

USDA Southeast Regional Climate Hub (SERCH)

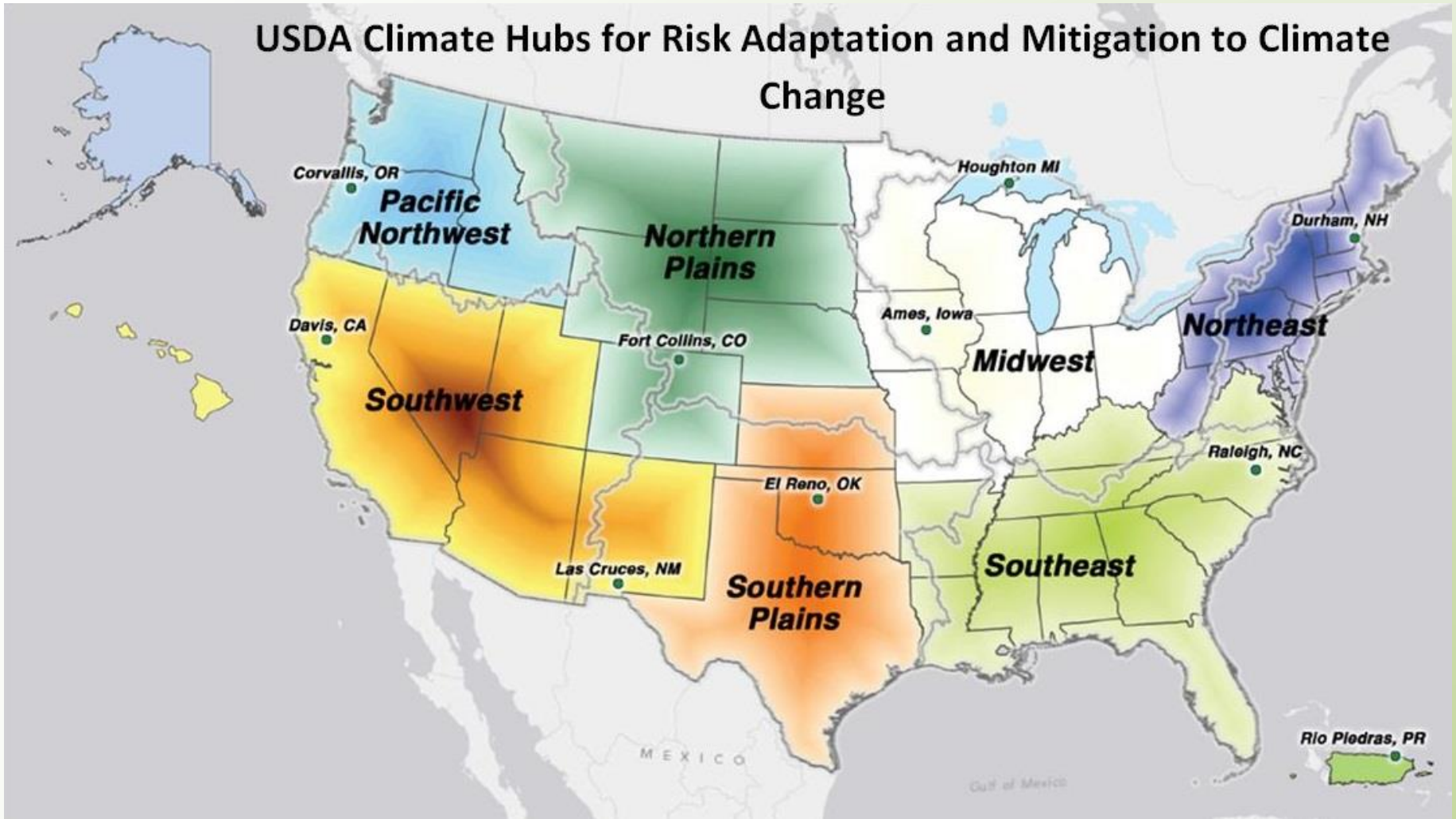
Michael Gavazzi

USDA Forest Service, Southern Research Station,
Eastern Forest Environmental Threat Assessment Center

