



# 2015 SOIL HEALTH WORKSHOP

2015 CORNELL SOIL HEALTH TRAIN-THE-TRAINER WORKSHOP  
AUGUST 5-8, 2015 • ITHACA, NY

## Schedule

**Day 1: Soil Health Basics, Assessment, and Management. 8/5, 8 am - 5:00 pm.**  
**Networking Dinner: 6pm-8pm**

**Location and time:** Activities will be based out of B25 Warren Hall, with breakfast, lunch and breaks in 401 Warren. Networking Dinner will be at the Big Red Barn on the Cornell Campus  
**Information about the day:** dress for class room

Time	Session	Location	Instructor
8:00 am	<i>Breakfast on campus</i>	401 Warren	
9:00 am	Registration, receive workshop materials	401 Warren	
9:30 am	Welcome and Introduction to Cornell Soil Health Program	B25 Warren	Harold vanEs
9:45 am	Soil Health in agroecosystems: understanding essential physical, biological, and chemical soil processes and how they interact	B25 Warren	Bianca Moebius-Clune Dan Moebius-Clune
11:15 am	<i>Break</i>	401 Warren	
11:30 am	Introduction to the Soil Health Assessment Framework	B25 Warren	Bianca Moebius-Clune
12:15 pm	<i>Lunch</i>	401 Warren	
1:00 pm	Management: dos and don'ts of the Soil Health Management Toolbox Part 1: - Exploring cover crops - Cover crops for managing soil health constraints - Managing soil physical properties with tillage technologies - Management of soil biota: disease, inoculants, and symbionts	B25 Warren	Jeff Liebert/Emily Reiss Dan Towery Bob Schindelbeck Dan Moebius-Clune
3:15 pm	<i>Break</i>	401 Warren	
3:35 pm	Management: dos and don'ts of the Soil Health Management Toolbox Part 2: - Soil Health for Rangelands - The Indiana Conservation Cropping System Initiative - Soil Health in Perennial Systems - Soil Health in a broader Context - Introducing the NRCS Soil Health Division	B25 Warren	Diane Stott Dan Towery Nina Bassuk Harold vanEs Bianca Moebius-Clune
445 - 5:00	Q and A; Adjourn	B25 Warren	Aaron Ristow
6:00 pm	<i>Networking Dinner on Campus at the Big Red Barn</i>	<i>Big Red Barn</i>	



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**Day 2: Cornell Soil Health Laboratory Practicum. 8/6, 8 am - 5 pm.**

**Location and time:** Activities will be based out of Warren, Bradfield and Emerson Hall, with use of several rooms in Bradfield for hands-on activities

**Information about the day:** dress for class room and lab, hands-on soil/plant experiences

Time	Session				
8:00 am	<i>Breakfast in 401 Warren</i>				
8:30 am	Group Presentation on Sample Intake – 101 Bradfield				
8:45 am	Stations – Rotate through lab demos; 5 groups, 40 min per station – Bradfield Hall				
	<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>
9:00 am	Proc. & Text.	Cover Crop	Root Bioassay	Resp./Protein	ICP/OM
9:40 am	Ag Stability	Resp./Protein	ICP/OM	AWC/AC	Cover Crop
10:20 am	Resp./Protein	Proc. & Text.	Cover Crop	Root Bioassay	Proc. & Text.
11:00 am	<i>Break in 135 Bradfield</i>				
11:20 am	AWC/AC	Ag Stability	Soil Health Tests	ICP/OM	Ag Stability
12:00 pm	<i>Lunch in 401 Warren</i>				
1:00 pm	Root Bioassay	Soil Health Tests	Proc. & Text.	Cover Crop	AWC/AC
1:40 pm	ICP/OM	AWC/AC	Ag Stability	Soil Health Tests	Root Bioassay
2:20 pm	<i>Break in 135 Bradfield</i>				
3:00 pm	Cover Crop	Root Bioassay	Resp./Protein	Proc. & Text.	Soil Health Tests
3:40 pm	Soil Health Tests	ICP/OM	AWC/AC	Ag Stability	Resp./Protein
4:20 pm	All groups Q and A – 101 Bradfield				
5:00 pm	Adjourn				
	<i>Dinner on your own</i>				

**Station Rotation Key:**

Session	Room	Presenter
Lab Procedures and Soil Texture Reading	G01 Bradfield	Jaimie Potter
Aggregate Stability Demo	G01 Bradfield	Bob Schindelbeck
Soil Respiration and Protein Analysis	822 Bradfield	Dan Moebius-Clune
Available Water Capacity and Active Carbon Demo	1003 Bradfield	Joseph Amsili
Bean Root Bioassay Demo	Purple Greenhouse	Kirsten Kurtz
ICP/OM Demo	823 Bradfield	Mike Rutzke
Cover Crop Demo and discussion	102 Bradfield	Emily R., Jeff L., Kathy H.
Other methods of Soil Health Testing in the U.S.	110 Bradfield	Harold vanEs, Bianca Moebius-Clune



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### Day 3: Soil Health Management Planning and Implementation Frontiers 8/7, 7:30 am - 5:00 pm

**Location and time:** Activities will be based out of Warren and Emerson Halls, and the Ag Quad on Campus  
**Information about the day:** Although there will be activities in the afternoon in the classroom, you should dress for the outdoors for the morning activities as we hope to be outside. August weather in our area is generally warm, sometimes cool in the morning, hot in the afternoon – in other words – a lot can change! We recommend that you come prepared with layers for temperature changes, and for sun or rain (sunscreen, hat, sunglasses, raincoat, umbrella...)

