

OHIO ECOLOGICAL FOOD AND FARM ASSOCIATION



ORGANIC TRANSITION WORKBOOK

ORGANIC TRANSITION WORKBOOK ACKNOWLEDGMENTS

Dedicated to the memories of Benjamin R. Stinner and Paul Dutter.

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THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES



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TABLE OF CONTENTS

Introduction	3
Evaluating your Current Farm Operation	4
FARM INVENTORY	5
1. FARM MAP	5
2. FIELD HISTORY	7
3. PEST CHALLENGES	9
4. LIVESTOCK	10
5. REGIONAL AND SITE-SPECIFIC RESOURCES	11
6. SOIL RESOURCES	12
7. PHYSICAL RESOURCES	18
8. HUMAN RESOURCES	19
9. FINANCIAL RESOURCES	21
10. MARKETING	22
11. SWOT (STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS) SUMMARY	23
DEFINING YOUR GOAL	24
MAKING YOUR GOAL HAPPEN	25
1. VALUES/VISION	25
2. RESOURCES/WEALTH	25
3. RELATIONSHIPS	26
4. WORK TIME/FREE TIME	26
5. ENTERPRISES	27
6. LEARNING	27
7. SETTING AN HOLISTIC GOAL	28
WRITING YOUR TRANSITION PLAN	32
1. Farm Profile [§205.201; §205.202]	34
2. Seeds, Seedlings, and Planting Stock [§205.204]	35
2.1 SEEDS [§205.204]	35
2.2 SEEDLINGS [§205.204]	36
2.3 PLANTING STOCK [§205.204]	37
3. Soil and Crop Fertility Management [§205.203; §205.205]	40
3.1 FERTILITY MANAGEMENT [§205.203]	40
3.2 INPUTS [§205.201]	41
3.3 COMPOST USE [§205.203]	42
3.4 MANURE USE [§205.203]	43
4. Natural Resources [§205.2; §205.203; §205.205]	45
4.1 SOIL CONSERVATION [§205.203]	45
4.2 BIODIVERSITY [PREAMBLE; §205.2; §205.200; §205.202; §205.203; §205.205-§205.207; §205.238-§205.240]	46
5. Water – Use and Quality [§205.202; §205.203; §205.205]	51
5.1 WATER USE	51
5.2 WATER QUALITY	52

6. Crop Management [§205.205; §205.206]	53
6.1 CROP ROTATION PLAN [§205.205]	53
6.2 WEED MANAGEMENT [§205.206]	54
6.3 PEST MANAGEMENT PLAN [§205.206]	55
6.4 DISEASE MANAGEMENT [§205.206]	57
7. Ensuring Organic Integrity [§205.201; §205.202; §205.272]	60
7.1 ADJOINING LAND USE [§205.202; 205.272]	60
7.2 SPLIT OR PARALLEL PRODUCTION [§205.201; §205.272]	62
7.3 EQUIPMENT CLEANING [§205.272]	64
7.4 HARVESTING [§205.272]	66
7.5 POST HARVEST HANDLING [§205.272]	67
7.6. CROP STORAGE [§205.272]	68
7.7 TRANSPORTATION [§205.272]	69
8. Recordkeeping [§205.103]	70
9. Organic Livestock Management [§205.236-§205.240]	72
9.1 ORGANIC LIVESTOCK [§205.236]	72
9.2 FEEDING ORGANIC LIVESTOCK [§205.237]	75
9.3 LIVESTOCK HEALTH CARE [§205.238]	77
9.4 LIVESTOCK LIVING CONDITIONS [§205.239]	80
9.5 PASTURE FOR RUMINANTS [§205.237; §205.240]	85
10. Wild Crops [§205.207]	88
11. Using the Organic Label [§205.301-§205.311]	90
11.1 LABELING TERMS	90
11.2 LABELING CATEGORIES	91
11.3 OTHER LABELS WITH THE WORD 'ORGANIC' [§205.101]	93
11.4 USING THE USDA SEAL [§205.311]	93
11.5 USING YOUR CERTIFIER'S LOGO	94
11.6 COMMERCIAL UNAVAILABILITY [§205.304; §205.606]	94
11.7 OTHER LABEL CLAIMS (UNRELATED TO ORGANICS)	95
11.8 NONRETAIL LABELS – BULK/WHOLESALE	95
Pulling it all together	96
Monitoring and Recordkeeping	100
Recordkeeping Templates	101
Resources	127

INTRODUCTION

So you're interested in organic farming? That's good news! By utilizing holistic farming practices, being an organic farmer can offer premium prices, require creative problem-solving, and be a healthy and fulfilling occupation. There is no single, "right" way to farm organically, so each organic farmer experiments to find the best system for her or his operation.

The organic certification process can seem daunting at first. We hope this workbook, and the accompanying Transition Guide, will explain the organic standards and the farming practices to help you make this transition. The organic standards, located at 7 Code of Federal Regulations (CFR), part 205, spell out the requirements for organic production practices. It is also a living document, meaning changes can occur to the standards, or the list of substances which are approved or denied for use in organic production. It's the certifier's job to inform clients about changes to these standards as they occur. You can request a copy of the full text of these standards from the National Organic Program or your potential certifier.

This workbook takes you step-by-step through the process of developing an organic management system, and will help you meet the organic requirements. It starts by encouraging you to take a look at your farming operation's strengths and identify areas for improvement. Next, the workbook guides you through setting goals for your operation. Finally, it walks you through the creation of an Organic System Plan (OSP). The OSP will be the plan you submit to your certifier when applying for certification each year.

This workbook and accompanying Transition Guide are not just for use during the transition period. Producers who are already certified organic, or who are transitioning additional land to organic production, might also find these publications useful. Others might utilize the assessment portion of the workbook to evaluate the potential viability of a new endeavor or product. Whatever your reason for using this workbook, we hope that it will help to get you on your way to becoming a new or better-informed certified organic producer or handler.

EVALUATING YOUR CURRENT FARM OPERATION

Before you write your organic transition plan or edit an existing organic farm plan, it is important to conduct an assessment of your current farm operation. This will give you baseline information you can use to build your new farm plan. The process will help you take stock of resources (financial, human, physical and natural), capture your farm's history, understand environmental factors, and determine the quality and health of your fields. A blank inventory form is provided on the opposite page that will help you gather the necessary information. The text on the left page explains why this data is important and in some cases, good ways to collect it.

As you describe your farming operation, identify which of these items are assets and therefore potentially useful in your new organic operation, and which represent challenges that will need to be addressed. Through a process called SWOT, you can distinguish items that are Strengths, Weaknesses, Opportunities and Threats. By identifying items in this way, your farm plan can help you build on your strengths, and overcome your weaknesses. For instance, if you have a good friend who is a certified organic farmer and is willing to mentor you- that represents a strength. If your soil contains very little organic matter – that is a weakness. Your acreage coming out of the Conservation Reserve Program could represent an opportunity. Your upwind neighbor who farms continuous corn may represent a threat because of his heavy use of prohibited chemical inputs. As you do your inventory, you will find a space before each item to write in an "S" for strength, a "W" for weakness, an "O" opportunity and a "T" for threat as appropriate.

FARM INVENTORY

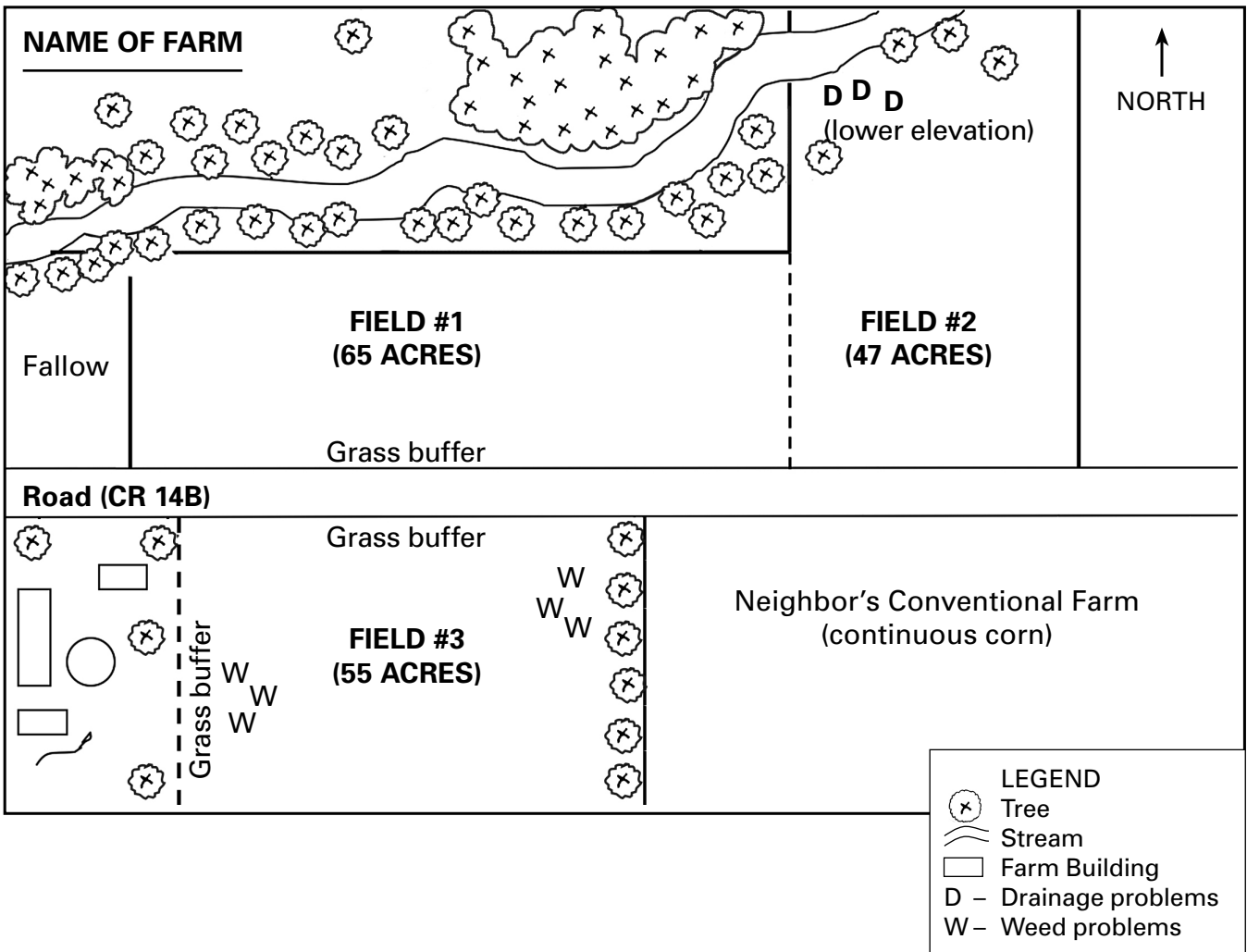
1. Farm Map – The map helps develop a more comprehensive view of your farm. It will also be a necessary piece of information when you apply for certification. The field map you submit with your certification must include:

- field identification (names or numbers);
- number of acres in each field;
- buffer zones; and
- adjoining land use.

If you raise livestock, be sure to include

- outdoor access areas;
- pasture fields;
- fences;
- shade; and
- animals' access to water

Update your map as features or fields change. If you want a more precise map to work from, a GIS map of your property is generally available from your county government offices. Google Earth images are available online. Below is a sample farm map.



Draw a map of your farm in the space provided below or attach a map here. Indicate all significant features named on page 3. Please indicate North.

Assign a number or name to each of your field(s) and indicate which field(s) you plan to transition to organic production.

A large, empty rectangular box with a thin black border, intended for drawing a map of a farm. The box is oriented vertically and occupies most of the page's width and height.

2. Field History – It is important to know not only what was grown in the fields, but also what inputs were used. List all inputs, including seed, compost, manure, manure source, and any chemicals or amendments. When you apply for certification you submit a field history for your fields that covers the current year and the prior three years, so this information is helpful to track during your transition. Fill out a field history form for all of your fields (organic, transitional and conventional). If you need more space, there is a blank copy of this form in the appendix so you can make extra copies.

While a general field history is required for certification, some certification agencies may have a specific field history format. Ask your certifier if they have a preferred form and see if it works for you. You can also design your own field history sheet that meets your specific needs, and includes the information needed by your certifier. Other information that will be required on your certification application and can be incorporated on your field history sheet, if you choose, includes:

- Harvest dates
- Yields
- Crop storage locations
- Seed variety and source for crop grown (including cover crops)
- Soil testing
- Any special problems in the field such as flooding or erosion

For each field, list the crops that have been grown there during the past three years. Indicate if the crop is organic (O), transitional (T) or conventional (C) and include information about all of the inputs you have used.

Field History Sheet

- Provide information for ALL fields you manage (organic, conventional, etc.).
- Use one row for each field.
- Include all crops, cover crops, pasture, woods, etc.
- List all inputs (i.e. seeds, seedlings, fertilizers, compost, manure, lime/gypsum, mulches, pest control).
- Include your plans for this year in the 2015 column, even if you have not yet planted or used any inputs. Your complete field activity logs will be reviewed at inspection.
- Make sure the acreage and field identification information listed on this sheet matches the information in the previous section and on your farm map(s).
- Include the last date a prohibited substance was applied to all transitional fields.
- Make copies of this sheet or request additional field history forms if more space is needed. A document that includes all the information requested here may also be accepted.
- In the "Field Status" column, please list "O" for Organic (currently requested for certification), "T" for Transitional (will be requested for certification in the next 3 years), or "C" for Conventional (not requested for certification).



FIELD # OR NAME	FIELD STATUS	# OF ACRES	2012		2013		2014		2015	
			CROP	INPUTS & DATE USED	CROP	INPUTS & DATE USED	CROP	INPUTS & DATE USED	CROP	INPUTS & DATE USED

3. Pest Challenges – Knowing your persistent pest, weed and disease problems will help you address them in your transition plan. When identifying your pest, weed and disease problems, be as specific as possible. This way, you can learn more about the biology and ecology of the pest or disease and develop more effective management strategies.

The National Plant Diagnostic Network website (<http://www.npdn.org/>) contains links to all of the state plant diagnostic laboratories that provide help with the identification of weeds and the identification and diagnosis of plant diseases, insects and environmental disorders. This website can help you know what weed or disease you have noticed. In addition, the following websites can help you identify and learn more about common insect pests, weeds and plant diseases:

Insects

- <http://vegetableipm.tamu.edu>

Weeds

- <http://wssa.net/weed/weed-identification/>

Diseases

- www.ipmimages.org

Extension agencies often have hotlines and educators trained in pest, weed, and disease identification and management. You can also contact your organic certifier to see if they have contacts or resources available. Some certifiers have educators on staff to help address these issues.

In the chart below, indicate the type of problem and severity of the problem (L – low, M – medium, H – high). Add the location – the number or name assigned to the field where the problem occurs, and length of time that the problem has been in existence. For the SWOT rating: S=strength; W=Weakness; O=opportunity; T=threat.)

Insect SWOT Rating:

Weed SWOT Rating:

Disease SWOT Rating:

PROBLEM	SEVERITY	LOCATION	DURATION
Weeds			
Insects			
Diseases			
Others			

5. Regional and Site-Specific Resources – Organic production systems optimize biological productivity and environmental health. These systems are designed to work with the forces of nature. You are likely already aware of the environmental conditions on your farm. There will be factors that you will be able to use to your advantage (such as an adequate average rainfall during the growing season) and those that could present problems (extreme conditions such as too much rain or drought) that you will have to address in your production plan. You can collect the average temperature and rainfall data yourself over the course of a year, or from your records. You can also find the data for a nearby location on a website like <http://countrystudies.us/united-states/weather>, and fine-tune it for your farm.

Knowing your climate’s characteristics will be helpful as you write your plan. However, being aware of microclimates, or small zones with different climate characteristics than the surrounding area, can be equally useful, too. Make note of any variations in temperature, exposure, rainfall and wind you observe on your farm, such as the south facing hillside, or the area of your farm that is at a lower elevation and always a few degrees cooler than the rest of the farm.

Hardiness Zone #: _____

List below any variations in microclimatic features due to factors such as changes in elevation, water drainage, wind, etc. Indicate the location of this variation.

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Average Precipitation						
Average High Temp.						
Average Low Temp.						
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Average Precipitation						
Average High Temp.						
Average Low Temp.						

(Include SWOT Rating when applicable in the box. S=strength; W=Weakness; O=opportunity; T=threat.)

What potential sources of contamination (such as pesticides, pollen from GMO crops) will you have?

CONTAMINATION SOURCE	COMMENTS	SWOT RATING

6. Soil Resources – Successful organic farming relies on building and maintaining healthy soil. To understand your soil's health, make multiple observations at different locations. Start by conducting a soil test on each field before you begin your transition process. (See the box on the next page for guidelines on taking soil samples.) These tests will provide some of the baseline information you will use to build healthy soils. Each time you test, you'll add more information so that you can evaluate your soil health over time. The best level for each indicator will depend on the crop you intend to grow. There are soil testing kits available so that you can do the testing yourself. However, using a professional lab, at least initially, will provide you with more precise and comprehensive results.

Soil Testing

The following categories may be reported in your soil test results:

Percent Organic Matter – Soil organic matter (SOM) is the part of the soil made up of the remains and waste products of living organisms (both plants and animals). There are three types of SOM. Living SOM consists of all types of soil life including plants, animals and microorganisms. Active SOM is composed of things like manure, plant residue, decaying roots, and the dead bodies and waste products of soil organisms. Humus or stable SOM is the final product of the decomposition process. The percent of SOM in the soil depends on your soil type and how it is managed. Fertile soils usually have a SOM content between 3-6%.

pH – An expression of the acid status, or hydrogen ion (H⁺) concentration, of a soil or a solution on a scale where 7 is neutral, less than 7 is acidic, and greater than 7 is basic. The pH of your soil will affect both the availability of nutrients and biological activity. For most crops the optimum pH is between 6.0 and 7.0.

Nitrate (NO₃⁻) – This is the most abundant and mobile form of nitrogen found in agricultural soils and it is the form most readily available to plants. Nitrate can be easily lost through leaching in groundwater or conversion to gases (N₂, N₂O). Soil microorganisms can convert atmospheric nitrogen into useable forms by the process of nitrogen fixation. The bacteria Rhizobia associated with legumes are an example of a nitrogen-fixing organism. On many organic farms the main source of nitrogen is atmospheric nitrogen fixed by legumes. A crop rotation that includes legume green manures and forage legumes plowed under can provide much of the required nitrogen for many crops.

Phosphorus – This element is required by all crops but can be a difficult nutrient to manage. Although it is abundant in the soil, it is often in a form unavailable to plants. Phosphorus can be lost from soil by crop removal, erosion and leaching. You can conserve phosphorus on your farm by applying composted manure, using green manures (cover crops) and properly managing soil erosion problems. An adequate phosphorus level is between 30-50 ppm.

Potassium – This is another required nutrient for plants. Soils with a high cation exchange capacity (CEC) hold potassium in the soil, making it available for crops but not vulnerable to leaching. Increasing the level of stable organic matter in your soil will increase the CEC. Potassium can be conserved by using deep-rooted green manures, applying composted manure, and leaving stubble in the fields. A potassium level between 150-250 ppm is considered sufficient to grow most crops.

Magnesium – Along with calcium and sulfur, this is considered to be a secondary plant food element. Soils can be low in magnesium because of leaching or when it is tied up due to either low soil pH, or an excess of potassium. Sources of magnesium include biotite, Epsom salts (magnesium sulfate), kieserite (magnesium sulfate), and langbeinite (also called Sul-Po-Mag, K-mag or magnesium-bearing potassium sulfate). A magnesium level between 120-270 ppm should be adequate for most crops.

Calcium – A sufficient level of calcium is necessary to reduce soil acidity. It can improve soil structure, decrease the effect of toxic substances, and help in regulating nutrient absorption in plants. Calcitic limestone is the most common source for calcium as a soil additive but dolomite limestone and gypsum are also used. An optimum calcium level is between 800-1200 ppm.

(A note about the calcium magnesium ratio. Many organic farmers believe a calcium magnesium ratio of at least 8:1 is important for optimal production.)

Cation Exchange Capacity (CEC) – The capacity of soil particles to hold on to positively charged ions. This measure is expressed in milliequivalents (meq) per 100 grams³. The CEC quantifies the potential fertility of the soil. A high CEC (greater than 10 meq/100 grams³) indicates a soil with greater nutrient-holding capacity.

Micronutrients – Other than magnesium and calcium, these are elements such as zinc, iron, sulfur, copper, boron, and manganese needed by plants only in small amounts. Micronutrients are also called trace elements. Good sources of many different micronutrients for organic farmers are compost, kelp and other seaweed products. Only add in a synthetic micronutrient if a soil test demonstrates that your field is deficient in that micronutrient. Check with your certifier to make sure you’re meeting the organic standards as you build your soil.

a. Fill in the chart below based upon the results of your most recent soil test.

SWOT Rating for Soil:

FIELD #	SOIL TYPE	% ORGANIC MATTER	PH	NITRATE	P	K	MG	CA	CEC	MICRO NUTRIENTS

Procedures for Taking Soil Samples

- Divide your fields into uniform areas. Each area should have the same soil color and texture.
- Using a spade, soil auger or soil sampling tube, take soil from the surface to the plow depth of 6-8 inches in cropping situations, or two to three inches in permanent pastures. Take 10-15 samples in each uniform area.
- Place the samples from the same area in a clean plastic pail. Mix them thoroughly, breaking up the cores or slices. If the soil is muddy, dry it at room temperature before mixing. If the soil crumbles easily, dry after mixing. Spread the mixture out on clean paper to dry. Do not heat it in an oven or microwave.
- Fill the sample bag with the air-dried mixture of soil from each uniform area. Discard the rest.

Soil Health Card

The Soil Health Card is a way to monitor and improve soil health using your own field experiences and knowledge of your soil. It provides an evaluation of your soil health. Ohio farmers developed the Soil Health Card with assistance from the Ohio State University Extension and the Natural Resources Conservation Service (USDA-NRCS). Soil health cards have also been developed for other states and can be accessed at http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/health/assessment/?cid=nrcs142p2_053871

OHIO SOIL HEALTH CARD- How to use it!

Step 1: Gather a pencil and a shovel or spade.

Step 2: Use the chart below for the best times to assess each indicator of soil quality & health.

Step 3: Divide your farm and fields into separate sections for evaluation in the same way you would divide them for soil fertility sampling: separate by factors like soil type, topography, and history of tillage, crop rotation and manure application. Use one card per section.

Step 4: Enter the Date and Field Identification information at the top of the Card.

Step 5: Select 2-3 representative spots in your field and evaluate each soil Indicator.

Step 6: Read the Descriptive Ratings in the rectangular boxes, and based on your judgment rate the indicator Good, Fair, or Poor by checking the small square in the corner of the box with the best description.

Step 7: In the Notes section following each group of soil health indicators, record any observations or soil conditions that will help you review and evaluate your ratings.

Step 8: Follow changes in each of the soil health indicators over time, examine current field management practices, explore options and consider alternatives for management changes in problem areas.



