July 2015

Encirca℠ Yield *Fertility Management*

Loading Soil Sample Points into Pioneer® Field360® Studio software

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INTRODUCTION

In this module you will learn how to:

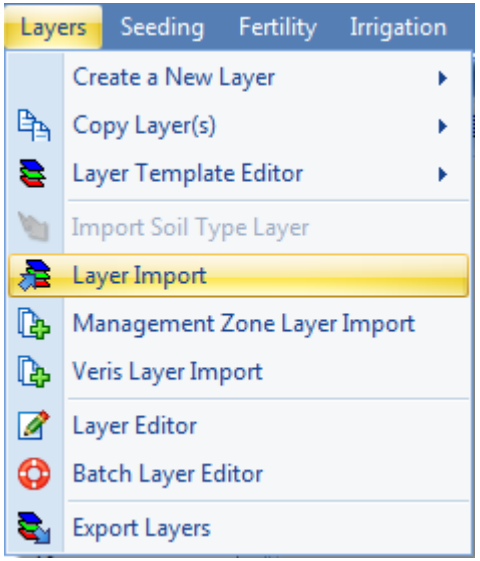
- Import soil sample points as shape files into Pioneer® Field360® Studio software.
- Conform the layer to the Encirca Soil Test Layer standard.

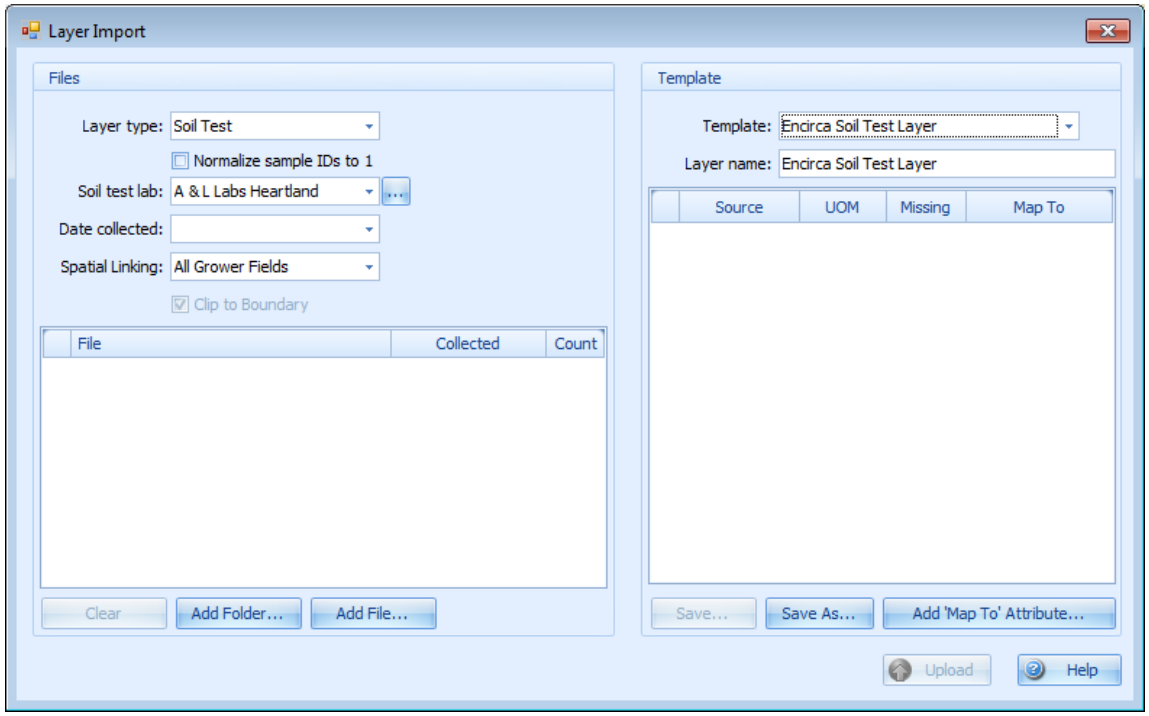
Prerequisites

- Basic understanding of functionality and use of Pioneer Field360 Studio software.
- Operation, farm(s), and field(s) already created (including boundaries).
- Soil sample points exported from a 3rd party GIS system as shape files.
- Read Encirca℠ services Tip Sheets "*Soil Test Analysis Requirements for State Fertility Recommendations*" and "*Encirca Soil Test Layer Attribute Standards".*