Time	Session	Location	Instructor
7:30am	Breakfast	401 Warren	
8:15 am	Soil Health Management Toolbox Part 3: Soil Health Assessment, Planning and Implementation Separate into 2 groups: Group 1 - Perennial Systems Group 2 - Outreach and Demonstration Tools for Agricultural Systems		
8:30 am	Group 1: – Ag Quad tour of Soil Health in perennial systems <ul style="list-style-type: none"> <li>Soil Health for Urban Landscapes</li> <li>Alleviating compaction with the Airspade and Auger</li> </ul>	Ag Quad	Nina Bassuk/ Miles Schwartz Sax Chuck Sherzi
	Group 2 – Soil Health Outreach and Demonstration Tools <ul style="list-style-type: none"> <li>Soil Stability/Hardness Tests</li> <li>The Cornell Soil Health Dripper</li> <li>NRCS/NYS Ag and Markets Runoff Demonstration</li> <li>Soil Water Holding Capacity Demonstration</li> <li>Soil Health Online Application</li> </ul>	Emerson Patio Emerson Patio Emerson Patio Emerson Patio Emerson 135	Paul Salon/ Bob S. Bob Schindelbeck Paul Salon/ Aaron R. Harold vanEs Dorn Cox
10:45 am	Break	401 Warren	
11:00 am	Producer Panel discussion on Soil Health Management	B25 Warren	Dan Towery
12:00 pm	Lunch	401 Warren	
1:00 pm	<b>(ELLS Students Meet Separately with Grower Panelists)</b> Putting it all together – Interpreting the Cornell Assessment numbers and creating management plans	<b>(101 Bradfield)</b> B25 Warren	<b>(Fatma Rekik)</b> Bianca Moebius-Clune
1:45 pm	Soil Health Management Planning Scenarios Separate into 6 groups: <ul style="list-style-type: none"> <li>Case Study 1 – Conventional Vegetables</li> <li>Case Study 2 – Urban Garden</li> <li>Case Study 3 – Conventional (cash) Grain</li> <li>Case Study 4 – Rice-Wheat in India</li> <li>Case Study 5 – Organic Dairy</li> <li>Case Study 6 – U-pick Berries and Apples</li> </ul>	B25 Warren B25 Warren B51 Warren B75 Warren B50 Warren B02 Warren 401 Warren	Bianca Moebius-Clune Kirsten Kurtz Nina Bassuk/Miles S. Aaron Ristow Dan Moebius-Clune Bianca Moebius-Clune Bob Schindelbeck
2:45 pm	Break	401 Warren	
3:00 pm	Presentation of Groups' Soil Health Management Plans	B25 Warren	All
4:45-5:00	Q and A and Adjourn	B25 Warren	Aaron Ristow
<b>Dinner on your own</b>			



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### Day 4: Soil Health Applications Field Trip. 8/8, 8 am - 2 pm.

**Location and time:** Starts in 135 Emerson Hall. Vans depart at 8:30 am, and return to campus by 2pm. Please be sure to meet us at 135 Emerson promptly at 8 am so that we can be on the road on time.

**Information about the day:** Dress for the field! August weather in our area is generally warm, sometimes cool in the morning, hot in the afternoon – in other words – a lot can change! We recommend that you come prepared with layers for temperature changes, and for sun or rain (sunscreen, hat, sunglasses, raincoat, umbrella...). Vans will come prepared with lunch and drinks. Bring your travel mug to take coffee/tea on the road from breakfast!

Time	Session	Location	Instructor
8:00 am	<i>Breakfast on Campus – New location!</i>	135 Emerson	
8:30 am	Follow up and Orientation for the Day	135 Emerson	Aaron Ristow
8:45 am	Separate into groups and depart to farm in vans - South end of Bradfield Hall	Tower Road	Aaron Ristow Bob Schindelbeck Dan Moebius-Clune
9:45 am	The Cornell Musgrave Research Farm <ul style="list-style-type: none"> <li>▪ Farm Orientation</li> <li>▪ Soil Health Test Sampling Demo</li> <li>▪ Tillage and Cover Crop Demo</li> <li>▪ Adapt-N Integrating Soil Health Dynamics into N Management</li> <li>▪ Soil Health Farm Equipment</li> <li>▪ 3-way No-till Seeder</li> <li>▪ Cover Crops in Alternative Systems</li> </ul>	Aurora, NY  Farmstead Field E2 Field E2 Field E2  Farmstead Farmstead Field B	Harold vanEs Bianca Moebius-Clune Bob Schindelbeck Aaron Ristow  Bob Schindelbeck Chris Pelzer Bob S. / Harold
11:50 am	<i>Boxed Lunch</i>	Farmstead	
12:15 pm	Musgrave Research Farm tour continued <ul style="list-style-type: none"> <li>▪ Roller/Crimper Plots</li> <li>▪ Closing Remarks</li> </ul>	Field H Field H	Bob S. / Harold Bob S. / Harold
1:00 pm	Board busses and depart for return to Cornell Campus	Farmstead	Aaron Ristow Bob Schindelbeck Dan Moebius-Clune
2:00 pm	<i>Arrive to campus and adjourn</i>		