Nutrient Management Survey

As previously used with a survey of 54 Wisconsin dairy farms: On Farmer’s Ground

Participation in the study is voluntary. All answers to questions in this survey will be kept strictly confidential, and the results will only be used in statistical summaries. Individual farm information will not be identified in any publication.

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Adaptation for use elsewhere is welcome.
Please notify Mark Powell if you intend to use this document or if you would like an electronic file of this document.
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**BACKGROUND (FILL OUT BEFORE AND AFTER INTERVIEW)**

A. Lead interviewer (your) initials: ________________________________

B. Second interviewer initials: ________________________________

C. ID of farm: ________________________________________________

D. County: ________________________________________________

E. Date of interview: __________________________________________

F. Describe role of person who was interviewed (check box and write additional info if necessary):

- [ ] Primary farm operator
- [ ] Junior farm operator (son, daughter, partner)
- [ ] Hired manager
- [ ] Hired farm hand
- [ ] Spouse of one above (specify):
  - [ ] Other (comments) ________________________________________

G. Where any other decision makers present?

- [ ] herd decision maker
- [ ] crop decision maker
- [ ] Other (comments) ________________________________________

H. Time: started: ______ finished: ______ Total (min) ________

G. Comments on how interview went:

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
Introduction (OVERVIEW)

You may be aware that nutrient build up on some of Wisconsin farms is an increasing problem that can have several environmental impacts, such as pollution of waterways and the atmosphere. This concern will likely lead to the implementation of certain nutrient management related policies. This study will provide research results to help dairy farmers and ag professionals meet current and future nutrient management challenges and help agencies make more informed policy decisions.

The project will consist of three broad phases. The first phase is to get an overview of the different sorts of dairy farms that operate in WI. In the second phase we’ll get some more detailed data collection and finally in third phase we intend to have a follow up interview to discuss the data we’ve collected. Today is first of these phases and so we want to get an overview of your farming operations with regard to the way the nutrients flow through it.

We will begin by asking some basic information about the dairy farm. Then we’ll ask about your cropping operations. At the end, I’ll have some questions about how you feed, manure and your plans for the future. At the end of this session, we will want to collect feed and milk samples, which will be useful to help us calculate typical dairy diets. At later visits we’ll take some manure and soil samples and get an idea of the nutrients that are available for cycling through your crops.
**PART A: INFORMATION ABOUT YOUR LIVESTOCK OPERATION**

To begin, I would like to get a sense of how this dairy operation is organized and some general information about your herd.

A1. Tell me:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>How many dairy cows are you milking right now?</td>
</tr>
<tr>
<td>b.</td>
<td>How many of these are first lactation animals?</td>
</tr>
<tr>
<td>c.</td>
<td>How long is an average lactation period for your cows?</td>
</tr>
<tr>
<td>d.</td>
<td>How many lactations do your cows normally have?</td>
</tr>
<tr>
<td>e.</td>
<td>Roughly how much milk do you ship per lactating cow per day (lbs/ cow/ day)?</td>
</tr>
</tbody>
</table>
| f. | What’s the average % fat content of the milk?  
   | □ ________%  
   | □ Not sure  
| g. | Do you know the average % protein content?  
   | □ Yes ______%  
   | □ No  
| h. | How many dry cows do you currently have? |
| i. | **CHECK:** So altogether this means you have a total of (a + g) dry and lactating cows? |
| j. | On average, how long do you dry cows off before freshening? |
| k. | In total how many dairy heifers do you currently have? |
| l. | How many of these are less than 7 months old (or 600 lbs)? |
A2. What breeds are in your dairy herd?

<table>
<thead>
<tr>
<th>Breed</th>
<th>Number</th>
<th>ALL this breed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holstein/Friesian</td>
<td></td>
<td>(CHECK BOX)</td>
</tr>
<tr>
<td>Jersey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown Swiss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other #1:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other #2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A3. Do you raise any other kinds of livestock on your farm?

- [ ] NO ➔ Not even any dairy bulls?
- [ ] YES ➔ What are they?

<table>
<thead>
<tr>
<th>Type of Livestock</th>
<th>Number of animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef cows</td>
<td></td>
</tr>
<tr>
<td>Bulls (dairy and beef)</td>
<td></td>
</tr>
<tr>
<td>Feeder steers or heifers (under 7 months)</td>
<td></td>
</tr>
<tr>
<td>Feeders and other calves (over 7 months)</td>
<td></td>
</tr>
<tr>
<td>Sows</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td></td>
</tr>
<tr>
<td>Sheep or Goats</td>
<td></td>
</tr>
<tr>
<td>Horses</td>
<td></td>
</tr>
<tr>
<td>Poultry (type: _____________________________)</td>
<td></td>
</tr>
<tr>
<td>OTHER (specify: _____________________________)</td>
<td></td>
</tr>
</tbody>
</table>
A4. **How would you describe your milking facilities? (check one)**

- Stanchion or tie stall barn using:
  - □ Bucket/pails □ Pipeline □ Flat parlor

- Parlor system:
  - *Size:*
    - □ Double 4 □ Double 6 □ Double 8
    - □ Double 12 □ Double 20 □ Double 24
  - *Type*
    - □ Parallel □ Swing
    - □ Pit □ Step up

A5. **What kind of housing do you use for your milking herd?**

- □ Tie Stall -or- □ Stanchion barn → *could you please tell us the:*
  - **Number of stalls:** ________
  - **Bedding used**

