

Multistate Research Activity
NECC 2001 – Sustainable Ag Energy
Accomplishments Report 2024

NECC2001: Sustainable Farm Energy Production and Use: Project Duration 10/1/2020 to 09/30/2025: Reporting Period 10/1/2023 to

Date of This Report: 10/31/2024 Annual Meeting Date(s):10/21-10/22 2024

Participants:

In person:

Ciolkosz, Dan (dec109@psu.edu) – Penn State University; Specca, David (specca@njaes.rutgers.edu) – Rutgers University; Hay, F. John (jhay2@unl.edu) – University of Nebraska – Lincoln; Melvin, Steve (Steve.Melvin@unl.edu) – University of Nebraska – Lincoln; Schiavone, Drew (dschiavo@umd.edu) – University of Maryland;

On Zoom:

Pheil, Kip (kenneth.pheil@usda.gov) USDA; Cardoso, Diego (dcardoso@illinois.edu) University of Illinois; Gould, Charles (gouldm@msu.edu) Michigan State University; Joshi, Satish (satish@anr.msu.edu) Michigan State University;

Brief summary of minutes of annual meeting:

NECC2001 met in person in Omaha Nebraska Oct 21-22 2024. Presentations on station reports were presented by Penn State, Rutgers, University of Nebraska -Lincoln, University of Maryland, and Michigan State University. Written Station reports were provided by CT, MI, NE, NJ, PA, and MD. Significant time was spent discussing solar agrivoltaics and current and future research and Extension opportunities. Solar Agrivoltaics is a common emerging topic across most states participating in NECC2001.

The team also received a presentation from the UNL TAPS Program TAPS (Testing Ag Performance Solutions) is a ag decisions competition where farmers and participants make management decisions which are performed on plots scale under a center pivot. Decisions include nitrogen rate, timing, planting hybrid, irrigation rate and timing, insecticide rate and timing, crop marketing timing. After plot harvest awards are given to teams with greatest efficiency, most profit, and highest yield. The TAPS event has grown to corn soybeans and sorghum and now has participants from over 6 states.

The second day of the annual meeting was tours of UNL facilities and discussions with professors. Tour stops were selected to increase discussions and form connections which may lead to future collaborations. Tour stops included Feedlot innovation center where feedlot pens of 60 head each facilitate research at scales which can be generalized to commercial scale. Feedlot pens with roller compacted concrete may allow for “clean manure” for use in anaerobic digestion. NFarm initiative is a research farm where internet connectivity is available farm wide allowing for

greater opportunities for precision and robotics. Nebraska Tractor test laboratory where discussions of tractor efficiency and future of tractor energy dominated the discussions. Nebraska Tractor Test Museum was our final stop where we learned about the history of tractor testing in Nebraska.

Discussions on future initiative and collaboration have continued via email after the annual meeting.

Station Reports: