

Transitioning to Organic: Strategies for Success

By Gary F. Zimmer and Leilani Zimmer-Durand. This article appeared in the October 2016 issue of Acres U.S.A.



May 9, 2018

The year two spring rye crop — note how few weeds are present. This rye grew well during the spring and early summer, and was ready for harvest in mid-July. Below shows the rye straw after the grain was combined. Yields were about 35 bushels/acre of rye seed the first year and 4 bales of straw/acre. This year, the yield was 52 bushels/acre of rye seed and 8 bales of straw/acre.

With conventional prices for corn, beans, wheat and dairy really low right now and both prices and demand for organic products high, a lot of growers are thinking about transitioning to organic.

For most growers, one of the biggest deterrents to going organic is the 36-month-long process of transition, during which time you can use only organic-approved inputs and practices, but the crops, milk or other farm goods produced can't be sold as "organic" and receive the price premium.

In my opinion, chasing profits is not the right reason to go organic, and there is more to it than not adding prohibited inputs and getting paid more for your crops. Being a successful organic farmer requires a different mind-set, and the best time to figure out your approach to organic farming and set yourself up for success is during the transition period.

Before Transitioning to Organic

If you're considering transitioning to organic, the first thing you should do is sit down and think about why and then think about how. If your answer to why is that you are doing it for the money, maybe it's not for you.

Being an organic farmer is not an easy get-rich-quick scheme. You have to have the right mind-set to be a successful organic farmer. This is a different way to farm. If you're doing this because you think it's right and it's the best path for the future of your farm, you're on the right track.

Organic farming takes more knowledge; it takes new and different tools, and it takes a better understanding of soils. You need to manage the nutrients you are putting on, but you also need to thoroughly understand the role of the soil's physical structure and its biology. These become your new focus.

As part of having the right mind-set, you should never accept the argument that your crops will yield less than conventional and have more insect and disease problems. As you transition to organic, you transition from crop-protection chemicals to disease-prevention techniques. Healthy, mineralized soils produce healthy, high-yielding crops, and it's your job to figure out how to pull that off on your farm.



As a first step, I highly recommend that you visit a successful organic farm to see what their operation is like and examine the management tools they use. What is their soil mineralization program? Do they have livestock or use manure? What is their crop rotation, and what tillage techniques do they use? Are there disease and insect problems? If so, how do they control them?

Take a look at their soils and spend a little time digging into them, looking at soil structure, residue decay and biology. Are there earthworms? What type of soils do they have? You'll find that most successful organic farms have higher organic matter and loamier soils. It's very difficult to farm organically on sand or on heavy clay.

Two of the biggest changes you'll have to make as you switch from conventional to organic production are weed control techniques and nitrogen management. Here, too, you can learn a lot from observing the successes of other farms. What are their weed control tools? How do they manage tillage? When and how do they plant?

Plowing might be the easy way to bury things, but it's not the best for soil structure and soil life. If you're going to farm organically you can do this once in a while but certainly not yearly. When you decide to plow you have made the decision to start over! You tear soil aggregates apart, tip things over and have a large biology kill-off. It's acceptable to do now and then, but it's not sustainable.

Changing how you think about nitrogen is key to becoming a successful organic farmer. Nitrogen is the only nutrient you can grow, but you have to learn how, what works and what doesn't work. This involves learning at what stage of maturity you work in a cover crop and which varieties you use in each situation — it's not just counting nitrogen credits from legumes. Feeding crops is like feeding dairy cows. What kinds of feed would you give a cow to get 100 pounds of milk?

It's not all legumes, but it is highly digestible, which means not feeding too many complex carbons. Feeding a crop that requires a lot of soluble nutrients — like corn — works the same way as feeding a highly productive dairy cow, meaning you need a lot of soluble nutrients including nitrogen.

You can feed a legume crop such as soybeans like you are going to feed a dry cow, with more complex carbons in the ration. A legume will fix its own nitrogen, so you can plant after working in a more mature cover crop and the soybeans will be fine. Growing cover crops or leaving straw and corn stalks (stubble) on the field is good for building organic matter but can tie up nutrients and starve the next crop of nitrogen. On the plus side, it also starves the weeds, making for better weed control in soybeans, which is always a challenge.

