

GENERAL SESSION II

Extreme Weather for Crops: Too Dry, Too Wet, and Even Ideal

Dr. Elwynn Taylor

Iowa State University

Dr. Elwynn Taylor is a professor at Iowa State University in Ag Meteorology with a vision of mega-trends in technology, climate and society that opens the horizons of our enigmatic world. His extensive knowledge and understanding of the world around us enlightens and entertains. His insightful presentations are immediately useful in the management of business and life. Few can explain the complexities of our world in a manner as clear, concise, and pleasant, as does Dr. Taylor, who received his doctorate in Biology from Washington University in St. Louis. Scholars internationally recognize his expertise in interactions of the biological and physical environment.

Abstract/Summary

Corn yield per acre in Riley County, KS has been more erratic from 2001-2014 than was experienced from 1981-2000. The year-to-year volatility of soybean yield is similar to that of corn. The consistency of the pattern of favorable and adverse production years indicates that the management of "Weather Related Risk" to production and marketing during the coming decade will be of increasing importance to farm profits. The 2010-2011 drought conditions from Texas to Kansas and in the central corn-belt during 2012-2013 are similar to those experienced during the mid-1950's (both episodes being directly related to very strong La Niña events). Precipitation patterns appear to have a multi-year nature as do other major components of our climate. Risk management is, and should be, more than disaster insurance hedging the farm against the random nature of weather and markets. Use of government estimates and forecasts combined with careful analysis of observed crop conditions and weather impacts provide profitable alternative positions that can enhance the financial security of an individual's farming program.

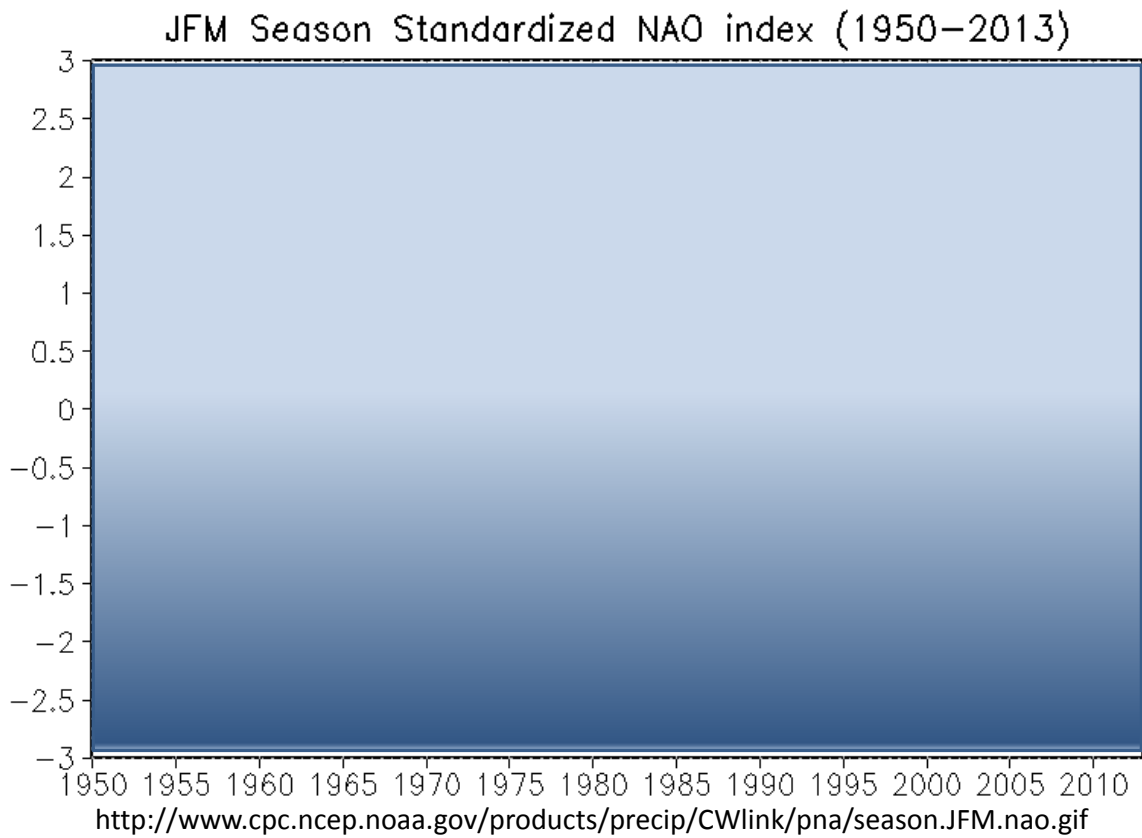
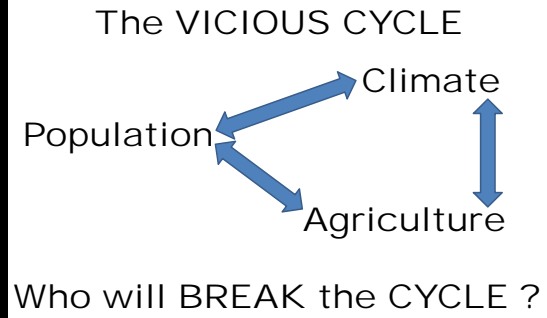
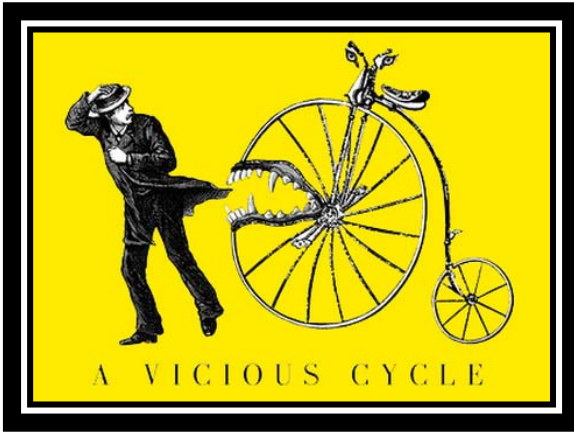
Extreme Weather for Crops: Too Dry Too Wet Even Ideal



