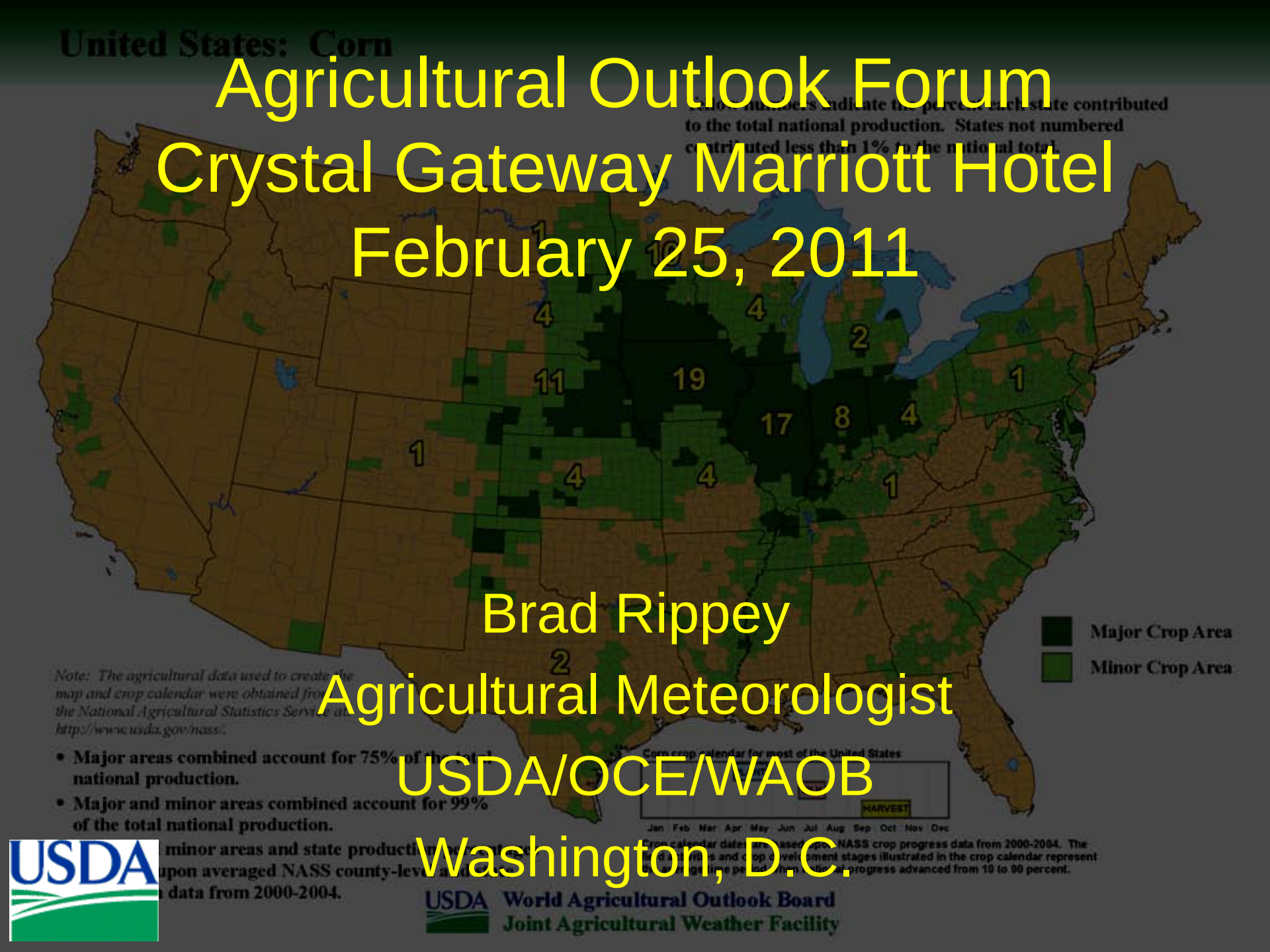



# Agricultural Outlook Forum
# Crystal Gateway Marriott Hotel
# February 25, 2011

Brad Rippey
Agricultural Meteorologist
USDA/OCE/WAOB
Washington, D.C.

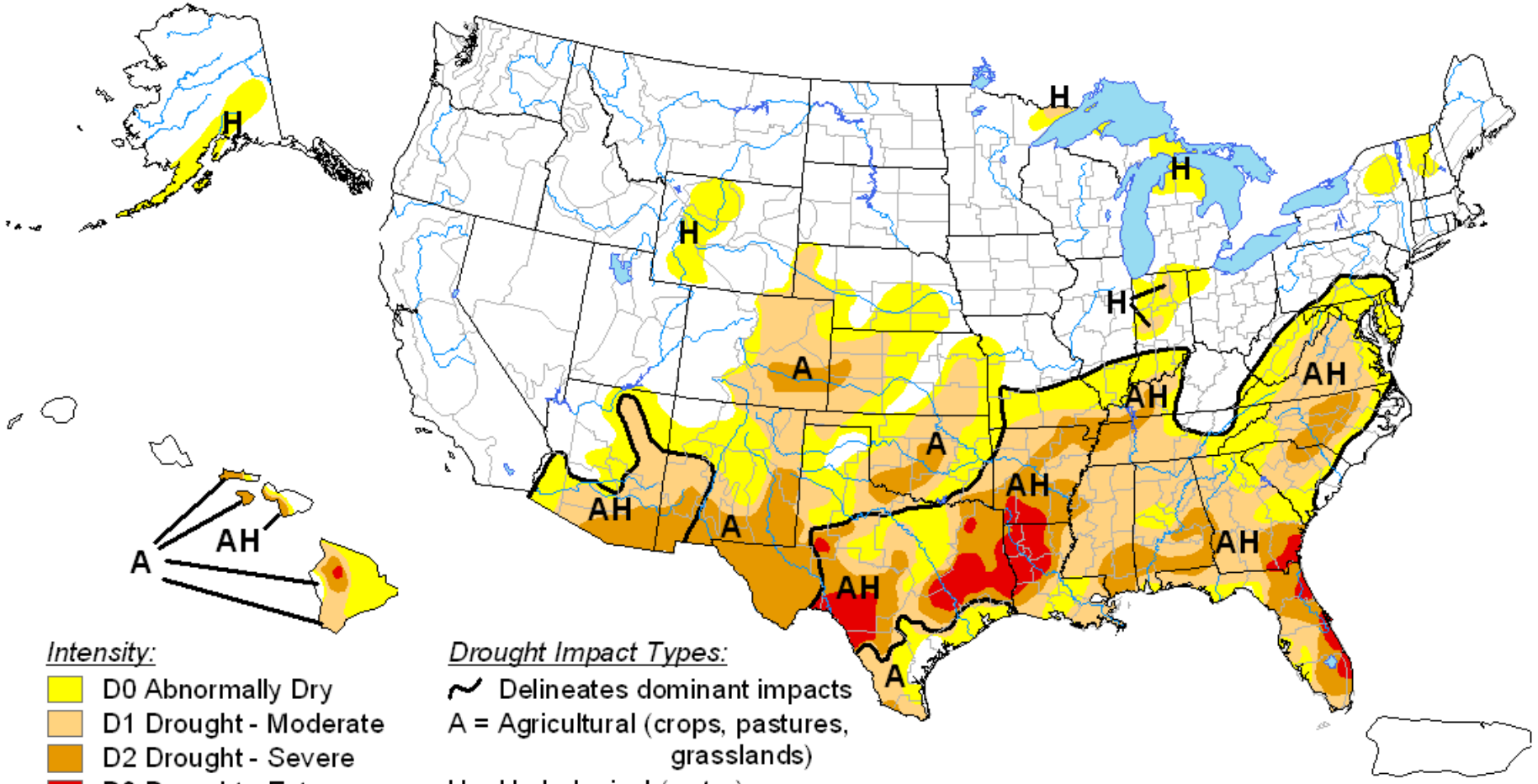
# Northern Hemisphere Crop-Weather Outlook for the 2011 Growing Season

- **A review of conditions experienced in the winter of 2010-2011**
- Current conditions
- Projected weather patterns for the spring of 2011
- Outlook for the summer of 2011

USDA

# U.S. Drought Monitor

**February 22, 2011**
Valid 7 a.m. EST




*Intensity:*

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

*Drought Impact Types:*

- ~ Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

USDA National Drought Mitigation Center

**Released Thursday, February 24, 2011**

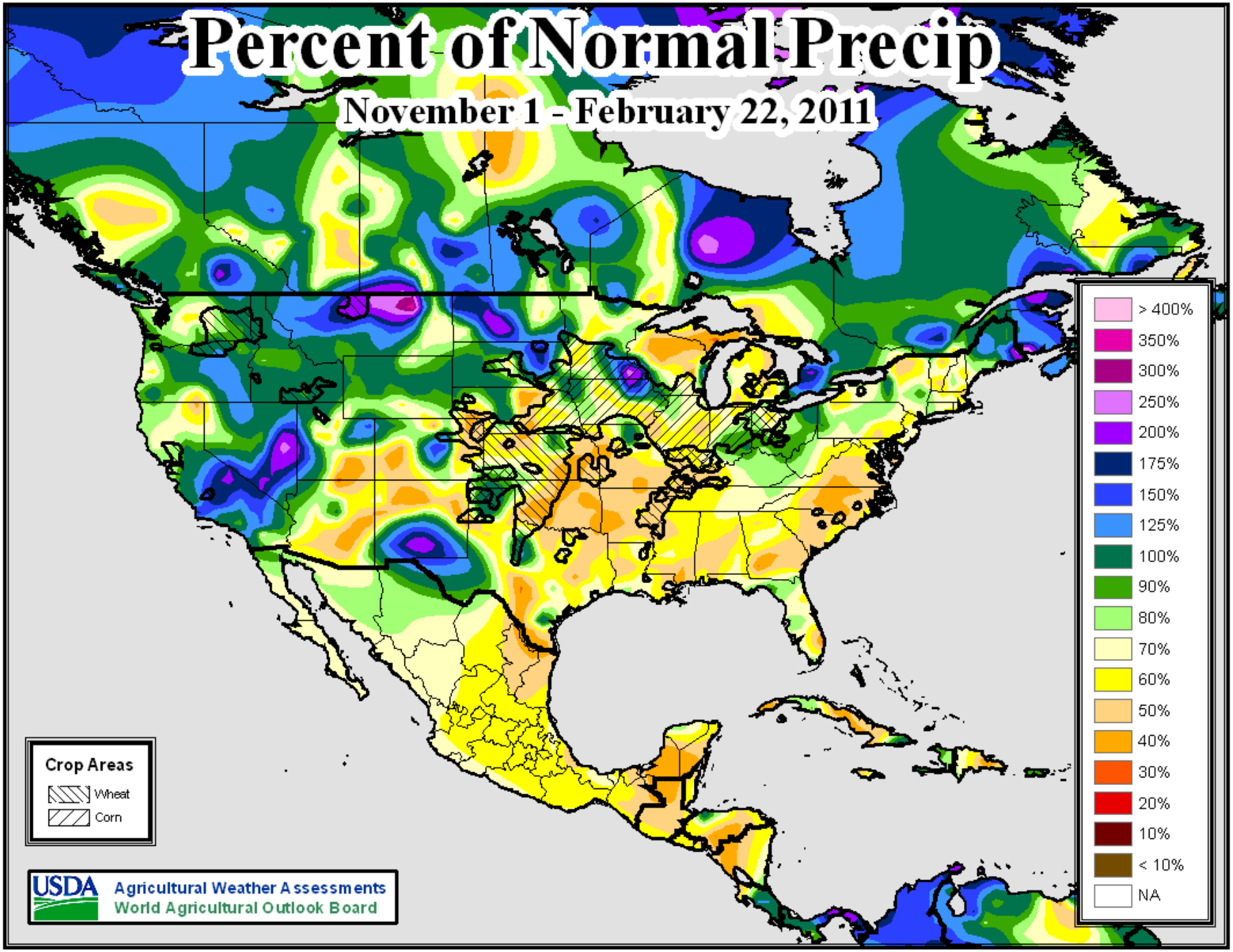
***Author: Brad Rippey, U.S. Department of Agriculture***

**http://drought.unl.edu/dm**

# U.S. Winter Wheat Condition, 2010-11

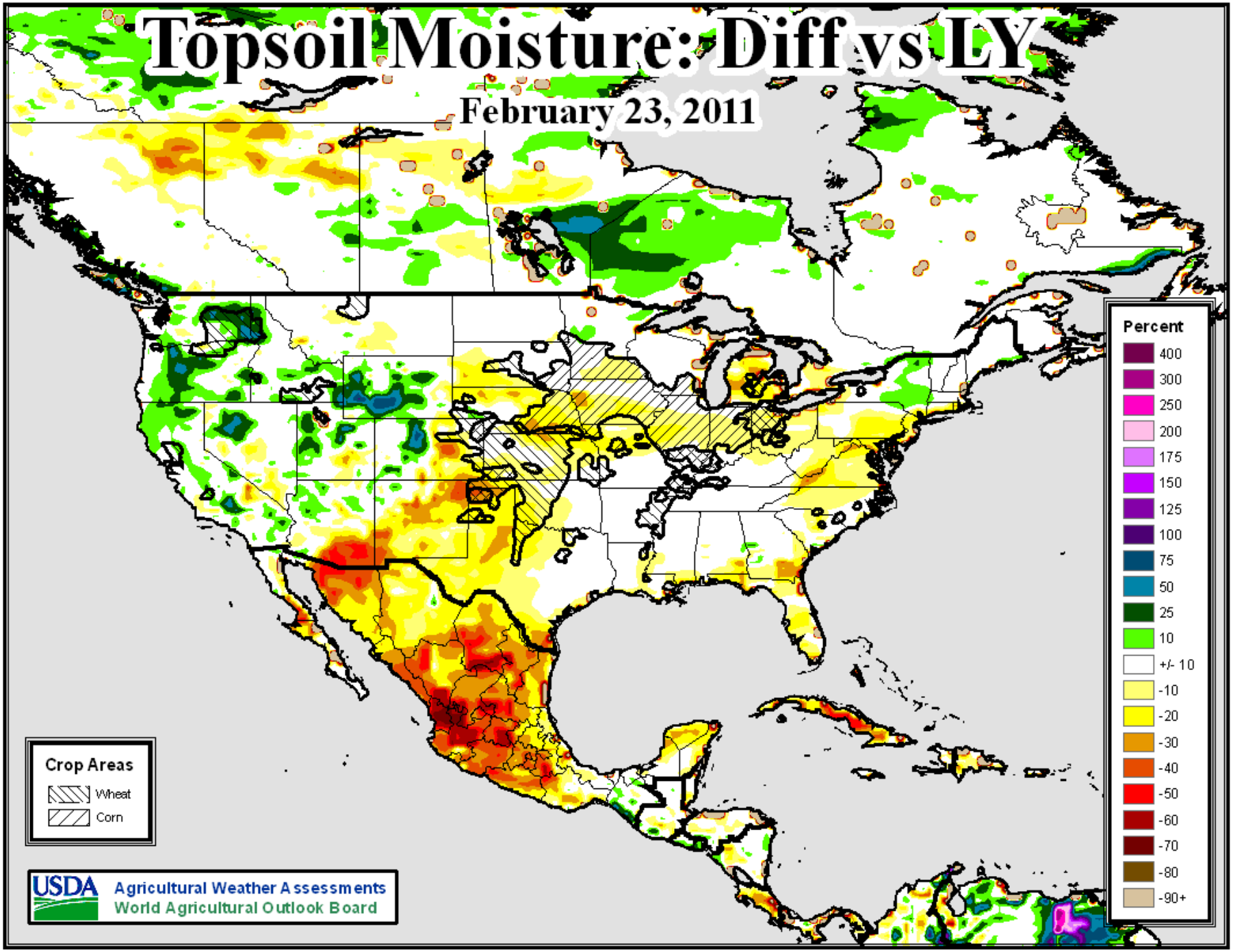
| State | Date | VP | P | F | G | EX |
|---|---|---|---|---|---|---|
| Montana | 11/28/10 | 0 | 3 | 23 | 63 | 11 |
| | 1/2/11 | 0 | 2 | 26 | 62 | 10 |
| | 1/30/11 | 0 | 2 | 25 | 59 | 14 |
| Nebraska | 11/28/10 | 1 | 10 | 44 | 39 | 6 |
| | 1/2/11 | 2 | 12 | 44 | 38 | 4 |
| | 1/30/11 | 2 | 13 | 44 | 36 | 5 |
| Kansas | 11/28/10 | 8 | 17 | 38 | 33 | 4 |
| | 1/2/11 | 11 | 22 | 40 | 25 | 2 |
| | 1/30/11 | 14 | 23 | 36 | 25 | 2 |
| Oklahoma | 11/28/10 | 1 | 7 | 48 | 37 | 7 |
| | 1/2/11 | 1 | 18 | 44 | 32 | 5 |
| | 1/30/11 | 6 | 34 | 39 | 19 | 2 |
| Texas | 11/28/10 | 6 | 20 | 38 | 32 | 4 |
| | 1/9/11 | 15 | 30 | 35 | 19 | 1 |
| | 1/30/11 | 21 | 31 | 31 | 16 | 1 |
| | 2/20/11 | 28 | 32 | 27 | 13 | 0 |

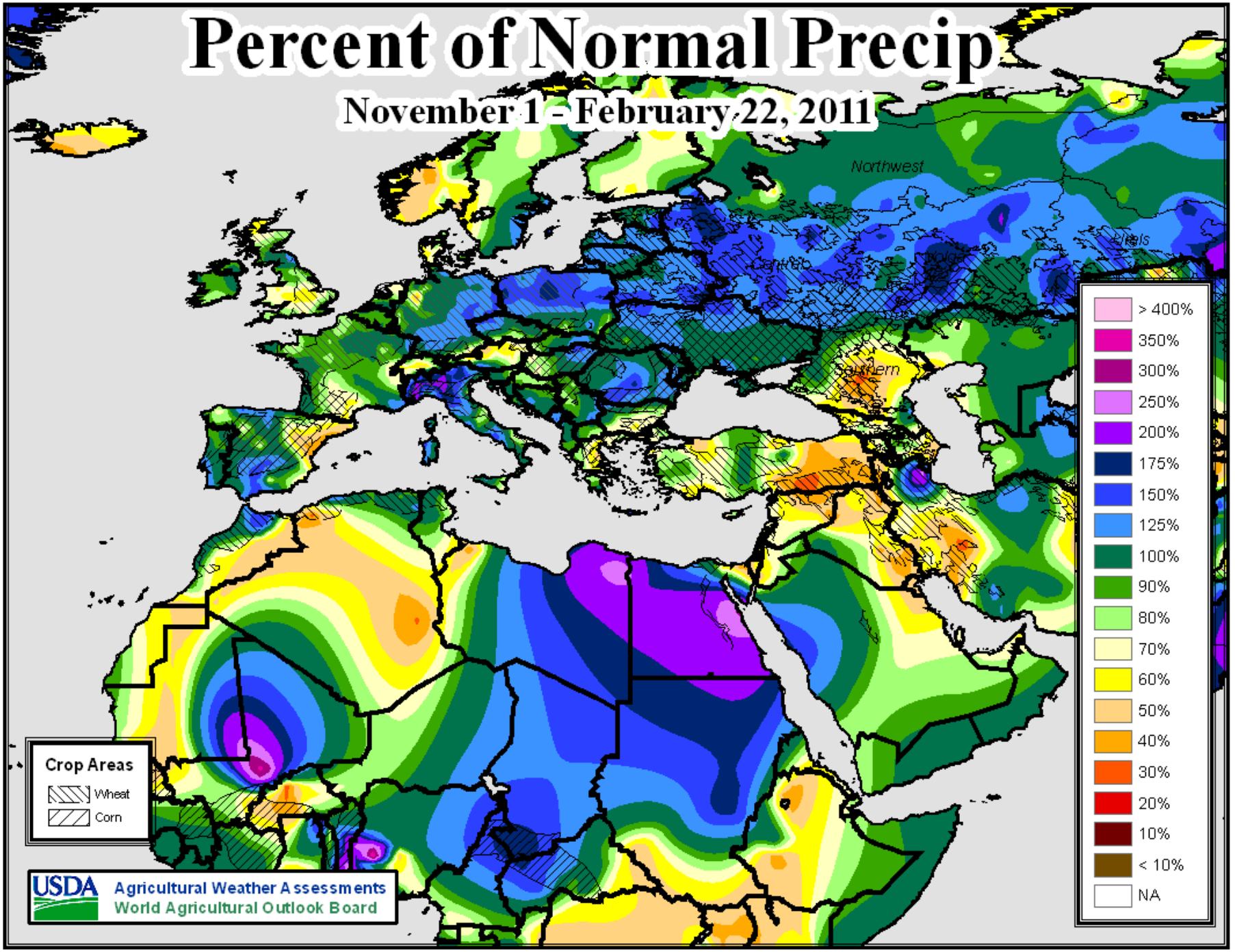
USDA

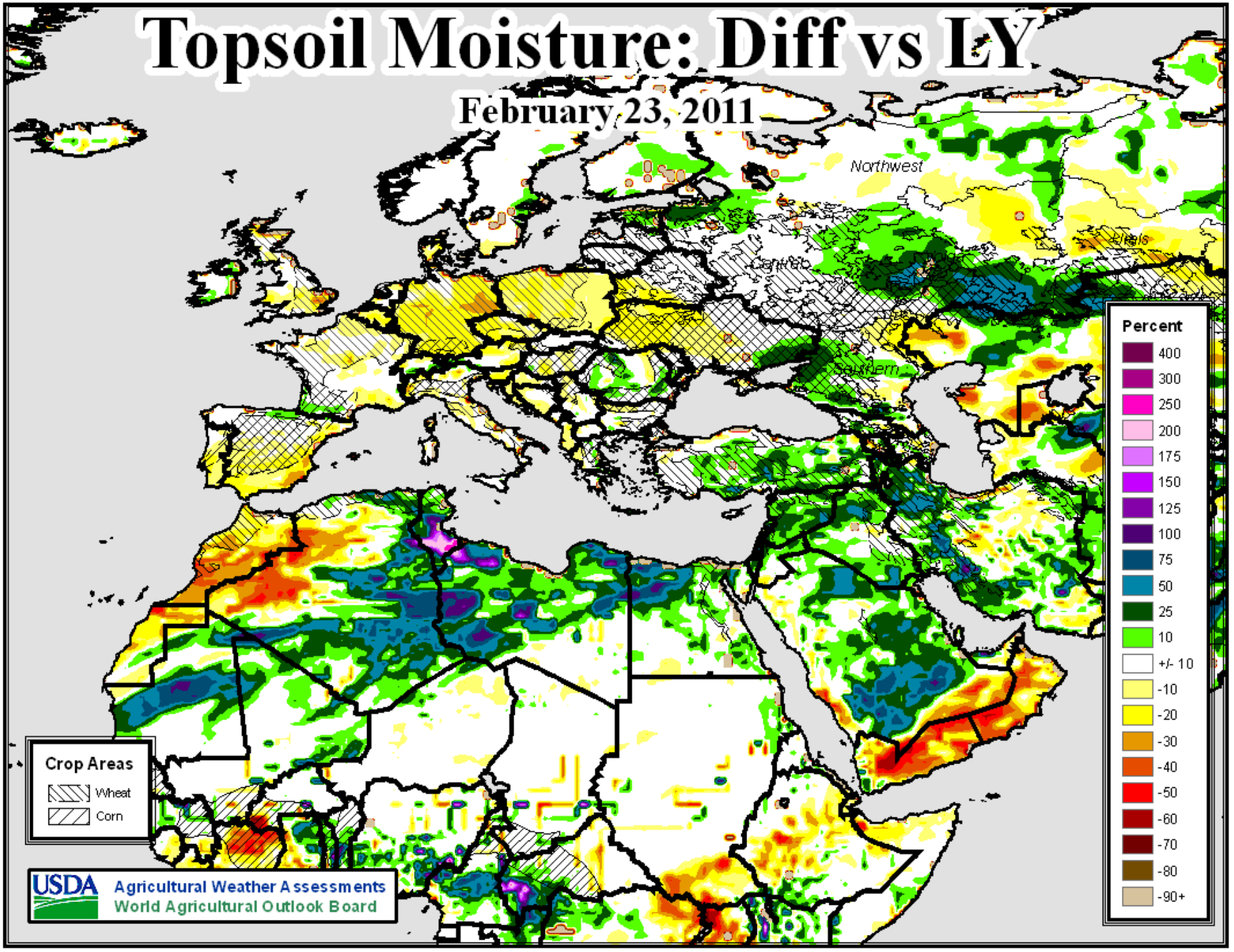

Percent of Normal Precip
November 1 - February 22, 2011
> 400%
350%
300%
250%
200%
175%
150%
125%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
< 10%
NA
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board

