"Targeted Seasonal Climate Information Delivery in THE Southeast USA

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THE SOUTHEAST CLIMATE CONSORTIUM

- FLORIDA STATE UNIVERSITY
- UNIVERSITY OF Florida
- UNIVERSITY OF MIAMI
- UNIVERSITY OF GEORGIA
- AUBURN UNIVERSITY (ALABAMA)
- UNIVERSITY OF ALABAMA AT HUNSTVILLE
- NORTH CAROLINA STATE UNIVERSITY
- CLEMSON UNIVERITY (SOUTH CAROLINA)

SECC Mission

Use advances in climate sciences, including improved capabilities to forecast seasonal climate and long-term climate change, to provide scientifically sound information and decision support tools for agricultural ecosystems, forests and other terrestrial ecosystems, and coastal ecosystem

How the SECC works

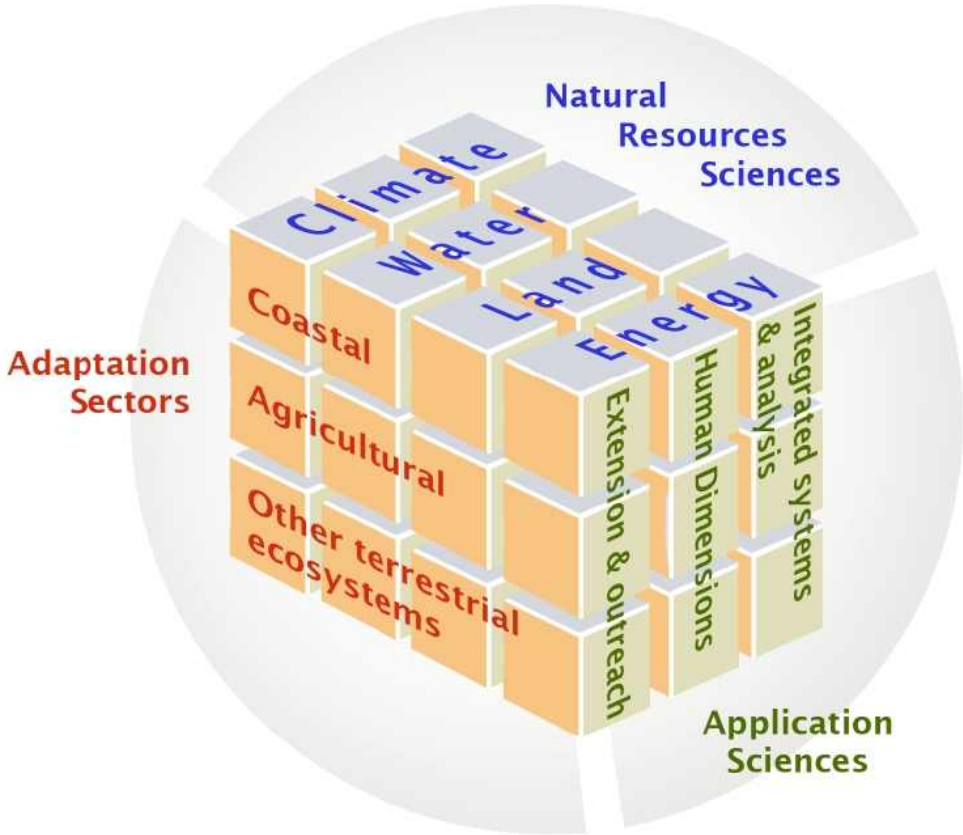
- Build multi-disciplinary teams of the best scientists in the region
- Use climate information to manage climate related risks – both seasonal and longer term
- SECC structures
  - Executive committee
  - Theme leaders
  - Task forces
  - Working groups
  - Project teams

Advantages of the SECC

- Network of multidisciplinary scientists in the region
- Structure and programmatic support for projects
- Higher p s

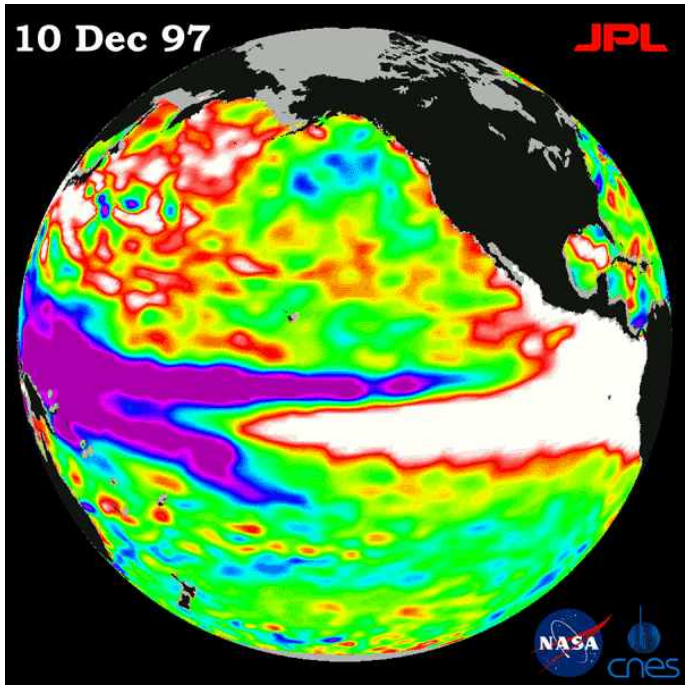
Three dimensions of the SECC

The key is collaboration
SECC projects are multi-disciplinary, multi-institutional, and address all three dimension of the organizational cube



