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The Canadian Agriculture Weather Prognosticator

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WORLD WEATHER ISSUES

- U.S. corn and soybeans are in very good condition coming into July, but a change in weather promises drier and warmer biased conditions that will deplete topsoil moisture in the next two weeks for many areas
- Eastern Ukraine into Russia's Southern Region is too dry for unirrigated summer crops
- France is drying out
- Parts of eastern China have experienced the most serious flooding in 40-80 years with widespread damage to crops and property
- India's monsoon is off to one of its best starts in many years with more of the same expected in July
- Western Argentina wheat areas are too dry
- Southern Brazil wheat areas are excessively wet and more is rain coming
- Australia winter crops establishing better than in recent years, but more rain needed in some areas
- Ontario, Quebec drying out

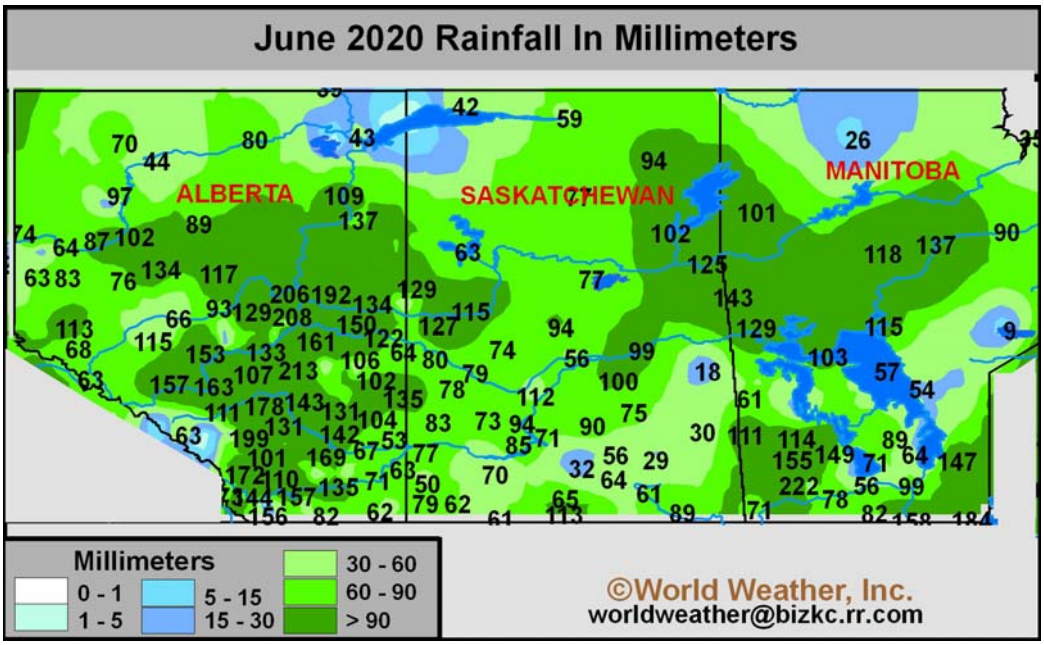
June Weather Frustrations May Linger

June weather in the Prairies presented more frustration for many producers, crops and weather forecasters. The strange precipitation distributions that occurred in May seemed to prevail in June and there is now talk of this trend continuing into July as well.

June was notably wet in a large part of Alberta, southeastern Manitoba and finally at the end of the month in southwestern Manitoba as well. However, during much of June rainfall was lacking from west-central and southwestern Manitoba through much of east-central, southeastern and south-central parts of Saskatchewan. Some of the rain recorded in these drier areas was far below what is considered normal and with lingering moisture deficits from past years the environment was not very kind to some of the region's crops. Had it not been for some wild weather last autumn and a couple of well timed early spring precipitation events the areas suffering from too much dryness could have been many times worse.

Temperatures and wind played a huge roll in hurting crops during June and for some areas in late May, as well. Day after day of strong wind speeds and low relative humidity dried out parts of the central and eastern Prairies much too fast and then several storm systems managed to miss the same areas with needed rainfall culminating in some significant moisture deficits.

Crops in the driest areas of south-central Saskatchewan have already experienced significant development in the absence of moisture. Spring cereals have headed prematurely resulting in small heads and a guaranteed lower yield while canola has been bolting and other crops have showed signs of stress as well.



