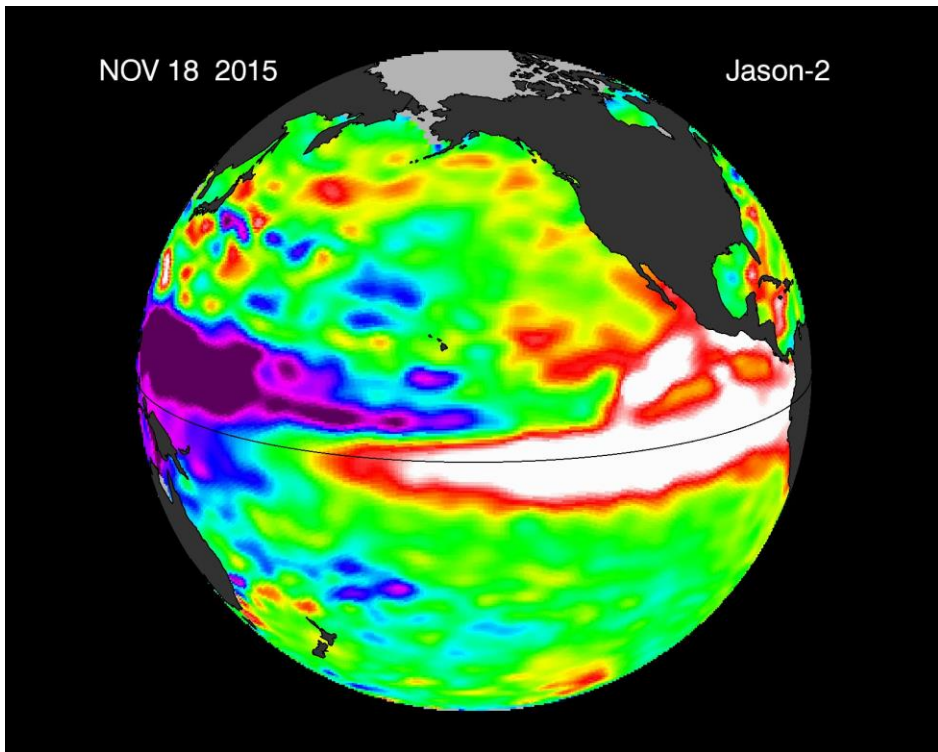
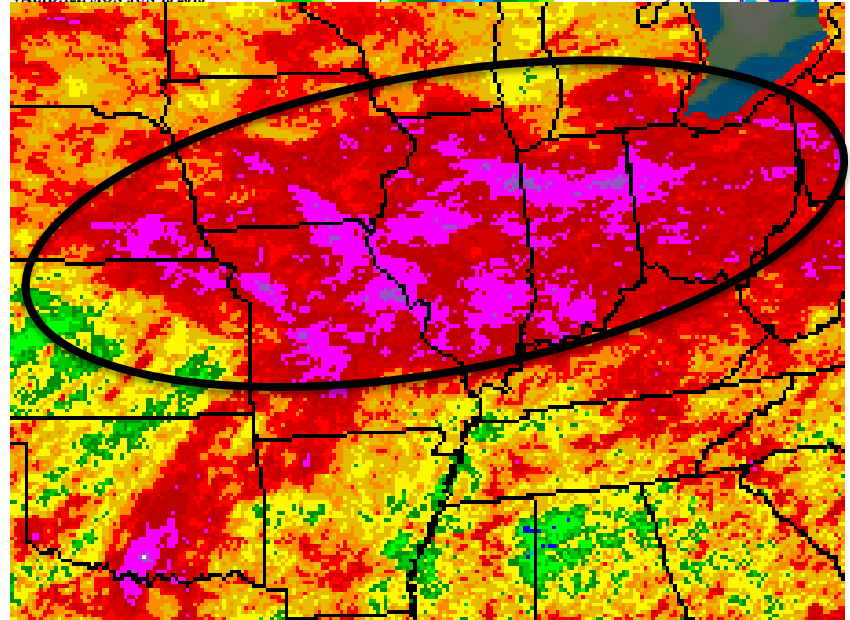
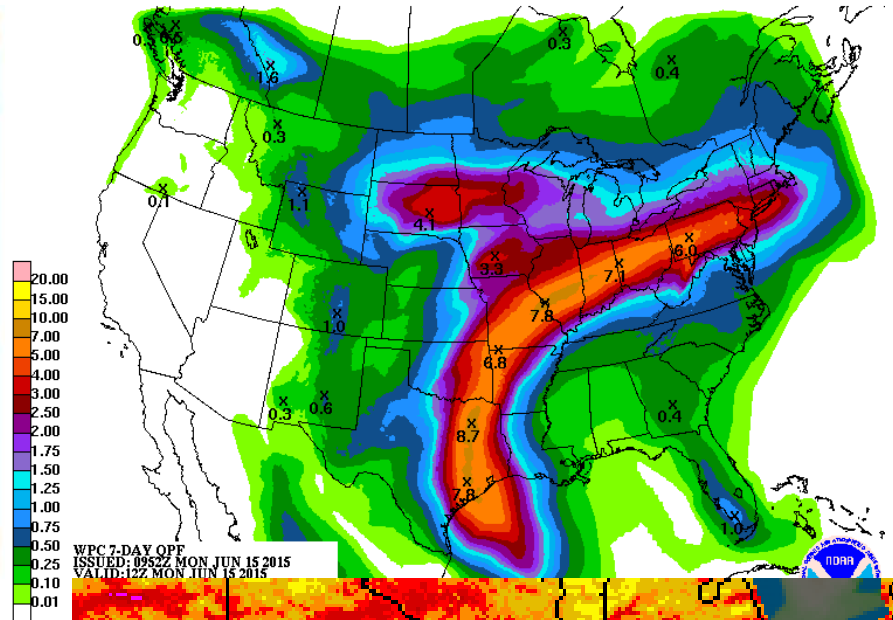
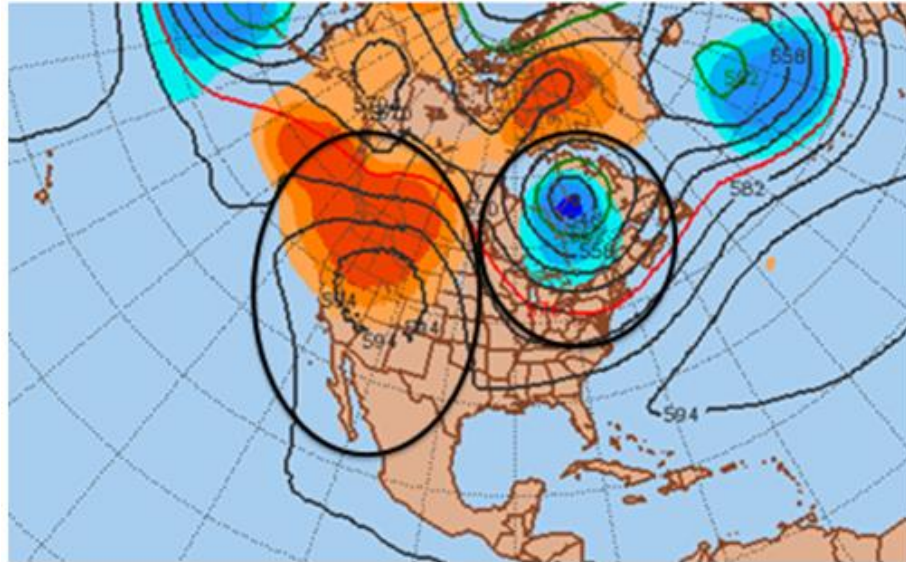


# 2016 Crop Weather:

## El Nino Dominar



# Stubborn Pattern = Stormy Start



# WCB-ECB July Contrast



Eastern  
Nebraska



Southwestern  
Illinois

# Wide US Variety



# El Nino Rides In—July '15



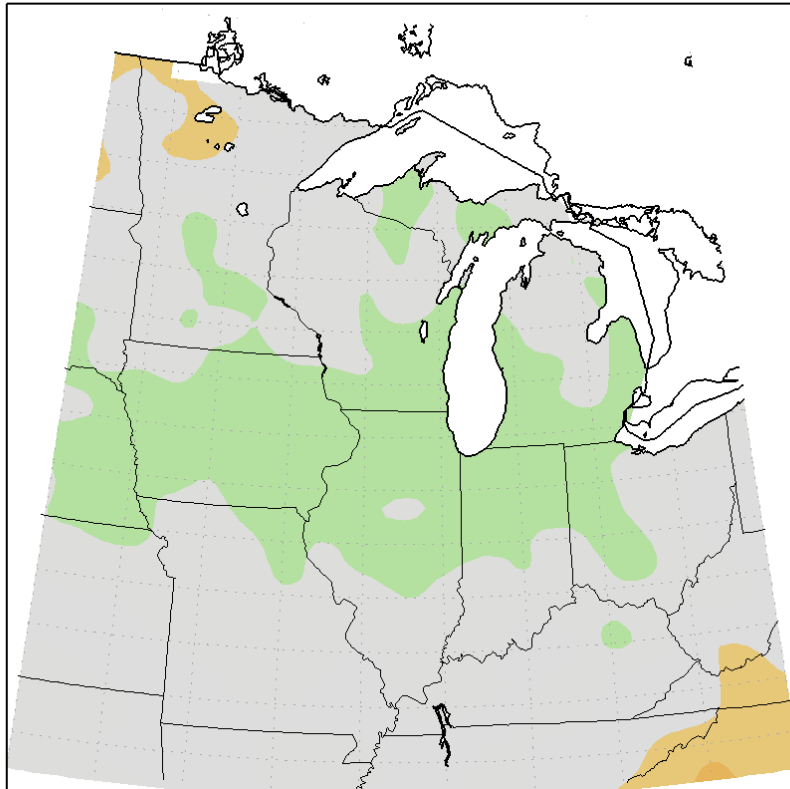
**Latest Southern Oscillation Index (SOI) values**

SOI values for 09 Jul 2015		Monthly average SOI values	
Average for last 30 days	<b>-15.39</b>	April	<b>-3.08</b>
Average for last 90 days	<b>-9.92</b>	May	<b>-13.11</b>
Daily contribution to SOI calculation	3.32	June	<b>-10.30</b>

Values in El Nino category.

# El Nino Temperature Effect

Average Temperature (°F): Departure from Mean  
June 1, 2015 to August 31, 2015



Mean period is 1981–2010.



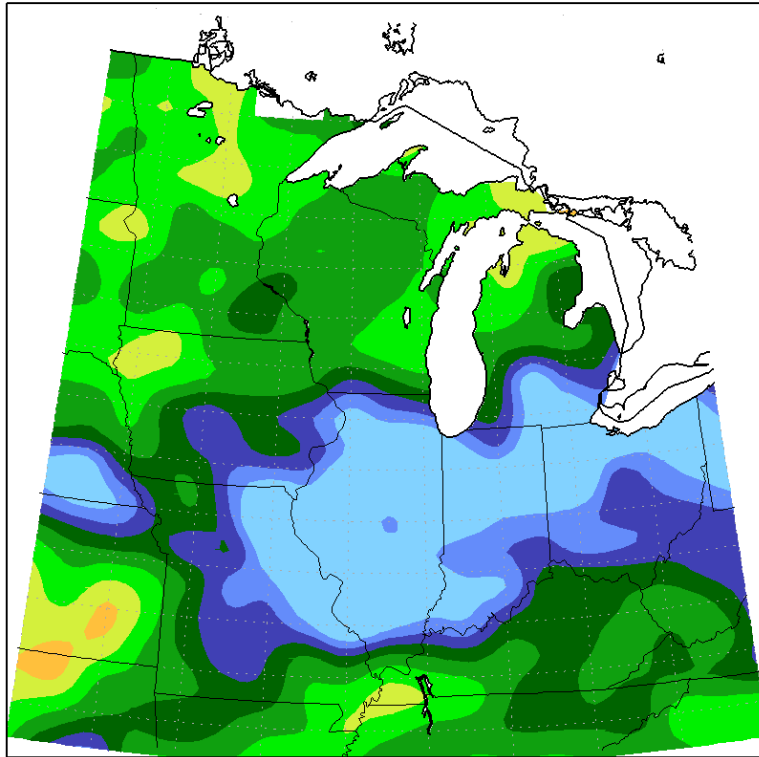
Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana–Champaign

Summer temps in Midwest were not stressfully hot.

