



Common Risks to Organic Certification (& taking steps to prevent them)

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What Is Organic?






“Organic is an agricultural methodology that promotes environmental sustainability, fosters animal wellbeing and enhances biodiversity and the preservation of ecological systems.”
NOP Preamble

‘Certified Organic’ - Food and fiber products grown according to strict uniform standards that are verified by USDA accredited, third-party, state, private or non-profit organizations.

Focus of Presentation

1. Organic Certification: Why Bother?
 - Retail Facts and Figures
2. Some of the risks in organic production?
 - ◆ Special risks for greenhouse production?
 - ◆ Input substances?
 - Seeds, Plants, Plugs, Cuttings
 - Soil Fertility Inputs
 - Pest Management Inputs
 - ◆ Documents to maintain?


Why Produce Organic?

- ◆ OTA report: organic sales in 2008 were more than 15% higher than in 2007.
- ◆ 2009 Harris survey: 80% of consumers reluctant to compromise.
- ◆ 70% were still buying as much or more organic food than before the economic downturn.
- ◆ Organic products can be found in nearly 20,000 natural food stores and 73% of conventional grocery stores.

Value for Organic Producers?

- ◆ Surveys have shown that the organic premiums to the farmer can be as high as 25-150% more than conventionally produced products.


Organic Household Penetration




6 Organic Categories

- Packaged foods
- Produce
- Beverages (not milk)
- Milk
- Personal care
- Clothing/linens


2005



\$13
Billion



2009



\$20
Billion

39% of the U.S. population consumes organic products.

4 Top Reasons Consumers Buy Organic Food



1. Food Safety/Health
2. Taste
3. Nature/Conservation
4. Animal Welfare

Source: Kent Group's Agribusiness Food Update, June 2006

Risks of contamination: Why Care?



- ◆ Contaminated crops **cannot** be sold as organic.
- ◆ Application of a **prohibited** substance results in de-certification of the treated land for **36 Months**.
- ◆ Results in the loss of price premiums.

First Requirement NOP 205.202

- ◆ Field or farm must not have:
 - ◆ (b) Had no prohibited substances, as listed in § 205.105, applied to it for a period of 36 months immediately preceding harvest of the crop.

Number 1 Major Risk Factor!

Any field or farm parcel from which harvested crops are intended to be sold, labeled, or represented as "organic," **must have distinct, defined boundaries and buffer zones** such as runoff diversions 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.

§205.202(c)

Prohibited Substance Application Drifts

- Aerial Spray Drifts
- Contaminated Runoff
- Flooding
- Inadvertent chemical applications from equipment spills
- Split operations
- Road right-of-ways
- Utility companies



"Must have distinct, defined boundaries and buffer zones"



On Farm Equipment Risks

- ◆ Sprayers
- ◆ Fertilizer spreaders
- ◆ Insecticide applicators
- ◆ Engine fluids (Clean Equipment Records)



NOP 205.203

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.

Raw Manure, Compost, Dried Poultry Litter- NOP 205.203

Raw animal manure must be composted unless:

- ◆ (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;

Heavy Metals- Arsenic

- ◆ *Copper Arsenilic Acid (Roxarsone) is commonly added to broiler poultry feed to reduce diseases and stimulate growth.*
- ◆ *Litter from layer operations contains Copper or Zinc that leaches from the cages.*
- ◆ *90% of these heavy metals pass through the birds and is deposited in the poultry litter.*

Soil Amendment Risks

EKO Compost... the original organic compost

Composting is theory is remarkably simple—mix organic matter with water and plenty of oxygen, and let the microorganisms do the rest.

That's why EKO Compost is one of the Charter Members of the United States Composting Council's Seal of Testing Assurance Program.

Every batch of EKO compost is rigorously tested to ensure that it meets and exceeds all process and product standards, including the United States Environmental Protection Agency's Class A "Exceptional Quality" compost, good for unrestricted use including food crops.

EKO Compost is made from green and brown ~~waste products~~ (leaves, limbs, lawn clippings, wood chips, Christmas trees) and household



Where can I buy Milorganite? Home users can find Milorganite at most leading lawn and garden centers across the country (it is America's #1 organic fertilizer). ... To find a Milorganite retailer close to you, visit us here.



Dried Poultry Litter

May be used without a specific interval between application and harvest when prepared in accordance with the NOP guidelines:

- ◆ The manure products must be treated so that all portions of the product, without causing combustion, reach a minimum temp. of either 150° F for at least one hour or 165° F,
- ◆ Dried to a maximum moisture level of 12%; or
- ◆ Equivalent heating and drying process could be used.
- ◆ Should not contain more than 1×10^3 (1,000) MPN fecal coliform/gm
- ◆ Should not contain more than 3 MPN salmonella/4 gram.

Chilean Nitrate (Sodium Nitrate)

- ◆ **NO MORE than 20% of Crop's Total Nitrate requirements**
 - Determine Cash Crop Total Nitrogen Needs
 - Add total of other nitrogen sources, including available N from cover crop plow-down.
 - Subtract that total from crop nitrogen needs.
 - Add remaining Nitrogen needs with no more than 20% Chilean Nitrate.

CAUTION: Sodium nitrate is also synthesized industrially by neutralizing nitric acid with **soda ash- PROHIBITED!**

Seeds, Root Cuttings, Planting Stock



Seeds, Planting Stock

- ◆ **Organic seed and planting stock must be used** [§205.204(a)]
- ◆ **If not commercially available, untreated seed or planting stock may be used; no GMOs** [§205.204(a)(1)]



Annual Seedlings

- ◆ **Can Never be from Non-Organic Sources**
 - Onion Plants & Annual Seedling Plugs

Perennials- NOP 205.204(a)(4)

- ◆ Non-organically produced planting stock to be used to produce a **perennial crop** may be sold, as organically produced after the planting stock has been maintained under a system of organic management for a period of no less than 1 year.

Strawberries?



- ◆ If raised as an annual crop, adhere to the annual planting stock rule!
- ◆ If raised as a perennial crop, adhere to the perennial planting stock rule!

Commercial Availability

- ◆ The ability to obtain a production input in an appropriate form, quality, or quantity to fulfill an essential function in a system of organic production or handling, as determined by the certifying agent in the course of reviewing the organic plan.

Pest Management Hierarchy NOP 205.206

- ◆ (a) Must: Management practices to prevent...
 - Crop rotation, soil fertility, good sanitation
- ◆ (b-c) May: Mechanical or physical methods
- ◆ (d) May: Application of non-synthetic biological, botanical, or mineral inputs.
- ◆ (e) WHEN ALL ELSE FAILS:
 - a biological or botanical substance or a substance included on the National List of synthetic substances (.601)



Synthetic Substances NOP 205.601

- ◆ All synthetic products (fertilizers, amendments, pesticides, growth regulators, etc.) are **PROHIBITED**,



UNLESS specifically allowed and placed on National List §205.601

Synthetic Substances- NOP 205.601

- ◆ Any substance that is formulated or manufactured by a chemical process
 - Anhydrous Ammonia/urea
 - Glyphosate /Roundup™
 - Carbamate insecticides/Sevin™
- ◆ Any natural substance that has been chemically changed
 - Superphosphate/ natural rock phosphate treated with sulfuric acid
- ◆ Super-Cal™

Non-Synthetic Substances PROHIBITED for use in organic crop production: NOP 205.602

If it is Non-synthetic (naturally occurring)
It IS ALLOWED in organic crop production;
UNLESS it is specifically Prohibited on
National List 205.602
(9 substances)

Naturally Mined substances (Gypsum)
Diatomaceous Earth
Natural Botanicals (Neem, Pyrethrin)



Pesticide Risks

- ◆ Insecticides: Inerts are usually not listed
- ◆ Botanical Insecticides
 - Pyrethrin/Rotenones with Piperonyl Butoxide
 - Pyrethrin/Rotenones with Petroleum Distillates

Always Prohibited

- ◆ Biosolids (i.e., sewage sludge) – §205.105(g)
 - Municipal Waste
- ◆ Genetically engineered bio-pesticides, inoculants, and other GE-derived products



Greenhouse/High Tunnel Risks

Greenhouse Considerations

- ◆ Whole house must be certified, but can have uncertified houses on same lot
- ◆ Use of CO2 allowed (prefer Nitrogen) Environmental Enhancement
- ◆ Emergency use of propane heaters are allowed
- ◆ Pressure treated lumber issues
 - No replacement treated lumber

Greenhouse Risks

- Starting Mixes- synthetic wetting agents
 - ◆ Yucca allowed
- Contamination from non-compliant crop nutrients and sanitizing agents in drip lines; common header lines
- Treated Lumber in contact with soil
- Commingling of plants, transplants
- Veggie Grafts from Treated Seeds

Greenhouse Risks

- ◆ Common Ventilation systems
 - Prohibited pesticides/ soil fertility products through common ventilation systems into organic houses
- ◆ House sanitation issues
 - Quats/chlorine products
- ◆ Harvest and storage issues
 - Conventional pots hung over organic pots

Documentation



Seed Documents

- ◆ Seed purchase receipts
- ◆ Non-GMO & non-treated for non-organic seed
- ◆ Labels and non-GMO statements for seed inoculants
- ◆ Receipts and labels for all materials used if you produce your own transplants

Land History Documents

- ◆ Farm Map- What planted & where planted
- ◆ Planting dates
- ◆ Attempts to find organic seed and planting stock
- ◆ Soil Fertility & Pesticide Input Records-
 - what and where
- ◆ Harvest Records

Pesticide Input Documents to Retain

- ◆ Product labels
- ◆ Purchase receipts
- ◆ MSDS sheets, showing composition of ingredients
- ◆ Additional verification
 - communications from manufacturers showing product ingredients

Input Help

- ◆ OMRI Listing: www.omri.org
- ◆ WSDA Brand Name Materials List
<http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.htm>
- ◆ U.S. EPA Pesticide Labeling



www.epa.gov/oppmsd1/PR_Notices/pr2003-1.pdf

Employee Training

- ◆ Impart a clear understanding of what organic means and what materials are prohibited
- ◆ Clarify the importance of clean-out protocols and logs on dual-use equipment
- ◆ Be certain everyone knows what to do if a contamination incident occurs