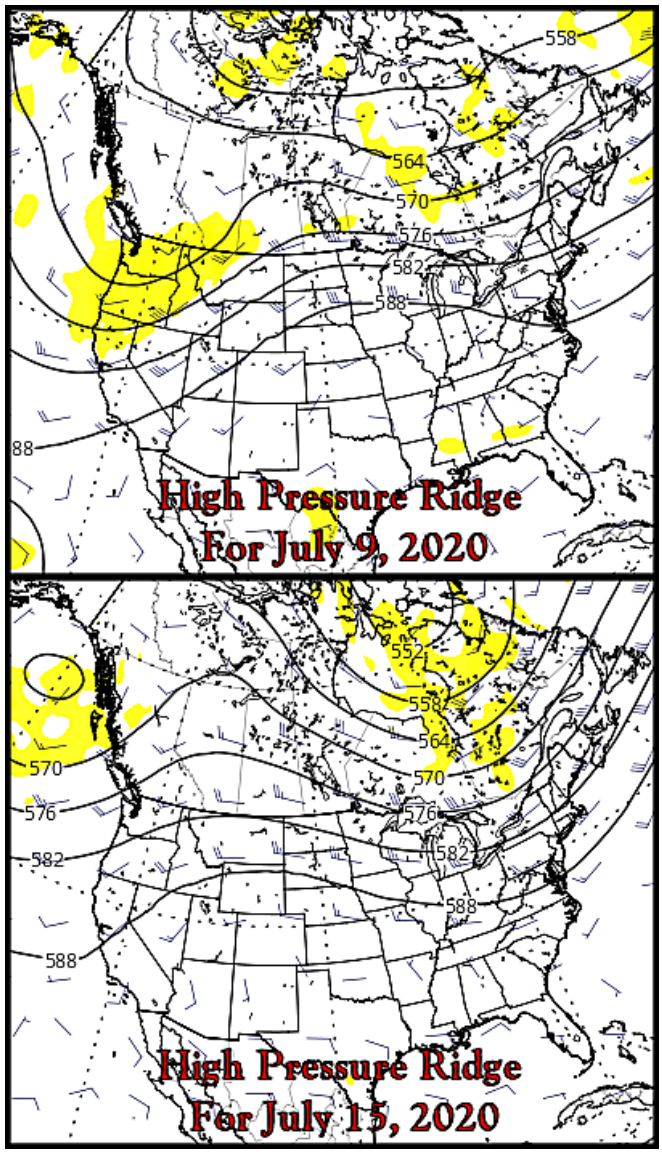
June Weather Frustrations May Linger (continued from page 1)

In contrast to the low rainfall and crop moisture stress in parts of Saskatchewan, excessive rain fell in many central, western and northern parts of Alberta as well as the Peace River region. Rain totals in some of these areas varied from 89 to 184 millimeters (3.50 to 8.38 inches) resulting in flood conditions. It got so wet in northern Alberta that some spring planting had to cease resulting in some abandonment. Some of the same farmers losing acreage to flooding this year lost production in 2019 and the three previous years because rainy weather during the harvest.

The frustration over excessive moisture in parts of northern and western Alberta matched the frustration over dryness in south-central and eastern Saskatchewan where notable moisture deficits remain from recent past years of drought. So the question now is how much longer will these anomalies prevail?

World Weather, Inc. believed that a change would take place this summer and there are signs of change being noted in many areas, but just not all areas. Southern Alberta, west-central Saskatchewan and east-central Alberta received a good mix of weather in May and June offering better crop conditions than those of last year and for some southern Alberta producers for the first time in a few years a decent crop is in the making.

The strong spring wind speeds, low relative humidity and missed rainfall in the eastern prairies smelled of drought. Certainly folks in south-central, interior southeastern and east-central Saskatchewan and west-central Manitoba agree that drought is present. A ridge of high pressure seemed to evolve over the eastern Prairies every time a chance for rain developed stopping the various rain events from being fruitful in the areas that needed the moisture most. The only reason rainfall increased in some of the driest areas in the last days of June was because the high pressure ridge shifted too far to the east into Ontario and the U.S. Great Lakes region resulting in less of a blocking weather pattern. However, even when conditions were almost perfect for rain some of these dry areas in Saskatchewan and west-central Manitoba came up empty handed or at least rainfall was too light for a serious bolstering in soil moisture.



That lack of precipitation will now help the ridge relocate over the U.S. Great Plains and extend a fair distance north of the Canada border in July. Such a position will possibly hinder rainfall development for a while longer in the drier biased areas. A weaker ridge of high pressure is needed so that storm systems coming into the Prairies through the U.S. Pacific Northwest can bring needed moisture to drought stricken region.

However, limited atmospheric moisture will be available in the U.S. Plains for a while in July and no monsoon moisture will come through the U.S. Rocky Mountain region until late July. These conditions will hinder rainfall through the first half of July in south-central and southeastern parts of Saskatchewan and some southern Manitoba locations.

Some U.S. monsoon moisture should become available for storm development in late July and August which will be the best time for additional dryness relief to begin in the south-central Prairies. However, it will be too late for many crops that will have already moved through their high moisture demand period of reproduction resulting in lower yields.

