



IIT KHARAGPUR



NPTEL ONLINE
CERTIFICATION COURSES

Organic Farming for Sustainable Agricultural Production

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Lecture 29 : Introduction on Transition to Organic crop Production

Why transition to organic?

Studies of farmers practicing organic farming for many years found the following common reasons:

- effects of chemicals on health
- effects of conventional farming on soil quality and conservation
- dissatisfaction with conventional farming practices
- decline in family farms and rural communities
- opportunity to improve farm profitability

Considerations for transitioning to Organic Systems

- Organic crop systems can be more labor- and management-intensive than conventional cropping systems.
- Keeping ahead of weed, insect and disease problems through observation, monitoring, identification and a timely response is the most efficient management strategy an organic producer can use.
- Transitioning to organic farming takes time and patience. Depending on the farming system, the crops produced and the transition approach, it can take three to five years to convert to an organic system.
- Crop yields may decline during the initial transition period until a balance in the system is reached, but with time, yields will rebound.
- Some vegetable and fruit crops are easier than others to grow organically. For a successful transition, begin with crops that are easier to produce organically.
- After gaining experience, begin adding more difficult crops in subsequent seasons.

Transition Approaches

Gradual Transition

- Where one class of inputs is withdrawn at a time, slowly discontinuing the use of synthetic inputs while introducing organic management practices into the system.
- This approach requires a longer transition time but can minimize yield losses during the conversion.

One Field at a Time

- It involves using organic management practices on a portion of your farm, converting to organic production part by part over time.
- This approach provides the opportunity to gain experience with organic production methods on a more manageable scale before converting the entire farm and minimizing risk.

Whole Farm

Where the use of all synthetic inputs is discontinued on the entire farm all at once.

What is the transition period?

For land to be eligible for organic certification, prohibited substances must not be applied to the land for a period of **three years** immediately preceding harvest of the crop.

Growers with little or no farm experience will find the transition to organic the most difficult.

A primary consideration is the need for technical production information. As with any new business, there are many factors to consider to ensure success.

A strong business plan ensures a sound approach. A business plan describes:

- ❖ who you are?
- ❖ what you plan to achieve?
- ❖ what you are going to produce?
- ❖ how and when you expect to get started?
- ❖ how you will overcome the risks involved?
- ❖ what are the estimated returns?

What do the organic standards require?

During transition, production must meet all of **the many standards requirements**, including the following.

- The land must be managed as organic for **36 months** prior to the first organic harvest and **during the last 12 months** of this period, it must be under the supervision of an **organic certification body** (i.e. that the farm has been reviewed and approved as a transitional organic farm).
- The goal of the enterprise must be for a complete transition of its production. **Parallel production** of the same product is not allowed. Parallel production is where the same crop is produced both organically and non-organically.

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What do the organic standards require?

- Production units must have **distinctly-defined boundaries**. Boundaries must be readily visible and defined on a map.
- **Buffer zones** between organic and non-organic production must be **at least eight metres** wide and this production may not be used or sold as organic. This can include permanent hedgerows, windbreaks, permanent roads or physical barriers.
- Production units cannot alternate between being organic and non-organic production. If you have a problem with a field it cannot be rotated between organic and non-organic.

Steps to transition

1. Knowledge

Before transitioning to organic do the research to understand the benefits and risks that organic production and sales may have for your farm.

- Gain **the knowledge** needed for field production, **on-farm processing** and marketing of the crop.
- Set goals for the farm.
- Learn the **organic standards** for the organic production of your crops.
- Understand the differences between your previous production experiences (usually in **conventional farming**) and your expectations in organic.
- What assets and resources are needed for transition on your farm?
- Use consultants or seek out other experienced people in the sector for advice.
- Do not underestimate the knowledge step. In many cases it will take several years to do the appropriate research.

Steps to transition

2. Make a Plan

- Organic standards require an “Organic Plan” outlining the details of transition, production, preparation, handling and management practices. Update the plan annually and include record keeping to ensure product traceability. In many cases this plan becomes a major part of the application for certification.
- A good plan outlines all aspects of the operation, both existing and planned. Include expected crop rotations, tillage plans, weed, insect, disease and other pest considerations, and include field maps and aerial photographs where available. Also include equipment and facility needs, including the expected improvements and related timelines.
- Determine how the crop will be marketed and the market requirements for the crop before planting. This includes what product, potential buyers, expected price, etc. If you do not know where to sell it – don’t plant it!
- The plan should set reasonable expectations for normal situations and be flexible enough to accommodate changes due to weather or other conditions beyond the grower’s control.

Steps to transition

3. Land

- For long-term planning decide which crops are to be grown organically based on market opportunities, on-farm needs such as livestock feeds and soil management needs, including rotations and cover crops.
- In the short term decide which crops to grow during the transition to organic. High value annual crops, such as most vegetables, usually have high requirements for management and inputs for fertility and pest management. There is also often a high risk of lower marketable crop yields during transition and this can be a significant financial risk. These crops are often not suited for the transition years.
- High value perennial crops such as fruit trees often are not harvested in the first couple of years after planting.
- Take care to manage pest issues during the transition that may be more difficult than in non-organic
- **Legume and forage crops** are often best for the transition years since they cost less to establish and generally have lower demands for nutrients and pest management. Many are also soil improving crops (legumes – nitrogen; grasses – fine roots for soil structure, etc).

Steps to transition

4. Inputs (seed, nutrients and pest management)

Seeds:

Organic seed and planting stock must be used if available. If organic seed and planting stock is not commercially available, the following options (in order of preference) may be permitted with documentation that organic seed is not available:

- seed grown only with substances in accordance with organic standards (**can be from transition fields**)
- non-organic untreated seed and planting stock
- non-organic perennial planting stocks may be used provided such plants have been maintained in accordance with the organic standards for at least one year prior to harvest of the organic products

Annual Certification Process