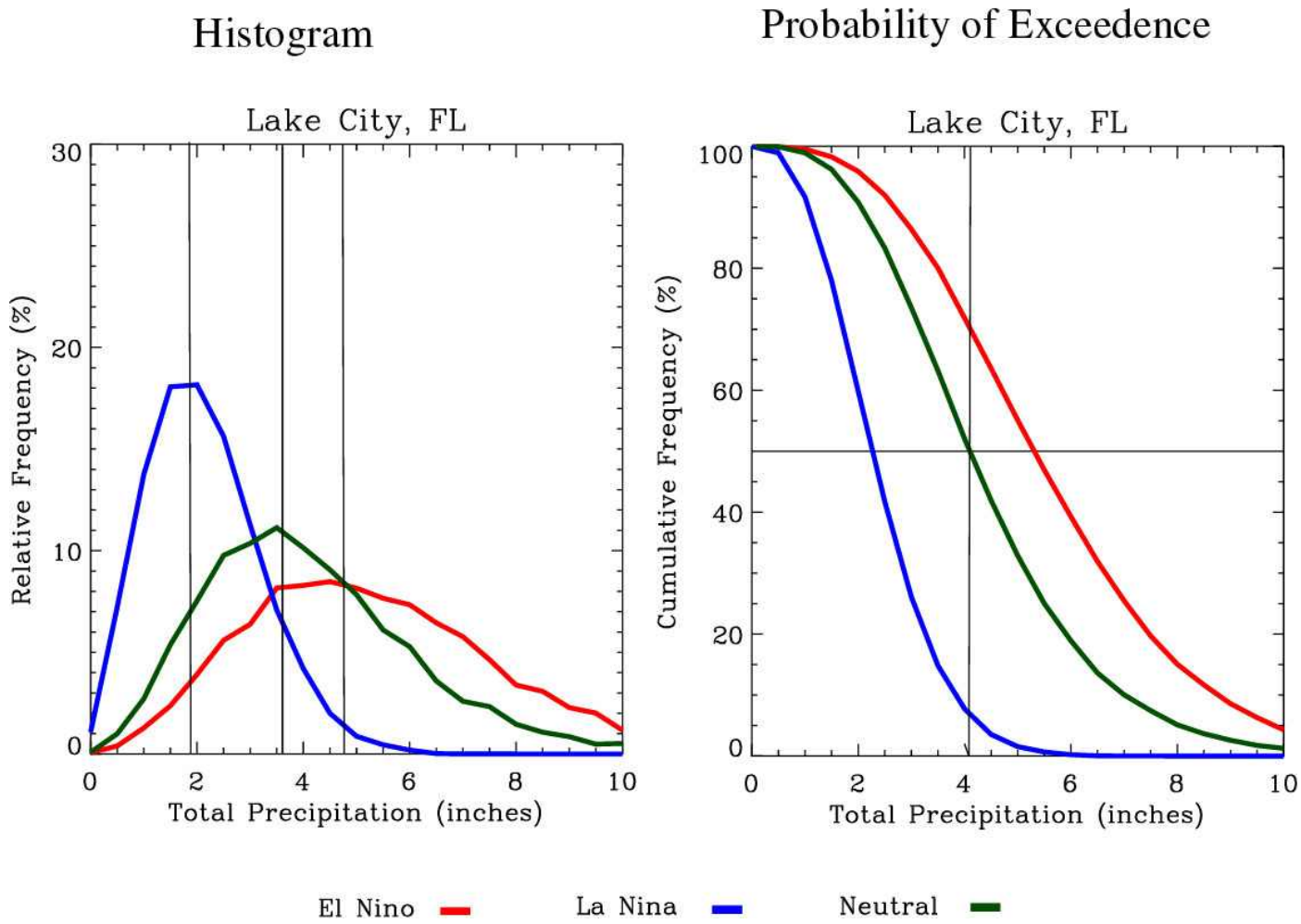
SECC

- Southeastern focus
  - ENSO signal
  - Regional diversity
  - Unique regional challenges
- Collaboration
  - Multi- or trans-disciplinary
  - Multi-institutional
  - Multi-state
- Competitive
  - Involve top scientists and rising stars
  - Become leaders in your institutions
  - Cooperate with other competitive programs



Probabilistic Nature of Forecasts

January Precipitation for Lake City, FL



In the SE USA we have been learning to communicate with stakeholders for over 15 years. Our principle clients are the entire agricultural community in our footprint. We have a large ENSO impact. Thus our “signal” is dependable. From the beginning social scientists have been a backbone to our approach. Extension specialists are our boundary organization. We have developed very advanced rules for information delivery.