- □ Free-stall housing → *could you please tell us the:*
  - **Number of stalls:** ________
  - **Bedding used**

- □ Bedding pack housing in new or converted building(s)
  - **Capacity:** ________ cows

- □ Other __________________________________________________________
  - ____________________________________________________________
  - ____________________________________________________________
A6. **What kind of housing do you have for DRY COWS?**

- [ ] None
- [ ] Same as milking cows (in: ________________)
- [ ] Outside with bedding back (in: ________________)
- [ ] Outside with loose housing (in: ________________)
- [ ] Own barn: □ stanchion  □ freestall barn  □ loose (in: ________________)
- [ ] Other ________________

⇒ **What bedding do you use for DRY COWS?**

- [ ] Straw
- [ ] Sand
- [ ] Corn fodder
- [ ] Manure solids
- [ ] Mattresses
- [ ] Other#2

A7. **What kinds of housing do you have for your SPRINGING HEIFERS?**

- [ ] None
- [ ] Same as milking/dry cows (in: ________________)
- [ ] Outdoor pens with shelter (in: ________________)
- [ ] Own Barn: □ stanchion  □ freestall barn  □ loose (in: ________________)
- [ ] Other ________________

⇒ **What bedding do you use for SPRINGING HEIFERS?**

- [ ] Straw
- [ ] Sand
- [ ] Corn fodder
- [ ] Manure solids
- [ ] Mattresses
- [ ] Other#1
- [ ] Other#2

A8. **What kind of housing do you have for your YOUNG HEIFERS AND CALVES (less than 2 months)?**

- [ ] None
- [ ] Same as milking/dry/springers (in: ________________)
- [ ] Hutches __________________________
- [ ] Pens with shelter: □ indoor  □ outdoor __________________________
- [ ] Other __________________________

⇒ **What bedding do you use for YOUNG HEIFERS AND CALVES?**

- [ ] Straw
- [ ] Sand
- [ ] Corn Fodder
- [ ] Manure solids
- [ ] Mattresses
- [ ] Other#2
A9. Do you have any other groups of livestock in housing?

☐ No  ➔ go to A10  ☐ Yes  ➔ continue

a. What kind of livestock? ____________________________________________

b. What kind of housing? ____________________________________________

☐ Same as dry/milking cows/springers/young heifers

☐ None  ☐ Same as milking/dry/springers/calves (in__________)  

☐ Pens with shelter:  ☐ indoor  ☐ outdoor ____________________________

☐ Other________________________________________________________________

➔ What bedding do you use here?

<table>
<thead>
<tr>
<th>Straw</th>
<th>&amp;</th>
<th>Sand</th>
<th>&amp;</th>
<th>Corn fodder</th>
<th>&amp;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure solids</td>
<td>&amp;</td>
<td>Mattresses</td>
<td>&amp;</td>
<td>Other#2</td>
<td>&amp;</td>
</tr>
</tbody>
</table>

The next series of questions relate only to LACTATING COWS in the herd.

A10. Do you ever let your LACTATING COWS have access to any pastures or outdoor exercise areas (other than barnyard)?

☐ NO  ➔ skip this and next page and go to question A16

☐ YES  ➔ continue to A11

A11. During the grazing season do you count on pastures as a significant source of forage for your LACTATING COWS?

☐ YES ➔ skip to next page A12  

☐ NO ➔ continue

a) Why do you let them outside?

☐ for exercise  ☐ other ____________________________

b) What kind of fields/yard are they going to?

☐ grass  ☐ soil  ☐ concrete  ☐ other ____________________________
c) In each season, how many hours a day would you say is spent outdoors by your LACTATING COWS in these areas?

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winter:</td>
<td></td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Spring:</td>
<td></td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Summer:</td>
<td></td>
<td>☐ (same as above)</td>
</tr>
</tbody>
</table>

Now skip the next section and go to straight to question A16.

A12. What month(s) make up your grazing season? ____________________
___________________________________________________________________

A13. a) During the grazing season, on average, approximately how much of the forage ration do pastures account for?

☐ 25% or less       ☐ 26% - 50%
☐ 51% - 75%         ☐ 75% or more

b) How often do you usually move your grazing LACTATING COWS to fresh pastures (or a new paddock)?

☐ Twice a day or more ☐ once a day ☐ every 2-3 days
☐ every 4-6 days    ☐ once a week ☐ less than once a week

A14. Do you let LACTATING COWS out for any other reasons other than to graze

☐ NO ➔ skip to A15
☐ YES ➔ continue

a) Why do you let them outside?

☐ for exercise ☐ other ________________________________
b) What kind of fields/yard are they going to?

- ☐ grass
- ☐ soil
- ☐ concrete
- ☐ other _____________________

A15. In each season, how many hours a day are spent outside by your **LACTATING COWS** in these areas?

<table>
<thead>
<tr>
<th>Hours Where</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall:</td>
<td></td>
</tr>
<tr>
<td>Winter:</td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Spring:</td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Summer:</td>
<td>☐ (same as above)</td>
</tr>
</tbody>
</table>

The next series of questions relate only to the **DRY COWS** and **HEIFERS** and the **OTHER LIVESTOCK** on your farm.

A16. Do you usually let **DRY COWS, HEIFERS OR OTHER LIVESTOCK** have access to outdoor pasture or exercise areas (other than the barnyard)?