Steve McNulty

Director, USDA Southeast Regional Climate Hub

USDA Climate Hubs for Risk Adaptation and Mitigation to Climate Change



USDA Climate Hubs for Risk Adaptation and Mitigation to Climate Change

Overarching Goal: improve sustainability and productivity of working lands under increasing climate variability and change

Corvallis, OR

Pacific Northwest

Davis, CA

Northern Plains

Fort Collins, CO

Houghton MI

Midwest

Durham, NH

Northeast

Raleigh, NC

Southeast

Las Cruces, NM

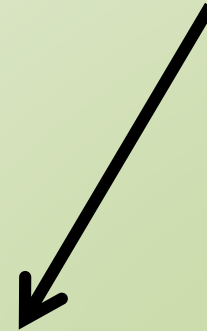
Southern Plains

El Paso, OK

Rio Piedras, PR

MEXICO

Gulf of Mexico

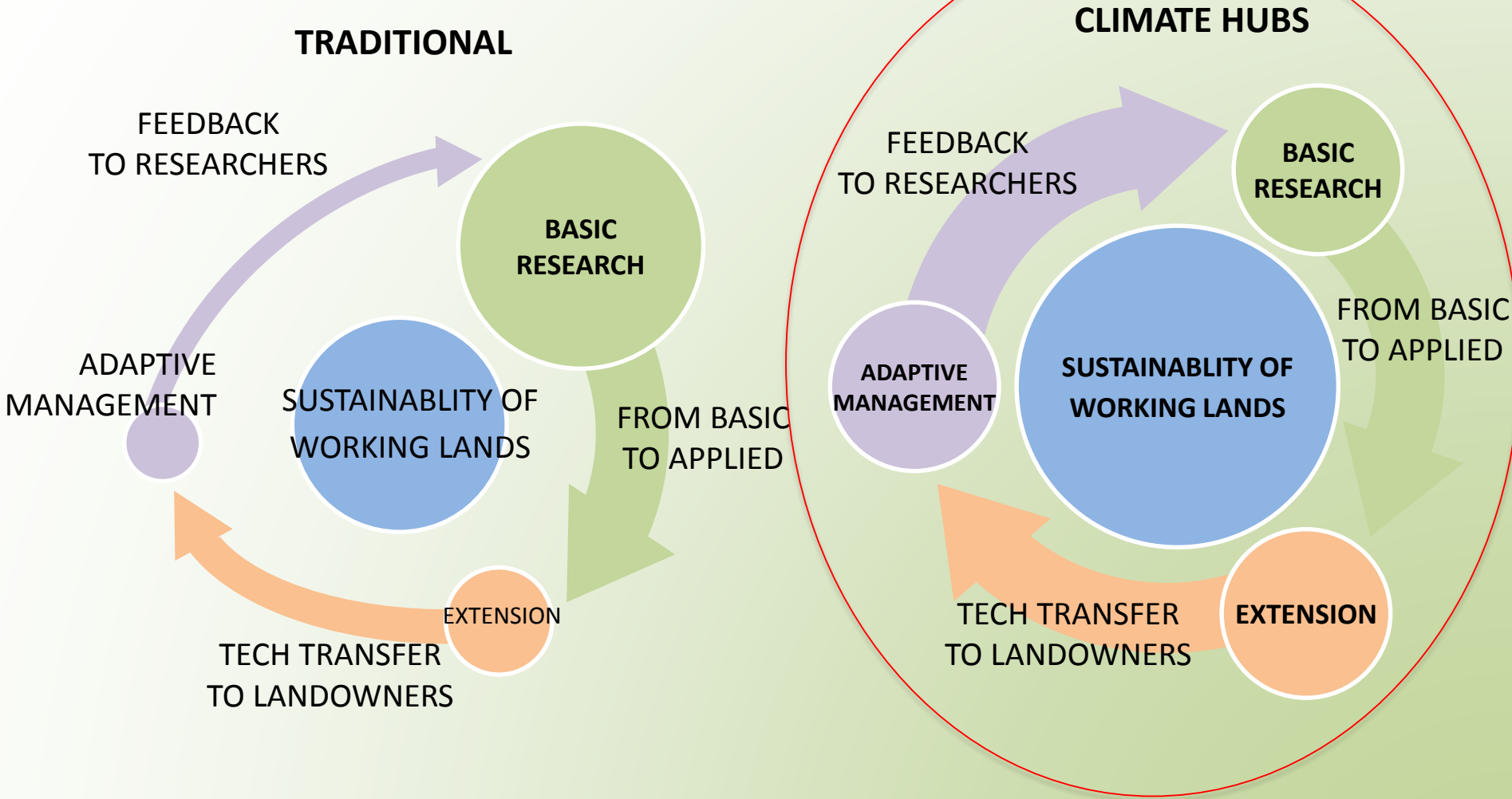


REGIONAL CLIMATE HUBS

USDA Regional Climate Hubs will:

- Translate science into USEFUL tools and information
- Work with extension to give them the tools and information to pass along to land managers
- LISTEN to feedback from land managers and extension regarding what does and does not work, and what new information is needed
- Provide this information to funding agencies to support future work

Sustainability Cycle



SERCH Team



Steve McNulty
Director, USFS



Sarah Wiener
Project Coordinator



David Marshall
Co-director, ARS



Lisa Fouladbash
Partnership Facilitator



Darren Hickman
Co-director, NRCS

SERCH's Approach

Mission: Finding and Providing the most relevant **research, tools and information** to producers to help them increase the resilience of their lands to climate change/variability

TECH TRANSFER :

Providing the most relevant tools and information to land managers

NEEDS ASSESSMENT:

To provide these tools, we must understand the different needs of different groups, and solicit their feedback

- Ranchers, farmers, foresters
- Conventional, organic, diversified
- Minorities, Tribal communities, and other limited resource producers