GETTING STARTED

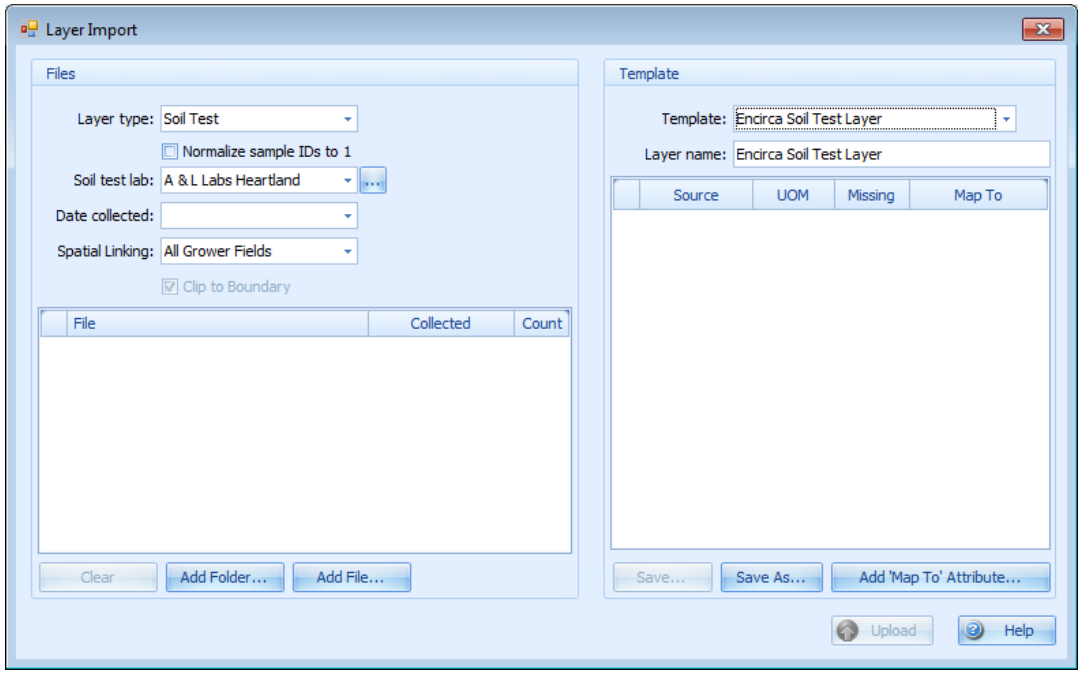
1. In Pioneer® Field360® Studio software, navigate to the Operation you wish to work with.
2. From the Layers pull down menu, select Layer Import.





