The U.S. Drought of 2012: Once-in-a-Generation Crop Calamity

The Mason Inn
October 17, 2012
Fairfax, Virginia

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Washington, D.C.
March-August 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA

U.S. Ranking: 17th-driest Mar to Aug; driest since 1988

Precipitation

1 = Driest
118 = Wettest

Record Driest
Much Below Normal
Below Normal
Near Normal
Above Normal
Much Above Normal
Record Wettest
Oct 2011-Sep 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA

U.S. Rankings
1. 56.2 in 2011-12
2. 55.6 in 1999-00
3. 55.1 in 2005-06
U.S. Ranking: 25th-driest Oct-Sep; driest since 2001-02
Why So Dry?

• La Niña in 2010-11 and 2011-12 contributed to the historic 2011 drought across the southern Plains.
• During the 2011-12 cold season, a strong jet stream across the North Atlantic Ocean drew cold air and moisture away from the U.S.
• Around Memorial Day 2012, a blocking high pressure system in the North Atlantic locked in hot, dry weather.
Sep. 25, 2012:
USDM record with 65.45% of CONUS in drought.
Percentiles and the U.S. Drought Monitor

• Advantages of percentiles:
  – Can be applied to any parameter
  – Can be used for any length of data record
  – Puts drought in historical perspective

• D4, Exceptional Drought: once per 50+ years
• D3, Extreme Drought: once per 20 to 50 years
• D2, Severe Drought: once per 10 to 20 years
• D1, Moderate Drought: once per 5 to 10 years
• D0, Abnormally Dry: once per 3 to 5 years
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.nass.usda.gov/.

- Major areas combined account for approximately 75% of the total national production.
- Major and minor areas combined account for approximately 99% of the total national production.
- Major and minor areas and state production percentages are derived from NASS county- and state-level production data from 2006-2010.

Crop calendar dates are based upon NASS crop progress data from 2006-2010. 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.
U.S. Corn Areas Experiencing Drought

Reflects September 25, 2012
U.S. Drought Monitor data

Approximately 84% of the corn grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.

- Major areas combined account for 75% of the total national production annually.
- Major and minor areas combined account for 99% of the total national production annually.

Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://www.drought.unl.edu/dm/monitor.html.
U.S. CORN Condition Index

Index Weighting: Excellent = 4; Good = 3; Fair = 2; Poor = 1; Very Poor = 0

Based on NASS crop progress data.
U.S. CORN: Percent Harvested

Based on NASS crop progress data.
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.nass.usda.gov/.

- Major areas combined account for approximately 75% of the total national production.
- Major and minor areas combined account for approximately 99% of the total national production.
- Major and minor areas and state production percentages are derived from NASS county- and state-level production data from 2006-2010.

Soybean crop calendar for most of the United States

Crop calendar dates are based upon NASS crop progress data from 2006-2010. 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.
U.S. Soybean Areas Experiencing Drought

Reflects September 25, 2012
U.S. Drought Monitor data

Approximately 80% of the soybeans grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.

Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://www.drought.unl.edu/dm/monitor.html.

- Major areas combined account for 75% of the total national production annually.
- Major and minor areas combined account for 99% of the total national production annually.

USDA Agricultural Weather Assessments
World Agricultural Outlook Board
U.S. SOYBEAN Condition Index

Index Weighting: Excellent = 4; Good = 3; Fair = 2; Poor = 1; Very Poor = 0

Based on NASS crop progress data.
U.S. Crop Production Highlights
October 11, 2012

• **Corn**: 122.0 bushels/acre, down 27% from 166.0 bushels/acre in June.

• **Soybeans**: 37.8 bushels/acre, down 14% from 43.9 bushels/acre in June.

• **Sorghum**: 50.2 bushels/acre, down 23% from 65.0 bushels/acre in June.
Crop Production Highlights, Continued

- **Corn:** Production is down nearly 4.1 billion bushels (28%) from June to 10.7 billion bushels.
- **Soybeans:** Production is down 345 million bushels (11%) from June to 2.86 billion bushels.
- **Sorghum:** Production is down 83 million bushels (25%) from June to 252 million bushels.
2012 U.S. Corn Yield Forecast (Bushels / Acre)

* Based on field surveys

Source: USDA
2012 U.S. Soybean Yield Forecast (Bushels / Acre)

* Based on field surveys

Source: USDA
U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for May 17 - August 31, 2012
Released May 17, 2012

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.
U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for June 21 - September 30, 2012
Released June 21, 2012

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

http://droughtmonitor.unl.edu/
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.