SOME RULES FOR USING CLIMATE

CLIMATE FORECASTS
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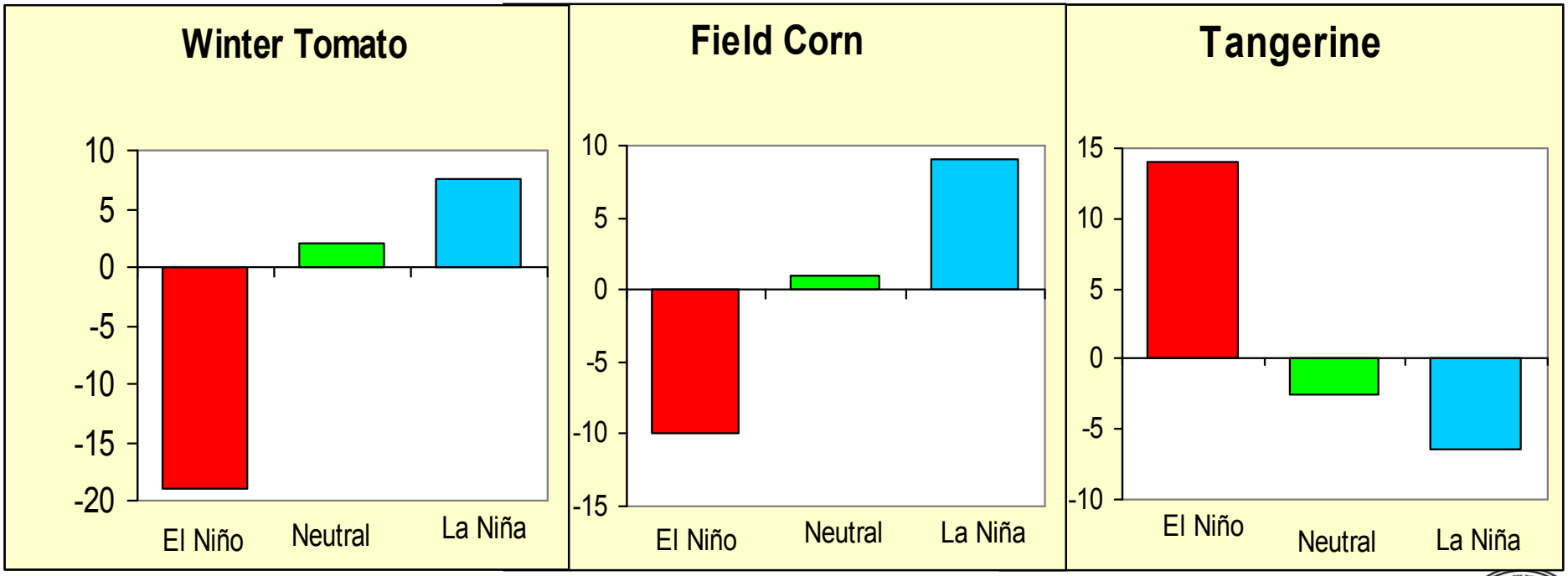
Third: Trust will only be built over a long time.

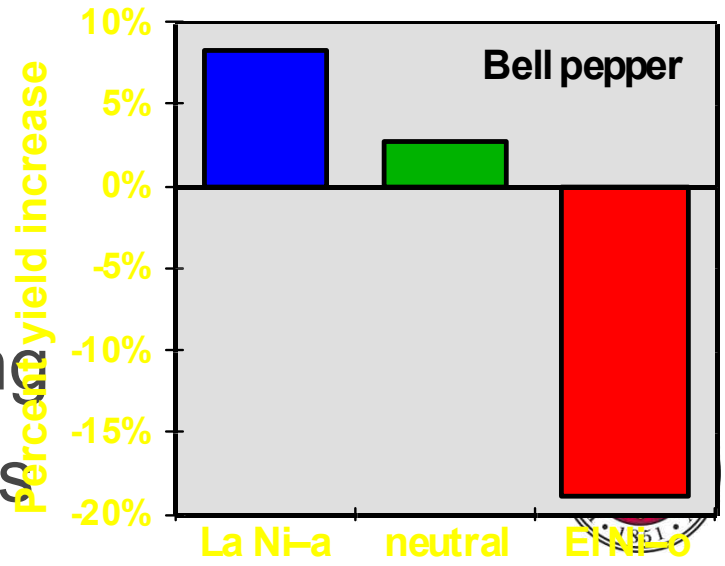
Fourth: A climate person always goes with a social scientist on each field encounter.

ENSO effects on production of crops in Florida



Managing Risks Associated with Climate Variability using Forecasts

- Irrigation and drainage
- Change variety, planting date, fertilizer program, irrigation
- Winter pasture vs. hay purchase
- Scheduling operations
- Crop insurance decisions
- Marketing decisions
- Wildfire management, burning
- Reducing environmental risks



SOUTHEAST CLIMATE CONSORTIUM
AgClimate

Map for county selection: AL | FL | GA

Customized Info. Enter county and state AL Go!

Home Help Contact

Current Climate Phase: Neutral

- AgClimate Tools
- Forecasts
- Crops
- Forestry
- Pasture
- Livestock
- Climate & El Niño
- Your Feedback
- About

Welcome to AgClimate

A Service of the Southeast Climate Consortium

Why... Climate is a major factor in virtually all aspects of food, feed, and fiber production and marketing.

What... AgClimate gives the latest forecasts showing how El Niño and La Niña could affect agricultural production and natural resources in the Southeast.