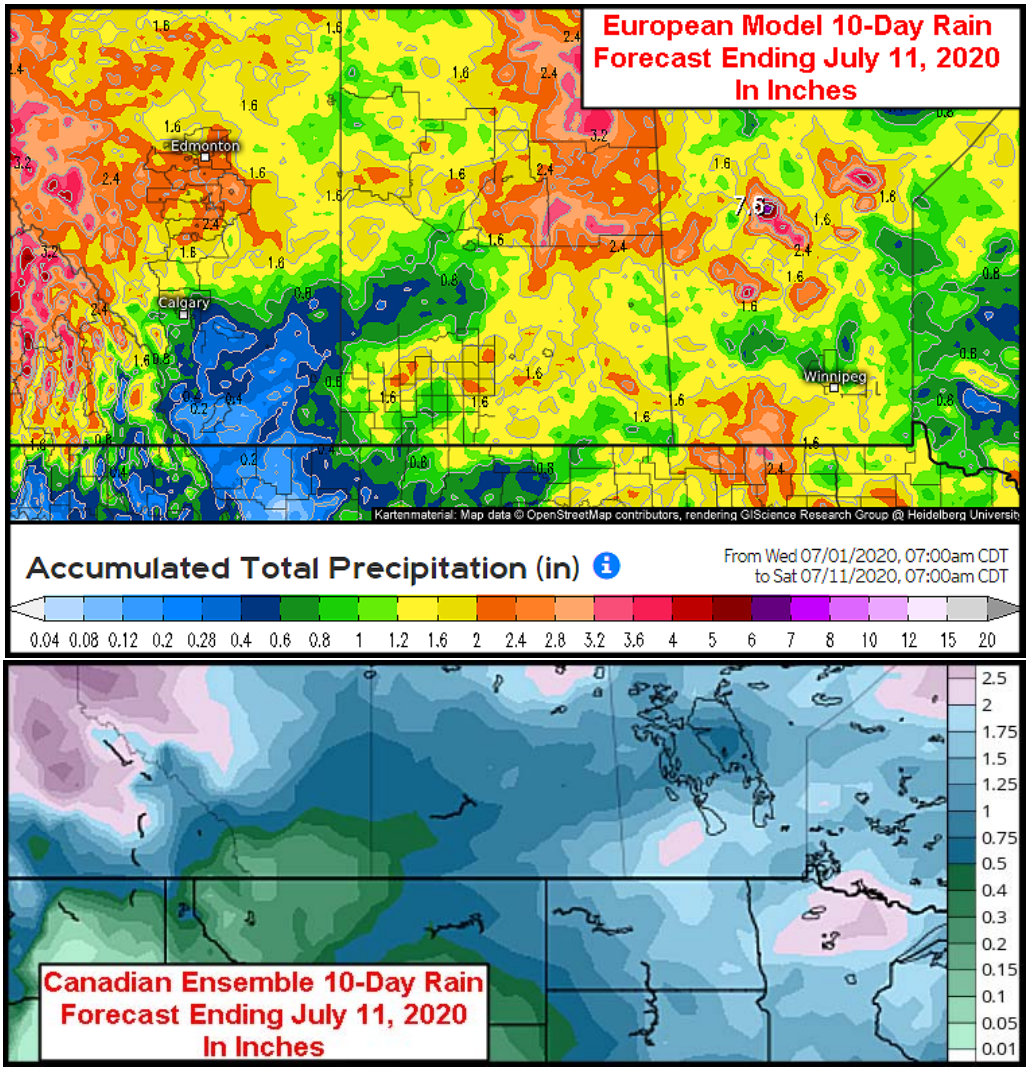
The poor crop conditions in south-central parts of the Prairies will be countered by a good production year for most of central, southern and eastern Alberta as well as western and northern Saskatchewan and in various locations in northern and eastern Manitoba.

Next Ten Days Of Rainfall Will Vary Greatly

An erratic rainfall distribution is expected across the Prairies in the coming ten days. Computer forecast models are in fair agreement that many areas in the region will get rain at one time or another, but there is still some question as to how significant the moisture will be in the drier areas of the south-central through east-central parts of Saskatchewan and central Manitoba where dryness is still an issue, despite recent rainfall.

Computer models agree that southern Alberta will not be seeing much rain through July 11 and most suggest western Alberta and southern Manitoba will be wettest. With that said it is important to note that much of the rain advertised for western Alberta was occurring today and that future rain events in that region will not be as great as suggested in the model output shown herein. The moisture advertised should be sufficient to support ongoing crop development in most of the Prairies, but the need for timely rain will be increasing in the middle part of this month in the southwestern Prairies as southern Alberta dries out over the next ten days.

Some of the advertised rainfall noted below by the European and Canadian forecast models seems a little zealous for south-central parts of Saskatchewan and a little caution is advised. Some of the potential rain may need to be whittled down a bit. The European model run is also overdoing rainfall in northeastern crop areas of Saskatchewan and that too will need to be whittled down a bit. Out of the two model forecast images shown here, the Canadian model is preferred with a lighter rain intensity bias for many areas through July 11.