- ☐ NO  ➔ *(CHECK)* so you always keep your other animals inside?

  ┌──────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────┐
  │ (now skip to section B1) │
  └──────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────────┘

- ☐ YES ➔ **What kinds of animals?**
  - ☐ All my other animals
  - ☐ Dry Cows
  - ☐ Dairy heifers (< 7/8 months)
  - ☐ Dairy heifers (>7/8 months)
  - ☐ Other dairy
  - ☐ Other cattle
  - ☐ Other livestock
A17. During each season how many hours of a normal day would each animal spend outside?

a) Group # ____________________

<table>
<thead>
<tr>
<th>Hours</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>Winter</td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Spring</td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Summer</td>
<td>☐ (same as above)</td>
</tr>
</tbody>
</table>

b) Group # ____________________

<table>
<thead>
<tr>
<th>Hours</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>Winter</td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Spring</td>
<td>☐ (same as above)</td>
</tr>
<tr>
<td>Summer</td>
<td>☐ (same as above)</td>
</tr>
</tbody>
</table>

A18. During the grazing season do you reduce the amount of stored forages fed to your dry cows, heifers or other livestock?

☐ Yes
☐ Yes for ➔ check respective groups below
☐ No, I feed ‘free choice’ but they probably eat less
☐ No, they get the same ration
☐ other ____________________________

<table>
<thead>
<tr>
<th>Dry Cows</th>
<th>Other dairy :</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy heifers (&lt; 7/8 months)</td>
<td>Other cattle :</td>
</tr>
<tr>
<td>Dairy heifers (&gt;7/8 months)</td>
<td>Other livestock :</td>
</tr>
</tbody>
</table>
Next, I would like to get an idea of the layout of your farm/fields and what you have growing in fields at the moment. We’ll do this using the maps that we sent to you prior to our visit or those that we have brought with us. This information will be important for us to understand decisions you make for particular fields and what problems you may face.

**B1.** Here is a picture of your farm from the air. Can you identify that this is your entire farm?

- [ ] No  →  Could you please show me what’s missing?
- [ ] Yes

**B2.** Have you seen a map of your farm like this one before?

- [ ] No  →  Do you have any other sort of maps or diagrams of your farm?
  - [ ] No  →  go to B3
  - [ ] Yes  →
    - i. What kind? ____________________________
    - ii. Could we get a copy ________  go to B3

- [ ] Yes  →  Do you already have a map like this?

- [ ] No  →  a. Where have you seen a maps like this?________________________
  b. Do you have any other sort of maps or diagrams of your farm?
    - [ ] No  →  go to B2
    - [ ] Yes  →
      - i. What kind? ____________________________
      - ii. Could we get a copy (s) at a convenient time?
        _________________________________  go to B3

- [ ] Yes  →  Could we get a copy of it at a convenient time and any other maps you may have?________________________
        _________________________________  go to B3
I’d now like to ask you to help me trace the boundaries of your farm and fields. Be sure to include rented fields as well as those you own. We will give each field a number, then make a note of what was grown in each field this past summer (2009), then talk about the normal crop rotation for the field.

Map Key

<table>
<thead>
<tr>
<th>Crop/Feature</th>
<th>Code</th>
<th>Acres</th>
<th>Crop/Feature</th>
<th>Code</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa hay</td>
<td>AH</td>
<td></td>
<td>Other grains</td>
<td>OG</td>
<td></td>
</tr>
<tr>
<td>Grass hay</td>
<td>GH</td>
<td></td>
<td>Permanent pasture (not tillable)</td>
<td>PP</td>
<td></td>
</tr>
<tr>
<td>Mixed alfalfa/grass hay</td>
<td>MH</td>
<td></td>
<td>Cropland used as pasture</td>
<td>CP</td>
<td></td>
</tr>
<tr>
<td>Clover</td>
<td>C</td>
<td></td>
<td>Other crops:</td>
<td>O1</td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td>SB</td>
<td></td>
<td>Other crops:</td>
<td>O2</td>
<td></td>
</tr>
<tr>
<td>Corn for grain</td>
<td>CG</td>
<td></td>
<td>Animal exercise area</td>
<td>AEA</td>
<td></td>
</tr>
<tr>
<td>Corn for silage</td>
<td>CS</td>
<td></td>
<td>Milking facility</td>
<td>MF</td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td>O</td>
<td></td>
<td>Barnyard (not if concrete)</td>
<td>BYD</td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td>B</td>
<td></td>
<td>Animal housing facilities</td>
<td>AHF</td>
<td></td>
</tr>
</tbody>
</table>

Crop Rotation Table

<table>
<thead>
<tr>
<th>Example Field #</th>
<th>Field ID (Farmer)</th>
<th>Crop rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B4. Are any of these fields rented from someone else?

☐ No  ☐ Yes (Indicate which ones and shade or code with “RNT”.)

B5. Overall, which of the following soil textures best describes the soil found on your farm?

<table>
<thead>
<tr>
<th>Mostly sandy</th>
<th>Mostly silt or loam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly clay</td>
<td>Don't know</td>
</tr>
<tr>
<td>Other:</td>
<td>I can find out:</td>
</tr>
</tbody>
</table>

B6. Does the soil type vary a great deal over your farm?