How... AgClimate provides important new tools to help producers understand and plan for climatic conditions.

Seasonal Outlooks NEW!

Fall Climate Outlook | Winter Pasture Outlook | Peanut Outlook | Citrus Outlook - NEW

Consortium Members

Supporting Organizations

Weather Networks

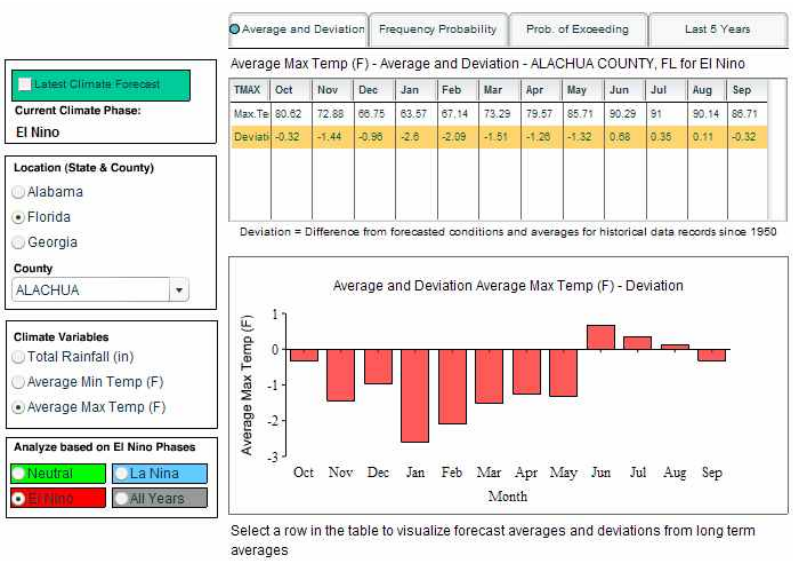
Some Tools in AgClimate

- Climate Forecast
  - Rainfall
  - Temperature (max and min)
  - Frost
- Drought
  - KBDI (Forest fire risk, mosquito control)
  - LGI (research in progress)
- Crop Yield
- Crop Development

ENSO-Based Climate Forecast

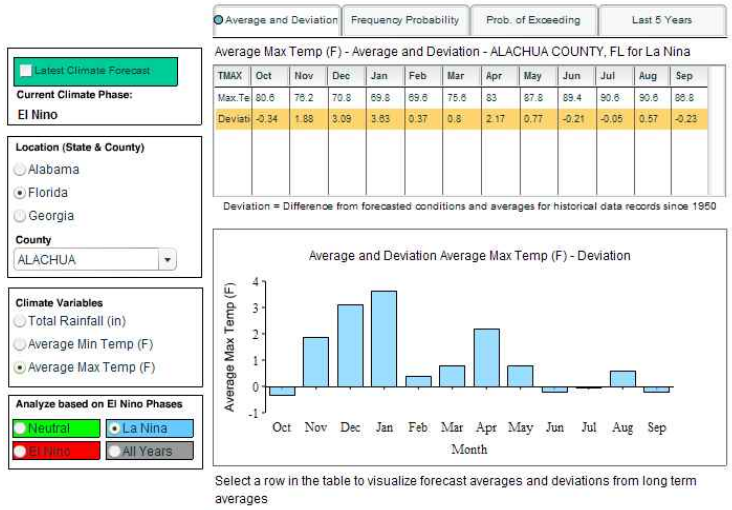
Maximum Temperature Monthly Averages

El Nino



TMAX	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Max.Te	80.62	72.88	66.75	63.57	67.14	73.29	79.57	85.71	90.29	91	90.14	86.71
Deviati	-0.32	-1.44	-0.96	-2.6	-2.09	-1.51	-1.26	-1.32	0.68	0.35	0.11	-0.32

La Nina



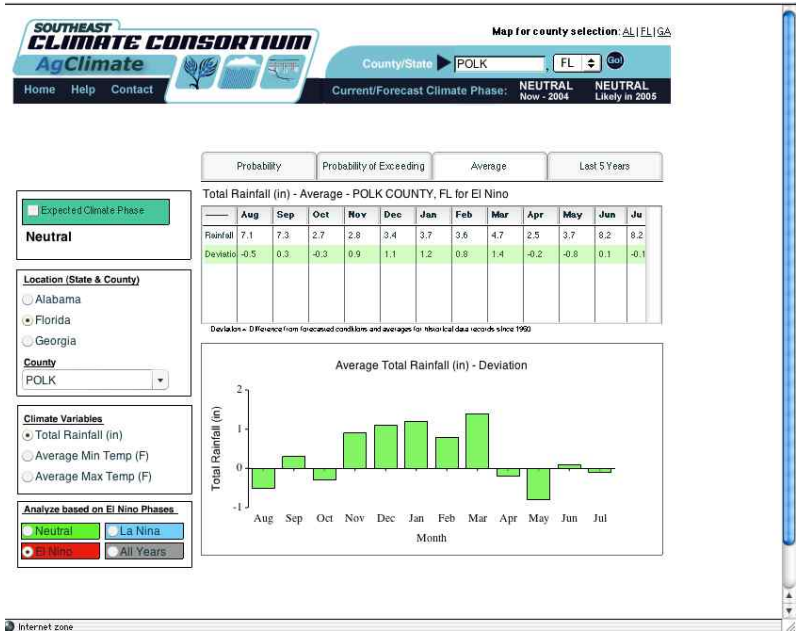
TMAX	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Max.Te	80.6	76.2	70.8	69.8	69.6	75.6	83	87.8	89.4	90.6	90.6	86.8
Deviati	-0.34	1.88	3.09	3.83	0.37	0.8	2.17	0.77	-0.21	-0.05	0.57	-0.23