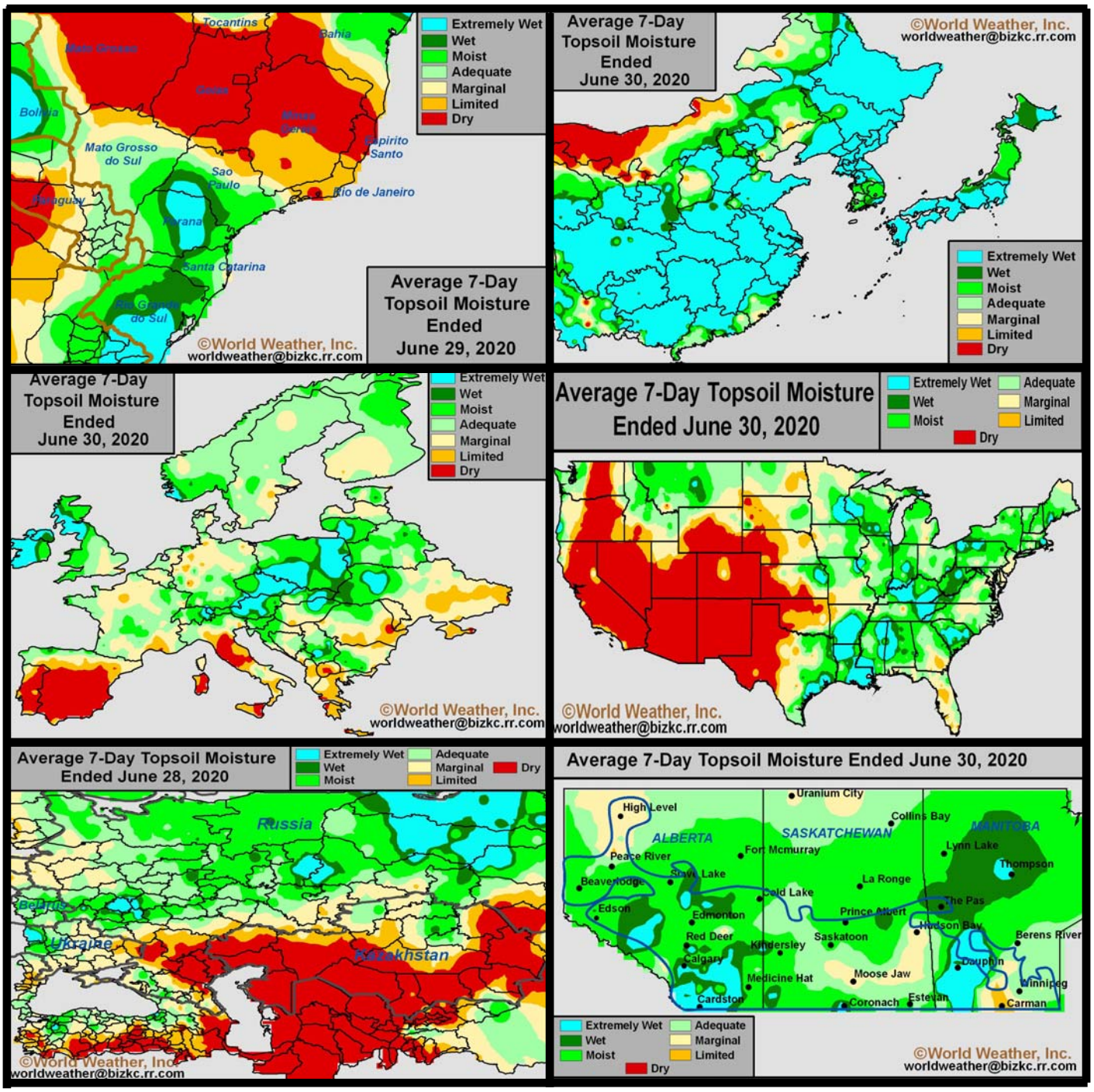


Make sure to note the upper air wind flow pattern change that is suggested near mid-month on page two of this prognosticator. If that upper air wind flow pattern verifies the period July 12-18 may trend drier biased as the ridge of high pressure shifts over much of the region. If the ridge shifts as advertised, the first ten days of July will bring some of the more significant rainfall for the month and will be followed by a period of net drying which may benefit western Alberta, but may bring back a deeper level of concern over crop moisture in parts of south-central through east-central Saskatchewan and portions of both southern Alberta and a few areas in central Manitoba where soil moisture may be lowest at mid-month when the ridge evolves over the region.

The ridge of high pressure in mid-July over the Prairies should weaken and shift a little to the east in late July and that may help to bring back some rainfall to southern Alberta, but confidence is low about the significance of rain expected in parts of Saskatchewan and Alberta. Temperatures will be warmest in the Prairies during mid– to late month.

There is potential for a dry wind to blow during some of the warmer days, as well, and that may accelerate the net loss in soil moisture.