<table>
<thead>
<tr>
<th>No</th>
<th>Don't know</th>
<th>Yes → In what way? Could you show me on the map? (insert directly on map)</th>
</tr>
</thead>
</table>

B7. How often do you usually soil test your crop fields?

<table>
<thead>
<tr>
<th>Never</th>
<th>Every year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every two years</td>
<td>Every three years</td>
</tr>
<tr>
<td>Every four years</td>
<td>Every five years or more</td>
</tr>
<tr>
<td>No pattern to when I soil test</td>
<td>Varies:</td>
</tr>
</tbody>
</table>

B8. When was your most recent test (year)? ______________________

B9. Can you show me on the map which fields have had soil tests in the last 5 years?

☐ All tested - or -- indicate which ones by inserting on map.

At the end of the interview, could we get copies of these records or could you tell us where we might get copies? -------------------------------------------------------------
Returning to the map, I would now like to ask some more specific questions about your crop production practices.

### HAY PRODUCTION

**B10.** Including year of establishment, how long do you usually leave a hay stand before rotating to another crop or replanting?

<table>
<thead>
<tr>
<th>Type</th>
<th>Years</th>
<th>Type</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>_______</td>
<td>Grass</td>
<td>_______</td>
</tr>
</tbody>
</table>

**B11.** When you establish a NEW HAY field do you usually apply manure or commercial fertilizer before planting?

- □ NO  
  *skip to B13*
- □ YES  
  a) **What do you apply?**
  b) **How much do you apply?**
  c) **When do you apply (how soon before planting)?**

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B12.** What tillage practices do you usually use to prepare for seeding a new HAY field?  □ No Till ________________________________

**B13.** Do you usually apply manure or commercial fertilizer to your ESTABLISHED HAY fields?

- □ NO  
  *skip to B15*
- □ YES  
  a) **What do you apply?**
  b) **How much do you apply?**
  c) **When do you apply?**

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**B14. In a typical year, what are your approximate HAY yields?**

<table>
<thead>
<tr>
<th>Type</th>
<th>Tons/acre (or )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa/</td>
<td></td>
</tr>
<tr>
<td>Grass/</td>
<td></td>
</tr>
</tbody>
</table>

**B15. In a typical low yielding year, what is your approximate HAY yield?**

<table>
<thead>
<tr>
<th>Type</th>
<th>Tons/acre (or )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa/</td>
<td></td>
</tr>
<tr>
<td>Grass/</td>
<td></td>
</tr>
</tbody>
</table>

**B16. In a typical high yielding year, what is your approximate HAY yield?**

<table>
<thead>
<tr>
<th>Type</th>
<th>Tons/acre (or )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa/</td>
<td></td>
</tr>
<tr>
<td>Grass/</td>
<td></td>
</tr>
</tbody>
</table>

**B18. Do you ever sell excess HAY? - (How often? How much?)**

- Yes
- No
- Sometimes

**CORN PRODUCTION**

**B19. This year (2009) how many acres of the CORN you planted did you harvest as silage and as grain?**

- Silage: ___________ acres
- Grain: ___________ acres

**B20. Does the amount/proportion you harvest as silage and grain vary greatly from year to year?**

- No ➔ **Continue to B21**
- Yes ➔ In what way? ________________

---

15
**B21.** Do you usually apply manure or commercial fertilizer before planting your CORN?

- [ ] NO  ➔ *skip to B22*
- [ ] YES ➔  
  
  a) What do you apply?
  
  b) How much do you apply?
  
  c) When do you apply (how soon before planting?)

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B22.** When you plant CORN, what tillage practices do you use to prepare the Field?  

- [ ] No Till  
- [ ] same as before (for hay)  

**B23.** Do you apply manure/ fertilizer during the growing season?

- [ ] NO  ➔ *skip to B24*
- [ ] YES ➔  
  
  a) What do you apply?
  
  b) How much do you apply?
  
  c) When do you apply?

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B24.** In typical year, what is your approximate CORN yield?

<table>
<thead>
<tr>
<th>Type</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn harvested as grain</td>
<td>Bushels/acre</td>
</tr>
<tr>
<td>Corn harvested as silage</td>
<td>Tons/acre</td>
</tr>
</tbody>
</table>
B25. In a typical low yielding year, what is your approximate **CORN** yield?

<table>
<thead>
<tr>
<th>Corn harvested as grain:</th>
<th>Bushels/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn harvested as silage</td>
<td>Tons/acre</td>
</tr>
</tbody>
</table>

B26. In a typical high yielding year, what is your approximate **CORN** yield?

<table>
<thead>
<tr>
<th>Corn harvested as grain:</th>
<th>Bushels/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn harvested as silage</td>
<td>Tons/acre</td>
</tr>
</tbody>
</table>

B27. Do you know the plant population? _______ plant/ac  □ No

B28. Do you know the relative maturity index? _______ plant/ac  □ No

B29. Do you ever sell any excess **CORN** (either silage or grain)? *(how much/often?)*

- □ Yes    □ No    □ Sometimes____________________

SOYBEAN PRODUCTION  □ CHECK IF SOYBEANS NOT GROWN

B30. When you plant **SOYBEANS** do you usually apply manure or commercial fertilizer before planting?

- □ NO  \( \rightarrow \) *skip to B31*
- □ YES  \( \rightarrow \) a) What do you apply?
- b) How much do you apply?
- c) When do you apply (how soon before planting)?