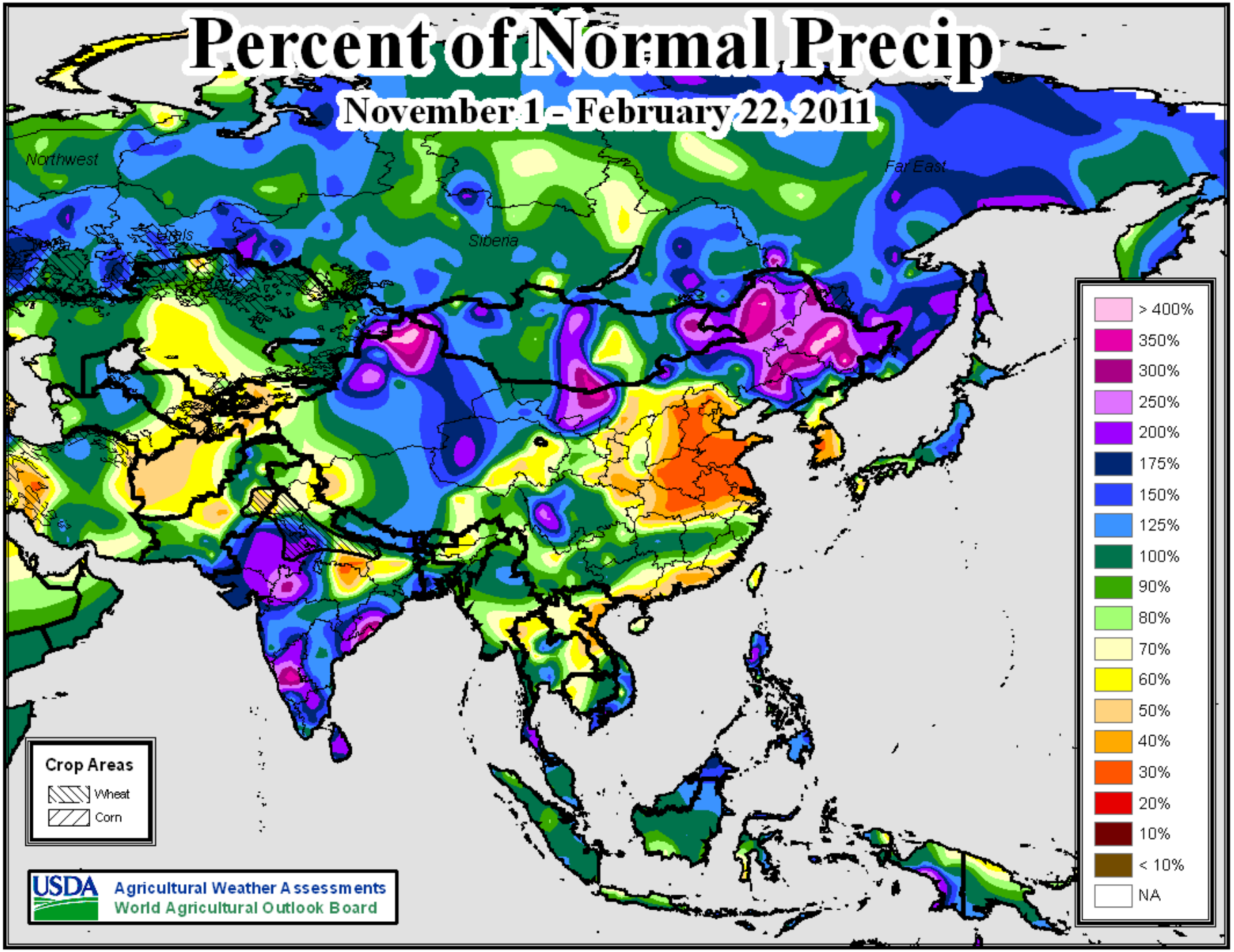
# Topsoil Moisture: Diff vs LY

## February 23, 2011



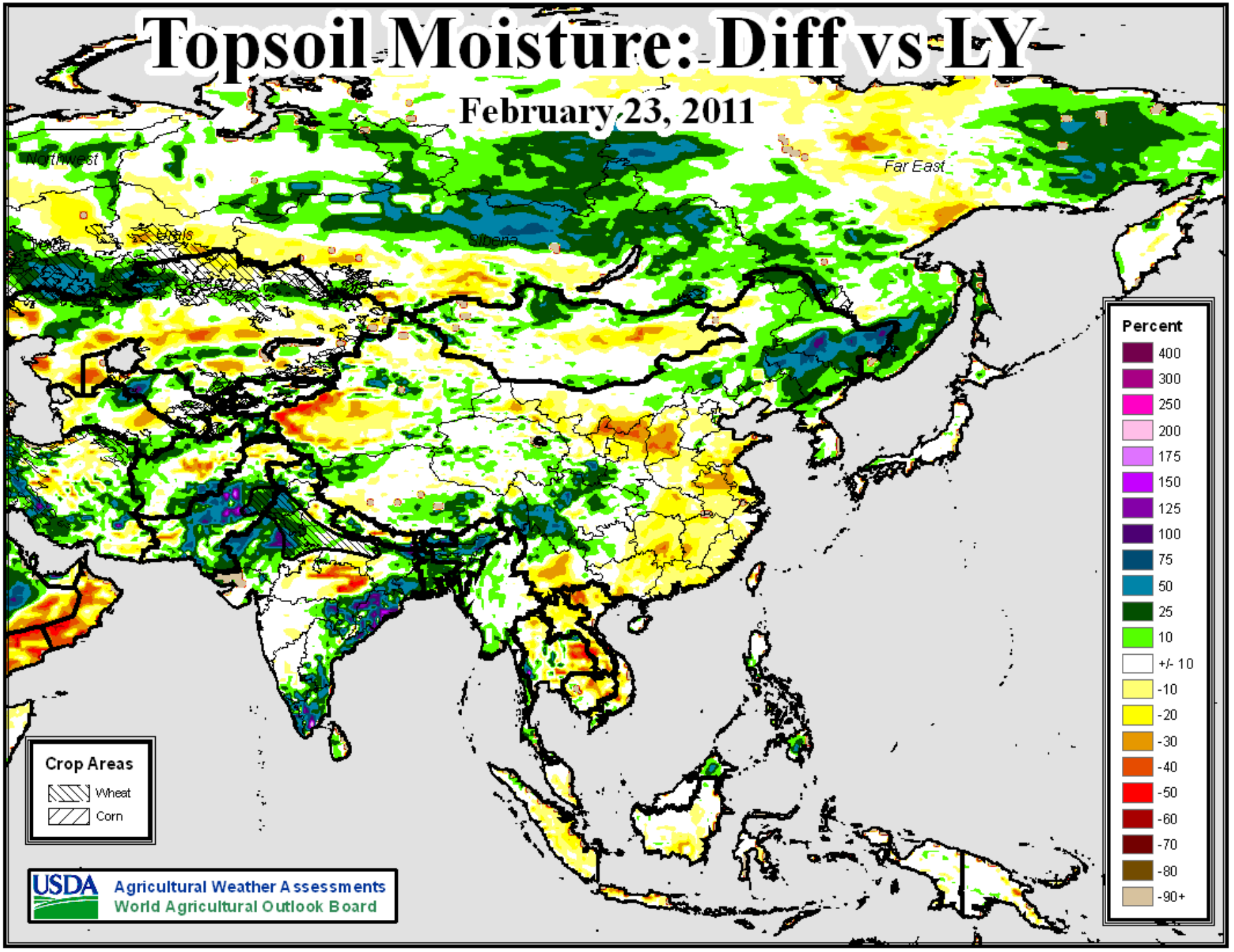

Percent of Normal Precip
November 1 - February 22, 2011
Northwest
Southern
> 400%
350%
300%
250%
200%
175%
150%
125%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
< 10%
NA
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board


Topsoil Moisture: Diff vs LY
February 23, 2011
Northwest
Central
Southern
Percent
400
300
250
200
175
150
125
100
75
50
25
10
+/- 10
-10
-20
-30
-40
-50
-60
-70
-80
-90+
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board

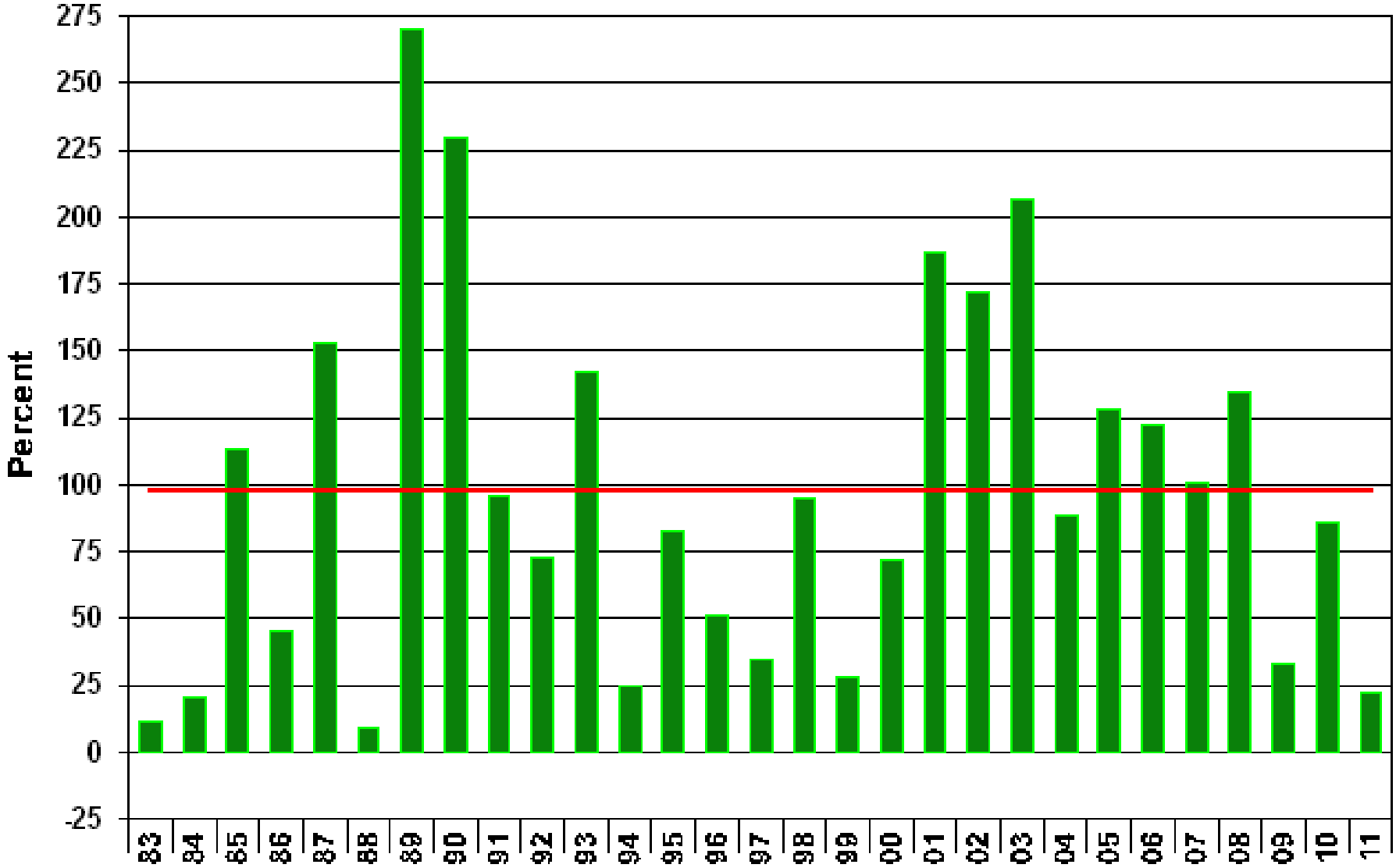

Percent of Normal Precip
November 1 - February 22, 2011
Northwest
Siberia
Far East
> 400%
350%
300%
250%
200%
175%
150%
125%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
< 10%
NA
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board