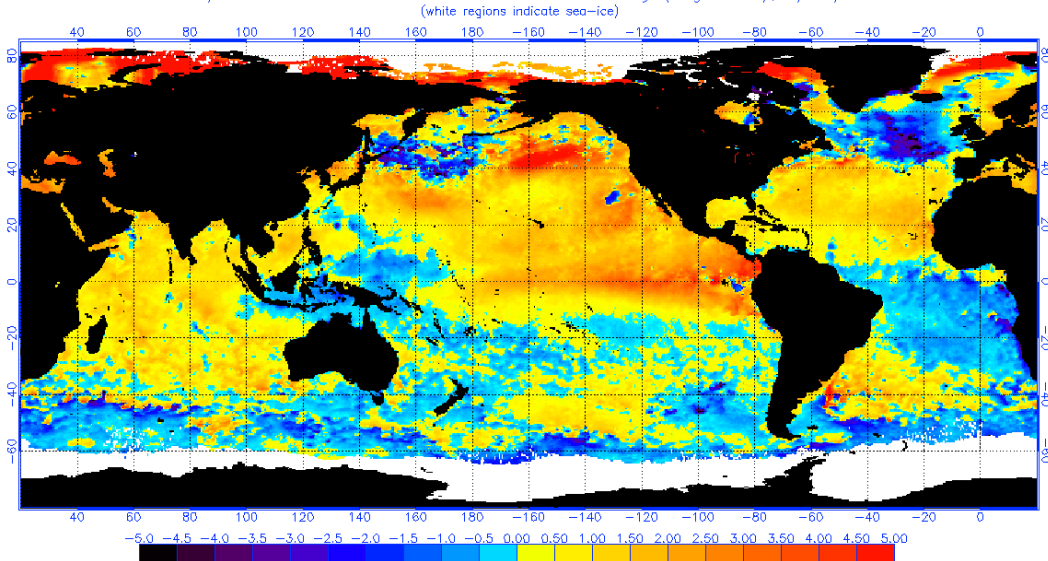
Elwynn Taylor

"Extreme Weather for Crops: Too Dry, Too Wet, and Even Ideal"

Corn yield per acre in Riley Co, KS has been more erratic from 2001-2014 than was experienced from 1981-2000. The year to year volatility of soybean yield is similar to that of corn. The consistency of the pattern of favorable and adverse production years indicates that the management of "Weather Related Risk" to production and marketing during the coming decade will be of increasing importance to farm profits. The 2010-2011 drought conditions from Texas to Kansas and in the central Corn belt during 2012-2013 are similar to those experienced during the Mid-1950's (both episodes being directly related to very strong La Niña events). Precipitation patterns appear to have a multi-year nature as do other major components of our climate. Risk management is, and should be, more than disaster insurance hedging the farm against the random nature of weather and markets. Use of government estimates and forecasts combined with careful analysis of observed crop conditions and weather impacts provide profitable alternative positions that can enhance the financial security of an individual's farming program.



