UKAg Weather Center | Weather Observer

September 6, 2013 **BAE**

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August 2013 Monthly Summary

The month of August is usually signaling the end of a long, hot summer, but cool conditions gave the feel that fall had already returned. Throughout the month, there were numerous extended periods of well below normal temperatures. Surface high pressure kept highs in the upper 70s to low 80s throughout the first week of the month, which is supposed to be one of the warmest periods of the year. Temperatures were on average 6 degrees below normal, which ended up being the highest below normal deviation since March. This was then followed by another week with temperatures hovering in the upper 70s over the month's mid-section. This was nearly 10 degrees below normal for this time of the year. The most noticeable difference was felt behind a cold front on the 15th. Clearing skies overnight gave way to lows dropping into the low to mid 50s. Some locations even plummeted into the mid 40s, which was nearly 20 degrees below normal. Frankfort ended up tying their daily record low. This night can be seen in Figure 1 below. Most locations in northeastern portions of the state fell into the upper 40s through the overnight period. Temperatures then recovered the latter 2 weeks of the month. A combination of high pressure at the surface and ridging aloft allowed for a late season heat wave to take control of the Ohio Valley. Highs rose into the upper 80s to lower 90s on a daily basis with the livestock heat stress index moving into the danger and emergency categories. Morganfield even hit a high of 97 degrees in the western section of the state.

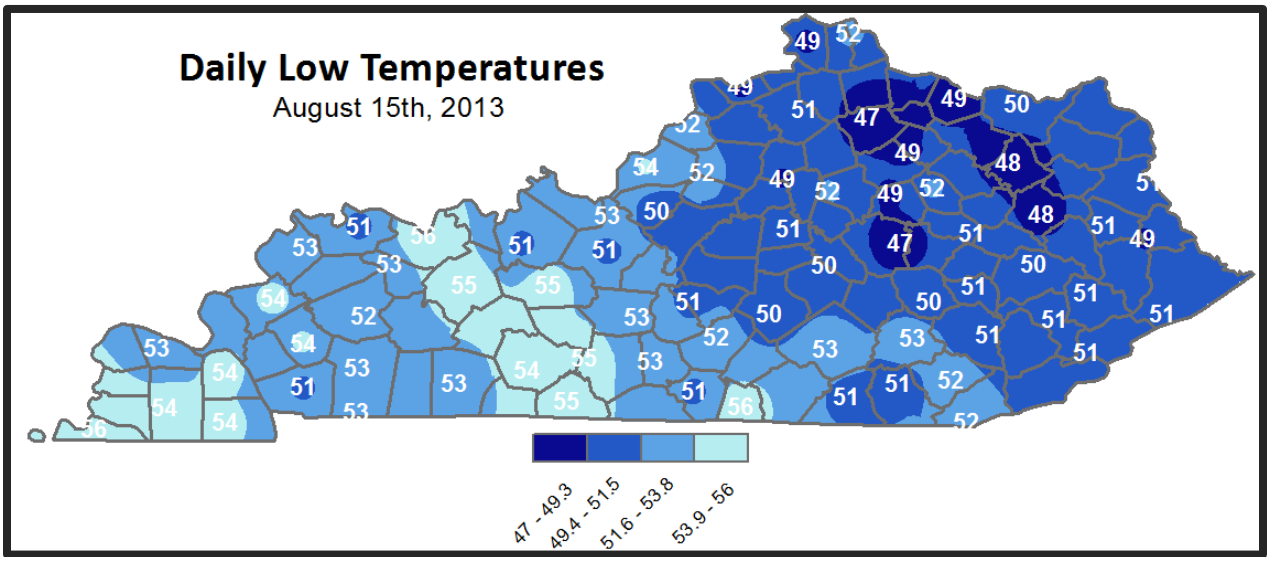

Figure 1

While it was cool, rainfall was above normal for the third straight month. Most was focused toward the first half of August. A very moist and unstable air mass drenched the Commonwealth over the second week with more than 1.5 inches averaged across Kentucky. Multiple upper level disturbances rode across a stalled frontal boundary to create numerous opportunities for rainfall. Activity then carried over

into the month's mid-section with another inch of rainfall before conditions dried out for the second half. The Jackson National Weather Service did record their wettest August on record with over 10 inches falling during the period, which was also there 5th wettest month on record. Overall, the state as a whole was only above normal by 0.17 inches with the Bluegrass State averaging just less than 4 inches of rainfall.

