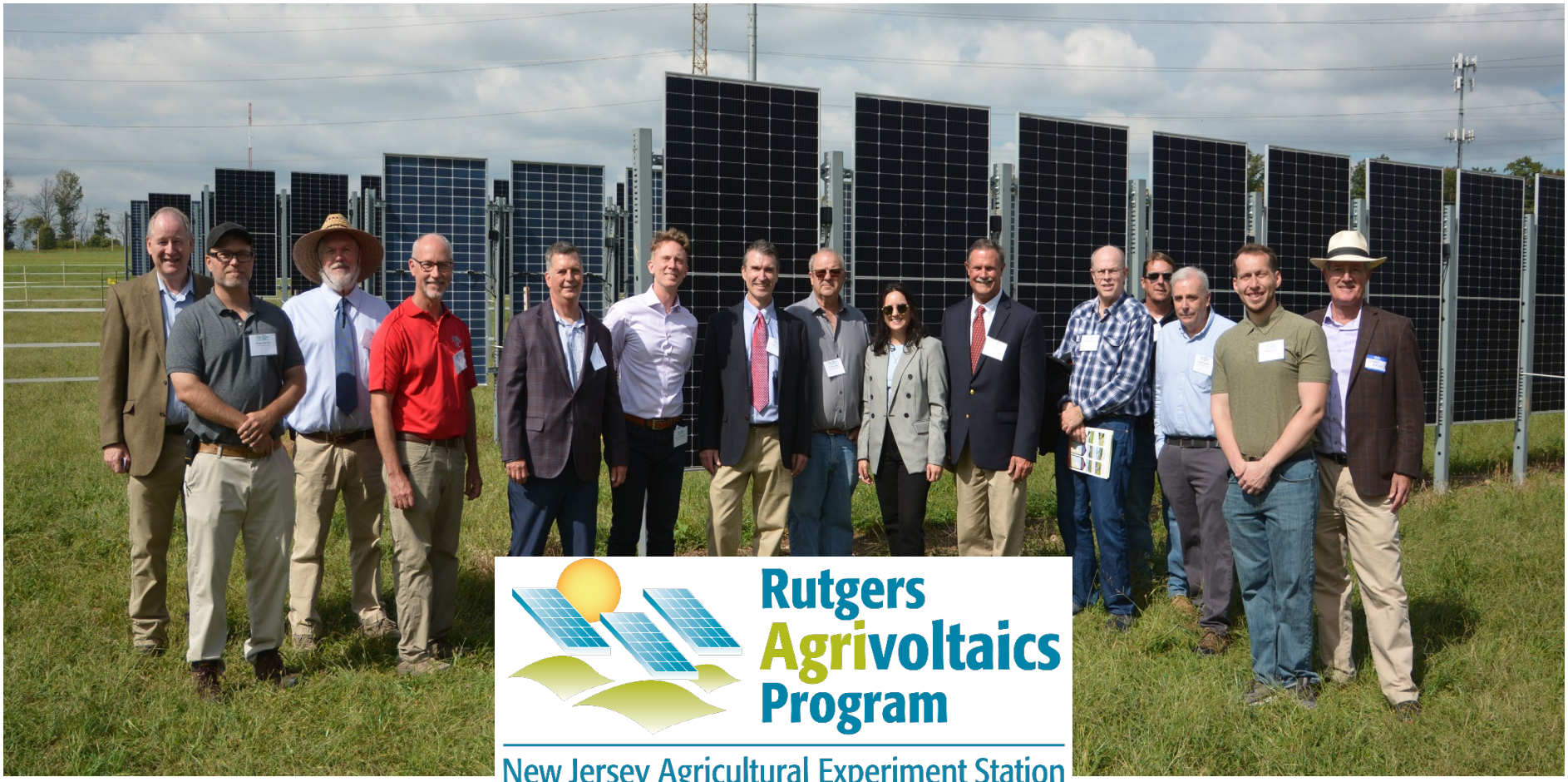

RUTGERS UNIVERSITY
Rutgers Agrivoltaics Program
New Jersey Agricultural Experiment Station
Agrivoltaics: Opportunities and Challenges for Agriculture
Dave Specca, RAP Lead

Rutgers Agrivoltaics Program Team(Sept. 2024)

Plant Sciences, Animal Sciences, Engineering, Economics, Social Science, Environmental Science, Meteorology