NOAA/NESDIS 50 KM GLOBAL ANALYSIS: SST Anomaly (degrees C), 8/20/2015



-

El Niño

Friend of the Midwest farmer.

Better friend of the Argentine farmer (El Niño tends to be a Christmas event that may or may not persist through the Midwest growing season).

October 2009

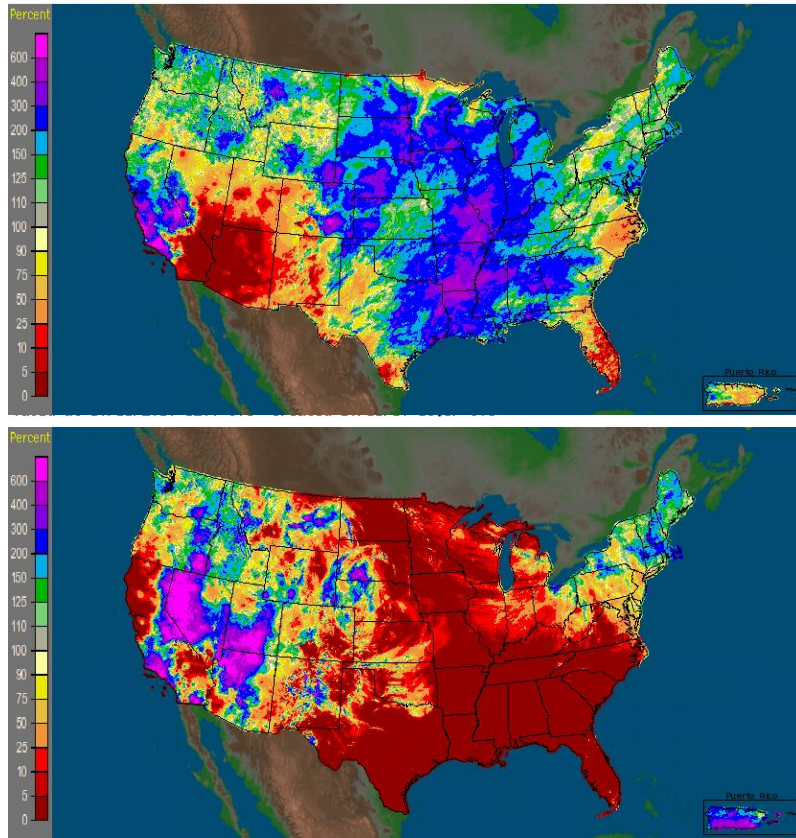
El Niño

To

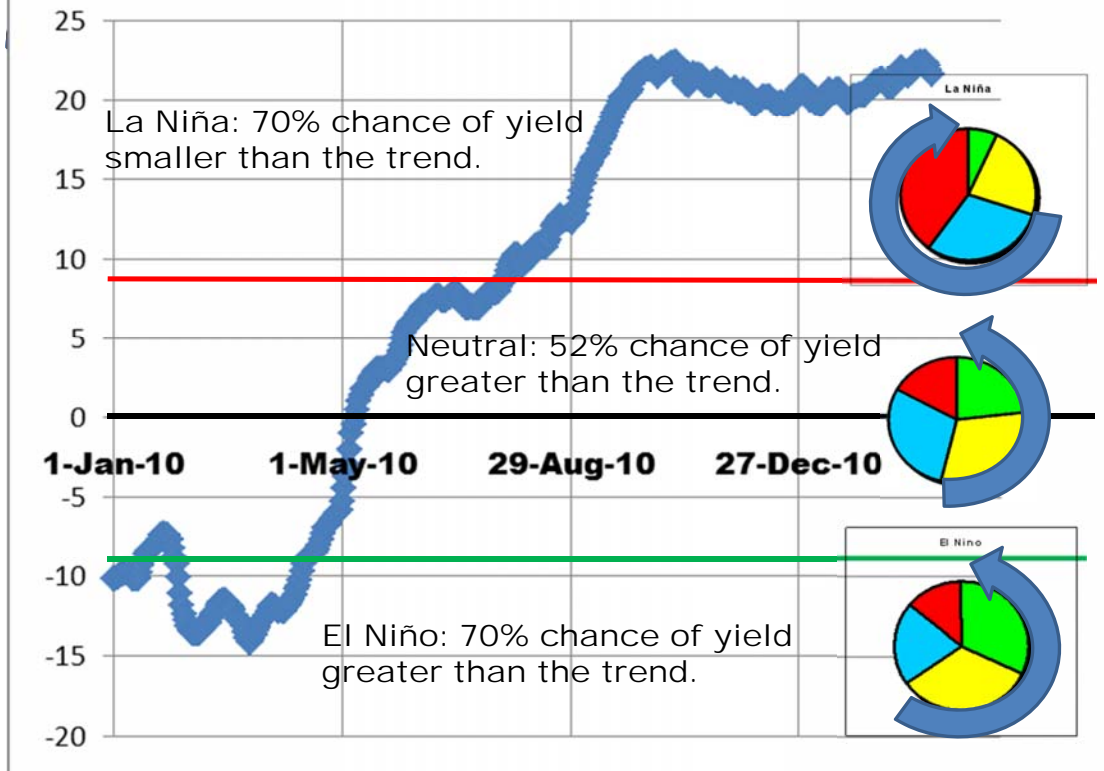
La Niña