Most values near to below normal.

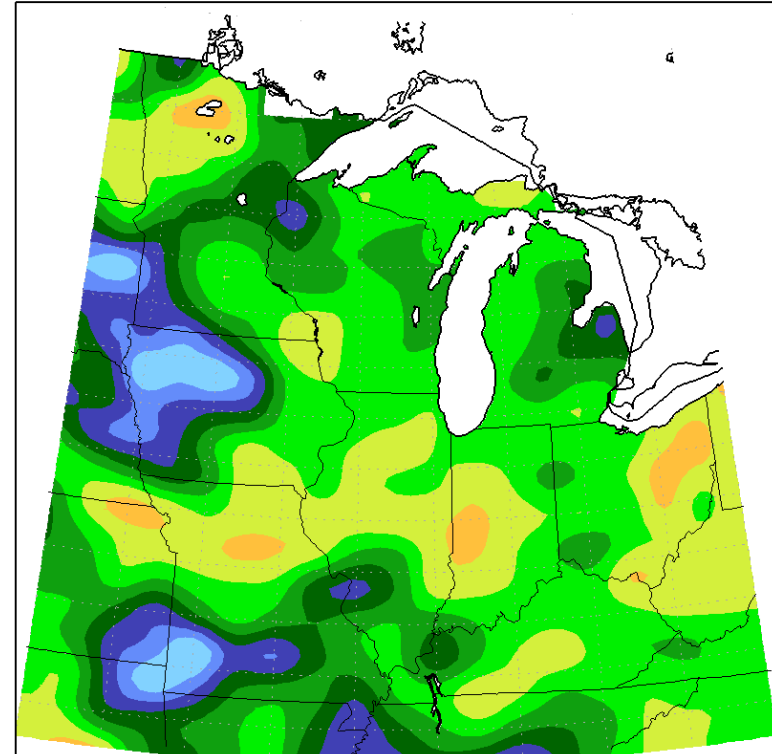
# El Nino Precip Effect

Accumulated Precipitation: Percent of Mean  
June 1, 2015 to June 30, 2015

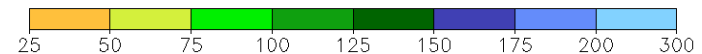
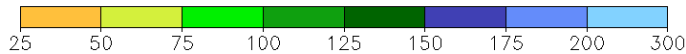


Mean period is 1981–2010.

Accumulated Precipitation: Percent of Mean  
August 1, 2015 to August 31, 2015



Mean period is 1981–2010.



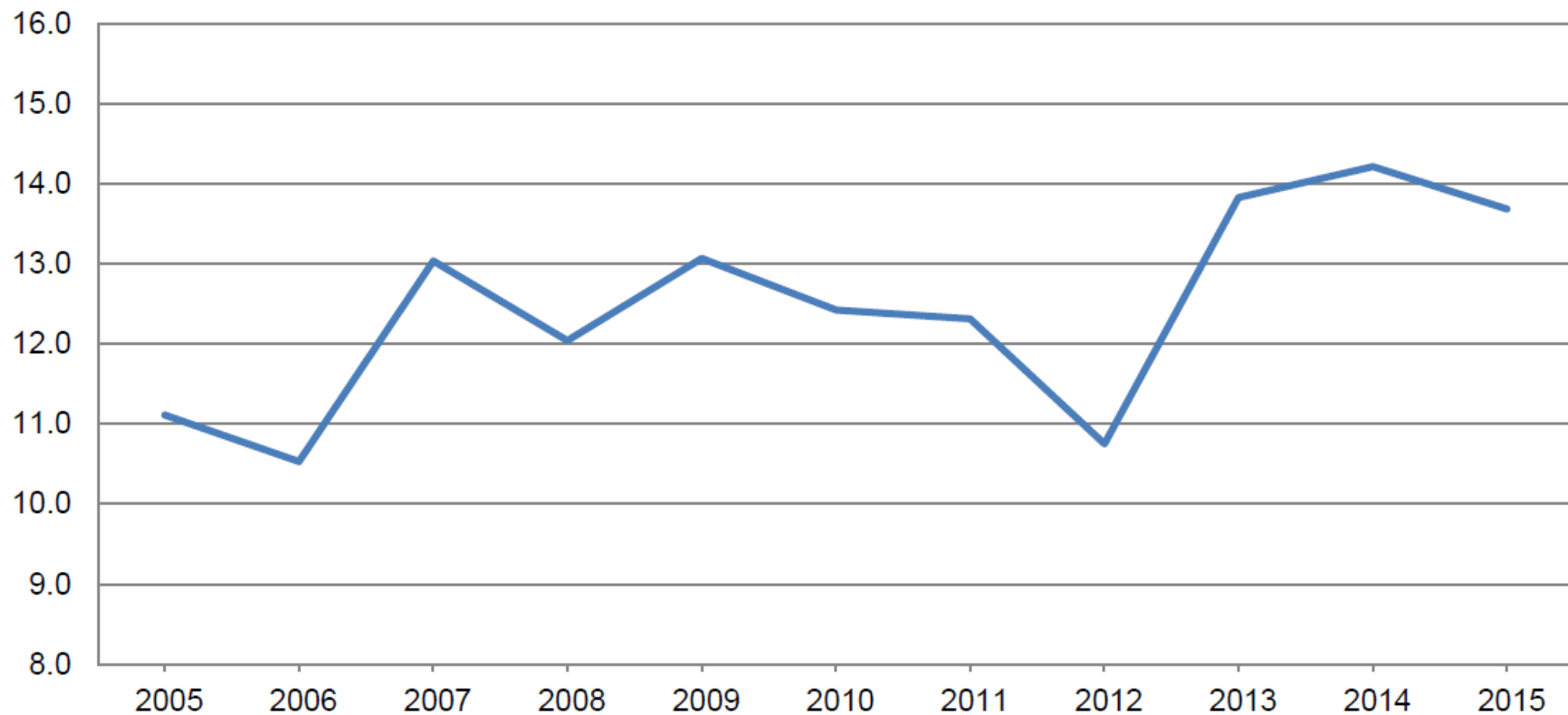
Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana–Champaign

Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana–Champaign

## Drier versus normal later in summer.

# August USDA Corn Estimate

Billion bushels

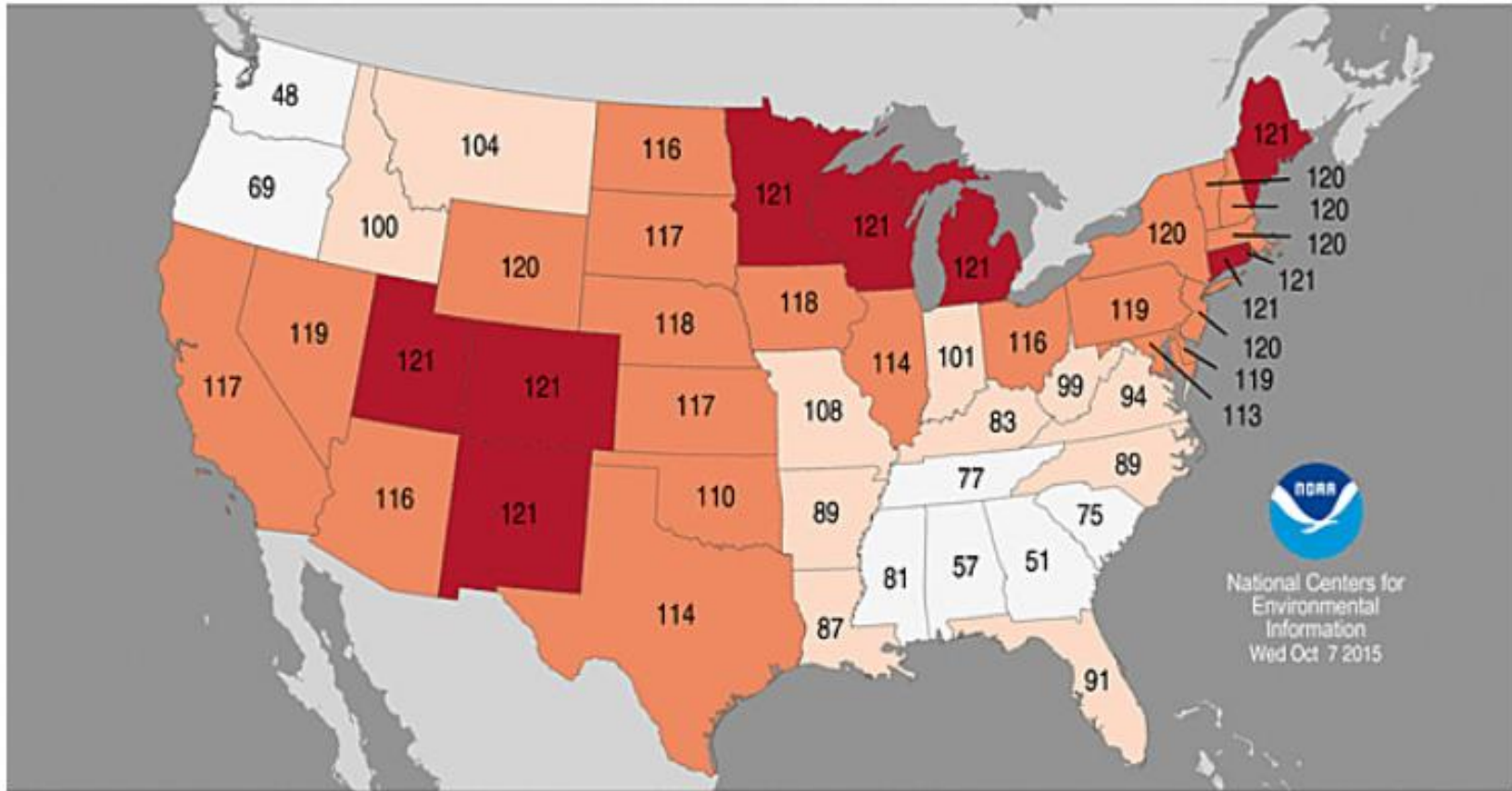


13.7 Billion Bu—3<sup>rd</sup> largest

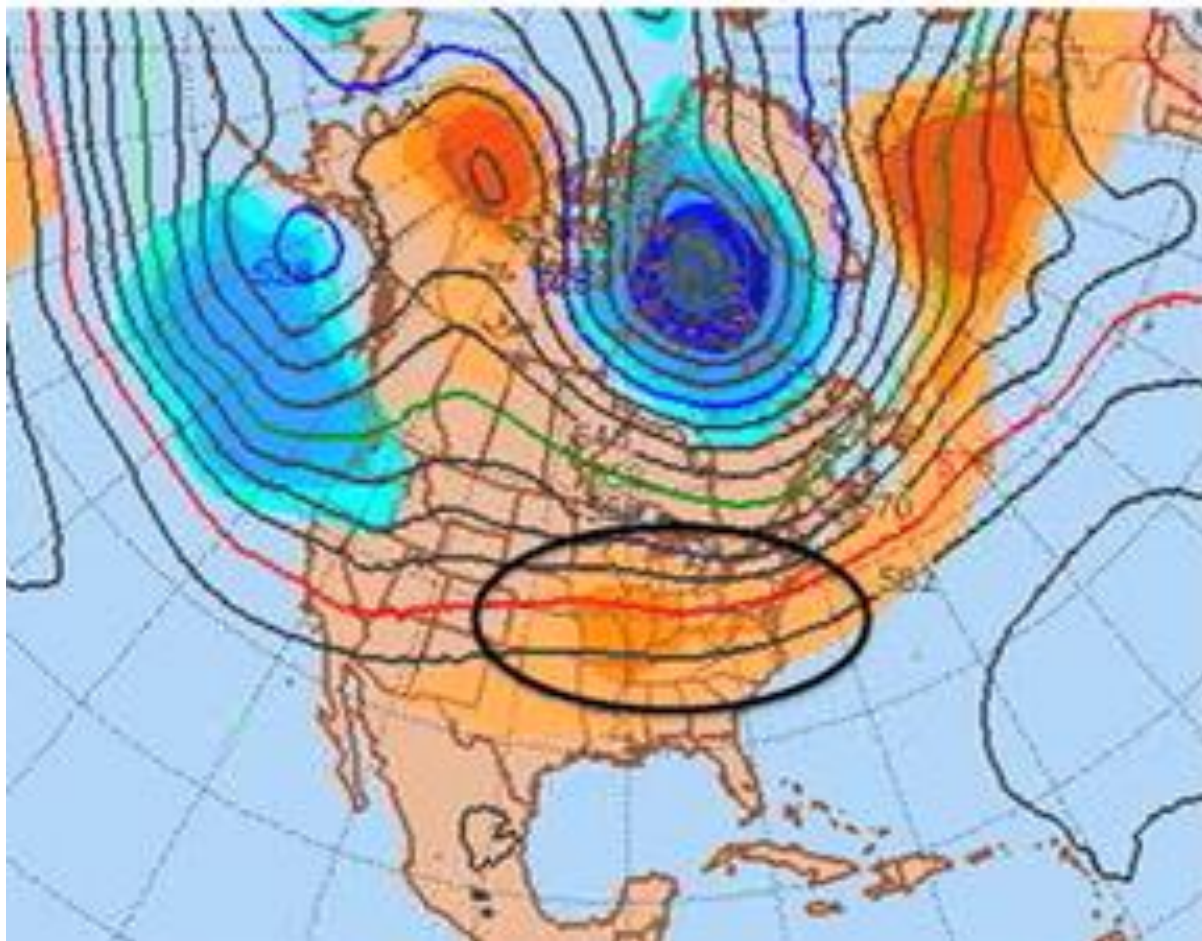


# September Frost? Nope.

**Statewide Average Temperature Ranks**  
 September 2015  
 Period: 1895–2015



# Fall 2015 Upper Air Pattern



Zonal flow  
allowed  
warm temps  
for ripening  
crops.

# Harvest Stays Large



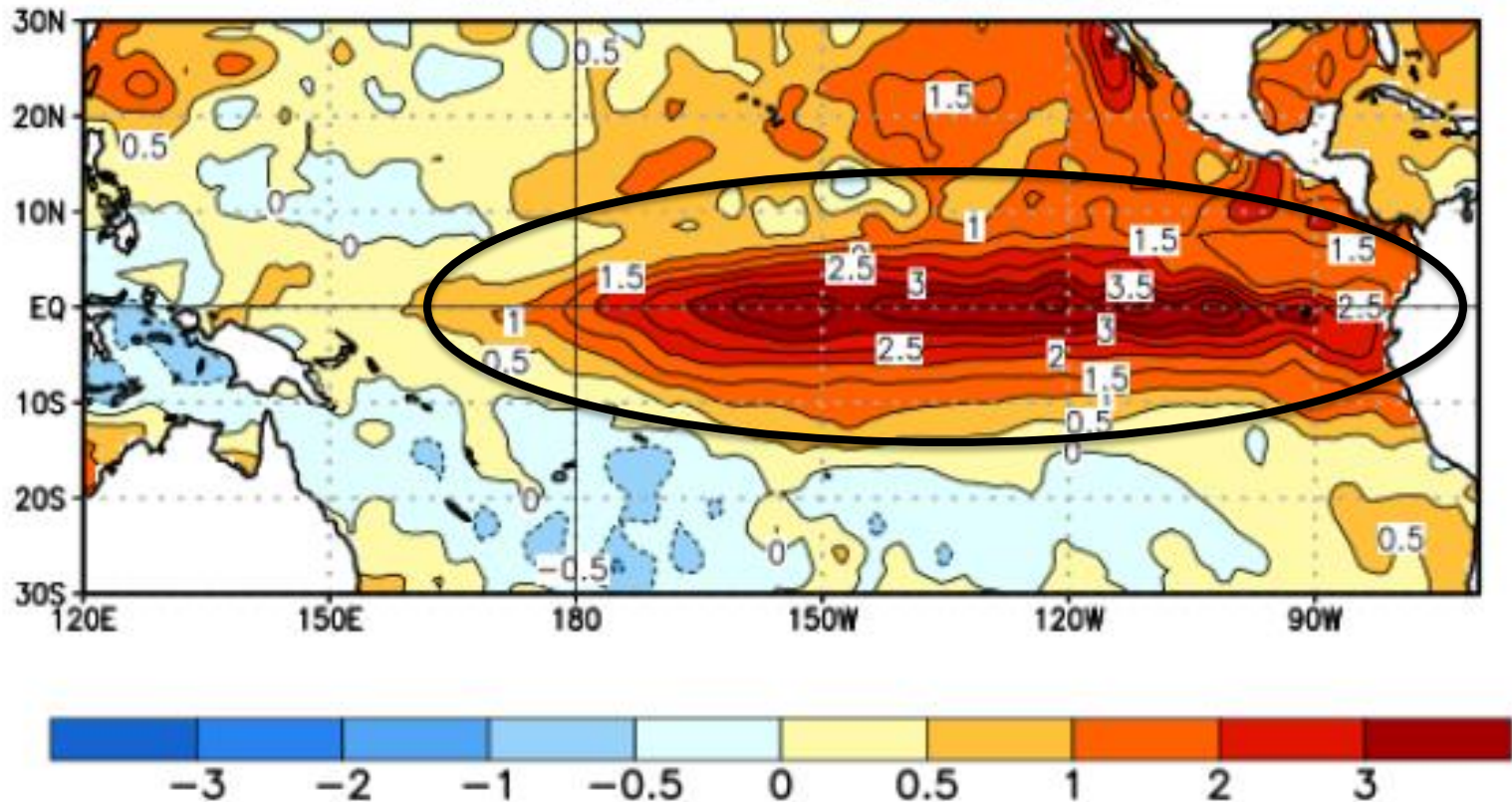
Corn—13.7  
Bil Bushels



Soy—3.98 Bil  
Bushels

# Pacific Temperatures

Average SST Anomalies  
1 NOV 2015 – 28 NOV 2015



Far above normal in equatorial Pacific. 3<sup>rd</sup> warmest on record.

# Australia SOI—Dec 2 2015



## SOI values for 02 Dec 2015

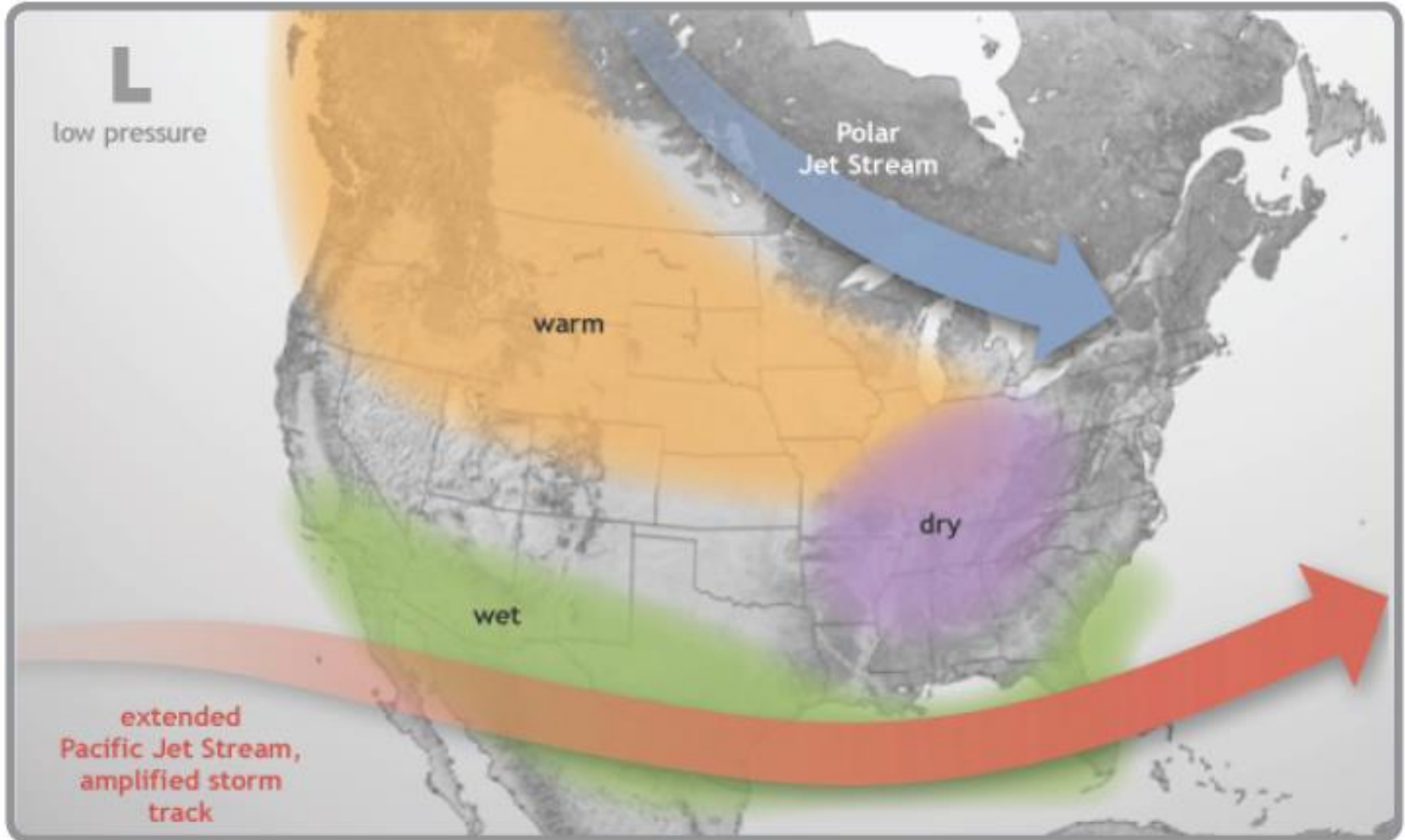
Average for last 30 days	<b>-4.80</b>
Average for last 90 days	<b>-14.40</b>
Daily contribution to SOI calculation	<b>-33.68</b>

