

February 6, 2013

BAE

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January 2013 Monthly Summary

The drought of 2012 seemed to be an afterthought following the first month of 2013. Throughout January, multiple systems brought an average of over 5 inches of precipitation to the Bluegrass State for the second straight month. The most significant was over the course of the second week when multiple waves of low pressure made for an above normal state deviation of 1.72 inches. The highest deviation seen over the entire year of 2012 was only 1.38 inches back in September. The west even saw an average of just over 6.5 inches for the month, which was over 2.5 inches above normal. This just about ended all drought concerns in the western portion of the state and put much needed moisture back in the soil for the upcoming growing season. Only 6.9% of Kentucky is now witnessing abnormally dry conditions according to the US Drought Monitor.

Temperatures were also well above normal for the month of January. This was especially true the second week of the month when temperatures were on average, 16 degrees above average. Numerous times, Kentucky saw highs jump well into the 60s and occasionally, low 70s, behind southerly flow patterns. High temperatures were at times around 25 degrees above our normal highs around 40. While it was a warm month, the state also saw some cold air outbreaks. Behind some of the stronger cold fronts,

temperatures dropped significantly. This was especially true the third week of the month when lows dropped well into the single digits in bluegrass and eastern portions of the state as an Arctic air mass descended over the area. Breezy conditions led to wind chill values dropping to near 0 at times, which acted to put the livestock coldstress index into the emergency category.

In addition, the month ended with a significant squall line moving through the area. Widespread strong to severe storms generated damaging winds and even some short-lived tornados as it tracked east across the Commonwealth. An EF2 tornado was even surveyed in Warren County, Kentucky with winds speeds of 120 to 125 mph. The image below, provided by the NWS office in Louisville, shows damage to a farmstead in Warren County Kentucky, following the tornado's passage.



Figure 1

Summarized and averaged data for the period 20130101 to 20130131 (Last 31 Days) (Not for Legal purposes. Departure from Norms based on climate divisional Averages)											
STATION	AIR TEMPERATURE						PRECIPITATION			ExtremeTemp	
	MAX	DEV	MIN	DEV	AVR	DEV	TOTAL	DEV	%NORM	HI	LO
WEST (CD1)	46	3	30	5	38	4	6.54	2.61	166	74	11
CENTRAL (CD2)	46	4	31	6	39	6	5.57	1.58	140	72	11
BLUEGRASS (CD3)	43	2	29	6	36	4	4.27	1.05	133	70	7
EAST (CD4)	45	1	31	8	38	5	4.89	1.10	129	78	6
STATE	45	2	30	6	38	5	5.32	1.59	143	78	6

Data obtained from KY Mesonet and NWS Station

Two Week Forecast

In the short term, it is expected that we will stay mostly dry through the upcoming weekend. The only exception is a weak front expected to move through the region on Thursday night and into Friday. High pressure will descend over the state by the weekend, acting to provide dry conditions and clearing skies. As the system moves east of the area late Saturday, winds will gradually shift to southerly and pump warmer air into the Commonwealth. Highs will rise into the mid 40s to low 50s. As a low pressure system progresses toward the Great Lakes on Sunday, Kentucky will stay in a southwesterly flow pattern with temperatures continuing to rise. Highs Sunday will generally be in the mid to upper 50s. The approach of the low and associated cold front will signal greater chances of rainfall late in the day Sunday. High pressure will then build back into the region by Monday night with a return to near normal temperatures.

3 Month Outlook (FMA) **Near Normal Rainfall and Temperatures**

Looking a bit farther into next week, the 6 to 10 day outlooks are expecting above normal temperatures and precipitation across the state. Looking farther out into the next 3 months and going into the planting season, the outlook is for near normal temperatures and precipitation. Average temperatures for the month of February tend to hover around the upper 30s with precipitation generally in the 3 to 4 inch range across the state.

Is Western Kentucky Still in a Drought?

The year of 2012 was known for the extreme drought causing agricultural hardship across the state. The most significant impacts were felt through the summer months and into early fall for much of the western portion of Kentucky. Drought could not have implanted itself at a worse time, in which most of the corn crop was entering into pollination and needed the moisture to stay afloat. Chad Lee, an extension grain crops specialist, stated in an article this past July that 0.3 inches per day of rainfall are necessary for corn through the process of pollination, which is the most the plant needs throughout the entire growing season. The lack of moisture allowed for kernels to abort and result in a

lackluster season. Figure 2, courtesy of Katie Pratt, demonstrates the results of poor corn pollination in Hart County.



Figure 2

June ended up being the second driest June on record. A large portion of the drought-stressed corn was then used as silage for livestock. While the early summer was dry for western Kentucky, the spring followed suit, and resulted in hay yields trending downward. This spelled a predicament for most farmers as hay was short, pasture quality was decreasing, and they still needed hay going into the winter months. The price of hay skyrocketed and many farmers resorted to selling their livestock as opposed to paying the high price to transport hay an extended distance. Rainfall did not start to impede across the state until the middle weeks of July, but even that was not enough to catch up on the precipitation deficit we were placed under and corn continued to suffer. Luckily, not all crops were not as horribly affected like corn and pasture conditions. The remnants of Hurricane Isaac moved through the lower Ohio Valley in late August, providing timely rains just in time to produce a descent soybean crop.