Best Times to Assess Soil Indicators for Soil Health Card

	EARLY SPRING BEFORE PLANTING	GROWING SEASON		FALL	AFTER RAINFALL
		SPRING	SUMMER		
Structure (when moist)	✓	✓	✓	✓	
Crusting		✓			✓
Compaction	✓	✓	✓	✓	
Earthworms	✓	✓		✓	✓
Smell (when moist)	✓	✓	✓	✓	✓
Residue Decomposition	✓	✓		✓	
Drainage	✓	✓	✓	✓	✓
Water Movement	✓	✓	✓	✓	✓
Water-Holding Capacity	✓	✓	✓	✓	✓
Uniform Growth & Color		✓	✓		
Seedling Emergence		✓	✓		
Root Systems		✓	✓	✓	
Nutrient Levels	✓			✓	
PH	✓	✓	✓	✓	
Organic Matter	✓			✓	

Ohio Soil Health Card

Date:

Field Identification:

INDICATORS		DESCRIPTIVE RATINGS		
SOIL TILTH				
	SWOT	GOOD	FAIR	POOR
Structure		Good crumb structure, tills easily leaving no clods, soil breaks apart easily. <input type="checkbox"/>	Moderate crumb structure, some clods, soil breaks apart with some pressure. <input type="checkbox"/>	Hard, tills with difficulty, tillage creates lots of clods. <input type="checkbox"/>
Crusting		Soil maintains open/porous surface all growing season, seedling emergence not affected. <input type="checkbox"/>	Some surface sealing, minimal effect on seedling emergence <input type="checkbox"/>	Soil surface seals easily after tillage and rain events, inhibits seedling emergence <input type="checkbox"/>
Compaction		Loose soil, unrestricted root penetration <input type="checkbox"/>	Firm soil, root penetration somewhat restricted <input type="checkbox"/>	Hard layers, tight soil, severely restricted root penetration <input type="checkbox"/>
Notes:				
SOIL LIFE				
	SWOT	GOOD	FAIR	POOR
Earthworms		Lots of earthworms, many holes and casts <input type="checkbox"/>	Some earthworms, few holes and casts <input type="checkbox"/>	No visible signs of earthworm activity <input type="checkbox"/>
Smell		Soil has a fresh, earthy smell <input type="checkbox"/>	Soil has little or no smell <input type="checkbox"/>	Soil has a swampy, stagnant smell <input type="checkbox"/>
Residue Decomposition		Residue at various stages of decomposition on soil surface and in the topsoil <input type="checkbox"/>	Some visible, non-decomposed residue in the topsoil <input type="checkbox"/>	Rapid decomposition with little or no visible residue in the topsoil or very slow decomposition with relatively unweathered residue in the topsoil <input type="checkbox"/>
Notes:				

SOIL AIR & WATER				
	SWOT	GOOD	FAIR	POOR
Drainage		Soil drains and warms quickly in spring, limited delays in field operations, good balance between air and water in the soil, yield reductions only in very, very wet years <input type="checkbox"/>	Soil drains and warms more slowly in spring, some delays in field operations, water-logged after heavy rains, minimal yield reduction <input type="checkbox"/>	Soils stay wet for long periods, delays in field operation, soil does not breathe, reduces yields <input type="checkbox"/>
Water-Holding Capacity		Soil holds water well, deep topsoil for water storage, crops seldom suffer from moderate dry spells <input type="checkbox"/>	Soil has moderate capacity to hold water, crops aren't the first in area to suffer from dry weather <input type="checkbox"/>	Soil has limited capacity to hold water, crops suffer in moderate dry spells <input type="checkbox"/>
Water Movement and Erosion		Rainfall soaks in, very little runoff & erosion, water does not pond <input type="checkbox"/>	Absorbs water more slowly, some runoff of colored water & erosion, ponding after heavy rains <input type="checkbox"/>	Absorbs water very slowly, lots of soil colored runoff & erosion, ponding after moderate rains <input type="checkbox"/>
Notes:				
PLANT VIGOR				
	SWOT	GOOD	FAIR	POOR
Uniformity in Growth & Color		Uniform deep-green color, rapid growth, even stand (height & number), no visible sign of stress <input type="checkbox"/>	Some variation in color, height and population, moderate growth, mild stress <input type="checkbox"/>	Uneven color, variable height and population, stunted and stressed, nutrient deficiency symptoms <input type="checkbox"/>
Seedling Emergence		Rapid and even emergence <input type="checkbox"/>	Some variability in emergence <input type="checkbox"/>	Slow and uneven emergence <input type="checkbox"/>
Root Systems		Healthy, uninhibited root growth, lots of fine roots <input type="checkbox"/>	Root growth somewhat restricted, some fine roots <input type="checkbox"/>	Restricted root growth, few fine roots <input type="checkbox"/>
Notes:				

FERTILITY MANAGEMENT				
	SWOT	GOOD	FAIR	POOR
<i>Nutrient Levels</i>		Soil test levels are adequate for planned crops and yield goals, no visible signs of plant nutrient deficiency <input type="checkbox"/>	One or more soil test levels are less than adequate for planned crops and yield goals, no visible signs of plant nutrient deficiency <input type="checkbox"/>	One or more soil test levels are deficient or excessive for planned crops and yield goals, visible signs of plant nutrient deficiency may be present <input type="checkbox"/>
<i>Soil pH</i>		pH levels are within the acceptable range for the planned crops <input type="checkbox"/>	pH levels slightly above or below the acceptable range for planned crops <input type="checkbox"/>	pH levels are too high or too low for the planned crops <input type="checkbox"/>
<i>Organic Matter</i>		Organic matter levels are being maintained or increasing, dark friable, with good structure <input type="checkbox"/>	Organic matter levels can be improved, some crusting and clods <input type="checkbox"/>	Organic matter levels are decreasing, light-colored, crusted, cloddy, hard <input type="checkbox"/>
Notes:				

7. Physical Resources – The physical resources category includes many items. Knowing what you already have allows you to think critically about what you might need as you transition to an organic production system. In each of these categories, make your list as complete as possible and include items that you can have consistent access to through renting, sharing, or ownership.

Equipment: Think of all of the equipment you have access to. Examples might include trucks, tractors, tillage implements, and all crop production, livestock handling, post harvest, processing and marketing equipment.

Infrastructure: List any housing, barns, sheds, repair shops, greenhouses, fencing, roads and access lanes, irrigation infrastructure, post harvest processing and storage facilities, and on-farm marketing facilities.

Land: List tillable fields, pasture, wooded parcels, and fallow land.

Water: Record the water you have access to, including surface, well, public or municipal, irrigation and any other.

List all appropriate items in each category and indicate if the item is owned or rented. In the land category, indicate the number of acres. List any long-term leases, easements, conservation agreements and other arrangements that will need to be honored in the future. (SWOT rating: S=strength; W=weakness; O=opportunity; T=threat)

CATEGORY	SWOT RATING	CONDITION	VALUE (\$)	OWN	RENT
Equipment					
Infrastructure					
Land – (include # of acres)					
Water					

8. Human Resources – List all the members of your family (including yourself) and any employees, helpers, or interns that work on the farm. These people might form the core planning group of your operation or act as decision makers. It is important to include everyone with an interest or stake in the farm, e.g., your spouse or partner who might focus on marketing or recordkeeping, your children who help with weeding and collecting eggs, or your uncle who loaned you the money for the new greenhouse (if he is involved in decisions about its use). List what jobs these key people currently do, and any special skills, as well as the percentage of their time devoted to the farm. 100% represents full-time employment.

In the second box, include all the people, agencies, and/or companies who provide service and support. They can include Extension agents, suppliers, friends or family not directly working on the farm who may offer advice, custom hires, and so on. These individuals and groups, although not involved in the decision making process, can have a direct impact on your operation. Finally, list individuals or groups of people who you currently serve (such as customers, CSA members, buyers, a local food bank, or an FFA group).

List members of your family (including yourself) and employees who work on the farm, the work they provide and any special skills the person has (such as tractor repair, outstanding people skills, etc.). Also include the amount of his/her time (100% would be full-time employment) devoted to farm work.

8. Human Resources

NAME	SWOT RATING	JOB(S) PERFORMED	SPECIAL SKILLS	% OF TIME

Check off the services you currently utilize. Fill in the name of the person providing the service and the type of information and/or assistance supplied. These can be people who provide these services for free.

SERVICE	NAME	INFORMATION/ASSISTANCE	SWOT RATING
<input type="checkbox"/> Consultant			
<input type="checkbox"/> Custom Hire			
<input type="checkbox"/> Financial Advisor			
<input type="checkbox"/> Extension Agent			
<input type="checkbox"/> Suppliers			
<input type="checkbox"/> Community Services			
<input type="checkbox"/> Other			
<input type="checkbox"/> Other			

9. Financial Resources – Understanding your financial situation before you start any new endeavor is critical since it will be a significant factor in determining the amount of risk you undertake. Your amount of liquidity and solvency will assist in this determination.

Liquidity – This is the ability of your farm business to meet financial obligations as they come due or to generate enough cash to pay your family’s living expenses, taxes and make debt payments on time. There are three measures of liquidity:

- a) **Current Ratio of Assets to Debts** – measures the extent to which current farm assets, if sold tomorrow, would pay off current farm debt. In the best case scenario, this number is greater than one.
- b) **Working Capital** – shows the short-term operating capital from within the business. In the best case scenario this is a positive number.
- c) **Cash Flow** – the total amount of money being transferred into and out of a business over a given period representing the operating activities of an organization.

Solvency – This is the ability of your business to pay all of its debts if it were sold tomorrow. Solvency is important in evaluating the financial risk and borrowing capacity of the business.

Farm Debt to Asset Ratio – is the bank’s share of your business. It compares total farm debt to total farm assets. A ratio greater than 1.0 is an indication of higher financial risk and lower borrowing capacity.

Farm Equity to Asset Ratio – is your share of the business. It compares farm equity to total farm assets. If you add the debt-to-assets ratio and the equity-to-asset ratio you must get 100%.

Farm Debt to Equity Ratio – compares the bank’s ownership to your ownership. It also indicates how much the owners have leveraged (i.e., multiplied) their equity in the business.

• **Liquidity** (SWOT Rating: _____)

a) Current Ratio $\left(\frac{\text{Total Current Farm Assets}}{\text{Total Current Farm Liabilities}} \right)$ _____ = _____

b) Working Capital (Total current farm assets – Total current farm liabilities)
 _____ – _____ = _____

• **Solvency** (SWOT Rating: _____)

a) Farm Debt to Asset Ratio $\left(\frac{\text{Total farm liabilities}}{\text{Total farm assets}} \right)$ _____ = _____

b) Farm Equity to Asset Ratio

$\left(\frac{\text{Total farm assets} - \text{Total farm liabilities}}{\text{Total farm assets}} \right)$ = Farm net worth
 _____ = _____

c) Farm Debt to Equity Ratio $\left(\frac{\text{Total farm liabilities}}{\text{Total farm assets}} \right)$ _____ = _____

10. Marketing – Product marketing can be one of the most fun and challenging parts of the system. The current markets in which you sell your agricultural products may or may not be viable venues for selling the products from your transitional and organic fields. However, understanding how your markets work is a starting point for developing marketing strategies for your new products. Be prepared to do some research and planning about the diversity of options available for selling your transition and organic crops. Start with the market opportunities you know exist in your area. (SWOT Rating: S=strength; W=weakness; O=opportunity; T=threat)

Markets SWOT Rating:

Describe how you currently sell the products raised on your farm.

Who are your customers?

What marketing resources (books, consultants, websites) have you utilized for your farming operation?

Indicate which of the following marketing opportunities currently exist in your area.

- Farmers' Market
- Community Supported Agriculture
- Farmers' Cooperatives
- Roadside Markets or On-Farm Stores
- Direct marketing to restaurants
- Direct marketing to institutions like schools or universities
- Commodity Brokers
- Wholesale sales to processors
- Agri-tourism/ Eco-tourism

USDA has a resource called: *Know Your Farmer - Know Your Food*, which can help you identify marketing opportunities. This link offers a catalogue of USDA's directories for farmers markets, CSA, food hubs, and on-farm markets.

http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_RESOURCES

Look under Farmers Markets, Gardens, and Local Food Marketing > Local Food Directories

11. SWOT (Strengths, Weaknesses, Opportunities, Threats) Summary – The final step of your assessment is to go back over your inventory and record in the space below all of the items you found to be strengths, weaknesses, opportunities or threats so you can keep track of using or addressing them in your transition farm plan.

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS

DEFINING YOUR GOAL

In the last section, you assessed your current farm operation to identify the human, financial, physical, and natural resource bases from which to build your new certified organic operation. Now you have a clearer picture of where you are. Next, think about where you are heading. This section will help you to write an effective goal statement. You will be asked to look long-term into your future and to set some concrete goals.

A goal is a statement that describes, broadly, what you are looking to achieve; it tells you where you are going. In this case, you will write a goal that you will work to achieve, in part, by transitioning to organic production. This goal will reflect your personal values and provide motivation to keep you moving through the transition process.

A goal statement will also serve a very practical purpose as you develop your transition plan. You will need to make many decisions in order to create your plan. Which crops will I grow? How will I build and maintain fertility in my fields? What markets will I use? Your goal statement will be your guide through this process. Ideas can be accepted or rejected based on whether or not they help achieve your goal.

Goal setting is a challenging part of any planning process because it requires you to look at your values, beliefs, and motivations. These are things that may not be easy to put into words. That said, defining your goal is necessary to develop an effective farm plan. The process outlined below will help.

There are many different planning and decision making tools; the method used in this chapter is based on Holistic Management© (<http://www.holisticmanagement.org/>). It is designed to help people make decisions that are socially, economically and environmentally sound. In Holistic Management©, the goal statement is the central focus of the plan. It is what steers the decision-making process. A Holistic goal is based on personal values. Ultimately, the purpose of setting a Holistic goal is to make sure that the direction you are heading fits with your core values and meets your needs and desires. Answering questions such as: “Why am I a farmer?” “What kind of steward of the land do I want to be?” and “What kind of farm do I want to leave to future generations?” in the Holistic goal setting process guides the participant to develop a powerful goal for her/his farm. The Holistic goal gives the planner a clear picture of where they are going and what they want to accomplish.

The goal-writing process is best shared by those directly affected by the activities you will undertake to attain the goal. Consider forming a core planning group and include input from each member in your goal statement. This group should include the primary farm operator(s), family members, and any individuals with a financial stake in the farm. Including these people will help them to be a part of the process. Furthermore, a clear goal statement can help resolve conflicts among stakeholders, should the need arise.

The following questions, developed by the Minnesota Project and the Whole Farm Planning Interdisciplinary Team (1998), will help you think about your values and the quality of life you want to build for yourself and your family.

Have your planning team answer each of the questions on their own, and then bring everyone together to discuss the written answers. This exercise will help to prepare you all for writing the actual goal statement.

MAKING YOUR GOAL HAPPEN

The following questions will help you think about what you value and what you want. Your values and wants lead to your goal. You may wish to answer the questions with single words, brief phrases, or long statements. Keep in mind that this worksheet is for you to communicate to the others in your planning group what is important to you, and for you to better understand what is important to them.

1. Values/Vision:

What do you like most about your farm?

What do you like most about your work on the farm?

What would you like the farm to look like at the end of your stewardship?

List what qualities you value in yourself as a person.

Describe what qualities you would like to have or would like to work toward?

2. Resources/Wealth:

Are there specific items that you don't have currently, but would like to own?

How much money from the farm enterprise is enough for you?

Is there a specific amount of money or infrastructure you'd like to leave behind when you no longer work on the farm?

3. Relationships:

Describe your relationship with each of the core planning group members.

What words describe the relationship you want?

If you could change these relationships to make them better, what would you change?

4. Work time/Free time:

List your major work tasks and activities throughout the year. Remember to include non-work things you do for fun or in service to your community.

	WORK TIME	SERVICE	FREE TIME
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

5. Enterprises: List your talents and skills. List the work tasks you do. Then, list the work tasks you would like to do that are now done by someone else, or not done at all. List the things you create. Then circle all your favorite work tasks.

TALENTS AND SKILLS	TASKS YOU DO	TASKS YOU WANT TO DO	TASKS YOU WANT SOMEONE ELSE TO DO	THINGS YOU CREATE

6. Learning: Fill in the blanks with as many examples as you can think of:

SKILL I WANT TO LEARN	RESOURCE OR MENTOR	TIMELINE

7. Setting an Holistic Goal: After you have completed your goal worksheet and discussed the responses from everyone in your planning group, it is time to develop your actual goal statement. Holistic Management© practitioners divide their goal into three categories: Quality of Life, Forms of Production, and Future Landscape Description.

Use the **Quality of Life** category to envision how you want your life to be. This is the place to express who you are and what you want to become. Some of the things you may want to include in this area are indications of:

- your future economic welfare;
- relationships with the key people in your operation;
- how you want to be challenged and grow in order to keep your work stimulating; and
- what will be your purpose and ultimate contribution.

The **Forms of Production** category should include answers to the question: “What needs to be done to create the quality of life you identified?” Make sure you deal with all of the ideas expressed in your quality of life statement and include everything you must produce to meet your stated purpose. Don’t focus on the “how” at this point; just list what needs to be done.

The statement under the **Future Landscape Description** may look far into the future and include something regarding your land and the key people in your operation. The statement about your land or environment should contain a detailed description of what the land must look like and how the ecosystem processes (the **water cycle, mineral cycle, community dynamics** and **energy flow**) will have to function to sustain what you will produce, which in turn, will give you the quality of life you desire. A statement about the people in your resource base should include a description of how you and your operation will grow so that these people will remain engaged and fulfilled as part of the operation.

Fundamental Ecosystem Processes

These are the four basic processes through which nature functions. They are the foundation for all human activities. If you affect one you affect them all. A Holistic goal takes them into account.

Water Cycle – Strive to maximize the cycling of water through plants and soil. Keep it local. Reduce the need for export or import of water.

Community Dynamics – This is a way to view relationships within nature. Here increased biodiversity leads to increased stability in plant and animal populations.

Mineral Cycle –Maximize the cycling of minerals through plants and soil and minimize the need for the export or import of minerals.

Energy Flow – Strive to make the most of the flow of solar energy through plants and soil by maximizing plant cover on the soil.

Source: *The Essence of Holistic Management*, The Savory Center

The Holistic Management® method for goal setting can be challenging, so developing a temporary Holistic goal may be helpful. Over time, you can refine your goal. For further assistance, the architects of the Holistic Management© method, Alan Savory and Jody Butterfield, offer the following list of Do's and Don'ts when developing your goal statement.

- Do make your Holistic goal 100% about what you want to achieve and have to produce and 0% about how it is going to be achieved. Save those details for your plan.
- Do include all decision makers in the process of setting your Holistic goal.
- Do write what you want, not what you don't want.
- Do realize that a person's level of commitment to this process will vary with the level of active involvement in your operation.
- Do start with the quality of life statement, then the forms of production, and finish with the future resource base, as they build on each other.
- Don't include problems at this stage.

An example of a Holistic goal statement set by a farming couple using the Holistic Management© method is given in the box below.

Holistic Goal For Foxhollow Farm:

Quality of Life: Meaningful family work; time and energy left over; low consumerism and outside inputs; control of our own time and tasks

Forms of Production: Sustainable practices yielding forest products and livestock products from grass

Future Landscape Description: Healthy mineral balance, water cycle, sod, and stream; diversity of plants and animals; including wildlife and native plants; sustainable use of woods, pasture, and streams

In the space below, write your ideas to include in your Holistic goal statements in each of the three areas. Have everyone in your core planning group do the same. Consider all possibilities at first. You can eliminate the unnecessary or combine the duplicates as you work through this. Keep the items you agree upon as a group. Some things may need to be modified to be acceptable to everyone.

Ideas for Inclusion in My Holistic Goal Statement

Quality of Life:

Forms of Production:

Future Landscape Description:

WRITING YOUR TRANSITION PLAN

So far in this workbook you have taken an inventory of your current resources and written your goal statement. In our related manual, the Organic Transition Guide, you learned about the certification process, the organic standards, and the methods available to meet them. The next step puts everything together into a plan to transition your farm to organic production.

Before you begin writing your plan, decide on your overall transition strategy. One strategy is to “go cold turkey” and transition the entire farm at one time. This route to certification has both challenges and risks associated with it. On the one hand, this method would leave you with only one set of production techniques and transition dates to keep track of. On the other hand, it can be risky and stressful to make a whole-farm change if you rely on your farm as your sole source of income. If you do choose to go this route, consider beginning your rotation with leguminous crops that fix nitrogen, or a crop with low nitrogen needs.

Another strategy is to transition one parcel of land at a time. This strategy also has benefits and challenges. This is a good strategy because it minimizes your risk. However, it can significantly increase your workload since you will have to keep careful records and separate your transitional, organic, and conventional crops during production, harvest, storage and transport in order to prevent commingling and contamination.

An alternative, gradual transition strategy is to withdraw one class of inputs at a time. You might start by eliminating inorganic fertilizers followed by insecticides, fungicides and then herbicides. This allows your production methods to adjust as inputs are withdrawn and organic practices are implemented. The main drawback to this method is that it can significantly delay the day when your entire operation becomes certified organic.

One final strategy is to find access to land that, because of its prior use, could be certified immediately. This could be land formerly enrolled in the Conservation Reserve Program (CRP), pasture that had not received any prohibited inputs for over three years, or land that was left fallow for three years. Talk to your potential certifier to make sure your land is eligible for immediate certification without a transition period.

In the space below record your overall transition strategy.

My overall transition strategy will be:

One of the primary organic certification requirements is an Organic System Plan (OSP) for your farm. You may find it helpful to use the OSP format as a guide as you develop your organic transition plan. The specific requirements for an OSP listed in the National Organic Program Standards can be found in the *Organic Transition Guide*.

Most organic certifiers have built their application forms to ask the applicant all of the information necessary for an Organic System Plan. In the next section of this workbook, you will use a sample application form to develop your transition plan. This transition plan will become the basis for your Organic System Plan and your application to an organic certifying agency. Not all of the information requested in the form will be relevant to your transition plan but the entire application is used so you can see what will eventually be required and plan accordingly. To be even further prepared, you might contact a potential certifier or two to take a look at their application formats for future use. Now is a good time to begin developing a relationship with a certifier.

There will be many decisions to make when you write your transition plan, such as which crops to include in your rotation, or the best way to add organic matter to your soil. Remember to use your goal statement as your guide through this process. Accept activities that help move you towards attaining your goal and set aside those that do not. For example, in the sample goal given in the last section, the authors stated in their Quality of Life statement that they wanted a farming operation based on low consumerism and outside inputs. It would make sense then, to include in their farm plan green manures or on-farm composting to provide nutrients, or adapting existing farm equipment rather than purchasing new.

As you work through this section, have the *Organic Transition Guide* available. It will be a valuable source of information and ideas. Many of the subjects in the application are covered in detail in the guide.

One final note before you begin: recordkeeping is an essential part of being a certified organic farmer. It has often been said that you cannot effectively manage what you cannot measure and record. As you make your way through this section, you may want to highlight areas that ask for information you do not currently record. This will make it easier to add these categories to your recordkeeping program.

1. FARM PROFILE

[\$205.201(a)]; \$205.202(a)-(b)]

In this section, you give a basic description of your operation as you start your transition or a new component of your operation. The information may change by the time you submit your application for certification, and that's okay. Use this information as your starting point.

In the first table, list each crop on a separate line. This table should only include the crops you plan to grow using organic methods. The total number of acres you include in this table must equal the number of acres included later in this application, in field histories and maps.