- Major areas combined account for approximately 75% of the total national production.
- Major and minor areas combined account for approximately 99% of the total national production.
- Major and minor areas and state production percentages are derived from NASS county- and state-level production data from 2006-2010.

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

Crop calendar dates are based upon NASS crop progress data from 2006-2010. 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.
**U.S. Winter Wheat Areas Experiencing Drought**

Reflects October 9, 2012
U.S. Drought Monitor data

Approximately 69% of the winter wheat grown in the U.S. is within an area experiencing drought, based on historical NASS crop production data.

- Major areas combined account for 75% of the total national production annually.
- Major and minor areas combined account for 99% of the total national production annually.

Major and minor agricultural areas are derived from NASS county-level crop production data from 2006 to 2010. Additional information on these agricultural data can be found at: http://www.nass.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://www.drought.unl.edu/dm/monitor.html.
United States Winter Wheat Areas Located in Drought

Percent

Date

Jun 5 2012
Jun 12 2012
Jun 19 2012
Jun 26 2012
Jul 3 2012
Jul 10 2012
Jul 17 2012
Jul 24 2012
Jul 31 2012
Aug 7 2012
Aug 14 2012
Aug 21 2012
Aug 28 2012
Sep 4 2012
Sep 11 2012
Sep 18 2012
Sep 25 2012
Oct 2 2012
Oct 9 2012

38
43
11
29
66
59
49
50
73
76
77
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76
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57
56

Moderate or more intense drought (D1+)
Severe or more intense drought (D2+)
Extreme or more intense drought (D3+)
Exceptional drought (D4)

Agricultural Weather Assessments
World Agricultural Outlook Board
U.S. Winter Wheat Progress
Percent Emerged
October 14, 2012

Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables.

National Progress
Emerged 36
Change from 5-year Average -8

TOP ## - Percent Emerged
[BOTTOM ##] - Change from 5-year Average
U.S. Hay Areas Experiencing Drought

Reflects October 9, 2012
U.S. Drought Monitor data

Approximately 66% of the domestic hay acreage is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.

Major and minor agricultural areas are based on NASS 2007 Census of Agriculture data. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agecensus.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://www.drought.unl.edu/dm/monitor.html.

- Major areas combined account for 75% of the total national acreage.
- Major and minor areas combined account for 99% of the total national acreage.
United States Hay Areas Located in Drought

- Moderate or more intense drought (D1+)
- Severe or more intense drought (D2+)
- Extreme or more intense drought (D3+)
- Exceptional drought (D4)

Agricultural Weather Assessments
World Agricultural Outlook Board
U.S. Pasture and Range Conditions

Percent Poor to Very Poor

October 14, 2012

Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

National Condition

Poor to Very Poor 55
Change from Last Year +14

TOP ## - Percent Poor to Very Poor
[BOTTOM ##] - Change from Last Year

USDA Agricultural Weather Assessments
World Agricultural Outlook Board
U.S. Pasture and Range Conditions

Percent Good to Excellent

October 14, 2012

National Condition

Good to Excellent 20
Change from Last Year -11

Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables.

TOP ## - Percent Good to Excellent
[BOTTOM ##] - Change from Last Year

USDA Agricultural Weather Assessments
World Agricultural Outlook Board
U.S. Cattle Areas Experiencing Drought

Reflects October 9, 2012
U.S. Drought Monitor data

Approximately 73% of the domestic cattle inventory is within an area experiencing drought, based on NASS 2007 Census of Agriculture data.

Major and minor agricultural areas are based on NASS 2007 Census of Agriculture data. Counties shaded in gray contain data that are not published by NASS, and hence were not used in delineating the major and minor agricultural areas. Additional information on these agricultural data can be found at: http://www.agecensus.usda.gov/.