***PARTNERSHIP BUILDING:**

Build relationships, strengthen lines of communication, leverage/share resources

SERCH's - Year 1

Assess

Connect

Provide

Assess

- What resources are currently most vulnerable to direct and indirect impacts of climate variability?
- What may be vulnerable in the near future?
- What should be the first priority areas for the Climate Hub to address?

Assess

- Contact all Land Grant Universities
 - Develop POC and cooperative agreements
- Contact state extension agents and specialists
- Interact with Tribal and Minority Organizations
 - Minority Landowner Conference
- Conduct needs assessment:
 - Southern Regional Extension Forestry (Dan Geller)
 - Silviculture Survey (Texas A&M, Eric Taylor)

Connect

- Use pre-existing networks
- Increase collaboration, linkages and outreach
- Identify underrepresented groups
- Reduce duplicated efforts

Connect

- Host workshops
 - GHG Mitigation Workshop
- Climate webinars
- Blogs & newsletters
- Updated web presence
- Collaborate
 - National Adaptation Forum (SECC)

Provide

- Extend existing tools across sectors and scales
- Amending existing tools to address climate variability
- Creating new tools if necessary
- Maintain tool delivery systems

Provide

- Inventory and Assess Top 100 Tools
- Create or Adapt Forestry Tools
 - Service Forester's Handbook
 - Climate Change App. (Bill Hubbard)
 - SERCH LIGHTS
- Create or Adapt Agricultural Tools
 - SERCH LIGHTS
 - AgroClimate Expansion
 - TACCIMO Expansion
 - NRCS Conservation Planning Practices
- Develop SE-specific adaptation information for extension professionals
 - E-Learning Network (Dan Gellar, SREF)

Tech Transfer: Tools Assessment

Tools Online Assessment Database

- Inventorying and assessing tools from across the country
- Compiling tools in database
- Gap analysis
 - New tool creation
 - Expand existing tools
 - Update existing tools



