Farm Record Keeping Can be Simple and Painless, or a Frenzy . . .

Traversing the Audit Trail Jungle

by Mary-Howell R. Martens

Panic can run rampant on organic farms as that wild pre-inspection paper scramble begins. Questions about where to begin abound: What should I do with those jumbled files of sales receipts, weigh slips and labels? What if I can't find everything? Is there time to organize that stack of transaction certificates, and did I remember to document all of last year's sales?

Two weeks before the organic inspector is scheduled to come, you manage to pull yourself away from your work and you realize what a state of chaos your farm paperwork is in. You panic: How can I possibly get my records in order enough to pass inspection? Panic can run rampant on organic farms as that wild pre-inspection paper scramble begins. Questions about where to begin abound: What should I do with those jumbled files of sales receipts, weigh slips and labels? What if I can't find everything? Is there time to organize that stack of transaction certificates, and did I remember to document all of last year's sales? You can't recall whether you applied manure to field 14B in 1999 or 1998. Did you manage to write down all the health records for the animals out in the barn? Now, where did you record what was harvested off those buffer strips?

Record keeping on an organic farm can be a colossal task. Keeping all the necessary records in order and readily accessible sometimes seems all but impossible. A dark, insidious doubt lurks in the back of even the most organized mind that the inspector will find something that was overlooked, some essential record that is missing, or even worse, that you will know the information is somewhere but you are unable to find it on the day of the inspection. Certainly then, eternal damnation will follow, and you will be cast out into the outer darkness of the realm of "inadequate audit trail"! How can you find salvation from this frightening possibility?

It is true that the integrity of organic certification relies on its members maintaining a fairly rigorous record-keeping system from planting through harvest and storage to point of sale. This is what is called the "audit trail." Inspector Al Johnson suggests that if the term "audit trail" is confusing or intimidating, perhaps it would be better to call this process "product tracking and accounting," since theoretically, any organic product should be traceable from the field where it was grown to the point of sale. If you are a typical farmer, you would much rather be out on a tractor or doing just about anything other than writing down records, but this too is a critical part of organic farming. Perhaps it would be helpful to consider record keeping from the perspective of an inspector. Harriet Behar, an organic inspector and farmer, has been quoted as saying that "What you do out in the field makes you an organic farmer, what you do in your paperwork makes you a certified organic farmer."

THE IMPORTANCE OF RECORD KEEPING

Of course, farm bookkeeping is an essential part of basic farm management. Very likely, most farmers already have some record system in place. However, most inspectors and certifers will agree that few organic farmers start out with adequately detailed record systems. This must be viewed as a learning process. Each year, the farmer should be better able to understand what information is needed, and each year they should further refine a system that works for them. However, it is essential to see that such a system of records is more than just a means to document organic integrity.

Ideally, the organic audit trail should be part of a larger whole farm record-keeping system that can allow the farmer to track expenses, income and profit; that can compile information necessary for income tax preparation; that can compare yields, pest pressure, and the relative value of different inputs or practices over several years; can calculate cost and profit per acre; and possibly can even help predict whether certain potential inputs would be cost effective. In short, the ideal record-keeping system should allow the farmer to understand both agronomically and financially how the farm is doing. It also should be simple and easy to keep up to date.

Chuck and Sarah Richtmyer, organic farmers from Rock Stream, New York, feel that the past three years have been an intense learning experience when it comes to audit trail maintenance. "You should always expect the unexpected!" Chuck says. "Each inspector wants something different. The inspector the second year asked for records that the first year's inspector did not ask for, and we were rather unprepared. Now, we maintain two folders throughout the year, one labeled 'taxes,' and one labeled 'inspection.' Any product label, sales receipt, seed bag tag, or other information that we might possibly need for the next inspection goes into the inspection folder. Be sure to date everything before putting it into the folder! Throughout the year, we also write monthly updates about anything that has occurred on the farm — any sales, any field operations, any purchases." Sarah advises, "Always keep more data than you think you will need. This year's inspection went much easier, since we knew what to expect and were prepared. We feel we are getting this system down, but it still takes constant work and planning."

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ACRES USA
A VOICE FOR ECO-AGRICULTURE
May 2000 - Vol. 30, No. 5 - Page 24

FIELD RECORDS

The first part of the audit trail are the field records. These are essentially summaries of all field operations throughout the season. The point here is to get all your information in one easily accessible place so that it is convenient and uncomplicated to add updated information

as operations are done. How can this be done simply and conveniently in a way that will facilitate updating during the spring, when there is no extra time? There are probably as many ways to keep records as there are organic farmers. It is important to chose a method that works easily for you — which is not necessarily the same as what works well for your neighbor.