CROP & FIELD ACREAGE SUMMARY			
Complete the table below for all crops you wish to have certified this year. Acreages listed in this table must match organic field acreages listed on your Field History sheet(s) and farm map(s). Attach additional sheets if more space is needed. Mixed vegetable growers may write "Mixed vegetables" <i>provided that a complete seed list is included with the OSP</i> . List two crops grown in one field on the same line. Pasture and cover crops are considered crops and must be included. Do not list transitional or conventional fields in this section.			
CROPS REQUESTED FOR CERTIFICATION	FIELD NUMBERS/NAMES	TOTAL ACRES PER CROP	PROJECTED YIELDS
<i>EXAMPLES: Corn</i>	<i>1, 4B, 7</i>	<i>45</i>	<i>100 bu/ac</i>
<i>Wheat/Straw</i>	<i>2, 5, 6</i>	<i>45</i>	<i>50 bu/ac / 1 ton/ac</i>
<i>Please check that the acreages listed here match your Field History</i>			← Total Organic Acreage

Have you managed all fields for 3 or more years?

yes no

If not, submit signed statements from the previous manager stating the use and all inputs applied for the previous three years on all newly rented or purchased fields.

Are all fields requested for certification located at the main farm address?

yes no

2. SEEDS, SEEDLINGS, AND PLANTING STOCK

2.1 SEEDS [§205.204]

The National Organic Program (NOP) Standards require that certified organic seeds must be used if they are commercially available. Cost does not make a type of seed or seedling unavailable in the eyes of the NOP. When comparing for an equivalent seed variety, consider growing habits, days to maturity, insect resistance, disease resistance, flavor, milling qualities, and other factors important to your growing conditions and markets. If you can find a comparable organic variety- use it! If the variety, or an equivalent variety you need is not available as organic, you may use untreated, non-GMO seeds. Certifiers accept documented attempts to try to find organic seeds from three different sources. If you have trouble finding organic seed, keep a record (person contacted, when, and the outcome) of these attempts. The Organic Seed Finder database is one resource to help you locate organic seeds at organicseedfinder.com. Some certifiers share printed lists of organic seed sources. If you use organic seeds, keep documentation that the seed is organic.



Do your best to keep current about which seed treatments are considered allowed or prohibited substances. Some seed treatments and coatings are allowed for use in organic production. Seeds are sometimes treated to kill seed-borne pathogens, protect from soil-borne pathogens, to make planting easier and more accurate with pelleting, and to improve germination rates. (Gatch, 2014). Ignorance regarding a product's status will not be accepted as an excuse for accidental use of a prohibited substance. The burden is on you to keep informed, but know that you are not alone. If you have questions about any material, ask your certifier before purchasing the product you'd like to use, and be sure to let them know how you'd like to use the product so they can let you know whether or not it is allowed. Some products are allowed for some uses, but not for others. The Organic Materials Review Institute and Washington State Department of Agriculture are two great resources. Check out their websites (www.omri.org; <http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>), or request a printed list of their materials. Keep labels, tags, and receipts from the products you use.



A. SEEDS

The NOP requires the use of certified organic seeds unless not commercially available. You must document your attempts to source organic seed. Synthetic seed treatments are prohibited unless included on the National List. Genetically engineered/modified (GMO) seeds are prohibited in organic production. If using non-organic seed when organic is not commercially available, you must also obtain verification that your seed is untreated and non-GMO.

List all seeds used or planned for use in the current year. Check the appropriate boxes below. Attach additional sheets if more space is needed. Mixed vegetable growers may submit seed order sheets showing complete information instead of completing this table. Have all tags/packets/labels, receipts, and supporting documents available for the inspector.

No seeds used

CROP/VARIETY/BRAND	ORGANIC	NON-ORGANIC	UNTREATED	TYPE/BRAND OF TREATMENT	
				INOCULANT	COATING
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

2.2 SEEDLINGS [§205.204]

Purchasing Seedlings

Annual seedlings, such as tomato or pepper starts, must be certified organic. If the crops you plan to grow are normally transplanted as seedlings, you have a choice to either buy the certified organic seedlings or produce them yourself. If you purchase organic seedlings, make sure “seedlings” or “vegetable starts” is clearly listed on the producer’s certificate. Obtain a copy of the certificate for your records.

Producing Your Own Seedlings

You may decide that you want to produce your own organic seedlings. As part of your OSP, describe your growing medium, greenhouse practices, greenhouse, and the materials used there. There are many sources for soil mix approved for use in organic production. Use your certifier’s list, or consult those of OMRI or WSDA mentioned in the previous section to make sure you are using approved growing medium. If you have questions, contact your certifier before you purchase the medium.

Think about how you will manage fertility as well as potential disease and insect problems for the seedlings you wish to grow. As with crops grown in the field, you will have to list all of your inputs used in the greenhouse. Develop a method to record this information and save product labels and receipts.

If you plan to work with both organic and non-organic plants in your greenhouse, your certifier will need to understand how you make sure the organic seedlings are kept separate and meet the organic standards. **Split production** (some crops grown organically, and others grown using non-organic methods) or **parallel production** (growing the same crops in organic and non-organic form) in the same greenhouse requires safeguards against contamination or commingling (mixing or touching of

organic and non-organic seedlings). If you intend to grow crops in split or parallel production, indicate how you have separated and clearly identified areas in the greenhouse for your organic and conventional crops. Since, in parallel production, these crops may not be visually distinguishable from each other, signs identifying the organic and conventional crops are advisable. Set up and document a system to ensure that any inputs used on your conventional crops that are prohibited for use in organic production do not come into contact with the organic crops.

It's important to note that **treated wood is NOT allowed** [§205.206(f)] for use in organic production. If you already have treated wood on your operation, make sure it is not in contact with crops, soil, or livestock, and be sure to note it in your Organic System Plan.

2.3 PLANTING STOCK [§205.204]

Planting stock includes garlic, potatoes, onion sets, sweet potato slips, strawberry plugs, trees, and shrubs. The rules here are the same as for seeds: you must use organic if the desired variety is commercially available. If the planting stock you need is not available as organic, you may use untreated, non-GMO planting stock. If you cannot find the organic variety you seek, document your search of at least three sources and only purchase untreated and non-GMO planting stock for your organic operation. Keep a record of these attempts (who you called or wrote, when, and the outcome). Have documentation of the search and that the planting stock is untreated and non-GMO ready for the inspector. If you do find organic planting stock that meets your needs, keep documentation that it is organic.

Will you purchase organic seedlings? yes no not applicable

If yes, who will be the supplier?

If supplier is certified, by which agency/organization?

Do you have a copy of the supplier's organic certificate with "seedlings" listed on it?

yes no

B. PURCHASED SEEDLINGS		
<i>Annual seedlings must be certified organic unless they meet the requirements under NOP §205.204(3), (5). See the OEFFA Policies & Procedures book for more information on seedlings.</i>		
List the supplier(s) of purchased seedlings below. If you manage the production of seedlings at another location, all information regarding seedling management must be supplied in the Seedling and Planting Stock Production section and the site must be inspected. <input type="checkbox"/> No purchased seedlings		
SUPPLIER	TYPE(S) OF SEEDLING	ORGANIC CERT ON FILE?
If you grow your own seedlings, list all inputs on page 4 and complete the Seedling & Planting Stock Production section		

If you plan to grow organic seedlings on-farm:

not applicable

Seedling and Planting Stock Production

NOP §205.204

Annual seedlings must be certified organic unless they meet the requirements under NOP §205.204(3), (5). See the OEFFA Policies & Procedures book for more information on seedlings and planting stock. List all purchased seedlings and planting stock on page 3.

Not Applicable (no seedling or planting stock production)

DO YOU GROW ORGANIC SEEDLINGS OR PLANTING STOCK?: (check all that apply) ON-FARM OFF-FARM

Where are they grown (i.e. greenhouse, hoop house, etc.)? _____

If grown in a greenhouse, list the type and size: _____

Do you raise plants in containers/flats off the ground? Yes No

Do you plant crops directly in the ground in the greenhouse? Yes No

If treated wood is used in any part of your greenhouse, where is it used? _____

Date of treated wood installation: _____

Describe your watering system: _____

How do you prevent diseases and/or insect problems in seedling and planting stock production?

Do you sell any seedlings or planting stock you produce as organic? Yes No

If you grow both organic and non-organic plants in your greenhouse:

not applicable

NON-ORGANIC GREENHOUSE OPERATIONS

Not Applicable (I do not have conventional greenhouse production)

List varieties produced as both organic and non-organic ("parallel production").

How do you physically separate and identify organic and non-organic growing areas?

How do you label organic and non-organic seedlings/plants?

List all soil mix ingredients, fertility products, foliar sprays, and pest and disease inputs used or planned for use in your NON-ORGANIC greenhouse operation.

	PRODUCT NAME	BRAND NAME AND/OR SOURCE	ACTIVE INGREDIENTS
NON-ORGANIC INPUTS			

How do you prevent commingling of organic and non-organic soil mixes during mixing and storage?

Where do you store inputs used for non-organic production?

How do you prevent contamination of organic seedlings with prohibited materials through ventilation and/or watering systems?

How do you clean seedling containers and equipment?

Planting Stock

not applicable

C. PURCHASED PLANTING STOCK (i.e. garlic, potatoes, onion sets, sweet potato slips, strawberry plugs, trees, shrubs, etc.)
The NOP requires the use of certified organic planting stock unless not commercially available. You must document your attempts to source organic planting stock. Genetically engineered/modified (GMO) planting stock is prohibited in organic production. If using non-organic planting stock when organic is not commercially available, you must also obtain verification that your planting stock was not treated after harvest and that it is non-GMO. Nonorganic perennial planting stock can only be marketed as organic after one year of organic management.

No planting stock used

TYPE	SOURCE	ORGANIC	NON-ORGANIC	UNTREATED	ANNUAL	PERENNIAL
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Keep a list of all soil mix ingredients, fertility products, foliar sprays, water system additives, pest and disease inputs used or planned for use in your **greenhouse operation**. List these in the next section on Inputs. *Have labels and receipts for organic crops available for inspection.*

3. SOIL AND CROP FERTILITY MANAGEMENT

[§205.203]; [§205.205]

3.1 FERTILITY MANAGEMENT [§205.203]

If you test your soil when you begin your transition, you'll have the basis needed to make informed decisions and track progress as the soil improves. Your soil-building program will work to address deficiencies or problems in the soil or fields. Think about how you will monitor your soil health, address issues (such as poor drainage, steep slopes, or soil with a low pH or nitrogen content), and create a favorable environment for soil flora and fauna.

Except for the question on monitoring, which is an essential part of soil-building programs, the answers to these questions will depend on your soil's condition. If organic matter content is low in your fields, you may want to use a green manure crop that is plowed under. If the nitrogen content of the soil is low, you may decide to grow a legume because of its ability to fix nitrogen in the soil. There won't be a single strategy; consider using multiple components in order to improve your soil.

As you implement your soil-building program, monitor your progress so you can make adjustments as needed. Keeping track of soil fertility over time will enable you to assess the effectiveness of your program and provide records for your certifier. Keep a copy of the results of any testing you do, as well as your monitoring and field activities. These will allow you to make the necessary changes in coming years to improve your system.

Soil and Crop Fertility Management	NOP §205.203
<i>The NOP requires active management of soil fertility and crop nutrients as well as prevention of soil erosion and contamination of crops, soil, and water. A "restricted" input refers to an approved material on the National List (NOP §205.601 and 205.602) which has a specific annotation for its use. If you use a "restricted" material, you must provide evidence of how you address the material's annotation. Under NOP Rule 205.201(a)(3), the operator must describe monitoring practices used to verify that the OSP is effectively implemented.</i>	
What are your soil types?	
What are your soil/nutrient deficiencies?	<input type="checkbox"/> No deficiencies
How do you monitor the effectiveness of your fertility management program? (Attach copies of available test results.)	
<input type="checkbox"/> soil testing <input type="checkbox"/> microbiological testing <input type="checkbox"/> tissue testing <input type="checkbox"/> observation of soil <input type="checkbox"/> observation of crop health	
<input type="checkbox"/> comparison of crop yields <input type="checkbox"/> crop quality testing <input type="checkbox"/> other (specify) _____	
How often do you conduct fertility monitoring? <input type="checkbox"/> weekly <input type="checkbox"/> monthly <input type="checkbox"/> annually <input type="checkbox"/> as needed <input type="checkbox"/> other (specify)	
Rate the effectiveness of your fertility management program: <input type="checkbox"/> excellent <input type="checkbox"/> satisfactory <input type="checkbox"/> needs improvement	
What changes do you anticipate?:	
What are the major components of your soil and crop fertility plan?	
<input type="checkbox"/> crop rotation <input type="checkbox"/> green manure plowdown/cover crops <input type="checkbox"/> interplanting <input type="checkbox"/> incorporation of crop residues <input type="checkbox"/> subsoiling	
<input type="checkbox"/> summer fallow <input type="checkbox"/> compost <input type="checkbox"/> on-farm manure <input type="checkbox"/> off-farm manure <input type="checkbox"/> soil amendments <input type="checkbox"/> side dressing	
<input type="checkbox"/> foliar fertilizers <input type="checkbox"/> biodynamic preparations <input type="checkbox"/> soil inoculants <input type="checkbox"/> other (specify)	

3.2 INPUTS [§205.201(a)(2)]

Based on soil tests and other observations, you may choose to use soil amendments. If you decide to use a product you haven't used before, make sure you check to see if it is approved for use in organic systems. It can be a good idea to check the approval status each year, as the status of some materials or the ingredients in some products change over time. Check the Organic Materials Review Institute's website (www.omri.org), Washington State Department of Agriculture website (<http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>), or check with your intended certifier.

Make sure you understand how to comply with specific uses, or "annotations" for any of the products listed as restricted. The material listing, or the certifier, will explain the restrictions. The Organic Transition Guide has additional information on materials that might be helpful to you. Be sure to keep copies of labels from any materials you choose to use.

The application of sewage sludge is not allowed in organic production because it is often contaminated with high levels of heavy metals, prohibited substances and salts.

Inputs			NOP §205.201(a)(2)
<p>List all fertility inputs (including compost and manure), soil amendments, soil mix ingredients, pest, weed, and disease control products, water additives, and all other inputs used or planned for use in the current year on organic and transitional fields. Use additional sheets if necessary. All inputs used during the current year must be listed on your Field History sheet. If you use a "restricted" material, you must provide evidence of how you address the material's restriction(s). <i>Have all labels and receipts available for the inspector.</i></p> <p style="text-align: right;"><input type="checkbox"/> No inputs used</p>			
INPUT/PRODUCT NAME	MANUFACTURER, BRAND NAME, AND/OR SOURCE	REASON FOR USE	IF RESTRICTED, DESCRIBE COMPLIANCE WITH NOP RULE ANNOTATION
<i>Examples:</i> Raw Manure	Own Cattle	Fertility	Applied to vegetables 120 days before harvest.
Dolomitic Limestone	Location of Quarry	Ca, Mg, & pH adjustment	
Bt Spray	ABC Company	Pest Control	Preventive measures used first

Do you use any of the following restricted fertility inputs?

None Used

fertilizers with high salt content such as sodium (Chilean) nitrate, or potassium chloride (*prevention of salt buildup*)

synthetic micronutrients (*documented deficiency*)

raw manure (*90/120 days before harvest on crops for human consumption – please also complete table on the next page*)

If yes, how do you comply with the restrictions (*shown in parentheses*)?

Do you use?: Lime Gypsum (*check all that apply*)

If yes, do you have documentation of their source and any processing they have undergone? Yes No

Do you burn crop residues? Yes No

If yes, please describe what materials are burned and why:

Do you apply municipal leaf litter, clippings, or other municipal compost materials to fields? Yes No

If yes, have you verified that these materials do not contain prohibited substances (such as sewage sludge)? Yes No

3.3 COMPOST USE [§205.203(c)]

Compost is an excellent fertility input for organic systems. If you purchase compost, make sure you know it is allowed for use in organic production. Additionally, make sure that you have records demonstrating that the compost was produced according to the organic standards explained in this section, or that you're purchasing a compost product that has been reviewed by a third party such as your certifier, the Organic Materials Review Institute (OMRI), or Washington State Department of Agriculture (WSDA).

Producing your own compost can be challenging, but worthwhile, since you will be able to control the content and quality, especially if you have enough of the raw materials available. The compost method you choose will depend upon how much time and resources you want to invest in the process. In-vessel composting requires a higher initial investment. Static, aerated pile composting does not require as high an initial investment as in-vessel composting. No vessel or bin is needed, but many people using this method purchase pipes to introduce air into the pile and a source of electricity to forcibly move the air through the pipes. A variation on this method is to not force air through the pipes and to rely on passive aeration. This way you would not need a source of electricity but it would likely take longer to finish the compost. Windrow composting does not require much of an initial investment, as you may already have the necessary equipment to turn the compost. However, this method requires you to monitor the progress of the compost more closely.

To begin the composting process according to the organic standards, achieve a carbon to nitrogen ratio of 25-35:1. Materials such as hay, sawdust and straw have relatively high C:N ratio. Mix these with items with a low C:N ratio like manures, vegetable wastes and humus to conduct an effective composting process.

Another important component of the composting process is the maintenance of high temperatures for a prescribed period of time. The high temperatures must be maintained to kill off dangerous pathogens, weed seeds, and fly larvae. To destroy pathogens, the temperature of the compost should be maintained above 122° F for at least 15 days. To ensure the destruction of weed seeds the temperature must reach 154° F.

Monitor the temperature of your compost pile with a temperature probe 2-3 feet long so you can reach the interior of the pile and get an accurate reading.

Windrow compost piles are turned to speed up the composting process, control temperature and moisture, and to ensure even decomposition throughout the pile. The NOP requires a compost pile to be turned a minimum of five times. As a control measure, turning is also recommended when the temperature of the pile falls below 120° F or exceeds 140° F.

It's important to keep records of all of these requirements (C:N ratio, temperatures, number of times turned, and dates). Many certifiers have sample forms to help you keep these records, or to use as a model from which to create your own recordkeeping system for compost. One example can be found in the sample forms at the end of this workbook.

A. COMPOST USE. NOP §205.203(c)(2) defines requirements for the composting process.	<input type="checkbox"/> No Compost
List all compost feedstocks, ingredients, and additives:	
What composting method do you use? <input type="checkbox"/> in-vessel <input type="checkbox"/> static aerated pile <input type="checkbox"/> windrows <input type="checkbox"/> other (specify) _____	
What is your <u>initial</u> Carbon to Nitrogen ratio (C:N)? _____	
Do you monitor temperature? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If using a windrow (turned pile) system, do you maintain the composting materials at a temperature of 131 to 170 °F for 15 days and turn the pile at least five times during that 15-day period? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
If using an in-vessel or static <u>aerated</u> pile system, do you maintain the composting materials at a temperature of 131 to 170 °F for 3 days? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Do you produce or use any vermicompost (worm castings) or compost extracts ("teas")? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Do you maintain a compost production record? <input type="checkbox"/> Yes <input type="checkbox"/> No	

3.4 MANURE USE [§205.203(c)(1)]

Raw manure can have lots of available nitrogen, making it an attractive fertility amendment. However, nitrogen can also easily leak from raw manure, so storage and use are important issues.

If you plan to use raw manure on crops intended for human consumption, you will need to incorporate the manure into the soil at least:

- 120 days before the harvest of crops whose edible portions touch the soil, or
- 90 days before the harvest of crops whose edible portions are not in contact with the soil or soil particles.

Since you won't know the exact day of harvest, leave yourself sufficient time to meet this requirement by planning to incorporate the manure earlier in the season or the previous fall when you seed cover crops.

Using manure from your own farm is convenient and a safer option because you control its composition and how it is handled. If you purchase manure from an off-farm source, keep careful records about the type of operation the manure is from, its composition, and any potential for contamination (for example, if it was sprayed for flies or ingredients were added to manage odors).

B. MANURE USE. NOP § 205.203(c)(1) restricts use of raw manure.

No Manure

What forms of manure do you use? none liquid semi-solid piled fully composted dried
 other (specify) _____

What type of crops do you grow (check all that apply)?

- crops not used for human consumption
- crops for human consumption whose edible portion has direct contact with the soil (complete the table below)
- crops for human consumption whose edible portion does not have direct contact with the soil (complete the table below)

If you grow crops for human consumption and use raw manure, complete the following table.

If composting manure, please complete the section above.

CROP(S)	FIELD NUMBERS	DATE MANURE IS APPLIED	EXPECTED DATE OF HARVEST

What is the source of the manure you use? (check all that apply) On-farm Off-farm

If you use on-farm manure, list manure ingredients/additives:

List all sources of off-farm manure:

What are the potential contaminants (pit additives, feed additives, heavy metals, etc.) from these sources?

Attach residue analysis/additive specifications of off-farm manure, if available.

Do you verify that all manure is free of prohibited substances? Yes No

Describe manure storage, end use, and/or sale:

How do you prevent runoff of manure and contaminated waters to surface water and neighboring properties?

4. NATURAL RESOURCES

[§205.2; §205.203; §205.205]

The conservation practices you employ on your farm will not only help to address areas of your fields with any existing problems such as erosion, but will also help to prevent future problems.

4.1 SOIL CONSERVATION [§205.203]

Here are several soil conservation tools you might employ:

Both **terraces** and **contour farming** are used to prevent erosion in fields with a significant slope. These methods follow the horizontal lines of the slope rather than run up and down the slope. Terraces are low, flat ridges of earth that cut into the slope of a hill, usually of 10% or less, and give the appearance of steps. Contour farming is a type of cultivation that also crosses the slope but no flat surfaces are formed. Contour farming is most effective on slopes of 3-8%. **Strip cropping** can be used to control erosion on sloping land but is also effective in areas susceptible to wind erosion. In sloping fields the strips are laid out along the contour of the land, alternating crops with cover crops or permanent grass. Where wind erosion is a problem, the strips are designed to be perpendicular to the prevailing wind direction of concern.

Undersowing or **interplanting** maximize soil cover during the growing season along with bringing economic and ecological diversity to your farm.

For year round ground-cover, a **cover crop** can be grown in the winter. The most common winter cover crops in the Midwest are fall-seeded cereals, such as rye or wheat, and fall-seeded annual ryegrass. Late summer or early fall-seeded legumes, such as hairy vetch, bigflower vetch, Austrian winter peas and crimson clover, may also serve as crops for winter cover.

Conservation tillage refers to the different methods used for establishing crops in the residues of the previous crop, which are intentionally left on the soil surface. Conservation tillage systems commonly used in organic farming are **ridge tillage**, **zone tillage** and **mulch tillage**. The conservation tillage practice of no-till is not generally used by organic farmers because of its heavy reliance on herbicides. However, research is under way that may make organic no-till a viable conservation practice.

Windbreaks, usually a line of trees or shrubs, work to reduce the amount of wind erosion. Windbreaks or tree lines also provide wildlife habitat and help to increase the biodiversity on your farm.

Maintaining the integrity of the bodies of water and rivers/streams on or near your farm can also help conserve soil. **Retention ponds**, constructed or grass **waterways**, and **riparian zone** management are all effective ways to help control runoff and limit flooding during high water times.