# Topsoil Moisture: Diff vs LY

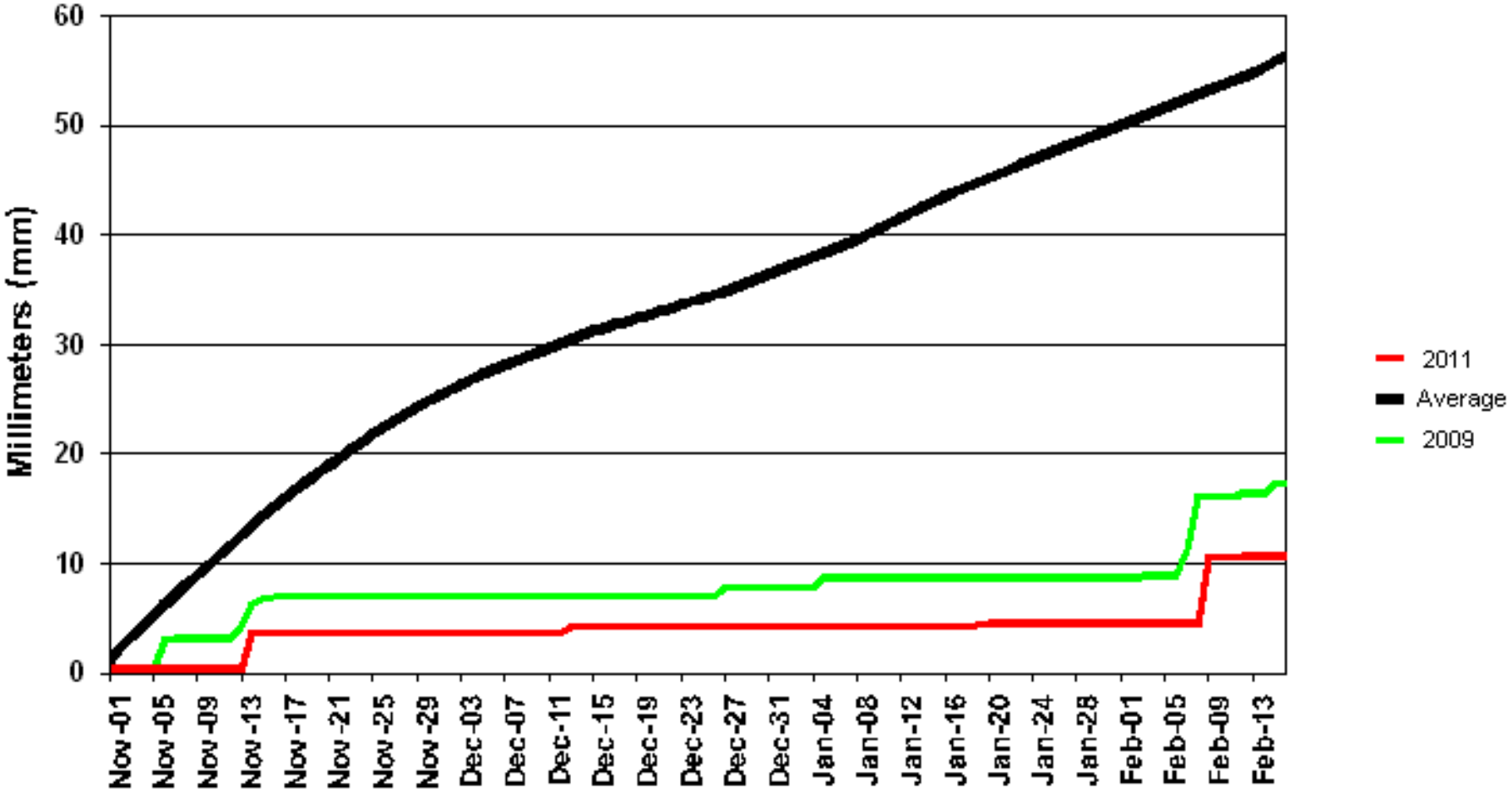
## February 23, 2011



# 9 - HENAN
## Percent of Normal Precipitation: Dec 1 to Feb 16

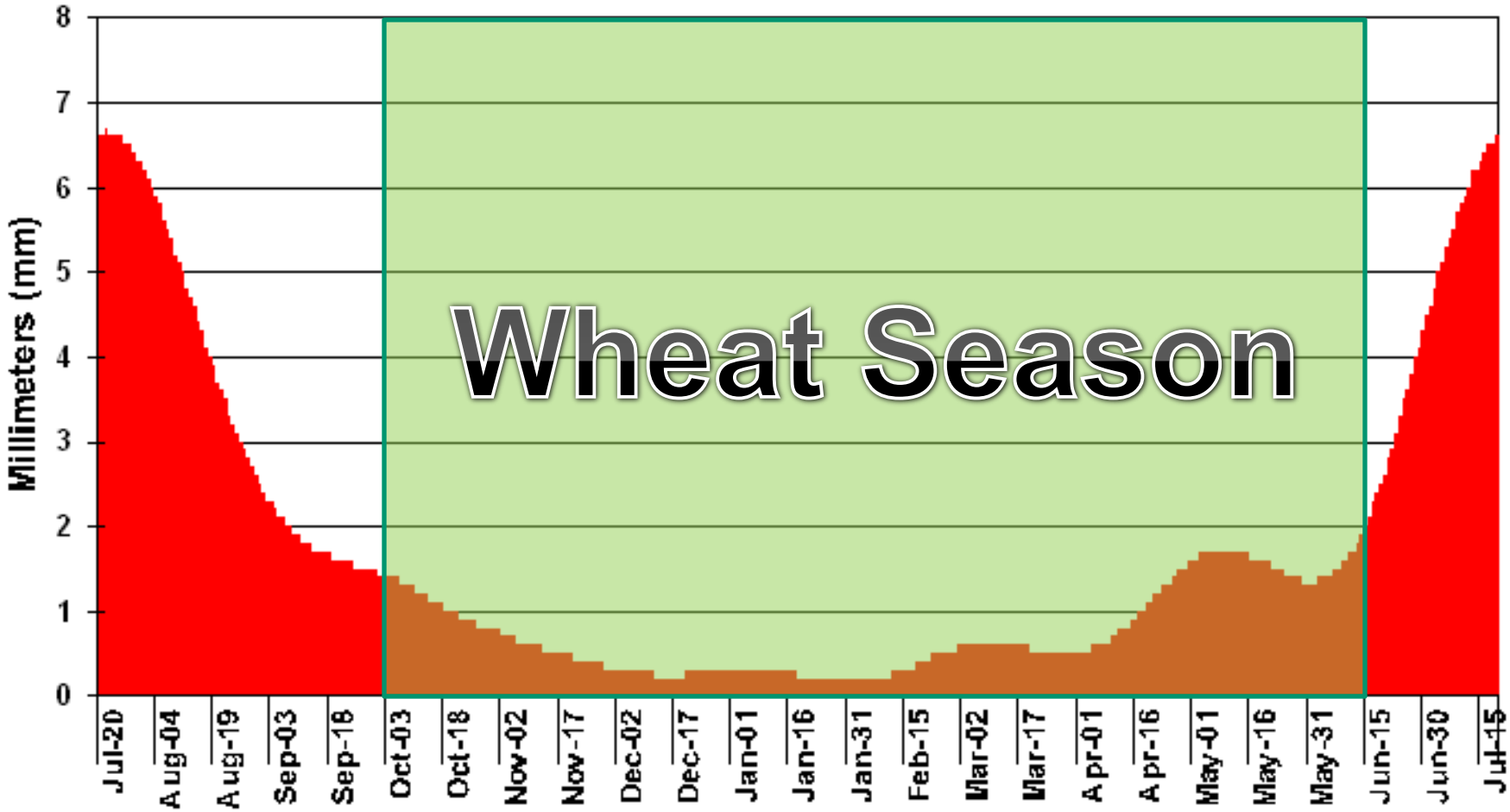


# 09 - HENAN
## Cumulative Precipitation

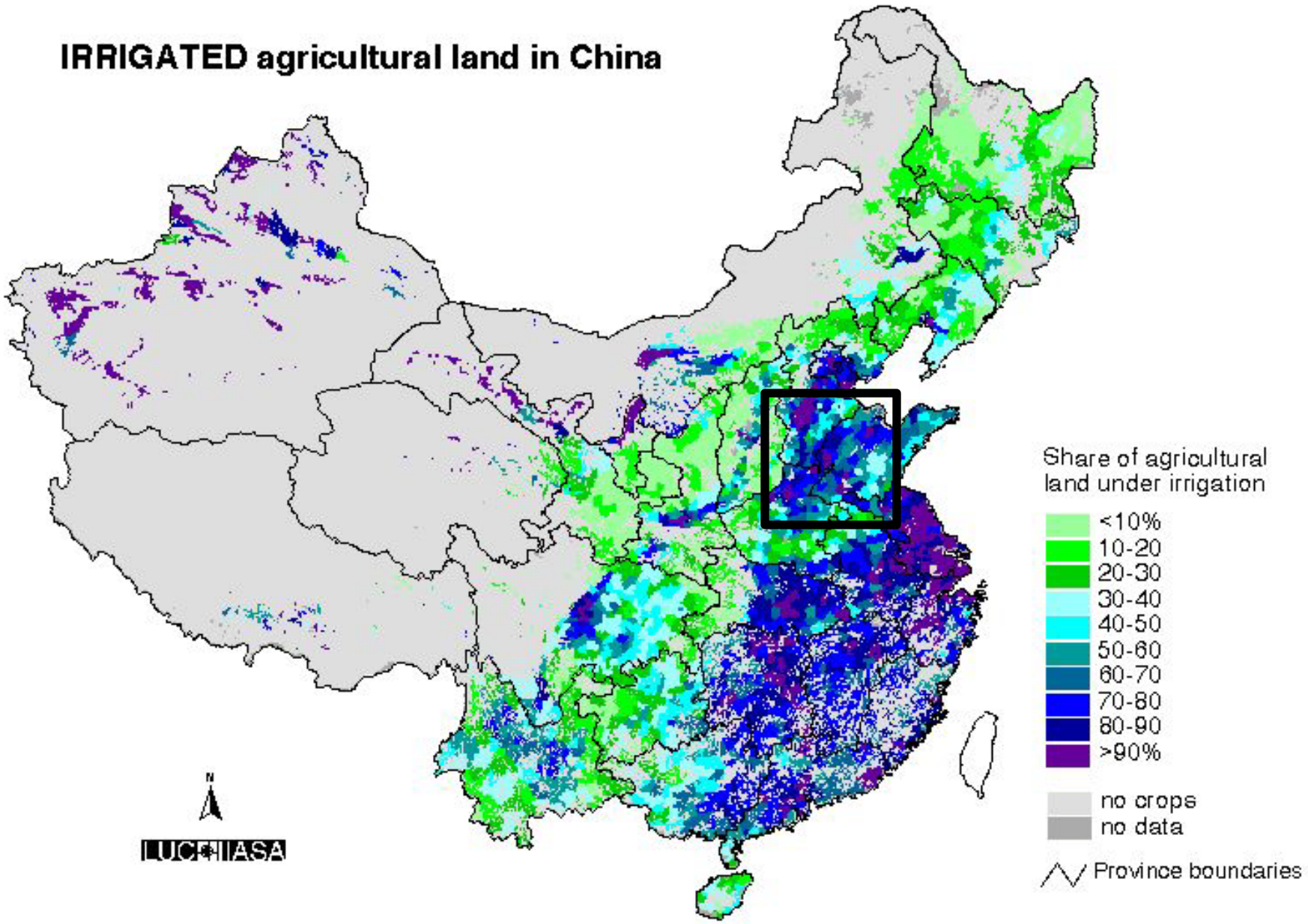



USDA

## 05 - NORTH CHINA PLAIN
## Daily Normal Precip (Based on Monthly Normals




USDA

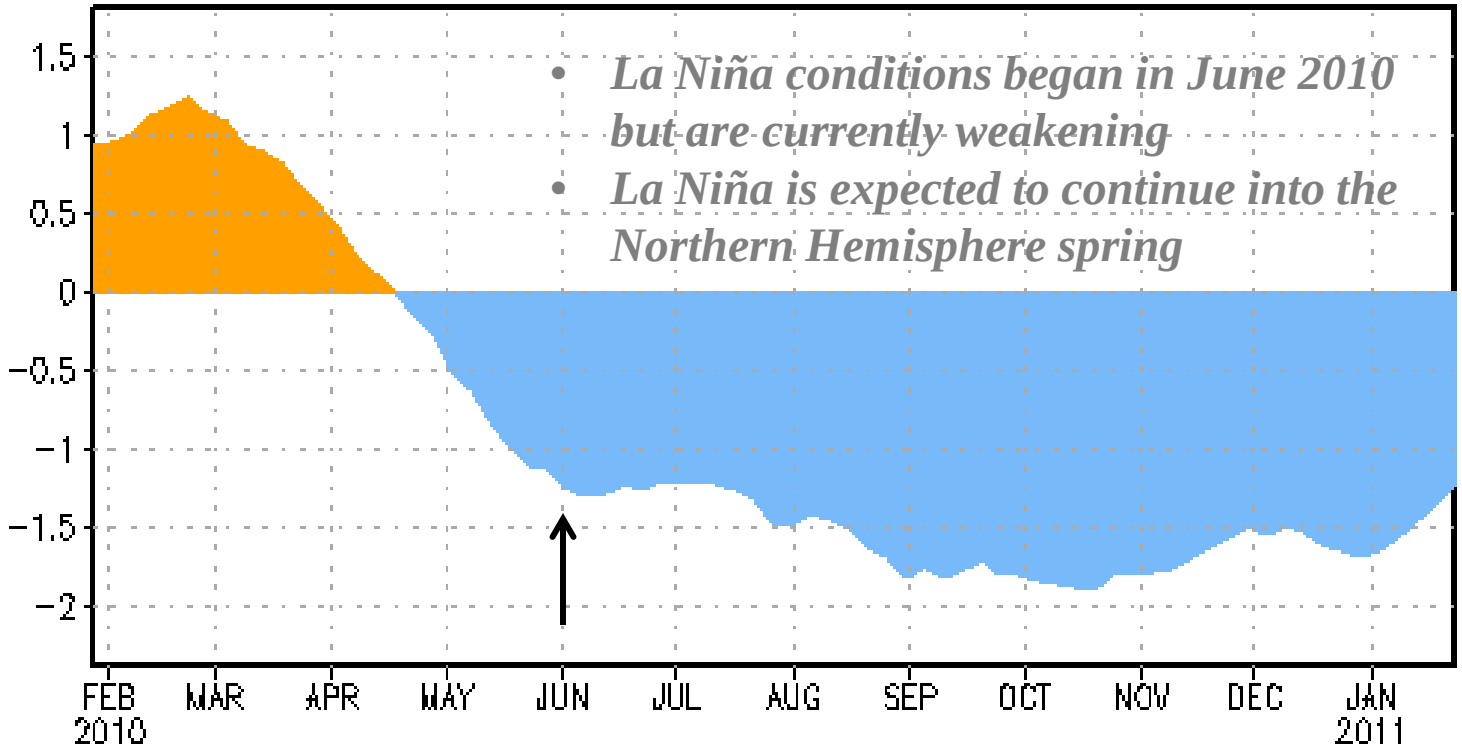

IRRIGATED agricultural land in China
Share of agricultural land under irrigation
<10%
10-20
20-30
30-40
40-50
50-60
60-70
70-80
80-90
>90%
no crops
no data
Province boundaries
N
LUC IIASA

# Northern Hemisphere Crop-Weather Outlook for the 2011 Growing Season

- A review of conditions experienced in the winter of 2010-2011
- **Current conditions**
- Projected weather patterns for the spring of 2011
- Outlook for the summer of 2011

USDA

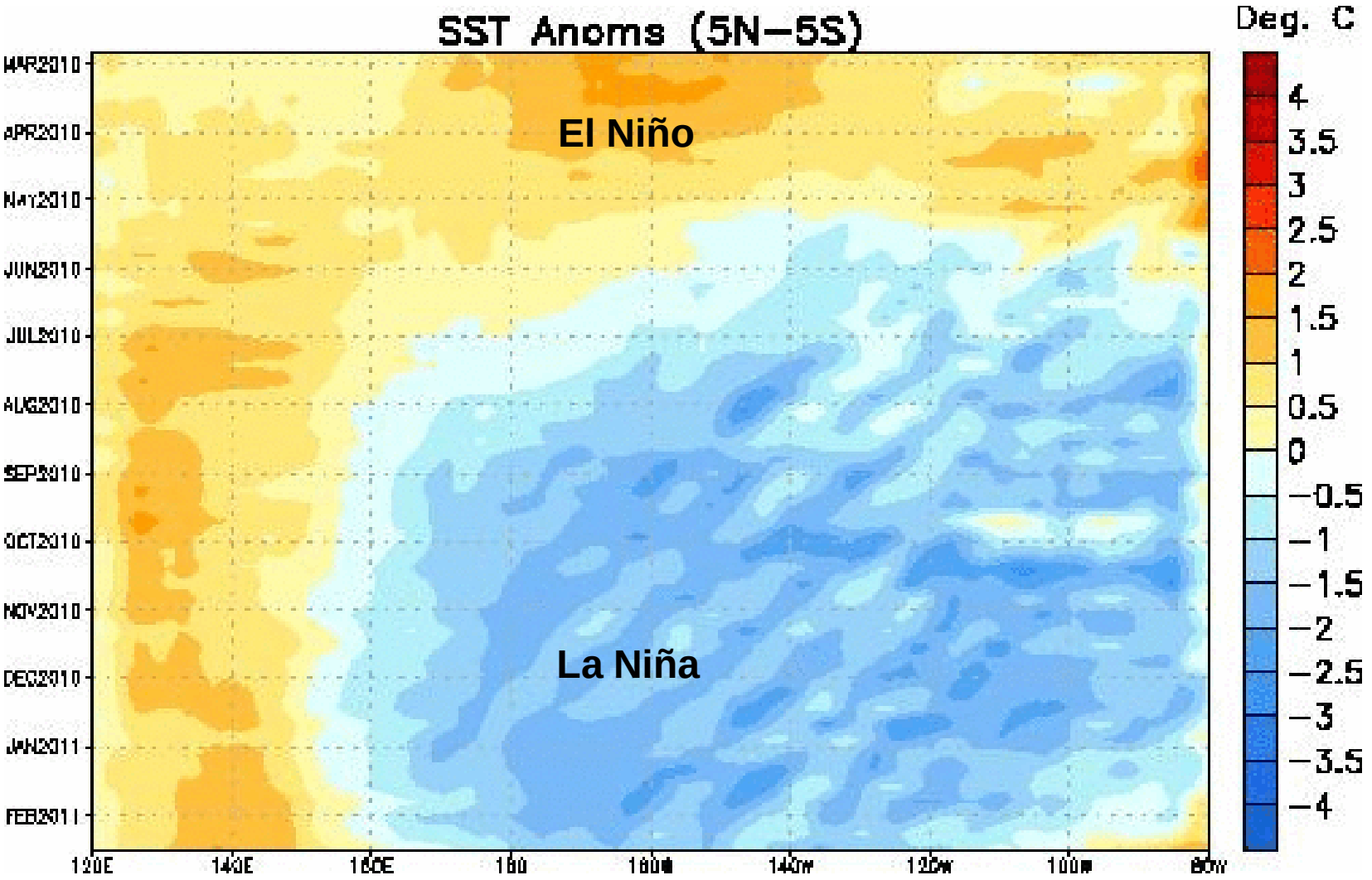
# Equatorial Pacific (180-100 W)
# Sea Surface Temperature (SST)
# Departures From Normal ( C)




**Large positive anomalies associated with El Niño decreased beginning in late February 2010, becoming negative in late April. The negative anomalies since June 2010 are consistent with La Niña. Since the beginning of January 2011, the negative anomalies have weakened.**

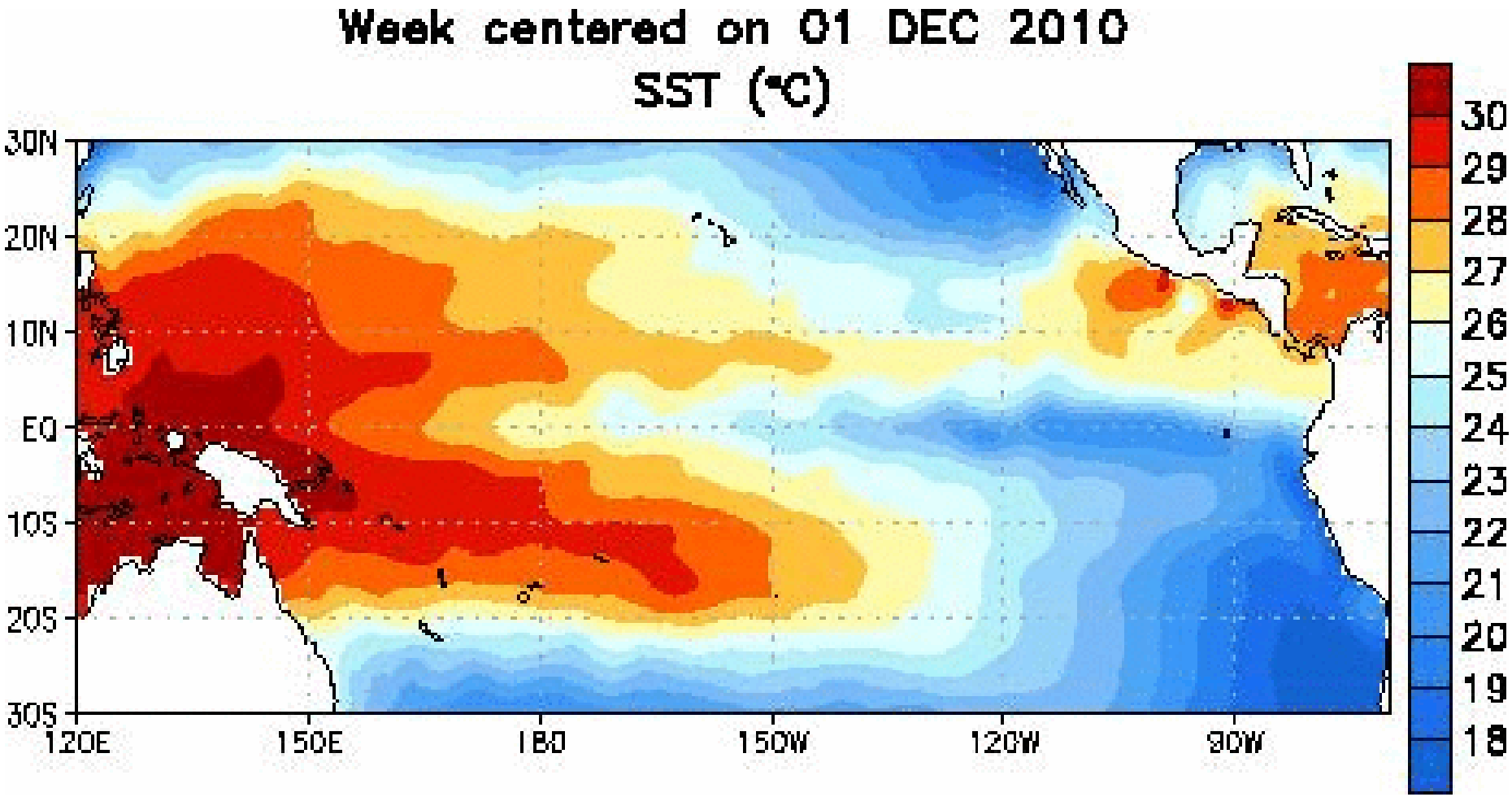
CLIMATE PREDICTION CENTER/NCEP

# ENSO Current Status

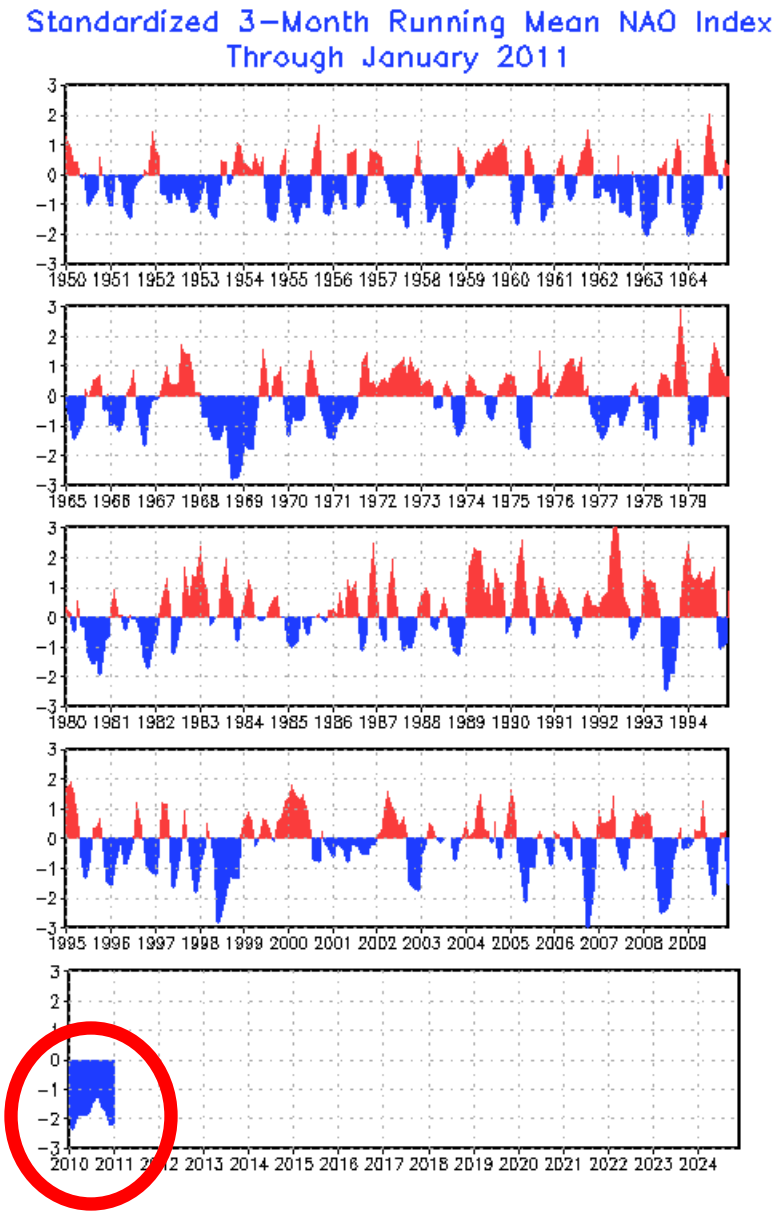



For more information go to: http://www.cpc.noaa.gov/products/precip/CWlink/MJO/enso.shtml

# Sea Surface Temperature (SST) Animation



# North Atlantic Oscillation




- Strongly negative most of the time since October 2009 (e.g. blocking high-pressure system over the N. Atlantic Ocean).
- Profound impact on N. Hemisphere weather conditions, both winter and summer (e.g. freezes in Florida, Jan. and Dec. 2010; Russian drought of summer 2010).

# Northern Hemisphere Crop-Weather Outlook for the 2011 Growing Season

- A review of conditions experienced in the winter of 2010-2011
- Current conditions
- **Projected weather patterns for the spring of 2011**
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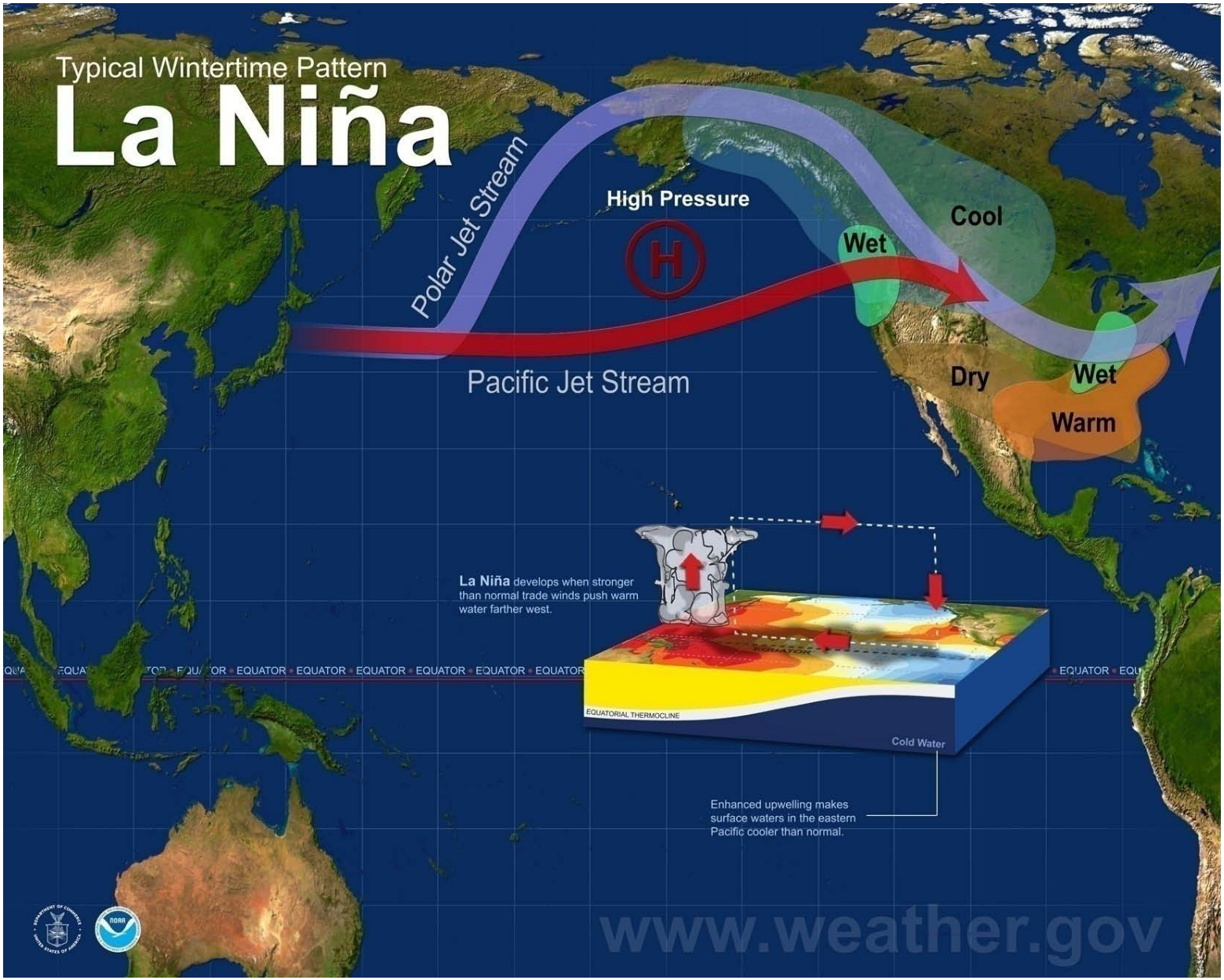
**Note:** USDA does not make official weather or climate forecasts for the federal government. The National Weather Service's Climate Prediction Center provides such outlooks.

# Typical U.S. Temperature, Precipitation, and Jet Stream Patterns During La Niña Winters



# Pacific Niño 3.4 SST Outlook

• Nearly all models indicate that La Niña will weaken in the coming months.
• A majority of models and all three multi-model forecasts indicate ENSO-neutral conditions by May-June-July 2011 (Niño-3.4 SST anomalies between -0.5 C and +0.5 C ).