Field records should include at least three years of detailed field histories, recording all inputs, including seed variety, fertilizers, other fertility amendments such as lime, compost, or manure, with rate and time of application, and pest control products. Labels for any purchased products should be saved and filed together with the records. Additionally, field activities such as tillage, planting, cultivation and harvest should be recorded for all crops, whether they are organic, transitional or conventional. Seed bag tags may be necessary to prove that the seed was untreated and that the variety was not genetically modified. Any additional operations, such as cover cropping or interseeding, should be clearly identified. All information should be easily linked to legible field maps, each field labeled with a unique field number.

It is also important to maintain detailed records on all organic and non-organic fields. When the same machinery, such as planters, cultivators or combines, are used on organic and non-organic crops, there should be documentation and description of thorough machinery cleaning before use on certified land. If buffer zones are required on a field, information on the management and harvest of the buffer zone should be documented.

A simple logbook, carried on the tractor or in the shirt pocket, works well for many farmers, but this has the tendency to become jumbled and confusing if the entries are not planned out in advance. A logbook that is set up before the season starts, with one page for each field, will make daily entries easier to organize. A notebook of log sheets with field maps, kept in the barn, can be valuable, especially if more than one person is doing some of the field operations. The logbook or notebook can also be used to record field observations throughout the season, to note hot spots where specific weed or pest problems develop, and to mark anything unusual or interesting. It is a good idea to remove your logbook from your shirt pocket at the end of each day. (It is considerably harder to read a logbook after it has been through the wash!)

Field Number_____ Location _____
Acres _____
Tillage operations (dates): _____
Crop/Variety: _____
Planting Date & Seeding Rate: _____
Cultivation (operations/dates): _____
Fertility Inputs (product/rate/dates): _____
Pest Control Inputs (product/rate/dates): _____
Observations/Comments: _____
_____
Harvest Dates: _____
Crop Destination: _____

An effective log or notebook field record sheet could be set up in this way:

Chuck Richtmyer has found that field records become more valuable each year. "With good field records over a number of years, you no longer have to rely on your memory for when you plowed, planted or fertilized a particular field. In a bad year, or even in a good year, the field records will help you determine what you have done wrong or what you did right. You'd be amazed how useful that can be."

HELPFUL COMPUTER PROGRAMS

Some farmers find using a computer program, such as Farm Works, is convenient as long as they remember to enter the data regularly. Computer record keeping can be especially valuable if paired with a daily logbook, since many programs allow financial analysis of input and labor costs. Some farmers find off-the-shelf farm business programs are well adapted to their operations. Jim Taylor, of North Rose, New York, has been very pleased with the Farm Works 6.2. Says Taylor, "Every input, including labor and machinery on every field, is recorded with the date and amount." The program is styled somewhat like a video game. Clicking on icons of tractors and employees will automatically record their activity. At the harvest of each field, the program prompts for yield and storage information. When a product is sold, the program removes it from inventory and can link the product back to the field histories. The program also draws field maps and prepares field histories for the annual certification application. Taylor adds, "From this information, we are able to track profitability for each field. I feel that this program has been a key force in improving our audit trail."

HARD COPY DATA

Not all farmers are comfortable with commercially prepared computer programs. After several years of evaluating available computer programs, my husband, Klaas, spent the winter of 1988 writing a computer program in HyperCard format on a old Macintosh computer that was specifically designed to fit our farm and our record-keeping style. This program has been refined over the past 10 years to adapt to the unique needs of organic record keeping. It has been invaluable for comparing yields, costs, profits, and the value of specific inputs over many years. All inputs, including typical custom rates for labor and typical rent for land costs, are factored into the cost analysis. Using this computer analysis, we have been able to conclusively determine that organic production consistently results in equal or better yields, lower costs, and higher profits per acre. When buyers offer contracts for our crops, we can determine which will be the most profitable, based on our historical costs and yields. Without the detailed analysis possible with this program, such quantitative conclusions would be much more difficult. As with the Farm Works system, this program draws field maps and prepares annually updated field histories, greatly simplifying the process of preparing the certification application each spring.

