



Soil Testing for Farms in Transition By Janet B. Fallon, CCA - Dairy One Forage and Soils Lab

Every year, I see more and more choices at the grocery store.....so many choices that it can be overwhelming at times. One of the most notable changes is in the category of organic products. Ten years ago, organic products were few and far between. Today, they are more numerous and one of several alternatives available to consumers in the dairy case.

Farmers are responding to that increased demand accordingly. Some for altruistic reasons and others based on economics. Whatever the reason, farmers transitioning to organic crop production need sound management guidelines. It can take quite a bit of patience as well. To become certified, all cropland, including pastures, must be farmed organically for 3 years. That means no herbicides, insecticides, fungicides, treated seed, or synthetic fertilizers - only approved soil amendments such as manure, compost or bone meal. The standards have changed recently requiring cows to eat a totally organic diet for one full year before milk can be certified.

In a way, the process goes back to the basics, including soil fertility management. Soil testing is a crucial component of any soil fertility management. The goal of organic soil fertility management is to build and maintain a healthy biologically active soil that will meet crop and livestock needs in an environmentally sound way. The organic farmer relies heavily on crop rotations, cover crops, green manures and animal manures to build a soil that can provide essential nutrients to the growing crop and support overall soil health.

Soil testing can identify potential nutrient deficiencies and imbalances that can limit soil health. It is especially important in organic systems that rely more heavily on building and recycling nutrients from natural sources over time vs. spoon feeding crops with the required nutrients in a soluble synthetic fertilizer that plants can use immediately.

Soil testing every 2 - 3 years and monitoring crop growth can help identify soil fertility issues that may require a change in management or the use of soil amendments approved for certified organic programs. Below are some guidelines to help you get the most out of your soil fertility program;

1. For most crops, take a soil sample every 2 - 3 years.
 - a. Sample more frequently for high value fruits and vegetables or if you are troubleshooting suspected nutrient imbalances in a field.
2. Avoid seasonal variation by sampling at the same time of year if possible.
3. Sample to a depth of 6 - 8 inches for most field crops.

4. Get a representative sample.
 - a. Limit the sample area to no more than 15 acres if possible.
 - b. Take separate samples for areas that are "different" *i.e.* different crop history, different management, different slope or drainage, etc.
 - c. Take 15 - 20 random sub-samples throughout the field.
 - d. Mix the sample completely in a clean plastic bucket.
 - e. Dry moist samples in a thin layer. A fan can be used to speed the process up but oven drying is not recommended.
 - f. Break up clods and put about 1 pint of the dried mixed sample in the Dairy One Sample box.
5. DO THE PAPER WORK – fill in the sample information sheet completely.
6. Ship the sample via US Mail, Fed Ex, UPS or DHL or use one of our existing pick up points for milk samples. Our street address is;

Dairy One Forage & Soils Lab
730 Warren Road, Ithaca NY 14850

For more information or to order Soil Test Kits, contact us at 1-800-344-2697 ext. 2172 for the Forage Customer Service or the Soils Lab ext. 2179.

Soil sampling helps farmers get the most value from their management inputs. Establishing a plan for soil testing is key for conventional or organic producers. A single soil test gives you a snapshot of soil fertility at one point in time. It is also the first step needed to establish a working history of soil health over time. This working history helps determine if soil fertility is improving, decreasing or being maintained at desired levels. It can show you trends in soil organic matter over time. It can identify when, where and what soil amendments may be needed to bring a wayward soil back to a healthy balance.

In 2002, there were 57 certified organic dairy farms in NY. Today, there are more than 250 - including about 100 farms newly certified in 2006. These farmers will tell you that transitioning to organic crop production or organic livestock production takes a tremendous commitment of time, resources, and management. It also requires a willingness to changechange the way you think about things, the way you do things and the patience to allow the system to come into the right balance. Testing the soil, the forages, the manure or compost are management tools that can be put to good use during this transition as well as in the years following a successful transition.

Below are links to additional information on organic farming and certification programs.

Soil Testing for Farm in Transition continues...

- [USDA National Organic Program](http://www.ams.usda.gov/nop/)
- [Northeast Organic Farming Association of NY and NOFA-NY Certified Organic, LLC](mailto:certifiedorganic@nofany.org)
- [Organic Materials Review Institute \(OMRI\)](http://www.omri.org/)
- [Cornell Small Farms Program](http://www.smallfarms.cornell.edu/pages/resources/production/organicdairy.cfm)
- [The Northeast Organic Network](http://www.neon.cornell.edu/)
- [Organic Agriculture at Cornell](http://www.organic.cornell.edu/) or <http://www.smallfarms.cornell.edu/pages/projects/dairy/organictransition.cfm>



Sign along Rt 13 in Cortland identifying an “Organic Farm No Spray Zone”.



Windrows of composting dairy manure on a certified organic dairy farm in Fabius, New York.