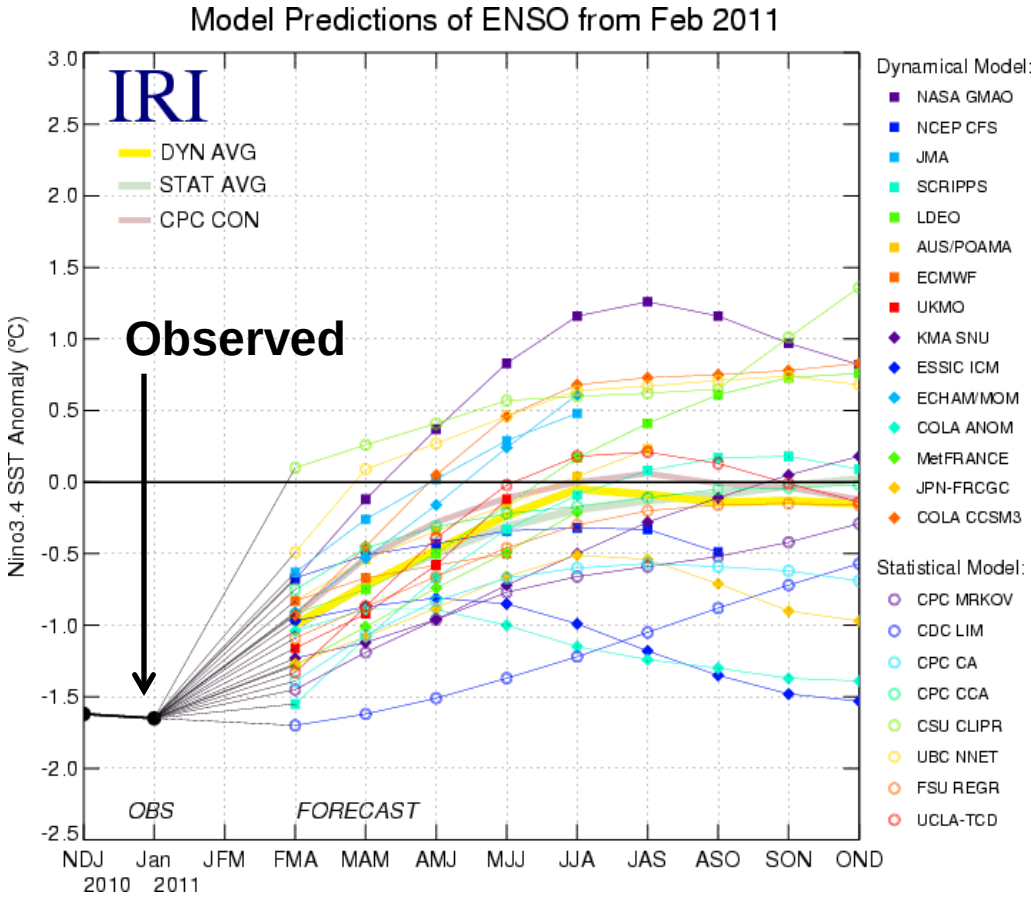
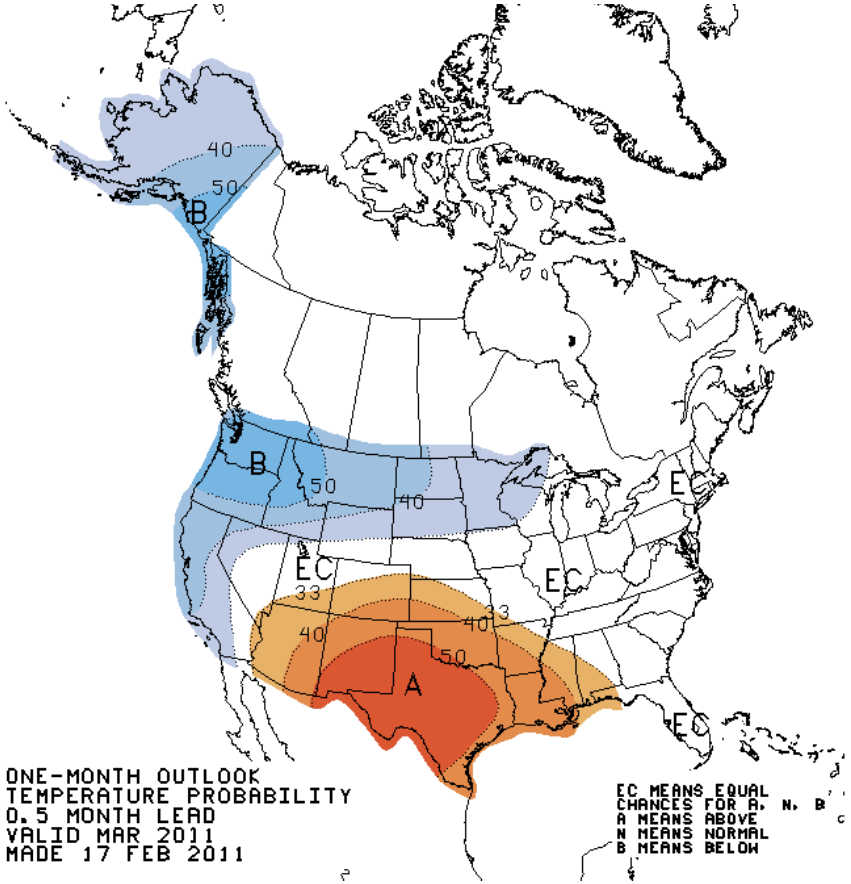


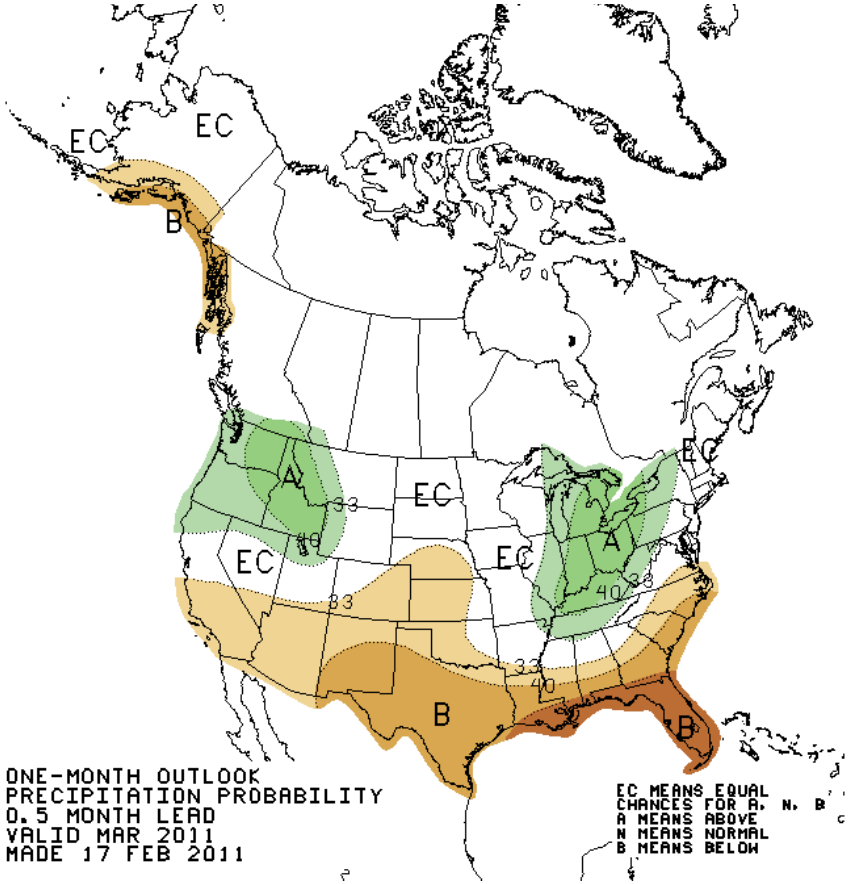

Figure provided by the International Research Institute (IRI) for Climate and Society (updated 15 February 2011).

**For more information go to: http://www.cpc.noaa.gov/products/precip/CWlink/MJO/enso.shtml**

# NWS Outlook
# March 2011
# Issued February 17

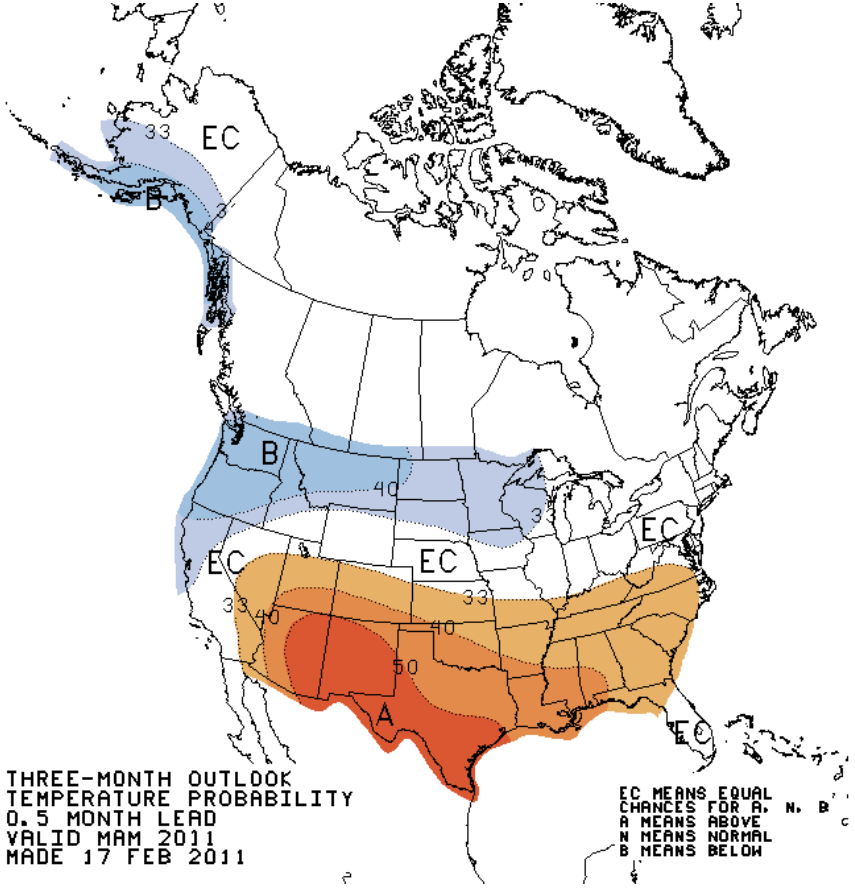



Temperature

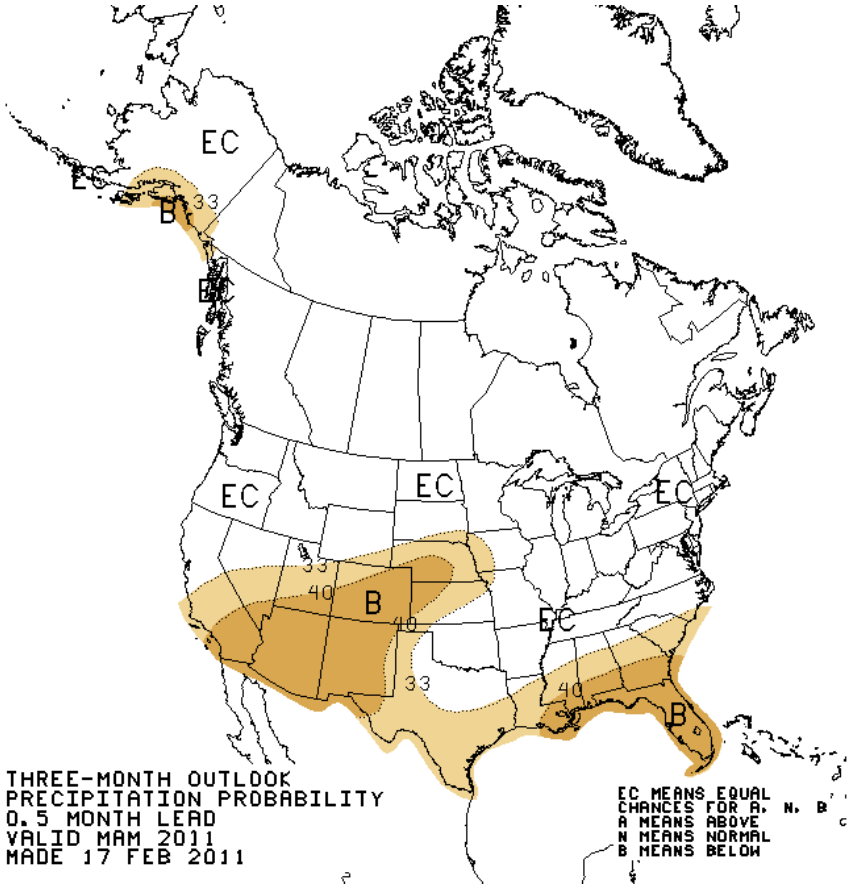



Precipitation

# NWS Outlook
# March – May 2011
# Issued February 17




Temperature



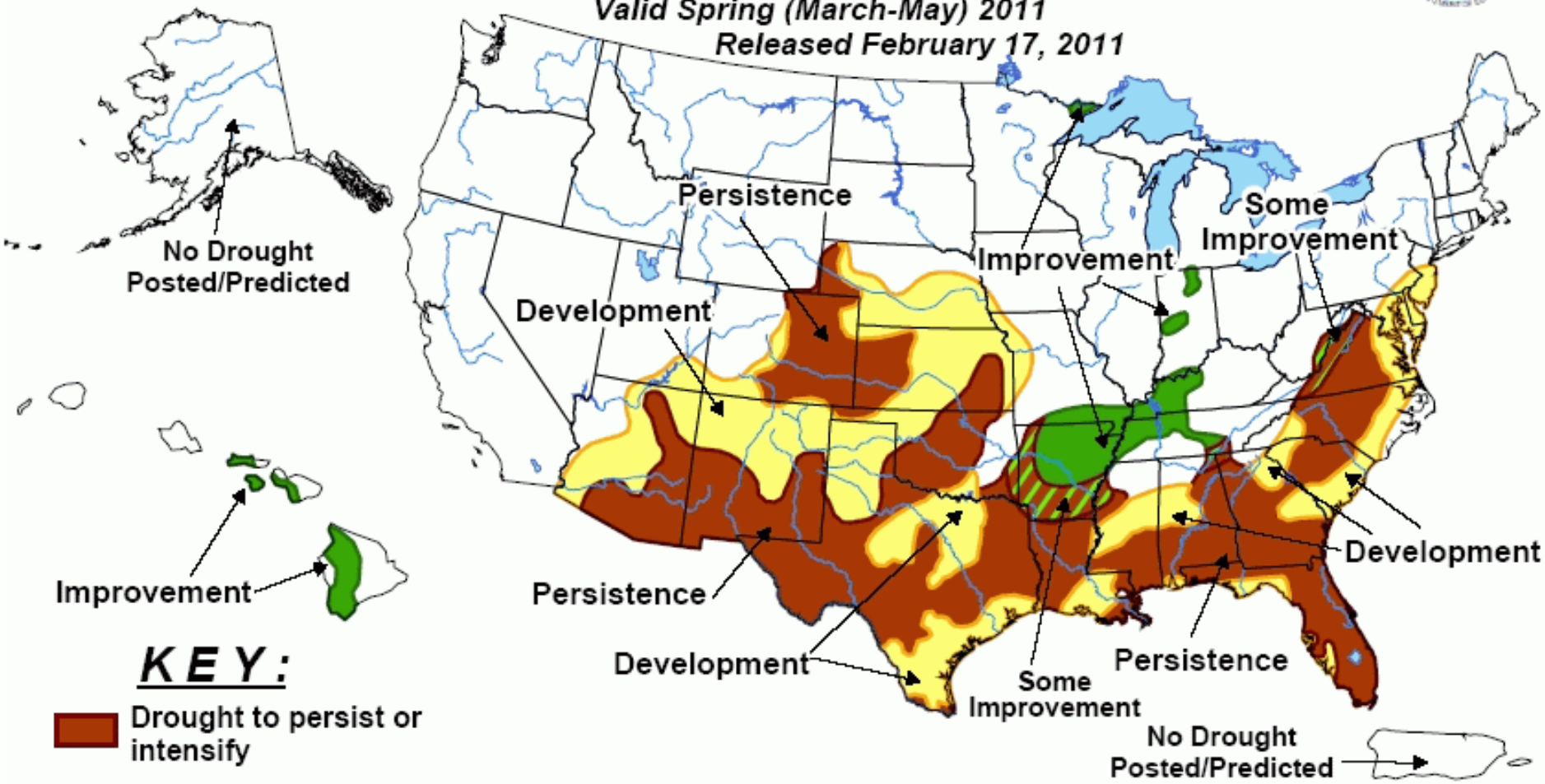

Precipitation

# U.S. Seasonal Drought Outlook

## Drought Tendency During the Valid Period

***Valid Spring (March-May) 2011***

***Released February 17, 2011***

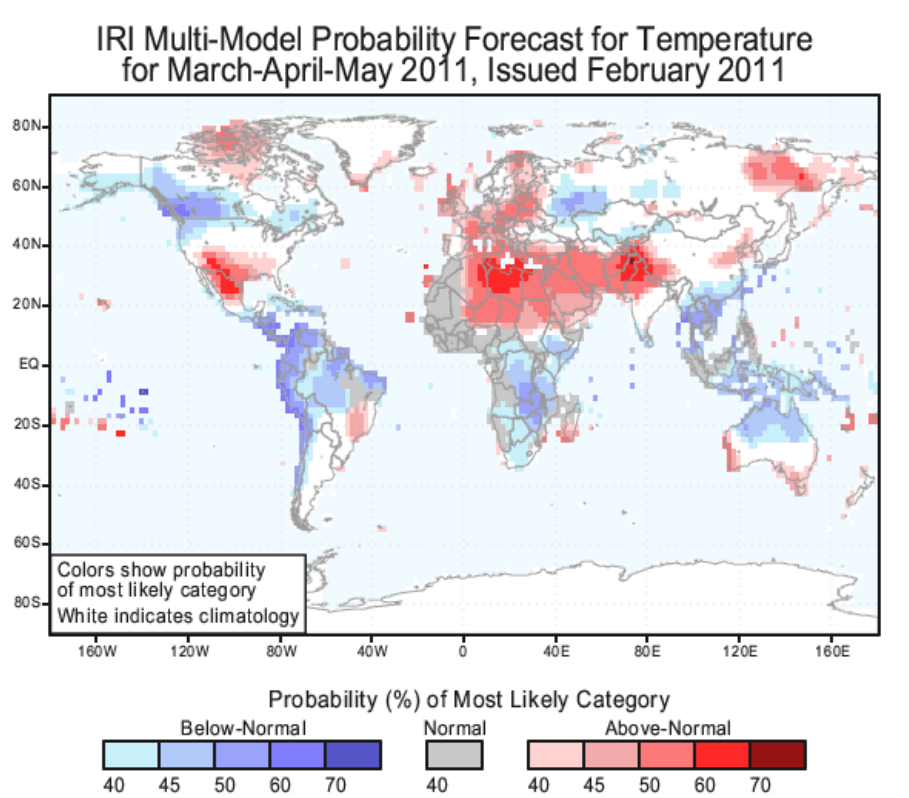



***KEY:***

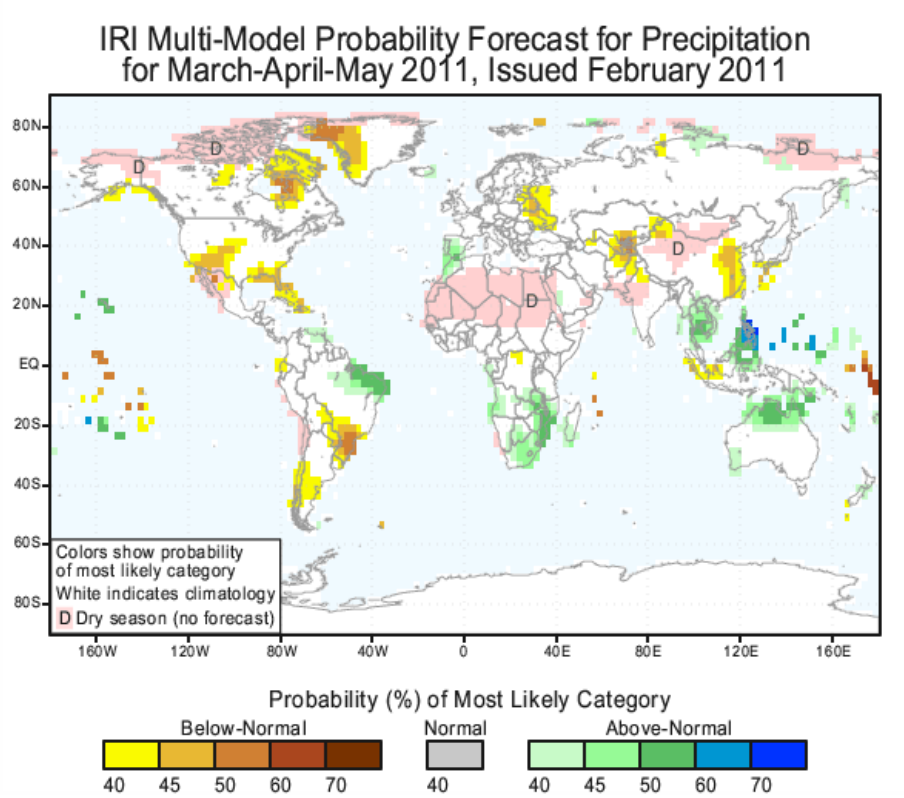
- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