October 2010

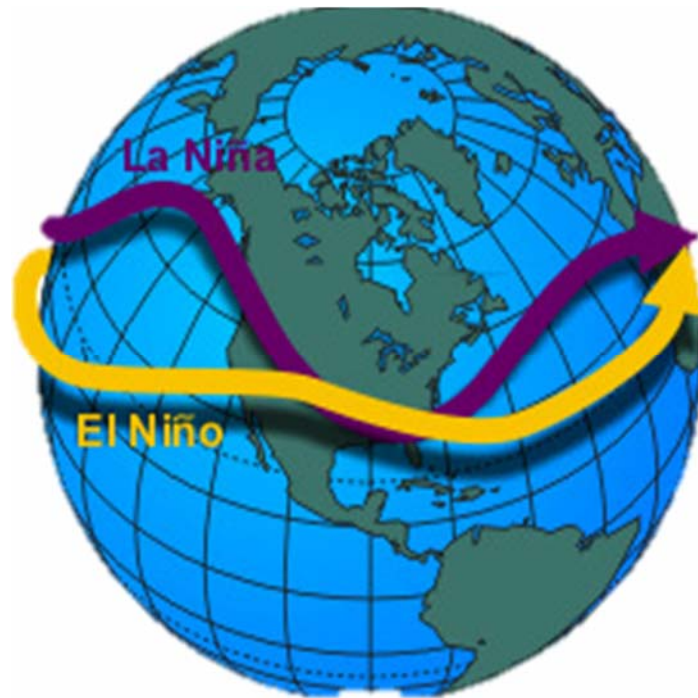
to 2012



SOI 1 Jan 2010 - 7 Mar 2011



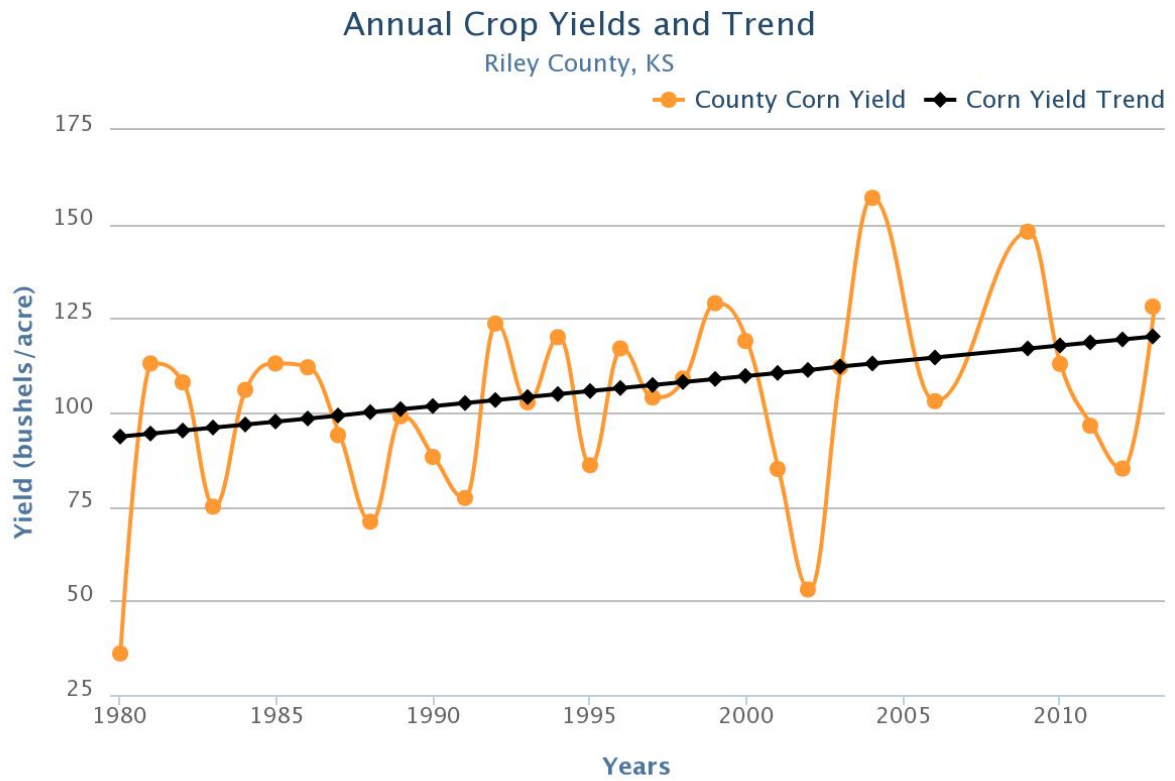
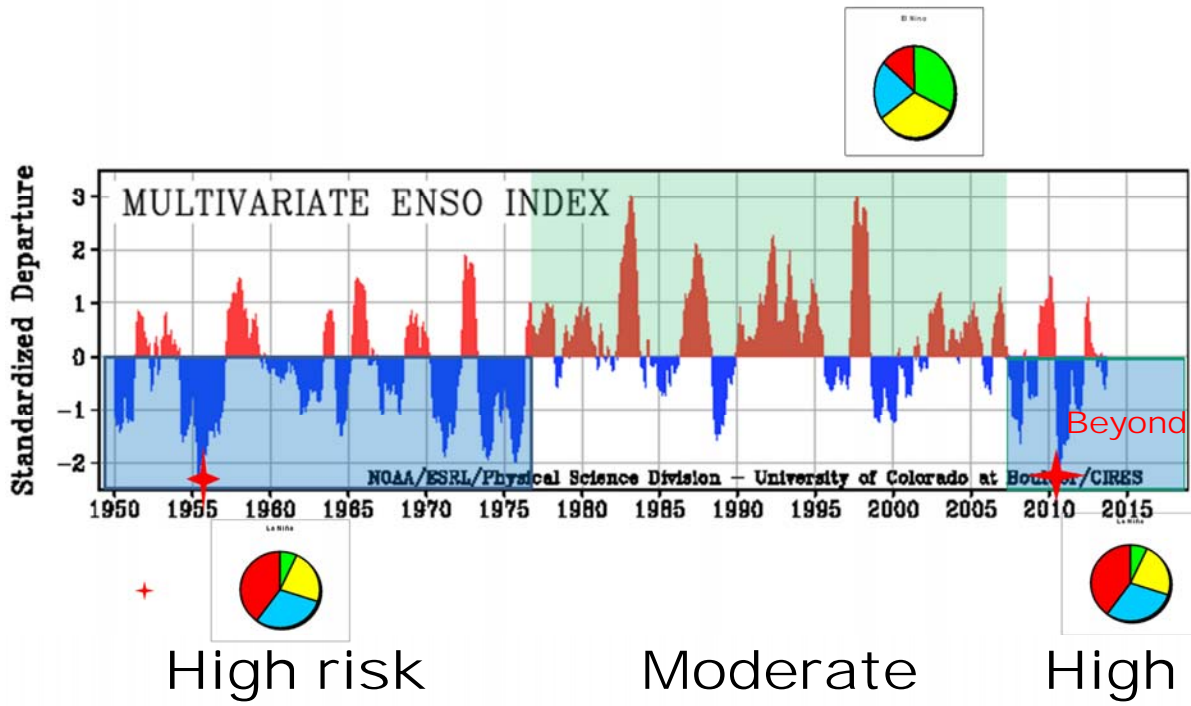
La Niña : Extremes