Tool Type:

Pest, Disease, and Weed Scouting (Farm/Forest Level)
Irrigation and Water Planning
Degree Days/Chill Hours

Sector:






Agriculture
Livestock
Forestry

Regions:

Caribbean
Midwest
Northeast
Northern Plains

Audience:

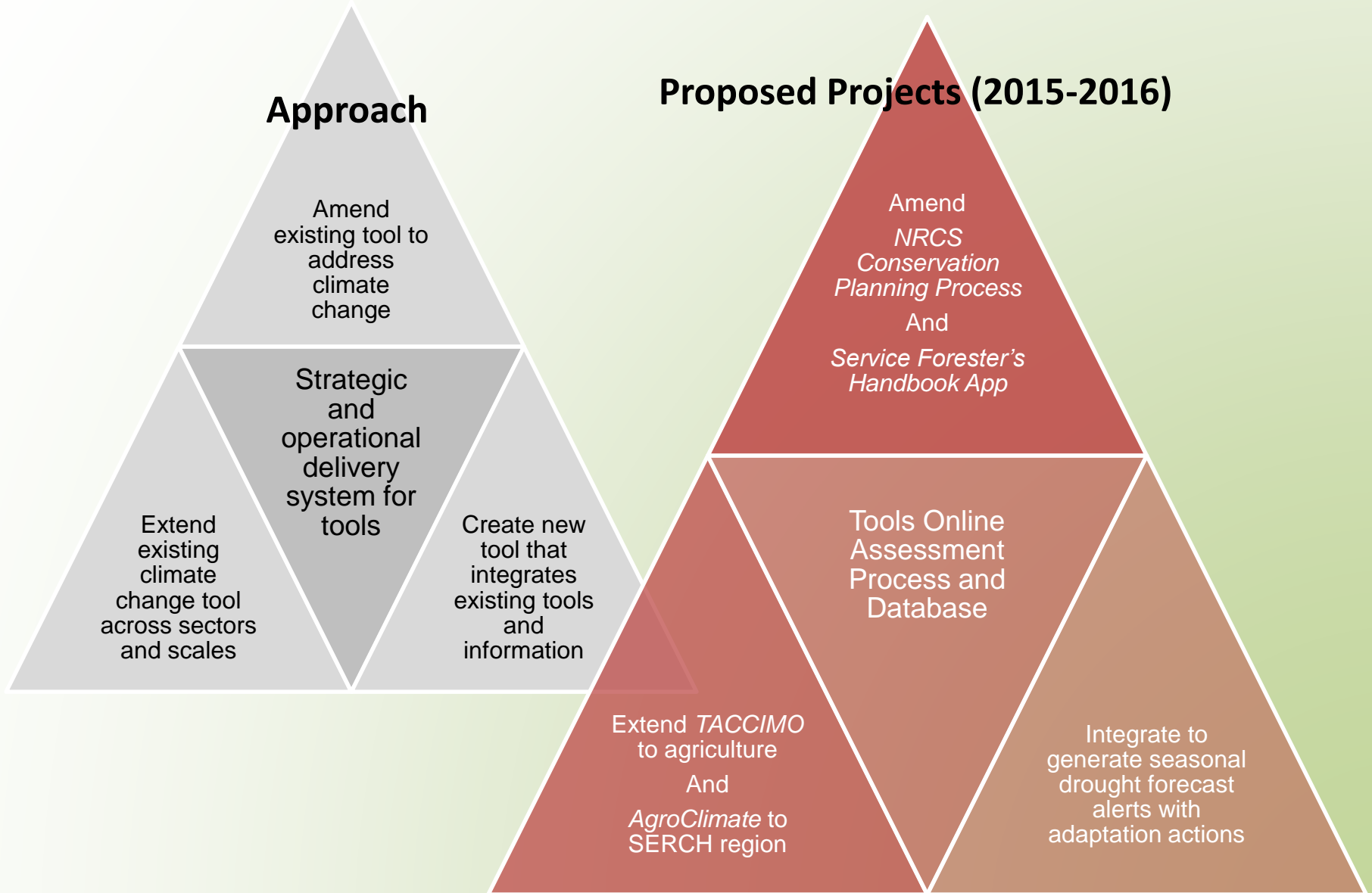
Manager
Researcher
Technical Information Provider