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B31. When you plant **SOYBEANS**, what tillage practices do you usually use to prepare the field? □ No Till □ same as before (hay/corn)  

-----------------------------------------------

-----------------------------------------------

B32. What manure or fertilizer do you usually apply to your **SOYBEAN** fields during the growing season?  

□ NO  →  skip to B33  

□ YES  →  a) What do you apply?  

b) How much do you apply?  

c) When do you apply

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B33. In a typical year what is your **SOYBEAN** yield? __________ Bu/acre

B34. What about in high yielding years? __________ Bu/acre

B35. What about in low yielding years? __________ Bu/acre

B36. Do you ever sell any of your excess **SOYBEANS**? *(How often/much?)*  

□ Yes  □ No  □ sometimes  □ All of them  

-----------------------------------------------

-----------------------------------------------

**OATS/ SMALL GRAIN PRODUCTION**  □ CHECK IF NOT GROWN

B37. What **SMALL GRAINS** do you grow?  

☐ Oats  ☐ Wheat  ☐ Barley  ☐ Other:
**B38.** What do you harvest them for? □ Forage □ Grain □ Straw/bedding, other:______________________________________________________________

**B39.** When you plant SMALL GRAINS do you usually apply manure or commercial fertilizer?
- □ NO  ➔ skip to B40
- □ YES ➔ a) What do you apply?
  - b) How much do you apply?
  - c) When do you apply?

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**B40.** What tillage practices do you usually use to prepare for seeding a new SMALL GRAINS? □ No Till □ as before ______________________________

**B41.** Do you usually apply manure or commercial fertilizer to SMALL GRAINS during the growing season?
- □ NO  ➔ skip to B44
- □ YES ➔ a) What do you apply?
  - b) How much do you apply?
  - c) When do you apply?

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial fertilizer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B42. In a typical year, what are your approximate **small grain** and **straw** yields?

<table>
<thead>
<tr>
<th>Type</th>
<th>Bushels/acre</th>
<th>Tons / acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B43. In a typical low yielding year, what is your approximate **small grain** and **straw** yields?

<table>
<thead>
<tr>
<th>Type</th>
<th>Bushels/acre</th>
<th>Tons / acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B44. In a typical high yielding year, what is your approximate **small grain** and **straw** yields?

<table>
<thead>
<tr>
<th>Type</th>
<th>Bushels/acre</th>
<th>Tons / acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B47. Do you ever sell excess **grain** or **straw/hay**?  □ yes  □ no  □ sometimes

-------------------------------------------------------------------
PASTURES  □ CHECK IF NOT GROWN

B48. Do you usually apply manure or commercial fertilizer to your PASTURE (excluding directly from the animal)?

□ No  ➔ skip to Part C
□ Occasionally  ➔ How often? ____________ years.  continue
□ Yes  ➔ continue

a) What do you apply?
   □ Manure ____________________________________________
   □ Commercial fertilizer________________________

b) How much do you apply? ________________________________
   ________________________________

c) When do you apply?
   ______________________________________________________
   ______________________________________________________

d) On what kinds of pastures do you apply manure or commercial fertilizers?
   ______________________________________________________
   ______________________________________________________

This ends the cropping questions; now we would like to know about how you store and feed these crops
PART C: STORAGE AND FEEDING PRACTICES

For each of the following types of feed, please tell me how and where you store them on your farm:

C1. DRY HAY:
☐ None stored on farm
☐ Stored in barn / other building (small / square/large /round)
☐ Stored outside without cover (small / square/large /round)
☐ Stored outside in bags (small / square/large /round)
☐ Other _____________________________________________________

C2. SILAGE/ HAYLAGE/ WET WRAP HAY:

a. silage
☐ None stored on farm
☐ Stored in upright or vertical silos _____________________________
☐ Stored in bunker silos _______________________________________
☐ Stored in bags _____________________________________________
☐ Other _____________________________________________________

b. haylage
☐ None stored on farm
☐ Stored in upright or vertical silos _____________________________
☐ Stored in bunker silos _______________________________________
☐ Stored in bags _____________________________________________
☐ Other _____________________________________________________

C. wet wrap hay
☐ None stored on farm
☐ large bags _______________________________________
☐ small bags _______________________________________

C3. GRAINS/ SOYBEANS:

a. grain
☐ None stored on farm
☐ Stored in silos _____________________________________________
☐ Stored in grain bins inside/outside buildings ________________
☐ Other _____________________________________________________

b. soybeans
☐ None stored on farm
☐ Stored in silos _____________________________________________
☐ Stored in grain bins inside/outside buildings ________________
☐ Other _____________________________________________________
C4. Do you have any other major feed storage facilities?

☐ No  ☐ Yes ➔ describe __________________________________________________________

We would like to get a rough idea of how much feed you buy in a typical year.

C5. In a normal (typical) year, how much of the following do you purchase? (Check the one box on each line that best applies)

<table>
<thead>
<tr>
<th>(* INSERT TYPE AS REQUIRED)</th>
<th>RAISED</th>
<th>BOUGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL</td>
<td>ABOUT 3/4</td>
</tr>
<tr>
<td><strong>FORAGE:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CORN SILAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GRAINS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CORN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROTEIN:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOYBEAN/ SOYBEAN MEAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROTEIN MIX</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MINERAL:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C6. Is the amount of feed you purchased this year typical? __________

☐ yes  ☐ no ________________________________________________________________

We would now like to talk a bit more specifically about your feeding practices for your lactating herd.

