances is available at www.ams.usda.gov/nop/NOP/standards/ListReg.html.

The MDA's State Chemist regulates the sale and distribution of pesticides, animal feeds, pet foods, fertilizers, compost, soil conditioners and agricultural liming materials in order to enhance and promote agricultural production; protect consumers, animals and the environment from unsafe products; ensure the sale of effective products and provide the regulated industry with a competitive marketplace. The State Chemist section provides a searchable pesticide registration database, submitted by companies who wish their products to be sold in the state of Maryland and it's combined with data from the EPA with regard to ingredients, pests and sites. You can find the database at http://www.kellysolutions.com/md/.

Organic Materials Resource Institute (www.omri.org) is a non-profit organization that evaluates products for suitability in organic production and processing. OMRI does not have status as a regulatory body. It is a resource and its acceptability of commercial products are highly respected. You should be aware, however, that there are many acceptable products in the marketplace that have not been evaluated by OMRI and do not carry the OMRI Listed seal.

Pest and Disease Management Materials

The term *pesticides* refers to any agent used to kill or repel a pest; for example, insecticides kill insects,
fungicides kill fungi, and herbicides kill plants.

Usually, pesticides derived from natural materials or living organisms are allowed in organic production, *only* if they do not contain synthetic additives or are not specifically dis-allowed (or mentioned) in the National List under §205.602. Most synthetic pesticides are not allowed; few synthetic pesticides are allowed to be used in organic production and they can be found in the National List under §205.601. Consult with MDA's State Chemist list http://www.kellysolutions.com/md/pesticideindex.htm to be sure you are not planning to use a prohibited material.

There are several general classes of pesticides that cover most of the materials allowed in organic

production. The largest classes are botanicals, biologicals, oils, fatty acids, minerals, and pheromones.

- Botanicals: Botanical pesticides are those derived from plants. They include pyrethrum, rotenone, sabadilla, neem, ryania, and garlic. Strychnine and nicotine are also botanicals, but are expressly prohibited in organic production [§205.602(e) and §205.602(f)]. Since botanical pesticides are relatively non-selective and can affect both natural predators and parasites in the field, they should be used minimally. Botanicals can also affect other non-target organisms. Rotenone, for example, is highly toxic to fish.

- Biologicals: Biological pesticides contain disease organisms or toxins derived from disease organisms effective in pest control. Among the better known biologicals are Bacillus thuringiensis (Bt), Beauveria bassiana, Trichoderma harzianum, and Spinosad. Usually, biologicals are more selective and safer to use than botanical insecticides. However, insect pests have been observed to develop resistance to biologicals, as they have to most synthetic pesticides. Therefore, biologicals should also be used sparingly to preserve them as tools for the long term.

- Spray Oils: Vegetable- or animal-derived oils are generally allowed as suffocating (stylet) oils, summer oils, dormant oils, and surfactants. Also, some petroleum-derived oils, referred to as narrowrange oils, are allowed for the same purposes. Spray oils are commonly used to control scale and mite pests. Consult with MDA's State Chemist list http://www.kellysolutions.com/md/pesticideindex.htm to be sure you are not planning to use a prohibited form of pesticidal.

- Insecticidal Soaps: Fatty acid insecticidal soaps are synthetic pesticides specifically allowed in organic production [§205.601(e)(6)]. Insecticidal soaps can be hard on beneficial predatory mites, are mildly phytotoxic, and should be used with caution.

- Minerals: Mineral-based pesticides include sulfur, copper products, diatomaceous earth, and kaolin clay. Arsenic, lead, and sodium fluoaluminate are minerals that are specifically prohibited [§205.602(b), §205.602(c), and §205.602(d)]. While mineral-based pesticides are allowed, caution is required in their use. Sulfur can reduce the populations of some beneficial insects and may also burn plants if used during hot weather. Since copper may accumulate in some soils, monitoring of soil copper levels is advisable. Diatomaceous earth can cause respiratory problems in people and animals. Note also that some formulations of mineral products—particularly coppers—may not be allowed in organic production. Consult with MDA's State Chemist list http://www.kellysolutions.com/md/pesticideindex.htm and OMRI if uncertain.