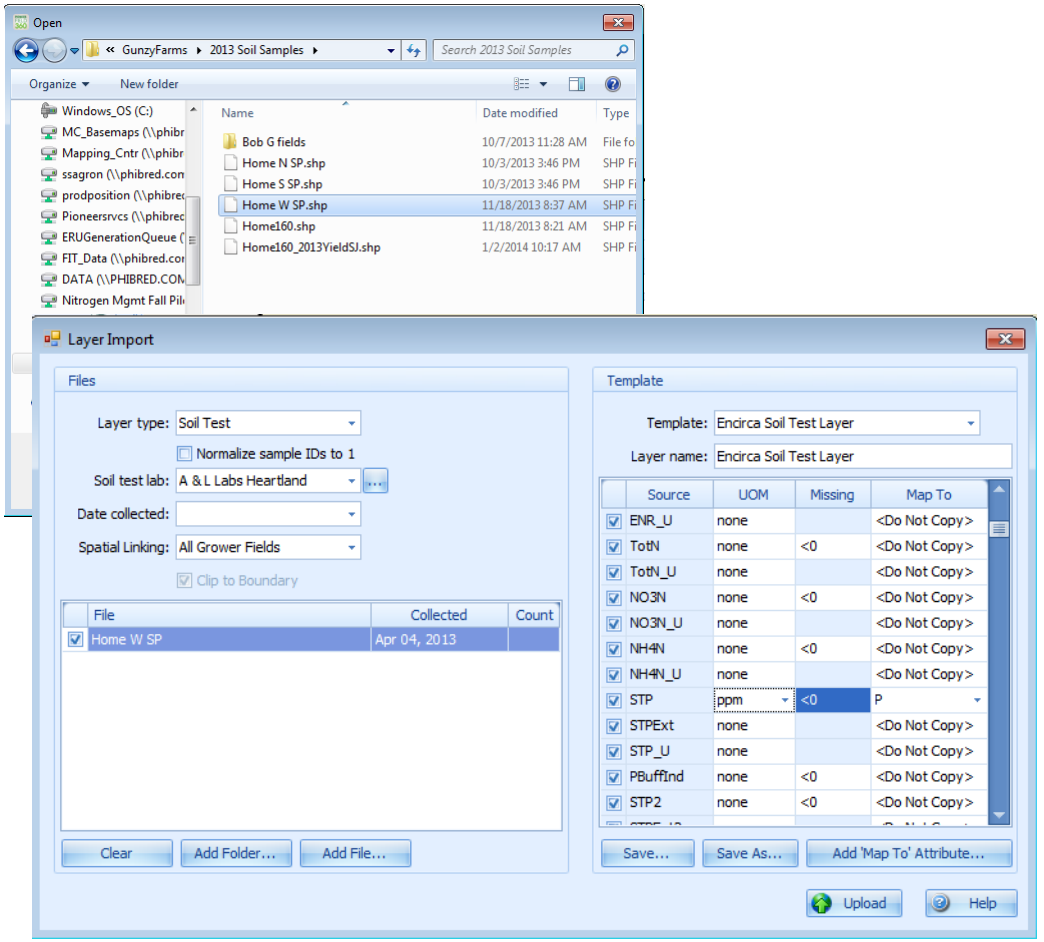
SETTING VALUES

1. Set layer type to “Soil Test”.
2. Select the Soil Test Lab
3. associated with the samples to be imported.
    1. **NOTE: This is required for the samples to be used in Encirca^{SM} services.**
    2. If your lab does not appear, please contact Encirca Knowledge Hub.
4. Enter the date the samples were collected.



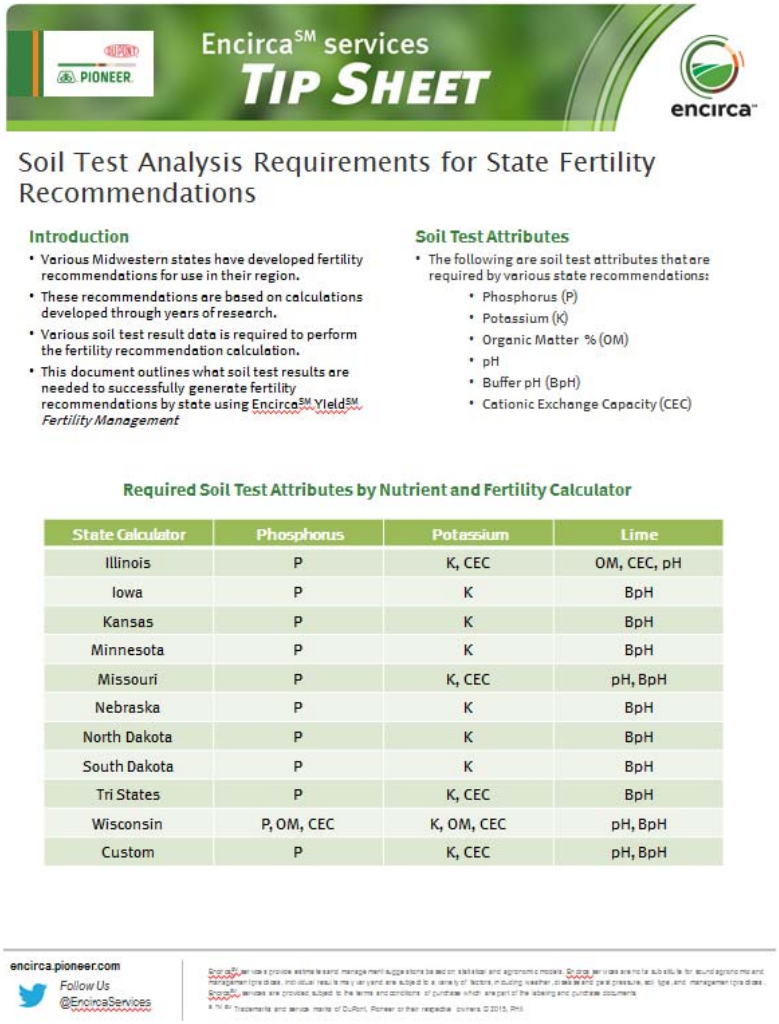
ADDING FILES & MATCHING ATTRIBUTES

1. Click the “Add File” button to navigate to the file(s) you wish to upload and click Open in the Open dialog box.
2. With the layer selected, choose “Encirca Soil Test Layer” from the template pulldown list.
3. For the attributes you wish to import, select the corresponding Encirca attribute name in the Map To column, and select the appropriate Unit of Measure (UOM).



UPLOADING SOIL SAMPLE POINTS

1. Refer to the Encirca[SM] services Tip Sheet "*Soil Test Analysis Requirements for State Fertility Recommendations*" for minimal required soil test attributes.
2. Once the attributes have been mapped, click Upload.
    1. Points will be automatically matched to the correct field boundaries.
    2. A summary page will appear, displaying results.