## Monthly average SOI values

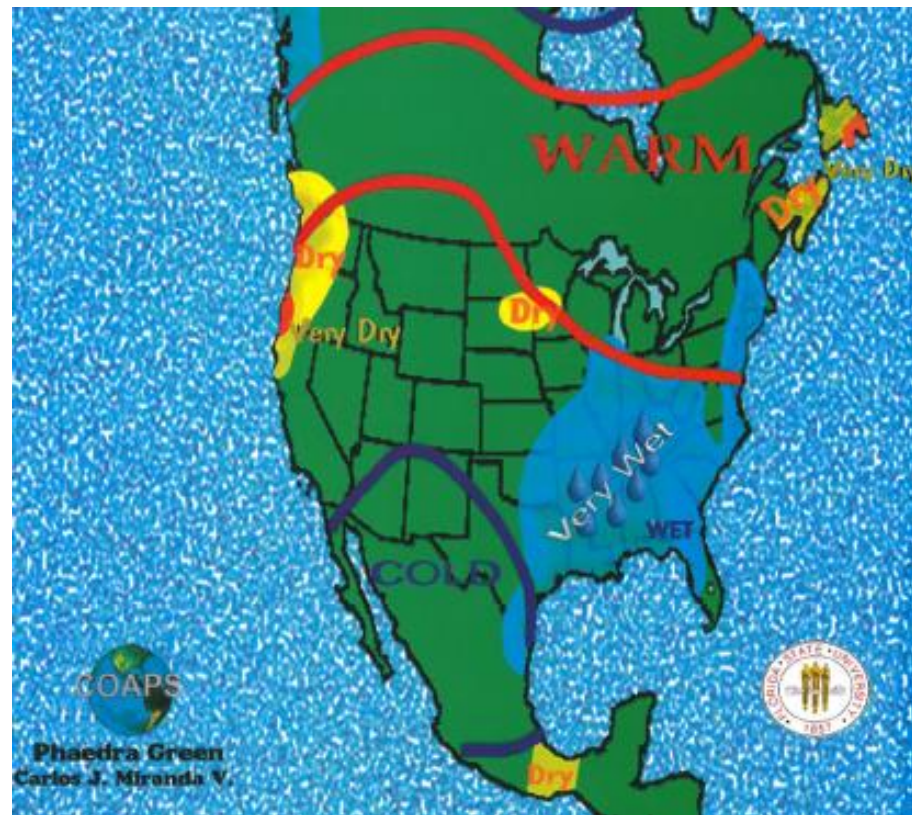
September	<b>-16.66</b>
October	<b>-21.30</b>
November	<b>-3.23</b>

Values in moderate to strong El Nino category.

# Winter El Nino Pattern

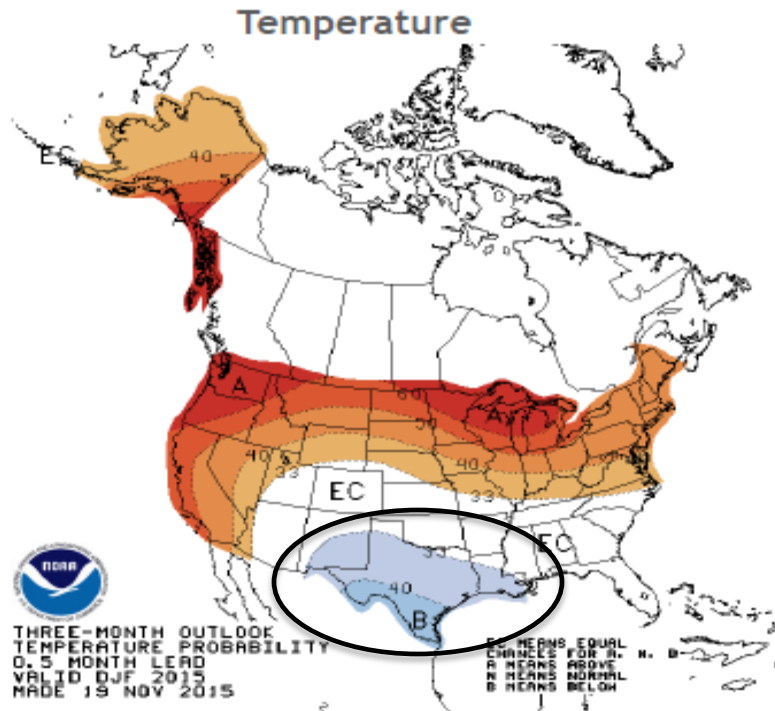


# Winter & Spring Effect

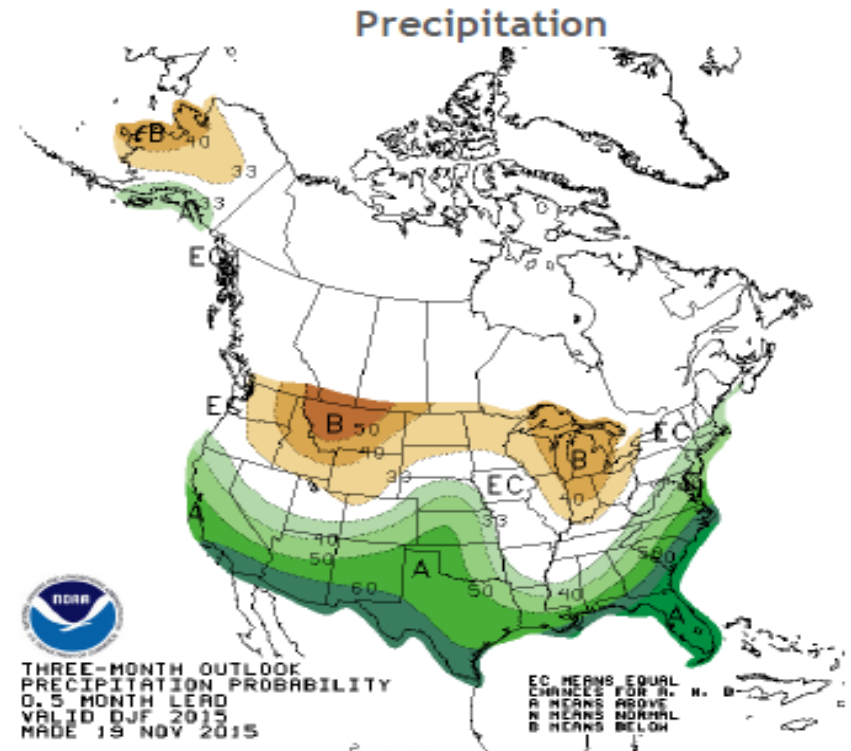


Trends for U.S. weather pattern when El Nino is in effect.

# Winter Forecast



Below normal temps confined to SW Plains.



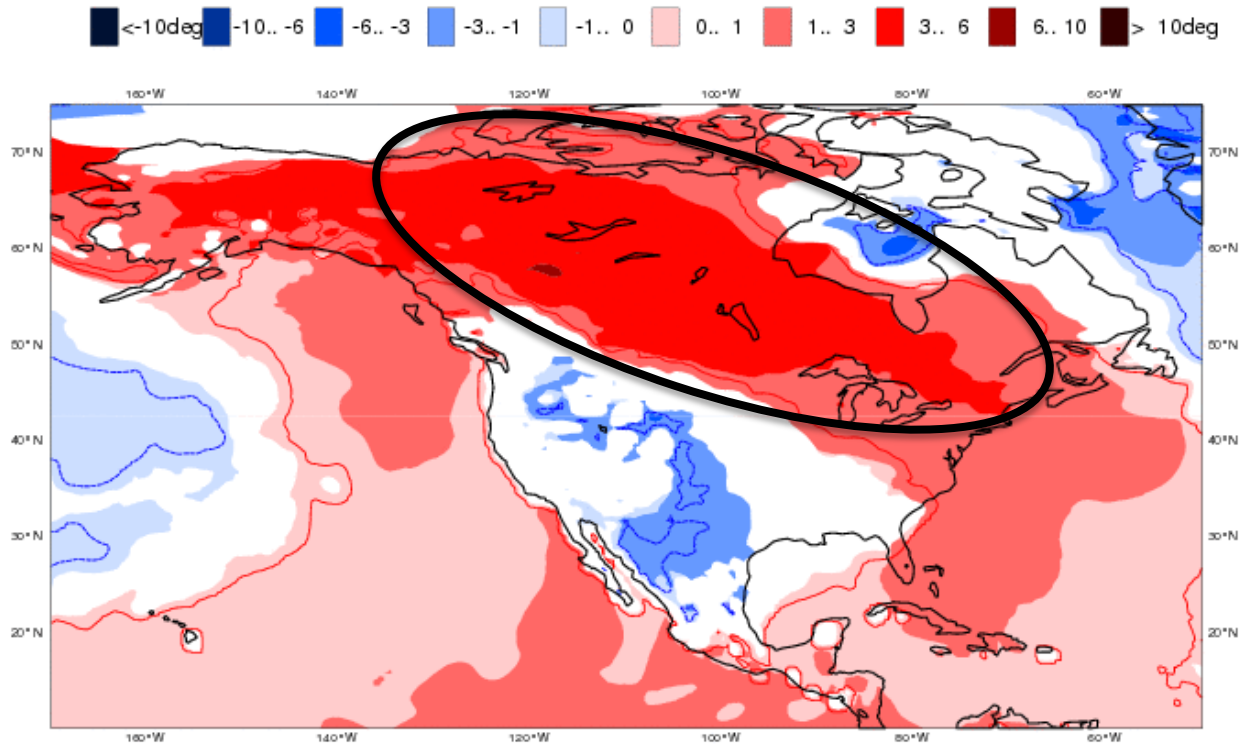
Above normal precip S Plains, S' east. Dry NW & Midwest.