In real life, this quantity of records may

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ACRES USA
A VOICE FOR ECO-AGRICULTURE
May 2000 - Vol. 30, No. 5 - Page 24

be beyond what many organic farmers feel comfortable with. A simplified field record-keeping system that compiles the bare minimum of information may be more appropriate. Inspector Rosalind Hobart tries to help the farmer develop the simplest functional system of record keeping possible, because she recognizes they would rather be doing just about anything other than paperwork, and if the system isn't easy, it might not get done. Inspector Bart Hall suggests that such farmers should use a visual field history sheet that compiles multiple years of detailed history on each field, including all the basic required information, using 100 words or less. The OCIA has distributed a form similar to what Hall suggests, compiling five years of information on one sheet. As long as a farmer is able to write both legibly and extremely small, this system may work well. Another simplified system may be to write all field information directly onto a set of farm maps, using these as the annual records.

LIVESTOCK RECORDS

Livestock records must include breeding and birth records; feed rations for all animals; documentation on purchases of feed, additional animals, supplements, or other materials; health records, including any noted health problems, veterinary interventions or medical treatments; and any other pertinent information. Labels for all products used in the feed or on the animals must be available. Each large animal should be tagged with a permanent identifying number so that all information can be easily traced back to the specific animal. Livestock and dairy farmers should be prepared also to supply information on manure application, including date of application, fields, and quantity.

Feed records should document the source of the feed, proof of organic certification, and dates when feed sources change. This is required whether the feed is purchased or produced on the farm. Keep in mind that each year, the inspector will estimate the amount of organic feed that would be reasonable to feed your number of animals, and then will check that either you are actually growing that quantity of organic feed or you have adequate documentation on purchased certified feed.

For a dairy or other large animal operation, Dr. Hubert Karreman, V.M.D., a Pennsylvania specialist in holistic dairy practices, recommends that a farmer keep a clipboard in the barn. On one page, columns should be set up for date, cow name, material used, and reason for treatment. Entries would be added sequentially, whenever an animal is treated with any material, including probiotics or vaccinations. Another page would record herd reproductive history, noting for each animal the date of freshening, breeding, pregnancy checks and calving. If the herd contains registered cows, another page should record a sequential calving record. This will facilitate submission of registration papers. For those farmers wishing further simplicity, a large calendar hung in the barn could be a useful way to record daily events and treatments. "I don't care if the barn records are perfectly clean," says inspector Ammie Chickering. "Fly specks don't bother me, as long as all the information is there."

Periodically, this information should be transferred to a more permanent record in the house. One good idea is to maintain a notebook with one page for each cow. All milk production, cell counts, medical history, feed, breeding, birthing, culling or slaughtering records for that animal would be recorded on that page. The same page could compile multiple years' information, allowing the farmer to easily compare and evaluate the essential records for each animal over time. A computer program could be set up to compile the same information, prompting for essential information, and automatically filling in repetitive information, such as feed rations, for multiple cows. Cost analysis could then determine which cows are yielding the best profit, and the impact that different feed rations have on milk production.

Dr. Karreman comments that farmers should use their herd medical history to better understand when treatments are effective and to determine the best treatments in the future. Because there are few large-scale research studies on natural and homeopathic animal treatments, Karreman hopes that this type of information could be compiled from a number of similar farms, perhaps by the certifier, to develop a database of effective treatments that could be a valuable resource for many farmers.

Poultry, fish and small animals are generally handled as a barn or pond unit, with all animals fed and treated essentially the same. When individual animals or birds receive unique treatment, they should either be segregated or tagged in such a way that they can be easily identified.

HARVEST RECORDS

Harvest tends to be a chaotic time, when record keeping is far from the mind of the average farmer. A harvest record form could be kept with the farmer during harvest, perhaps on a clipboard on the tractor, in the truck, or in the combine — but be sure that a pencil is securely attached. As each field is harvested, the date, quantity, condition and destination of that crop is recorded. This is a good opportunity to note on the harvest log interesting field conditions, such as if yield is particularly high or low in certain areas, or if localized weed problems are seen. Subsequent soil tests of those areas could help determine the reason for these differences.

For fresh produce producers, harvest records will be different in form, perhaps as part of the log or a book of sales receipts as product is sold. Dairy producers should keep milk pick-up slips as their "harvest" record. The bottom line is that any product that is harvested on an organic farm must be clearly and accurately recorded, and the destination of that crop, either to a bin, to a truck, or directly to a customer, must be documented.

Split operations must keep records on the harvest and destination of all crops grown on the farm, from both organic and non-organic fields.

STORAGE RECORDS

Whenever crops are stored before sale, bin records should be maintained, showing both incoming and outgoing crops in each bin or barn. Organic crops must be stored in facilities that are clearly separated from any non-organic products. A simple in-and-out log is generally adequate for storage records. Bins should be labeled on the outside with a unique number or letter. It is also important to keep track of the storage and use of any products that are being fed to animals. Again, any organic feed materials must not be stored with any non-organic product. As a bin or hay mow is being filled, be sure to record which fields the crop is coming from.