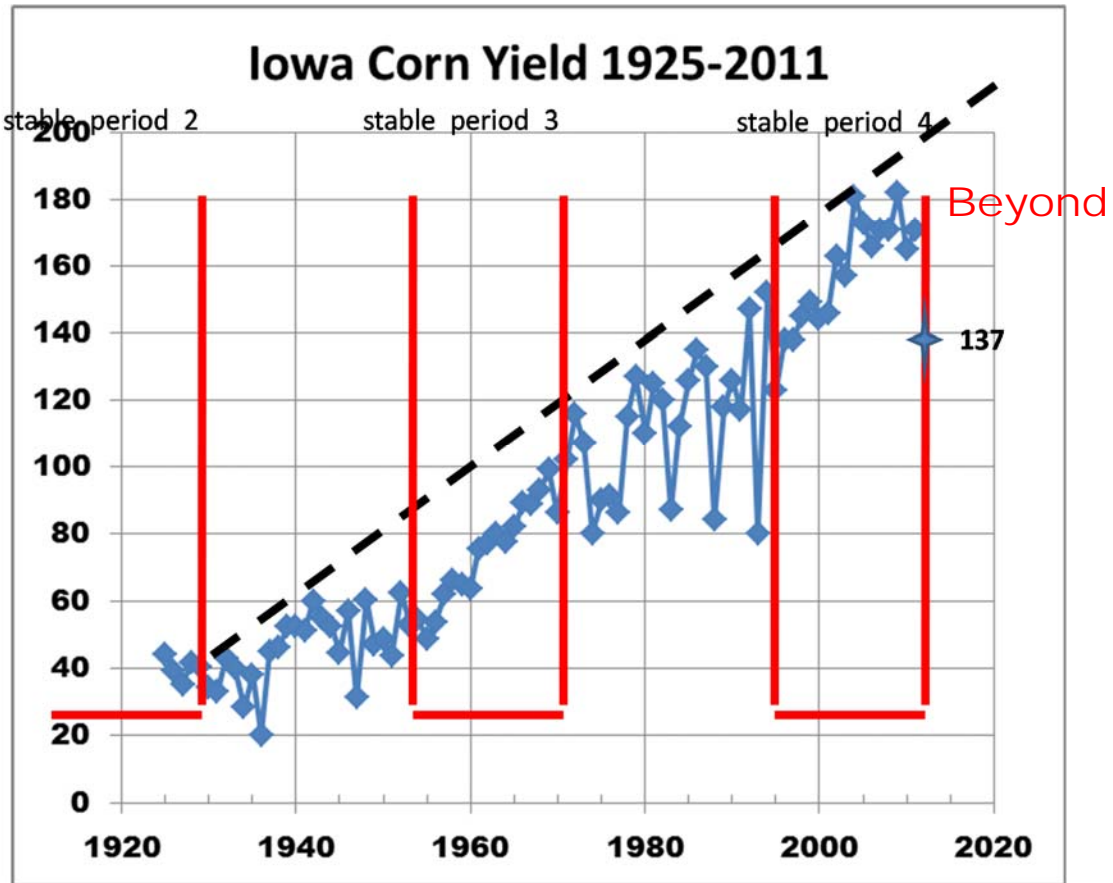


Weather Volatility

Climate RISK in Agriculture is likely to be greater during the next 20 years

Management of RISK is of increasing importance