Agrivoltaics at Rutgers' NJAES Farms

Animal Farm
New Brunswick

170 kW_{DC} Installed

Large Animal Grazing and Forage Production

(left) **Vertical bifacial panels for beef cattle grazing and forage production**

(right) **Grass evaluation to understand how solar panels affect growth**

RAREC
Upper Deerfield

255 kW_{DC} Installed

Staple and Specialty Crop Production

(left) **Tomato, eggplant & pepper under double wide single-axis tracker arrays**

(right) **Soybeans under single wide single-axis tracker arrays**

Snyder Farm
Pittstown

95 kW_{DC} Installed

Hay Production

(left) **Hay production under single wide single-axis tracker arrays**

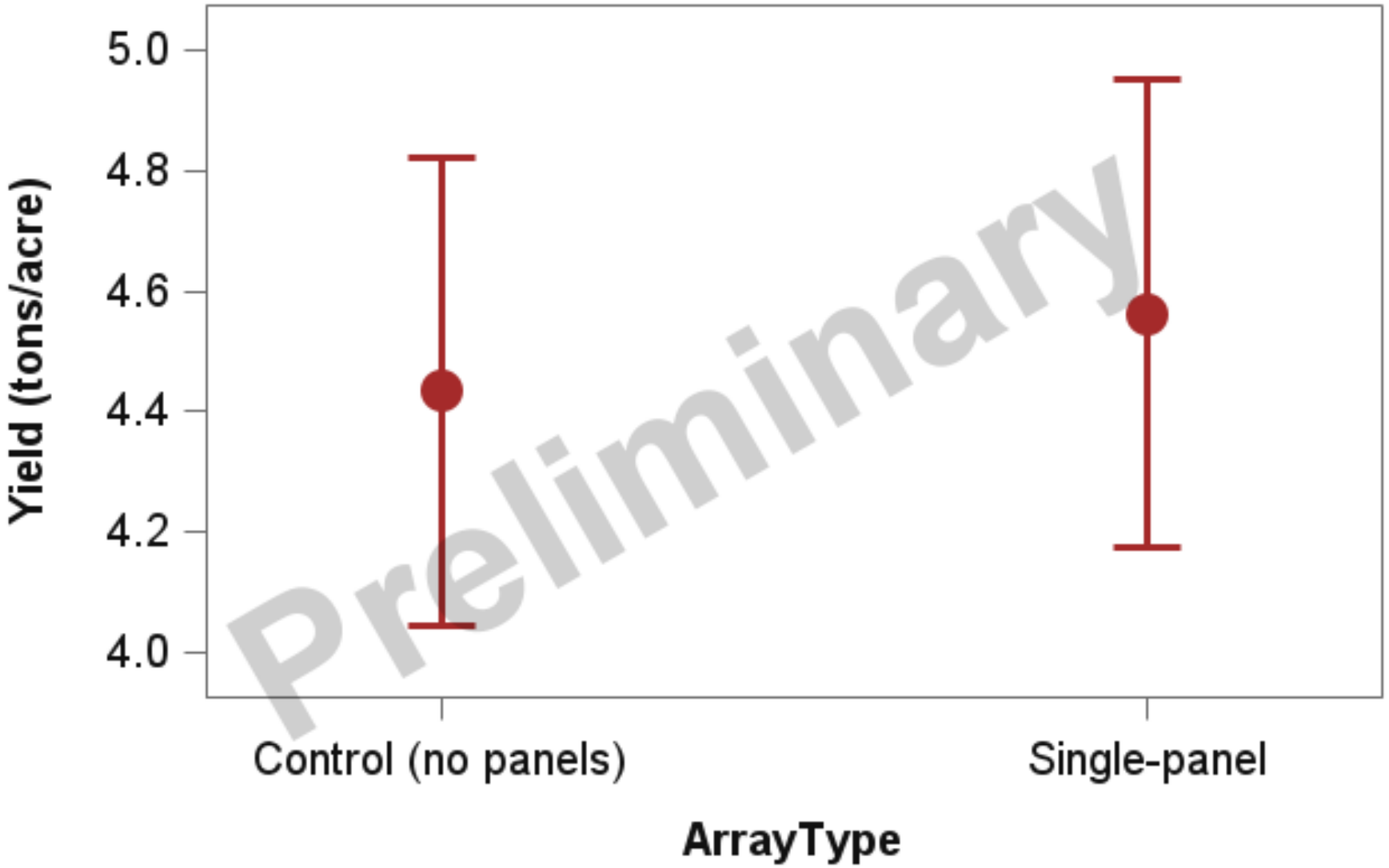
(right) **Raking hay between single-axis tracker arrays**

Note: All arrays have bifacial panels. All arrays are exporting power to a utility.