Hopefully, when you did the assessment, you identified any existing **erosion** issues on your farm. Understanding why your erosion problems exist will help you find a solution to the problem.

The description of your efforts to minimize soil erosion might include the soil conservation practices noted here.

You can **monitor your soil conservation** by regularly observing the areas of your farm known to be prone to erosion. Start by taking a picture of the area so you have a point for comparison. You can also insert stakes in to the ground in these locations with the present soil line marked. Check the stakes regularly to see if the soil level drops. Another method is to monitor the turbidity of the water in any

stream or waterway on your property after it rains. If you find lots of soil particles suspended in the water (meaning high turbidity) it is an indication that your soil conservation program may need some improvements.

In the beginning, monitor frequently since this will help you get to know all aspects of your operation and respond to developing problems more quickly. Later you can cut back as needed.

A. SOIL					
What conservation practices do you use?					
<input type="checkbox"/> terraces	<input type="checkbox"/> contour farming	<input type="checkbox"/> strip cropping	<input type="checkbox"/> under-sowing/interplanting	<input type="checkbox"/> firebreaks	
<input type="checkbox"/> winter cover crops	<input type="checkbox"/> conservation tillage	<input type="checkbox"/> permanent waterways	<input type="checkbox"/> windbreaks	<input type="checkbox"/> tree lines	
<input type="checkbox"/> retention ponds	<input type="checkbox"/> riparian management	<input type="checkbox"/> maintain wildlife habitat	<input type="checkbox"/> other (<i>specify</i>) _____		
What soil erosion problems do you have (why and in which fields)?					<input type="checkbox"/> No Erosion Problems
Describe your efforts to minimize soil erosion problems listed above, if applicable.					

4.2 BIODIVERSITY [Preamble; §205.2; §205.200; §205.202; §205.203; §205.205-§205.207; §205.238-§205.240]

The NOP standards require the conservation of biodiversity and the maintenance or improvement of natural resources, including wetlands, woodlands, and wildlife. Biodiversity or biological diversity means a variety of life forms- from bacteria and fungi to grasses, ferns, trees, insects, and mammals. Biodiversity also includes the full range of natural processes upon which life depends, such as nutrient cycling, carbon and nitrogen fixation, predation (species eating other species- such as a praying manits eating a cabbage looper), symbiosis (species partnering with one another to meet their needs- such as dairy cows and the bacteria that live in their rumen, helping them digest the what they graze), and natural succession.

The Preamble of the NOP standards states: “We have amended the definition of organic production to require that a producer must conserve biodiversity on his or her operation. The use of ‘conserve’ establishes that the producer must initiate practices to support biodiversity and avoid, to the extent practicable, any activities that would diminish it. Compliance with the requirement to conserve biodiversity requires that a producer incorporate practices in his or her organic system plan that are beneficial to biodiversity on his or her operation.”

Biodiversity conservation is addressed throughout much of the NOP Standards. Windbreaks that buffer neighboring contamination also support native species (§ 205.202). Improving the condition of the soil boosts microbial diversity and carbon storage (§ 205.203). Biodiversity can be incorporated in alleyways and on the edges of crop beds or fields (§ 205.205). Habitat for natural enemies can help control pest problems (§ 205.206). Additionally, the standards require that the ecosystem be maintained during wild crop harvesting (§ 205.207). Pasture sanitation provides for healthy situations for livestock and wildlife (§ 205.238). Incorporating native trees into grazing areas offers another way to increase diversity (§ 205.239). Protecting wetlands and riparian areas adjacent to pastures reduces sediments, nutrients, and pathogens from entering waterways, increase carbon storage and provide habitat for wildlife (§ 205.240).

Read on for several more examples that can promote and conserve biodiversity on your farm from the NOP’s draft guidance on biodiversity. For more information on how to engage in biodiversity conservation on your farm, contact the Wild Farm Alliance at PO Box 2570 Watsonville, CA 95077.

Source: Biodiversity Conservation: An Organic Farmer’s Guide, Wild Farm Alliance

EXAMPLES OF PRACTICES THAT MAY MAINTAIN OR IMPROVE NATURAL RESOURCES AND BIODIVERSITY

TOPICS	NRCS ASSISTANCE MAY BE AVAILABLE ²	EXAMPLES OF PRACTICES ³
Examples Relevant to All Types of Organic Certification		
Soil Composition	✓	Adding organic matter to the soil to increase the diversity of soil organisms and to improve nutrient cycling, competitive exclusion of pathogens, long-term storage of soil carbon, and adaption to extreme climatic conditions.
	✓	Conserving and restoring woodlands, prairies, riparian habitats and wetland areas, which sequester carbon in soils and aid in cycling soil nutrients.
Soil Stability and Water Quality	✓	Creating, conserving, and restoring vegetative covers (woodlands, prairies, riparian habitat, and wetland areas) that control erosion and filter nutrient, pesticide, and pathogen pollutants.
	✓	Using no-till or permanent cover, conservation tillage, terracing, contour farming, micro-irrigation, windbreaks, cover crops; no conversion of Highly Erodible Land or wetlands. ⁴
Water Quantity	✓	Using water conservation techniques that save water for crops, livestock, wildlife, and riparian ecosystems.
	✓	Choosing crops and other plants that are appropriate for the climate and landscape with water conservation in mind.
		Using suitable irrigation systems and schedules and monitoring them for water conservation.
	✓	Woodlands, riparian habitat, and wetland areas that act as sponges to hold water for long periods are conserved and restored as part of a healthy water cycling process.
	✓	Using managed systems to “bank” soil moisture if fields are drained using tiles.
Wildlife Benefits	✓	Maintaining or improving diverse mixtures of plants to provide food, habitat, or shelter for pollinators, insects, spiders and other arthropods, bats, and raptors.

2 NRCS financial assistance programs are listed at <http://1.usa.gov/1kwzgz0>. NRCS staff and technical service providers may reference this chart as part of conservation planning for organic producers.

3 While NRCS publishes national Conservation Practice Standards (<http://1.usa.gov/1n8fcHG>), each State has its own technical specifications, which can be accessed electronically through the NRCS Field Office Technical Guide (<http://efotg.sc.egov.usda.gov/>) or by contacting your local USDA Service Center (<http://1.usa.gov/1kwzgz0>).

4 The Farm Service Agency and NRCS Fact Sheet on Highly Erodible Land Conservation and Wetland Conservation Compliance (<http://1.usa.gov/1xH45sT>) defines highly erodible land and wetlands and provides information on the regulations that apply to each type of land.

TOPICS	NRCS ASSISTANCE MAY BE AVAILABLE ²	EXAMPLES OF PRACTICES ³
Examples Relevant to All Types of Organic Certification <i>(continued)</i>		
Native Species and Natural Areas of the Operation	✓	Conserving high-value conservation areas that have outstanding biodiversity importance, or mitigating/restoring these areas elsewhere on the farm.
	✓	Conserving and restoring wildlife and native plant communities specific to the site (woodlands, prairies, riparian habitat, and wetland areas).
	✓	Documenting rare, threatened, and endangered terrestrial and aquatic plants and animals, and taking steps to protect them. ⁵
	✓	Conserving wildlife corridors and large blocks of habitat that reduce fragmentation.
	✓	Making improvements to streams, lakes, and rivers, enhancing habitat for fish and other aquatic species.
	✓	Allowing degraded riparian areas, prairies, and wetlands to be recolonized through natural processes. Actively restoring degraded land to its native habitat using species adapted to and historically present in the area. ⁶
Invasive Plants and Animals	✓	Closely monitoring invasive plants and animals threatening natural areas.
	✓	Controlling invasive species before they spread.
		Avoiding seed, planting stock, soil amendments, and mulches that may import weed seeds and other pests.
Examples Specific to Crop Operations		
Soil Stability and Water Quality	✓	Using nutrient budgets to protect water quality by managing crop nutrients.
	✓	Designing grassed waterways, filter strips, terraces, and other non-crop vegetation, and managing them to help control erosion and filter pollutants before they reach water bodies.
	✓	Using stream crossings, brush mattresses, and other engineered features to prevent erosion where year round or intermittent water flows.
	✓	Using sediment basins to capture runoff sediment before it leaves the farm.

5 The NatureServe database (www.natureserve.org/explorer/) and the U.S. Fish and Wildlife Service database (<http://www.fws.gov/endangered/>) provide information on the conservation status of area plants and animals.

6 The NRCS PLANTS database (<http://plants.usda.gov>) provides information on native plants in each county of the U.S.

TOPICS	NRCS ASSISTANCE MAY BE AVAILABLE ²	EXAMPLES OF PRACTICES ³
Examples Specific to Crop Operations <i>(continued)</i>		
Co-existing with Wildlife	✓	Taking mitigation measures to minimize total habitat loss on adjacent land when wildlife is restricted from entering the production area.
		Designing and using management strategies as much as possible to repel, rather than destroy, intended and unintended species.
Supporting Wildlife		Strategically using mowing, tilling, and harvesting methods to preserve sites where wildlife raise their young.
Crop Diversity		Growing a variety of crop types, heirloom crops, or several genetic strains of the same crop.
		Growing locally-adapted seed varieties or those suited to site-specific conditions.
Examples Specific to Livestock Operations		
Soil Stability and Water Quality	✓	Managing the frequency, intensity, and timing of grazing and forage harvests to protect soil and water quality.
	✓	Controlling access to sensitive riparian areas and wetlands as much as possible.
Wildlife	✓	Composing pasture plantings of diverse species and managing them to support livestock and native species.
Co-existing with Wildlife		Using non-lethal predator control before lethal methods (e.g., guard animals, grazing large and small animals together, grazing when predation is low, or housing vulnerable animals overnight).
	✓	Encouraging diverse native landscapes that support natural prey for carnivorous animals to reduce the carnivores' predation of livestock.
	✓	Using wildlife-friendly fencing as much as possible.
Livestock Diversity		Raising a variety of livestock, including heirlooms, or several breeds of the same livestock.
		Preserving locally-adapted livestock breeds, or raising those well suited to site-specific conditions.

TOPICS	NRCS ASSISTANCE MAY BE AVAILABLE ²	EXAMPLES OF PRACTICES ³
Examples Specific to Wild Harvest Operations		
Soil Stability and Water Quality		Using practices for wild harvest that maintain or improve soil stability.
		Using practices for wild harvest that maintain or improve water quality.
Native Species and Natural Areas of the Operation		Maintaining the sustainability of harvested native plants and animals and associated species when determining the quantity and timing of the wild harvest.
Examples Specific to Handling Operations		
Air and Water Quality		Operations that use dust collection systems have up-to-date permits for their operation.
	✓	Using constructed wetlands to improve wastewater quality.
		When necessary, processing wastewater using secondary or tertiary treatment prior to flowing through the wetland.
Wildlife Benefits	✓	Locating raptor perches around packing sheds and processing facilities to control rodents without using toxins.
Co-existing with Wildlife		Avoiding harm to wildlife from processing waste.
		Strategically placing lighting around buildings to lessen the need for insectocutors (e.g., placing light fixtures away from vents, windows, or doors).
		Removing habitat and food sources from directly adjoining areas where pests could enter the facility, to decrease the need to destroy pest insects, birds or mammals.

B. BIODIVERSITY

What steps do you take to provide wildlife habitat and conserve biodiversity?

- invasive species monitoring/removal
 work with neighbors/others
 manage for native plants/wildlife
 establish legal conservation areas
 scheduling farm practices to benefit wildlife
 other (specify) _____

Describe how you monitor the effectiveness of your natural resources conservation program.

- soil testing
 visual observation
 species counts
 other (specify) _____

How often do you conduct conservation and biodiversity monitoring?

- weekly
 monthly
 annually
 as needed
 other (specify) _____

5. WATER – USE AND QUALITY

[§205.202; §205.203; §205.205]

Water plays an important role on every farm, whether you irrigate or not, and regardless of whether or not your farm contains a stream, consistently wet areas, or other designated waterways.

5.1 WATER USE

The questions about water use help to ensure that the use of water does not become a source of contamination for your organic crops. They can also help you think about ways to conserve water on-farm.

<p>C. WATER USE (check all that apply) <input type="checkbox"/> none <input type="checkbox"/> irrigation <input type="checkbox"/> livestock <input type="checkbox"/> foliar sprays <input type="checkbox"/> washing crops <input type="checkbox"/> greenhouse <input type="checkbox"/> other (specify) _____</p> <p>Source(s) of water: _____ (on-site well, river, creek, pond, spring, municipal, irrigation district, etc.)</p> <p>Type of irrigation system: <input type="checkbox"/> none <input type="checkbox"/> drip <input type="checkbox"/> flood <input type="checkbox"/> center pivot <input type="checkbox"/> other (specify) _____</p> <p>What input products are applied through the irrigation system? <input type="checkbox"/> None</p> <p>What products do you use to clean irrigation lines & nozzles? <input type="checkbox"/> None</p> <p>Is the system shared with another operator? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, what measures are taken to prevent contamination of your organic crops?</p>
--

5.2 WATER QUALITY

Plan to protect and maintain water quality as part of your Organic System Plan. Your farm should not be a contamination source for any waterway, pond, lake, or groundwater. In addition to the methods listed at right, you can help to protect water quality by not planting crops in the riparian zones around streams and rivers, conserving as much wetland area as possible, fencing livestock out of streams, and minimizing erosion and sedimentation by using cover crops and conservation tillage.

Have your water tested to find out if there are any contaminants in your water supply, unless you are connected to a public water supply whose responsibility it is to conduct these tests. Depending on your location, there are public agencies and private laboratories to conduct water quality tests. Check to see if labs in your area are required to have a certification or approval from the state to conduct these tests. If contaminants are found in your water, it will be important to find the source of the contamination in order to address it.

The frequency of your water quality testing might be risk-based. If you notice a potential contamination issue, you may want to test more frequently as you resolve the problem. On the other hand, if no problem exists you could extend the time between tests.

D. WATER QUALITY *(Complete this section even if you do not have a pond or waterway on your farm.)*

What practices are used to protect water quality?

- fencing livestock from waterways scheduled use of water for conservation tensiometer/monitoring
 laser leveling/land forming drip irrigation micro-spray other (*specify*) _____

Describe the location and type of any water contamination problems you have and explain the cause.

None

Describe your efforts to minimize water contamination problems listed above.

Describe how you monitor the effectiveness of your water quality program (water testing, visual observation, etc.).

How often do you conduct water quality monitoring?

- weekly monthly annually as needed other (*specify*) _____

6. CROP MANAGEMENT

[\$205.205; \$205.206]

6.1 CROP ROTATION PLAN [\$205.205]

Developing your crop rotation is one of the key decisions you will make for your transition plan. Start by selecting the crops you want to grow and then the length of the rotation. If grain crops are your priority then your rotation will tend to be shorter (3-4 years) than if row crops and small grains are your priority (4-5 years). Rotations including forage crops tend to be the longest (5-6 years). Consider many different factors before you make the final decision on which crops to include. Here are several factors for your consideration:

- Your familiarity with the crops and how they are grown;
- How well the crops fit into your goal statement;
- The existence of viable markets for the crops;
- Potential pest and disease problems;
- Availability of organic crop varieties;
- Your soil type, quality and nutrient content;
- Available fertility options to meet the nutrient needs of the crops;
- Forages for any livestock in your operation;
- Special equipment or labor requirements for the crops;
- The need to balance:
 - o Cash crops with soil-conserving crops;
 - o Deep rooted crops (alfalfa) with shallow rooted crops (cereals);
 - o Crops with high-root biomass (rye) with those with low root biomass (oats);
 - o Crops requiring lots of water with those requiring less water;
 - o Crops that fix nitrogen (legumes) with high nitrogen consumers (corn);
- The need for ground cover from cover crops;
- The need for extra nitrogen and organic matter from a green manure crop; and
- The need for weed control from weed suppressing crops.

You may also want to vary your rotation from field to field or start at a different point in the rotation in different fields. When you provide the information about your crop rotation on your Organic System Plan, you will also need to indicate any changes to the rotation you anticipate moving forward.

A. CROP ROTATION PLANS (use one line for each rotation used):	
CROP ROTATION PLAN & TIMEFRAME	FIELD NUMBERS/NAMES WHERE PLAN IS FOLLOWED
<i>Example: Corn ► Soybeans ► Small Grain ► Hay (3 years)</i>	<i>Smith Farm, Fields 1-5</i>
How do you monitor the maintenance or improvement of soil organic matter? (soil testing, visual observation, etc.)	

6.2 WEED MANAGEMENT [\$205.206]

For the purposes of your transition plan, list your current weed problems. As you change your crops and the methods used to grow them, your weeds may also change.

Since weeds can be a challenge for organic farmers, the choices you make for weed control are also very important. To expand your weed control toolbox, educate yourself about many of the practices listed. Different weeds will require different control measures, so it is best to be prepared for as many potential challenges as possible.

Here are several weed management tools for your consideration:

Crop rotations are great weed management tools. Rotating crops can disrupt weed life cycles. There are many allelopathic plants that can be included in your rotation as a crop, green manure or smother crop. These plants can inhibit germination and growth of certain weeds by the natural release of chemicals from plant parts. Some of these allelopathic plants include: barley, oats, red and white clover, hairy vetch, ryegrass and sweet clover. Make sure that the crops that follow an allelopathic crop are not sensitive to that plant.

Mechanical methods of weed control include full field tillage **cultivation** or, on a smaller scale, **hoeing, hand weeding, flaming** and **steam weeding**. When carefully timed and conducted with the appropriate machinery, tillage can be a valuable weed management tool.

Tillage is used to prepare a field for planting, but it can also stimulate weed growth. Timing the first tillage pass two weeks before planting, or delaying seeding, will give you time to conduct a second tillage pass before planting to control early germinating weeds. For the weeds that do germinate and survive early weed control measures, it is important to kill or remove them from the field before they flower and set seed. Flaming can be useful for small patches of soon to be flowering weeds or another tillage pass may be needed if the problem is more widespread. The use of fast-emerging crop varieties can out-compete slower growing weeds and suppress their growth.

Mowing is a weed control method that is used primarily in the areas around fields but it can also be used in forage crops and green manures. To be most effective, mowing should be timed to cut back weeds at their most vulnerable stage which, for many weeds, is just before they flower.

Livestock grazing can be part of a weed management program. Cattle, sheep, goats and even geese have been used to help manage weeds on organic farms and pastures. The grazing animals must be monitored to make sure that they do not overgraze an area causing more harm than good.

Non-synthetic mulches such as straw, shredded newspapers, corn gluten and soap-based herbicides all can be used to prevent or manage weed growth. They are used most commonly in fruit, vegetable

and other high-value crop production. **Plastic mulch** not removed from the field at the end of the season could leach chemicals into the soil, so removal is required for organic certification. Shredded newsprint (without glossy inserts or color inks) has also shown to be effective as mulch.

Soil sterilization uses heat to kill weed seeds in the soil before planting. This method is usually only practical for use in the greenhouse. Furthermore, it can create more problems than it solves because the process kills nearly all living organisms in the soil. It is difficult to maintain a healthy soil without a balance of living organisms.

In the beginning, a frequent and comprehensive **weed monitoring** program could help you to address problems early and keep track of the methods that work and those that do not. When you submit your Organic System Plan for certification, you will also be asked to rate your weed management program's effectiveness and list any anticipated changes. The same requirements will apply for your pest and disease management programs.

B. WEED, PEST, & DISEASE MANAGEMENT PLANS	
Please list your problem weeds:	<input type="checkbox"/> No weed problems
What weed control methods do you use? (check all that apply)	
<input type="checkbox"/> crop rotation	<input type="checkbox"/> field preparation
<input type="checkbox"/> delayed seeding	<input type="checkbox"/> mowing
<input type="checkbox"/> livestock grazing	<input type="checkbox"/> approved herbicides
<input type="checkbox"/> use of fast emerging varieties	<input type="checkbox"/> mechanical cultivation
<input type="checkbox"/> hand weeding	<input type="checkbox"/> flame weeding
<input type="checkbox"/> smother crops	<input type="checkbox"/> other (specify) _____
List the type(s) of mulch you use: _____	<input type="checkbox"/> None
If you use plastic or other synthetic mulch, is it removed at the end of the growing or harvest season?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If you use newspaper or other recycled paper for mulch, do you use paper with glossy or colored inks?	<input type="checkbox"/> Yes <input type="checkbox"/> No

6.3 PEST MANAGEMENT PLAN [\$205.206]

At this point, you may have a good idea of what pest problems you could encounter during your transition rotation. To help you plan, do some reading or ask other farmers their experiences on the crops you have included in your new rotation and find out the most common pest problems. List these insect pests. If you choose to consult a pest control advisor, make sure that she or he is familiar with organic production systems. It may be equally helpful to find a certified organic farmer in your area who is willing to answer your questions.

There are many different methods to manage pest problems in organic systems. Educate yourself on different options and determine which are the most effective against the pests you identified. See the "Pest Management Practices" box for an explanation of the different pest management options listed in the Organic System Plan.

Since you might have a need for pest control products, find out which products are available and approved for use on the pests most likely to be a problem in your new system. Again, your potential certifier, the Organic Materials Review Institute (OMRI), and Washington State Department of Agriculture (WSDA) offer three good resources. List these products in your plan. You may not have to use the products, but if it is included in your plan, you will know what to use in case a problem emerges. If no products are approved for use on the pest you may encounter, then look at the ones that

are restricted. As long as you can comply with the restriction or annotation (a description saying under which circumstances the product can be used), you can use that product and document it in your field activity records. Here is an example:

Under [NOP §205.601(e)(1)] Synthetic substances allowed for use in organic crop production.

Ammonium carbonate is allowed as an insecticide in organic production systems, but there is an annotation. This is how it reads in the standards:

“(e) As insecticides (including acaricides or mite control).

- (1) Ammonium carbonate – for use as bait in insect traps only, no direct contact with crop or soil.”

So, if you wanted to use ammonium carbonate as part of your pest management system, you would need to make sure you’re doing so in accordance with that annotation, making sure that it is only used as a bait, and that it does not touch crops or soil.

It will be helpful in the early stages of your transition to keep detailed records on the methods and products used and how well they worked. Monitoring to determine if your pest management plan is effective will be important from the beginning, just as it will be for your weed management program. Most of the methods listed are straightforward to implement, but require extra time in the field. Try to monitor for pests more frequently during transition. This allows you to spot problems before they get too severe and to determine the effectiveness of the methods and products you are using.

PEST MANAGEMENT PRACTICES

Crop Rotation – A diversity of crops makes any one crop less vulnerable and will break up pest life cycles.

Selecting Appropriate Species/Varieties – Choose a species or variety that is tolerant or resistant to pests in your area.

Provide Habitat for Natural Enemies – Buffer zones, shelterbelts and hedgerows are great for this. They also need to be monitored to make sure they are not harboring pests.

Timing of Planting – Track the life cycles of your insect pests. Try to time planting so that the crop’s most vulnerable stage does not coincide with the emergence of the pest.

Companion Planting/Intercropping/Strip Cropping – Other ways to add diversity to your fields. Companion plants are mutually beneficial to each other’s growth.

Frog pond, Bat Houses and Bird Houses – These provide habitat for animals who primarily consume insects for their diet.

Monitoring – Can be done visually or with traps.

Trap Crops – Plants attractive to an insect pest are grown in an area away from your field as a diversion from your crops.

