Risk Management for Organic Crop Producers

Determining and Documenting the Acceptability of Organic Farm Inputs

Developed by George Kuepper
Agriculture Specialist
National Center for Appropriate Technology
Major Risk Management Areas for Transitioning & Experienced Producers*

- Determining and Documenting the Acceptability of Organic Farm Inputs
- Preventing Contamination from Off-Farm and Obtaining Compensation for Damages
- Organic Weed Management
- Adequate Recordkeeping
- Budgeting for Organic Transition and for On-going Production

* As reported in an RMA-Funded Survey of IOIA Organic Inspectors, Spring 2005
RISK AREA:

Determining and Documenting the Acceptability of Organic Farm Inputs

Intentional or accidental application of a prohibited substance decertifies the treated land for 36 months!!
Rule of Thumb #1

- If it is natural (nonsynthetic), assume that it is **ALLOWED** in organic crop production **UNLESS** it is specifically prohibited and placed on the National List under §205.602
Rule of Thumb #2

- All synthetic products (fertilizers, amendments, pesticides, growth regulators, etc.) are **PROHIBITED**, **UNLESS** specifically allowed and placed on the National List under §205.601
What is a Natural or Nonsynthetic Substance?

- A substance that is naturally occurring in a plant, animal, or mineral form (includes crop residues, seed meals, manures, bone meal, ag-lime, rock powders, etc.)

- Also: Any substance created by naturally occurring biological processes (e.g., vinegar, *Bacillus thuringiensis* toxin)
What is a Synthetic Substance?

- Any substance that is formulated or manufactured by a chemical process (e.g., anhydrous ammonia, 2,4-D, glyphosate/Roundup™, carbamate insecticides, etc.)

- Also: any natural substance that has been chemically changed (e.g., superphosphate, which is derived by treating natural rock phosphate with acids)
• Biosolids (i.e., sewage sludge) — §205.105(g)
• Prohibited under §205.602:
  ➢ Ash from manure burning
  ➢ Arsenic
  ➢ Lead salts
  ➢ Sodium fluoaluminate
  ➢ Strychnine
  ➢ Tobacco dust
  ➢ Potassium chloride (restricted use)
  ➢ Sodium nitrate (restricted use)
• Contaminated organic materials
  Examples include:
  ➢ leather meal (heavy metal chromium)
  ➢ conventional cottonseed meal (pesticides)
  ➢ broiler chicken litter (if arsenic contaminated)

• Genetically engineered bio-pesticides, inoculants, and other GE-derived products
The Organic Input Minefield —
Where It’s **VERY** Easy to Make Mistakes

- Fertility products labeled “Organic”
- Synthetic micronutrients
- Potassium chloride
- Liquid fish and seaweed extract products
- Products (especially pesticides) with inerts
Help in Sorting through Materials

- Read the Regulations:
  www.ams.usda.gov/nop
  §205.203 Fertility & Nutrient Mgt. Standard
  §205.206 Pest Mgt. Standard
  §205.601 Nat’l List—Synthetics Allowed
  §205.602 Nat’l List—Nonsynthetics Prohibited
Help in Sorting through Materials

- OMRI Listing
  www.omri.org

- WSDA Brand Name Materials List

- U.S. EPA Pesticide Labeling
  www.epa.gov/opppmsd1/PR_Notices/pr2003-1.pdf
Established, multi-product organic farm and garden supply store catalogs.
Examples:
- Seven Springs Farm Supply
  www.7springsfarm.com/catalog.html#Orgcertinfo
- Peaceful Valley Farm Supply
  www.groworganic.com

To be sure materials are allowed:
*CONSULT YOUR CERTIFIER*
Documents You Need to Save

- Product labels
- Purchase receipts
- Lab analyses of products
  — may be required by certifier for some inputs
- Soil or tissue tests when synthetic micronutrients are applied
- Any additional verification of allowability
  — labels, material safety data sheets, or communications from manufacturers stating product ingredients
Be **Sure** to Record

- Where products are used (i.e., which crops and fields)
- Rates or amounts applied
- Application dates
- Target pests, when pesticides are used

See ATTRA’s Documentation Forms
Helpful Record-Keeping Tools

• Organic Field Crops Documentation Forms

• Organic Livestock Documentation Forms

• Organic Orchard, Vineyard, and Berry Crop Documentation Forms

• Recordkeeping and Budgeting Workbook for Organic Crop Producers
How to Avoid Confusion about Materials?

REDUCE YOUR USE OF COMMERCIAL INPUTS
Organic Management is...

A systems-based approach to farming that reduces the need for off-farm inputs for most agricultural enterprises
Conventional Mindset
(Shared by Organic Farmers focused on Input Substitution)

A

GOOD

CROP

Off-Farm Inputs

Soil Base

© 2005 National Center for Appropriate Technology
Organic Soil Management

Feed the Soil,
Not the Plant.

— An Old Saying among Organic Farmers
The Soil Food Web
Plant Nutrition
Under Natural Conditions

Digestive processes and nutrient recycling in the Rhizosphere:
*The Soil Food Web*

Source of plant nutrition:
- plant residues
- animal remains
- animal wastes

Parent Rock Material

Soluble Minerals
Organic Compounds
Other Benefits

Plant Roots

© 2005 National Center for Appropriate Technology
Conventional Management

Pesticides and some synthetic fertilizers are toxic and weaken the soil food web.