Freshly Mowed Orchard Grass – First Cutting
Snyder Farm

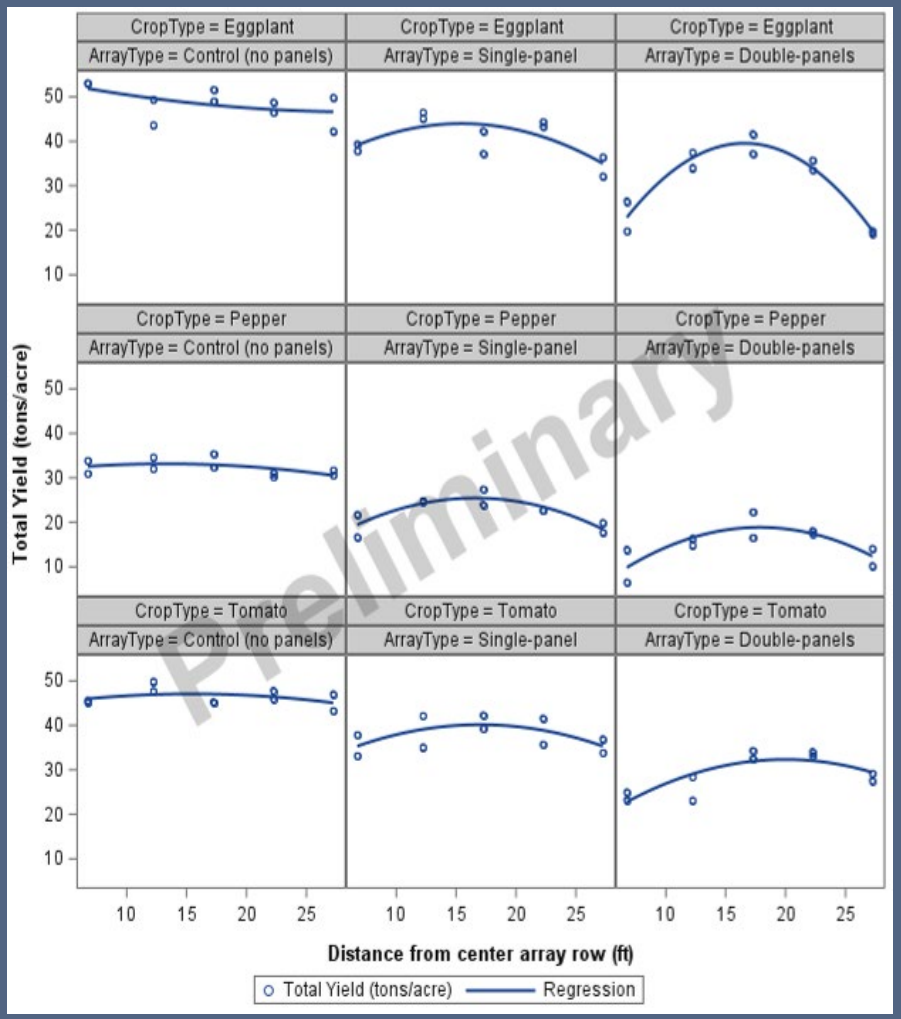
Hay yield in 2024

No significant effect of Solar Arrays

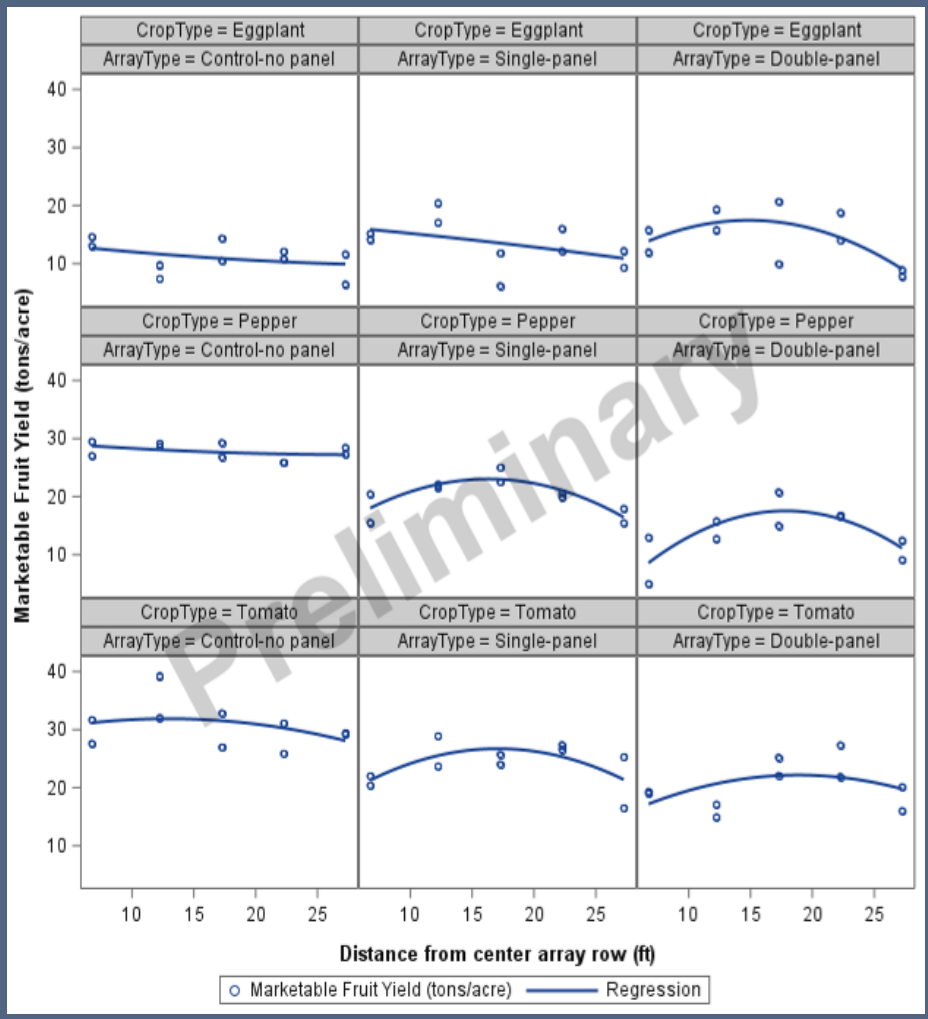


Beefsteak Tomato – Bell Pepper – Sicilian Eggplant, RAREC

Total Yield



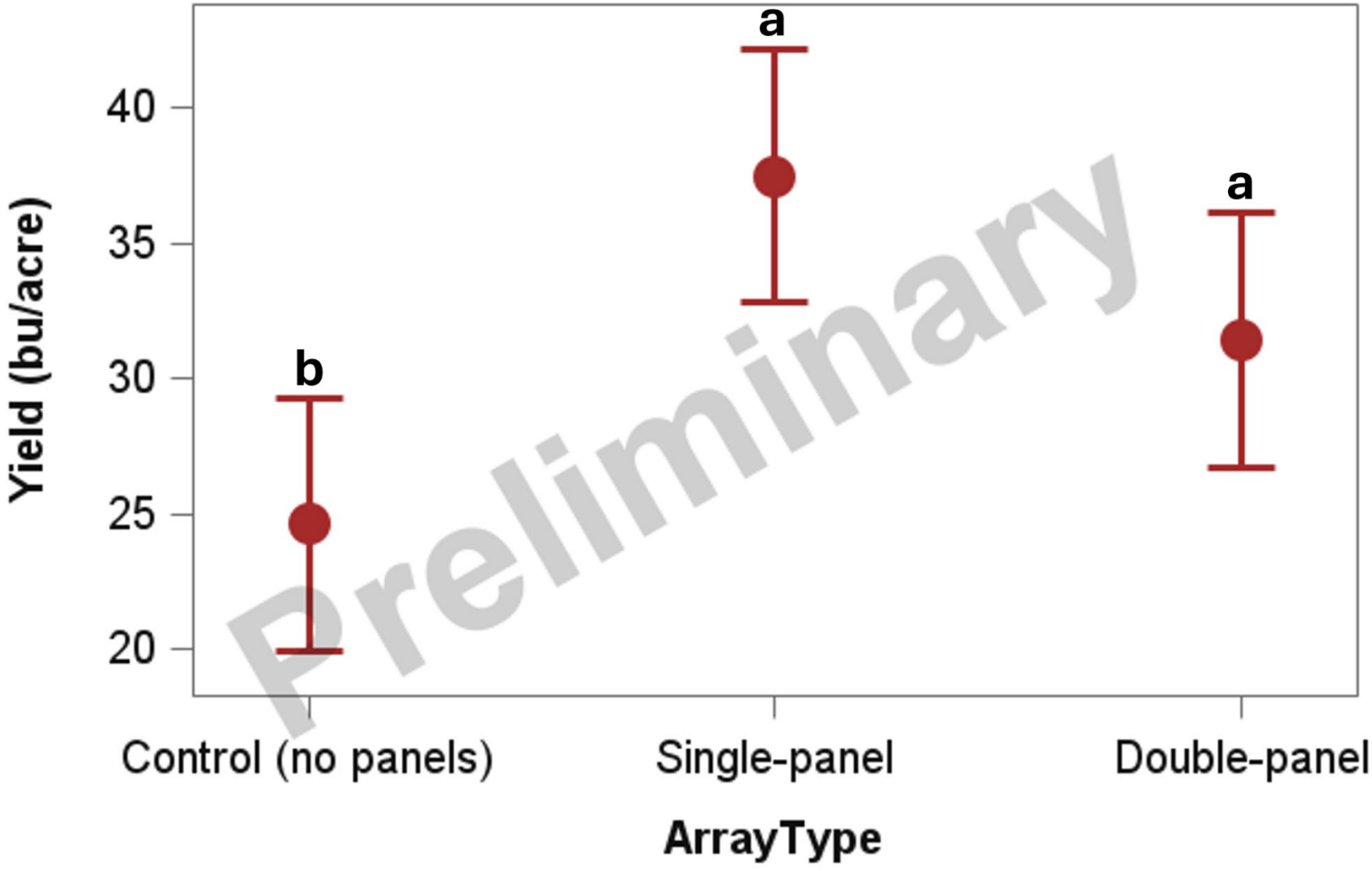
Marketable Yield

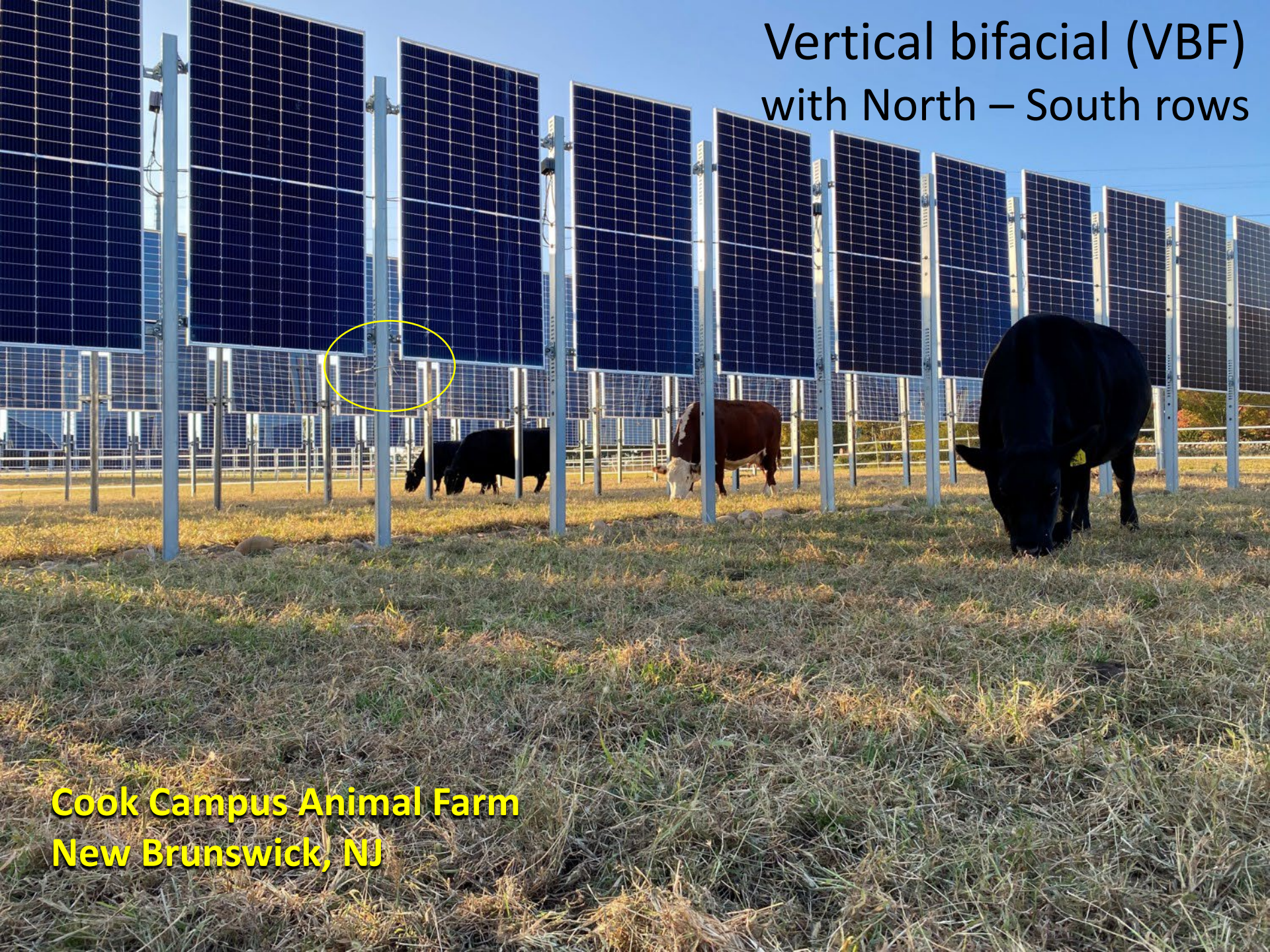



Soybean, RAREC

Soybean yield in 2024

Positive significant effect of Solar Arrays




Vertical bifacial (VBF)
with North – South rows
Cook Campus Animal Farm
New Brunswick, NJ

Cranberry Agrivoltaics Project

Ring Road Solar Project 08.06.25.pptx

Distributed
ENERGY INFRASTRUCTURE

Greenbacker SM

The Dual-Use Solar Energy Pilot Program

- The Dual-Use Solar Energy Act requires Board of Public Utilities (BPU) to develop rules and regulations for dual-use solar in New Jersey