You have to learn how to manage when you need nitrogen and when you want to limit it in order to get the most success in building organic matter and biology to get the most out of your soils.

Another thing to keep in mind as you look around at successful organic farms is whether the farm imports or exports nutrients. What leaves the farm in terms of minerals and organic matter (in the form of crops, milk and other farm goods)?

Selling hay is hard on soils because it takes out lots of minerals and removes a lot of organic matter. On the farm I manage with my son and daughter, we refuse to sell hay unless the farm that buys it returns manure to our fields. I don't want to deplete my soils of the organic matter and minerals that keep my yields high and reduce my pest problems.

Make sure you're setting yourself up for success when you transition to organic. As you consider transitioning, another thing to think about is the history of the farm. Not every farm is suited to be organic. Old dairy farms tend to transition well, especially if the farmer had to buy feed or overused fertilizers or manure. There will be a lot of extra nutrients and organic matter in the soil from the added manure and minerals.

Grain farms also tend to have good potential for success because grains remove the least amount of minerals and organic matter from the soil — but the downside of grain farms is that there is not much crop variety, a lot of chemical use and bare ground between the rows, which means that soil structure and biology can be a problem on this type of farm.

If a farm has been heavily tilled and had a lot of nutrients removed, or has poor soil structure and a lot of disease and weed problems, it is probably one that will take more work to transition to successful, high productivity organic farming. Having good mineral levels in the soil and using plants and biology to keep nutrients cycling is a good way to keep your organic farm successful.

5 Strategies for Transitioning to Organic

There are several different strategies for setting yourself up for a bumper crop in your first year of organic production. Below is a short discussion of the strengths and weaknesses of each of the five strategies I see as the most common or most practical approaches to transitioning land.

1. Change the materials used, but keep farming as you have been.

I see this as the highest risk of all of the strategies for transitioning land to organic. Many farmers adopt the thinking that they need to keep on growing a cash crop like they always have during the transition, and rather than focus on building soils they focus on making as much

money as they can from their transitional crop. But farming organically does not mean input substitution.

You're not looking for organic nitrogen sources, organic insecticides, herbicides or fungicides; you are setting yourself up so you don't need them. There are some organic pesticides available and more coming out, and while there may be times when these tools are helpful, you don't want to depend on them. Also, you are not in a numbers game. If you were putting on 200 units of nitrogen conventionally you aren't going to find or be able to afford 200 organic units of N, even from manure. It's a totally different program.

The other side to this strategy is the value of the crop. Yes, you can grow a farm-identified cash crop that you market as non-GMO or transitional organic in order to get a slightly higher price — and take advantage of the USDA-backed insurance for transitional crops — but what have you really changed about your mind-set or your farming system?

If the focus isn't on building soils, this is a risky strategy. Have you added a cover crop and minerals to the rotation as well? How are you managing weeds? You could moldboard plow once or twice to try to get the weed seed bank down, but that isn't a long-term strategy. If you don't change how you farm, you are going to run into some big obstacles down the road.

2. Accelerate the system.

Focus on building soils and don't worry about getting a good return off of the transitional acres. This strategy really sets you up for success and a bumper crop once your land is organic, but it works best if you're only transitioning part of the farm rather than your whole operation.

Most farmers can't afford not to harvest any crops from their whole farm for two growing seasons in order to focus on soil-building. But if you are in a situation where you're taking on new acres that you want to transition, or are transitioning just a part of your farm, spending two years growing cover crops and working them back into the soil, adding minerals, and really focusing on building soil health and organic matter as quickly as possible really sets you up for a great crop with a great return once the transition phase is over.

Because our farm is already organic, if we add acres we spend the two transition years remineralizing, growing cover crops and working them back into the ground, and focus on fixing the soil so when it is certified we can have a few years of high-yielding, profitable crops with very few pest problems. If corn makes us the most money, I'm not going to grow it in transitional years; I'm going to save it for when it's organic as I do need a rotation. I have used this method on several new pieces of land, and I have had really great success and seen remarkable improvements in soil quality after just two years of soil-building.