Alachua County, Florida

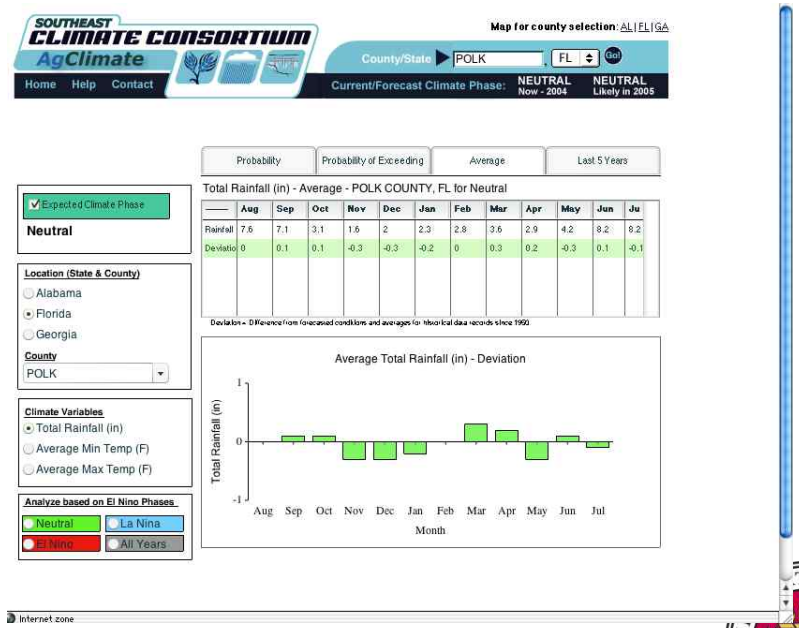
ENSO-Based Climate Forecast

Deviations in Monthly Rainfall Averages

El Nino



Neutral

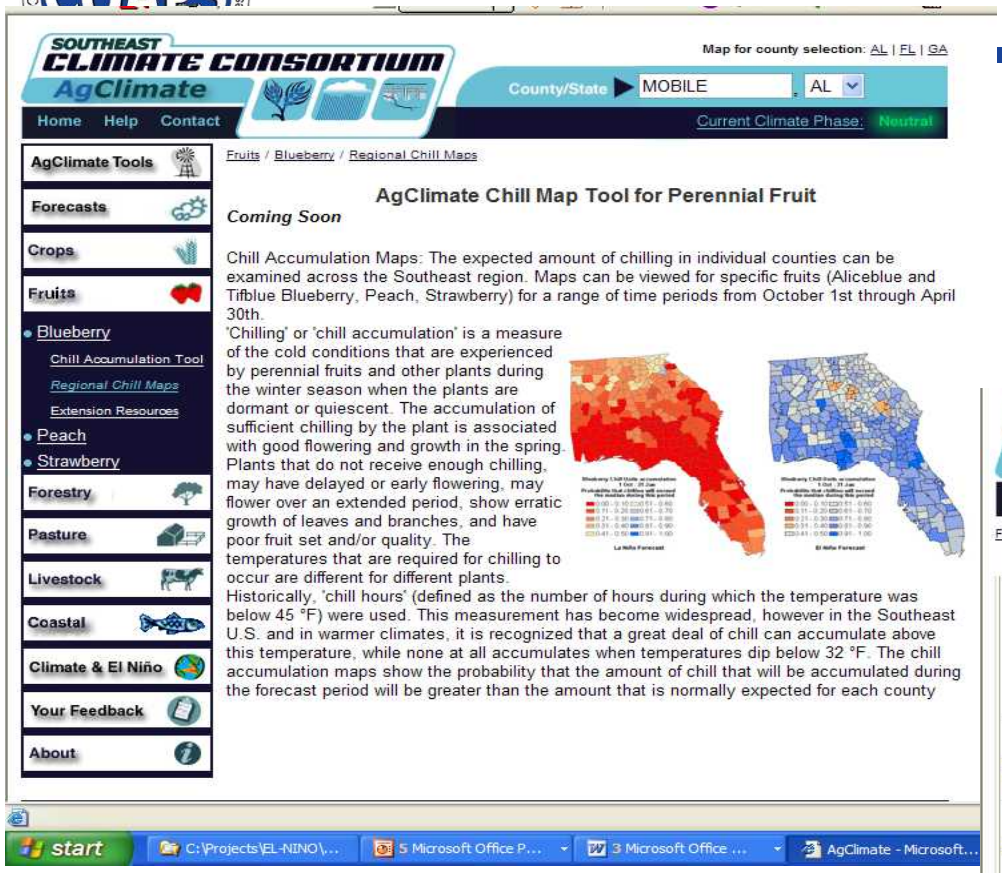


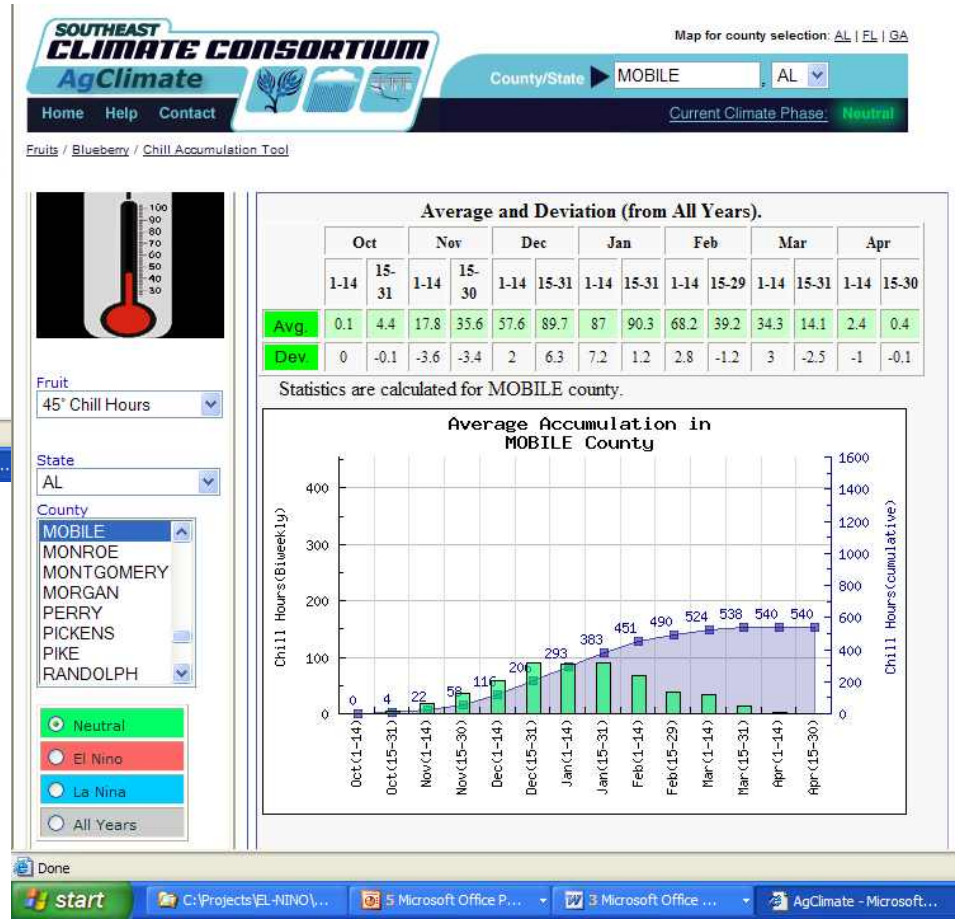
Polk County, Florida

Chill Unit Accumulation

- Blueberries
- Strawberries
- Peaches
- Wheat

Chill-Hour Forecasts for Fruit Production

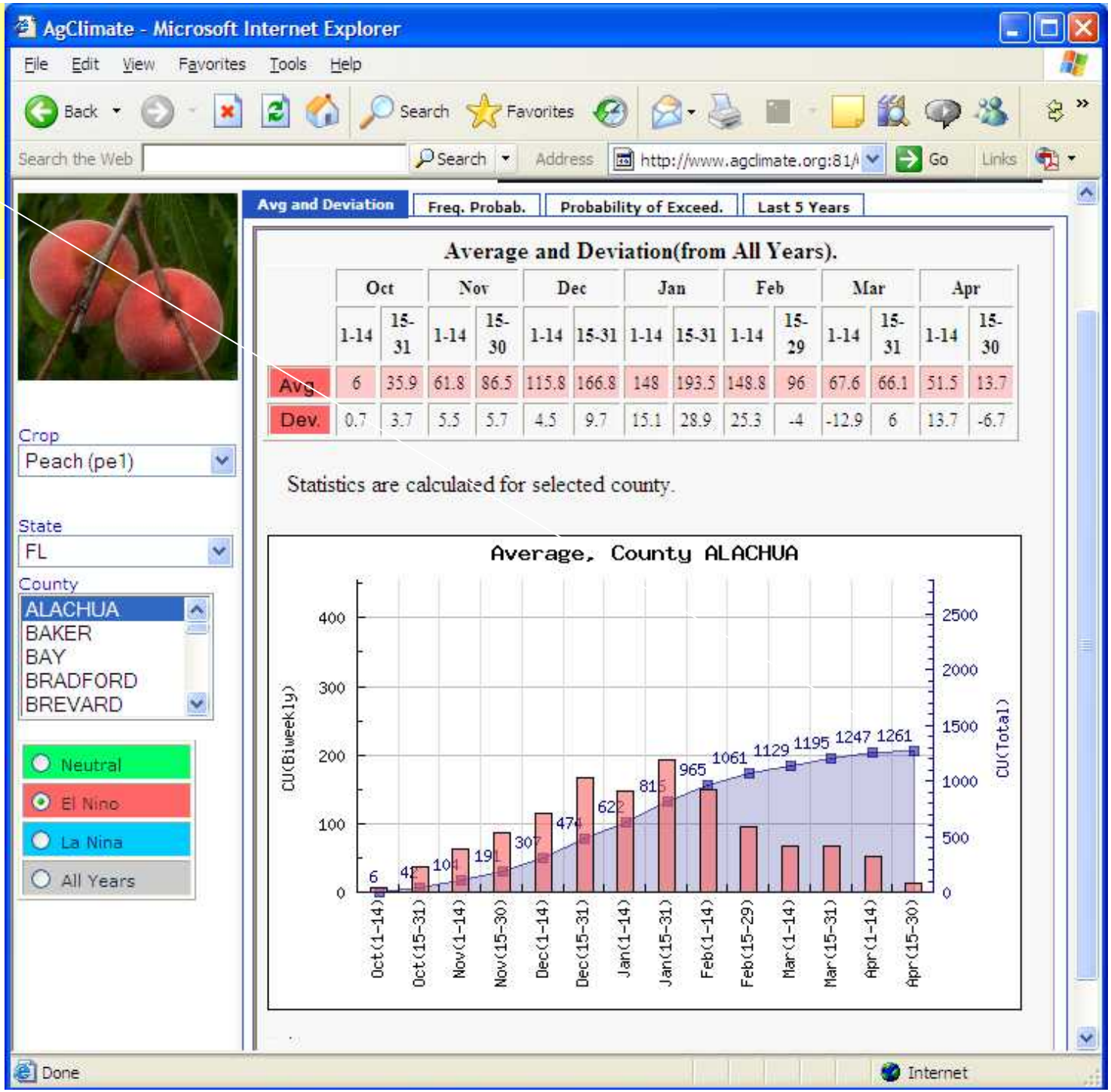




	Oct		Nov		Dec		Jan		Feb		Mar		Apr	