- BPU's process for developing new programs typically involves developing a Straw Proposal, Draft Rules and Final Rules for public stakeholder input
- BPU has contracted with the Rutgers Agrivoltaics Program (RAP) to assist with implementation and monitoring
- Stakeholders have provided input, the BPU is finalizing the program, including eligibility criteria, operational requirements, and processes

Dual-Use Solar Energy Pilot Program

Rutgers Snyder Farm

In order to participate in the program, applicants:

- Must apply and be selected through a competitive process.
- Must commit to keeping farmland with dual-use solar in active agricultural/horticultural use
- May propose a monetary incentive in the form of an “adder” to the SREC-II (certificate for producing solar).

Dual-use projects:

- Cannot be sited on “prime agricultural soils and soils of statewide importance,” unless undertaken as part of a research study with a New Jersey agricultural institution
- ***Cannot be sited on wetlands or in Highlands/Pinelands preservation areas, unless a waiver is granted by BPU
- Cannot be sited on farms in the New Jersey Farmland Preservation Program

Pilot Program Research Requirements

- Management and collection of the data for the first three (3) at no cost to the participant. Participants may choose to contract with a non-Board appointed entity to collect the data at their own cost.
- The Board's designee in this case is the Rutgers Agrivoltaics Program (RAP) at Rutgers University.
- RAP will contact the Project Team of an EOI application after it has been encouraged to apply for the full application to discuss the details of the research program.

Dual-use solar can provide benefits to farmers… and New Jersey

- Farmers derive new revenue, or reduced costs, from generating electricity
- In addition to existing solar incentives, farmers may receive an added economic incentive from being part of the Dual-Use Pilot Program
- Crop yield and performance can continue to be strong with dual-use solar
- *All while producing 100% clean energy for New Jersey*

Rutgers Agrivoltaics Program

New Jersey Agricultural Experiment Station

RUTGERS UNIVERSITY

Thank You!!!

David Specca
Rutgers Agrivoltaics Program Lead
Rutgers EcoComplex
1200 Florence-Columbus Rd.
Bordentown, NJ 08505
609-360-0107
specca@njaes.rutgers.edu
agrivoltaics.rutgers.edu

Agrivoltaics.Rutgers.edu