# Warmth Indeed For December

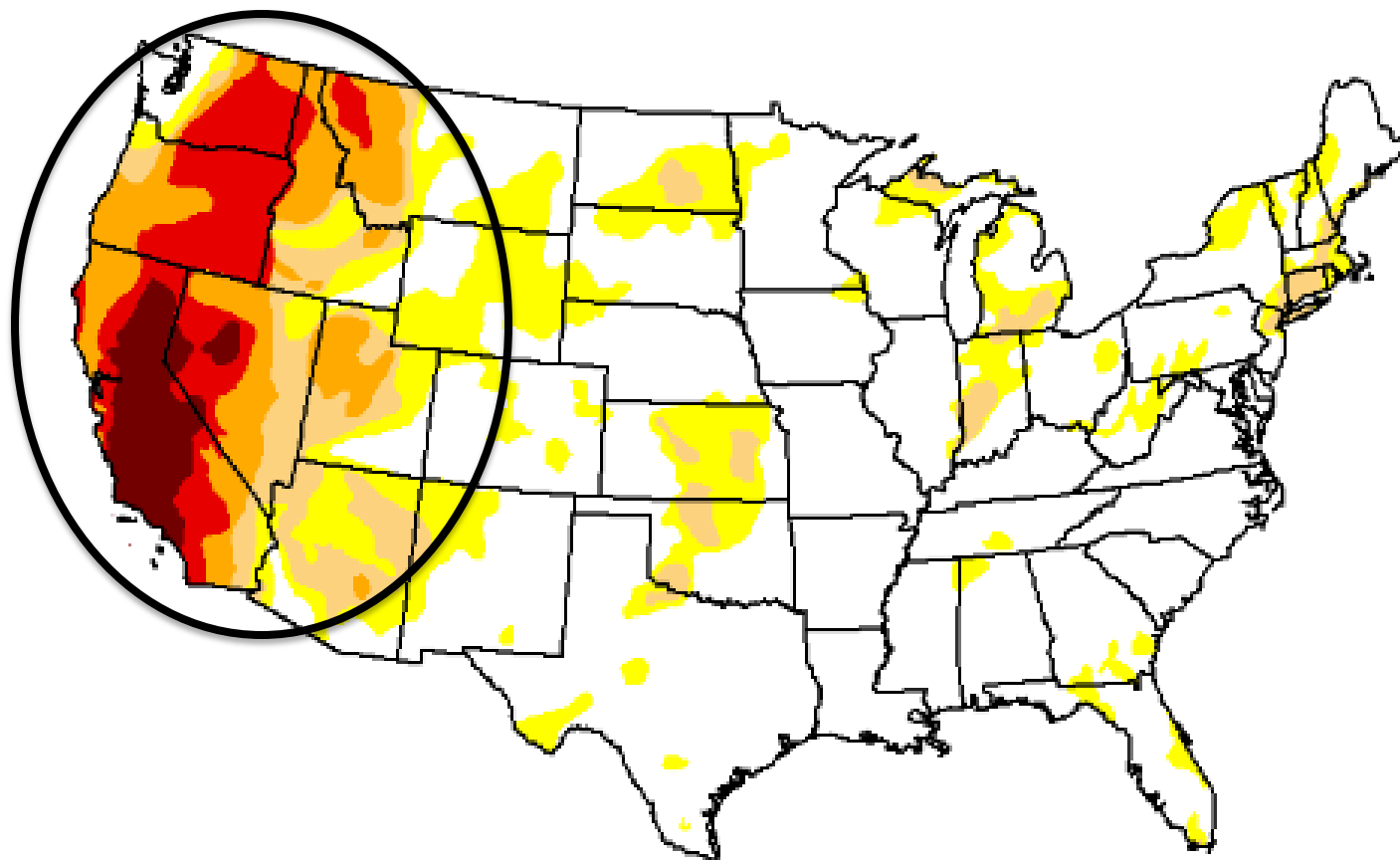
ECMWF EPS-Monthly Forecasting System  
2-meter Temperature anomaly  
Forecast start reference is 30-11-2015  
ensemble size = 51 , climate size = 660

Day 22-28  
21-12-2015/TO/27-12-2015  
Shaded areas significant at 10% level  
Contours at 1% level



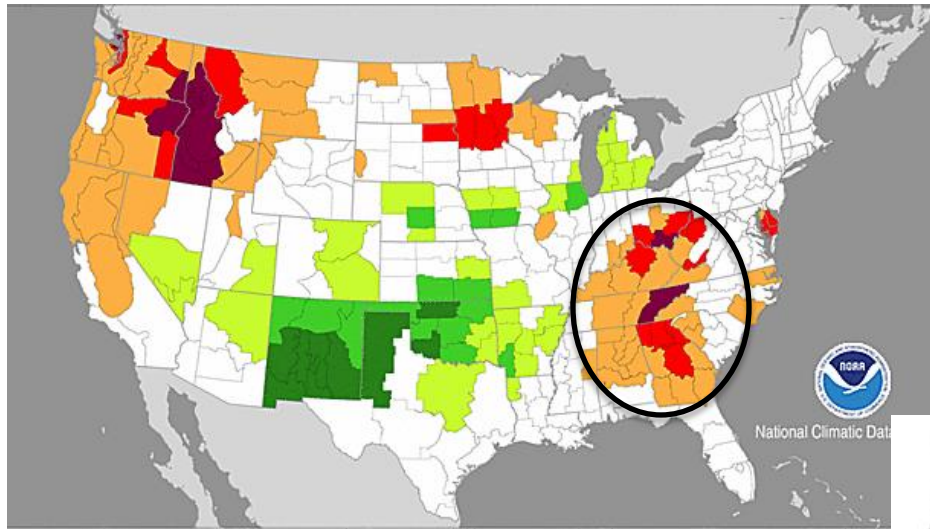
Well above normal in Canadian Prairies. No Polar Vortex trifecta.

# Drought Monitor



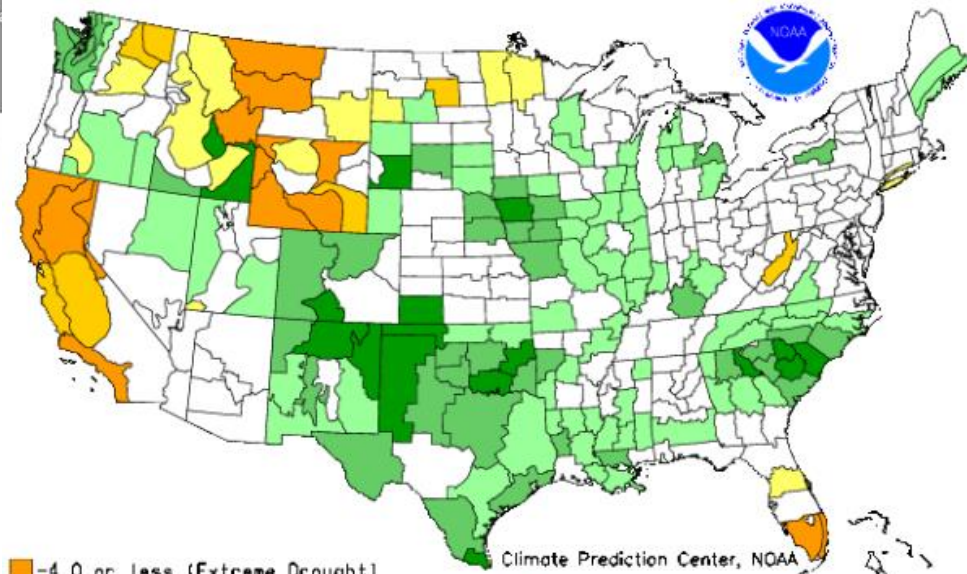
Issues still focus on western states.

# Palmer Drought Index



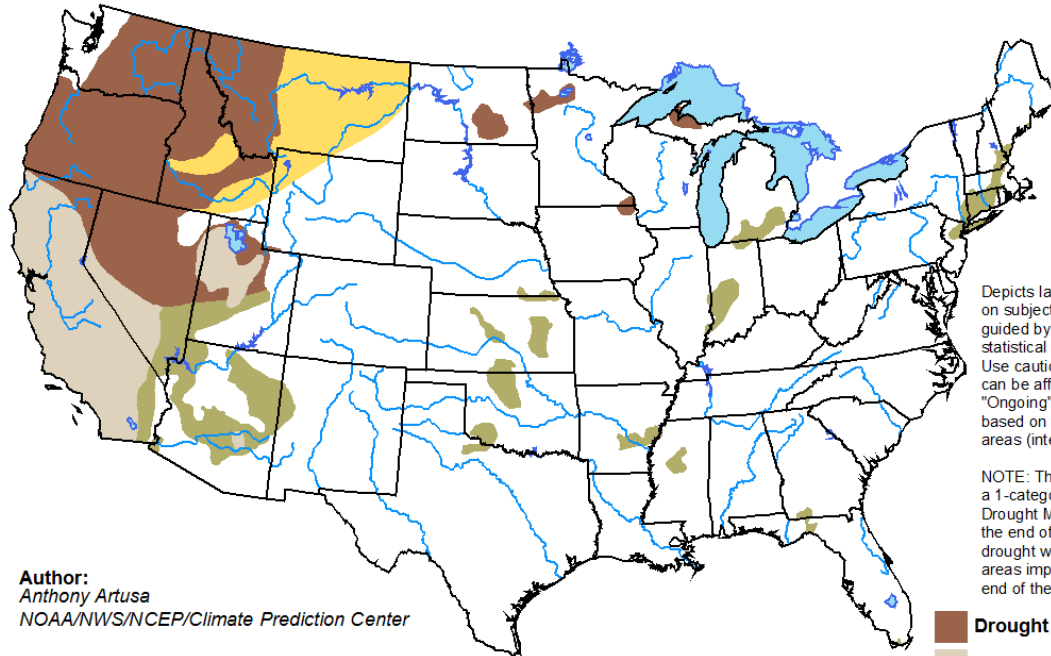
Dec 1987

Nov 2015



# Drought Forecast

**U.S. Seasonal Drought Outlook** *valid for November 19 - February 29, 2016*  
**Drought Tendency During the Valid Period** *Released November 19, 2015*



**Author:**  
 Anthony Artusa  
 NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



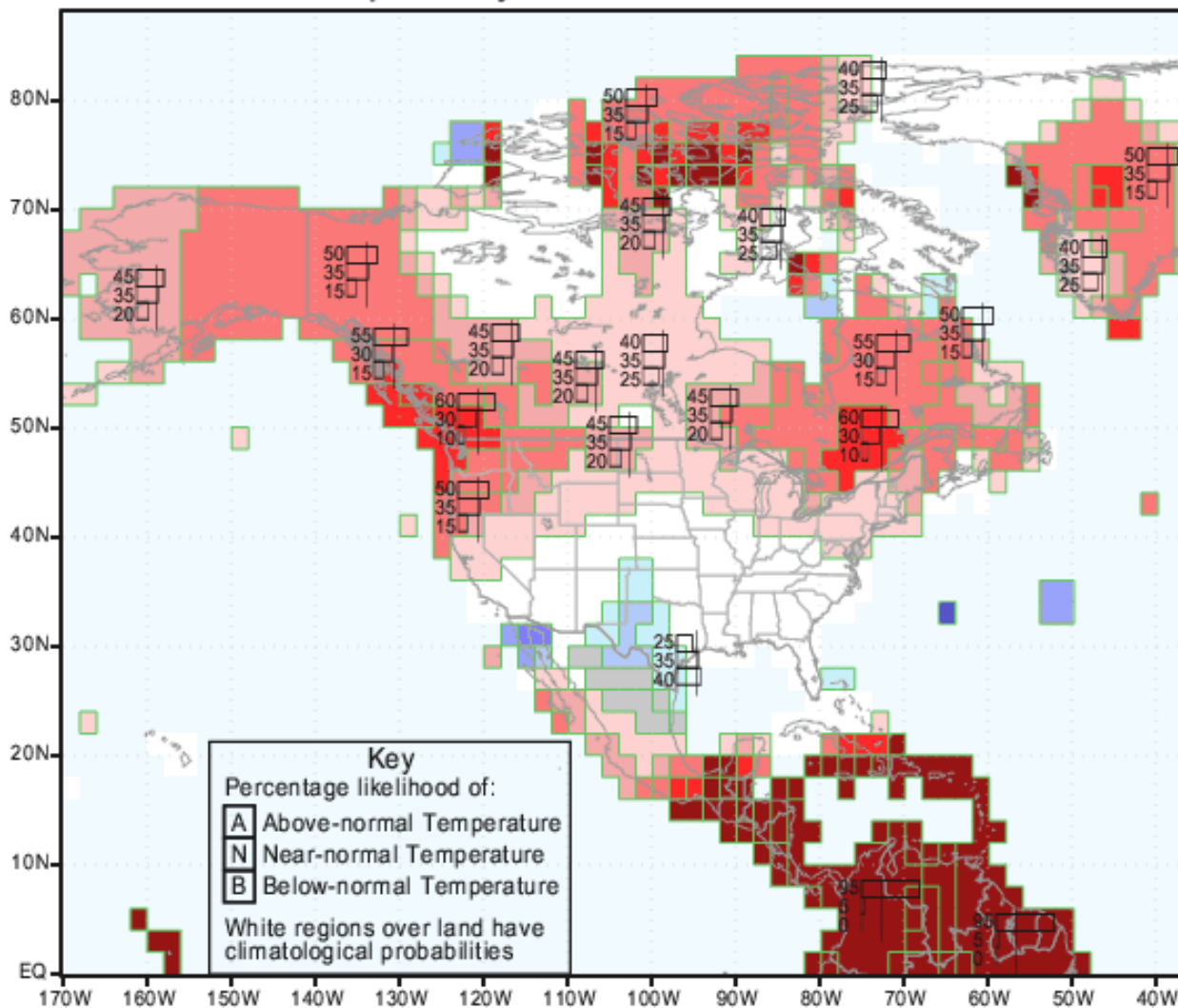
<http://go.usa.gov/3eZ73>



West improvement. Northwest constant.  
 Removal elsewhere.

