



## SESSION DETAILS – 2021 NEVF CONFERENCE

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### CLIMATE ADAPTION STRATEGIES ON THE FARM

**Session Chair:** Olivia Saunders, UNH; **Co-moderator** Rachel Schatman

Approved CEUs: 2 crop

#### **Heat Tolerant Vegetable Varieties for Climate Change Adaptation**

Dr. Ernest will report on more than 5 years of vegetable variety trials aimed at identifying heat tolerant varieties of lettuce, snap bean, tomato, cauliflower, sweet corn and broccoli. Varieties were evaluated for yield and important quality characteristics over multiple seasons or planting dates. Heat stress physiology and crop stages susceptible to heat injury will also be discussed.

**Speaker 1:** Nagisa Manabe

**Speaker biography:** Nagisa is the Executive Director of NOFA-NJ and Owner of River Stoan Farm

**Speaker 2:** Gabe Siciliano

**Speaker biography:** Gabe Siciliano runs his familys farm, Abe's Acres Farm in Highstown, NJ

**Speaker 3:** Dr. Emmalea Ernest

**Speaker biography:** Dr. Ernest has been conducting vegetable and small fruit research with University of Delaware Cooperative Extension for 17 years.

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#### **Managing and monitoring soil moisture in mulch systems**

**Speaker 1:** Abby Ferla

**Speaker biography:** Abby Ferla owns and manages Foxtrot Farm, located in Shelburne, MA.

**Speaker 2:** Lisa McKeag

**Speaker biography:** Lisa is a vegetable production Extension Educator with University of Massachusetts Extension.

**Speaker 3:** Alan Baker

**Speaker biography:** Alan is the Past president of Bennington County Farm Bureau, Farmers Market and Master Gardeners, and member of the Bennington middle school ag committee

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#### **Keeping temperatures low in cucurbits to enhance pollination**

High temperatures can adversely affect crop growth. For example, some cultivars of pumpkins have poorer fruit set when high temperatures coincide with flowering. Mitigating high temperatures could use either of two principles: use of evaporational cooling or reflecting sunlight. Crops already using mist irrigation could consider intermittent use to lower canopy



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temperature to improve flower bud initiation on crops that are sensitive to high temperatures. We are studying the use of kaolin clay (Surround WP) to reduce plant and flower temperatures, comparing the effects on pumpkin varieties ranging in sensitivity to temperature at the time of fruit set. Besides measuring the surface temperature of flowers with and without kaolin treatment, we are studying the visitation of treated and untreated flowers by pollinators.

**Speaker 1:** Jamie Jones

**Speaker biography:** Jamie Jones is a farmer at Jones Family Farm in Shelton, CT

**Speaker 2:** Rich Cowles, Ph.D.

**Speaker biography:** Richard works as a Scientist for the Connecticut Agriculture Experiment Station, focusing on biological and behavioral management of agricultural pests.

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### **Adapting to a changing climate with organic no-till cropping**

Climate models, and recent experience, predict both increasing periods of drought and heavy rainfall events. Reducing tillage can help to cope with both of these problems. Farmer Jeremy Barker Plotkin will explain the lessons learned in the first two years of implementing organic no-till at Simple Gifts Farm in North Amherst. Jeremy will give an overview of two no-till systems: a transferred mulch system which involves harvesting cover crops using collection mowers and spreading equipment to apply green chop to beds prior to planting cash crops, and an intensive system using tarps and compost. Caro Roszell will describe soil health outcomes observed on the plots where the new practices have been adopted compared to control plots using standard tillage systems.

**Speaker 1:** Jeremy Barker Plotkin

**Speaker biography:** Simple Gifts Farm, Amherst MA

**Speaker 2:** Caro Roszell

**Speaker biography:** Soil Health Specialist at American Farmland Trust

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