Physical Barriers – These can take many forms but all work by preventing the pests’ access to the crops. An example is kaolin clay used on apples to form a barrier against boring insects. Another example is floating row cover for high-value crops.

Hand Picking/Physical Removal – practical in high value crops grown on small acreage. This can be done with a suction device.

Traps and Lures – Devices that catch insects and usually contain an attractant such as a pheromone.

IPM – Integrated Pest Management is an approach to pest management in which different types of methods (e.g. prevention, mechanical, biological, physical and as a last resort chemical) are used.

Insect and Animal Repellants – compounds that repel the target pest (e.g. neem oil repels Japanese beetles). Garlic, marigolds and mint can be used as repellent plants.

Predator/Parasite Release – many insect predators and parasites are available commercially. Make sure you get ones that are proven to work on your insect pest.

Use of Approved and Restricted Products – these should be your last line of defense. Check the OMRI website for approved status or restrictions. Strictly follow any use restriction, document uses and save labels and receipts.

What are your problem pests?

No pest problems

rodents gophers birds other animals (*list*) _____

insects (*list*): _____

What strategies do you use to control pest damage to crops?

crop rotation selection of plant species/varieties timing of planting companion planting trap crops

lures/traps/repellants habitat for natural enemies physical barriers release of predators/parasites

Integrated Pest Management (IPM) use of allowed/restricted products physical removal

Other (*specify*) _____

6.4 DISEASE MANAGEMENT [\$205.206]

You may apply the same strategy here as you did in the pest management section. Find out which diseases are common in your area for the crops you have included in your new rotation. Learn about different prevention strategies and approved disease management products to determine which will be most effective against these diseases. Ask experienced organic farmers about the strategies and products they use.

Here are several weed management tools for your consideration:

Rotating crops is a good idea for many different reasons. In disease management, crop rotation will prevent the buildup of disease organisms in the soil that can occur when the same crop is planted season after season. This is also the reason that crops that share the same susceptibility to a disease should not follow each other in a rotation. Additionally, choose species/varieties of plants for your rotation that are resistant to diseases common in your area.

Timing your planting can also assist in disease prevention. Learn about the typical cycle of the common diseases of your crops and adjust your planting date to avoid the period of time when the disease is most prevalent. When planting, consider the distance between each plant. Good airflow

around your plants can help prevent disease since it allows for the easy evaporation of water from the plant surface. Not crowding your crop plants in the row will allow for adequate airflow. As your crop grows, if a disease develops, proper field sanitation will be important to remove infected plants from the field and destroy them. **Clean any equipment** that may have come in contact with diseased plants to help stop the spread of the disease.

Another strategy to reduce the incidence of certain diseases includes **vector management**. Vectors are organisms, usually insects, which transmit pathogens from an infected plant to an uninfected one. Effective vector management will reduce the amount of disease. The type of management required will depend on the species of vector, but also includes things such as **elimination of weeds from the field borders, adjusting plant spacing, intercropping** and **removal of diseased plants**.

Companion planting, intercropping and **strip cropping** can be disease management strategies because they increase plant diversity in the field, making a devastating disease less likely to develop. If you have areas in your fields where you know a specific disease has been a serious problem, **soil solarization** can be used as a treatment. This method requires intense sunlight to raise the temperature of the soil under plastic sheets high enough to kill the pathogens. The process can take weeks to be effective and will, unfortunately, kill all living organisms in the soil.

Maintaining healthy plants by providing them a **balance of nutrients in the soil** will help your crops resist infection. Maintaining healthy, biologically active soil helps keep the plant pathogens in the soil in check. One way to accomplish both of these things is to **add mature, high quality compost to your soil**. Quality compost is a source of a variety of nutrients and a diversity of organisms and soil life. It stimulates microbial activity, which in turn helps suppress disease.

During your transition, having a wide range of options in your disease management program will be useful. Approved and restricted use materials are also tools in your toolbox after other, preventive methods have been tried and demonstrated to be unsuccessful. Find out which approved products are available to treat the diseases you listed. If there are no approved products, look at the restricted use products. It's important to fully understand and be willing to comply and document that you are meeting the use restrictions. If you are unsure about the restrictions, call your certifier. Here is an example:

Under [NOP § 205.601(i)(2)] Synthetic substances allowed for use in organic crop production.

Fixed coppers are allowed for use in organic systems for disease control with a specific annotation. This is how it reads in the standards:

“(i) As plant disease control.

(2) Coppers, fixed- copper hydroxide, copper oxide, copper oxychloride, includes products exempted from EPA tolerance, Provided, That, copper-based materials must be used in a manner that minimizes accumulation in the soil and shall not be used as herbicides.”

So, if you have a particularly wet season, and despite your efforts to prevent disease, which may have included wider plant spacing, mulching, crop rotation, among others, you might still face disease issues. Fixed coppers are a tool in your toolbox. You would need to make sure you're using approved copper products in accordance with the annotation above, making sure that you are only using the product to manage disease (not as an herbicide), and that the way you're using the product minimizes the accumulation of copper in the soil.

Keep complete records on every method and product you use in your disease management program. The intensity and frequency of your monitoring will eventually be determined by the amount of disease you encounter. As you transition, plan to monitor comprehensively and frequently.

What are your problem crop diseases?	<input type="checkbox"/> No disease problems			
What disease prevention strategies do you use?				
<input type="checkbox"/> crop rotation	<input type="checkbox"/> field sanitation	<input type="checkbox"/> selection of plant species/varieties	<input type="checkbox"/> timing of planting/cultivating	
<input type="checkbox"/> plant spacing	<input type="checkbox"/> vector management	<input type="checkbox"/> soil balancing	<input type="checkbox"/> compost/tea	<input type="checkbox"/> use of approved/restricted materials
<input type="checkbox"/> other (<i>specify</i>) _____				

C. MONITORING FOR PEST, WEED, & DISEASE MANAGEMENT:						
How do you monitor the effectiveness of your pest, weed, & disease management program?						
<input type="checkbox"/> testing	<input type="checkbox"/> visual observation	<input type="checkbox"/> comparison of crop yields	<input type="checkbox"/> pest/weed counts	<input type="checkbox"/> work with a consultant or advisor		
<input type="checkbox"/> physical examination of crops/pests						
<input type="checkbox"/> other (<i>specify</i>) _____						
How often do you conduct pest, weed, & disease monitoring?		<input type="checkbox"/> daily	<input type="checkbox"/> weekly	<input type="checkbox"/> monthly	<input type="checkbox"/> annually	<input type="checkbox"/> as needed
How effective is your pest, weed, & disease management program:		<input type="checkbox"/> excellent	<input type="checkbox"/> satisfactory	<input type="checkbox"/> needs improvement		
What changes do you anticipate?						

7. ENSURING ORGANIC INTEGRITY

[\$205.201(a)(5); §205.202(c); §205.272]

7.1 ADJOINING LAND USE [§205.202(c); 205.272]

Buffer zones are important to prevent accidental contamination of your organic crops. There are many sources of potential contamination, whether it is the genetic drift from the GMO crops planted on the farm next door, the herbicide spray that the power company applies to their right-of-way near your farm, or the inputs you use on your own, conventionally managed fields. One way to protect your crops from exposure to prohibited substances is to design buffer zones around your fields. The NOP Regulations do not specify the required width for a buffer zone. A standard width is 25-30 feet, but the size of the buffer zone required by your certifier may vary depending on risk factors. So, for example, you may be required to keep a wider buffer zone if the adjacent farmer aerially applies his chemicals, since the contamination risk may be greater than from an application close to the ground.

Once you have determined your potential sources of contamination and the crops you will grow, think about factors including slope of land, movement of water and wind, existence of treelines and hedgerows, and the relationships you have with your neighbors. Let these factors help you determine what size of a buffer you need in a specific area.

Buffer zones can have multiple uses other than preventing inadvertent contamination. They can be kept as natural areas for wildlife or beneficial insect habitat or can be planted with harvestable crops. If you plant your buffer zone with a crop, that crop will not be able to be sold as organic. You will need to keep track of the harvest and sale or end use information to show that you harvested, stored, and used the non-organic buffer crop appropriately, and that you kept it separate from your organic or transitional crops. Another option is to mow grass buffers and let the mown grass lie in the field. This means you won't receive income from that crop, however you won't have the same degree of recordkeeping that goes along with producing a crop in those buffer areas.

Another method to prevent contamination is to give written and verbal notice to your neighbors and any other agency or company that might apply a prohibited substance near your farm. Some certifiers have a form to document the use of adjoining land. This form is set up for your neighbor to promise not to use a prohibited substance in proximity to your fields, and may be one option for starting the conversation with your neighbor. Some producers also post "no spray" signs around the property. These are not failsafe methods, but the more people who know about your production methods, the better chances you may have to avoid contamination.

The question about flooding is also meant to help protect you organic crops. Fields that frequently flood may be contaminated by water carrying prohibited substances. If you have such a field, consider this risk and what it might take to correct the flooding problem before you transition it to organic production.

All of the methods listed for monitoring can be part of a comprehensive monitoring program for contact with prohibited substances. However, the residue analysis and GMO testing will be more costly options that you can save for when the other methods have indicated a likely contamination.

Maintenance of Organic Integrity**NOP §205.201(a)(5); §205.202(c); §205.272****NEIGHBORING LAND USE AND BUFFERS:**

The NOP requires that organic production areas have distinct boundaries and buffer zones to prevent the unintended application of or contact with prohibited substances that are applied to neighboring land not under organic management. Crops within required buffer zones are not eligible for organic certification. Indicate buffer zones and neighboring land use on your field maps.

In the table below, list specific buffer areas you maintain:

Not applicable (I do not maintain any buffer areas) - Explain: _____

LOCATION/FIELD NUMBERS	TYPE OF BUFFER (CROP LAND, TREELINE, HEDGEROW, WILDLIFE PLANTING, GRASS STRIP)	WIDTH OF BUFFER	ADJOINING LAND USE	IF CROP IS HARVESTED FROM BUFFER, DESCRIBE END USE (SALE, NON-ORGANIC LIVESTOCK FEED, SEED, ETC.)

If crops are harvested from the buffer zones with equipment used for harvesting organic crops, how do you protect organic crops from contact with buffer crops?

What other practices do you use to prevent accidental contamination? None

Do you provide written notification to the following? Not Applicable

highway departments electric companies aerial spray companies/airports adjoining landowners
 drainage commissions farm service office other (specify) _____

Have you posted signs along roadsides that adjoin organic fields? Yes No

Do any fields or portions of fields flood frequently (more than once every ten years)? Yes No

If yes, list field numbers:

Do you have a plan to minimize the risk of pollen drift from GMO crops? Yes No

If yes, please describe:

Have your crops ever tested positive for GMOs? Yes No

If yes, please explain:

How do you monitor for crop contamination?

visual observation residue analysis GMO testing photographs wind direction/speed data
 other (specify) _____

How often do you conduct crop contamination monitoring?

weekly monthly annually as needed other (specify) _____

7.2 SPLIT OR PARALLEL PRODUCTION [§205.201(a)(5); §205.272]

If you transition just part of your operation to organic production at this time, the remainder of your farm may be managed using other methods. Conventionally managed fields could pose a potential source of contamination to your transitional and eventually certified organic fields. If you grow the same crops in both your transitional and non-organic fields, this is called **parallel production**. In **split production**, different crops are grown in organic and non-organic fields. Split production cannot be avoided if you do not transition your entire operation at one time. If you engage in parallel production, your risk of accidental commingling (mixing or touching of organic and non-organic products) is higher, so you will have to carefully design a method to keep the crops separate during seeding, harvest, and post-harvest handling.

The certification process requires detailed records about the crops you grow and the inputs you use in your non-organic or transitional fields. This information helps the certifying agency track the production, harvest and sale of the non-organic crop and ensures you keep the two production systems separate so that no commingling or contamination of your organic crops can occur.

Conventional Production

NOP §205.272

Not applicable (I do not have conventional production)

Do you grow any of the same crops organically and conventionally (parallel production)? Yes No

If yes, list:

Are conventional crops and organic crops grown on the same farm or site? Yes No

Complete the following table for all conventional crops you grow or plan to grow (use additional sheets if needed):

NOTE: ALL CONVENTIONAL FIELDS SHOULD BE INCLUDED ON THE FIELD HISTORY

SPECIFIC CROPS/VARIETIES	FIELD NUMBERS/NAMES	GMO	TOTAL ACREAGE	PLANNED USE OF CROP (SALE, SEED, NON-ORGANIC LIVESTOCK FEED, ETC.)	ORGANIC CROP VARIETY (IF APPLICABLE)
		<input type="checkbox"/>			
		<input type="checkbox"/>			
		<input type="checkbox"/>			
		<input type="checkbox"/>			
		<input type="checkbox"/>			

Fertilizers/soil amendments used on conventional crops:

PRODUCT NAME	WHO APPLIES? SELF (S) CUSTOM (C)	FIELD NUMBERS/NAMES	STORAGE	
			ON-FARM (LIST WHERE)	OFF-FARM

Herbicides/pesticides used on conventional crops:

PRODUCT NAME	WHO APPLIES? SELF (S) CUSTOM (C)	FIELD NUMBERS/NAMES	STORAGE	
			ON-FARM (LIST WHERE)	OFF-FARM

Which of the following records do you keep for conventional production?

Not applicable

- | | | |
|---|---|--|
| <input type="checkbox"/> field maps | <input type="checkbox"/> labor records | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> field history sheets | <input type="checkbox"/> storage records | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> input records | <input type="checkbox"/> sales records | <input type="checkbox"/> other (specify) _____ |
| <input type="checkbox"/> harvest records | <input type="checkbox"/> shipping records | <input type="checkbox"/> None |

7.3 EQUIPMENT CLEANING [\$205.272]

As part of your Organic System Plan, keep a list of all of the equipment you use. Indicate how you will clean it between use in your non-organic (or buffer), transitional, and organic fields. The same rules apply for custom services or equipment you borrow from a friend or relative. Jim Riddle, organic farmer, gardener, inspector, educator, policy analyst, author, consumer and columnist for the on-line magazine, New Farm, addressed equipment cleaning in one of his columns:

“The first thing to do is to identify all areas where commingling with nonorganic crops or contamination by prohibited substances may occur. List all pieces of equipment. If they are only used for organic crops, commingling is prevented. For equipment that is also used for nonorganic crops, determine what type of “thorough cleaning” is needed to prevent commingling. Develop a written protocol or list of actions that you need to take to clean a particular piece of equipment. This will help you or your employees remember each step. This may be submitted as part of your Organic [System] Plan, or you may simply show it to your inspector.

Some pieces of equipment will only need hand cleaning. Others may need pressure washed or blown out with pressurized air before organic use. Gravity boxes, truck beds, and other transportation units, and storage bins and hoppers may need to be swept, vacuumed, or blown out with compressed air.

For combines, open all trap doors and run the combine empty for about 15 minutes. Sweep the hopper and use an air compressor or vacuum cleaner to remove leftover grains, vegetative matter, and dirt from “hard to clean” areas. Manipulate the sieves to shake out residues. Purge any leftover grains by running three to five bushels of organic grains through the combine before beginning the actual harvest of your organic crop. (The purged grain cannot be sold as organic or used for organic feed.)

A study done by 2 engineering specialists at Iowa State University evaluated contamination of a grain crop by another crop left in the combine with a 45-minute ‘farmyard intensive cleaning’ and less intensive ‘field cleaning.’ They concluded that it’s not unrealistic to remove about 60 pounds or more of grain, vegetative matter, and dirt from the combine after the grain tank had been apparently emptied.

In addition to old grain, all harvesting and handling equipment and transport and storage units should be cleaned to remove bird droppings, rodent feces, insects, dust, and dirt. Ideally, equipment and transport and storage units should be cleaned soon after being used or emptied. This prevents future pest, moisture, rust, and mold problems, and makes cleaning before use much easier.

Records are an integral requirement for organic certification. Keep an equipment-cleaning log on a clipboard or notebook in the machine shed or other convenient location to record the date, piece of equipment cleaned, and methods used. Keep a record of equipment purges.”

Source: www.newfarm.org/columns/inspector/2004/0804/081704.shtml.

Many certifiers have policies regarding “adequate” equipment cleaning. Talk to your certifier to make sure your practices meet the standards.

7.4 HARVESTING [§205.272]

After explaining how you will harvest your transitional or organic crops, describe how you will keep your transitional or organic crops from contamination or mixing with conventional crops during that process. If you are going to harvest by machine, you will need to thoroughly clean your harvest equipment between organic and non-organic fields or buffer zones (see details in section 7.3). Additionally, you can help to keep track of organic and non-organic harvest by harvesting organic and non-organic fields on different days or times, and make sure that you have separate containers for each type of crop.

Comprehensive harvest records will be helpful not only to meet this section of the standards, but also to evaluate the effectiveness of your production system. These records should include the date, location, amount, quality and next step (storage or sale) of harvest. Sample recordkeeping forms have been included at the end of this workbook. Certifiers have different versions of this form available for use, or you can use these templates to create a system that works for both you and your certifier.

Some crops, as they are harvested, are placed in containers. Make sure that harvest containers are thoroughly cleaned prior to use and between uses, if the container is also used to harvest a non-organic crop. Be sure to document this cleaning as you would for other equipment used for both organic and non-organic crops.

Harvest	NOP §205.272
NOP §205.272(b)(1-2) require that containers, bins, and packaging materials must not contain synthetic fungicides, preservatives, or fumigants. All reusable containers must be cleaned and pose no risk of contamination before use.	
How are your organic crops harvested? (check all that apply) <input type="checkbox"/> mechanical <input type="checkbox"/> by hand <input type="checkbox"/> custom	
If custom, provide name and contact information for the harvester:	
Describe steps taken, including equipment cleaning, to protect organic crops from commingling/contamination during harvest:	
What containers are used for harvesting?	
<input type="checkbox"/> gravity wagons/boxes <input type="checkbox"/> truck boxes <input type="checkbox"/> cardboard/waxed boxes <input type="checkbox"/> wooden tote <input type="checkbox"/> plastic containers <input type="checkbox"/> other (specify)	
Are containers new or used? <input type="checkbox"/> new <input type="checkbox"/> used	
If used, what did they contain prior to organic use? _____	
Are the containers used for organic crops only? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Describe any potential contamination or commingling problems you may encounter harvesting organic crops: <input type="checkbox"/> None	

7.5 POST HARVEST HANDLING [§205.272]

Most farmers do some type of minimal post-harvest handling such as rinsing, chilling or bagging a harvested crop. What needs to be done, post harvest, depends on the crop itself. The key here is to devise a system to keep non-organic and organic crops separated and not to use any packing or shipping material that may contain a prohibited substance that would contaminate the crop. Investigate your options and check with your certifier to determine what is safe to use. The input from an experienced organic producer may also be helpful. If you want to engage in more elaborate post-harvest handling and processing, you will have to develop a separate Handling Organic System Plan for that process. Ask your certifier for the specific requirements.

Post-Harvest Handling	NOP §205.272
<p><i>NOP §205.201(a)(5) requires handling procedures that do not mix organic with non-organic crops or prohibited materials. Some handling/processing will require completion of an OSP for Handlers. Contact the certification office for more information or to request this form.</i></p>	
<input type="checkbox"/> Not applicable (I do not do any post-harvest handling)	
<p>Describe your post-harvest handling procedures and equipment: <i>(Examples: threshing, shelling, cleaning, drying, grinding, rinsing, washing, bagging, mixing, roasting, pressing, etc.)</i></p> 	
<p>Where is handling/processing conducted?: <input type="checkbox"/> on-farm <input type="checkbox"/> off-farm</p>	
<p>Who does the handling/processing? (<i>check all that apply</i>): <input type="checkbox"/> self (the applicant) <input type="checkbox"/> custom operator <input type="checkbox"/> commercial handler <input type="checkbox"/> other (<i>describe</i>): _____</p>	
<p>Processed products end use (<i>check all that apply</i>): <input type="checkbox"/> used on-farm <input type="checkbox"/> used off-farm <input type="checkbox"/> sold <input type="checkbox"/> other (<i>describe</i>) _____</p>	
<p>Is the processing area and equipment used for both organic and non-organic products? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe steps taken to prevent commingling and contamination:</p>	
<p>Packaging Material(s): _____ <input type="checkbox"/> None</p>	
<p>Does packaging present any contamination potential for your organic products? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe:</p>	
<p>Please list any additional inputs used on/with processed products (i.e. wax coatings, sanitizers, etc):</p>	

7.6. CROP STORAGE [§205.272]

Commingling with non-organic crops and contamination from a prohibited substance can also be concerns during storage. If you store your harvested crops on-farm and you grow organic, transitional, and conventional crops, develop a system that separates them.

Stored crops can entice insect and rodent pests. If any pest problems develop in your storage facilities, use an integrated approach to pest management, and do not use any prohibited substances to treat the storage facility that might contaminate your organic crop. If any prohibited substance is used in a storage unit, the unit must be thoroughly cleaned and that cleaning documented before you can use it to store organic crops.

The best way to manage for insect pests in stored organic crops is to prevent them. Let's take grain storage for an example: Storage management must focus on the temperature and moisture of the grain, the relative humidity of the air, and the amount of time the grain is stored. Make sure that storage bins are clean and sealed against any easy entry by insects or rodents. Also, clean up around the bin so it does not attract pests to the area. When you place your crops into storage, make sure they are clean and at the optimal moisture level for the crop (the optimal moisture level for most grains in storage is 14%). High moisture increases the potential for insects and molds. Keep your stored crops at temperatures below 60°F and provide some type of airflow through your storage unit to help maintain the appropriate humidity as additional deterrents to insects and mold. Regular monitoring of the condition of the stored crop will also help ensure that it remains pest and disease free.

If an insect problem develops despite your best efforts at prevention, identify the pest so you can find the best treatment method. Allowed products that are available to treat insect problems include diatomaceous earth (DE) and *Bacillus thuringiensis* (B.t.). Depending on the pest, there are also beneficial insects (such as parasitic wasps) that can be released in the storage area to control the problem.

Storage				NOP §205.272
Operators must store organic crops in ways to prevent commingling and contamination. Records must be maintained to demonstrate compliance with the Rule.				
Describe your storage locations in the table below:				<input type="checkbox"/> Not Applicable (I do not have any crop storage)
STORAGE ID#	TYPE OF CROPS STORED	TYPE OF STORAGE	CAPACITY	ORGANIC (O), TRANSITIONAL (T), BUFFER (B), CONVENTIONAL (C)
Do you use the same storage areas for organic, transitional, buffer, and/or conventional crops? <input type="checkbox"/> Yes <input type="checkbox"/> No				
If yes, describe how you segregate organic crops from non-organic crops:				
How do you clean storage units before storage of organic crops?				
How do you prevent/control insect pests and rodents in crop storage areas? <input type="checkbox"/> No problems				
<i>List all product names and manufacturers for pest control inputs used in storage areas -- attach labels if not pre-approved by OEFFA.</i>				

7.7 TRANSPORTATION [§205.272]

If you plan to transport your crops to the point of sale, take measures to ensure their organic status during this process. The same types of problems exist during transit as they do during storage. Utilize a transport vehicle that is dedicated to organic crops, or provide verification that the transport unit is thoroughly cleaned and inspected between uses. It's a good idea to clean the transport unit right after it has been used or emptied since any remaining crop can be attractive to pests and then generate the need to treat the container. Keep records of the cleaning and inspection process to show that no commingling or contact with prohibited substances occurred during transport. If you do not transport your own crops, you can use a Clean Transport letter or form with the transportation company stating organic requirements to show that requirements were met. See the attached document for this purpose, obtain a similar form from your certifier, or create one that meets your specific needs.

