Gearing up to transition to organic

Vicki Morrone
sorrone@msu.edu
WWW.MichiganOrganic.msu.edu
Center for Regional Food Systems
Michigan State University
Overview

- Principles of organic agriculture
- Process to transition
  - Learning curve
  - Farm preparation
  - Getting pieces in place from soil to markets
- Identifying a certifying agency
- Q & A with organic farmers
Principles of Organic Agriculture Production

Areas of Emphasis
✓ Soil Health
✓ Plant and Animal Health
✓ Strong Business
✓ Family
Principles of Organic

- **Health**
  - soil
  - plant
  - animal
  - human as one and indivisible

- **Ecology**
  - living ecological systems
  - cycles
  - work with them, emulate them and help sustain them

- **Fairness**
  - In the common environment
  - life opportunities

- **Care**
  - manage in a precautionary and responsible manner
  - protect the health and well being of current and future generations
  - protect the environment
Certify organic?
What to consider

- Are you and your family committed to the values and organic program?
- Are you able to manage the records required?
- Do you have committed organic markets or market opportunities?
- Do you have the needed technical knowledge?
Where does Michigan Fall/Rise?

Top 10 States in Organic Sales, 2014

These states account for 78% of all sales in the U.S.

- California: $2.2 B
- Washington: $1.15 B
- Pennsylvania: $1.13 B
- Oregon: $0.237 B
- Wisconsin: $0.201 B
- Texas: $0.199 B
- New York: $0.164 B
- Colorado: $0.147 B
- Michigan: $0.125 B
- Iowa: $0.103 B

U.S. Total = $5.5 B

Top 10 States in Total Horticulture Sales, 2014

These states account for 65% of all sales in the U.S.

- California: $2.9 B
- Florida: $1.8 B
- Oregon: $0.932 B
- Michigan: $0.645 B
- Texas: $0.59 B
- North Carolina: $0.571 B
- Ohio: $0.392 B
- Arizona: $0.389 B
- Washington: $0.366 B
- New Jersey: $0.356 B

U.S. Total = $13.8 B

Source: USDA NASS 2014 Census of Horticultural Specialties
Who Can Certify Your Farm?

- Agencies are independent companies that are approved by USDA

- You choose the agency from any state, but it must be USDA approved

- They cannot provide technical information only guidance for certification
Identifying a NOP certifier

- You choose who
- Ask questions and evaluate them
- Refer to MSUE bulletin #3067

“Transitioning to Certified Organic in Michigan—Where to Start?”
What does TRANSITION mean?

- Organic OR Non-treated, non-GMO seed
- Organic feed and additives
- OMRI ok pesticides and soil amendments
- Apply manure 90-120- days before harvest
- Include crop rotations in 3 year plan
- Maintain records for the 3 years
Steps to get to organic

- Building your knowledge
- Building your soil
- Building your farm resources
- Building your markets
Organic Transition?

- What does it mean?
- Why is it part of organic?
- How do I practice it?
Transitioning Check-list

- What happens during the 3 years
  - Farmers learn about organic
    - Soil health
    - Organic crops
    - Pest cycles & multiple ways to manage pests
    - Encouraging beneficial diversity (bees, parasites, hawks)
    - Markets interested in buying organic
  - Maximize learning opportunities
Land...

- Soil
- Slope
- Host to critters and creatures
- Nutrients
- Weeds
- Borders
- Contaminants
Transitioning Checklist - Field Prep

- Select field (portion)
  - Drainage
  - Past uses & management
  - Past abuses
  - Organic matter
  - Surrounding conditions (buffers)
- Soil test-annual
  - Nutrients, OM, texture, micronutrients*
- Source inputs and cover seed-OMRI approved
Transitioning Check-list
Build Soil

- Use annual soil test to help determine inputs
- Grow legume cover crops (clovers, vetch, peas) with rye or oats (diversify cover types)
- Maximize soil cover to reduce weed increase
- Add manure to stimulate soil biology
Improve Soil Health
Manage Pests
Pest management
Insects and nematodes

- **Knowledge**
  - Insect ID
  - Common pests in your area (ID and lifecycle)
  - How to track Degree days
  - How to scout effectively

- **Reduction**
  - Remove infected plant material from fields/gardens
  - Select crop varieties less attractive or resistant to known pests
  - Interplant varieties that deter or “mix up” insects (e.g. basil, marigolds)
  - For long life cycle pest rotate out of that crop for adequate time (RKN)
  - Grow flowering plants to support beneficial insects

- **Control**
  - Use non-family varieties for crop rotation
  - Scout weekly and spray *when needed* according to directions
  - Spray when bees and other pollinators are not out (early AM)
Pest Management-Plant Diseases

Knowledge
- Common diseases lifecycles (in your area)
- Disease identification by symptoms
- Lab to get confirmation of disease

Manage
- Don’t overcrowd plants (or thin) to allow air circulation
- Grow on hills or raised beds to encourage soil drainage
- Promote good crop health to be resilient to pest problems
- Field sanitation

Control
- Use resistant varieties (fusarium, verticillium, scab)
- Scout weekly and manage as needed (pull, spray, thin)
Pest management - Weeds

Control
- Appropriate tillage
- Mowing before weed-seed set
- Stale bed to plant crops
- Organic herbicide (hydrogen peroxide)
- Hand rogue perennial weeds

Reduction
- Cover crops
- Maximize ground coverage (year around)
  - Establish permanent living walkways when appropriate
Critical Management for Organic Animal Production

- Feed must be certified organic
- No NON-organic substance on bedding
- Access to pasture
- Once you give animal antibiotic they can no longer be sold/used as organic
- Vaccines allowed but cannot be GMO produced
- Wormer given if + and only ivermectin
Pest Management - Animal Illnesses and Diseases