Selected Weather Images From Around The World



Canada's topsoil moisture has improved after this past week's rain. However, portions of Saskatchewan still need additional rain. Some of the rain was falling at the time of this writing, but south-central parts of the province and portions of Manitoba will continue in need of rain. Areas from eastern Ukraine into Kazakhstan are trending much too dry and if the environment prevails much longer unirrigated summer crops will come up with reduced production. U.S. crop moisture in the Midwest, Delta and southeastern states is rated quite favorably, but the coming week to ten days will generate some quick drying that will reduce topsoil moisture so that summer crops become dependent upon timely rainfall and subsoil moisture for normal development. France, parts of Ukraine and the lower Danube River Basin are driest in Europe and there is need for significant rain soon to support summer crops. China's soil moisture is excessively wet in a huge part of the nation. The wet bias has already harmed rice, rapeseed and a few other crops. Brazil weather is expected to become too wet in southern parts of the nation during the coming week to ten days.

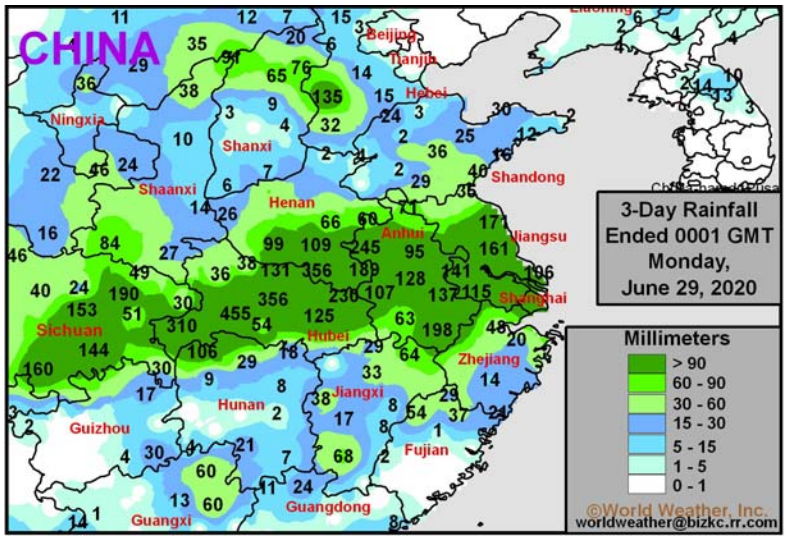
China Flooding Worst in 40 To 80 Years

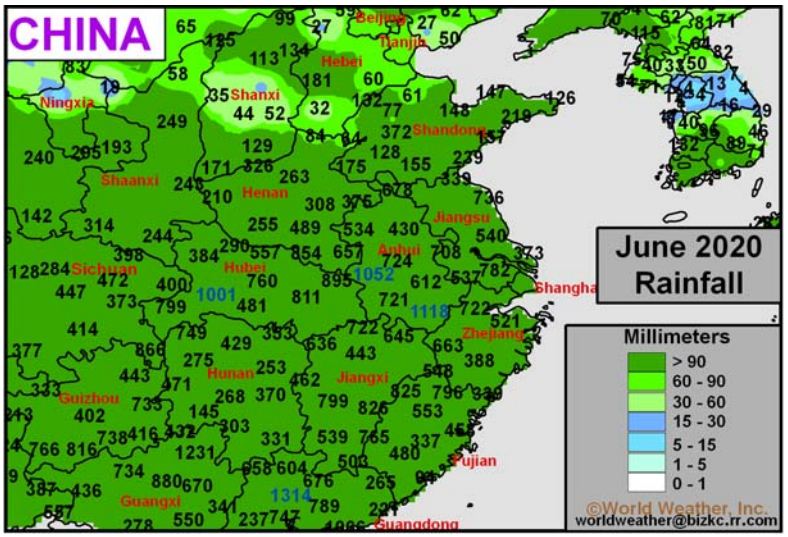
China flooding reached another peak in east-central parts of the nation from Sichuan to Anhui during this past weekend. The nation's east-central and southern parts of the nation have experienced the worst flooding in 40-80 years, depending on location.