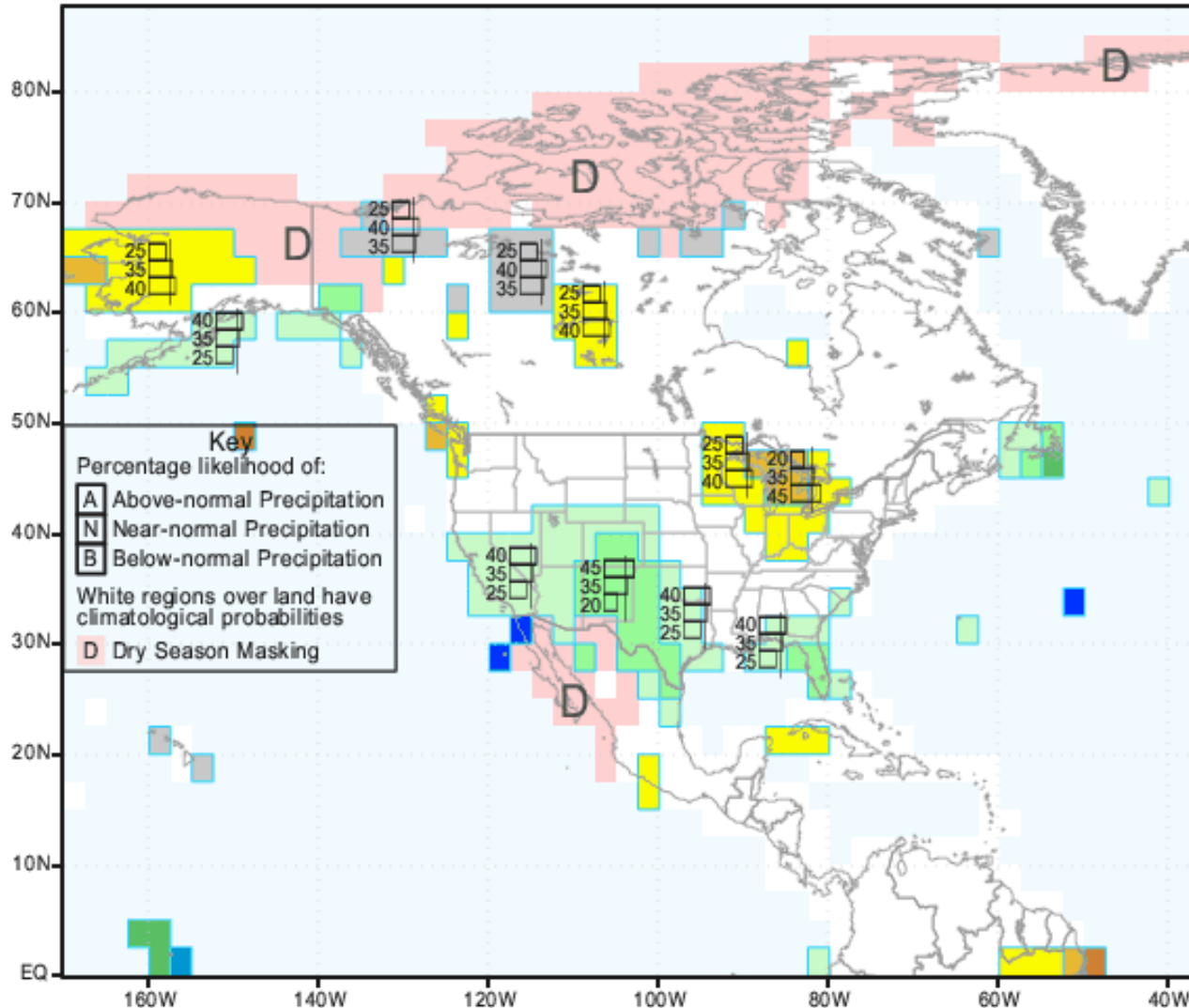
# Spring Forecast

IRI Multi-Model Probability Forecast for Temperature  
for March-April-May 2016, Issued November 2015



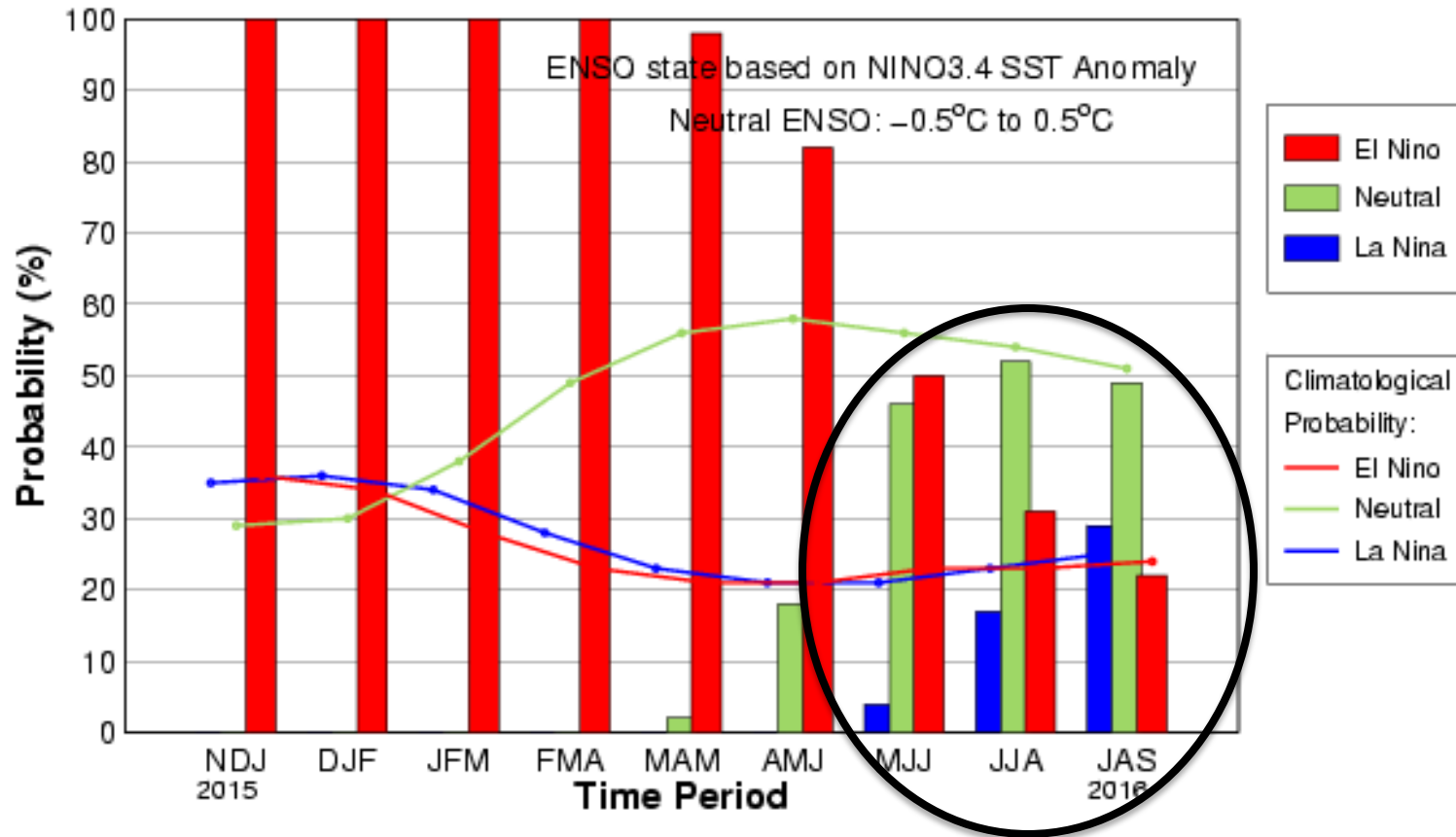
# Spring Forecast

IRI Multi-Model Probability Forecast for Precipitation  
for March-April-May 2016, Issued November 2015



# IRI El Nino Forecast

Mid-Nov IRI/CPC Plume-Based Probabilistic ENSO Forecast

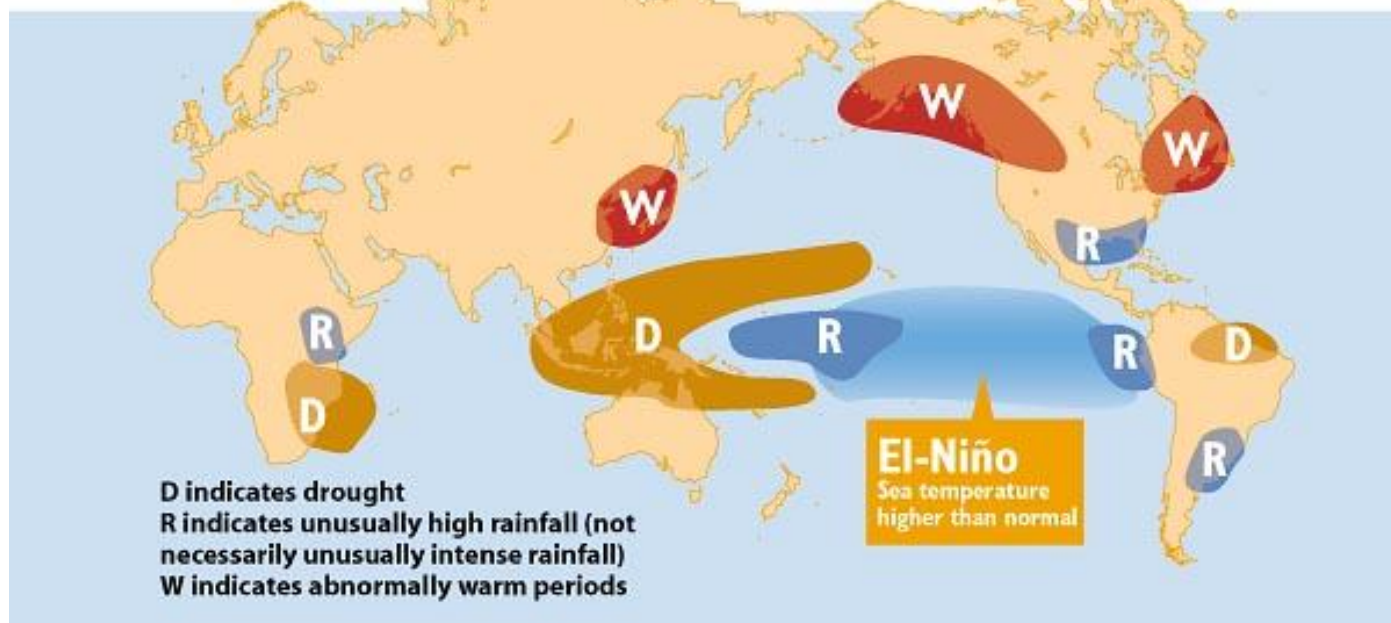


El Nino near-certainty until late spring-early summer 2016.