Website	Tool Type	Description	Format	Regions	Audience
 AgroClimate	Climate Projections, Drought, Greenhouse Gas Emissions, Growing/Cooling Degree Days, Information Clearinghouse, Irrigation and Water Planning, "Pest, Disease, and Weed Tracking and Prediction (State/Regional/National Level)"	"AgroClimate is an innovative web-resource for decision-support and learning, providing interactive tools and climate information to improve crop management decisions and reduce production risks associated with climate variability, climate change, and ext	App, Web	Southeast	Manager, Researcher, Technical Information Provider
 Aphid Speed Scout	"Pest, Disease, and Weed Scouting (Farm/Forest Level)"	Determines if soybean aphids have reached the 20 aphid per plant threshold	App	Midwest,Northeast,Northern Plains,Southeast,Southern Plains	Manager, Researcher, Technical Information Provider
 MyTraps.com	"Pest, Disease, and Weed Scouting (Farm/Forest Level)"	Enables growers and consultants to electronically manage insect data and pesticide records on a secure Website by entering the data into the site through a Web browser or smartphone.	App, Web	Caribbean,Midwest,Northeast,Northern Plains,Pacific Northwest,Southeast,Southern Plains,Southwest	Manager, Researcher, Technical Information Provider
 Insect Forecast	"Pest, Disease, and Weed Tracking and Prediction (State/Regional/National Level)"	Tracks and forecasts corn rootworm, corn earworm, western bean cutworm, and soybean aphid; alert capabilities	Web	Midwest,Northern Plains,Southeast,Southern Plains	Manager, Researcher, Technical Information Provider
 Adapt-N	Crop Fertilization	Helps precisely manage nitrogen inputs for grain, silage, and sweet corn production, provides daily updates of N status, and recommendations, uses real-time weather influences	Web	Midwest,Northeast,Northern Plains,Southeast,Southern Plains	Manager, Technical Information Provider

Tools, View record [Tool:2]

Tool Name	AgroClimate
Website	AgroClimate
Tool Type	Climate Projections, Drought, Greenhouse Gas Emissions, Growing/Cooling Degree Days, Information Clearinghouse, Irrigation and Water Planning, "Pest, Disease, and Weed Tracking and Prediction (State/Regional/National Level)"
Developer	University of Florida; USDA; Southeast Climate Consortium
Description	"AgroClimate is an innovative web-resource for decision-support and learning, providing interactive tools and climate information to improve crop management decisions and reduce production risks associated with climate variability, climate change, and ext
Cost	Free
Sector	Agriculture, Climate
Format	App, Web
Time Scale	Daily, Weekly, Monthly, Seasonal
Spatial Scale	State, Regional, County or Weather Station
Hub	Southeast
States	Alabama, Florida, Georgia, North Carolina, South Carolina
Audience	Manager, Researcher, Technical Information Provider
Relevance to Climate Change	Direct