C7. Do you usually feed different groups of lactating cows different rations?

☐ NO ➔ Skip to question C8

☐ YES ➔ continue
a) How many groups of **LACTATING COWS** are there for different rations? ____________________________________________________________

b) How do you separate these groups

- □ By stage of lactation
- □ By production level
- □ By age of cow
- □ By use of Posilac® (rBST; BGH)
- □ Other criteria ______________________________________________________

___________________________________________________________

**C8.** Do you use a TMR?

- □ NO → *Skip to question C9*
- □ YES → **How do you use the TMR?**
  
  a) Do you use it for: □ one group □ more than 1 group
  
  b) Are these the: □ lactating animals only
                     □ other livestock only
                     □ both
  
  c) Is it: □ mobile □ stationary

**C9.** Could you tell me what you are feeding your (groups of) **LACTATING COWS** at the moment?

*Ask if they have this written down somewhere; if yes, ask if you can get a copy. Insert the following information in the worksheet and sample collection booklet:*

**C10.** How many cows are currently fed this ration? ______________

→ *Repeat for each major feed group.* *(See section A1 - A3 & A7- A9 for farmer’s likely feeding groups if prompts are required.)*
C11. Are you currently using a consultant to help you to figure out the feed rations for your herd?

☐ NO → skip to question C14
☐ YES → continue

a) How would you describe this person?

☐ Independent consultant
☐ Consultant working at the feed mill or for feed dealer
☐ Consultant working for my dairy cooperative
☐ My veterinarian
☐ Other ________________________________

b) Do you usually pay for their nutritional advice? ☐ NO ☐ YES

c) Do you usually buy any feed from this consultant? ☐ NO ☐ YES

C12. Do you usually have the forages you feed tested for nutritional value?

☐ NO or ☐ Not sure

☐ YES → a) How often? ____________

b) Did you interpret the results of the analysis yourself? ☐ YES ☐ NO→

C15. Do you usually keep production records on individual cows in your herd? ☐ NO ☐ YES → What would you estimate was the rolling herd average of your milk cows last year? ______________ lbs/cow/year

C16. Which of the following practices / technologies do you currently use on your dairy farm?

a. Balance feed rations at least 4 times a year ☐ Yes ☐ No

b. Milk your cows 3 times a day ☐ Yes ☐ No

c. Use Posilac™ (rBST or BGH) on any of your milking cows ☐ Yes ☐ No

d. Own a computer ☐ Yes ☐ No

e. Use a computer to manage farm records ☐ Yes ☐ No

f. Access internet for farm info ☐ Yes ☐ No
PART D: MANURE MANAGEMENT INFORMATION

We would now like to talk about how you collect, store and spread your manure. We’ll start by talking about the farm buildings.

D1. Tie Stall/ Stanchion Barn? □ Not Applicable
   a) How do you collect manure produced in your (see above)?
      ____________________________________________________________

   b) How often do you do this (and what dictates when you do this)?
      ____________________________________________________________
      ____________________________________________________________

   c) Where does it go immediately after you’ve collected it? _______
      ____________________________________________________________

   d) How do you store the manure that you collect from this barn?
      (Skip if already answered above.)
      ____________________________________________________________

   TYPE OF STORAGE:
   □ unlined □ clay lined □ lagoon □ solid manure pit □ concrete

D2. Freestall barn □ Not Applicable
   a) How do you collect manure produced in your (see above)?
      □ SAME AS FOR D1 ____________________________________________

   b) How often do you do this (and what dictates when you do this)?
      □ SAME AS FOR D1 ____________________________________________

   ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________
c) Where does it go immediately after you’ve collected it?
   ☐ SAME AS FOR D1 ________________________________
   ________________________________________________

d) How do you store the manure that you collect from this barn?
   (Skip if already answered above.)
   ☐ SAME AS FOR D1 ________________________________
   ________________________________________________

   TYPE OF STORAGE:
   ☐ unlined ☐ clay lined ☐ lagoon ☐ solid manure pit ☐ concrete

D3. Milking Parlor/ Facilities ☐ Not Applicable

a) How do you collect manure produced in your (see above)?
   ☐ SAME AS FOR D1/ D2 ________________________________
   ________________________________________________

b) How often do you do this (and what dictates when you do)?
   ☐ SAME AS FOR D1/ D2 ________________________________
   ________________________________________________

c) Where does it go immediately after you’ve collected it?
   ☐ SAME AS FOR D1/D2 ________________________________
   ________________________________________________

d) How do you store the manure that you collect from this barn?
   (Skip if already answered above.)
   ☐ SAME AS FOR D1/D2 ________________________________
   ________________________________________________

   TYPE OF STORAGE:
   ☐ unlined ☐ clay lined ☐ lagoon ☐ solid manure pit ☐ concrete
**D4.** Loose Housing or other major building

a) How do you collect manure produced in your (see above)?

☐ SAME AS FOR D ______________________________________________________

b) How often do you do this (and what dictates when you do this)?

☐ SAME AS FOR D ______________________________________________________

c) Where does it go immediately after you’ve collected it?

☐ SAME AS FOR D ______________________________________________________

d) How do you store the manure that you collect from this barn?

