

Nutrient Management Spear Program

Cornell University Department of Animal Science



Whole Farm ISNT and Stalk Nitrate Field History Survey & Nitrogen Management Evaluation Tool

8/27/2009

The Illinois Soil Nitrogen Test (ISNT) and late-season stalk nitrate test were calibrated for corn grown under New York growing conditions. Recent assessment has shown these tests to be effective in identifying fields with the potential for N fertilizer savings. In our "Whole Farm ISNT Project" our intent is to assess the field and farm data from several dairy and crop farms to (1) identify ISNT-N distribution over the farm: and (2) assess the potential for changes in manure and/or fertilizer N management. In this project we will analyze soils for ISNT-N and general soil fertility and then combine those data with field histories and stalk nitrate for corn fields. The field information required includes field size, crop rotation, and fertilizer and manure records. This survey sheet is the field information collection form.

Farm Name:

Farm Address:

City: State: Zip:

Crop Year:

Questions? Contact: Quirine Ketterings gmk2@cornell.edu 607-255-3061

Whole Farm ISNT and Stalk Nitrate Field History Survey

1) Field ID	<input type="text"/>	2) Field Size	<input type="text"/>	acres																		
3) County	<input type="text"/>	4) Soil Type	<input type="text"/>																			
5) Drained or Undrained	<input type="text"/>	6) Crop Variety	<input type="text"/>																			
7) Corn Population Density	<input type="text"/>	8) 30"-36", 15", or Twin Rows?	<input type="text"/>																			
9) Cover Crops in Rotation?	<input type="text"/>	10) Crop Rotation	<table border="1"> <thead> <tr> <th></th> <th>Sod</th> <th>Crop Code - Name</th> </tr> </thead> <tbody> <tr><td>2010</td><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td>2009</td><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td>2008</td><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td>2007</td><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td>2006</td><td><input type="text"/></td><td><input type="text"/></td></tr> </tbody> </table>			Sod	Crop Code - Name	2010	<input type="text"/>	<input type="text"/>	2009	<input type="text"/>	<input type="text"/>	2008	<input type="text"/>	<input type="text"/>	2007	<input type="text"/>	<input type="text"/>	2006	<input type="text"/>	<input type="text"/>
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2010	<input type="text"/>	<input type="text"/>																				
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2007	<input type="text"/>	<input type="text"/>																				
2006	<input type="text"/>	<input type="text"/>																				
Yes/No	<input type="text"/>																					
If yes.....What Year?	<input type="text"/>																					
.....What Cover Crop?	<input type="text"/>																					
11) If Rotation Included Sod, Estimated % Legume When Rotated into Corn?	<table border="1"> <tr><td><1 Legume</td><td><input type="text"/></td></tr> <tr><td>1-25% Legume</td><td><input type="text"/></td></tr> <tr><td>26-50% Legume</td><td><input type="text"/></td></tr> <tr><td>>50% Legume</td><td><input type="text"/></td></tr> </table>		<1 Legume	<input type="text"/>	1-25% Legume	<input type="text"/>	26-50% Legume	<input type="text"/>	>50% Legume	<input type="text"/>	12) For Sod: Terminated When?	13) For Sod: Terminated How?										
<1 Legume	<input type="text"/>																					
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26-50% Legume	<input type="text"/>																					
>50% Legume	<input type="text"/>																					
		Spring	<input type="text"/>	Chemical	<input type="text"/>																	
		Before Labor Day	<input type="text"/>	Plowdown	<input type="text"/>																	
		After Labor day	<input type="text"/>	Other	<input type="text"/>																	
		Other	<input type="text"/>																			

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14) Current and Past Manure Applications

	2009 Growing Season		2008 Growing Season	2007 Growing Season
	Application #1	Application #2	Sum of Applications	Sum of Applications
Type				
Amount				
Gallons/acre or Ton/acre?				
Month				

15) Application Method

	2009	2009	2008	2007
Injected				
Incorporated within 1 day				
Incorporated within 2 days				
Incorporated within 3 days				
Incorporated within 4-5 days				
Incorporated after 5 days				
Not Incorporated				

16) Incorporation Equipment

	2009	2009	2008	2007

17) Manure Analysis

	2009	2009	2008	2007
Density				
	lbs/gal	lbs/gal	lbs/gal	lbs/gal
% Solids				
	% as is	% as is	% as is	% as is
Inorgani-N				
	% as is	% as is	% as is	% as is
Organic-N				
	% as is	% as is	% as is	% as is
P ₂ O ₅				
	% as is	% as is	% as is	% as is
K ₂ O				
	% as is	% as is	% as is	% as is

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18) Fertilizers for Crops in: 2009

	Fertilizer #1 Units	Fertilizer #2 Units	Fertilizer #3 Units
Nitrogen (N)	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
Phosphorus (P ₂ O ₅)	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
Potassium (K ₂ O)	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %
Application Rate	<input type="text"/>	<input type="text"/>	<input type="text"/>
If Liquid, Density?	<input type="text"/> lbs/gal	<input type="text"/> lbs/gal	<input type="text"/> lbs/gal
Application Method	<input type="text"/>	<input type="text"/>	<input type="text"/>

19) Did Any of the Following Conditions Occur this Year (#1 = most impact, #6 = least impact):

- weed pressure - insect damage - hail damage - severe compaction - lodging - other

Define "other"

#1 <input type="text"/>	#2 <input type="text"/>	#3 <input type="text"/>	<input type="text"/>
#4 <input type="text"/>	#5 <input type="text"/>	#6 <input type="text"/>	

20) Crop Yield?

Amount	Units	If Bales, Bale Weight?	% Moisture
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

21) Additional Field Information of Relevance?