

Come Grow with Us!

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Headed towards a Climate Shift

It may be difficult to comprehend, but cooling waters in the Pacific Ocean will lead to a change in weather patterns in our area. The phenomenon called La Niña happens when surface water in this area of the ocean reaches 4-7°F below the average temperature.

The phenomenon called El Niño-Southern Oscillation (ENSO), in which one cycle of this climate pattern La Niña is under, is the inter-annual fluctuation of the atmosphere-ocean system in the equatorial Pacific. It is called El Niño, which in Spanish means the Little Boy or Christ Child, and was first recognized by fishermen off the coast of South America in the 1600's. These fishermen noted shifts in oceanic temperature and the name El Niño was chosen because it coincided with the celebration of Christmas (birth of Christ Child), when warming of the ocean in the Southern Hemisphere tended to occur.

Phases of ENSO

It is constituted of three phases based on Equatorial Pacific Ocean surface waters: El Niño (above normal temperatures), La Niña (below normal temperatures) and Neutral (average temperatures; Figure 1).

The impact of this temperature shift can be felt in our region due to the water temperature's influence over trade winds which can be responsible for the moisture that enters our area.

The weather pattern shifts can occur in intervals of 2-5 years and phases can last anywhere from nine to 12 months.

Signs of El Niño in the US

Typically, El Niño weather patterns included warmer than average temperatures over the western and northern States of the Nation. Wetter than average conditions are seen over portions of the Gulf States and Florida, while dry conditions are seen in the Pacific North West and the Ohio Valley.

This past winter was noticeably mild and humid.

Signs of La Niña in the US

La Niña is the opposite pattern to El Niño. As the jet stream moves north, it creates more severe weather

events north of our State. La Niña brings an increasing chance of tornadoes and severe weather for Alabama and Georgia. This pattern can last for one to three years. It also brings cooler weather to the Southeast and warmer weather to center of the US during the fall months while delivering milder temperatures during the winter months to our area.

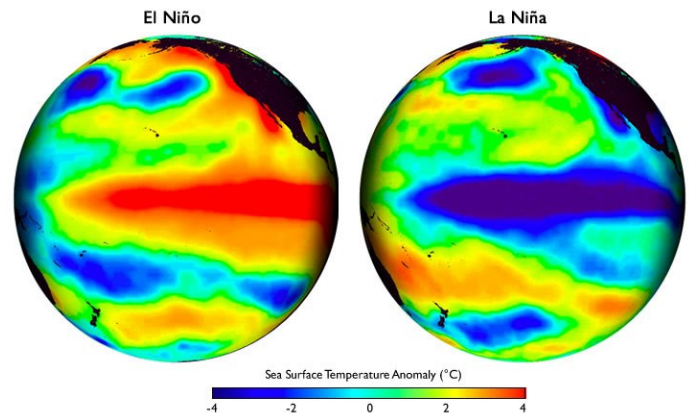


Figure 1. Surface temperatures of El Niño vs. La Niña. Red indicates warmer temperatures while blue represents cooler temperatures. Click on the image to enlarge.

So, what does this coming phase of La Niña bring?

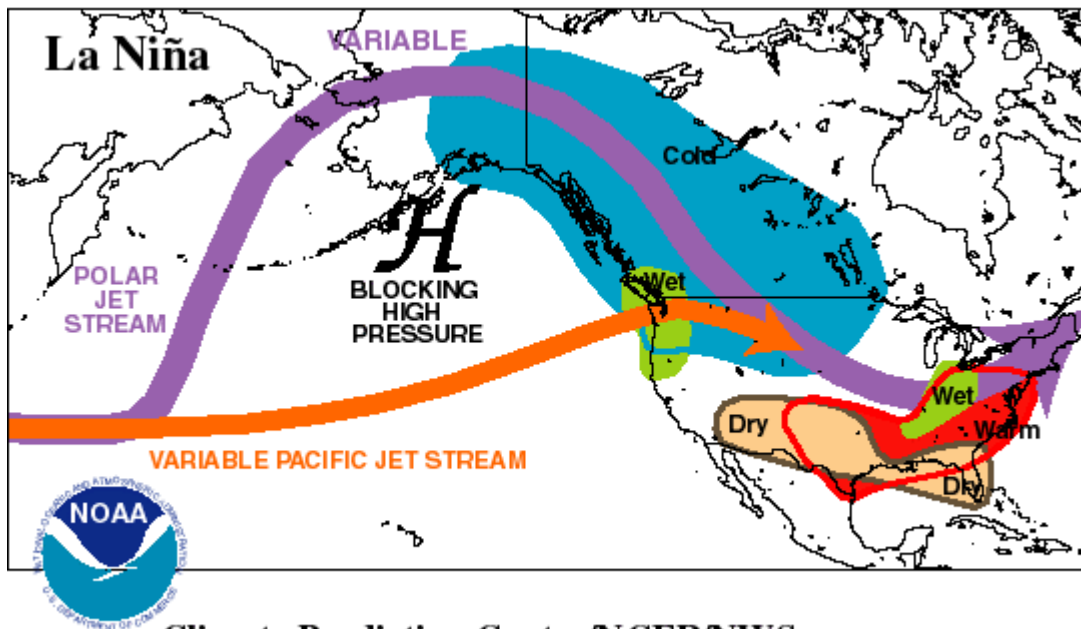
Colder Pacific Ocean surface water will affect the locations of thunderstorms. Rising air will result in lower pressure in the western Pacific. Pressure shifts can cause subtropical jet streams in the US to shift north, moving the storm track farther north from Florida in the Southeastern region meaning that our State will be drier than usual.

We can expect our weather to be slightly wet during the early summer (Neutral phase) turning slightly warm and dry from October to December.

We are also expecting a significant rise in cyclonic activity.

For winter crops planted in the area, La Niña can bring

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Climate Prediction Center/NCEP/NWS

Figure 2. La Niña winter will bring drier and warmer conditions to the Southeast. Source: http://climate.ncsu.edu/edu/k12/.la_nina

Increased yields due to cooler temperatures that can affect insect and disease pressure and less rain events that often leach nutrients past the root zone.

For livestock production enterprises, drier/cooler Fall and Winter months can result in less nutrient management issues that can be affected by excessive rains. Nevertheless, a reduction in moisture often times will result in a reduction on pasture growth. Watch out for your stocking rates, which might have to be reduced to avoid supplementation costs.

NOAA 90-day Outlook is calling for an increase in average rainfall for our area. In terms of temperatures, no significant shifts are expected from the normal patterns. The AgroClimate website calls for a 47 percent chance of a Neutral phase and a 45 percent chance of a La Niña phase in the months of June through August. We are still in an El Niño phase right now. This means that if you are working outside, please have an abundant supply of cool water to replenish and counter those hot and humid days ahead.

For more information on this topic, please call the UF/IFAS Extension Hardee County office at 863-773-2164.