Mapped drought areas are derived from the U.S. Drought Monitor product and do not depict the intensity of drought in any particular location. More information on the Drought Monitor can be found at: http://www.drought.unl.edu/dm/monitor.html.

- Major areas combined account for 75% of the total national inventory.
- Major and minor areas combined account for 99% of the total national inventory.
U.S. Total: 8.98 million acres
10-Year Average: 6.73 million acres
Modern Record: 9.87 million acres in 2006
Drought and Drought Assistance

This page provides resources and information related to the current drought crisis from across the Government. Throughout much of the country, communities are struggling with one of the worst droughts to strike the U.S. in decades. The lack of rain and high temperatures have done considerable damage to crops — particularly those in the Midwest. USDA and other federal agencies are taking steps to help farmers, ranchers, and small businesses wrestling with this crisis.

Drought Code Sprint

Through the Drought Code Sprint we’re making the call to developers across the country to use publically available government information to help farmers, ranchers, and others to gain quick and reliable “one-click” access to information on drought conditions and federal drought relief.

For direct links to key datasets and resources, check out this blog post. Submit your app by October 5, 2012 and we'll highlight some of the submissions on our Drought web pages.

2012 Drought Disaster Updates

Map Updated 9/12/12
Drought Disaster Designations Map (PDF, 3.8MB)
Text-only (accessible) version
Map shows designations due to drought across the country under USDA’s amended rule. Any county declared a primary (red) or contiguous (orange) disaster county makes producers in that county eligible for certain emergency aid.

List of Designated Drought Disaster Counties (PDF, 495KB)

U.S. Drought Monitor
Current drought conditions in the U.S.

http://www.usda.gov/drought
Farmer participation in crop insurance programs is up significantly since 1988, which should provide a safety net for the majority of crop producers.

### Crop Insurance Coverage

- 1988 --- 25% participation rate
- 2012 --- 85% participation rate

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of corn insured in 2011</th>
<th>Percent of soybeans insured in 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>81</td>
<td>78</td>
</tr>
<tr>
<td>Indiana</td>
<td>74</td>
<td>72</td>
</tr>
<tr>
<td>Iowa</td>
<td>90</td>
<td>91</td>
</tr>
<tr>
<td>Kansas</td>
<td>88</td>
<td>78</td>
</tr>
<tr>
<td>Kentucky</td>
<td>80</td>
<td>81</td>
</tr>
<tr>
<td>Missouri</td>
<td>88</td>
<td>80</td>
</tr>
<tr>
<td>Ohio</td>
<td>80</td>
<td>74</td>
</tr>
</tbody>
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Source: RMA, State Profiles, July 2012.
U.S. Counties Approved For Emergency Haying And Grazing of CRP As of August 28, 2012

Drought Level D0 and above and other counties approved for emergency haying and grazing.

3,157 total counties approved.
2008 “Farm Bill” Livestock Forage Disaster Program (LFP) Payouts (financial assistance to producers who suffered grazing losses due to drought or fire on or after January 1, 2008, and before October 1, 2011, during the calendar year in which the loss occurs):

- 2008 calendar year: $165,540,837
- 2009 calendar year: $98,739,950
- 2010 calendar year: $33,334,458
- 2011 calendar year: $180,950,088
- 2012 calendar year: $0
- LFP total, 2008-11: $478,565,333
US Drought and Your Food Costs

Note: Graphics represent all food (food at home + food away from home).

Historical Food Price Inflation

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<tbody>
<tr>
<td>Inflation Rate</td>
<td>3%</td>
<td>1.8%</td>
<td>0.8%</td>
<td>3.7%</td>
<td>3%</td>
<td>3.5%</td>
<td></td>
</tr>
</tbody>
</table>

*Forecast as of July 25th 2012

What it means: Food price inflation is expected to be close to the historical average this year and just slightly above that next year.

What Affects Your Food Costs?

14% Commodity Prices

86% Everything Else
  - Food Processing
  - Packaging
  - Retail Trade
  - Food Services
  - Energy + Transportation
  - Finance
  - Other

What it means: Commodity prices are just one of many factors affecting retail food prices. Commodities make up about 14% of the average retail food purchase, so even if all commodity prices doubled, retail food prices would increase by about 14%.*


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Thank you!

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