☐ SAME AS FOR D ______________________________________________________

**TYPE OF STORAGE:**

☐ unlined ☐ clay lined ☐ lagoon ☐ solid manure pit ☐ concrete

**D5.** Where else do you collect manure from (INCLUDE OTHER LIVESTOCK)?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Barnyard</td>
</tr>
<tr>
<td>B</td>
<td>Exercise area</td>
</tr>
<tr>
<td>C</td>
<td>Bedding Pack</td>
</tr>
<tr>
<td>D</td>
<td>OTHER#</td>
</tr>
</tbody>
</table>

**D6.** How do you collect manure produced in your (see above)?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>☐ SAME AS FOR D</td>
</tr>
<tr>
<td>B</td>
<td>☐ SAME AS FOR D</td>
</tr>
<tr>
<td>C</td>
<td>☐ SAME AS FOR D</td>
</tr>
<tr>
<td>D</td>
<td>☐ SAME AS FOR D</td>
</tr>
</tbody>
</table>

**D7.** How often do you do this (and what dictates when you do this)?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>☐ SAME AS FOR D</td>
</tr>
<tr>
<td>B</td>
<td>☐ SAME AS FOR D</td>
</tr>
<tr>
<td>C</td>
<td>☐ SAME AS FOR D</td>
</tr>
<tr>
<td>D</td>
<td>☐ SAME AS FOR D</td>
</tr>
</tbody>
</table>
D8. Where does it go immediately after you’ve collected it?

A☐ SAME AS FOR D
B☐ SAME AS FOR D
C☐ SAME AS FOR D
D☐ SAME AS FOR D

D9. How do you store the manure that you collect from this barn?

A☐ SAME AS FOR D
B☐ SAME AS FOR D
C☐ SAME AS FOR D
D☐ SAME AS FOR D

D10. If you have a manure storage structure, could you tell us
a) Surface dimensions ________________________
b) Average depth ________________________
c) Total capacity in ________________________ tons / gallons
   AND/OR
   ________________________ days/weeks/months

d) How is it loaded?
   ☐ top /surface ☐ bottom of storage

D11. Have you ever received cost-sharing monies from a federal, state, or local government agency to help you build this manure-storage facility?

☐ NO
☐ YES
☐ NOT SURE
D12. Roughly how much of the manure that your whole herd produces in the spring, summer, fall, and winter in any given year do you collect? This includes lactating cows, dry cows, heifers, etc., and time spent indoors or time spent outdoors in exercise yards, pastures, etc.

<table>
<thead>
<tr>
<th>Spring ( )</th>
<th>Winter ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer ( )</td>
<td>Fall ( )</td>
</tr>
</tbody>
</table>

We’re now going to talk more about your hauling and spreading practices.

D13. Does all the manure produced by your herd stay on the farm?

☐ YES → skip to question D14
☐ NO → continue....

a) How much on average goes off the farm?

☐ 25% or less
☐ 51% - 75%
☐ 26% - 50%
☐ 75% or more

b) What arrangement do you have for its removal?

D14. Do you ever bring manure from other farms onto your farm operation?

☐ NO → skip to question D15
☐ YES →

a) What type of manure do you receive? __________

b) How much do you receive? ___________________

c) When do you receive it? ___________________

d) Where do you spread it? ___________________

e) What arrangements have you made to receive it? __________
D15. How often and when do you usually haul/apply manure on your farm in the . . . ?

<table>
<thead>
<tr>
<th></th>
<th>Spring</th>
<th>Winter</th>
<th>Summer</th>
<th>Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>daily monthly weekly never</td>
<td>daily monthly weekly never</td>
<td>daily monthly weekly never</td>
<td>daily monthly weekly never</td>
</tr>
</tbody>
</table>

D16. What kinds of machinery are used to spread the manure to your farm fields (see if we can acquire make)?

D17. Who usually hauls manure onto your farm fields?

☐ I do ☐ custom manure hauler ☐ Other _______________

D18. On a scale of 1-5, with 5 being very important and 1 being not very important, could you rank the following factors as to how important they are in determining when and where you or your custom manure hauler spread your manure?

<table>
<thead>
<tr>
<th></th>
<th>Not Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Crop requirements</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>b. Soil conditions</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>c. Soil residual nutrient levels</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>d. How full your manure store is</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>e. When the person who hauls the manure is available</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>f. The weather</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>g. The distance I have to haul the manure</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
D19. Are there any other factors that determine where and when you haul manure that we have not mentioned? __________________

D20. Of the factors you've just mentioned which is probably the most important? __________________

D21. In what kinds of fields do you usually spread manure during the following seasons, giving the most important field first, etc.?

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>☐ I don’t</td>
<td>☐ corn</td>
<td>☐ other</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>☐ I don’t</td>
<td>☐ corn</td>
<td>☐ other</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>☐ I don’t</td>
<td>☐ corn</td>
<td>☐ other</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>☐ I don’t</td>
<td>☐ Hay (after 1st cut)</td>
<td>☐ other</td>
<td></td>
</tr>
</tbody>
</table>

D22. How much of the manure that you apply to your land would you say gets incorporated into the soil within 24 hours after spreading?

☐ All of it ☐ Over 75 % ☐ 50-75 %
☐ 25-50 % ☐ 0-25 % ☐ none of it

D23. What factors affect your ability to incorporate manure into the soil? ________________________________

D24. Since last year (a year ago), roughly how many TOTAL ACRES on your farm have received any manure? _______ acres
OK, I’m going to ask a few questions about the nutrients that are in the manure and the nutrients that are commercial fertilizers.