- Pheromones: Pheromones are hormones generally used in products called mating disrupters. Being totally natural, the hormones themselves are allowed in organic production. However, most (perhaps all) commercial mating disrupter products contain List 3 inerts. Some of these inerts—BHT specifically—have been recommended for addition to the National List in the future. Because the status of mating disrupters is uncertain, consult MDA before using them.

Inert ingredients are often an issue with many of these pesticide classes. Please see below.

Inert Ingredients in Organic Pesticides - §205.601(m)(1)(2)
The Environmental Protection Agency provides four classifications of inert ingredients: List 1, List 2, List 3, and List 4.

- List 1 inerts are those known to be toxic
- List 2 inerts are those that are potentially toxic
- List 3 inerts are of unknown toxicity
- List 4 inerts are of minimal concern

At this time, the NOP allows the use of List 4 inerts only. Many natural pesticide products routinely used by organic producers prior to the implementation of federal regulation contained List 3 inert ingredients. Some many manufacturers have not reformulated their products, it is difficult for producers to know whether a product can or cannot continue to be used for organic production. Products that are OMRI Listed (www.omri.org) contain only List 4 inert ingredients and can be considered safe to purchase and use. Products that are not listed by OMRI
and that may contain unspecified inert ingredients should not be used without approval by the MDA or documentation from the manufacturer that the product contains only allowed inert and active ingredients.

How to find Registered Pesticides or Fertilizer-Pesticides Products in Maryland
Ways to check registration status
1.NPIRS State Registration Data Http://state.ceris.purdue.edu/
Click on state "MD"
Click on" Search Maryland Pesticide Data"
Search by either(EPA Registration Number, Product Name, Company Name)

2. Kelly solutions Http://www.kellysolutions.com
Click on state"MD"
Search by either (Company Name, Product Name, Company ID or Product EPA Number

The State Chemist Section sends updates to the Kelly Website every week, where it is put on their website on Tuesday of that week.. The information on the Purdue site is updated twice a month.

Maryland reregisters all pesticide products starting in late November and no new information is sent to either of the websites between November to the end of January. The registered pesticides for the current year will initially be sent the first week of February and will replace the previous years database that is still on each of the websites.

7. Noncompliance Issues -- §205.660

Noncompliances are described as either major noncompliances or minor noncompliances. There is no standardization from the federal government on the criteria of the noncompliances. MOCP consulted with certifiers, Maryland Organic Certification Advisory Committee (MOCAC) and the National Organic Standards Board (NOSB) and developed the following criteria:

1. Major non-compliance: Organic product or the long-term organic system integrity is compromised or evidence of willfull and repeated disregard of the standards;

2. Minor non-compliance. The problem is correctable so that organic system integrity is restored. Repeated minor non-compliances may become major non-compliances as it would indicate a disregard of the standards.

The MOCP also must cite all rule numbers where there are major noncompliances or minor noncompliances in the letters accompanying organic certificates.

8. Information vs. Consultation

Producers commonly sought the advice of certifying agents and organic inspectors on matters ranging from pest control strategies and livestock treatments, to crop rotation schemes and the best sources of purchased inputs, prior to the implementation of national organic standards. Such advice is now considered a conflict of interest and is not allowed. The key to sorting out this problem is recognizing the basic difference between information and consultation. Certifiers must make essential information about their certification process, their fees, and similar matters available to the public. The certifier must tell an applicant how and why he or she is out of compliance. However, the certifier cannot advise the applicant on how to rectify the problem; that would be giving advice or consultation, i.e. informing a farmer of the availability of cost-share funds through the NRCS to help fence their animals out of a creek on their land. Similarly, the certifier can tell a producer whether or not a particular pest control product is permitted for use. However, the certifier may not advise about how to use the product or where to buy it. Certifiers may distribute publicly available information that provides advice and recommendations, such as Extension bulletins or suggest that clients consult these sources; they may also provide producers with lists of private consultants, but may not recommend a specific one.