

# KBS LTER All Scientist Meeting and Investigators Field Tour: 2019 Program

**Venue:** *W.K. Kellogg Biological Station: 3700 E. Gull Lake Drive, Hickory Corners, MI 49060*

**Date:** *September 19-20*

**Theme:** *Mechanisms of Resilience in Agricultural Landscapes*

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## Thursday September 19

*Registration (8:30 am – 9:00 am)*

**Location**  
*outside Auditorium*

### Plenary (9:00 am – 10:30 am)

**Auditorium**

- Introduction and program overview: Neville Millar
- Overview and new directions: Nick Haddad
- Themes for KBS-LTER
  - Resource: Sarah Evans and Sandy Marquart-Pyatt
  - Diversity: Doug Landis
  - Adaptation: Jen Lau and Scott Swinton
  - Scaling-up: Bruno Basso
  - Scaling-out: Julie Doll
  - Questions

*Break and transfer to LTER Field Lab (10:30 am – 11:00 am)*

### Field visit (11:00 am – 2:30 pm; including lunch)

**Main Cropping System Experiment**

- Site overview (11:00 am – 11:15 am) Nick Haddad
- Presentations (11:15 am – 12:30 pm)
  - *Prairie strips*
    - Background: Doug Landis
    - Soil health: Corinn Rutkoski (Sarah Evans)
    - Microarthropods: Allison Zahorec (Doug Landis)
    - Economics of adoption: Zach Luther (Scott Swinton)
  - *Responses to drought*
    - Rainout shelters (background): Steve Hamilton
    - Rainout shelters (design): Kevin Kahmark
    - Microbial addition: Jennifer Jones (Sarah Evans)
    - Carbon addition: Grant Falvo (Phil Robertson)

*Lunch (12:30 pm – 1:20 pm)*

**Field visit (continued)****Main Cropping System Experiment**

- Presentations (1:20 pm – 2:20 pm)
  - *Conservation Lands Experiment*
    - Prairie restoration and trophic interactions: Brandon Latorre (Lars Brudvig)
  - *Soil sampling and analysis*
    - Plant diversity and soil micro-scale physics: Alyssa Kim (Sasha Kravchenko)
    - In-situ reflectance and SOC pools: Ben Tirrell (Bruno Basso)
  - *Globalized landscapes*
    - Ecosystem services dynamics and interactions: Yingjie Li (Jack Liu)
    - Connecting on-farm and LTER studies: Xinyi Tu (Sieg Snapp)
  - *Greenhouse gas exchange and remote sensing*
    - Nitrous oxide emissions : Di Liang (Phil Robertson)
    - Surface reflectivity: Cheyenne Lei (Jiquan Chen)

***Group photo (2:20 pm – 2:30 pm)***

*Transfer to KBS and break (2:30 – 3:00 pm)*

**Research opportunities discussion groups (3:00 pm – 4:15 pm)****Various classrooms**

- Leveraging experiments (prairie strips): Doug Landis and Braeden Van Deynze
- Leveraging experiments (rainout shelters) Jen Lau and Jennifer Jones
- New frontiers (plot to field scale studies): Lukas Bell-Dereske and Scott Swinton
- New frontiers (remote sensing – KBS and beyond): Bruno Basso and Ben Tirrell
- Broader impacts (engaging stakeholders and public): Julie Doll and Craig Kohn

***Discussion group charge questions:***

1. What motivates you about being or getting involved in KBS LTER?
2. How can we take better advantage of the experiments that we have?
3. What emerging areas of research could be addressed at KBS-LTER?
4. How can we broaden our broader impacts at the interface of agriculture and environment?
5. How can we bridge across networks?

*Break (4:15 pm – 4:45 pm)*

**Poster advertisements (4:45 pm – 5:15 pm)****Carriage House****Posters and buffet dinner (5:15 pm – 7:00 pm)****Carriage House****Social gathering (starting at 7:00 pm)****Windmill Island**

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## Friday, September 20

*Registration (8:00 am – 8:30 am)*

**Location**  
*outside Auditorium*

### **Building Networks at KBS-LTER (8:30 am – 9:00 am)**

**Auditorium**

- Productivity-Diversity – LTER cross site synthesis project: Kay Gross
- Lotic Intersite Nitrogen Experiment (LINX): Steve Hamilton

### **Building across Networks (9:00 am – 10:30 am)**

**Auditorium**

*Network leaders to present and discuss funding, initiatives, and potential KBS LTER collaborations*

- National Science Foundation
  - Macrosystems and Population and Community Ecology (Dan Gruner)
  - National Ecological Observatory Network – NEON (Roland Roberts)
- United States Department of Agriculture Agricultural Research Service
  - Long-term Agroecosystems Research – LTAR (Teferi Tsegaye)

*MSU faculty discuss their involvement with these networks*

- Phil Robertson, Elise Zipkin, and Phoebe Zarnetske

*Networks discussion panel*

- All presenters

*Break (10:30 am – 10:45 am)*

### **Keynote (10:45 am – 12:00 pm)**

**Auditorium**

**Matt Liebman** (Henry A. Wallace Endowed Chair for Sustainable Agriculture): Iowa State University  
*“Enhancing Biodiversity in the Corn Belt to Improve Environmental Quality and Crop Production”*

*Lunch (12:00 pm – 1:00 pm)*

**McCrary**

Graduate students and post-docs meet with co-PIs, advisory committee members, and network leaders

### **Science Advisory Board Meetings (1:00 pm – 4:00 pm)**

**Carriage House**

- Board (internal) discussion
- Board meeting with LTER Executive Committee

*Science Advisory Board*

Doug Jackson-Smith (Chair)

John Blair

Jeannine Cavender-Bares

Sarah Garlick

Christine Hawkes

Matt Liebman