	1-14	15-31	1-14	15-30	1-14	15-31	1-14	15-31	1-14	15-29	1-14	15-31	1-14	15-30
Avg.	0.1	4.4	17.8	35.6	57.6	89.7	87	90.3	68.2	39.2	34.3	14.1	2.4	0.4
Dev.	0	-0.1	-3.6	-3.4	2	6.3	7.2	1.2	2.8	-1.2	3	-2.5	-1	-0.1

Chill Units – Peach, Alachua County, FL

El Nino Years
1,261 Chill Units on average



	Oct		Nov		Dec		Jan		Feb		Mar		Apr	
	1-14	15-31	1-14	15-30	1-14	15-31	1-14	15-31	1-14	15-29	1-14	15-31	1-14	15-30
Avg.	6	35.9	61.8	86.5	115.8	166.8	148	193.5	148.8	96	67.6	66.1	51.5	13.7
Dev.	0.7	3.7	5.5	5.7	4.5	9.7	15.1	28.9	25.3	-4	-12.9	6	13.7	-6.7

Chill Units – Peach, Alachua County, FL

La Nina Years
1,058 Chill Units on average

AgClimate - Microsoft Internet Explorer

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Avg and Deviation | Freq. Probab. | Probability of Exceed. | Last 5 Years

Crop
Peach (pe1)

State
FL

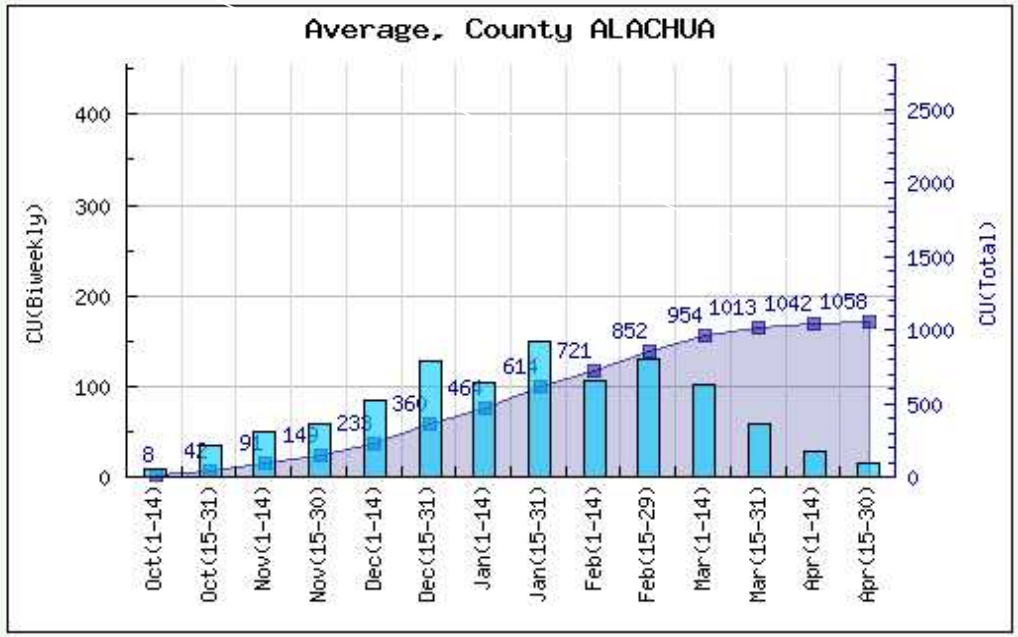
County
ALACHUA
BAKER
BAY
BRADFORD
BREVARD

- Neutral
- El Nino
- La Nina
- All Years

Average and Deviation(from All Years).