Conventional Soluble Fertilizers

Soluble Minerals

Organic Matter as Crop Residues

Digestive processes and nutrient recycling in the Rhizosphere: *The Soil Food Web*

Parent Rock Material

Plant Roots

Soluble Minerals

Organic Compounds

Other Benefits
Organic Management

Digestive processes and nutrient recycling in the Rhizosphere: *The Soil Food Web*

**Organic Materials and Methods:**
- Composts
- Crop Residues
- Green Manures
- Livestock Manures
- Natural Fertilizers
- Biological Inoculants
- Rotations w/ sod crops

Parent Rock Material

Soluble Minerals

Organic Compounds

Other Benefits

Plant Roots

© 2005 National Center for Appropriate Technology
Soil & Soil Fertility Benefits

- N self-sufficiency
- Access to native fertility
- Nutrient banking
- Nutrient bioavailability
- Reduced erosion
- Reduced leaching
- Soil water retention
- Nutrient cycling
- Better tilth

Pest Management Benefits

- Innate resistance/tolerance
- Induced resistance/tolerance
- Disease suppression in the soil
- Biocontrol above ground
- Pest life-cycle disruption
- Weed seedbank reduction
- Shift in weed populations
- Ease of cultivation for weed control

SYSTEM ELEMENTS

- Crop rotation
- Sanitation
- Soil-building crops
- N-fixing crops
- Soil/water conservation
- Refugia
- Resistant varieties
- Reduced toxics
- Manure/waste recycling
A Sustainable Organic Concept For Crop Production

A GOOD ORGANIC CROP

Off-Farm Inputs

Cultural Practices

SYSTEM ELEMENTS & SYSTEM DESIGN
Recommended Resources

• Switching to a Sustainable System
  www.npsas.org/OrderForm.html

• Transitioning to Organic Production

• Fundamentals of Organic Agriculture
  www.extension.iastate.edu/Publications/PM1880.pdf

• Organic Crop Production Overview
  www.attra.ncat.org/attra-pub/organiccrop.html
What about Seeds & Planting Stock?

What are the Risks?

**Failure** to comply with organic requirements for seed and planting stock can lead to decertification of a single crop.

Land can be decertified for 36 months if treated or genetically engineered seed is used.
Seed and 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)]
When non-organic seed or planting stock is used . . .

. . . certifiers require that producers make a good faith effort to find organic sources. Customarily, this means documenting contacts with at least three reasonable sources. Documentation can include catalogs, Web sites, phone calls, and letters.

— Resource: ATTRA’s Documentation Forms publications
Seed and Planting Stock

• Conventional seed treatments are **prohibited**, unless required by Federal or State regulations [§205.204(a)(5)]

• Organic transplants **must** be used [§205.204(a)]
ATTRA Resources: Organic Transplants

• Potting Mixes for Certified Organic Production
  www.attra.ncat.org/attra-pub/potmix.html

• Organic Plug and Transplant Production
  www.attra.ncat.org/attra-pub/plugs.html
Seed and Planting Stock: 
**Avoiding the Pitfalls**

- Organic requirements apply to cover crops
- Seed for sprouting *MUST* be organic [§205.204(a)(1)]
- Inoculants must be non-GE
- Many commercial seed coatings are prohibited
- Perennial planting stock—consult your certifier

§205.204(a)(4) is being interpreted in several ways
Finding Organic Seed & Planting Stock

• ATTRA’s Suppliers of Seed for Certified Organic Production
  www.attra.ncat.org/attra-pub/altseed.html

• OMRI-Certified Organic Seed and Planting Stock List
  www.omri.org/OMRI_SEED_list.html
Finding Organic Seed & Planting Stock

• Save Our Seed’s Certified Organic Seed Sourcing Service
  www.savingourseed.org/pages/sourcing.htm

• Cooperative Extension Resources;
  e.g., *Seed Production and Seed Sources of Organic Vegetables*, Univ. of FL Ext. Pub. HS981
  http://edis.ifas.ufl.edu/hs227
Documents You Need to Save

- Seed purchase receipts
- Non-GMO declarations 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
Be **Sure** to Record…

- What is planted where (i.e., which crops in which fields or beds)
- Planting dates
- Attempts to find organic seed and planting stock
Helpful Record-Keeping Tools

- Organic Field Crops Documentation Forms
  www.attra.ncat.org/attra-pub/cropforms.html
- Organic Livestock Documentation Forms
  www.attra.ncat.org/attra-pub/livestockforms.html
- Organic Orchard, Vineyard, and Berry Crop Documentation Forms
  www.attra.ncat.org/attra-pub/orchardforms.html
- Recordkeeping and Budgeting Workbook for Organic Crop Producers
  www.attra.ncat.org/attra-pub/organiccropforms.html
Seed-Saving Resources

- Save Our Seed project features on-line manuals for brassica, tomato, and bean seed production, as well as a manual on seed processing and storage [www.savingourseed.org](http://www.savingourseed.org)
- International Seed Saving Institute has a free on-line guide to saving seed [www.seedsave.org](http://www.seedsave.org)
- Seed-saving and Seedsavers' Resources [http://homepage.tinet.ie/~merlyn/seedsaving.html](http://homepage.tinet.ie/~merlyn/seedsaving.html)
- Seed Savers Exchange links people who grow, collect, conserve, and share seeds of heirloom plants [www.seedsavers.org](http://www.seedsavers.org)
Risk Management for Organic Crop Producers

For more information, please contact:

National Center for Appropriate Technology
PO Box 3657
Fayetteville, AR 72702
479-442-9824
www.ncat.org

USDA Risk Management Agency–Mississippi Regional Office
8 River Bend Place
Jackson, MS 39232
601-965-4771
www.rma.usda.gov/

Reducing Transition and Compliance Risks for Organic Crop Producers in the South