# IRI Global Outlook
# March – May (Spring) 2011
# Issued February 17

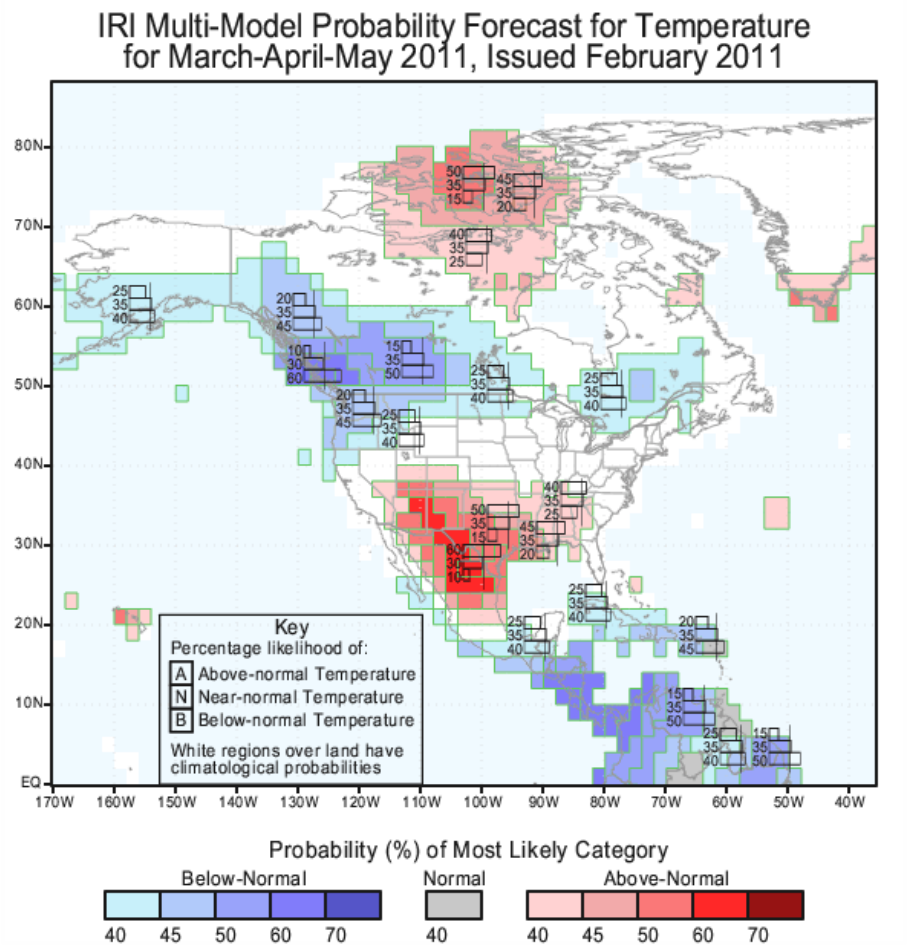



**Temperature**

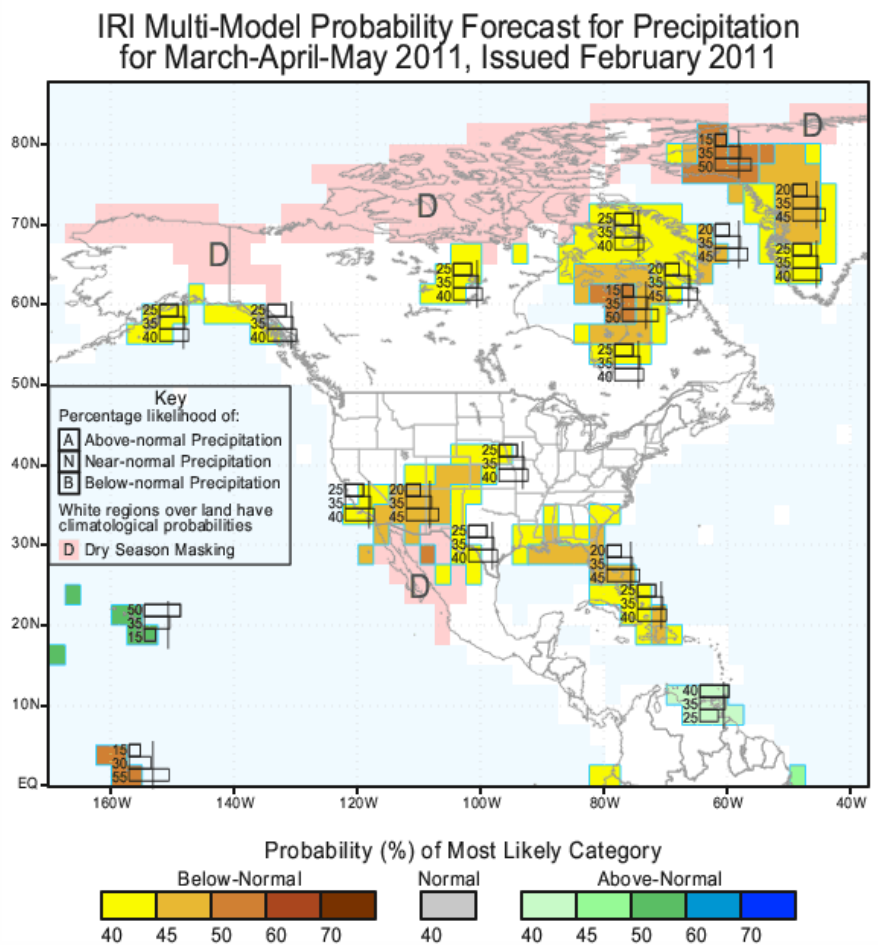



**Precipitation**

# IRI North American Outlook
# March – May (Spring) 2011
# Issued February 17

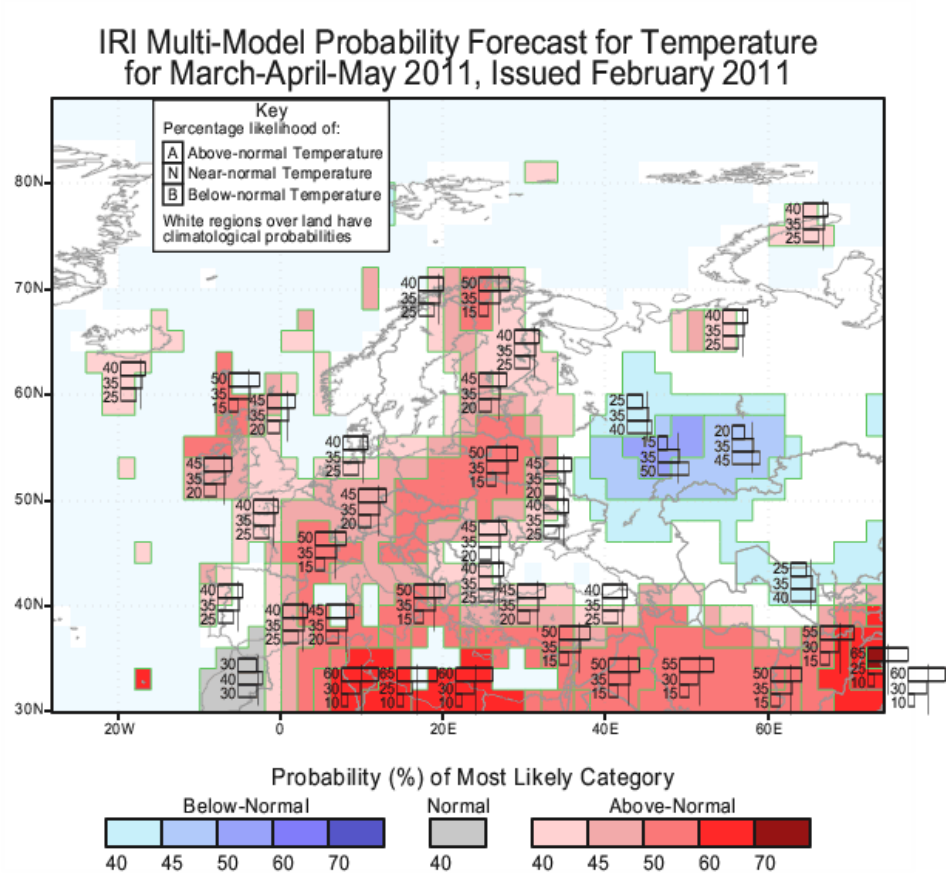



**Temperature**

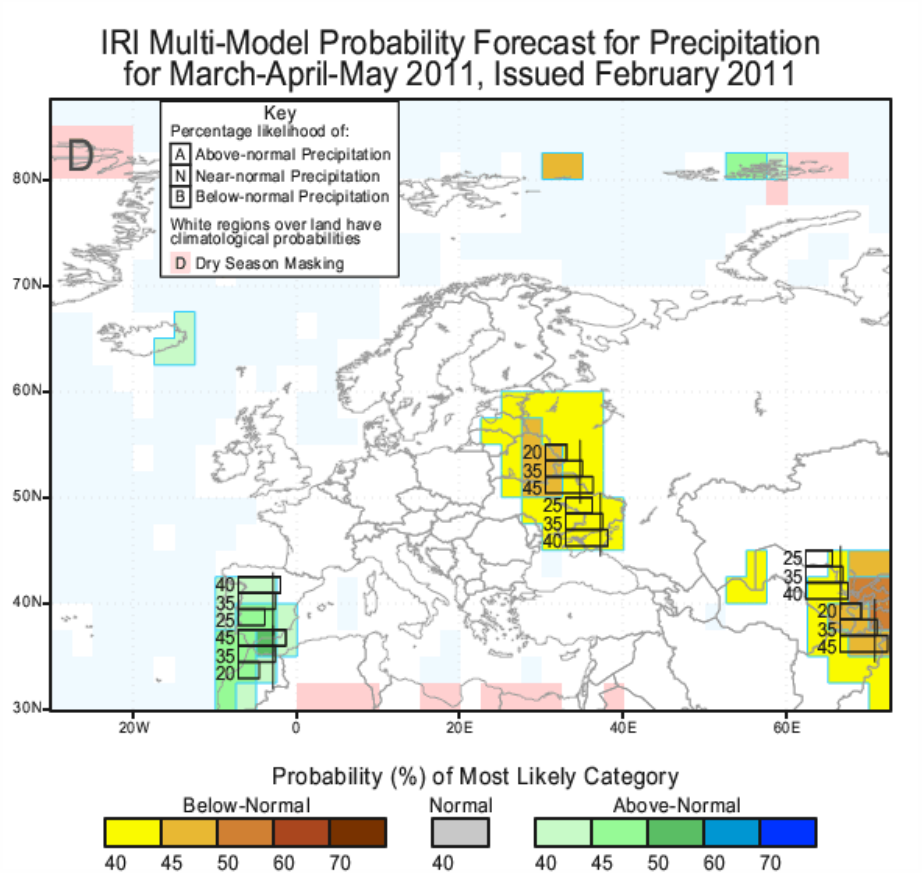



**Precipitation**

# IRI Eurasian Outlook
# March – May (Spring) 2011
# Issued February 17

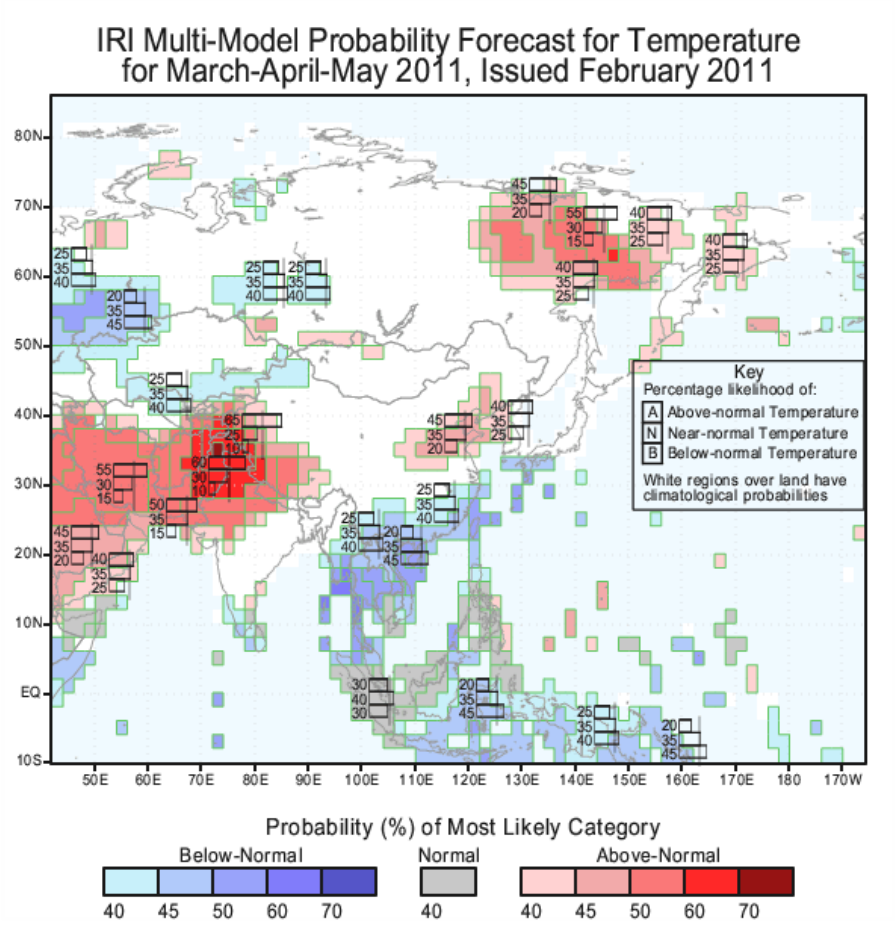



Temperature

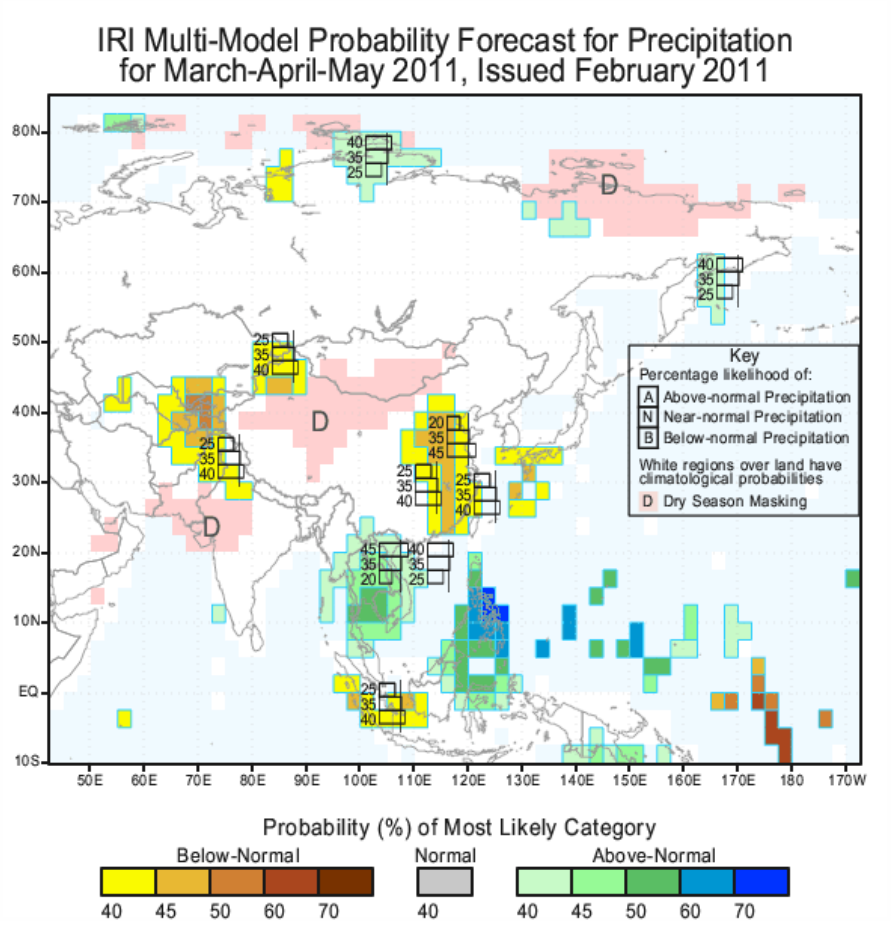



Precipitation

# IRI East Asian Outlook
# March – May (Spring) 2011
# Issued February 17




**Temperature**




**Precipitation**

# Northern Hemisphere Crop-Weather Outlook for the 2011 Growing Season

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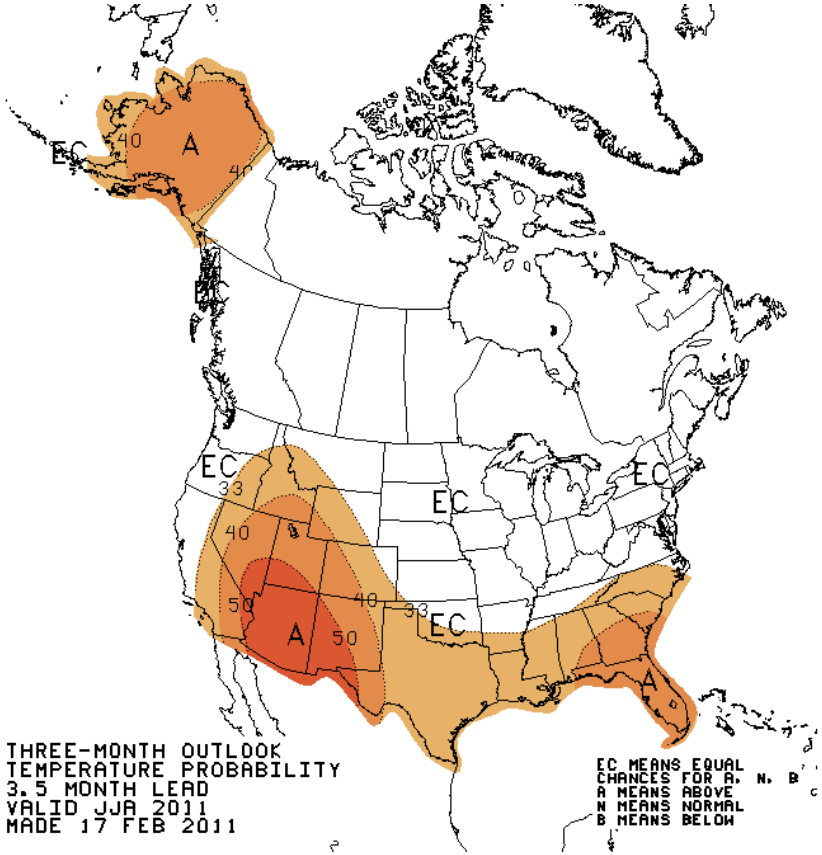
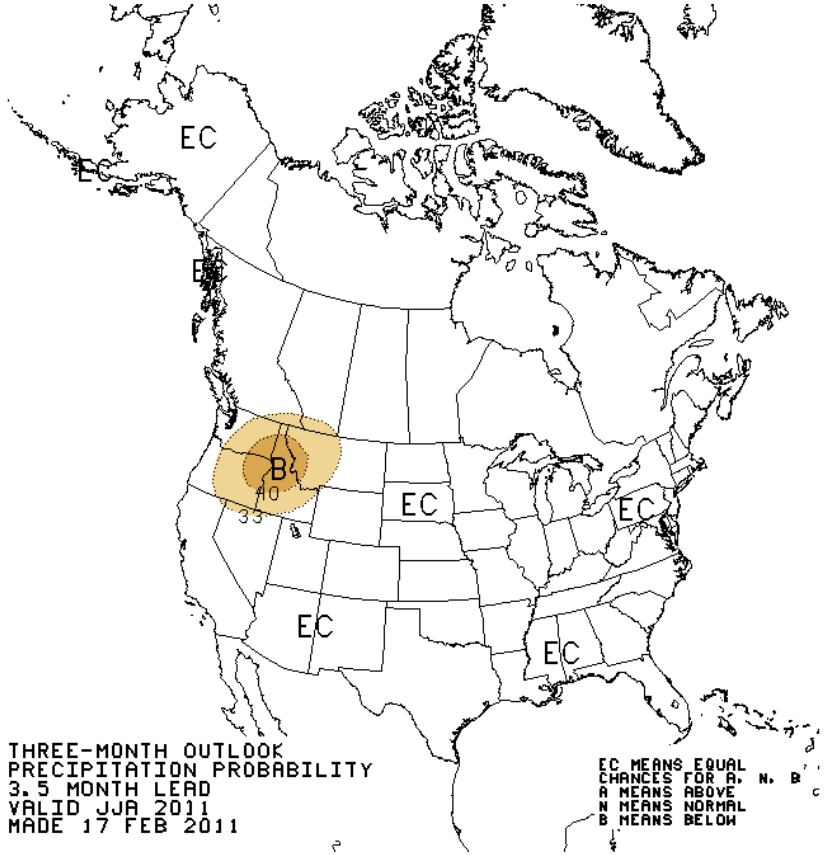
- **Outlook for the summer of 2011**

# NWS Outlook
# June – August 2011
# Issued February 17

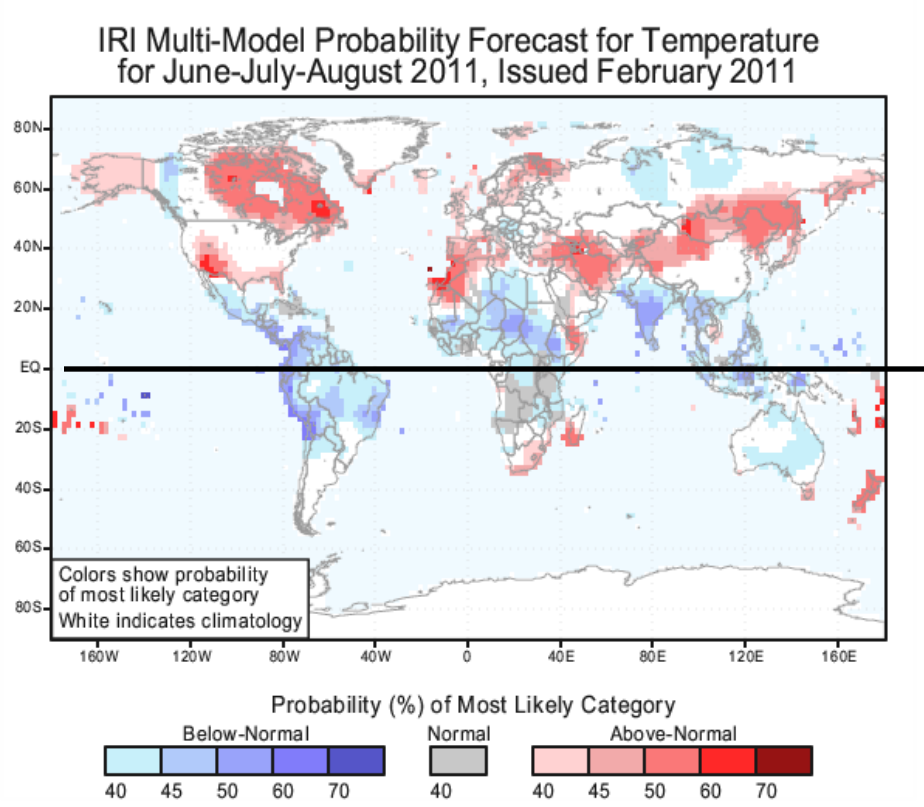



**Temperature**

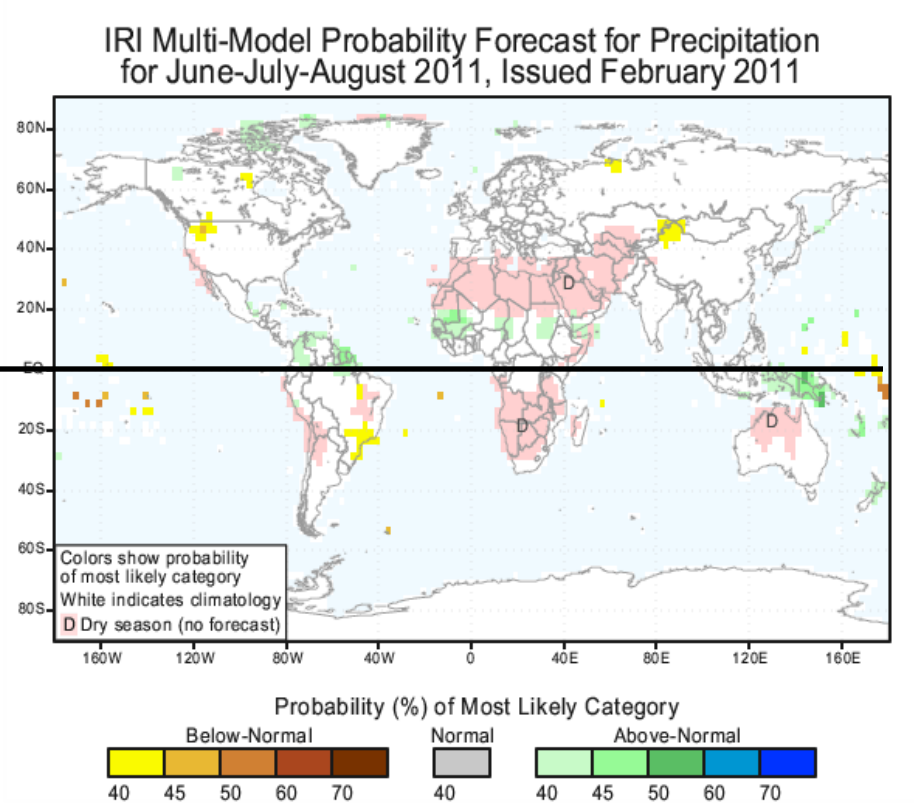



**Precipitation**

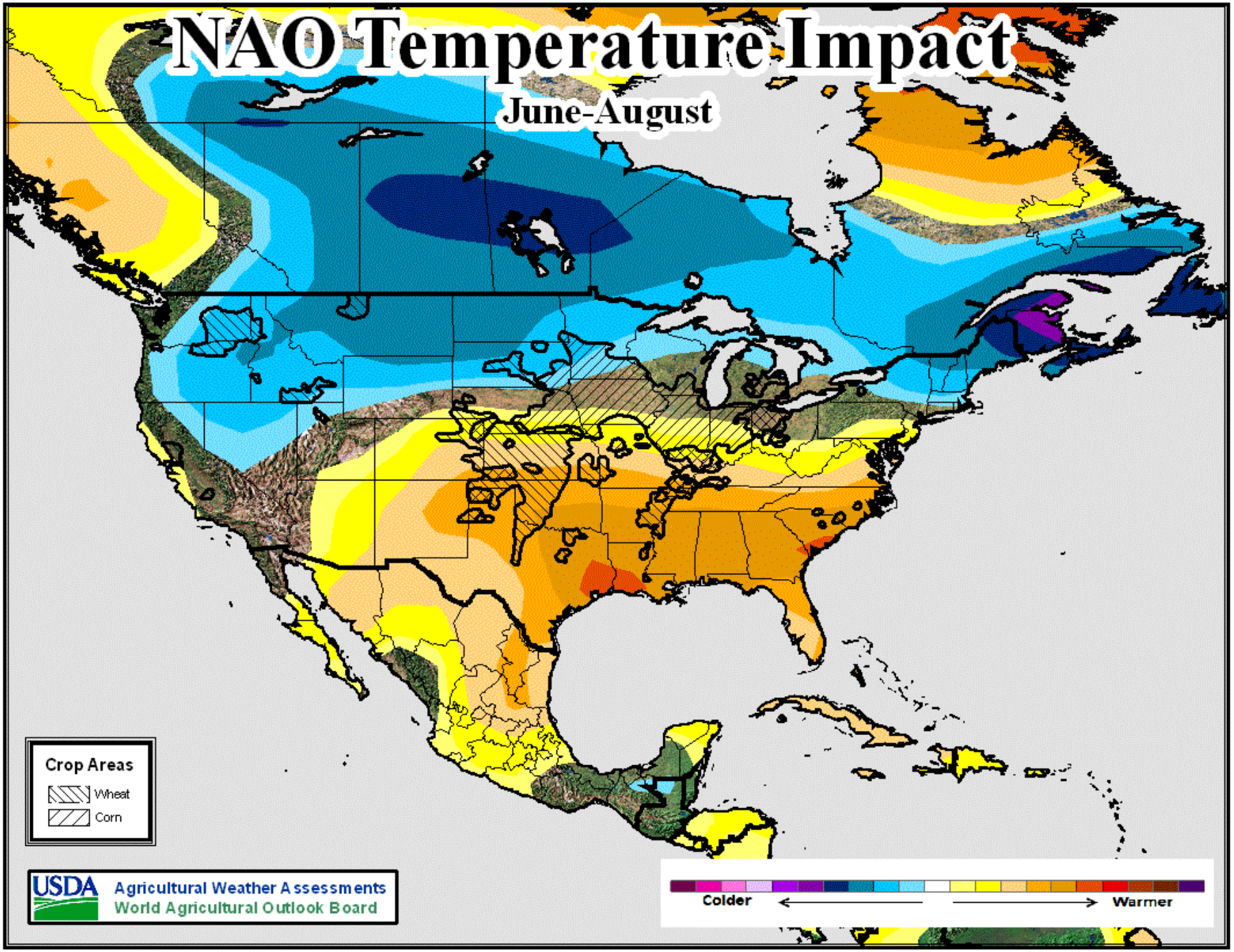
# IRI Outlook
# June – August (Summer) 2011
# Issued February 17

