# Step 7. KEEP RECORDS

In order to review and revise a plan, you must know what was done. Record-keeping is the process of recording what **actually** took place.

Record-keeping is already a key component of many aspects of farming, such as financial book-keeping and recording crop and livestock yields. For nutrient management plans, there are two main reasons for keeping records:

- they provide the information you'll need to fine-tune your NMP during the review process, and you can determine how closely the plan fits with reality
- they demonstrate accountability and diligence, should something go wrong, or if someone questions what was done (e.g., a nuisance complaint). Having the records of what was done and when will help resolve questions and conflicts.

Keep the nutrient management plan as simple as possible, but preserve the details in the record-keeping.

## WHAT TO INCLUDE

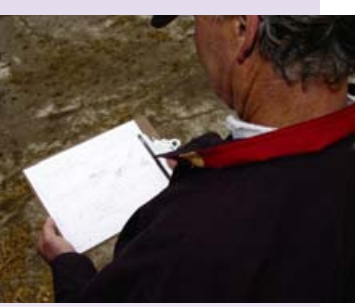
Although the following list gives more record-keeping ideas than may be required on your farm, this is the type of information that will simplify the updating of your nutrient management plan and the evaluation of what worked and what didn't and why.

### FIELD AND CROPPING PRACTICES

- Soil test results
- Nutrients types applied and application dates, rates, and methods
- Manure analysis records – if manure is being managed differently, or samples were taken at different levels in the storage
- Records of equipment calibration
- Incorporation method and date
- Weather conditions at time of application and incorporation
- Rainfall records to determine water content changes from the norm (i.e., more rainfall than normal = less concentrated manure, resulting in adjusted application rate)
- For spreading: date, time, location, quantity, setbacks
- Date and times of tile outlet monitoring including observations (on application dates) if applicable
- Commercial fertilizer invoices showing volume and timing of application
- Crop type and planting date and planting details



**Record-keeping can be used to fine-tune your plan.**



- ▶ Tillage method and date
- ▶ Herbicides applied and date
- ▶ Scouting notes
- ▶ Harvest date
- ▶ Yield
- ▶ Side-by-side comparison results

**GPS systems, especially in tandem with flow meters, are useful in recording where manure has been applied, and where it hasn't. This system allows a commercial fertilizer applicator to come in later to apply nutrients where manure application equipment couldn't.**

## LIVESTOCK INFORMATION

- ▶ Feed records, especially to justify or monitor manure nutrient reductions
- ▶ Inventory of livestock on the farm (monthly basis)
- ▶ Inventory of feed
- ▶ Record of livestock groupings and batch feeding
- ▶ Biosecurity protocols for the operation
- ▶ Manure volume generated – an accurate measurement of the nutrients generated on a farm is an important aspect of manure storage planning
- ▶ Manure analysis results

## OTHER INFORMATION

- ▶ Documentation of any other time/conditions when a contingency plan is deployed, including location, estimated volumes and remediation measures
- ▶ What was done to resolve any complaints
- ▶ Imported nutrient-containing materials, date, tons or volume, description of the material (i.e., agreements)
- ▶ Biosecurity protocols for the operation

When you keep proper records, you'll generate a considerable volume of information. It does take time to set up a system that allows the information to be readily reviewed and used. There are many different systems: software options, GPS-type, hand-held personal computers, and field books.

**It's an old saying but it's still true: farmers are the first stewards of the land. Record-keeping is part of environmental stewardship, demonstrating on-farm diligence to the local community.**

# RECORD-KEEPING DOCUMENT FOR CASE STUDY FARM

## EXAMPLE OF MANURE INVENTORY RECORD

| | | | | |
|---|---|---|---|---|
| PRODUCER: CM Farms | TANK I.D. | HARVESTORE® ~ 200,000 GALLON CAPACITY | | |
| TANK DIMENSION: | Depth: 24’ | Diameter: 42’ | Length: | Width: |
| GALLON PER FOOT OF DEPTH: 8,654 | | GALLONS PER INCH OF DEPTH: 721 | | |

| Date/Year | Depth (inches) | Top to surface | = Depth of manure | X Gallons/inch | = Gallons |
|---|---|---|---|---|---|
| May 1, 2004 | 288 | 275 | 13 | 721 | 9,373 |
| June 1, 2004 | 288 | 251 | 37 | 721 | 26,677 |
| July 1, 2004 | 288 | 231 | 57 | 721 | 41,097 |
| August 1, 2004 | 288 | 22 | 68 | 721 | 49,028 |
| September 1, 2004 | 288 | 190 | 98 | 721 | 70,658 |
| October 1, 2004 | 288 | 160 | 12 | 721 | 92,288 |
| November 1, 2004 | 288 | 260 | 28 | 721 | 20,188 |
| December 1, 2004 | 288 | 232 | 56 | 721 | 40,376 |
| January 1, 2005 | 288 | 208 | 80 | 721 | 57,680 |
| February 1, 2005 | 288 | 188 | 100 | 721 | 72,100 |
| March 1, 2005 | 288 | 164 | 124 | 721 | 89,404 |
| April 1, 2005 | 288 | 133 | 155 | 721 | 111,755 |
| May 1, 2005 | 288 | 272 | 16 | 721 | 11,536 |

| Amount Removed | Amount | No. of Loads | Destination |
|---|---|---|---|
| October 15, 2004 | 72,100 gal | 25 | Smith South field |
| April 20, 2005 | 100,219 gal | 35 | Brown Farm |