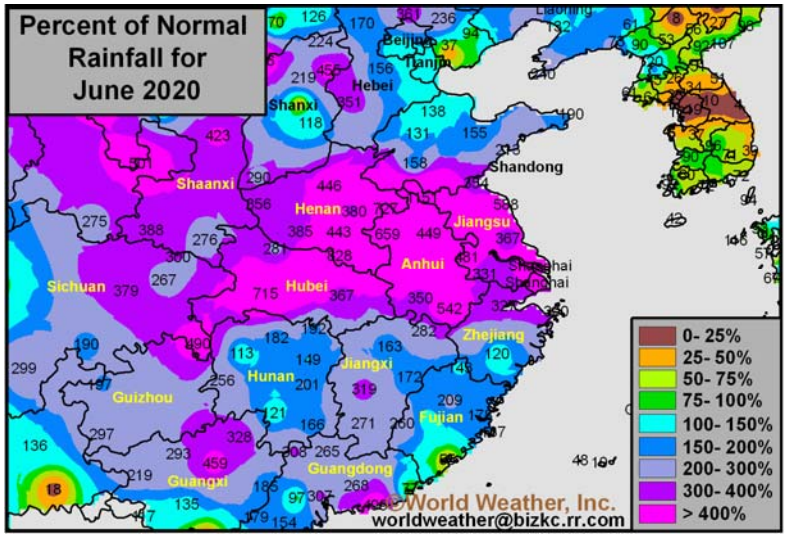
Rain totals of 5.00 to 14.00 inches occurred from eastern Sichuan through central portions of Anhui to parts of Jiangsu Friday through Monday, June 26-29. By far, the greatest rainfall occurred from southwestern through central Hubei where 12.20 to 17.91inches resulted. The city of Yichang was reporting the greatest rainfall.

Yichang is located near the Three Gorges Dam built on the Yangtze River many years ago to reduce damage from flooding rains like this, but some officials are concerned that the dam may not hold. Conflicting comments have been made by various sources as to the integrity of the dam sending fear to the 400 million people that live downstream from the dam. Most likely the dam will hold the water, but there is certainly reason to be concerned about crop and property damage from the Yangtze River Basin southward to the interior southern parts of the nation from all of the excessive rain this year.

Most of the weekend rain was confined to a relatively narrow area leaving the southern parts of the nation with much less rain and allowing past flood water to recede. It will be very interesting to hear what crop production will be in 2020 since a large part of Southern China was inundated by excessive rain in recent months. World Weather, Inc. anticipates large cuts in rice and rapeseed production with much smaller losses in sugarcane, corn, soybeans and groundnuts.







The main corn, soybean and cotton production areas east of Tibet are located mostly to the north of where the greatest flooding rains have occurred this year with the exception of a couple of weeks ago when excessive rain reached Henan, northern Anhui, northern Jiangsu and neighboring areas.

Waves of additional heavy rain are expected over the next ten days in the Yangtze River Basin and some areas to the southwest. The additional rainfall will maintain very wet conditions, but there should be enough breaks between the events to keep flood water from getting much worse than it has been.

Rain totals for July ranged from 10.00 to 31.50 inches in east-central through southern China with local totals to 51.73 inches in central Guangdong, 44.06 inches in southeastern Jiangxi, 41.42 inches in west-central Anhui and 39.41 inches in southwestern Hubei. Some of the rainfall in east-central China has been four to nearly eight times' normal.

Active Weather Will Ease In Second Half Of July

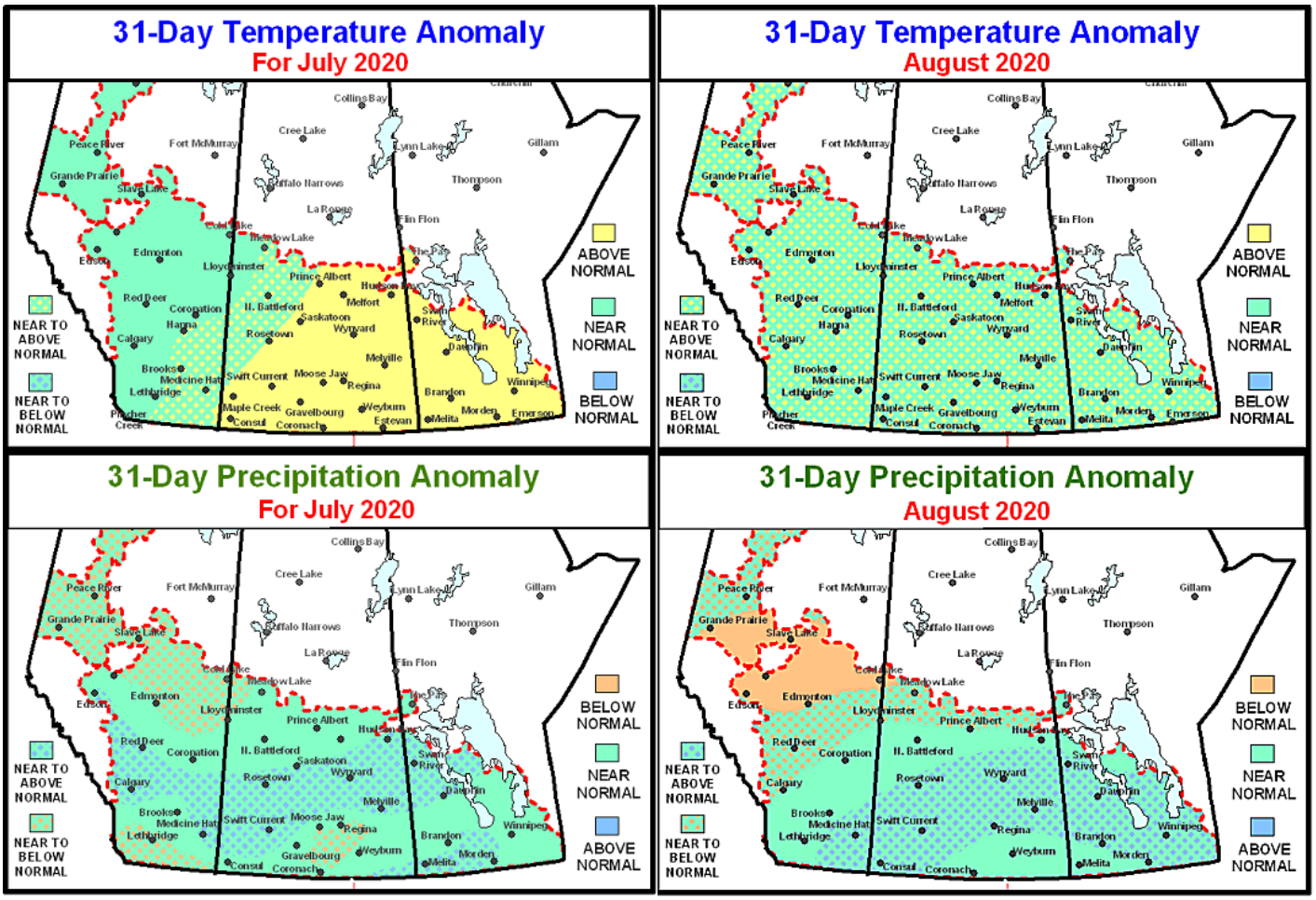
July is expected to be warmer than usual in most of the Prairies with Manitoba and Saskatchewan warmest relative to Alberta. There is some potential for western and central Saskatchewan to be warmer than indicated below, but periodic rainfall moving over the top of the ridge should help to bring down temperatures at times.