	Oct		Nov		Dec		Jan		Feb		Mar		Apr	
	1-14	15-31	1-14	15-30	1-14	15-31	1-14	15-31	1-14	15-29	1-14	15-31	1-14	15-30
Avg.	8.1	34.1	49.3	58.2	84	126.9	104.2	149.6	106.8	130.6	102	58.6	29	15.6
Dev.	2.8	1.9	-7	-22.6	-27.3	-30.2	-28.7	-15	-16.7	30.6	21.5	-1.5	-8.8	-4.8

Statistics are calculated for selected county.



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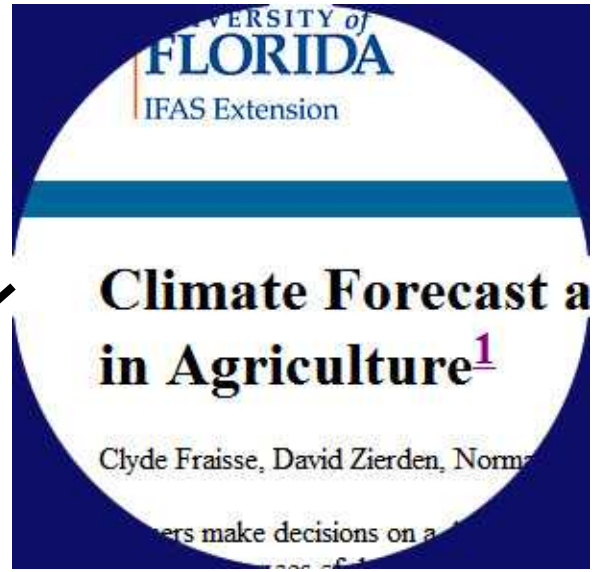
Climate Extension in Florida

AgClimate.org

Publications

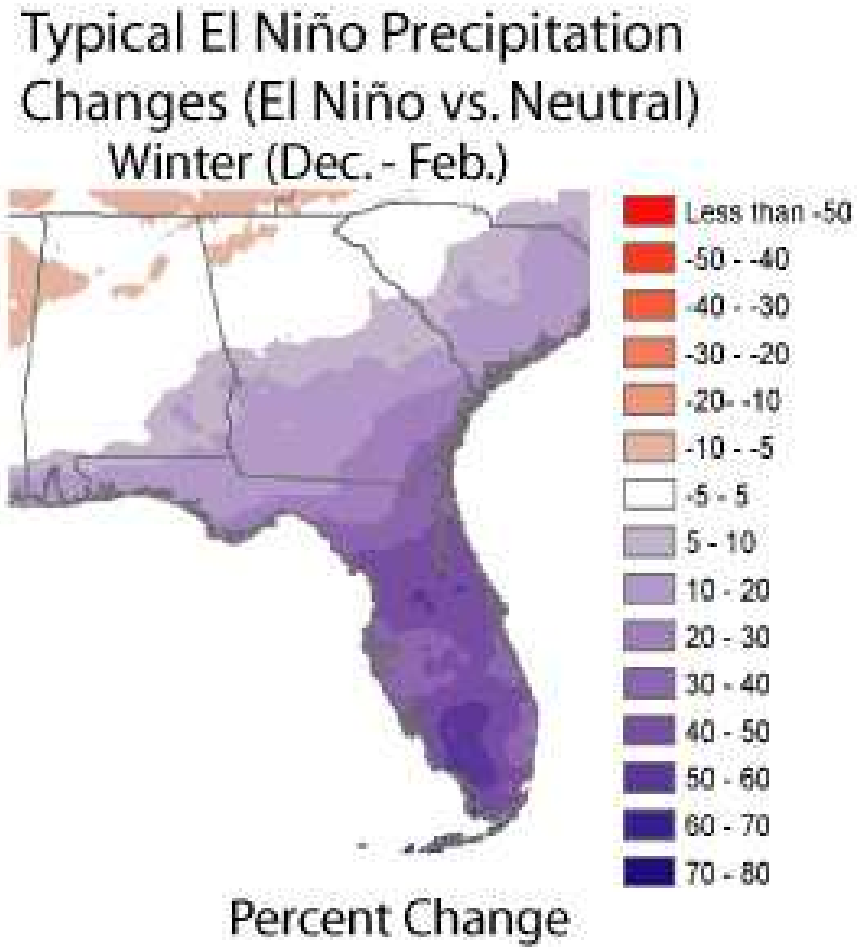


Climate Extension

Applied Research

Outreach

Winter Climate Outlook



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FOR MORE DETAILS!

Future

- Climate risks will gain more recognition as societies' understanding of and interest in climate grows
- Increasing awareness that risks associated with climate can be reduced in many cases
- Implement now new technology and you are preparing
- For CLIMATE CHANGE

For More Information:

Visit Our Websites

COAPS: www.coaps.fsu.edu/SECC

Florida Climate Center:

www.coaps.fsu.edu/climate_center

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ANY QUESTIONS?