Transportation	NOP §205.272
<input type="checkbox"/> Not applicable (I do not transport organic products)	
Who is responsible for arranging transportation of organic products:	
<input type="checkbox"/> self <input type="checkbox"/> buyer <input type="checkbox"/> other (<i>specify</i>): _____	
Describe how organic products are transported:	
What potential contamination or commingling problems do you have with the transport of organic crops? <input type="checkbox"/> None	
What steps are taken to protect the integrity of organic products during transport?	
<input type="checkbox"/> dedicated organic only <input type="checkbox"/> inspecting transport units prior to loading <input type="checkbox"/> cleaning transport units prior to loading	
<input type="checkbox"/> use of Clean Truck Affidavits <input type="checkbox"/> letter/contract with transport company stating organic requirements	
<input type="checkbox"/> other (<i>specify</i>): _____	

8. RECORDKEEPING [§205.103]

Recordkeeping for organic production may appear overwhelming. Develop a system that works for you. There are many examples of forms for you to use to keep track of the necessary information. **You'll find some sample forms at the end of this manual** and from other sources, such as the ATTRA website (<http://attra.ncat.org/attra-pub/PDF/cropforms.pdf>). Your certifier may also be able to provide you with sample forms.

At your organic inspection, one or more of your crops will be chosen for an audit. Your inspector can choose any of your crops to audit. She or he will choose a crop, then follow it through your recordkeeping system. Starting with seed or plant starts, you will show the inspector your records demonstrating:

- what seed or starts you used,
- how many or at what rate you seeded,
- where the seed or starts were planted,
- what was done in that field (bed or field preparation, planting, cultivating, fertilizing, etc.),
- what, when, and how much was harvested,
- and what the end use was (sale, storage, feed, etc.).

Talk with your certifier to make sure the records you're keeping will be fully auditable.

Plan to keep your records for at least five years. It is a good idea to keep more than one copy of your records. Make sure you've got a back-up copy of everything you send to your certifier.

If you are farming non-organically on any portion of your farm, it is a good idea to keep records of that production. These records could be an important audit trail to help resolve issues, should any arise.

The NOP requires that records disclose all activities and transactions of the operation, be kept for at least 5 years after their creation, and demonstrate compliance with the NOP regulations. All records must be accessible to the inspector, certifier, and the NOP.

Do you keep, or plan to keep, all records for at least 5 years? Yes No

Which of the following records do you keep for organic production?

- field activity log(s) – (including preparation, planting, input application, etc.)
- input records for soil amendments, seeds, manure, foliar sprays and pest control products (keep all labels)
- documentation of attempts to source organic seeds and/or planting stock
- documentation of organic seedlings
- residue analyses of inputs (i.e. manure sourced off-farm)
- compost production records
- monitoring records (soil tests, tissue tests, water tests, quality tests, observational)
- equipment cleaning records
- harvest records that show field numbers, date of harvest and harvest amounts (including custom harvest records)
- labor records
- storage records that show storage location, storage identification, field numbers, amounts stored, and cleaning activities
- clean transport records
- sales records (purchase order, contract, invoice, cash receipts, cash receipt journal, sales journal, etc.)
- shipping records (scale ticket, dump station ticket, bill of lading)
- transaction certificates
- audit control summary
- other (specify): _____
- other (specify): _____
- other (specify): _____
- other (specify): _____

Please have all records available for your inspector to review.

9. ORGANIC LIVESTOCK MANAGEMENT

[\$205.236; §205.240]

9.1 ORGANIC LIVESTOCK [\$205.236]

For organic livestock management, it's important to know where your animals came from. In general, organic animals must have been managed organically since the last third of gestation or hatching period. The exceptions include poultry, which must have been under organic management since the second day of life, and dairy animals, which may have been transitioned to organic over a period of one year. Organic dairy animals may only transition to organic one time, as a herd; the animals cannot go back and forth between organic and non-organic management.

In order to demonstrate to your certifier that your animals are organic, or in the case of dairy, are undergoing transition to organic production, keep good records of where your animals were purchased or raised. If you purchased organic animals, keep a copy of the organic certificate provided to you at the time of purchase. If you raised the organic animals yourself, keep records (organic feed rations, outdoor access, pasture access, and health records) of the way in which you managed them to demonstrate their organic status.

As you might remember, the transition period for organic land is three years from the last application of a prohibited substance. One additional exception with regard to transitioning dairy herds allows dairy herds or flocks to be fed feed from land that is in the third year of transition (T-3) during the 12-month herd or flock transition (or "herd conversion") period. Dairy animals that were transitioned from non-organic management are not eligible for organic slaughter.

Non-organic breeder stock must be managed as organic (fed organic feed, housed according to the standards, etc.) during the last third of gestation in order for the offspring to be "born organic" and to be eligible for organic slaughter.

Organic Livestock Operation Profile

Name _____	Date _____
------------	------------

Type of Livestock Operation (check all that apply):
 Dairy Beef Layers Broilers Pullets Sheep Swine Other _____

FOR DAIRY ONLY: <input type="checkbox"/> My dairy herd is currently certified organic. <input type="checkbox"/> I began my 12 month conversion on _____ <input type="checkbox"/> I will start my 12 month conversion on _____	FOR POULTRY ONLY: Date(s) birds will be present on your operation: _____
---	--

Breed(s) of livestock/poultry: _____

Type and # of livestock/poultry requested for organic certification (O), conventional (C), or in conversion (IC- dairy only):

LIVESTOCK TYPE	# OF FEMALES			# OF MALES			# OF CASTRATED MALES			# OF YOUNG STOCK		
	O	C	IC	O	C	IC	O	C	IC	O	C	IC
Dairy												
Beef												
Swine												
Sheep												
Goats												
Other:												
POULTRY TYPE	# OF HENS		# OF ROOSTERS/TOMS		# OF CAPONS							
	O	C	O	C	O	C						
Layers												
Broilers												
Pullets												
Turkeys												
Other:												
Other:												

Source of Animals NOP §205.236

Have you purchased any animals since your last application? yes no

If yes, complete the following table:

TYPE OF LIVESTOCK/POULTRY PURCHASED	IDENTIFICATION OR FLOCK #/ NAME	DATE OF PURCHASE	DATE OF BIRTH	PURCHASE SOURCE	CERTIFIED BY WHAT AGENCY?

Livestock List

NOP §205.236

Please provide a list of all animals requested for certification. Poultry do not need to be identified individually. The following information may be provided in another format as a substitute for this table. Use additional pages as needed.

TYPE OF LIVESTOCK	IDENTIFICATION #/ NAME	DATE OF BIRTH	ORGANIC SLAUGHTER ELIGIBLE? ~Managed organically from the last third of gestation ~No prohibited/restricted substances used	NOTES Include any information pertaining to slaughter eligibility (i.e. use of prohibited substances, date of purchase & seller, sold, died, etc.).
			<input type="checkbox"/> yes <input type="checkbox"/> no	
			<input type="checkbox"/> yes <input type="checkbox"/> no	
			<input type="checkbox"/> yes <input type="checkbox"/> no	
			<input type="checkbox"/> yes <input type="checkbox"/> no	
			<input type="checkbox"/> yes <input type="checkbox"/> no	
			<input type="checkbox"/> yes <input type="checkbox"/> no	

General Information

Classes of Livestock: (check all that apply)

Dairy:

- Lactating cows
- Dry Cows
- Bred heifers
- Young heifers
- Calves

Beef:

- Beef cows
- Beef replacement heifers
- Feeder/Stocker calves
- Finishing cattle

Swine:

- Sows
- Feeder pigs
- Growing/Finishing hogs

Alternatively, you may define your own classes here:

Sheep/Goats:

- Ewes/Does
- Feeder lambs/Kids
- Finishing lambs/Wethers

Poultry:

- Layer hens
- Pullets
- Broilers
- Turkeys
- Ducks/Geese

- Are any animals kept at a location not on this OSP? Yes No
- If yes, is that location certified organic? Yes No
- Do you have an organic certificate on file for that location? Yes No
- Manager(s) and address(es) of off-site livestock management:

Who is responsible for management decisions regarding the livestock at this location?:

Animal Identification

NOP §205.236(c)

NOP standards require records sufficient to preserve identity of all organically managed animals and animal products. Animals that have been treated with prohibited products must be identified and managed separately from organic animals.

Describe your animal identification system:

Please indicate how animals are identified (as an individual and/or group), or would be identified, if treated with prohibited substances (even if you have not done so before).

9.2 FEEDING ORGANIC LIVESTOCK [§205.237]

Organic animals must be fed all organic feed, including forage and pasture, all the time. The only exception is noted in the previous section regarding 3rd year transition (T-3) feed being fed to a transitioning dairy herd or flock. It's also fine to include allowed feed additives and supplements in the ration. Check with your certifier before using a feed additive if you're not certain it's approved for use in organic feed. It's also important to keep all receipts, tags, and organic certificates from those who provide feed or ingredients as part of your records. For ruminants, part of your Organic System Plan will include how your animals will receive at least 30% dry-matter intake from certified organic pasture during the grazing season, which must last at least 120 days. There may be breaks during the grazing season due to bad weather or very wet conditions, but animals must graze at least 120 days during that season. For an example of how to calculate Dry Matter Intake (DMI), see page 86..

Organic animals must also NOT be fed certain things, such as growth promotion drugs or hormones, excessive supplements beyond the animals' needs, plastic pellets, urea, manure, or slaughter by-products.

This means it's important to familiarize yourself with the specific standards and keep good records of what you're feeding your organic animals throughout the year and what days they're on pasture to demonstrate you're meeting the standards. If you keep your animals inside, it's also important to note why you kept them in (such as a storm, or extreme weather event). The templates at the end of this workbook offer one way to keep track of this information. Use these templates, or adapt a new system that works for you and your certifier.

Livestock Feed and Feed Supplements NOP §205.237				
A. FEEDSTUFFS (Projected for the calendar year) – Your inspector will verify all purchases since the last inspection.				
Feedstuff	Quantity Produced On-Farm	Quantity Purchased	Source(S)	Organic Cert. on File?
Hay				
Corn				
Silage				
Small Grain(s)				
Soybeans				
Complete Feed				
Other				

Feed Handling

Do you process feed (mix, grind, roast, extrude, etc.) on-farm? Yes No

If yes, is the equipment also used to process conventional or uncertified products? Yes No

If yes, how is equipment cleaned prior to processing organic feed to prevent contamination?

What is your plan for emergency feed supplies?

FEED STORAGE:

Describe your feed storage locations:

STORAGE ID	TYPE OF FEED STORED	TYPE OF STORAGE	CAPACITY	ORGANIC (O), TRANSITIONAL (T), CONVENTIONAL (C), BUFFER (B)

How do you control rodents and other pests in organic feed storage areas? No problems

Water

What are your sources of water for livestock use?

on-site well municipal river/creek/pond spring other

If you have had your water tested for coliform bacteria and/or nitrates, give the date of the last test: _____

Describe any water contamination problems in your region: No contamination problems

If livestock have access to a river, creek, or pond, how do you prevent bank erosion? No access

9.3 LIVESTOCK HEALTH CARE [§205.238]

Organic livestock health care focuses on practices intended to prevent health problems. You may already use these practices on your farm, or see opportunities to incorporate some of the following practices:

- species and animals that fit with the needs of your operation and location;
- diet and nutrition management;
- appropriate housing;
- pasture; and
- sanitation practices to promote health and animal welfare.

When preventive health practices and veterinary biologics are not enough to avoid diseases, then some tools listed in section 205.603 of the NOP Standards (part of the National List of Approved and Prohibited Substances) may be used to treat sick organic animals so that they may maintain their status as organic. If these approved treatments on the National List do not work, it's also important to note that a sick animal must be treated, even if the treatment will mean the animal can no longer be organic. Under the NOP, organic livestock producers must not:

- 1) withhold medical treatment (such as antibiotics) from a sick animal in an effort to preserve its organic status; or
- 2) administer animal drugs in violation of the Federal Food, Drug, and Cosmetic Act.

Organic livestock producers may also consult with experienced organic producers or their veterinarians to develop best herd health practices that comply with both the organic standards and other federal and state regulations while considering the health and well-being of the animal.

Health Management**NOP §205.238**

NOP rules require livestock producers to establish and maintain preventive livestock health care practices. When preventive practices and veterinary biologics are inadequate to prevent illness, a producer may administer synthetic medications: Provided that such medications are allowed under §205.603 and are used in accordance with their restrictions.

A. General Information:

Identify the general features of your animal health management program:

- selective breeding
 raise own replacement stock
 isolation for purchased/diseased animals
 culling
 vaccinations
 good sanitation
 access to outdoors
 dry bedding
 good ventilation in housing
 good quality feed
 pasture rotation
 nutritional supplements
 probiotics
 body condition scoring
 other: _____

List common health and/or disease problems for your operation:

Name and phone number of your veterinarian:

B. FLY CONTROL:
 No problems

Describe your fly management plan:

C. PARASITE CONTROL:
 No problems

Describe your internal and external parasite management plan:

D. PREDATOR CONTROL:
 No problems

Check which predators you have problems with: hawks
 feral cats
 raccoons/skunks
 rodents

dogs
 foxes
 coyotes
 other _____

Describe how you control predator problems:

E. SURGICAL PRACTICES:

NOP requires any physical alterations needed to promote the animal's welfare must be done in a manner that minimizes pain and stress.

Describe surgical practices you use:

 Not used

SURGICAL PRACTICE	AGE OF LIVESTOCK WHEN USED	REASON	METHOD
Castration			
Dehorning			
Tail docking			
Beak Trimming			
Other:			

List all inputs used for fly/parasite/predator control and physical alterations in section D on page 4

9.4 LIVESTOCK LIVING CONDITIONS [§205.239]

Living conditions for organic livestock should be supported by best management practices, some of which you may already have in place if you raise livestock. Living conditions must support the health and natural behavior of the animal, including year-round access to the outdoors, shade, shelter, fresh air, clean drinking water, direct sunlight, and exercise areas. The standards note that these provisions must be suitable to the species of animal and its particular stage of life, climate, and environment. The standards go into greater detail regarding pasture access for ruminants (see next section). They also require clean, dry, bedding (which must be organic if it's a roughage), and shelter for all animals. Shelter must allow the animal to behave naturally, exercise, be at an appropriate temperature with good ventilation, and reduce the potential for injury to the livestock. There are several instances in this section detailing when an animal may be temporarily confined or denied outdoor access. Should such a situation occur, it's important to document when and why the animal was confined.

There is a note at the end of this section regarding manure management. Manure must be managed in such a way that it prevents contamination of crops, soil, or water, and must optimize the recycling of nutrients.

Living Conditions

NOP §205.239

NOP Rule requires that the manager of an organic livestock operation must establish and maintain livestock living conditions which accommodate the health and natural behavior of animals.

	Maximum #	Indoor Floor	Outdoor (non-pasture)	Pasture
CATTLE	Adult	total sq. ft.	total sq. ft.	acres
	Young Stock	total sq. ft.	total sq. ft.	acres
	Calves (individually-housed)	ft. - width each	sq. ft. each	acres
	Finishing		total sq. ft. of finishing area	acres
SWINE	Sows in Group Pens	total sq. ft.	total sq. ft.	acres
	Sows w/Piglets (up to 40 days)	sq. ft. each	sq. ft. each	acres
	Boars in Individual Pens	total sq. ft.	total sq. ft.	acres
	Growing Pigs ≤65 lbs	total sq. ft.	total sq. ft.	acres
	Growing Pigs 65-110 lbs	total sq. ft.	total sq. ft.	acres
	Growing Pigs 110-185 lbs	total sq. ft.	total sq. ft.	acres
	Growing Pigs >185 lbs	total sq. ft.	total sq. ft.	acres
POULTRY	Layers	total sq. ft.	total sq. ft.	acres
	Broilers	sq. ft. per pound	sq. ft. per pound	acres
	Turkeys	sq. ft. per pound	sq. ft. per pound	acres
SHEEP	Adults			
	Lambs	total sq. ft. (adults & lambs)	total sq. ft. (adults & lambs)	acres (adults & lambs)
	Goats (adults & kids)	total sq. ft.	total sq. ft.	acres

What type of housing do you use? _____

How is housing cleaned and how often? _____

What outdoor areas other than pasture do animals use? _____

Do all animals have access to direct sunlight and clean water? Yes No

Are any animals continuously confined indoors? Yes No

Are any ruminants continuously confined in yards, feeding pads, and/or feedlots? Yes No

If any animals are continuously confined, please provide the reason(s):

Are animals provided temporary shelter, as needed, for the following reasons?: Yes No

Inclement Weather Yes No

Health, Safety or Well Being Yes No

Stage of Life (i.e. feathering, calving, farrowing; not stage of production) Yes No

Risk to Soil or Water Quality Yes No

Are the yards, feeding pads, feedlots, and laneways: Yes No

- Well-drained? Yes No

- Kept in good condition (including frequent removal of wastes)? Yes No

- Managed to prevent runoff? Yes No

Poultry**NOP §205.236(a)(1); §205.239(a)**Not Applicable (No Poultry)

NOP requires poultry or edible poultry products to be from poultry that have been under continuous organic management beginning no later than the second day of life. Poultry producers must provide living conditions that accommodate the health and natural behavior of animals including year round access to the outdoors, shade, shelter, exercise areas, fresh air, clean water for drinking, and direct sunlight.

A. Source of Birds

What type(s) of birds do you purchase? (check all that apply) chicks pullets laying hens broilers

How old are birds at the time of purchase? _____

Describe your management plan for raising 1 or 2 day old chicks (heating, space allowed, etc.) Not Applicable

If birds are molted at any time on your operation, describe molting protocols (include feed, lighting, and confinement changes): Not Applicable

B. Housing

Is housing used only for organic birds? Yes No

If no, describe cleaning procedures between flocks (including housing, and feed/water systems):

How long is the nest training period?: _____ Not applicable

At what age are birds given outdoor access?: _____

Describe outdoor access doors:

Number: _____ Size: _____ Location(s): _____

Describe features of the outdoor access area that encourage birds to go outdoors (forage, shade, cover, etc.):

What temperature range is used to determine when birds will be let outdoors?: _____

List all other factors used to determine if birds will be let outdoors (weather, pasture conditions, health, stage of life, etc.):

Do you record when birds are outdoors and document reasons for confinement? Yes No

Is day length regulated using artificial light? Yes No If Yes, What is the source of artificial light?: _____

C. Egg Handling

Facilities that handle organic eggs must be certified for eggs to be marketed as organic.

Name and contact information of facility where eggs are washed, graded and packed: _____ on-farm

Is the facility certified organic? Yes No If yes, by what agency? _____

Do you or the facility have an egg handler's license? Yes No

Who buys/markets your eggs?: _____

Ruminant Livestock**NOP §205.240**Not Applicable (No Ruminants)

The producer of an organic livestock operation must, for all ruminant livestock on the operation, demonstrate through auditable records and in the organic system plan, a functioning management plan for pasture. Pasture must provide a sufficient quantity and quality of forage to supply a minimum of 30% of ruminant dry matter intake, on average, through the grazing season.

A. PASTURE MANAGEMENT

Pasture Type: (check all that apply) Perennial Annual Both Inter-seeded

Is irrigation available? Yes No

Please describe the location and types of permanent fences (you may attach a map showing locations – write “see attached”):

Please describe location(s) and type of shade (you may attach a map showing locations – write “see attached”):

Please describe the location(s) of clean water (you may attach a map showing locations – write “see attached”):

What general management practices do you use to ensure your pastures provide not less than 30% dry matter intake to your ruminants during the grazing season?:

Describe your plan for drought or other conditions that may prevent you from providing all ruminants with the 30% dry matter intake requirements during the grazing season:

B. FEED AND GRAZING

How did you determine dry matter demand for each class of livestock?

NRC Tables (see enclosed) % of Body Weight (source of data: _____)

Other (describe and provide source of information/data):

How do you measure and document the amount of non-pasture feed?

Is the grazing season Continuous or Non-continuous ?

Grazing Season: Beginning date _____ Ending date _____ Total number of days: _____

Describe how you determine the length of the grazing season:

How many times do you change your ration during the grazing season?

Do you calculate dry matter intake each time?

Yes No

Do all classes of ruminants get at least 30% of their dry matter requirement from pasture?

Yes No

Are pastures grazed Continuously or Rotationally ?

If rotational grazing is used, how long are animals in each paddock? _____

Are yards, feeding pads, and feedlots large enough to allow all ruminant livestock occupying the space to feed simultaneously without crowding and without competition for food? Yes No

Dairy

Not Applicable (No Dairy)

Please describe the daily milking, feeding, and grazing schedule for dairy cows :

Please provide the number of hours per day animals spend doing each of the following during the grazing season:

Milking _____ Feeding _____ Grazing _____

Are individual cows confined for more than 7 days at dry off? Yes No

Are individual cows confined for more than 21 days before freshening? Yes No

Are individual cows confined for more than 7 days after calving? Yes No

Are young stock given access to pasture at or before 6 months of age? Yes No

Are young stock confined or tethered such that they cannot lay down, fully extend their limbs, or move about freely?
 Yes No

What type of milk handling system do you use:

pipeline automated step saver hand milking parlor tie stalls stanchions other _____

How are you licensed? Grade A Grade B other _____

Describe cleaning cycle for milking equipment (water temperature, number of rinses, etc.): _____

Average Somatic Cell Count (SCC):

How often do you change inflations?

How many animals do you currently milk?

Average monthly milk production:

Who buys/markets your milk?:

9.5 PASTURE FOR RUMINANTS [§205.237; §205.240]

As was previously mentioned, any producer raising ruminant livestock must have a pasture management plan as part of the Organic System Plan (OSP). Usually, certifier forms ask the questions that lead you through the information they need to determine that you have an adequate plan.

This section requires pasture to be managed as an organic crop in accordance with all of the NOP crop standards. It also requires that the pasture be sufficient in quality and quantity for the animals grazing it. The organic pasture must provide at least 30 percent of the ruminant livestock's dry matter intake (DMI) on average over the grazing season. Pasture must also be managed to minimize disease and parasite loads, and must prevent risking soil or water quality.

Information that certifiers request as part of the pasture management plan include:

- the type of pasture practices to ensure there is enough and sufficient quality for ruminants to meet the 30 percent DMI;
- typical grazing season for the region;
- size and location of pastures, including maps;
- types of grazing methods to be used in the system;
- location of fences, shade, and water;
- soil fertility management and pasture seeding systems; and
- erosion control and protection of wetlands and areas along streams or waterways (riparian areas).

DMI Calculations (Required for ruminant livestock only)

NOP §205.237(c)

No Ruminants

Please provide dry matter intake (DMI) calculations for each class of ruminant livestock (milking, dry, young stock/heifers, calves). You may use next page of the OSP or your own format if all the same information is present. Make copies of the blank form as necessary. If the grazing season has not yet started, provide a projection for the grazing season starting date and amounts of feed at that point. At your inspection, the inspector will verify that you have kept updated DMI calculations through the grazing season.