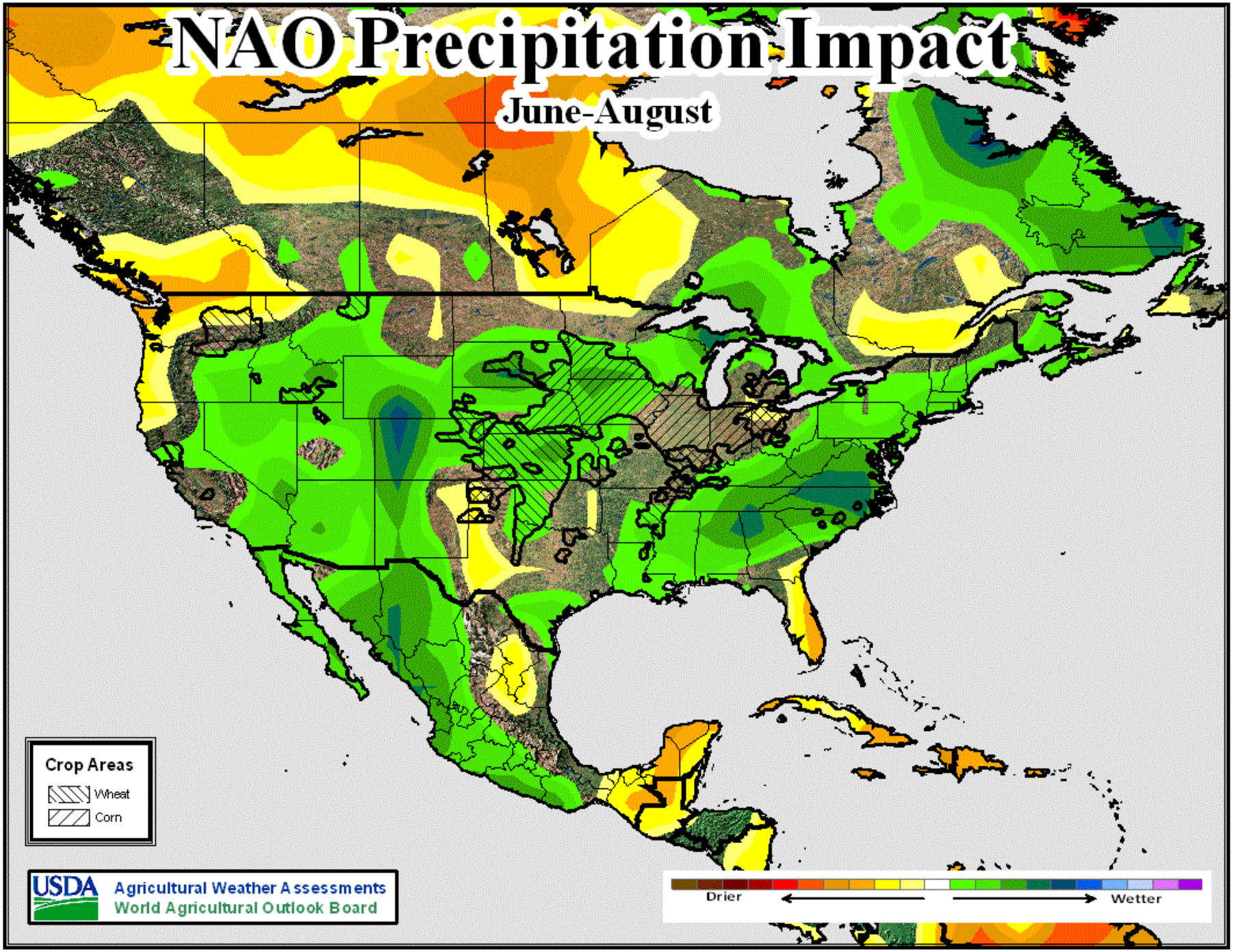


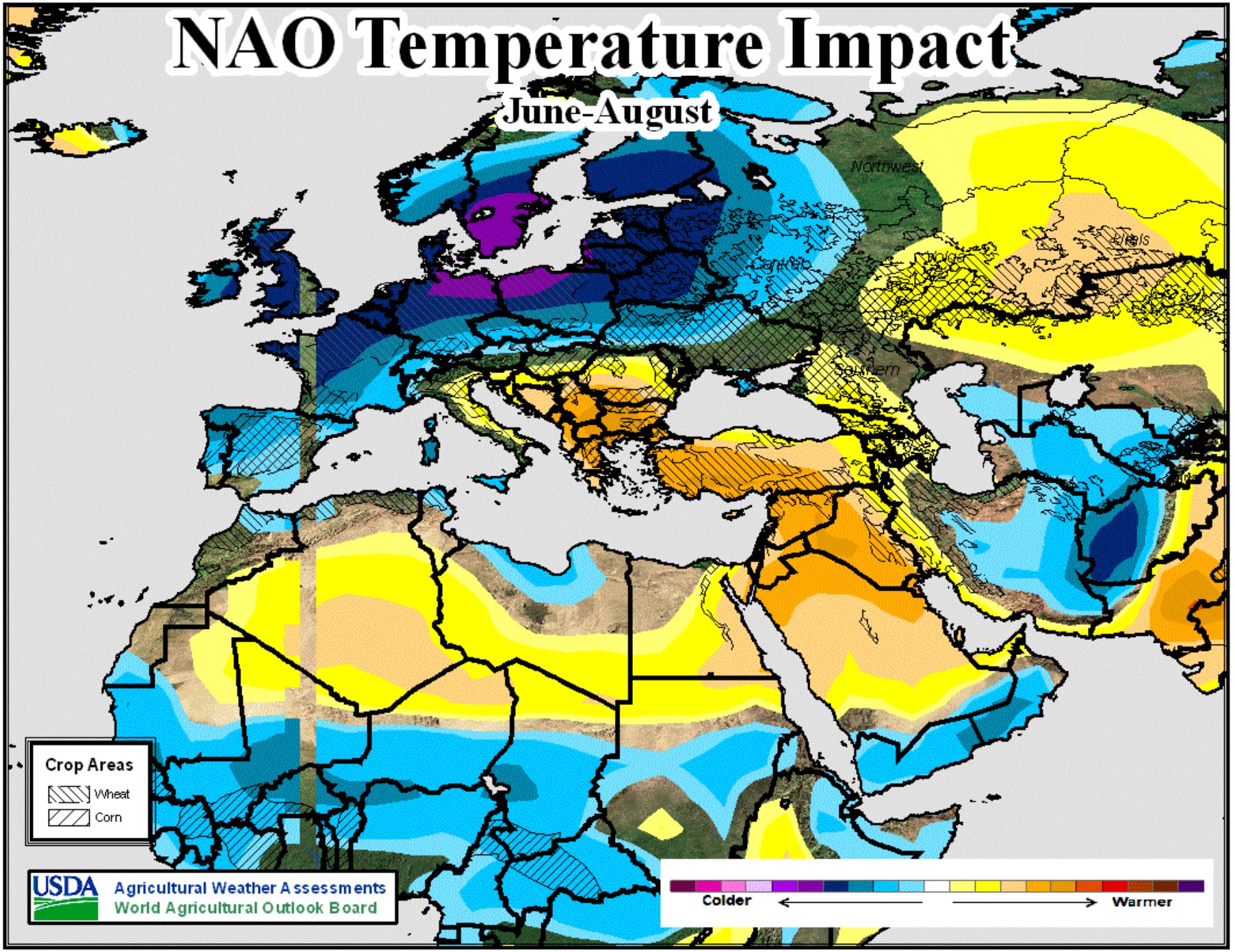

Temperature

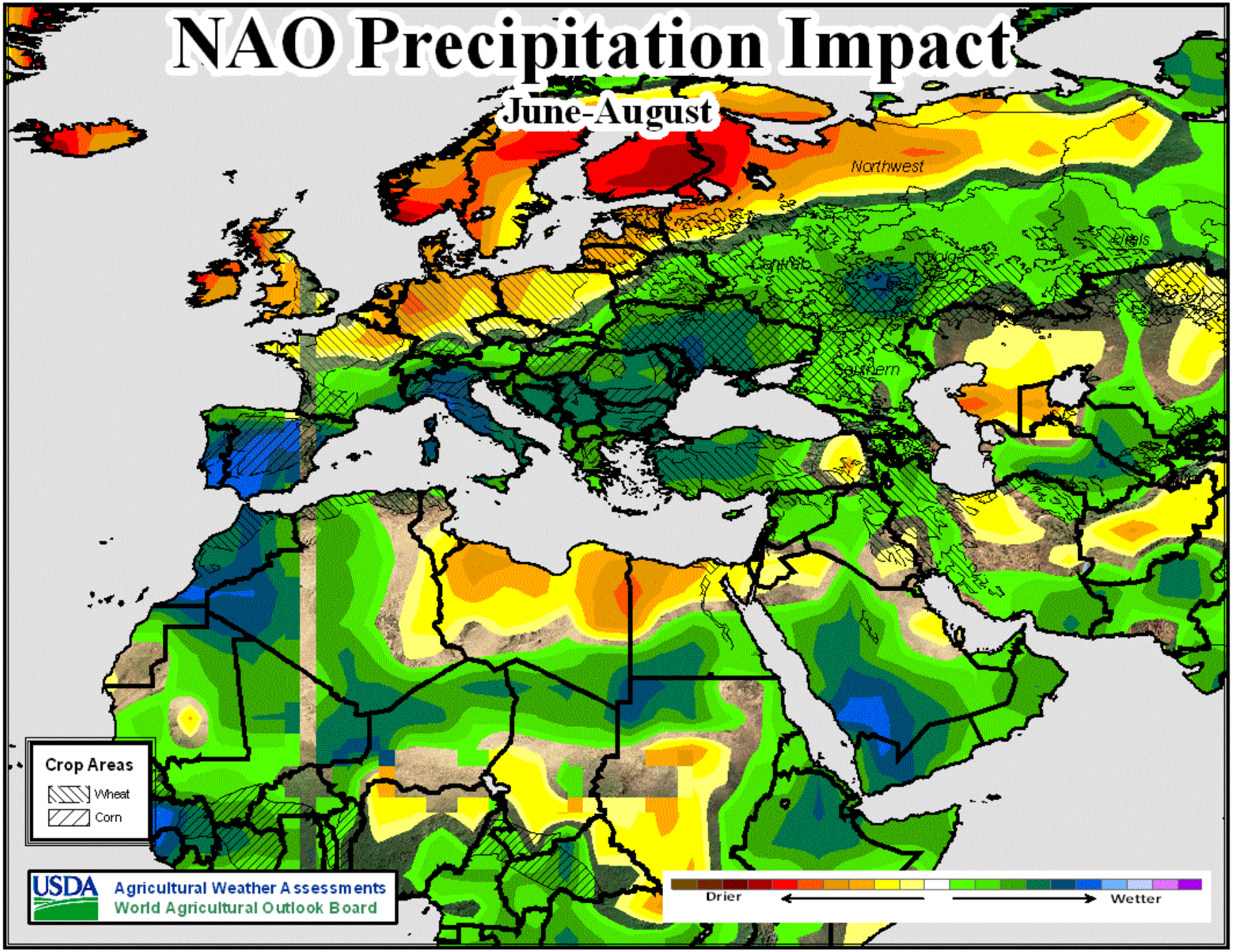


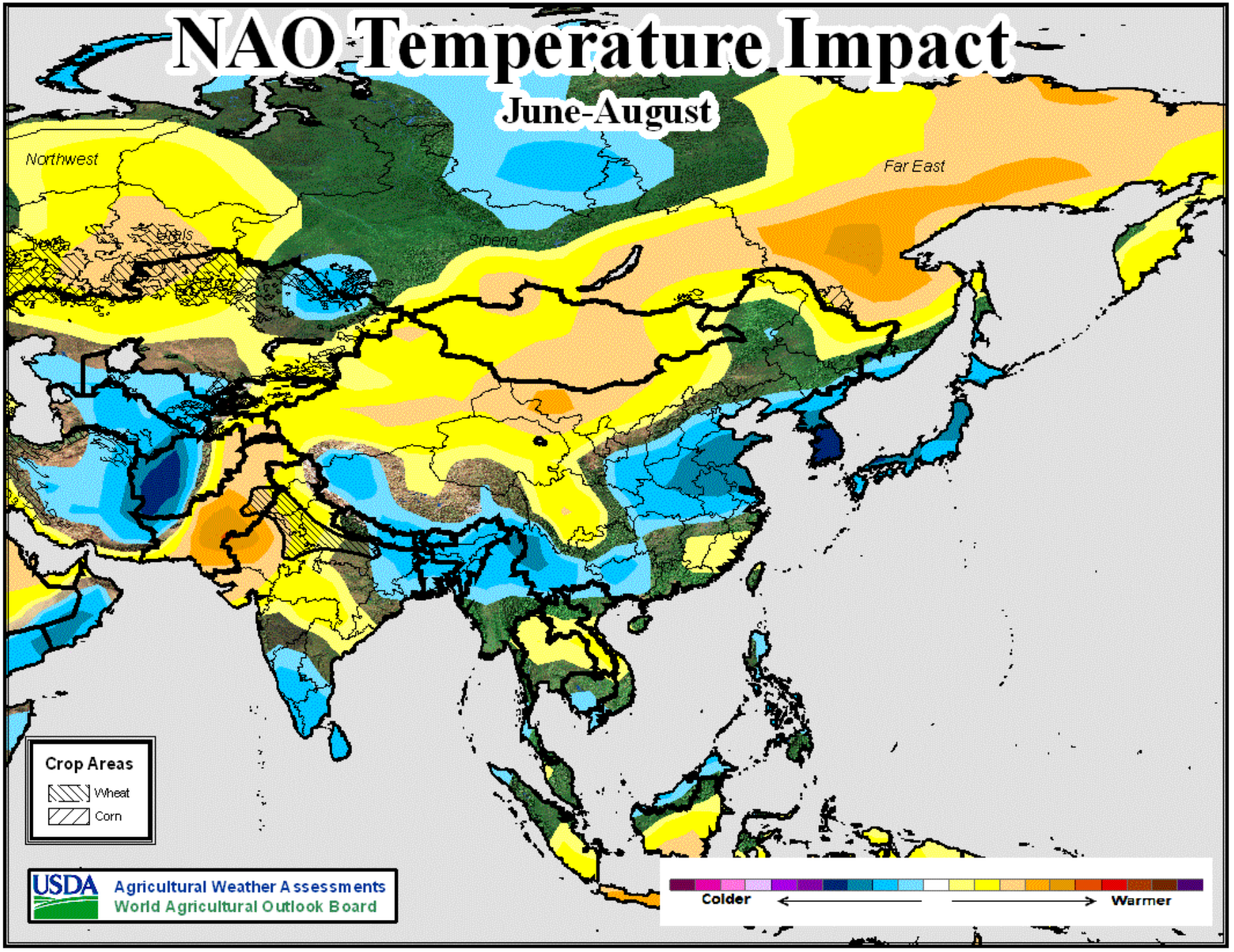

Precipitation

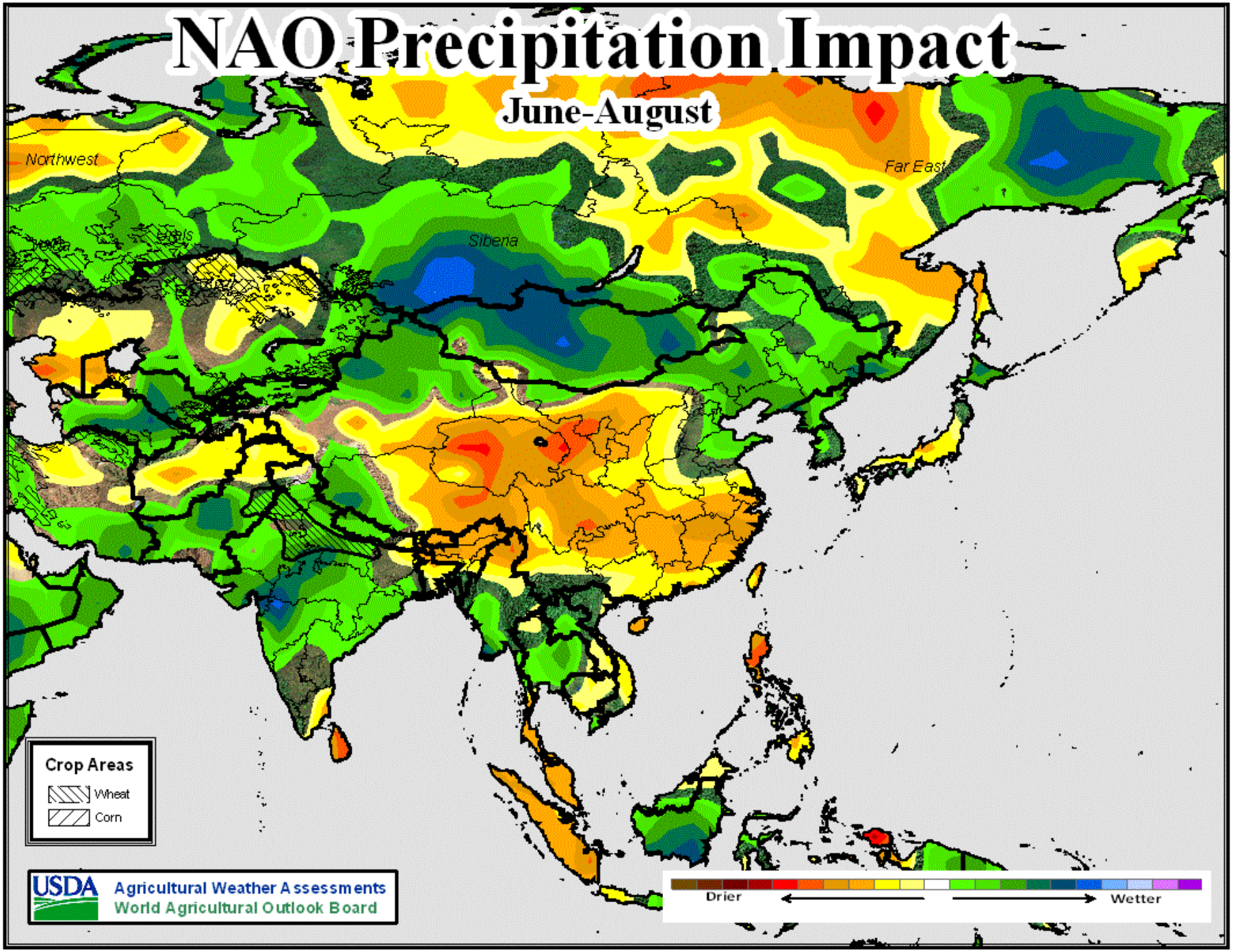

NAO Temperature Impact
June-August
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
Colder
Warmer


NAO Precipitation Impact
June-August
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
Drier
Wetter


NAO Temperature Impact
June-August
Northwest
Central
Southern
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
Colder
Warmer

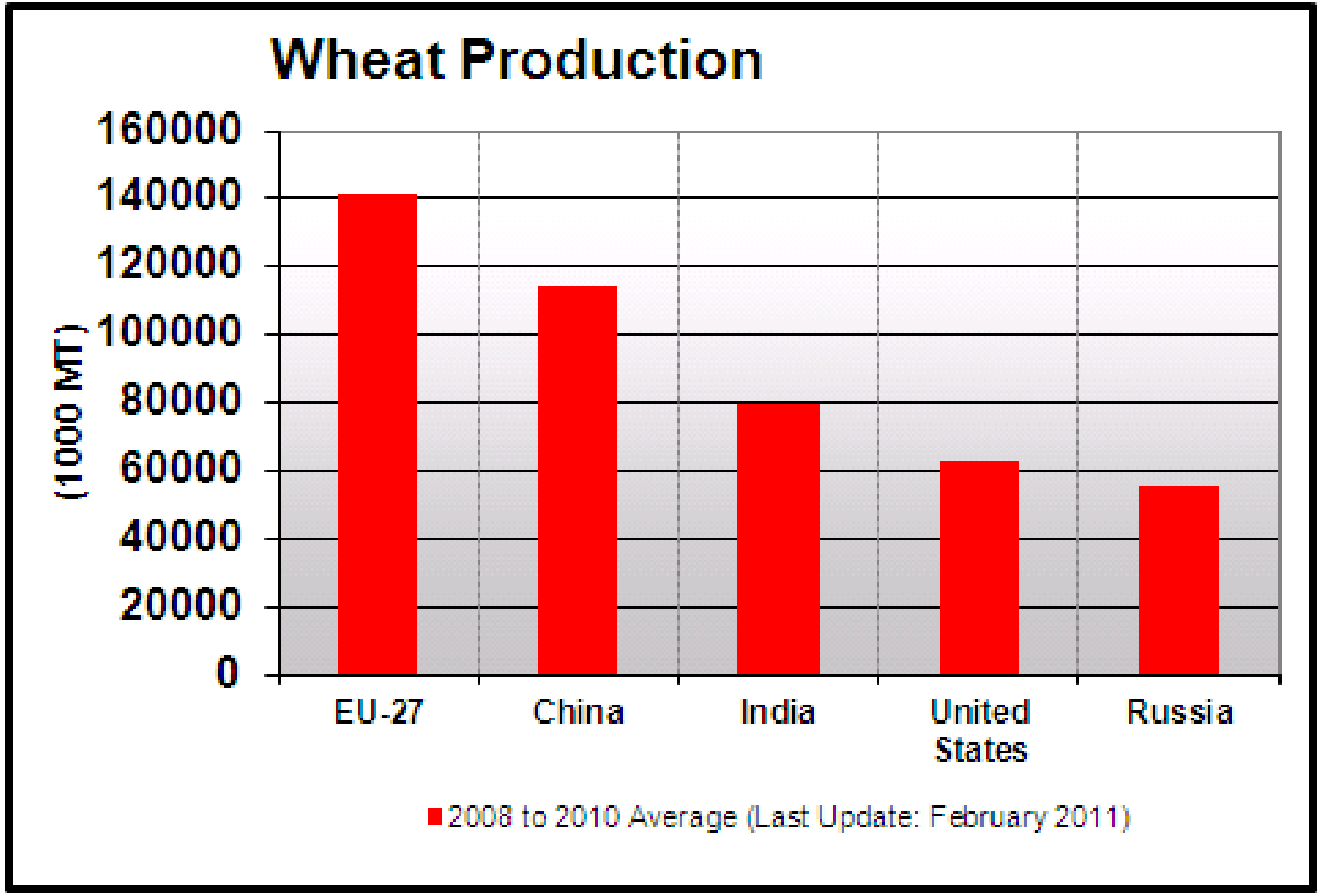

NAO Precipitation Impact
June-August
Northwest
Central
Southern
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
Drier
Wetter