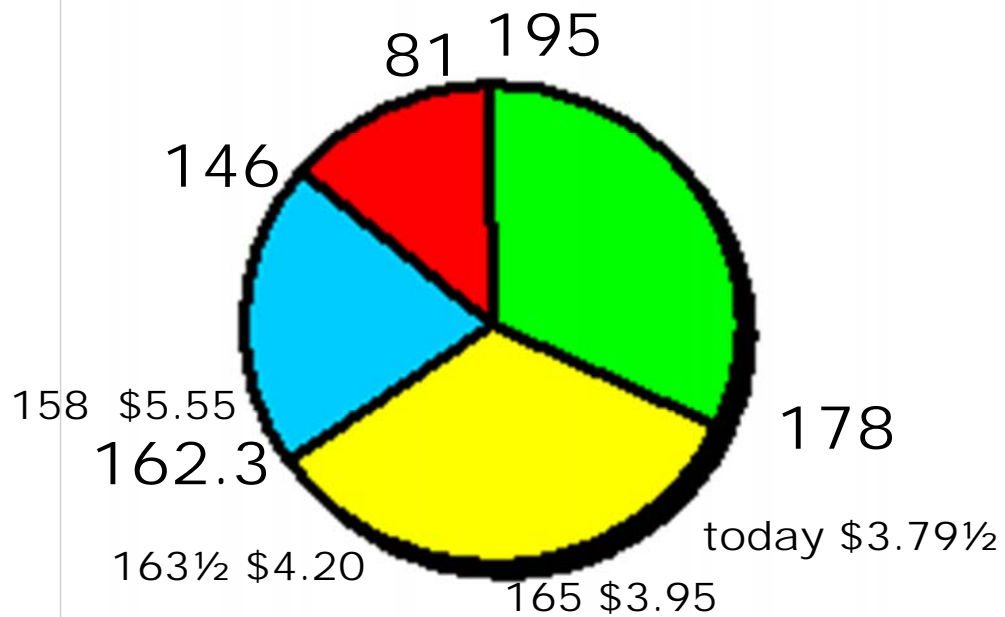




US Corn

El Nino

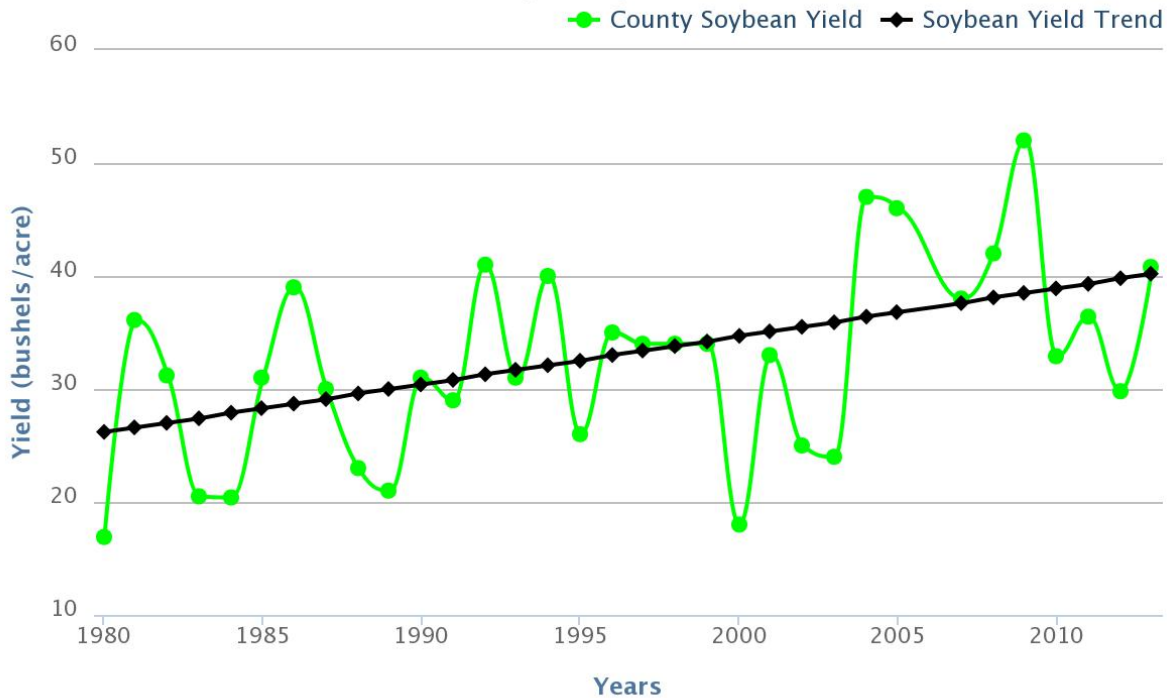
as of 7-16-2015
Wisner



Example Yield-Price "Risk Wheel"