3. Grow cover crops like rye for seed.

Growing a cover crop for seed during transition, such as oats or rye, is another strategy for building soils and reducing weed and pest problems. You don't have to worry about selling the

crop at the lower transitional price — you just use the seed you grew for all of your cover crop seed on your farm.



Alfalfa crop just after it is worked into the soil before organic corn is planted.

This method has several advantages: no worries about marketing; you can apply lower cost organic approved soil correctives such as chicken manure to build fertility and organic matter slowly, since only the seed is harvested and the straw is worked back into the soil; you can reduce the weed seed bank and lower weed pressure by harvesting the seed crop before the

weeds have gone to seed; and you can add plant diversity by planting a mixed cover crop after the rye or oats is harvested.

This is a method of transition that we are using currently on a farm that we are transitioning. Right now the farm is in year 2 of transition after having been a conventional corn/corn/bean farm for many years. Besides applying 1 ton/acre of poultry manure, we also applied 1,000 lbs/acre of rock phosphate and 1,000 lbs/acre of Sulfur Plus (a calcium/sulfur blend with potassium and trace elements in it).

Having tested the soil before making any changes to this farm, we are now retesting to see what further inputs are needed.

Our yields were about 35 bushels/acre of rye seed the first year and 4 bales of straw/acre. This year, the yield was 52 bushels/acre of rye seed and 8 bales of straw/acre. We use the straw to bed our livestock and later apply 2 tons/acre of composted dairy manure to return the carbon that came off in the straw. The rye seed is put through a seed cleaner and then planted as the fall cover crop following corn removal across other parts of this organic farm.

4. Grow an alfalfa or forage crop during transition.

Growing two years of alfalfa during transition can really help reduce the weed seed bank and add nitrogen to your soil, with the caveat being that minerals must be returned to the soil during the transition years. If you're going to sell the transitional alfalfa off the farm, it is absolutely essential that you replace the minerals and organic matter you're removing, preferably by adding animal manure.

Keep in mind that if you're just replacing what is removed, you are only maintaining the nutrient levels in the soil. I want to build soils as much as possible during the transition, so I will test the soils before transition starts and add the nutrients that are short. Growing and selling alfalfa makes remineralization more difficult because you are hauling a lot of nutrients off of the farm.

That said, this method of transition works well if you want to grow a bumper crop of corn your first organic year and you let the alfalfa get about 12 inches tall and then work it back into the soil before planting the corn.

You'll have an absolutely beautiful, weed-free and high-yielding corn crop that first year. As long as the weather cooperates, you'll think organic is really easy and wonder why everyone isn't doing it! You can't expect every year after that to be quite so easy, but it sure does make that first year fun.

5. Grazing cattle on the transitional acres.

Taking the two transition years to build soil health and plant diversity while grazing is another good strategy for transitioning to organic. It's important to focus on growing a high-quality diverse pasture and adding some minerals so that you're building soil nutrients and organic matter. As long as you manage the grazing well and mow if need be to prevent weeds from going to seed, this can be an easy way to set yourself up for success.

If you're just starting down the road toward transitioning to organic, consider doing just a part of the farm at a time rather than going all in. This not only helps you learn what works best on your farm, but also allows you to really focus on getting land ready for organic production while you still have an income. It will take you some time to find the best crops and methods for your farm.

Always start with a good detailed soil test so you know what minerals are needed to balance the soil. As organic farmers we can use any mineral anyone else does just from different sources (such as manure and rock phosphate for P rather than MAP or DAP). Biology and plants are also essential to recycle and get these nutrients crop-available.

Organic is a system of farming that can produce yields just as high as conventional farming with healthy plants and few pest and disease problems, but you need to learn the principles of how to play the game. As I stated in the beginning, if you are just after the higher prices you may be disappointed with your results. Are you willing to do what is necessary for success?

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