Encirca[SM] services
TIP SHEET

Soil Test Analysis Requirements for State Fertility Recommendations

Introduction

- Various Midwestern states have developed fertility recommendations for use in their region.
- These recommendations are based on calculations developed through years of research.
- Various soil test result data is required to perform the fertility recommendation calculation.
- This document outlines what soil test results are needed to successfully generate fertility recommendations by state using Encirca[SM] Yield[SM] *Fertility Management*

Soil Test Attributes

- The following are soil test attributes that are required by various state recommendations:
    - Phosphorus (P)
    - Potassium (K)
    - Organic Matter % (OM)
    - pH
    - Buffer pH (BpH)
    - Cationic Exchange Capacity (CEC)

Required Soil Test Attributes by Nutrient and Fertility Calculator

State Calculator	Phosphorus	Potassium	Lime
Illinois	P	K, CEC	OM, CEC, pH
Iowa	P	K	BpH
Kansas	P	K	BpH
Minnesota	P	K	BpH
Missouri	P	K, CEC	pH, BpH
Nebraska	P	K	BpH
North Dakota	P	K	BpH
South Dakota	P	K	BpH
Tri States	P	K, CEC	BpH
Wisconsin	P, OM, CEC	K, OM, CEC	pH, BpH
Custom	P	K, CEC	pH, BpH

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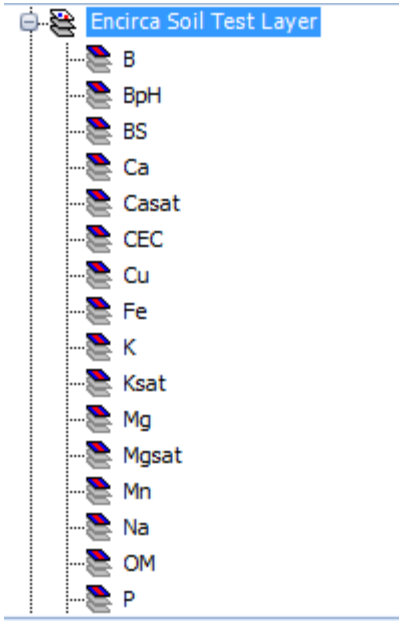
COMPLETION

1. In the Resource tree a new layer should appear:
    1. Encirca Soil Test Layer
    2. Contains the nutrient analysis that were mapped.
2. This layer is now ready for use in Encirca[SM] Yield *Fertility Management*.
    1. Upon enrollment of the crop zone, this layer is consumed by Encirca Yield *Fertility Management* and used to generate Nutrient Needs and Product Recommendations.
    2. No extra work to bring layer into Encirca Yield *Fertility Management* is required.

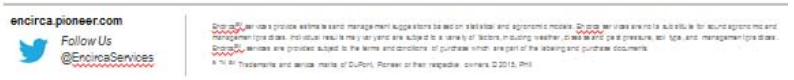


COMPLETION

1. For more information about “Encirca Soil Test Layer” attributes, please refer to the Encirca[SM] services Tip Sheet “*Encirca Soil Test Layer Attribute Standards”.*

Encirca Soil Test Layer Attribute Standards

Description	Name	UOM	Decimal Precision
Sample ID	SampleID	n/a	n/a
Date Sample Received	LabDate	n/a	n/a
Soil pH	pH	n/a	1
Buffer pH	BpH	n/a	1
Soluble Salts	SS	mmho/cm	2
Aluminum	Al	ppm	0
Organic Matter	OM	%	1
Nitrate	NO3	ppm	1
Phosphorus	P	ppm	1
Potassium	K	ppm	1
Calcium	Ca	ppm	0
Magnesium	Mg	ppm	0
Sodium	Na	ppm	1
Sulfate	SO4	ppm	1
Zinc	Zn	ppm	2
Iron	Fe	ppm	1
Manganese	Mn	ppm	1
Copper	Cu	ppm	2
Boron	B	ppm	3
Chloride	Cl	ppm	1
Cation Exchange Capacity	CEC	meq/100g	1
Base Saturation	BS	%	1
Potassium Saturation	Ksat	%	1
Calcium Saturation	Casat	%	1
Magnesium Saturation	Mgsat	%	1
Sodium Saturation	Nasat	%	1
Bulk Density	BD	g/cm³	2
Sample Depth	SampleDepth	inches	0
Sand %	Sand	%	1
Silt %	Silt	%	1
Clay %	Clay	%	1
Ammonium	NH4	ppm	1
Date Sample Taken	SampDate	n/a	n/a
Laboratory	Lab	n/a	n/a
Sulfur	S	ppm	1
Version: 2.2, Revised April 24, 2015			



Thank you.

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