The ridge orientation is expected to be such that its axis will run along the high Plains region from western Texas to western North Dakota during much of the month. Such an orientation will allow storm systems that come into the U.S. Pacific Northwest to move across Montana and then from southwest to northeast across the Prairies. The pattern is a more classic one for "normal" summer weather in North America except for the fact that the ridge amplitude is likely to be a little stronger than usual. A stronger ridge will force the top of the ridge to reach into the south-central Prairies which is the primary reason why World Weather, Inc. expects the south-central part of Saskatchewan to continue in a drier than usual mode during July.

Areas to the west and north of the ridge axis should receive periodic rainfall most often so that the month's total moisture is near to above average. The key to this forecast is just how strong will the ridge be. The more amplitude the ridge attains the less rain will fall in southern Saskatchewan and the more that should occur in west-central through northeastern parts of the Province. The stronger the ridge the less rain will also fall in Manitoba. For now, World Weather, Inc. expects the ridge to be weak enough to bring rain to much of the Prairies periodically. However, amounts will be a little lighter than usual from the Peace River region across northern Alberta's key summer crop areas and in that small region in south-central into southeastern Saskatchewan.

There is potential for some greater rain to reach into southern Saskatchewan, but that will only be determined by the U.S. monsoon flow that brings summer showers and thunderstorms through the Rocky Mountains and sometimes into the northern Plains and southern Prairies. That flow is not expected until late July and for that reason the greatest rain in southern Saskatchewan may not occur until the second half of the month leaving the below-average precipitation bias for the month.

August weather may be similar to July, but adjustments are expected.