Reprinted from
ACRES USA
A VOICE FOR ECO-AGRICULTURE
May 2000 - Vol. 30, No. 5 - Page 24

SALES RECORD

It is essential to document all crops on an organic farm as they are sold. As part of the annual inspection, an organic farmer

will be expected to show sales information on all organic, transitional and conventional crops from the previous year. Organic inspector Hobart says, "Generally, I am toughest on the audit trail if there is parallel production. Often, such farmers don't seem to understand why I am more interested in documentation on the sale of the conventional crop and buffers. It is very important that I can see separation through sales documents. I calculate yields per acre of conventional and organic and then compare that to the sales records. I am far more interested in that than I am in bin numbers on a totally organic farm. I *assume* an organic farmer will keep the rye and the barley separate."

Different certifiers handle documentation on individual sales in various ways. Some require that a transaction certification authorization form is completed and then submitted, after which an official transaction certificate is issued for that particular sale. Other certifiers authorize the farmer to issue official documentation verifying the organic integrity of the product. Still other certifiers do not issue paperwork on individual sales. Your certification will determine how you handle this step.

When organic products are sold, each lot of product should be assigned a unique, appropriate lot number. In most cases, you should choose lot numbers that encode the necessary information in a manner that makes sense to you and your record keeping. No two loads should carry the same lot number. Some suggestions:

1. If the product is coming out of one bin, for example Bin 5, the first load of 1999 crop sold out of the bin could be 5199; the second load could be 5299. If desired, the product could be encoded also. C5199 therefore would indicate the first load of corn sold out of Bin 5 from the 1999 crop.
2. If selling several loads of soybeans to one buyer, lot numbers can be tagged with that buyer's name. For example, "Smith-soy-1-99" would indicate the first load of soybeans sold to Smith from the 1999 crop.
3. If the product is sold directly from the field, lot numbers could be based on the field number. For example, "Soy2499-1" would indicate the first load of 1999 soybeans sold off of field 24. However, if the farmer has the same field and bin number, the lot numbers must clearly differentiate between this, to avoid lot number duplication.

Lot numbers should then appear on the bill of lading, the transaction certificate, on any invoices or sales receipts issued, and on any other records regarding this sale. It is a good idea to keep a comprehensive sales log each year, with lot numbers listed for each sale made. This will make it easier to determine whether a particular sale is the fifth or sixth to a certain customer, and therefore to be able to assign the correct sequential lot number.

Some farmers have devised complex lot numbering systems that encode much information in each number. This is fine, as long as the farmer can remember what the code means. Many farmers, though, have found that using a simple lot numbering system makes it much easier to keep numbers straight.

Sometimes, however, the buyer may assign a lot number that the farmer will be required to use. In this case, the farmer must record their number and the buyer's number in the harvest and bin record. No matter how the number is determined, the lot number should be unique for each load that is sold.

Bills of lading should be used whenever bulk shipments of organic products are made. The bill of lading is a good place to write a "clean truck affidavit" statement, documenting that the farmer has inspected the truck and that it was clean. Bills of lading, weigh slips, sales receipts, and other papers pertaining to a given load are easy to organize if they are promply stapled together and attached to the transaction certificate when it comes. These can then be placed sequentially in a three-ring binder or in a file for easy access.

If a farmer purchases products from another certified source for resale, documentation of the organic certification of the incoming product is essential. It is a good idea to check with your certifier before such a purchase, to determine whether your certification allows you to handle products certified by other agencies without a document review and whether you will need to physically separate that product from other certified products.

SUMMARY

Perhaps at this point you are overwhelmed and confused by all this paperwork. If you feel this way, you are not alone! Remember, developing a workable audit system is an ongoing learning process. Very few organic farmers start out doing a good job at it. Maintaining a good audit trail becomes considerably less confusing as you understand what is required and what will work for you. Ask your inspector to suggest ways to improve your record-keeping system — they have seen many examples of audit trails that work and do not work. The most important point to remember is to stay as organized and as up-to-date as possible. Don't let the paperwork get behind — then it becomes a much more daunting task.

If you are an organic farmer, accurate and accessible farm record keeping is an essential part of your operation. A properly designed audit trail should not be just another irritating detail required for the inspection. It should be a system that helps you integrate all aspects of your farm operation — plan more successful weed control, improve soil fertility management, augment animal care, and ensure more efficient, profitable farming practices.