D25. What do you think are the advantages or disadvantages of using manure compared to commercial fertilizers? ________________________

D26. Which of the following would describe your understanding of the fertilizer value of the manure you spread on your fields?

☐ Good understanding
☐ Some understanding
☐ I don’t really think about it

D27. Do you think the nutrient content of manure is reliable enough to eliminate the need for commercial fertilizers?

☐ Yes    ☐ No
☐ Yes for some nutrients (which)__________________________

At this point, have a very brief discussion with the farmer about the proposed manure spreading record keeping system/plans.
PART E: NUTRIENT MANAGEMENT PLANNING

At this point, we have a pretty good idea of your herd size and composition, your farm and field layout, cropping systems and practices, how you store feeds and feed your herd, and how you manage the manure your herd produces. The last part of today’s survey will be on some general aspects of the overall nutrient management on your farm.

E1. Do you have a written nutrient management plan for your farm operation? For these questions, a nutrient management plan is defined as: “any written plan that guides nutrient application on your fields.” Note: a nutrient management plan is not the same as a conservation plan.

Yes  --------> E5
No  --> continue

E2. To what extent do you pay attention to the way nutrients are lost from your farm?

- Not at all
- Slightly
- Somewhat
- Very much

E3. What environmental issue do YOU currently think is of biggest concern to farmers? ____________________________________________________________

E4. What environmental issue relating to farmers do you think is given too much coverage by the media / general public? ____________

NOW SKIP TO PART F
E5. How important is your nutrient management plan to the way you make decisions about your dairy and cropping operations?

- Not at all
- Slightly
- Somewhat
- Very much

E6. What do you think are the biggest advantages you can gain from nutrient management planning?

- __________________________________________________________
- __________________________________________________________
- __________________________________________________________

E7. What do are do the biggest disadvantages?

- __________________________________________________________
- __________________________________________________________
- __________________________________________________________

E8. What motivated you to write a nutrient management plan?

- __________________________________________________________
- __________________________________________________________

E9. Was this plan developed to help you qualify for a government program? (May have answered above.)

- Yes, a 590 nutrient management plan
- Yes, another type of plan
- No

E10. What percent of your cropland is covered by the nutrient management plan?

- 25% or less
- 26% - 50%
- 51% - 75%
- 76% or more
E11. Roughly what percent of the total manure that is hauled to your fields is covered by your nutrient management plan?

- 25% or less
- 26% - 50%
- 51% - 75%
- 76% or more

E12. What environmental issue do YOU currently think is of biggest concern to farmers? ______________________________________

E13. What environmental issue relating to farmers do you think is given too much coverage by the media/general public? ______________

E19. What impact do you think your nutrient management plan has had on local water quality near your farm?

- It has had no impact on local water
- It has had a small, positive impact on local water
- It has had a major, positive impact on local water
- I don't know -- it has never been explained to me how this plan will influence local water

Could we see a copy of your nutrient management plan?
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1. How old are you?</td>
<td>_____</td>
</tr>
<tr>
<td>F2. How many years have you been operating this dairy farm?</td>
<td>_____</td>
</tr>
<tr>
<td>F3. Did you grow up on a dairy farm?</td>
<td>NO</td>
</tr>
<tr>
<td>F4. Are you originally from this area?</td>
<td>YES</td>
</tr>
<tr>
<td>F5. How much of the work done on this farm is done by family members or other relatives?</td>
<td>All work done by family</td>
</tr>
<tr>
<td>F6. How much of your household income comes from non-farm sources (off-farm employment, pensions, investment income, etc.)?</td>
<td>All from off-farm</td>
</tr>
<tr>
<td>F7. How many cows do you expect to be milking on this farm in 5 years?</td>
<td>None, we plan to quit dairying by the year _________ → <strong>Skip to F8</strong></td>
</tr>
</tbody>
</table>
F8. How likely is it you will make each of the following kinds of changes to your dairy operation over the next 5 years? For the next 10 questions, please respond by saying ‘very likely’ to ‘very unlikely.’

<table>
<thead>
<tr>
<th>TYPE OF CHANGE</th>
<th>Very likely</th>
<th>Likely</th>
<th>Not sure</th>
<th>Unlikely</th>
<th>Very Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy more feed from off the farm</td>
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<tr>
<td>Expand cropping operation</td>
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<td>Hire a nutritional consultant</td>
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<td>Develop/ update nutrient mgt plan</td>
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<td>Change crop mix (explain):</td>
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<td>Change tillage practices (explain):</td>
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<tr>
<td>Change fertilization practices (explain)</td>
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<td>Build manure storage facility</td>
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<td>Build a new freestall barn</td>
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<tr>
<td>Build a new parlor milking facility</td>
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</tbody>
</table>

F9. Are there any other major changes you plan to make in your dairy operation over the next 5 years that I did not already mention?

☐ NO
☐ YES → ________________________________________________________________

______________________________________________________________
TRANSITION TO THE BARN:

We would like to take samples of each of the components in your typical feed ration to determine the protein and phosphorus content. We will share the results of these analyses with you.

Finally, we would like to take manure samples from the herd to allow us to examine the relationship between nutrients in the diet and nutrients in the manure among typical dairy herds.