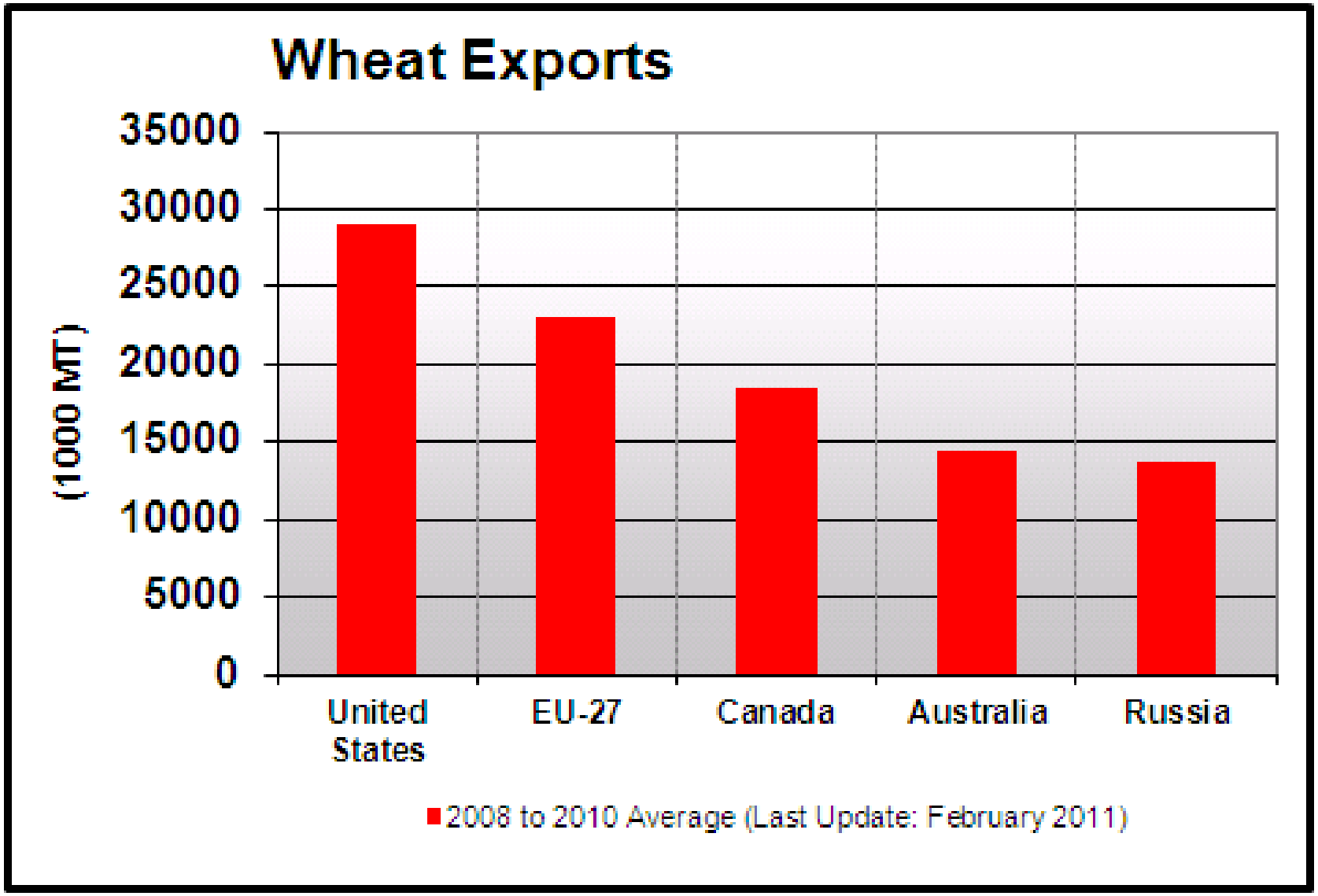

NAO Temperature Impact
June-August
Northwest
Siberia
Far East
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
Colder
Warmer

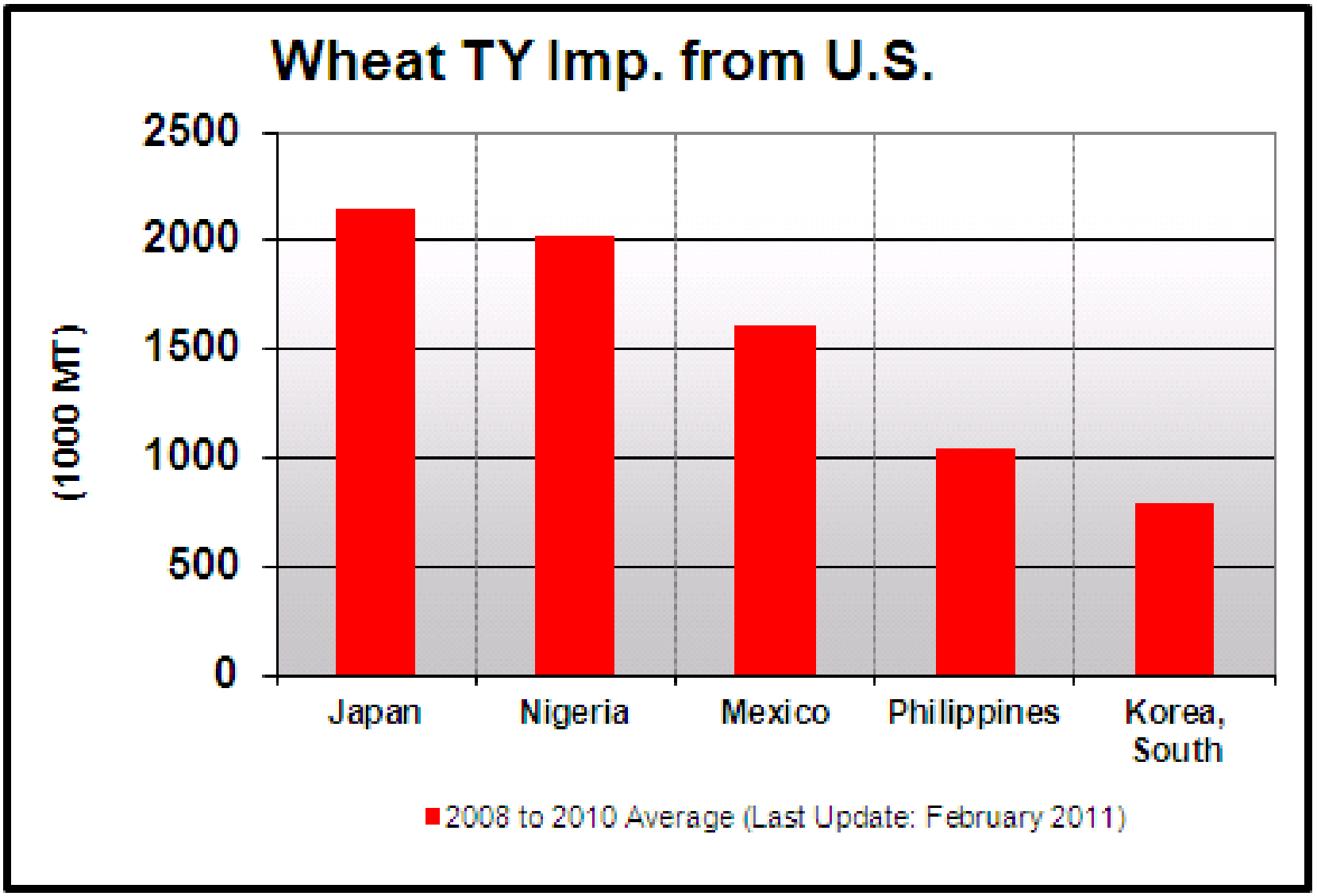

NAO Precipitation Impact
June-August
Northwest
Siberia
Far East
Crop Areas
Wheat
Corn
USDA
Agricultural Weather Assessments
World Agricultural Outlook Board
Drier
Wetter

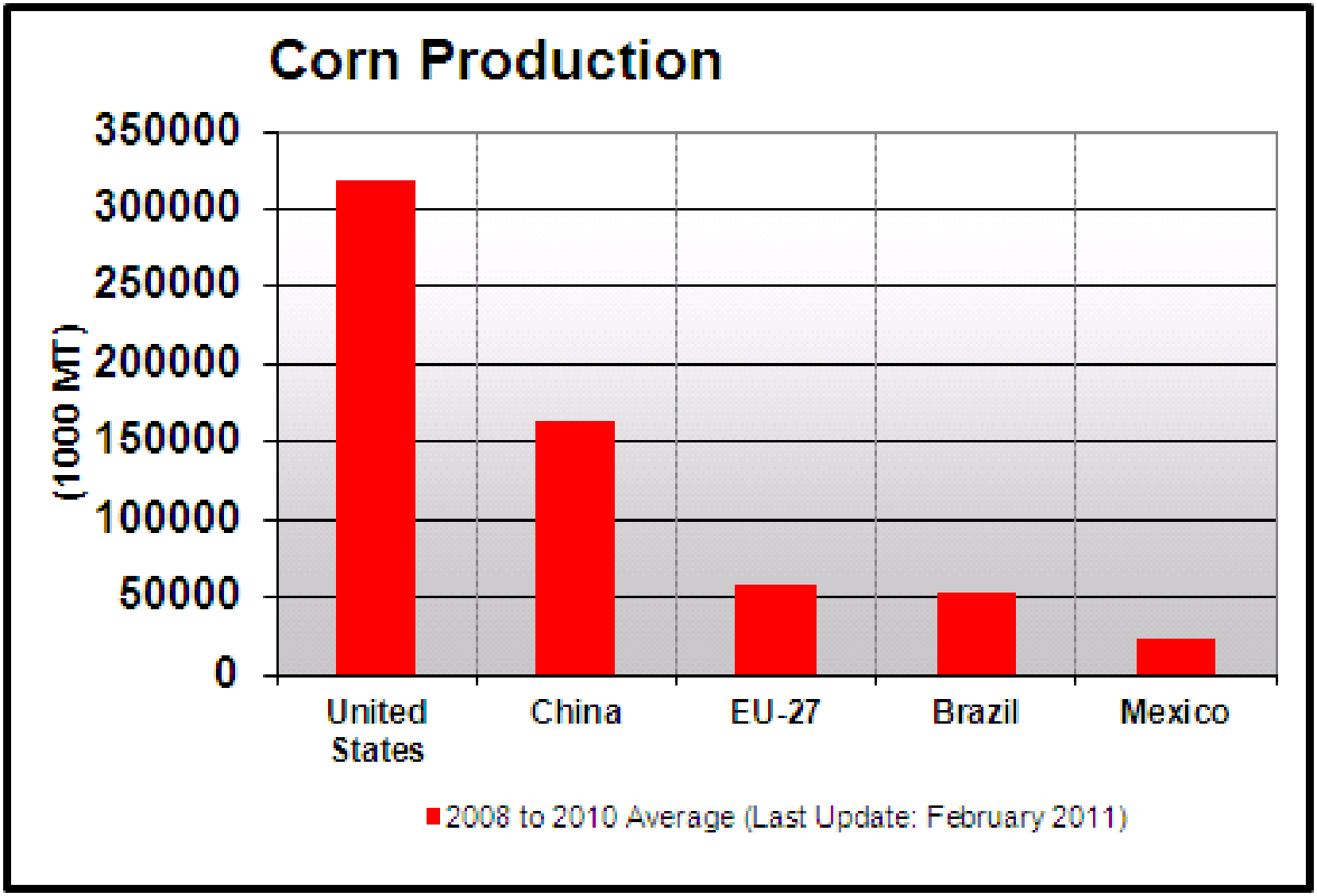
# Questions or Comments?

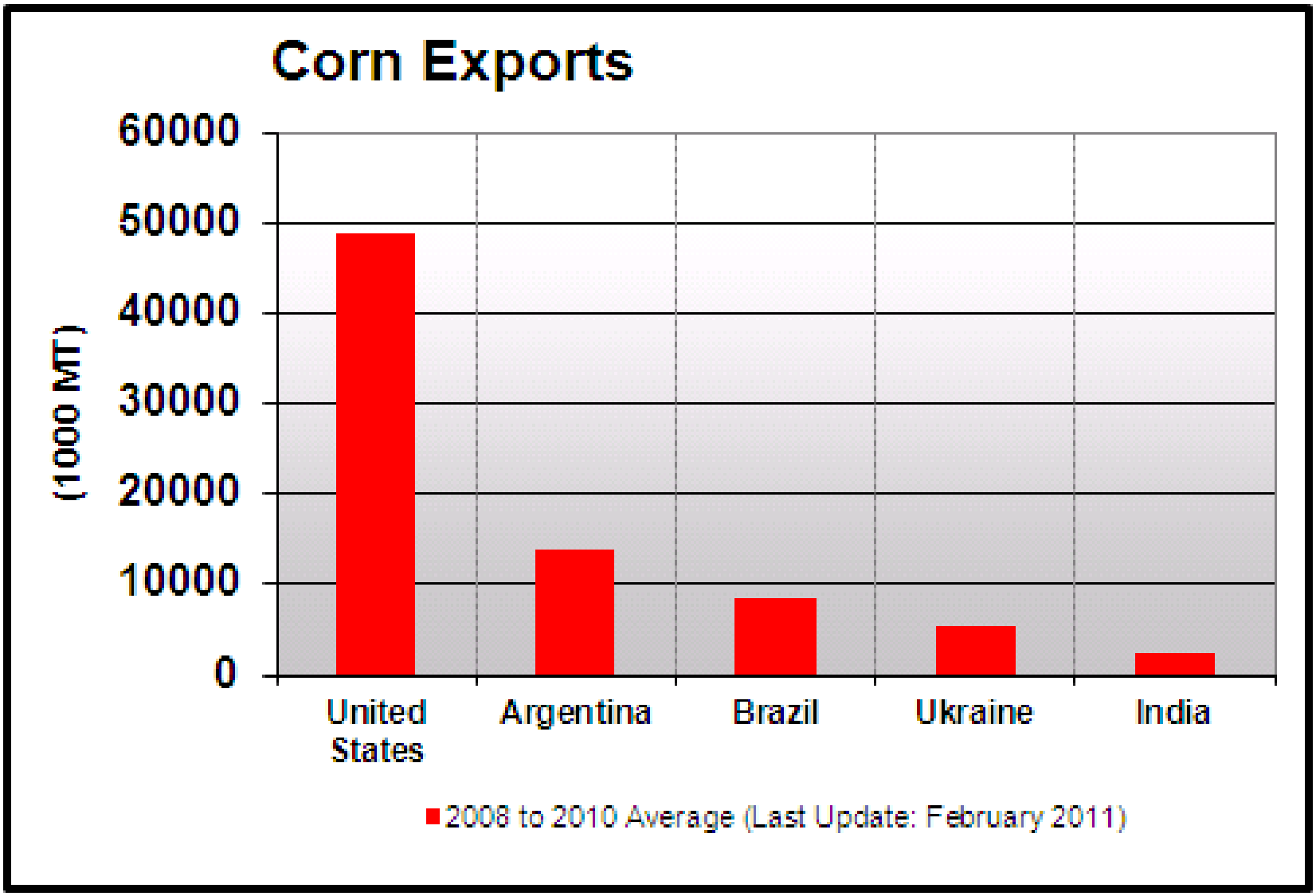
- Contact Information:
  - E-mail: brippey@oce.usda.gov
  - Phone: (202) 720-2397

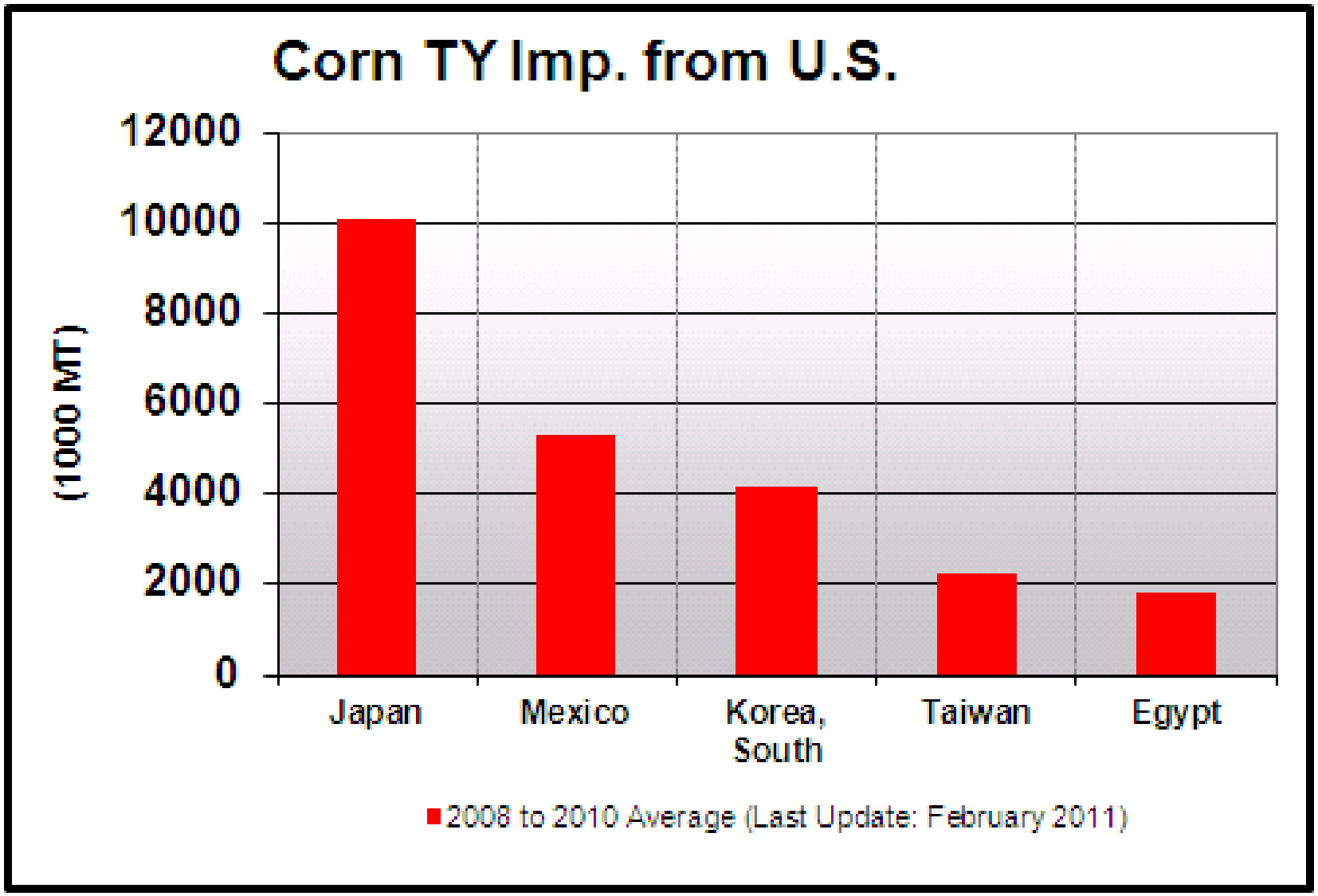

Wheat Production
160000
140000
120000
100000
80000
60000
40000
20000
0
(1000 MT)
EU-27
China
India
United States
Russia
2008 to 2010 Average (Last Update: February 2011)

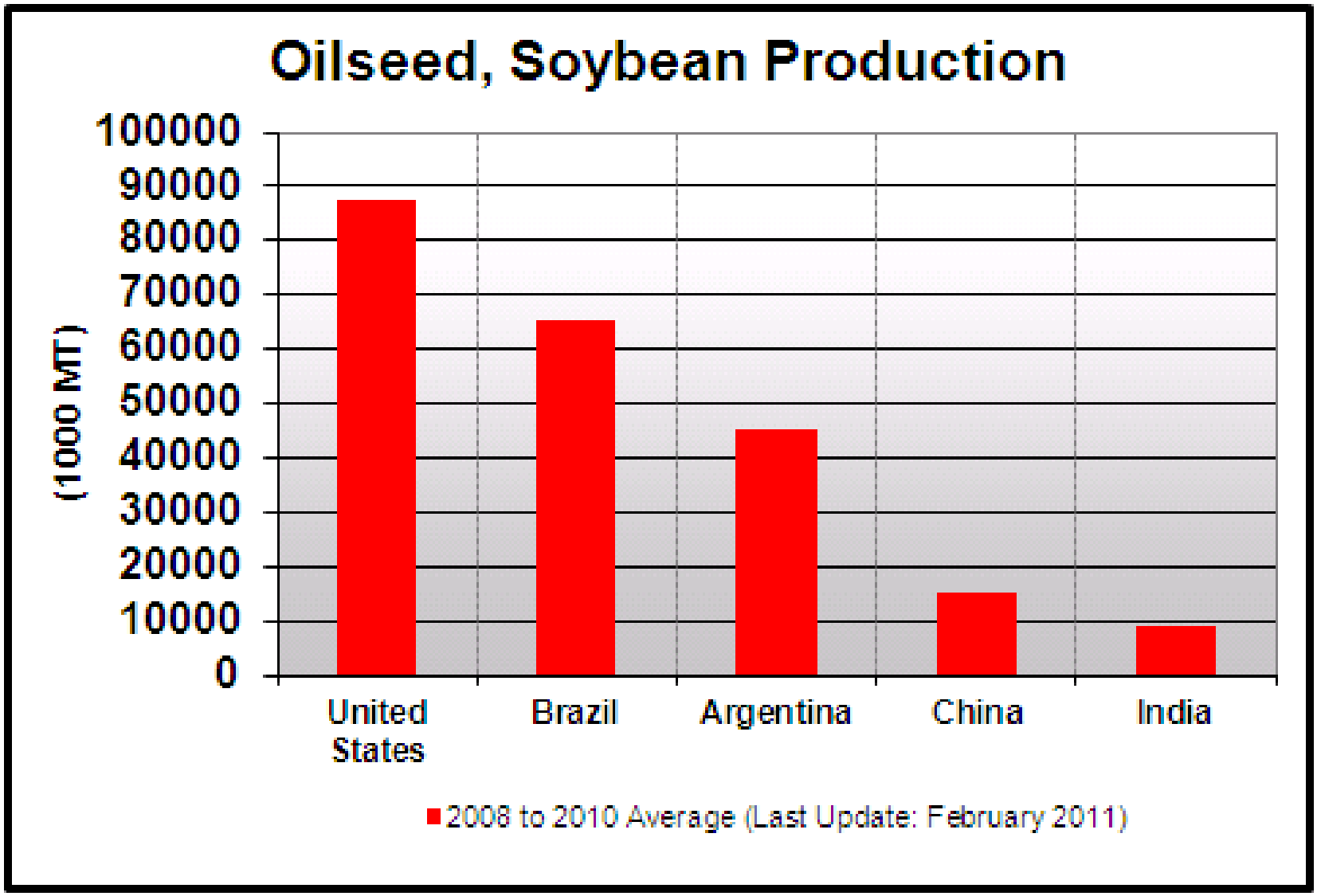

Wheat Exports
35000
30000
25000
20000
15000
10000
5000
0
(1000 MT)
United States
EU-27
Canada
Australia
Russia
2008 to 2010 Average (Last Update: February 2011)

