Rebooting after the Great Drought of 2012: Five Reasons to Be Optimistic!

Carl Casale, President & CEO
CHS Inc.
First, the disclaimer….

I can’t predict the weather…or the prospects of continued drought in 2013.
The outlook: Half full or half empty?

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for November 15, 2012 - February 28, 2013
Released November 15, 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.
Comparing the impact of two droughts

<table>
<thead>
<tr>
<th>1988 Drought</th>
<th>2012 Drought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn yields fell nearly 30%</td>
<td>U.S. net farm income reached a record $122.2 billion and net cash income hit $139.3 billion (USDA forecast)</td>
</tr>
<tr>
<td>Stocks-to-use ratio near 20%</td>
<td>Stocks-to-use ratio 5.6%</td>
</tr>
<tr>
<td>Corn price $2.50</td>
<td>Corn price $7.10-8.50 (record!)</td>
</tr>
<tr>
<td>1989 crop year nutrient application declined:</td>
<td>At current prices for corn and other crops, producers won’t let crop nutrients be the limiting factor on potential 2013 yields</td>
</tr>
<tr>
<td>- N  4%</td>
<td></td>
</tr>
<tr>
<td>- P&lt;sub&gt;2&lt;/sub&gt;O&lt;sub&gt;5&lt;/sub&gt;  9%</td>
<td></td>
</tr>
<tr>
<td>- K&lt;sub&gt;2&lt;/sub&gt;O  8%</td>
<td></td>
</tr>
</tbody>
</table>

Source: The Fertilizer Institute
A few more worries
Five Reasons for Optimism
Reason One:
The world is hungry, especially China
The shape of things to come

Today: More than 1 billion hungry people

2050: Food supply must nearly double
Global middle class

*in billions*

- 2012
- 2020
- 2030
Perspective on food prices and population

Real agricultural prices have fallen since 1900, even as world population growth accelerated.

Agricultural prices have declined by an average of 1% per year since 1900. The agricultural price index (1977-79 = 100) has shown a downward trend, while world population has risen steadily over the same period. The source of the data is the USDA Economic Research Service using Fuglie, Wang, and Ball (2012). The chart depicts the Grilli-Yang agricultural price index adjusted for inflation by the U.S. Gross Domestic Product implicit price index. The Grilli-Yang price index is a composite of 18 crop and livestock prices, each weighted by its share of global agricultural trade (Pfaffenzeller et al., 2007). World population estimates are from the United Nations.
Outlook for World Corn Exports

Global corn exports

Million metric tons

1/ Excludes intra-EU trade.
2/ Former Soviet Union.
Long-term soybean outlook

Global exports: Soybeans, soybean meal, and soybean oil

Soybeans and soybean meal, million metric tons

Soybean oil, million metric tons

- Soybeans
- Soybean oil
- Soybean meal


Values: 0, 2, 4, 6, 8, 10, 12, 14, 16, 18

CHS
Reason Two: New ag technologies can help offset tough conditions
Technology is not a silver bullet

But...it sure does help

- Today’s corn hybrids can produce 50 percent more bushels/inch of water than 50 years ago
- Genetics have created plants more able to withstand a wider variety of stress
Technology helps make most of bad situation

- **1988 corn**
- **1988 soybeans**
- **2012 corn**
- **2012 soybeans**

Graph showing yield trend and actual yield for corn and soybeans in 1988 and 2012.
Reason Three: North American energy production
A world thirsty for fuel

Figure 1. World energy consumption, 1990-2035
(quadrillion Btu)

- Non-OECD
- OECD

- 1990: 354
- 2000: 406
- 2008: 505
- 2015: 573
- 2020: 619
- 2025: 671
- 2030: 721
- 2035: 770
Diesel demand leads U.S. consumption

U.S. Liquid Fuels Consumption

(million barrels per day) (year over year change, million barrels per day)

20 0.6
19 0.4
18 0.2
17 0.0
16 -0.2
15 -0.4

2010 2011 2012 2013

- Total consumption (left axis)
- Consumption forecast (left axis)
- Motor gasoline (right axis)
- Jet fuel (right axis)
- Distillate fuel (right axis)
- Other fuels (right axis)

Source: Short-Term Energy Outlook, October 2012
But we are becoming more self-sufficient
Reason Four: Nitrogen fertilizer production heads home
World outlook – U.S. ammonia production/imports

U.S. Nitrogen Sources - Ammonia Production and N Imports

Source: U.S. Department of Commerce and The Fertilizer Institute.
The Lion’s Share of Global Nutrient Demand, 88 Percent, is Outside the United States

Global Nutrient Consumption
FY 2010/11

- China: 29%
- India: 16%
- US: 12%
- Brazil: 6%
- Rest of World: 37%

Source: International Fertilizer Industry Association (IFA).
The time is right...

World Natural Gas Costs

($ Per MMBtu)

10
9
8
7
6
5
4
3
2
1
0

1995 1997 1999 2001 2003 2005 2007 2009 2011

U.S.: 1999-2008 – highest cost gas

Ukraine
West Europe
Russia
United States
Middle East

Source: FERTECON, CF Industries, Inc.
Reason Five: The ag economy is healthy and opportunity abounds
Why 2012 is better than 1988

- U.S. farmers are in their strongest financial position in history
- Farm balance sheets are stronger
  - 2012 debt-to-assets: 10.3
  - 1988 debt-to-assets: 16.9
- Interest rates are lower
- Grain demand is higher – so are prices
- Crop insurance provides more protection
Gross farm income and production expenses, 1990-2012f

“The only way to predict the future is to have the power to shape it.”

-- Eric Hoffer
Writer and philosopher
Who we are

- Leading U.S. cooperative, owned by farmers, ranchers and local co-ops
- A diversified, global energy, grains and foods business
- Fiscal 2012 net income $1.26 billion
- Fiscal 2012 net revenues $40.6 billion
- Will return $600 million in cash to owners in 2013
- Number 78 on 2012 *Fortune* 500 list
About CHS

- Supplies grain and other products to customers in 60 countries
- Nearly 10,000 employees in the U.S. and 19 other countries
Energy

- Investing in our two petroleum refineries
- Increasing crude oil supply options
- Enhancing refined fuels distribution to our customers
- Strengthening distribution of propane and other fuel sources
- Establishing a global renewable fuels distribution platform
Global Commodities

• Strengthening our grain and crop nutrients systems with:
  • Domestic grain origination and export infrastructure investments and partnerships
  • Global grain origination and market access
  • Global and domestic crop nutrients origination and distribution
  • Direct participation in nitrogen manufacturing
Expanding our Global Footprint
Processing and food ingredients

- Growing desire by developing economies for higher levels of dietary protein through meat and soy-based foods
- U.S. and global acquisitions to strengthen soy processing and food ingredients
- An owner of the leading U.S. flour miller and the nation’s largest manufacturer and packager of vegetable oil-based food and food ingredients
Shaping YOUR future
What can you control?

- You can’t control:
  - Global markets
  - Domestic markets
  - Technology
  - The weather

- You can control:
  - How you manage your operation
Shaping your future

- Be a serious player in global agriculture
- Find the right partners in supply, agronomic advice, marketing
- Diversify your business, as warranted
- Incorporate risk management tools
- Strive to add value
- Create a game plan only you can win
Shape your future with optimism!
Thank You!

Questions?