Taking all the impacts into account, what most producers have on their mind, especially in western portions of the state is are we still in a drought? The answer is: no. We have seen great improvement over the past couple months and to the point that it looks that most of the state is out of drought, both hydro- logically and agriculturally. Recently, an elevated amount of precipitation has fell across the Bluegrass State and helped farm ground recover to near normal moisture profiles, especially this past month. As it sits now (2/6/13), the western portion of Kentucky has averaged 6.45 inches of rainfall

over the past month, which is over 2.5 inches above normal. Multiple low pressure systems have tracked across the Commonwealth bringing both rainfall and at times, snow. This has had a huge impact on drought conditions, which can be seen in the graphic below. As you can see, much of western Kentucky was under exceptional drought conditions (dark red) back in mid July, but this has greatly improved since that time frame. By the start of December, western Kentucky was only implanted in moderate (tan) to severe (orange) drought and by the middle of January; only abnormally dry conditions (yellow) were accounted for.

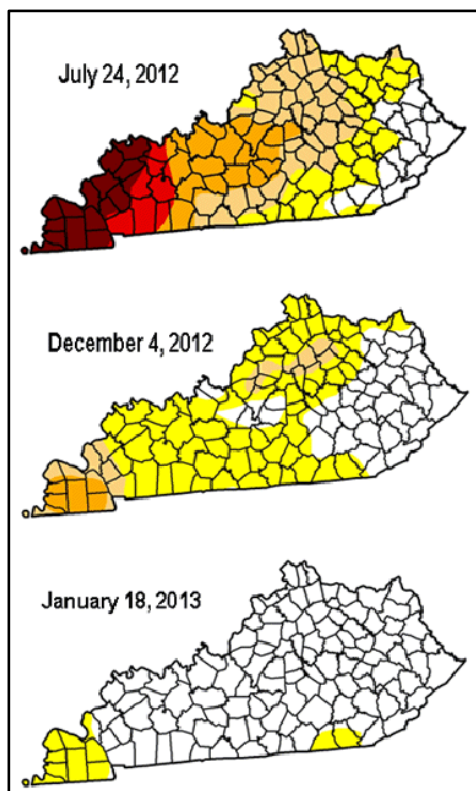


Figure 3

In addition, the Palmer Drought Index has also taken the Commonwealth out of drought conditions, with central and eastern portions of Kentucky even showing an unusually moist spell. All portions of the state have recuperated precipitation deficits that we were placed under. According to the crop moisture index, western Kentucky is observing wet conditions in a shallow soil profile.

Future outlooks also look promising as both the February and 3 month outlooks call for near normal precipitation and temperatures. A couple county

agents in the region are also reporting that the agricultural moisture situation in the Purchase area is much improved. So in a sense, while we did go through the drought of 2012, it does seem that we have made a huge comeback, and to the point that any concern going into the 2013 growing season should have weakened. Abundant moisture throughout January, in addition to current data and long range outlooks, all point toward moisture profiles looking good going into the next planting season. This does not necessarily mean another drought can't happen, but as of right now, everything is looking good.

Other News

As we saw at the end of last month, severe weather can happen at any time of the year. Just this past year, Kentucky saw its worst severe weather on Leap Day and then closely followed by a tornado outbreak on March 2nd. As we continue to head into February and the spring, it is important to know about the various warning products that are available to you, and in particular, those that are put out by the National Weather Service. Below is a link to a page formed by the NWS in Louisville, showing the various ways of receiving National Weather Service warnings. These include NOAA Weather Radios, media outlets, sirens, the NWS webpage, and many others. Each carries its own advantages and disadvantages and thus, it is up to you to pick your most reliable source of information in any particular situation.

http://www.crh.noaa.gov/lmk/?n=psa_warnings

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>

February Garden Safe Planting Dates

	Earliest Safe Planting Date		Latest Safe Planting	
	Date	Area of KY	Date	Area of KY
Peas	February 20th	Western	-----	-----
Snow Peas	February 20th	Western KY	-----	-----
Spinach	February 15th	Western KY	-----	-----

February Vegetable Gardener's Calendar

February 1st	Start seeds indoors for BRUSSEL SPROUTS
February 15th	Start seeds indoors for BROCCOLI, CABBAGE, CAULIFLOWER, KOHLRABI, LETTUCE, and CHINESE CABBAGE
NOTE: Add 10 days for Central KY and 15 for Eastern KY to these dates for spring and summer crops.	

February Beef Operations

Spring Calving Herd	<ul style="list-style-type: none"> • Calving season BEGINS • Have calving equipment, labor, and facilities arranged prior to calving
Fall Calving Herd	<ul style="list-style-type: none"> • Breeding season ENDS (season should be over) • Provide clean windbreaks and shelter for young calves
All Cattle	<ul style="list-style-type: none"> • Increase feed intake as the temperature drops • Provide clean water at all times. Be aware of frozen pond hazards
Forages	<ul style="list-style-type: none"> • Begin pasture renovation with legumes • Apply nitrogen fertilizer by mid to late February to promote early grass growth • Plan pasture utilization strategy (fencing, water, shade) • Chain harrow pastures as needed for more uniform manure distribution