# Global El Niño Effect

## Climatic impacts of warm El Niño events (October-March)

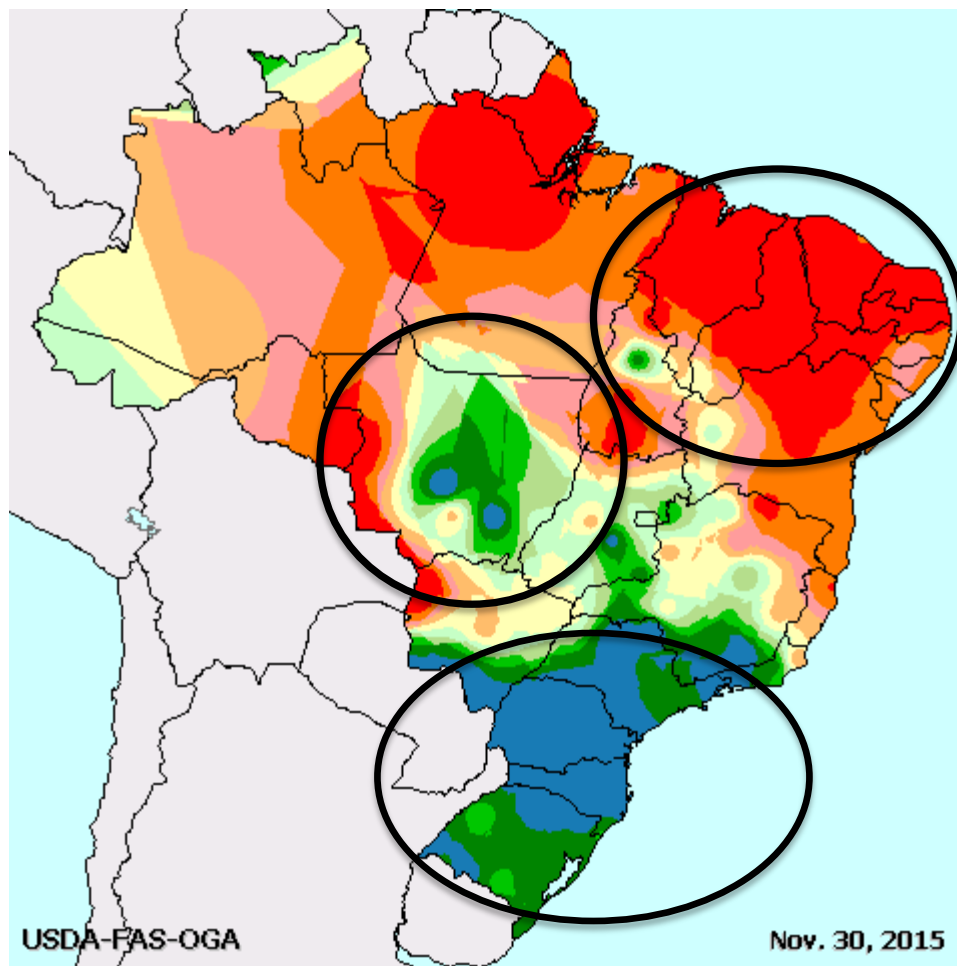
El Niño has different impacts in different parts of the world and at different times of the year. During the northern hemisphere winter, El Niño's expected impacts include drought in southern Africa, continuing drought in northern Australia and Indonesia, high rainfall in three continents and unseasonably warm weather in parts of North America and eastern China.



Above-normal rain S Brazil/Argentina. Dry S' east Australia, Indonesia, S. Africa.

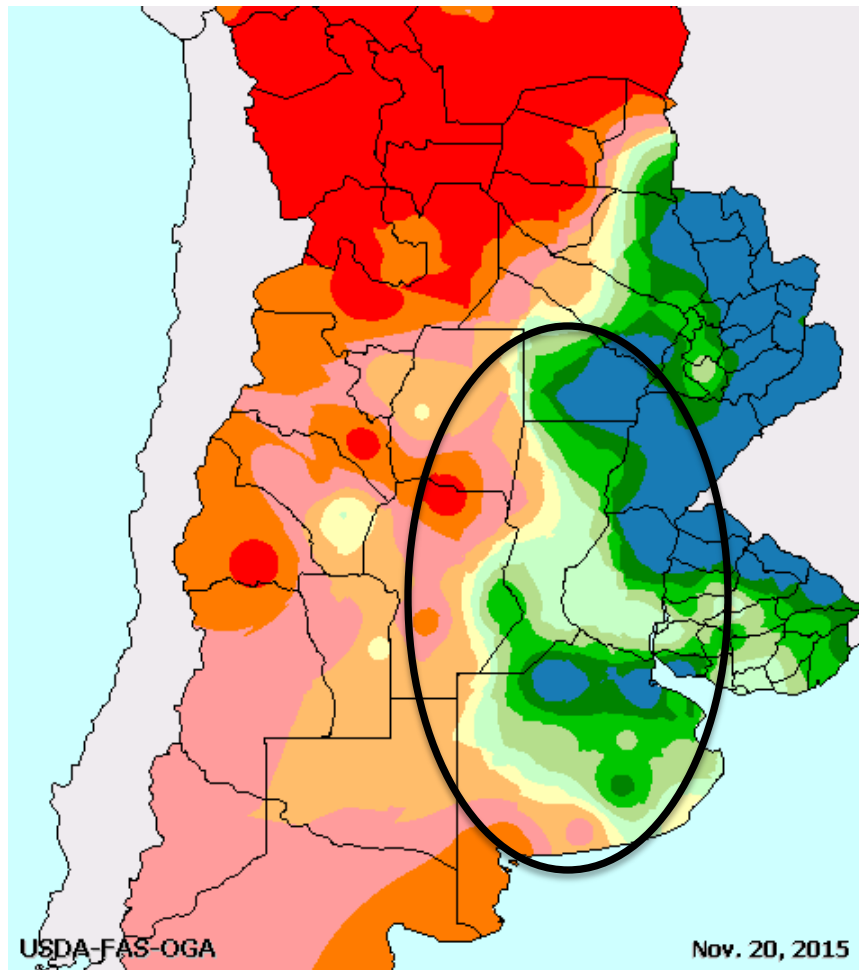


# Brazil Soil Moisture



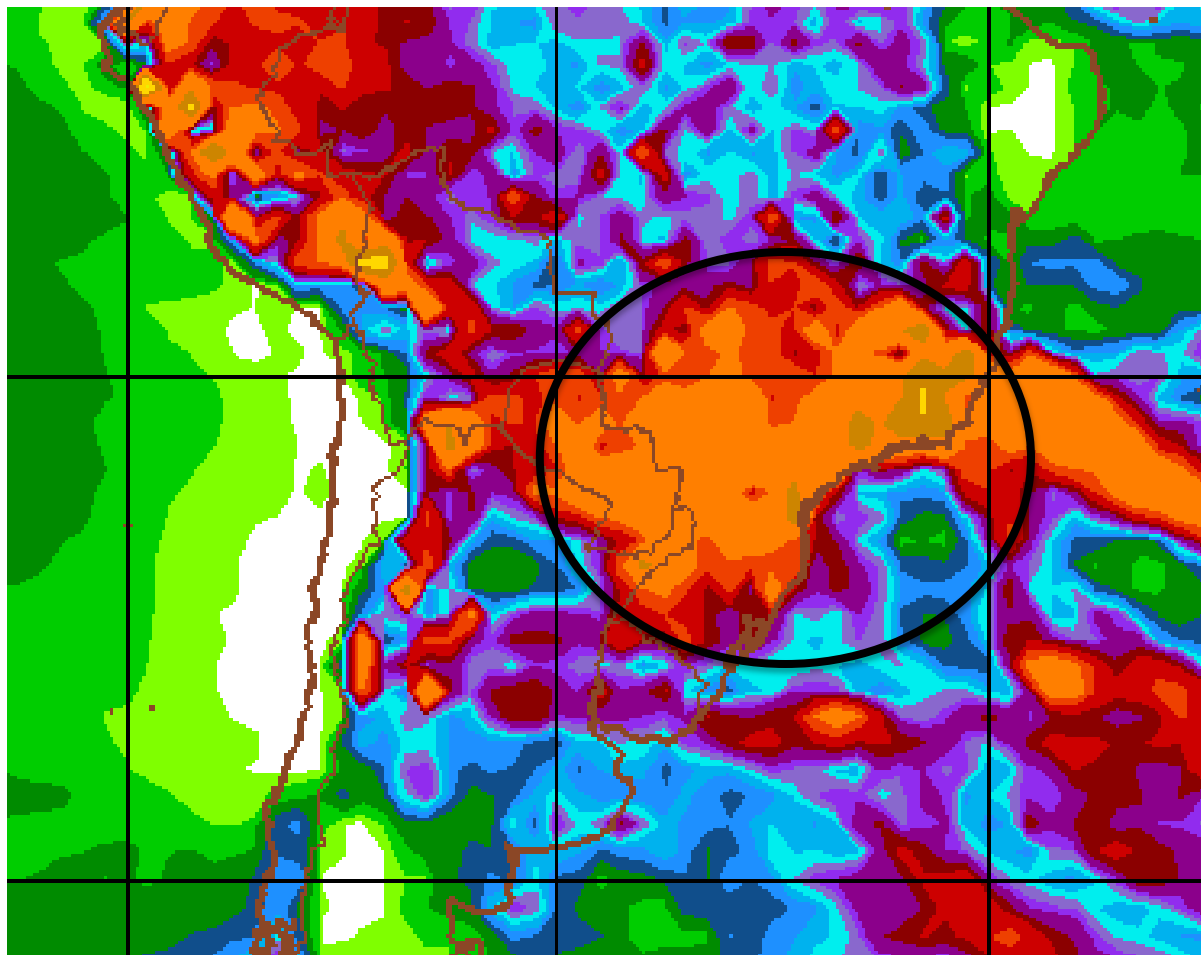
Wet south. Dry northeast. Mixed central (Mato Grosso).