- **Knowledge**
  - What are the common illnesses for animal type and area
  - Life cycle of illness
  - Veterinary that understand organic management

- **Control**
  - Select hardy and resistant breeds
  - Include prophylactics in diet (vinegar, garlic, aloe, neem oil)
  - When illness/disease is present use OMRI approved medicines/treatments
  - Separate sick from healthy animals
  - Give antibiotics when needed and remove from organic herd

- **Management**
  - Remove secondary host materials
  - Maintain clean living area
  - Provide sound diet for animals to improve resilience to illnesses
  - Insure that new-borned nurse from mother at least for first week of life
  - Vaccinate animals with relevant and OMRI approved vaccines
Record Keeping

- Maintain records
  - Create a system and train all staff on farm
  - Make it easy to complete records
  - Include Who, When, What on every record
  - These records will be viewed by Certification inspector

- Records can be paper or electronic
Transitioning Checklist - Record System

- Use paper or electronic
- Complete forms supplied by certifier agency
- Receipts for…
  - Purchases of seed, compost, sprays, soil additives, nutrients, feeds, organic allowed sprays/chemicals
  - To show date, who, what and how
- Input labels must be kept to verify variety, amount, additives, seed coatings
- Maintain field maps for each field
Farm Plan

Farm
- Identification of each field (section)
- Identify different uses for each section on map
- Include roads, waterways, fallow fields, fields non-organic, in transition, production areas, and buildings.

Farm Plan
- What will be grown where (3 years prior and 3 years in the future)
- Rationale/goals for what is where
Farm Preparation
Field Preparation—protect from non-organic

- Include a buffer zone around fields
  - Manage it organically
  - Harvest it as conventional
  - Should be 25 or more ft between risk and field
Transitioning Check-list- Seeds & Transplants

- Identify from organic source
- Seek varieties for markets AND resistance
- Consider varieties for “durability” and flavor
- Keep organic and conventional separated
- If no organic seed is available check and record Check and record from 3 suppliers
  Provide info that NOT GMO
Transitioning Check list
Animal Production

- Chicks raised from 2 day as organic
- All animals for meat must be raised from last 1/3 gestation through birth and calf born into organic
- Dairy goats and sheep managed for 12 months organically prior
- Animals have access to pastures
- Pastures are grown organically
- Barns and pens cannot use treated lumber
Animal production - When can you certify?

- Pasture and feed fields have been managed organically for 3 years (with records or signed affidavit)
- Animals are born in organic system
  - Mother is managed organically at the 3rd trimester of pregnancy
- Poultry is managed organically after 1 day of life
Transitioning Check-list Equipment

- **Field Equipment**
  - **Access**
    - Buy only what you can afford
    - Rent or have done custom if you cannot afford
    - Farming is like other businesses-start small
  - **Split operation**
    - If part of farm is organic and part conventional
    - Clean equipment between use at each operation
    - Keep records to verify these actions
Transitioning Check-list

Storage

- Storage & Transport of organic products
  - Must be separate from conventional (pallets, bins)
  - Maintain bin labels to correspond to field maps (harvest)
  - Do not apply any product on harvest that has not been approved by certifier (organic)
  - Develop a storage area that offers some climate control if possible
Focus on key areas

<table>
<thead>
<tr>
<th>Plants</th>
<th>Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build soil for &gt; organic matter</td>
<td>Provide healthy environment</td>
</tr>
<tr>
<td>Select strong crop varieties resistant to key disease</td>
<td>Choose breeds with good resistance</td>
</tr>
<tr>
<td>Scout fields weekly-soil, under and leaves</td>
<td>Observe animals daily for feeding, walking, giving birth, drinking, gaining weight</td>
</tr>
<tr>
<td>Grow crops and cover crops good for soil and</td>
<td>Produce animals that are sound and in demand by</td>
</tr>
</tbody>
</table>
Land and Soil Preparation

**Goals:**
- Reduce weeds - aggressively manage perennial weeds
- Build organic matter
- Improve drainage
- Maintain soil coverage

**Management**
- Test soil to establish base line
- Select covers for purpose
- Add inputs to meet goals
Top Priorities for Transitioning

- Build soil
  - Conduct a soil test annually (not OM)
  - Support plant growth and development
  - Improve ability to drain and hold water
  - Stay in the field during weather events

**Records Alert!**
Keep or photograph all receipts
Photograph all input bags
If you use your own compost track process with records (T°, turning, inputs).
Inputs must be supported by soil test
Top Priorities for Transitioning

- Use seed that is certified organic
  - If variety is not available as organic
    - Use NON-GMO seed
    - Use NON-treated seed
    - Use inoculant for legumes that is OMRI approved

Records Alert!
Show where you purchased seed with receipt and package label.
If not organic
- show 3 sources
- verify they are non-GMO
Top Priorities-Record Keeping

- Sources of inputs
- What and when applied- everything
- Practices implemented on farm
- Cleaning equipment and housing
- Harvest records with weights and volumes
- Pest observations and plans to manage (long-term)
- Adjust farm plan as needed
Use all those records…

- Farm plan
- Farm map
- Management logs
- Harvesting and marketing records
- Animal identification

THEY WILL HELP YOU IMPROVE YOUR BUSINESS!!

Center for Regional Food Systems
www.michiganorganic.msu.edu/
sorrone@msu.edu
Ask Our Farmers Questions

- Q&A with experienced organic farmers-your best resource!

- Please type in your questions in the Q&A box on your screen. They will answer as appropriate.
Thanks for your participation

Questions??

Email Vicki Morrone: sorrone@msu.edu

www.michiganorganic.msu.edu