Summarized and averaged data for the period 20130801 to 20130831(Last 31 Days)
(Not for Legal purposes. Departure from Norms based on climate divisional Averages)

	AIR TEMPERATURE						PRECIPITATION			ExtremeTemp	
STATION	MAX	DEV	MIN	DEV	AVR	DEV	TOTAL	DEV	%NORM	HI	LO
WEST(CD1)	84	-4	66	0	75	-2	3.56	0.04	101	97	51
CENTRAL(CD2)	84	-3	66	1	75	-1	4.02	0.25	107	96	50
BLUEGRASS(CD3)	83	-2	64	0	74	-1	3.98	0.21	106	95	47
EAST(CD4)	82	-4	65	3	73	-1	4.29	0.19	105	93	48
STATE	83	-4	65	1	74	-2	3.96	0.17	104	97	47

Data obtained from KY Mesonet and NWS Stations

Forecast

The meteorological fall season began on the 1st of September. Conditions have cooled down considerably since the last week of August, but this trend is not expected to continue. Surface high pressure will move to the east over the weekend, bringing a wind shift to the southwest. This shift in addition to an upper level ridge building into the region next week will make for a gradual increase in temperatures and humidity. Highs will be in the upper 80s to low 90s by Monday. While it will be warm, conditions will remain mostly dry through the weekend with only isolated chances Sunday across the northern reaches of the state. This trend will then continue into next work week with only scattered chances in place going into the week's mid-section.

Looking farther out, outlooks are calling for the Commonwealth to see near to above normal temperatures going into the middle of the month. This will then be accompanied by below normal rainfall for this time of the year, but climatologically speaking, September and October are the driest months of the year for the Bluegrass State. This is shown in Figure 2, which is valid for September 13th through the 19th. In a typical September, Kentucky will generally only average around 3 to 3.5 inches. While the 2 week outlook calls for drier conditions, the 3 month outlook does keep the state in an above normal trend, which extends out to November.

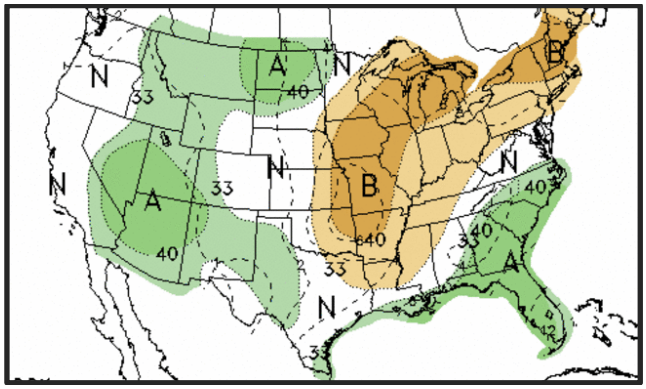

Figure 2

3 Month Outlook (SON)
Above Normal Rainfall and Near Normal Temperatures

Hurricane Outlook and Impacts on Kentucky Agriculture

Hurricanes are normally not associated with Kentucky weather, but just like in 2012, we can see that the remnants of these systems can push into the region and impact Kentucky agriculture. This time last year, all focus was given to the remnants of Hurricane Isaac making its way north

into the Lower Ohio Valley. At the time, the Commonwealth was still entrenched in a damaging drought, and Isaac seemed to give the Bluegrass State the steady rainfall that was needed for sufficient soybean development. This ended up being the first of 2 systems that came in contact with Kentucky in 2012, with the second being that of Hurricane Sandy. While it does not happen that often, the remnants of tropical cyclones impacting the Bluegrass State can happen and will have a direct impact on agriculture. Just like in Isaac last year, the remnants of these systems can stall over a region and result in significant amounts of rainfall over an extended period of time. Before the onset of Hurricane Isaac, portions of Western Kentucky were embedded in extreme to exceptional drought conditions. This area then proceeded to receive 2 inches over the course of the weekend as the remnant system moved east through the region. Light to moderate rainfall over an extended time frame allowed for a refueling of moisture levels and aided in a push to near normal soybean yields compared to that of corn. Figure 3 below was taken by NASA and displays Isaac two days after making landfall heading into the Ohio Valley.