# Argentina Soil Moisture



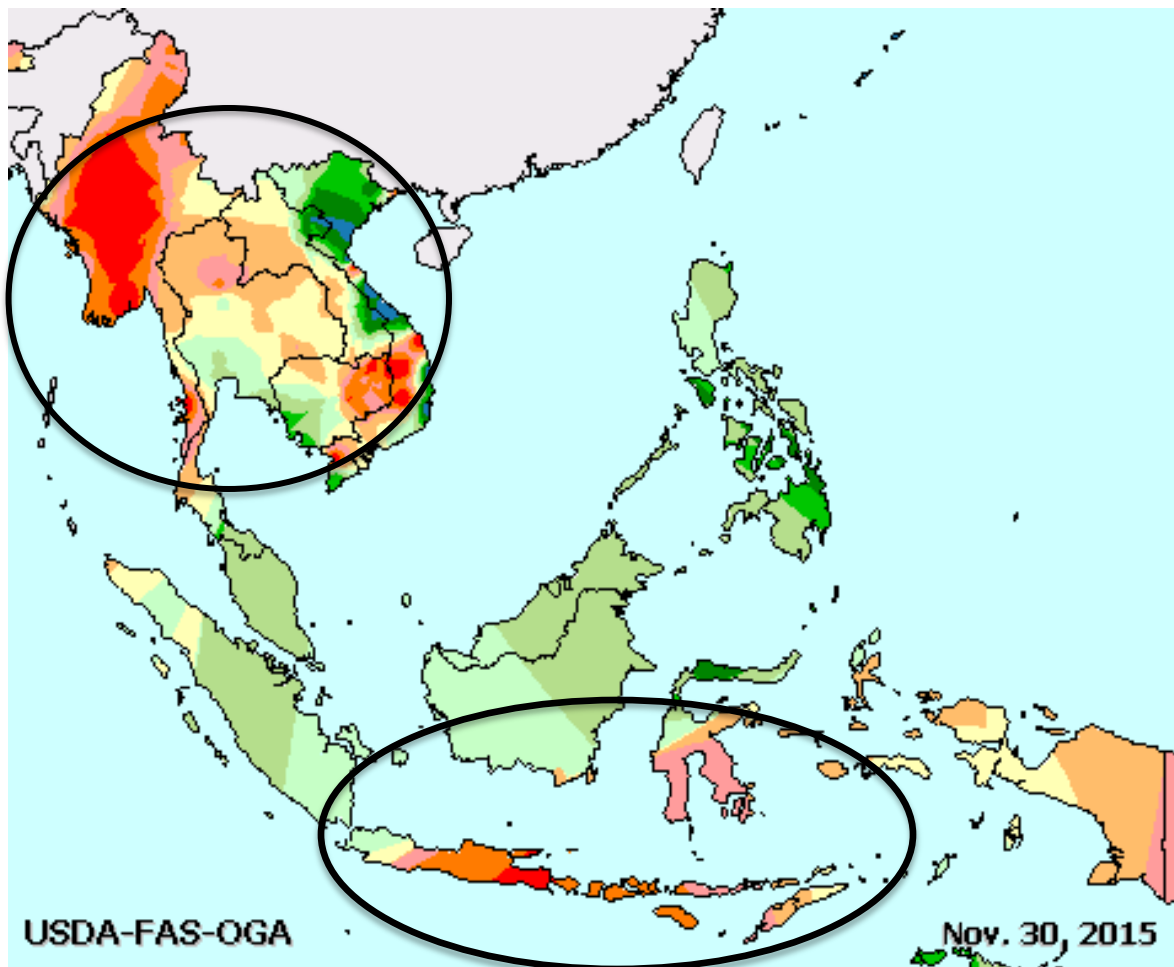
Adequate to surplus central and eastern crop areas.

# South America Forecast



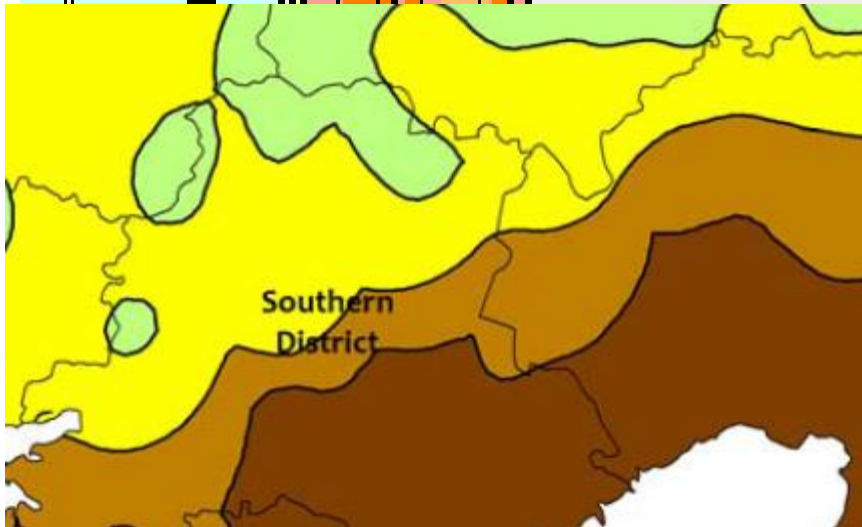
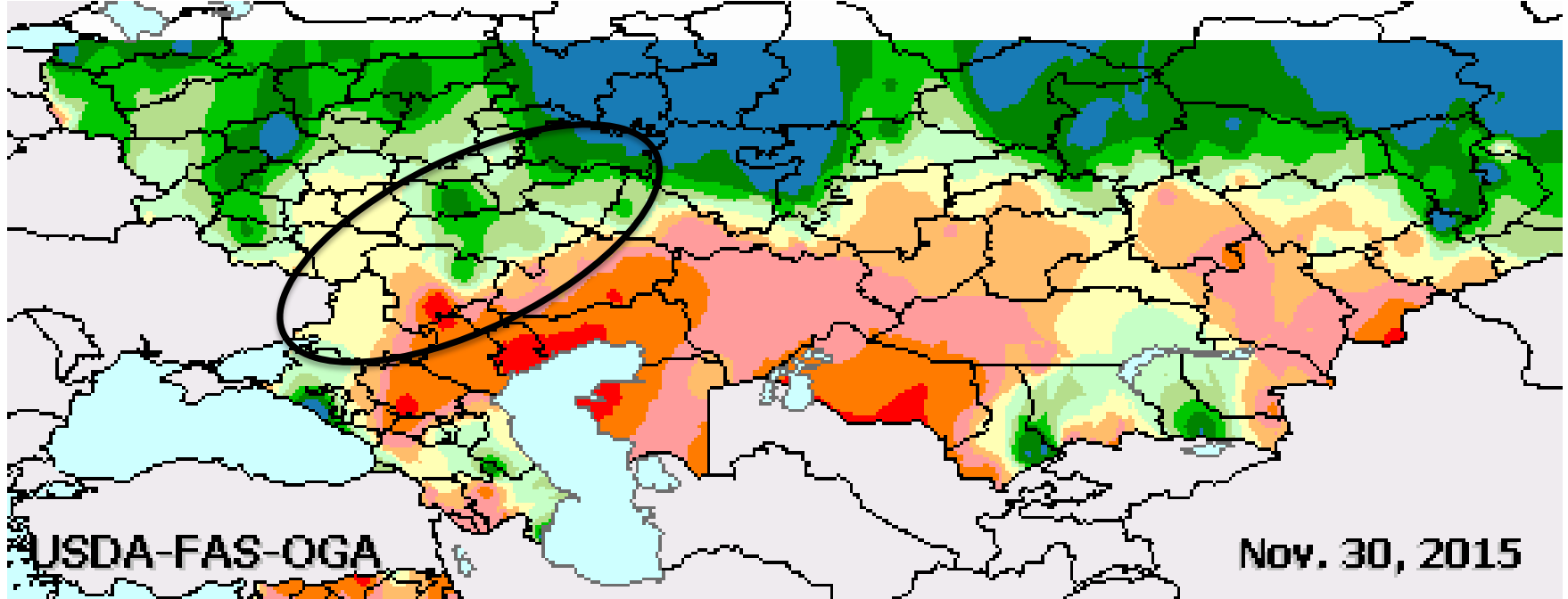
Heavy rain southern Brazil. Moderate central Brazil and Argentina.

# Southeast Asia Soil Moisture



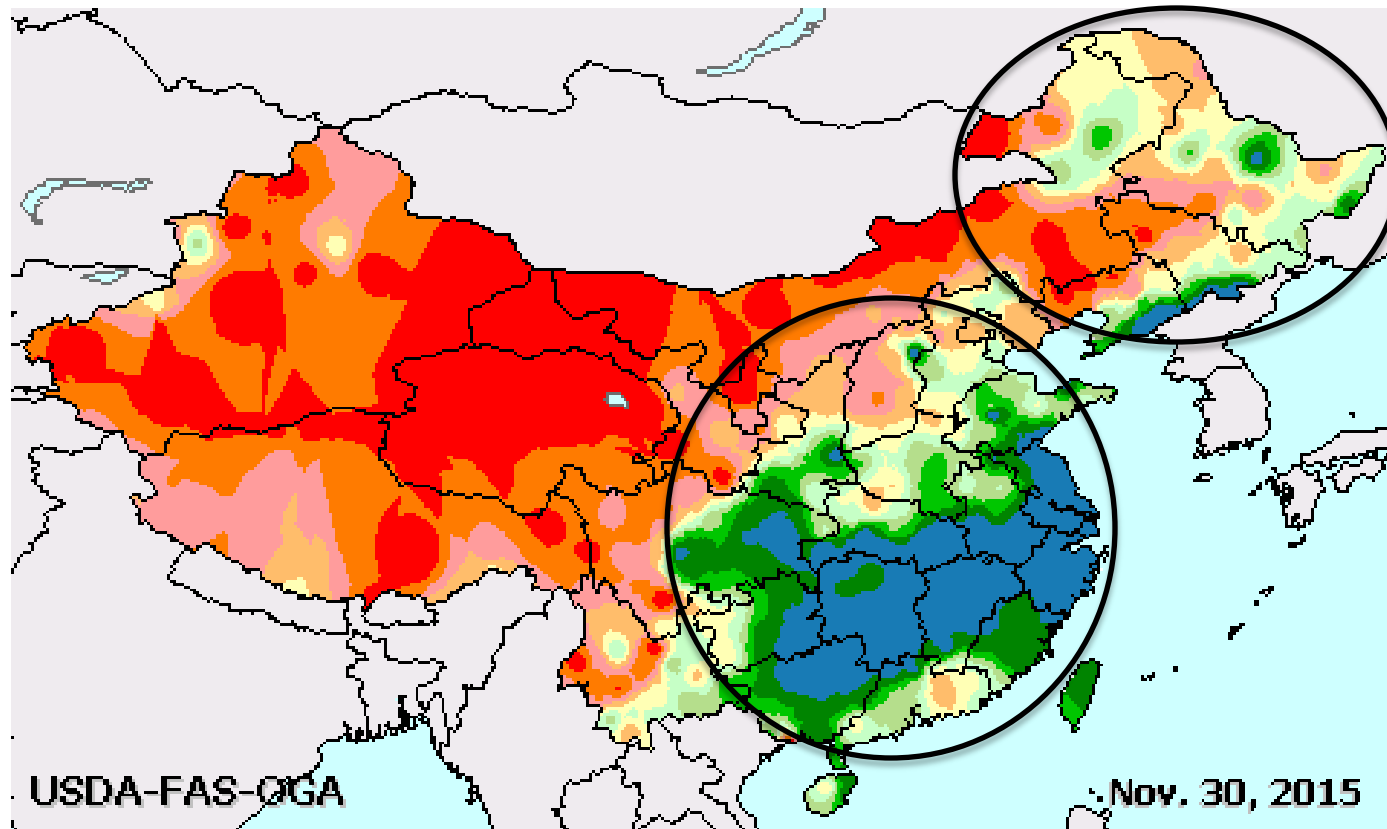
Quite a few dry areas—some concern for palm oil production.

# Russia Soil Moisture/Precip



Recent rains up to .5” bring some better moisture to Southern District.

# China Soil Moisture



Adequate to surplus southeast. Mixed central. Some dryness northeast.

Thanks! As Usual--

[bryce.anderson@dtm.com](mailto:bryce.anderson@dtm.com)

800-485-4000 ext 6419

402-594-4248 Cell

Twitter @BAndersonDTN