Decision Support Tools



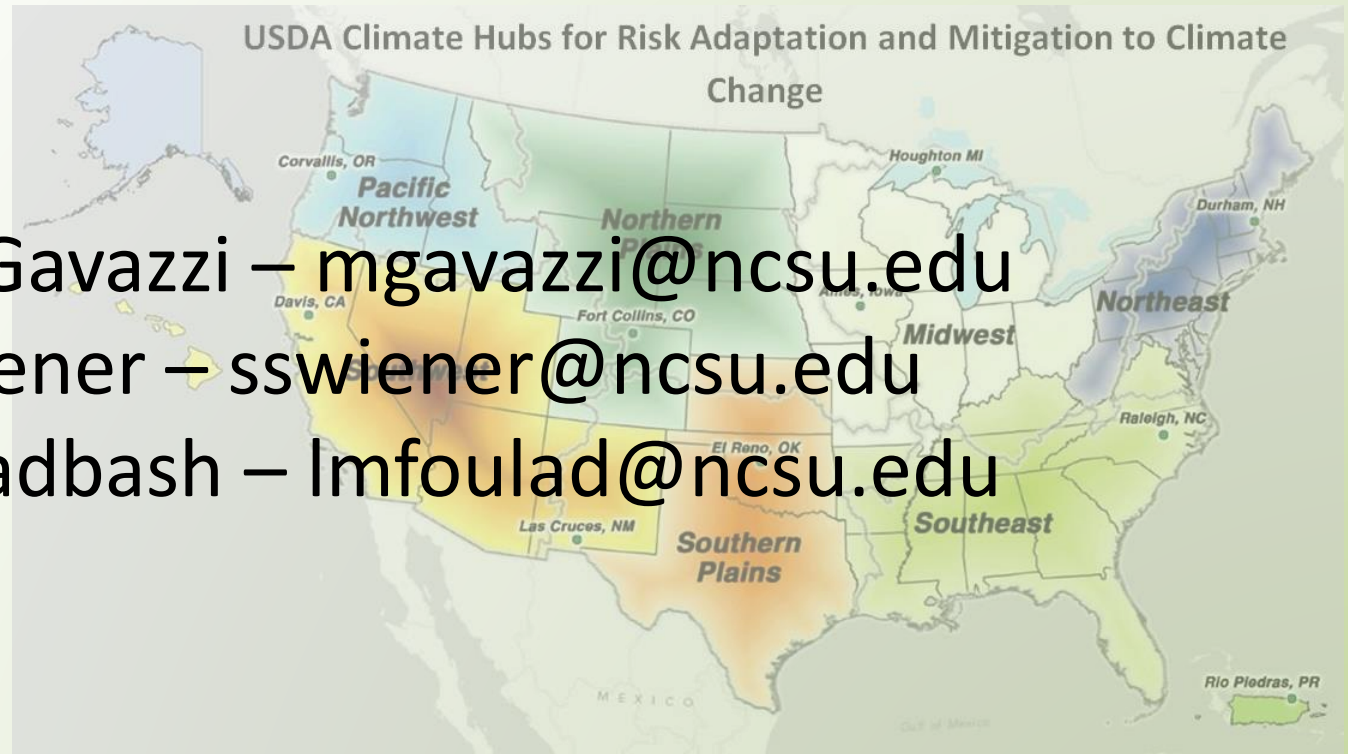
Thank You!

Contact:

Michael Gavazzi – mgavazzi@ncsu.edu

Sarah Wiener – sswiener@ncsu.edu

Lisa Fouladbash – lfoulad@ncsu.edu



Find us at:

- globalchange.ncsu.edu/serch
- <http://climatehubs.oce.usda.gov/southeast-hub>

How can SERCH collaborate with/assist SE extension and experiment stations?

What have you heard that's useful?

What are we missing?

What can we do better?

What should be our number one priority?

Potential Collaboration with NC A&T

Education

- Student projects, interns
- Presentations, conferences

Extension

- Outreach to extension agents
- Demonstration plots
- Discussions with farmers about needs

Research

- Collaborative research projects, e.g. NIFA Grant

Education

- Small Farms week
- Interns, student projects
- Minority Landowner Conference

Extension

- Adaptation demonstration plots to test and teach adaptation practices
- Needs assessment: Lunch Discussions with farmers
- Working with extension agents

Research: NIFA Grant

Social-ecological Study to assess potential of diversified crop-livestock systems for:

- Climate resilience
- Sustainable management
- Socio-economic benefits that meet the needs of different groups

*Looking for interested university partners!