## FIELD SUMMARY AND RECORD KEEPER (Farm 1, South field, all)

### Cropping Information

| Status | Crop | Yield | Plant Date | Havest Date | Notes |
|---|---|---|---|---|---|
| Planned | Soybeans | 42 bu/ac | 15-May-2005 | 01-Oct-2005 | |
| Actual | Soybeans | 47 bu/ac | 28-May-2005 | 09-Oct-2005 | NK RR 10T1 |

### Tillage Information

| Status | Tillage Date | Method | Practice | Notes |
|---|---|---|---|---|
| Planned | 01-May-2005 | Mulch-Till | Cross Slope | |
| Actual | 25-May-2005 | AerWay® | Cross Slope | Pre-till ahead of manure application |
| Actual | 28-May-2005 | No Till | | International 5100 Drill® with coulters |

### Fertilizer Application

| Status | Description | App Date | Blend | Rate | Method | Applied | Surface Water |
|---|---|---|---|---|---|---|---|
| Actual | | | | | | | |

### Manure Application

| Status | Description | App Date | Type | Rate | Speed | Method | Incorporation | Surface Water |
|---|---|---|---|---|---|---|---|---|
| Planned | Manure App 2 | 22-May-2005 | Spring | 5000 gal/ac | | Drag Hose | Not incorp. Pre-tilled | 200 ft |

## FIELD SUMMARY AND RECORD KEEPER (Farm 1, North field, all)

### Cropping Information

| Status | Crop | Yield | Plant Date | Havest Date | Notes |
|---|---|---|---|---|---|
| Planned | Grain Corn | 130 bu/ac | 01-May-2005 | 01-Oct-2005 | |
| Actual | Grain Corn | 156 bu/ac | 19-May-2005 | 13-Nov-2005 | West Spring Pioneer 38P04® @ 30,000 ppa |

### Tillage Information

| Status | Tillage Date | Method | Practice | Notes |
|---|---|---|---|---|
| Planned | 17-Nov-2004 | Mulch-Till | Cross Slope | |
| Actual | 29-Nov-2004 | Soil Saver | Cross Slope | Sweep tooth, cloudy windy, 2ºC. conditions ideal |

### Fertilizer Application

| Status | Description | App Date | Blend | Rate | Method | Applied | Surface Water |
|---|---|---|---|---|---|---|---|
| Planned | Fert App 4 | 01-May-2005 | 28-0-0 | 12.0 gal/ac | Not Incorp. Standing | 43. 0. 0. lb/ac | N/A |
| Panned | Fert App 3 | 01-May-2005 | 6-24-6 | 4.0 gal/ac | Placed with planter | 3. 13. 3. lb/ac | N/A |
| Actual | Starter | 19-May-2005 | 6-24-6 | 4 gal/ac | Placed with planter | 3. 13. 3. lb/ac | |
| Actual | 28% N | 23-May-2005 | 28-0-0 | 10 gal/ac | Carrier, pre-emerge herbicide | 36. 0. 0. lab/ac | |

### Manure Application

| Status | Description | App Date | Type | Rate | Speed | Method | Incorporation | Surface Water |
|---|---|---|---|---|---|---|---|---|
| Planned | Manure App 2 | 24-Nov-2004 | Fall | 6000 gal/ac | | Tanker | Incorp. 1 day | N/A |
| Actual | Manure | 28-Nov-2004 | Liquid Hog | 6000 gal/ac | 2.8 mph | Tanker | 5 C; NW winds | N/A |

### LONG-TERM FORECAST

| | THURSDAY | FRIDAY | SATURDAY | SUNDAY | MONDAY | TUESDAY |
|---|---|---|---|---|---|---|
| | Cloudy periods | Mainly sunny | Mainly sunny | Mainly sunny | Cloudy periods | Scattered showers |
| HIGH | 29ºC | 32ºC | 32ºC | 30ºC | 26ºC | 25ºC |
| LOW | 17ºC | 21ºC | 20ºC | 22ºC | 15ºC | 16ºC |
| P.O.P. | 0% | 20% | 0% | 0% | 10% | 40% |
| PRECIP ACCUM | – | – | – | – | – | close to 10 mm |
| WIND | SW 10 km/h | W 10 km/h | SW 10 km/h | SW 15 km/h | SW 25 km/h | NE 5 km/h |

### PLANNING FORECAST

| | THURSDAY | FRIDAY | SATURDAY | SUNDAY | MONDAY | TUESDAY |
|---|---|---|---|---|---|---|
| DRYING INDEX | High (56) | High (59) | Very high (63) | Very high (63) | Very high (61) | Average |
| HRS SUNSHINE | 14 h | 14 h | 14 h | 14 h | 13 h | 6 h |
| GROWING DEG DAYS | 18 | 22 | 21 | 21 | 16 | 16 |
| CROP HEAT UNITS | 28 | 31 | 30 | 32 | 25 | 26 |

**Source: www.farmzone.com/report/LongTerm (the weathernetwork.com)**