OEFFA is providing a new way to calculate DMI this year. This page will help you move your old calculations to the new format, which take into account the length of time each ration is used and more accurately reflect the amount of pasture ruminants receive through the grazing season. Please complete calculations on the next page. If you would like assistance completing these calculations, contact the OEFFA office and we will be happy to help.

OLD

Date	April 1 – June 15
# of Animals	40
Average Weight	100
DMD Source: NRC/NOP Table Value or Other _____	30 lbs.
Other Feed Sources:	
Hay	
lb, as fed	10
x % DM of Feed Source	90%
= DMI, lb	9
Corn Silage	
lb, as fed	4
x % DM of Feed Source	35%
= DMI, lb	1.4
Barley (Grain)	
lb, as fed	5
x % DM of Feed Source	89%
= DMI, lb	4.45

lb, as fed	
x % DM of Feed Source	
= DMI, lb	
Total DMI from feed sources, lb = a+b+c+d	14.85
% DMI from feed sources = (B/A)*100	49.5%
Pasture DMI, lb = A - B	15.15
% DMI from pastures = (C/A)*100	50.5%

Explanation of examples:

- The old format (left) and new format (bottom) take the same information in different locations
- Both examples shown here represent the same ration
- The “Ration Value” in the bottom right corner of the new format was not calculated in the old format

Definitions:

- DMD (Dry Matter Demand) – The amount of dry matter each animal needs to eat.
- DM content – The amount of dry matter in a feedstuff. See the table below for examples.
- DM Fed – The amount of dry matter each animal gets from a feedstuff.
- Total DM Fed – The amount of dry matter each animal gets from all non-pasture feed.
- DMI (Dry Matter Intake) from Pasture – The amount of dry matter each animal gets from pasture.

Typical dry matter (DM) content of feed sources:

- Grain = 89%
- Grain Silage = 25-35%
- Dry Hay = 90%
- Haylage/Baleage = 35-60%

The new DMI calculation form is also available in a computer-fillable version from OEFFA.

NEW

RATION 1						
Dates this Ration is Fed: from <u>4/1/2015</u> to <u>6/15/2015</u> = # of Days [A] <u>75</u>						
Feed Type (do not list pasture)	Amount Fed Per Animal (lbs.)		DM Content %	=	DM Fed (lbs.)	
Hay	10	x	90%	=	9	
Corn Silage	4	x	35%	=	1.4	
Barley (Grain)	5	x	89%	=	4.45	
		x		=		
30	-	14.85	=	15.15	÷	30
DMD (lbs.)		Total DM Fed (lbs.)		DMI from Pasture (lbs.)		DMD (lbs.)
						= [a]
						50.5%
						DMI from Pasture %
# of Days in this Ration [A]	75	x	DMI % from this Ration [a]	50.50%	=	Ration Value [1] 37.875



OEFFA Dry Matter Intake Calculation Worksheet for Organic Ruminant Livestock

Operation Name: _____	Certification #: _____
Class of Animal/Stage of Production: _____	Number of Animals in Group: _____
Dry Matter Demand (DMD) (lbs.): _____	Source of DMD: <input type="checkbox"/> NRC/NOP Table <input type="checkbox"/> Other: _____

RATION 1
 Dates this Ration is Fed: from _____ to _____ = # of Days [A] _____ 0

Feed Type (do not list pasture)	Amount Fed Per Animal (lbs.)		DM Content %		DM Fed (lbs.)			
		x		=	0.00			
		x		=	0.00			
		x		=	0.00			
		x		=	0.00			
0	-	0.00	=	0	÷	0.00	= [a]	#DIV/0!
DMD (lbs.)	Total DM Fed (lbs.)	DMI from Pasture (lbs.)	DMD (lbs.)	DMI from Pasture %				
# of Days in this Ration [A] _____		x DMI % from this Ration [a] _____		#DIV/0!		= Ration Value [1] _____ #DIV/0!		

RATION 2
 Dates this Ration is Fed: from _____ to _____ = # of Days [B] _____ 0

Feed Type (do not list pasture)	Amount Fed Per Animal (lbs.)		DM Content %		DM Fed (lbs.)			
		x		=	0.00			
		x		=	0.00			
		x		=	0.00			
		x		=	0.00			
0	-	0.00	=	0	÷	0.00	= [b]	#DIV/0!
DMD (lbs.)	Total DM Fed (lbs.)	DMI from Pasture (lbs.)	DMD (lbs.)	DMI from Pasture %				
# of Days in this Ration [B] _____		x DMI % from this Ration [b] _____		#DIV/0!		= Ration Value [2] _____ #DIV/0!		

RATION 3
 Dates this Ration is Fed: from _____ to _____ = # of Days [C] _____ 0

Feed Type (do not list pasture)	Amount Fed Per Animal (lbs.)		DM Content %		DM Fed (lbs.)			
		x		=	0.00			
		x		=	0.00			
		x		=	0.00			
		x		=	0.00			
0	-	0.00	=	0	÷	0.00	= [c]	#DIV/0!
DMD (lbs.)	Total DM Fed (lbs.)	DMI from Pasture (lbs.)	DMD (lbs.)	DMI from Pasture %				
# of Days in this Ration [C] _____		x DMI % from this Ration [c] _____		#DIV/0!		= Ration Value [3] _____ #DIV/0!		

Calculating Average Dry Matter Intake from Pasture Over Entire Grazing Season	
Total Days in Grazing Season ([A]+[B]+[C]) = _____ 0 [Z]	Total Ration Value ([1]+[2]+[3]) = _____ #DIV/0! [Y]
(Y) ÷ (Z) = _____ #DIV/0! Average % DMI from Pasture for the grazing season	

OEFFA DMI Worksheet:

<http://certification.oeffa.org/producers.php>

> Look under: 2. Livestock and Poultry Organic System Plan

10. WILD CROPS [§205.207]

Cultivated fields are not the only areas of your farm that can be productive. Some organic farmers are looking to the plant life in natural areas on their farms as an additional income source. To certify the collection of wild crops from these areas, ensure that the land has not been applied with any prohibited substances in the past three years. Further, the wild crop must be harvested from a defined area in a manner that does not degrade the surrounding habitat, and allows the crop to continue to grow and thrive. The options for wild crop harvest are vast. Many of these crops are used in food and natural health products.

Once you have identified potential wild plants for harvest and made sure you have a viable market for them, develop a system for harvesting and processing. One of the main concerns of organic wild crop collection is the sustainability of the collection process. The methods you use to harvest the crop will have to ensure that populations and habitats are maintained. So, limiting your harvest to a certain number of plants or a certain area is advisable. Processing your wild crop beyond rinsing and bagging may require you to submit an organic handling plan too. Check with your certifier to make sure you're meeting the requirements.

Wild Crop Collection				NOP §205.207
<p><i>If you harvest any wild crops, you must demonstrate compliance with NOP §205.207. Please complete the table and questions below for wild crop certification. See §205.2 for the definition of a wild crop.</i></p>				
				N/A – No Wild Crops <input type="checkbox"/>
CROPS HARVESTED	COLLECTION AREA IDENTIFICATION (FIELD NUMBERS, NAME)	ACRES PER COLLECTION AREA	PROJECTED YIELDS	APPROXIMATE DATES OF HARVEST
<p>Have you managed the land used for harvesting wild crops for at least 3 years? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>If no, you must submit a Prior Land Use Affidavit. This form must be signed by the previous owner/manager. Contact the certification office or visit our website for Prior Land Use Affidavits.</i></p>				
<p>What percentage of the available wild crop do you harvest annually? _____</p> <p>How are wild-crops harvested? <input type="checkbox"/> By hand <input type="checkbox"/> Mechanically</p> <p>Do you transplant any roots or other planting stock into the collection area? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, how do you separate cultivated crops from wild-crops?</p> <p><input type="checkbox"/> Fencing</p> <p><input type="checkbox"/> Posting signs</p> <p><input type="checkbox"/> Use of natural boundaries such as a stream or tree line</p> <p><input type="checkbox"/> Other (<i>specify</i>): _____</p> <p>Do you process the harvested crop other than rinsing/washing and bagging? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, describe what processing procedures you perform: _____</p> <p>What methods do you use to ensure harvesting will sustain the wild crop and not be destructive to the environment?</p> <p><input type="checkbox"/> Limiting collection to an amount or area</p> <p><input type="checkbox"/> Observation of entire area</p> <p><input type="checkbox"/> Limiting time of collection</p> <p><input type="checkbox"/> Other (<i>describe</i>): _____</p>				

Mushroom Production

If you grow mushrooms, please complete the questions below. If you harvest wild mushrooms, please complete the Wild Crop Collection section, above.

N/A – No Mushroom Production

Mushroom type(s): _____

Production method(s): _____

Total mushroom production area: _____

Please list the source of spawn for mushroom production: _____

Please list the substrate and fertility inputs you use: _____

Are spawn and substrate organic? Yes No

If using non-organic spawn, describe your attempts to find organic spawn: (attempts must be documented)

If you use logs in mushroom production, please attach a label or information for the plug material you use and all other inputs.

Be sure to include your wild crop & mushroom production areas on your Field History sheet(s) and farm map(s).

11. USING THE ORGANIC LABEL

[\$205.301-§205.311]

As you can tell from your own efforts throughout this book, organic producers and handlers work very hard to follow the organic standards created by the National Organic Program (NOP). It is important that only products resulting from this work, which have undergone the rigorous organic certification process, be labeled as organic.

Depending on their contents, products may be labeled:

- 100% Organic
- Organic
- Made with Organic [Specific Ingredients]

Certifier and USDA seals, and other label claims may also be used within certain limits.

All labels must be approved by your certifier before they are used. Wait to print your labels until you have received final written approval of your design from your certifier. This practice helps you avoid spending money to print labels with mistakes. Noncompliant labels cannot be used and must be corrected.

11.1 LABELING TERMS

Many processed, multiple ingredient, and even raw certified organic products carry labels that indicate the ingredients, producer, organic status of the product, and who has certified the product. Labels let consumers know your product deserves a premium because of the high standards it meets. Therefore, understanding organic labeling is vital, but it can also be confusing. .

Label Terminology:

The organic regulations talk about two types of label panels:

- **Principal Display Panel** – this is the part of the retail package the consumer is most likely to see when purchasing the product (usually the front of the package.) Your certifier may refer to this as the “PDP.”
- **Information Panel** – this is the part of the retail package that includes the ingredient list and other product information, like your farm or company name and contact information (usually the back or side of the package.)

11.2 LABELING CATEGORIES

100% Organic

- Each ingredient (excluding water and salt) must be certified as 100% organic;
- Any processing aid used to manufacture the product must be certified organic.

This means the product cannot contain any nonagricultural (non-certifiable) ingredients such as baking soda or citric acid. At no point can the product be processed with a nonorganic substance. To confirm an ingredient is 100% organic, look for the ingredient to be listed as “100% Organic” on the supplier’s organic certificate.

Retail product label requirement:

- The statement, “Certified organic by [certification agency]” must appear directly below the certified operation’s name and/or contact information on the Information Panel. This statement is commonly called the “COB”(Certified Organic By) statement.

Example Information Panel with correct COB statement:

100% Organic Dried Cranberries

Ingredients: Organic Dried Cranberries.

Someone, Inc.

123 Somewhere St

Columbus, OH 43214

Certified Organic by OEFFA

Labels may use the USDA organic seal and/or certification agency logo, but this is not required. Some certification agencies have multiple logos that are allowed for label use. OEFFA offers a logo stating that Organic is Non-GMO and more.



Organic (≥ 95%)

- The product must contain at least 95% certified organic ingredients (excluding water and salt)
 - The remaining ingredients must be either:
 - o nonagricultural substances from the list of allowed materials under NOP §205.605 (like ascorbic acid.)
- OR
- o nonorganic agricultural substances from the list of allowed materials under NOP §205.606 (like gelatin.)

In order to use a nonorganic ingredient from §205.606, you must first show the ingredient is not available in organic form by conducting and documenting a search for it.

Retail product label requirements:

- The statement, “Certified organic by [certification agency]” must appear directly below the certified operation’s name and/or contact information on the Information Panel.
- Each organic ingredient must be identified in the ingredient list.
 - o The word “organic” should appear before each organic ingredient.

OR

- o An asterisk (*) should appear next to each organic ingredient and a key showing the asterisk means the ingredient is “organic” should be below the list.

Example Ingredient List for Organic Soup Mix:

Ingredients: Great Northern Beans*,
Dehydrated Carrots*, Thyme*, Rosemary*,
Turkish Bay Leaves.

*Organic

Note: Turkish Bay Leaves appear on §205.606

You may choose to show the specific percentage of organic ingredients in the product (i.e. 97% organic ingredients.) The whole statement must be:

- the same size, color, and style.
- half the size or less of the largest type size on the label panel (i.e. 10 point font or smaller if your largest type size is 20 point font.)

Labels may use the USDA seal and/or certification agency logo, but this is not required.



Made with Organic [Specific Ingredients](≥70%)

- The product must contain at least 70% certified organic ingredients (excluding water and salt)
 - The remaining ingredients may be:
 - o nonagricultural substances from the list of allowed materials under NOP §205.605 (such as ascorbic acid.)
- OR
- o nonorganic agricultural substances that have not been produced using sewage sludge, ionizing radiation, or genetic modification.

The product cannot be labeled generally as “Made With Organic Ingredients.” The words, “Made With Organic” must be followed by:

- o up to three organic ingredients in the product
- o up to three organic food groups in the product

All named ingredients in the “Made With Organic...” statement must be organic.

All words in the “Made With Organic...” or Organic Ingredient Percentage statement must be:

- the same size, color, and style.
- ½ the size or less of the largest type size on the label panel.

Retail product label requirements:

- The statement, “Certified organic by [certification agency]” must appear directly below the certified operation’s name and/or contact information on the Information Panel.
- Each organic ingredient must be identified in the ingredient list.
 - o The word “organic” should appear before each organic ingredient.

OR

- o An asterisk (*) should appear next to each organic ingredient and a key showing the asterisk means the ingredient is “organic” should be below the list.

The product may include the certification agency’s logo.
The USDA seal is not allowed.



Example of a “Made With Organic...” product label claim:

Sun Dried Tomato, Basil, & Pine Nut Cheddar

Made with Organic Milk & Sun Dried Tomatoes

Example Ingredient List for this product:

Ingredients: Organic Whole Milk, Salt, Organic Sun Dried Tomatoes (Organic Tomatoes, Sea Salt, Water, Citric Acid), Pine Nuts, Dried Basil, Cultures, Enzymes.

11.3 OTHER LABELS WITH THE WORD ‘ORGANIC’ [§205.101(a)]

Farmers and handlers who gross less than \$5,000 income from organic products annually are exempt from certification under the NOP, but may choose to certify. Exempt operations must follow the standards (including all of the recordkeeping standards) to use the term “organic” on their products and they cannot represent their products as “certified organic.” Also, anyone may use organic ingredients in a processed product (and list these ingredients as organic in the ingredient list) without certification, as long as they are not advertising the product as organic or using the USDA seal.

Under the NOP, cosmetics, body care products, dietary supplements, fertilizers and lawn care products, textiles, and other non-food/feed products are not specifically addressed.

When in doubt, look for the name of the product’s certification agency on the label. You may always contact the agency to obtain a copy of the producer’s or handler’s organic certificate, which is public record.

11.4 USING THE USDA SEAL [§205.311]

If your product falls in either the “100% Organic” or the “Organic” category and is certified, you may choose to use the USDA organic seal on your label. You must use one of the following approved versions:

Black

Must be on a white or transparent background.



Color

Must be on a white background using the following colors from the Pantone Color Matching System (PMS):

Brown = PMS 175

Green = PMS 348



You can download either version directly from the NOP website, or you can contact your certifier to have the approved seal(s) sent electronically to you or your printer.

You can put the USDA organic seal anywhere on your label/package.

11.5 USING YOUR CERTIFIER'S LOGO

If your product falls in the "100% Organic," "Organic," or "Made With Organic [specific ingredients]" category, you may also choose to use your certifier's logo on your label. Check with your certifier to see if there are additional requirements for the use of its logo.



If using both the USDA seal and your certifier's logo on your label, the certifier logo cannot be larger or displayed "more prominently" than the USDA seal. Often, certifier logos can serve the purpose of a "Certified Organic By" statement. Just remember, if using it for this purpose, it must go directly below your name and/or contact information on the information panel of your label. Otherwise, you can put the logo anywhere on your label or package.

11.6 COMMERCIAL UNAVAILABILITY [§205.304; §205.606]

If you are unable to find an agricultural ingredient that is not listed on §205.606 in certified organic form for your proposed organic product, you may only use the nonorganic version of that ingredient if you label your product as "Made with Organic [Specific Ingredients]." The product must also fully comply with the requirements of §205.304.

A product labeled as "Organic" may only contain:

- organic ingredients;
- nonagricultural (nonorganic substances) as listed in §205.605; and
- nonorganically produced agricultural products as listed in §205.606, provided they are not commercially available as organic.

If you would like to use an ingredient from §205.606, you must conduct a search for the organic form first to prove it is not 'commercially available' in organic form. At least 3 valid suppliers of organic ingredients should be checked. In order to request to use a nonorganic agricultural ingredient that is not listed at §205.606 and label the product as "Organic" you would have to petition the National Organic Standards Board (NOSB), which makes recommendations to the NOP, to add the ingredient to §205.606.

11.7 OTHER LABEL CLAIMS (UNRELATED TO ORGANIC)

Handlers of organic products may make additional label claims (such as cage free, grass-fed, etc.), provided such claims are truthful and do not violate the NOP regulations or other Federal or State labeling regulations.

11.8 NONRETAIL LABELS – BULK/WHOLESALE

Nonretail product label requirement:

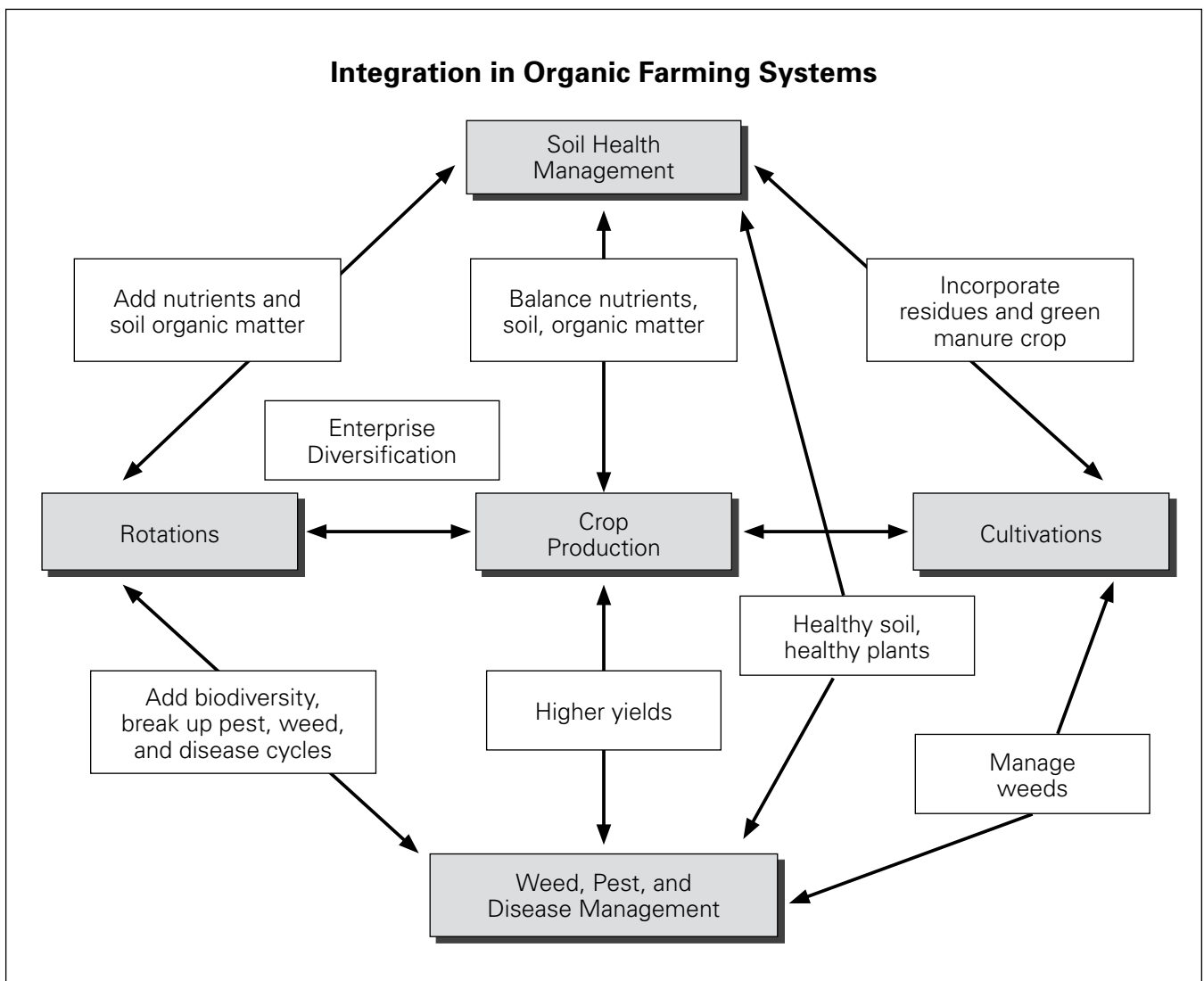
- Must show the production lot code so the product is traceable backwards through production and handling records.

It is good practice to note organic status on nonretail labels to help other handlers in the supply chain maintain organic integrity. However, this is not required. You may also choose to include an organic composition claim (i.e. 100% Organic), a COB statement, the USDA organic seal, and/or the certifier's logo.

PULLING IT ALL TOGETHER

If you have navigated the workbook to this point, you have assessed your current operation, established a holistic goal, and completed a sample Organic System Plan to serve as your transition plan. Congratulations! That was a lot of work! There are just a few more things to cover before you get started putting your plan into practice.

