

Agricultural Climate Solutions at Clemson University

Climate Smart Agriculture

- Demonstrates precision technologies to improve production efficiency with practices that reduce inputs (land, labor, energy, nutrients, pesticides and water), enhance climate resilience, avoid or reduce GHG emissions, and sequester carbon in plants and soil on the farm.

Regenerative Organic Agriculture

- Demonstrates USDA certified organic strategies to promote a healthy farm ecosystem with practices that increase soil carbon sequestration and crop diversity to enhance soil health, animal welfare, and economic justice for farmers and food system workers.

Restoration Agriculture

- Demonstrates permaculture strategies to manage the transition from annual crops to a perennial farm that mimics the natural diversity of local native landscapes to enhance climate resilience and sequester carbon in plants and soil on the farm.

Check out our
website!



[https://www.clemson.edu
/cafls/agricultural-
climate-solutions](https://www.clemson.edu/cafls/agricultural-climate-solutions)

Restoration Agriculture Farm



- Unique university demonstration farm located at the Calhoun Fields Laboratory in the Seneca Bottoms.
- Demonstrates the use of berms and swales to protect crops from flooding and direct water swiftly out of the fields during large rain events, which are expected to grow larger and more frequent in coming years.
- Demonstrates the ecological restoration of farmland by planting mix of trees and shrubs that mimic the natural oak-pine forests of our region in a pattern that allows for continued annual crop production.
- Features 28 different tree and shrub species, including unique cultivars, that are edible or beneficial to wildlife.
- In future, alleys will be planted in perennial and annual crops and grazing animals may be added to the farm.

Row	Canopy species	Secondary Canopy Species	Shrub Species	Secondary Shrub	Sub-canopy species
1	Heartnut	Baurtnut	False Indigo		Paw Paw
2	Buttemut and Baurtnut	Honey Locust	False Indigo		Paw Paw
3	Black Walnut	Honey Locust	Hazelnut	Serviceberry: Laevis Right, Canadensis Left	Persimmon
4	Shagbark Hickory	Shellbark hickory	Hazelnut	Dogwood	Persimmon
5	Hican	Pecan	Button Bush	Dogwood	Mulberry
6	Shagbark Hickory	Shellbark Hickory	Yaupon Holly	Chokeberry: Black Right, Red Left	Mulberry
7	Oaks		Yaupon Holly	Chokeberry: Black Right, Red Left	Sassafrass
8	Italian Pine		Blueberry		Sassafrass
9	Italian Pine		Blueberry		Redbud
10	Italian Pine		American Beautyberry		