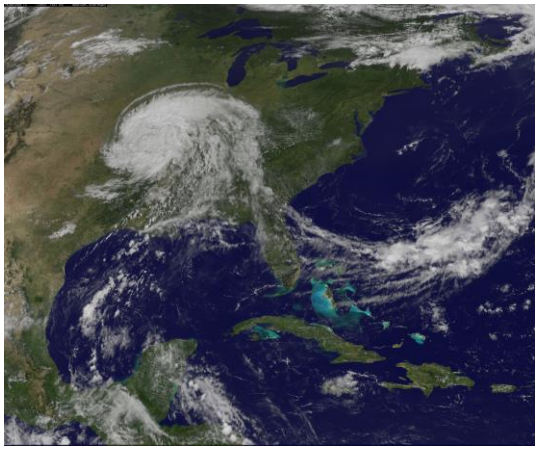

Figure 3

While the Commonwealth saw the beneficial impacts of a tropical system last year, impacts can be detrimental in others. Back in September of 2008; farmer's had to deal with downed corn from damaging winds associated with the remnant system of Hurricane Ike. This opens the possibility of harvesting earlier if a stronger system is evident in the near future. The problem can even go bad to worse if stalk strength is weak, which seems to be the case this year. Dr. Paul Vincelli of the UK Department of Plant Pathology stated in a recent article (Stalk Strength) that corn this year is exhibiting signs of heavy ears combined with a shallow root system, which would ease the process of falling corn in any potential high winds events. Figure 4 below was taken from an article by Sam McNeill (Extension Agricultural Engineer for the University of Kentucky) and displays some corn damage from high winds associated with Ike.

Figure 4

As we head into the peak months of hurricane activity (September and October), what is expected of the remainder of the 2013 hurricane season? While a hurricane has yet to form, the National Hurricane Center recently came out with their latest Atlantic hurricane outlook and it is remains pointed at an above normal season. The forecasters point toward many factors indicating a more active period and there comparable to some of the more active Atlantic seasons since 1995. These included favorable weather patterns in West Africa and above normal sea-surface temperatures. The outlook states that there is a 70% chance of above normal hurricane activity with 6 to 9 hurricanes. More information about the outlook can be found here. Does this mean the Commonwealth will see the remnants of another hurricane? No, but the possibility remains.

Other News

The Community Collaborative Rain, Hail, and Snow Network (CoCoRaHs) is currently looking for more observers across the state of Kentucky. Observers are asked to record daily measurements of rain or snowfall accumulations. New to 2012, observers can now take readings of evapotranspiration. Kentucky observers provide a great volunteer service to the community, the county and the state by providing information on precipitation, snowfall, and snow depths. The information is used by government and university scientists, community officials, farmers, county emergency managers, watershed managers, drought monitors, and by your friends and neighbors. More information about this organization and how to join can be found here at:

http://www.cocorahs.org/state.aspx?state=ky

September Garden Safe Planting Dates

	Latest Safe Planting Date	
	Date	**Area of KY**
Lettuce (leaf)	September 1st	Western
Radishes	September 1st September 15th	Eastern Mt. Central
Spinach	September 1st September 15th	Central Western

September Vegetable Gardener's Calendar for Western KY

September 1st	- Start seeds outdoors for RADISHES, SPINACH, and MUSTARD.
September 15th	- Start seeds outdoors for RADISHES, MUSTARD, TURNIPS, and TURNIP GREENS.
NOTE: Subtract 10 days for Central KY and 15 for Eastern KY to these dates for fall crops	

September Crop Operations

	First Week	Second Week	Third Week	Fourth Week
Small Grains	-----	-----	-----	Fall Seeding of wheat begins
Soybeans	85% have reached pod set Critical Pod-Filling Stage ENDS	-----	Harvesting BEGINS 25% of plants shedding leaves	Harvest about 5% complete
Tobacco	Burley 25% cut Dark 30% cut	Burley 50% cut Dark 50% cut	Burley 80% cut Dark 80% cut	-----
Corn	18% fully mature	35% fully mature	Harvest BEGINS at about 15% done	25% harvested

August Beef Operations

Spring Calving Herd	• Pre-weaning working
Fall Calving Herd	• Calving season BEGINS • Cows should be moved to a clean, accessible pasture for calving.
All Cattle	-----
Forages	• Continue taking soil samples for perennial crops and apply fertilizer as needed • Harvest hay as needed. • Plant perennial grasses at optimal rate, date, and depth. • Harvest alfalfa by mid-September • Continue harvest of corn silage