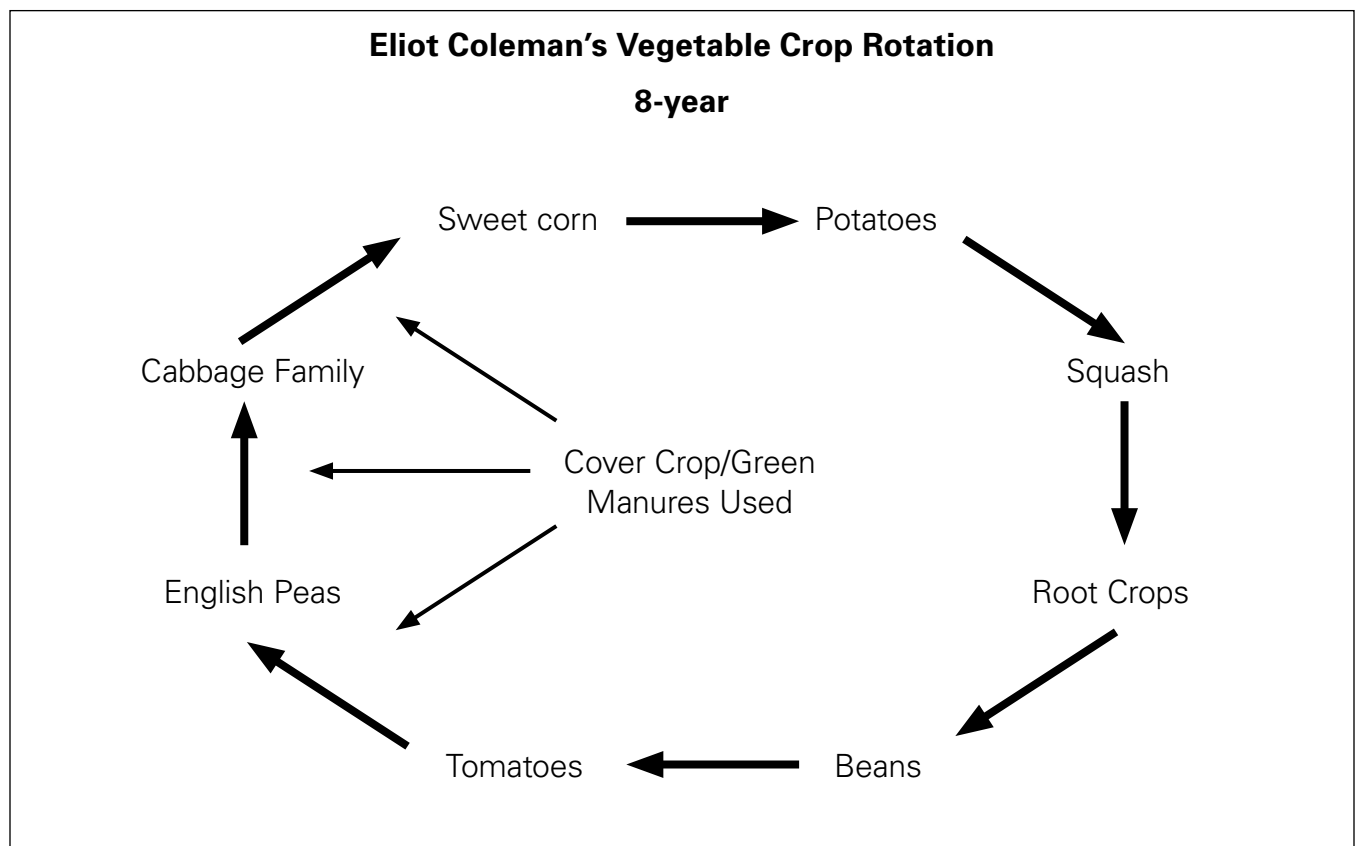
A blessing and curse of using an Organic System Plan format to develop your transition plan is that it breaks your farming operation into parts, when one of the keys to success in organic farming is being able to think and make decisions about the operation as a whole system. Like nature, it is a system within which all the pieces are interconnected and interdependent. For example, your crop rotation will serve many functions. It can provide nitrogen by including a legume in the rotation. It's a way to break up pest, disease, and weed cycles. It brings increased biodiversity, diversity of enterprises, and overall sustainability. Because of this interconnectedness, any decision about your crop rotation will impact fertility, pest, weed, and disease management, your finances, and your system as a whole. The diagram below illustrates some of these interactions.



As you completed your Organic System Plan, you made many decisions, using your goal statement as a guide, about each of the components of your farming operation. Now it is time to take these components and think about how they impact one another in a system to make sure you are taking advantage of positive interactions, and minimizing unintended consequences.

For example, using a legume cover crop in your rotation can provide a lot of nitrogen to the next crop. On the other hand, if you have included corn followed by winter wheat in your rotation, both crops are heavy nitrogen feeders and may deplete soil reserves leaving very little nitrogen in the soil. The following crops could be weaker from lack of nutrients and more vulnerable to competition from weeds or attack from insect pests and diseases. Further, if you produce livestock, you might find a way to integrate livestock into your rotation while still making sure to keep track of other organic rules regarding manure application.

In vegetable production, plants from the same family should not follow each other in the rotation because they tend to be susceptible to the same insects and diseases. As showing in the diagram below, a rotation can be devised that manages nutrients and provides a break between plant families.



Potatoes follow sweet corn because research has shown corn to be one of the crops that most benefits the yield of potatoes.

Sweet corn follows the cabbage family because, in contrast to many other crops, corn shows no yield decline when following a crop of brassicas. Secondly, the cabbage family can be undersown to a leguminous green manure, that, when turned under the following spring, makes ideal sweet corn growing conditions.

The **cabbage family** follows peas because the pea crop is finished and the ground is cleared (early), allowing a vigorous green manure crop to be established.

Peas follow tomatoes because they need an early seed bed, and tomatoes can be undersown to a non-winter-hardy green manure crop that provides soil protection over winter with no decomposition and re-growth problems in the spring.

Tomatoes follow beans because this places them four years away from their close cousin, the potato.

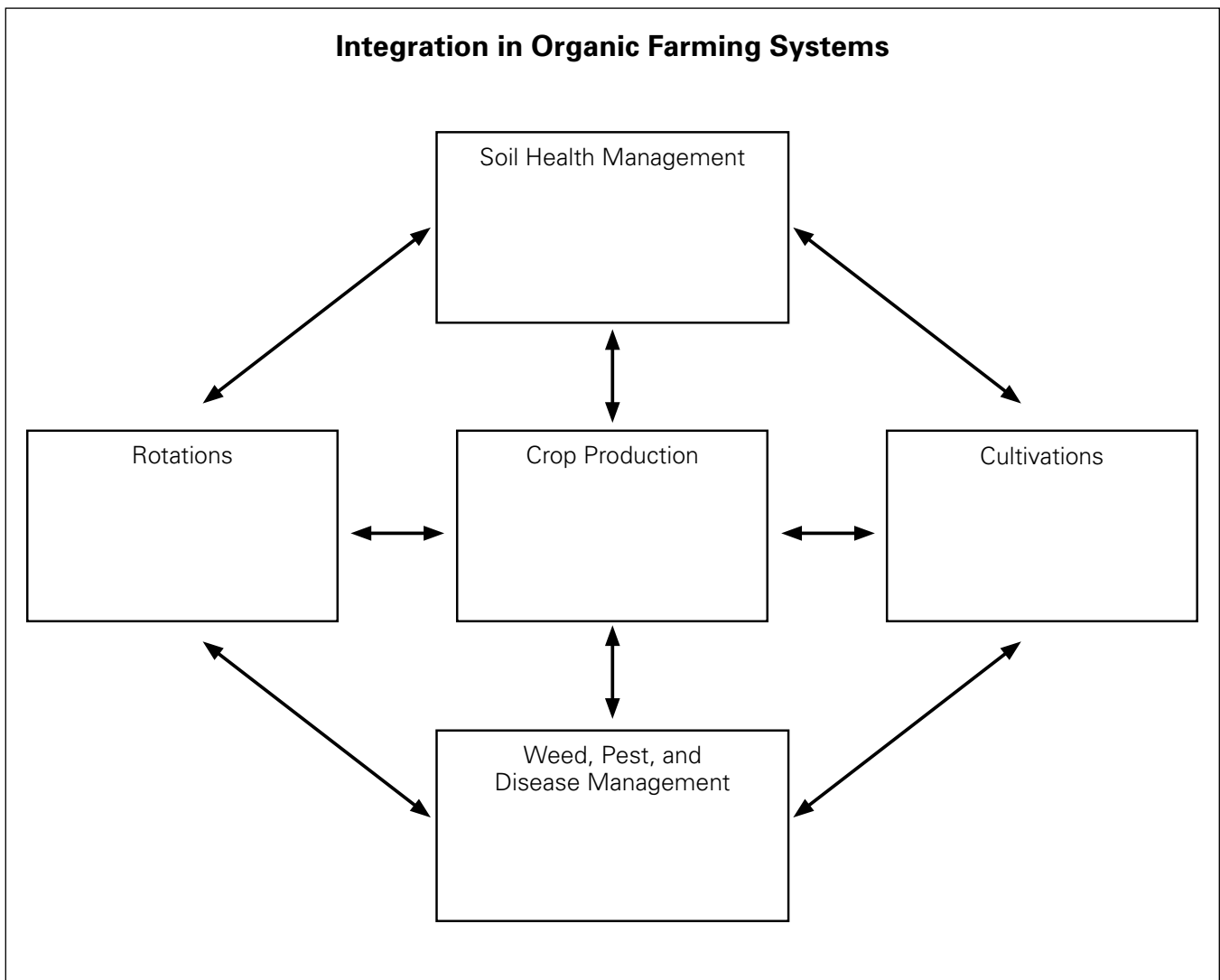
Beans follow root crops because they are not subject to the detrimental effect that certain root crops such as carrots and beets may exert in the following year.

Root crops follow squash (and potatoes) because those two are good “cleaning” crops (they can be kept weed-free relatively easily), so there are fewer weeds to contend with in the root crops, which are difficult to keep cleanly cultivated. Secondly, squash has been shown to be a good preceding crop for roots.

Squash follows potatoes in order to have the two “cleaning” crops back-to-back prior to the root crops, thus reducing weed problems in the root crops.

Source: An Overview of Organic Crop Production, ATTRA, <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=66>

Use the diagram below to fill in particulars for your transition plan. Consider the impact of the different components on each other to anticipate any challenges that may arise when you implement your plan, or recognize positive relationships that may emerge in your system.



Some relationships and interactions cannot be foreseen. They will become evident once you have implemented your plan. This is why your plan is a **living document** – intended to be flexible and adjustable according to changing conditions or new ideas. To assess if your system is working, and for your organic certification, you will need to keep good records.

MONITORING AND RECORDKEEPING

Throughout the explanation of the National Organic Program Standards, recordkeeping came up repeatedly. Some of these records will be required to submit as part of your Organic System Plan, others you will keep to show the inspector, and others will simply help you collect information about your system that will help you to improve it as you go.

Using the Forms

The following sample forms are based on those used by the Ohio Ecological Food and Farm Association (OEFFA) Certification Program. Using these forms, or a similar recordkeeping system you create yourself, will allow you to create an audit trail so that you or your certifier can trace a product from seed to sale or end use. This helps you to be able to demonstrate to the certifier or consumer that you are meeting all of the organic requirements.

These records can also help you to better understand your own operation – from soil conditions to markets. Good field records can be a valuable crop improvement tool. They will provide information so you can make adjustments to your system accordingly.

Crop Forms

Adjoining Land Use Statement	101
Bill of Lading	102
Buffer Strip Record	103
Clean Transport Statement	104
Combine Clean-Out Record	105
Compost Production Record	106
Equipment Cleaning Record	107
Farm Storage and Sales Record	108
Field History Record	109
Input Record	110
Lime Gypsum Statement	111
Material Request Form	112
Mushroom Input Record	113
Off-Site Storage Statement	114
Prior Land Use Statement	115
Seed & Stock Search Record	116
Soil Fertility Record	117
Untreated, Non-GMO Statement	118
Yearly Field Activity Record	119

Livestock Forms

Animal Health Record	120
Animal Purchase Record	121
Animal Sale Record	122
Breeding Record	123
Feed Record	124
Poultry Flock Health Record	125
Outdoor Access Record	126



OEFFA Certification

41 Croswell Rd Columbus, Ohio 43214

Phone: (614) 262-2022 ♦ Fax: (614) 421-2011 ♦ organic@oeffa.org

Adjoining Land Use Statement

To be completed by neighboring land owner/manager

General Information		
Name of Neighboring Land Owner/Manager	Farm or Business Name	
Address	Phone	Fax
City, State, Zip Code	Email	
Type and Location of Adjoining Land Use		
1) Describe the type of land use next to the organic farm (<i>yard, pasture, crops, etc.</i>):		
2) Explain and/or draw the location of this adjoining land in relation to OEFFA Producer's nearest field(s):		
Statement		
I state that the land under my management which borders the organic land managed by _____ has had no synthetic fertilizers, herbicides, insecticides, or genetically engineered seeds used on it in the last 12 months. I have no plans to use any synthetic products or genetically engineered seeds on these fields/areas in the next 12 months. In the event that I do use any of these materials, I will inform the OEFFA Producer of my plans and actions beforehand.		
Neighboring Land Owner or Manager Signature:		Date:

Revised 05 10 2015



OEFFA Certification

41 Crowell Rd Columbus, Ohio 43214
 Phone: (614) 262-2022 ♦ Fax: (614) 421-2011 ♦ organic@oeffa.org

Bill of Lading

FROM (Seller):			TO (Buyer):		
Street			Street		
City	State	Zip	City	State	Zip
OEFFA Producer Number		Transaction Date			
Carrier / Shipper:			Broker / Dealer:		
Street			Street		
City	State	Zip	City	State	Zip
Route	Vehicle / Container Number		Reference BOL Number:		

Description of Finished Product:

COMMODITY	CROP YEAR	QUANTITY	UNIT OF MEASURE	US \$ PAID	LOT #	CHARGES (for shipping purposes)

Container / Trailer has been inspected and determined to be free of contaminants.

Carrier / Shipper Signature _____ **Date** _____

Remit Cash On Delivery (C.O.D.) to:	C.O.D. Amount:	C.O.D. Fee:	Freight Charge:	Total Charges:
Address:	\$	\$	\$	\$
City: State : Zip:	Prepaid	Prepaid	Prepaid	
	Collect	Collect	Collect	

The agreed or declared value of the property is hereby specifically stated by the shipper not to exceed:

\$ Per

If this shipment is to be delivered to the buyer without recourse on the seller, the seller shall sign the following statement. The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Signature of Seller _____

RECEIVED: Subject to the classifications and lawfully filed tariffs in effect of the state of Issue of Bill of Lading. The property described above in apparent good order, except as noted (contents and condition of contents of packages unknown) marked, shipped and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under this contract) agrees to carry to its usual place of delivery at said destination, if on its own route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property that every service to be performed hereunder shall to all the bill of lading terms and conditions in the governing classification on the date of the shipment. Shipper hereby certifies that he/she is familiar with all of the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for him/herself and his/her assigns.

The products listed above are to be shipped in accordance with National Organic Program standards.

OEFFA PRODUCER SIGNATURE:	CARRIER / SHIPPER SIGNATURE:
X	X
Per (Company):	Per (Company):
Date:	Date:

Revised 05 10 2015



OEFFA Certification

41 Crosswell Rd Columbus, Ohio 43214
Phone: (614) 262-2022 ♦ Fax: (614) 421-2011 ♦ organic@oeffa.org

Clean Transport Statement

Name / Farm Name: _____ Date: _____

Organic Product(s) Transported	Lot #
_____	_____
_____	_____
_____	_____
_____	_____

1. Type of transport:

Farm wagon(s) Farm truck Bulk semi-trailer
 Common carrier Tanker Other (*specify*) _____

2. The transport was arranged by: Grower Buyer Other (*specify*) _____

3. Is the transport unit used only with organic products? Yes No

 If no, list products transported prior to organic products: _____

 If no, list how organic products are packaged: _____

4. Was the transport unit cleaned prior to transport of the organic crop(s)? Yes No

 If yes, describe cleaning: _____

 If no, explain: _____

5. Was the unit inspected prior to transport? Yes No

 If yes, was the unit found to be free of the following? Check all that apply.

Foreign odors Residues Conventional products
 Other substances that may compromise organic integrity

I state that the above transport unit was inspected and/or cleaned thoroughly using the method indicated to protect the integrity of the organic products being transported.

Signature

Date

Revised 05 10 2015



OEFFA Certification

41 Crosswell Rd Columbus, Ohio 43214
 Phone: (614) 262-2022 ♦ Fax: (614) 421-2011 ♦ organic@oeffa.org

Combine Clean-Out Record

Please complete a clean-out record before harvest and for each different crop harvested. Note field names / numbers and date clean-out procedures were performed.

Year _____ Name / Farm Name _____

Clean-Out Date _____ Crop _____ Field _____

Custom Operator Name _____

Address _____

Type of Machine _____

Please mark which procedure was used for each part of the combine that was cleaned.

Clean-out Procedure:

Sweeping;
 Compressed air;
 Washing;
 Purging

_____ Header	_____ Sieves and Chaffers
_____ Feederhouse	_____ Cylinder and/or Rotor
_____ Grain Tank	_____ Shoe Supply Augers
_____ Straw Walkers	_____ Unloading Auger
_____ Ledges, Frame Rails	_____ Rock Trap
_____ Clean and Return Elevators and Cross Augers	

I state that the above cleaning has been completed in accordance with National Organic Program Standards.

Operator Signature

Producer Signature

Date

Date

Attach a copy of the invoice for contracted services.



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Lime / Gypsum Statement

This form serves as a statement that the lime / gypsum on an OEFFA producer's organic operation comes from a mined source that has not been processed (other than mining and crushing) and contains no additives.

LIME

I, (name of seller) _____ have sold

LIME to: (name of buyer) _____.

This lime is from a mined source that has not been processed and contains no additives.

Signature of Seller

Signature of Buyer

Company

Date

Date

GYPSUM

I, (name of seller) _____ have sold

GYPSUM to: (name of buyer) _____.

This gypsum is from a mined source that has not been processed and contains no additives.

Signature of Seller

Signature of Buyer

Company

Date

Date



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Material Request Form

To be filled out by the producer interested in using an input or material. Please provide as much of the below information as you have. The more information we have, the more quickly we can complete the review to determine if the material is approved for use in organic production.

Full Product Brand Name	Intended Use	Manufacturer Name	Manufacturer Contact Info	Supplier Name	Supplier Contact Info	List of Ingredients

If material is a custom blend, provide an invoice listing all ingredients. Provide label (front and back) if available.



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Mushroom Input Record

Substrate Statement

I, (name of seller) _____ grow mushrooms on the following substrate: _____.

This substrate is:

a certified organic agricultural substrate (straw, grain, etc.) an untreated log or block made of untreated sawdust

Signature of seller _____ Date _____

Signature of Mushroom Producer _____ Date _____

Company _____

Spawn Search Record

Distributor Contacted	Date	Contact Method (Phone, mail, catalog, etc.)	Spawn Requested	Organic Variety Available? *		Variety Purchased (If no purchase made, write "None")	If Spawn is Not Organic:	
				Yes	No		Untreated*	Non-GMO*
				<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

*Save all tags, receipts, documents stating spawn is organic or untreated and Non-GMO.

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Off-Site Storage Statement

Complete this statement if you store ingredients or finished products at a non-certified facility.

General Information				
Certified Processor/Producer:	Certification #:	Date:		
Warehouse Company:	Warehouse Address:			
Product Information				
The following items are stored at an off-site, non-certified facility <i>(attach additional sheets if more space is needed)</i> :				
Product	How Packed? (bulk, boxed, etc.)	Type of Packaging Material (paper, plastic, etc.)	ID'd as Organic	
			Yes	No
Storage Information				
Cleaning: <input type="checkbox"/> Washed <input type="checkbox"/> Swept <input type="checkbox"/> Other <i>(specify)</i> _____				
List all cleaning products used: _____				
Pest Control Type: <input type="checkbox"/> none <input type="checkbox"/> traps <input type="checkbox"/> electrocutors <input type="checkbox"/> bait <input type="checkbox"/> fogging <input type="checkbox"/> fumigation <input type="checkbox"/> crack & crevice <input type="checkbox"/> other <i>(specify)</i> _____				
List all pest control products used: _____				
Statement				
<p style="text-align: center;"><i>I have received the products described above. No packaging is broken and nothing is re-labeled at this facility. These products are stored in a manner that preserves their organic integrity.</i></p>				
Name: _____		Job Title: _____		
Signature: _____		Date: _____		

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Soil Fertility Record

Name / Farm Name _____ Year _____

Bed / Field: _____ SqFt / Acres: _____ Crop(s): _____

Date of Most Recent Soil Test: _____

NUTRIENT	NUTRIENT LEVEL (as compared with previous soil tests)				
	Decreasing	Stable	Increasing	Excessive	Not Tested
P (phosphorus)	Decreasing	Stable	Increasing	Excessive	Not Tested
K (potassium)	Decreasing	Stable	Increasing	Excessive	Not Tested
Ca (calcium)	Decreasing	Stable	Increasing	Excessive	Not Tested
Mg (magnesium)	Decreasing	Stable	Increasing	Excessive	Not Tested
S (sulfur)	Decreasing	Stable	Increasing	Excessive	Not Tested
Na (sodium)	Decreasing	Stable	Increasing	Excessive	Not Tested
B (boron)	Decreasing	Stable	Increasing	Excessive	Not Tested
Cu (copper)	Decreasing	Stable	Increasing	Excessive	Not Tested
Mo (molybdenum)	Decreasing	Stable	Increasing	Excessive	Not Tested
Zn (zinc)	Decreasing	Stable	Increasing	Excessive	Not Tested
Mn (manganese)	Decreasing	Stable	Increasing	Excessive	Not Tested
Fe (iron)	Decreasing	Stable	Increasing	Excessive	Not Tested
Organic matter/ Humus levels	Decreasing	Stable	Increasing		Not Tested

pH Level: _____

- Within or approaching desired range
- Out of or moving away from desired range

Crop Monitoring:

Are there visible signs of nutrient stress? No Yes
 If yes, please explain:

Soil Erosion Monitoring:

Is there evidence of wind and/or water erosion? No Yes
 If yes, please explain:

Additional Notes on Soil and/or Crop Health Monitoring:



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Untreated / Non-GMO Statement

Seeds and planting stock used for organic production must be free of prohibited substances and must not be produced using genetic engineering. If you are using non-organic seed or planting stock when the organic variety is not commercially available, untreated and non-GMO documentation is required.

I, *(name of seller)* _____ have sold / traded

Seed

Planting Stock

to *(name of buyer)* _____.

The varieties are as follows:

1. _____

6. _____

2. _____

7. _____

3. _____

8. _____

4. _____

9. _____

5. _____

10. _____

(If additional space is needed, write on back or attach seed list.)

I state that these seeds / planting stock were not treated with any prohibited substances, produced using genetic engineering techniques, or derived from genetically modified organisms.

Signature of Seller

Signature of Buyer

Company

Date

Date

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Poultry Flock Health Record

Year: _____ Name / Farm Name: _____ Flock ID: _____

Date Chicks / Poults Placed: _____ Number of Chicks / Poults Placed: _____

Production Start Date: _____ Estimated Production End Date: _____

In columns for Day 1 through Day 7, record the number of birds that died each day.

Week #	Week of (Date)	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Health Problem	Cause	Action Taken (environmental changes, vaccines, health care products)	Date of Action
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

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Outdoor Access Record

Use this form to mark the days that livestock had access to the outdoors. Document the dates and reasons for temporary confinement. Reasons could include: bad weather; the animal's stage of life (except lactation); conditions hazardous to the animal's health/safety/well-being; soil and/or water quality concerns; preventative healthcare or to treat illness/injury; sorting or shipping livestock; breeding; and/or youth project events.

Year _____ Name / Farm Name _____ Type of Livestock _____

MONTH	DAYS ANIMALS HAD ACCESS TO THE OUTDOORS																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
JANUARY																																
FEBRUARY																																
MARCH																																
APRIL																																
MAY																																
JUNE																																
JULY																																
AUGUST																																
SEPTEMBER																																
OCTOBER																																
NOVEMBER																																
DECEMBER																																
Date Confined	Reason										Date Confined										Reason											

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OHIO ECOLOGICAL
FOOD AND FARM
ASSOCIATION

41 CROSWELL RD.
COLUMBUS, OH 43214

WWW.OEFFA.ORG • (614) 421-2022 • OEFFA@OEFFA.ORG