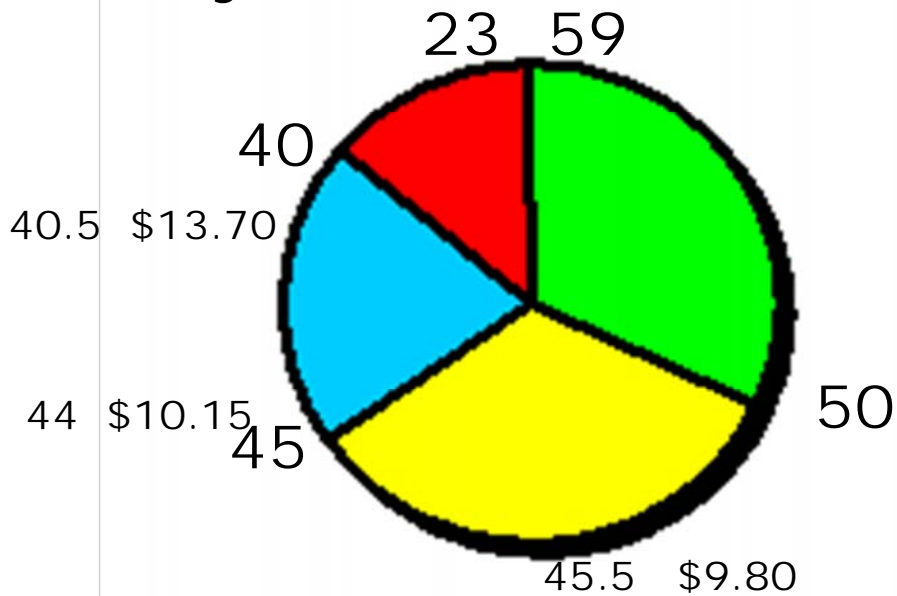
Annual Crop Yields and Trend

Riley County, KS



Created 7/24/2015

US Soybean El Nino as of 7-16-2015
Wisner



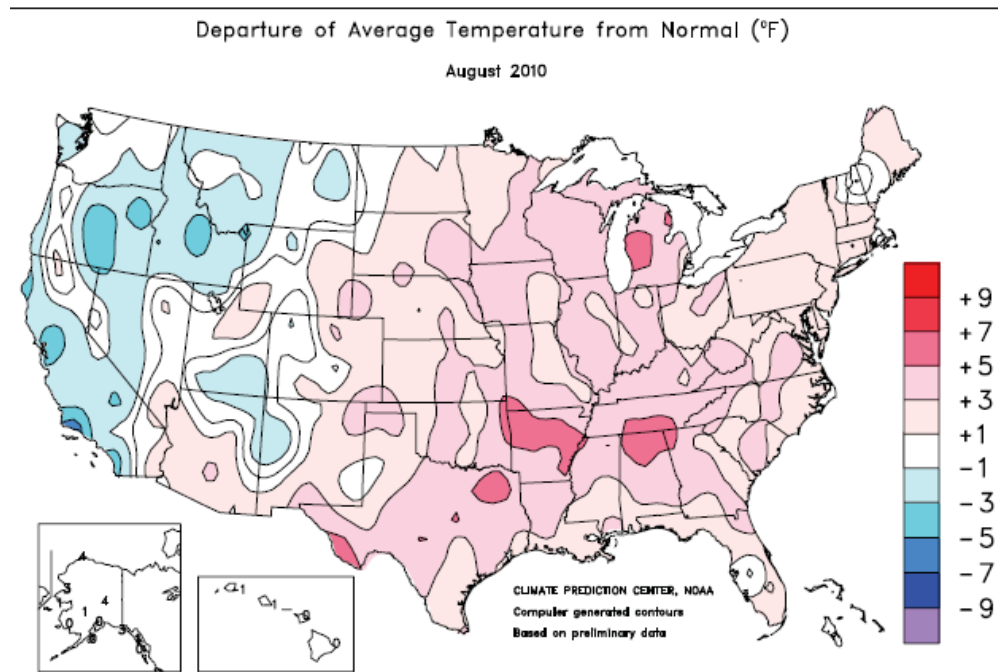
Example Yield-Price "Risk Wheel"

END



Elwynn Taylor
Iowa State University
Climatologist

Summer Temperature 2010



- This is OPPOSITE of past 3 years