



**COLORADO STATE UNIVERSITY
EXTENSION**

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Agronomy Agent's Corner #20

Todd Ballard

What to Expect from El Niño Southern Oscillation (ENSO)

During the 1997-98 El Niño David Letterman had a running joke on his show. Each night he would read news of an odd event and follow up by saying it was caused by El Niño. This was the first time I remember the ENSO receiving large scale media attention. Many people were unaware of what ENSO was and how it affects the weather.

ENSO is weather a cycle with a seemingly random fluctuation of Pacific surface temperatures off the coast of Ecuador. If a three-month span has an average eastern equatorial Pacific surface temperature greater than 0.5 C° warmer than the long-term average, the three-month span is an El Niño. The term is Spanish for the boy. It was given this name since the events are typically occur near Christmas. When temperatures are cold to the same extent the event is called La Niña.

The direct effects are a change in atmospheric moisture and heat available in the Americas. El Niño brings more rain and warmer temperatures to us. La Niña brings drought and colder temperatures. Of course, the effects are not evenly distributed across the continents. Some areas see more of an impact. Others are less likely to notice a change. The current state is a mild La Niña. Our precipitation over the last thirty days reflects the dryer than normal expectations. Colorado's state climatologist and the National Oceanic and Atmospheric Administration agree we should continue to see La Niña until at least February, meaning the potential for continued dry weather in our region.

The effect on our crops is yet to be known. The good news is the wheat is dormant for winter. The bad news is the soil is already dry and we will be needing strong spring precipitation as much as ever. History shows when La Niña extends into the spring, Colorado wheat has a down year. An extended La Niña from May of 2009 to April of 2012 lead to the widely failed wheat crop of 2012. However, a short lived La Niña can be overcome to have a good crop. This occurred in 2017 when La Niña conditions ended in January.