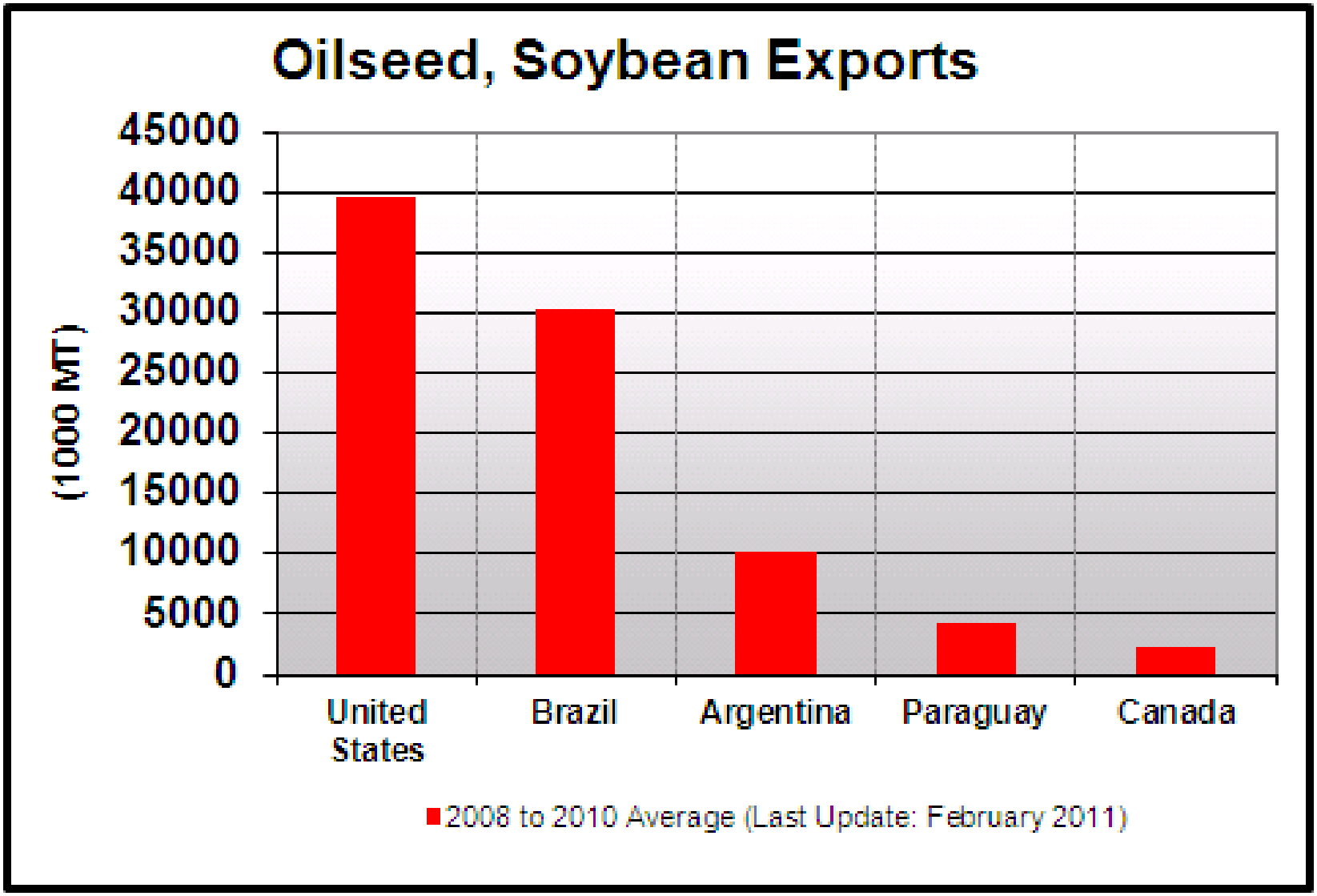

Wheat TY Imp. from U.S.
(1000 MT)
2500
2000
1500
1000
500
0
Japan
Nigeria
Mexico
Philippines
Korea, South
2008 to 2010 Average (Last Update: February 2011)

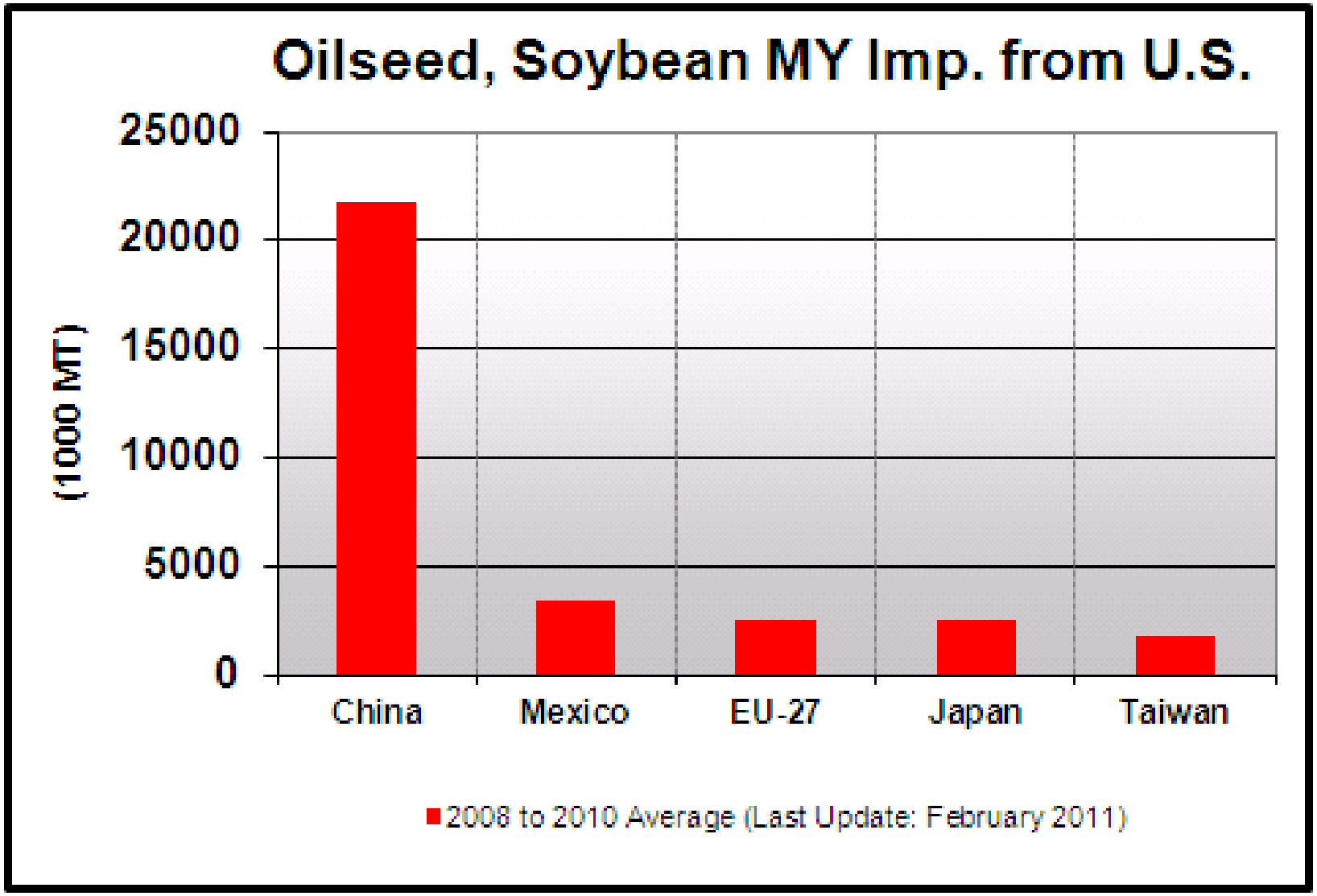

Corn Production
350000
300000
250000
200000
150000
100000
50000
0
(1000 MT)
United States
China
EU-27
Brazil
Mexico
2008 to 2010 Average (Last Update: February 2011)


Corn Exports
(1000 MT)
60000
50000
40000
30000
20000
10000
0
United States
Argentina
Brazil
Ukraine
India
2008 to 2010 Average (Last Update: February 2011)


Corn TY Imp. from U.S.
(1000 MT)
12000
10000
8000
6000
4000
2000
0
Japan
Mexico
Korea, South
Taiwan
Egypt
2008 to 2010 Average (Last Update: February 2011)

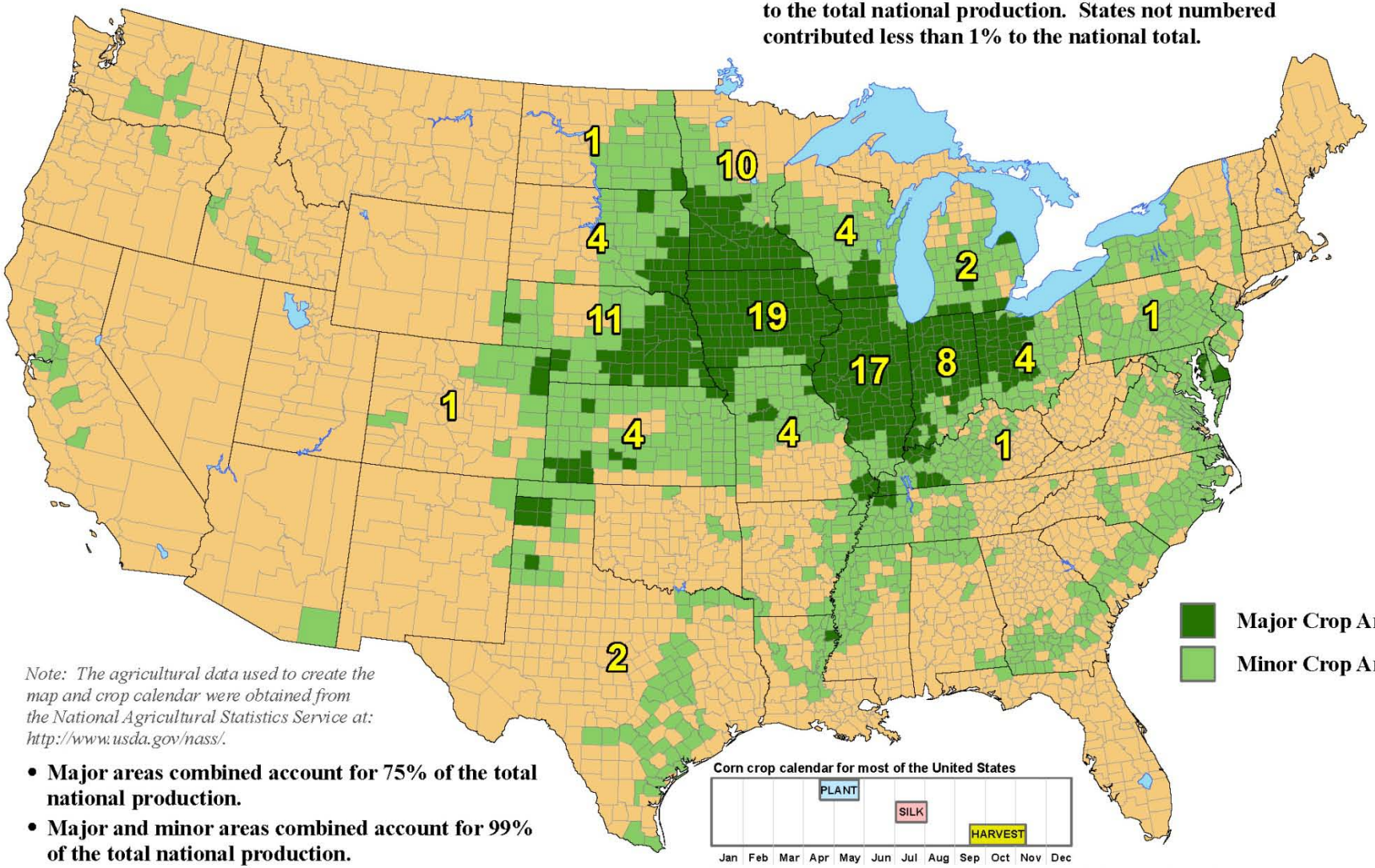

Oilseed, Soybean Production
(1000 MT)
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
United States
Brazil
Argentina
China
India
2008 to 2010 Average (Last Update: February 2011)


Oilseed, Soybean Exports
(1000 MT)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
United States
Brazil
Argentina
Paraguay
Canada
2008 to 2010 Average (Last Update: February 2011)


Oilseed, Soybean MY Imp. from U.S.
(1000 MT)
25000
20000
15000
10000
5000
0
China
Mexico
EU-27
Japan
Taiwan
2008 to 2010 Average (Last Update: February 2011)

# United States: Corn

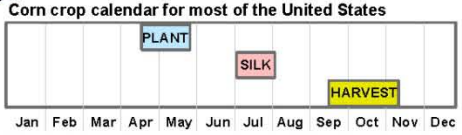
Yellow numbers indicate the percent each state contributed to the total national production. States not numbered contributed less than 1% to the national total.




*Note: The agricultural data used to create the map and crop calendar were obtained from the National Agricultural Statistics Service at: http://www.usda.gov/nass/.*

- **Major areas combined account for 75% of the total national production.**
- **Major and minor areas combined account for 99% of the total national production.**
- **Major and minor areas and state production percentages are based upon averaged NASS county-level and state production data from 2000-2004.**

**Corn crop calendar for most of the United States**




**Crop calendar dates are based upon NASS crop progress data from 2000-2004. The field activities and crop development stages illustrated in the crop calendar represent the average time period when national progress advanced from 10 to 90 percent.**

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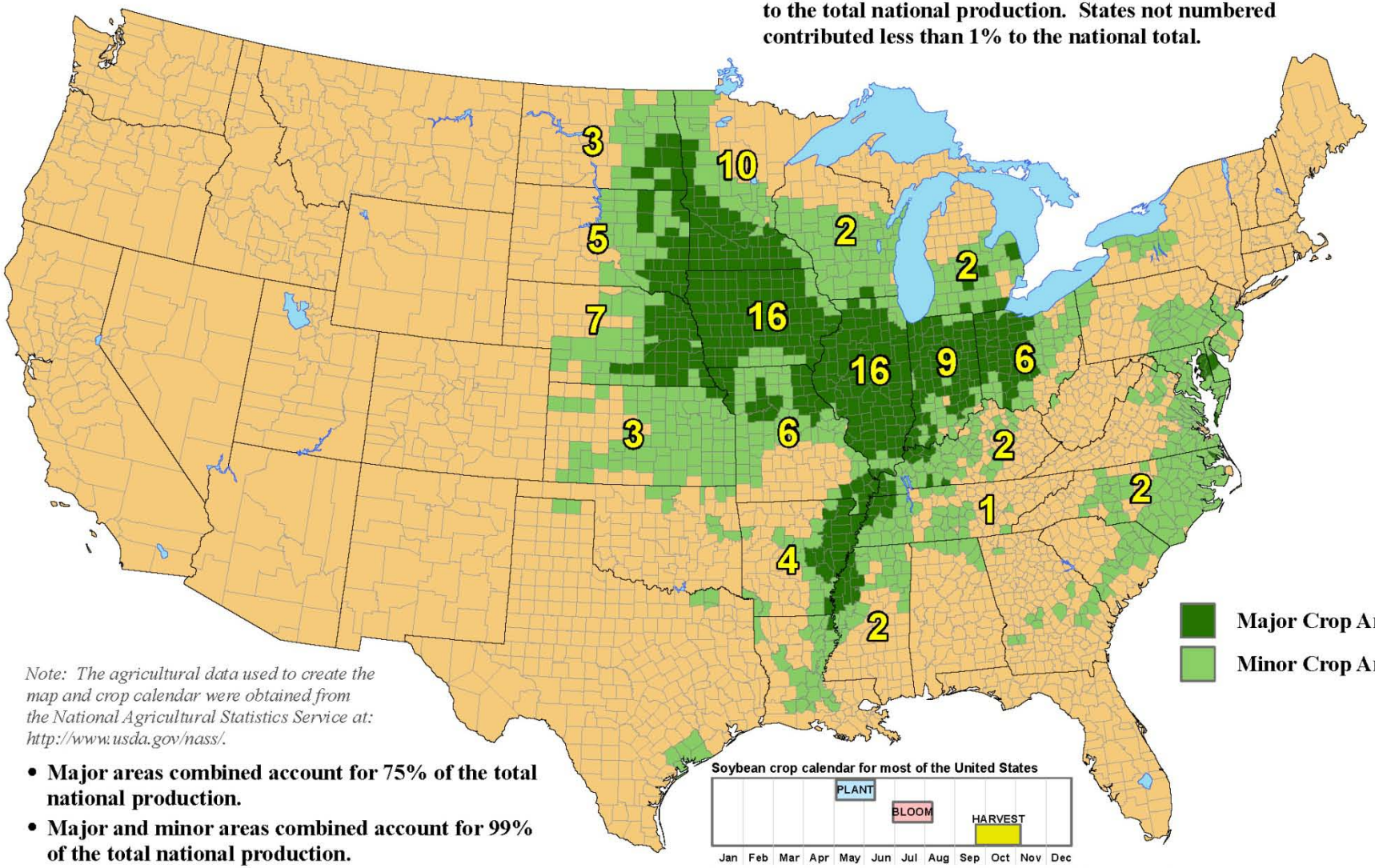
# United States: Soybeans

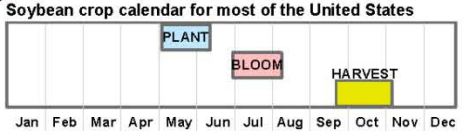
Yellow numbers indicate the percent each state contributed to the total national production. States not numbered contributed less than 1% to the national total.




*Note: The agricultural data used to create the map and crop calendar were obtained from the National Agricultural Statistics Service at: http://www.usda.gov/nass/.*

- **Major areas combined account for 75% of the total national production.**
- **Major and minor areas combined account for 99% of the total national production.**
- **Major and minor areas and state production percentages are based upon averaged NASS county-level and state production data from 2000-2004.**

**Soybean crop calendar for most of the United States**




**Crop calendar dates are based upon NASS crop progress data from 2000-2004. The field activities and crop development stages illustrated in the crop calendar represent the average time period when national progress advanced from 10 to 90 percent.**

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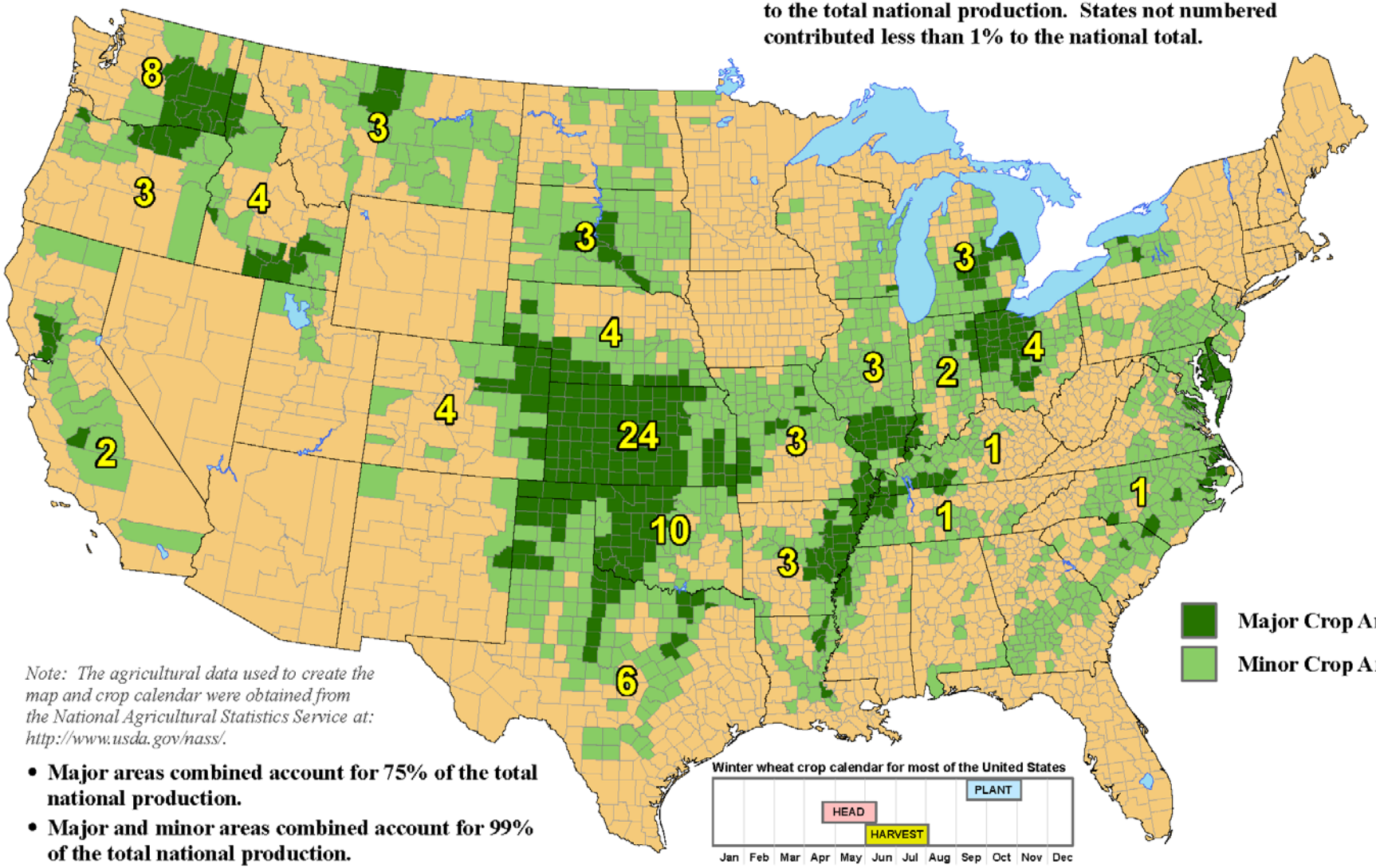
# United States: Winter Wheat

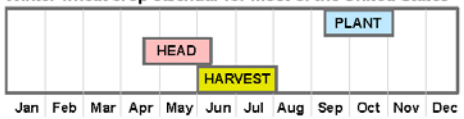
Yellow numbers indicate the percent each state contributed to the total national production. States not numbered contributed less than 1% to the national total.




*Note: The agricultural data used to create the map and crop calendar were obtained from the National Agricultural Statistics Service at: http://www.usda.gov/nass/.*

- **Major areas combined account for 75% of the total national production.**
- **Major and minor areas combined account for 99% of the total national production.**
- **Major and minor areas and state production percentages are based upon averaged NASS county-level and state production data from 2000-2004.**

**Winter wheat crop calendar for most of the United States**




Crop calendar dates are based upon NASS crop progress data from 2000-2004. The field activities and crop development stages illustrated in the crop calendar represent the average time period when national progress advanced from 10 to 90 percent.

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