Agricultural Impacts of the Driest Year on Record

How Drought Reshapes Agriculture and Food Systems
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David P. Anderson
Professor and Extension Economist

AgriLIFE EXTENSION
Texas A&M System

AFPC
The Agricultural and Food Policy Center at Texas A&M University
The 2011 Texas Drought

• Driest Year on Record
  – Dubious record eclipsed the worst of the 1950s and 1917-18

• Hottest Year on Record
  – In terms of 24 hour average temperature

• When it Quit Raining, It Quit!
  – Dry, hot winds
Agricultural Costs of Drought

• Estimated $7.62 Billion
  – Corn, cotton, wheat, hay $4.4 billion
  – Livestock $3.2 billion
  – Another $669 million in timber

• Increased Costs
• Reduced Yields
• Conservative Estimate
  – Includes major crops, does not include fruits, vegetables, peanuts, and others
Multi-Year Effects

• 2011 Drought Actually Began in 2010
• Livestock
  – Reduced conception rates
  – Fewer calves the next year
• Range and Pasture
  – Years to recover
  – Delays rebuilding herds
• Surface Water Irrigation Systems
  – Texas rice
Adjustment to Drought

• Fewer Livestock
  – Largest beef cow herd reduction in history
  – Lower prices short term, higher prices long term
  – A little shift in where cattle are produced in the U.S.

• Adjustment to Recovery Takes Time
  – Pasture and range recovery
  – Financial: debt, higher priced replacements, lure of high heifer prices
  – Cautious recovery

• Occurred at Time of High Prices
Texas Beef Cow Herd, January 1

Mil. Head

Adjustment to Drought

- Water Harvesting
- More Irrigation Where Possible
- Renovate Tanks and Ponds
- Research on Fertilizer Availability and Uptake
- Conservation? Urban Use
- Adjustment is Longer Term Also
  - Historically, just as droughts occur, they also break
Contact

danderson@tamu.edu

http://livestock-marketing.tamu.edu

(979) 845-4351