July U.S. Weather To Set Tone For Balance Of Summer

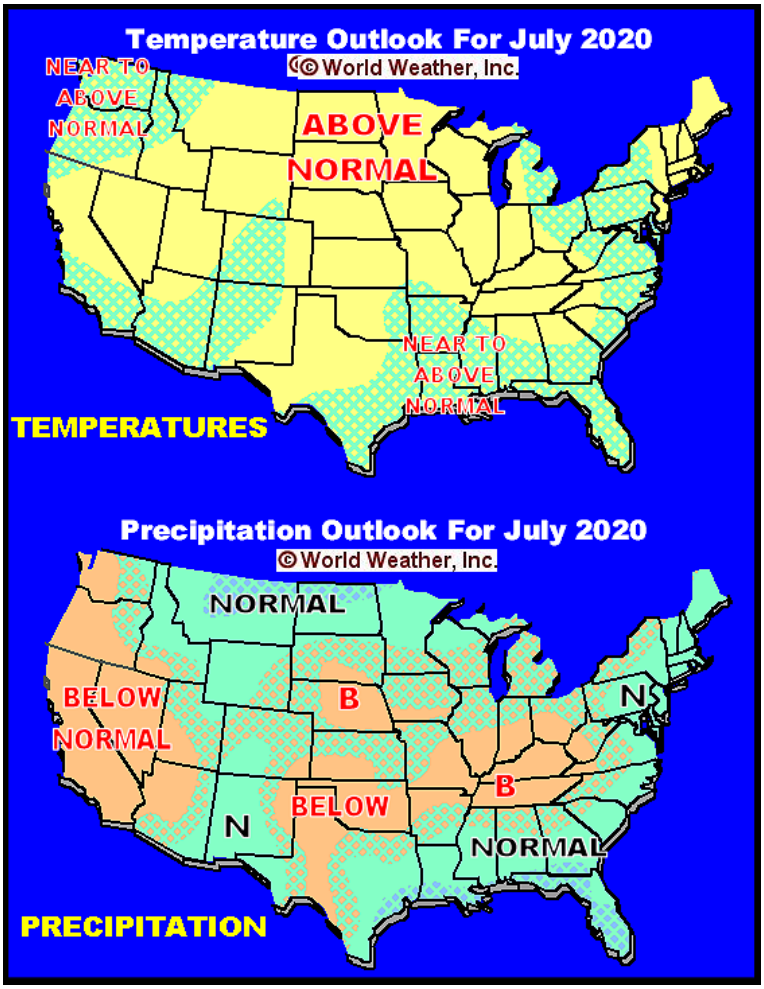
July promises to be a warmer than usual month in much of the U.S. with more limited rainfall resulting in net drying and the dryness that evolves in July will set the tone for crop development the remainder of summer especially since a drier finish is possible.

June rainfall was not far off from normal in too many areas, but the same kind of environment may not occur in July and there is growing concern that a high pressure ridge may lead to significant drying in the first half of the month. Below average precipitation and warmer than usual temperatures will not take long to deplete topsoil moisture and raise the need for routinely occurring rainfall.

If the World Weather, Inc. Trend Model is correct there will not be enough rainfall to fully restore soil moisture and once moisture deficits start to evolve the trend could be set for moisture stress later this summer. It will be imperative that timely rain occurs during July to leave soil moisture at favorable levels in August.

August weather was originally expected to trend a little cooler with some timely rainfall, but that part of the forecast is beginning to change as a result of developing La Nina conditions in August and September and the likelihood that an active tropical cyclone season will evolve at the same time. The active tropical cyclone season will have a huge impact on U.S. crop weather, but the exact impact will be determined by where the majority of tropical cyclones go.

Frequent tropical cyclones evolving near or passing over the southeastern U.S. could result in a quasi permanent high pressure system over a part of the Midwest resulting in poor rainfall and ongoing warm weather. If this scenario plays out after a drier and warmer than usual July there could be some significant impacts on soybean and sorghum yields with some influence on late season cotton and peanuts as well.



Developing La Nina conditions should occur late enough in the summer to limit the actual impact on crop areas. However, lets assume for a moment that what some forecasters are suggesting about La Nina is true. If there is a La Nina influence it would tend to reduce rainfall and increase temperatures across the Plains and western Midwest and if that were to occur while frequent tropical cyclones are impacting the southern U.S. Atlantic coast there would be a greater potential for late season dryness of significance.

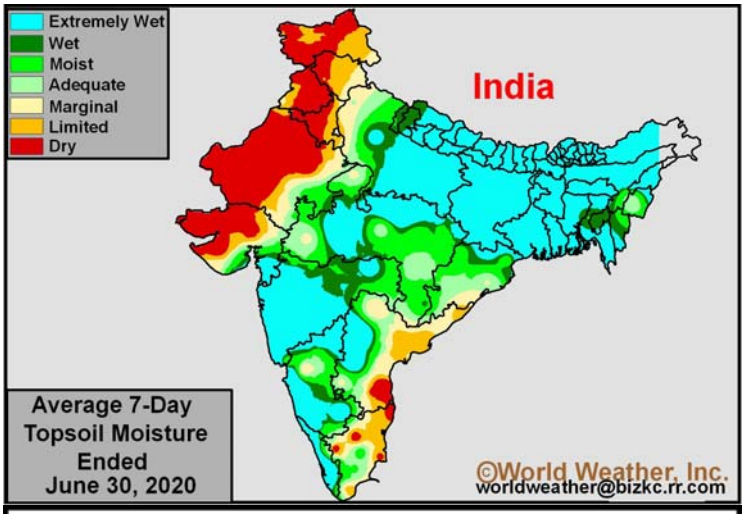
However, World Weather, Inc. believes any influence from La Nina would occur no sooner than August and more likely in September, but some forecasters will stretch that out not realizing there already is a dry and warm bias built into the North America weather for this summer coming from a long term repeating weather cycle. It will be easy for some to blame the coming drier and warmer weather on developing La Nina, but despite some recent cooling ocean temperatures, the change has not been great enough to impact global weather trends despite what some forecasters might suggest.

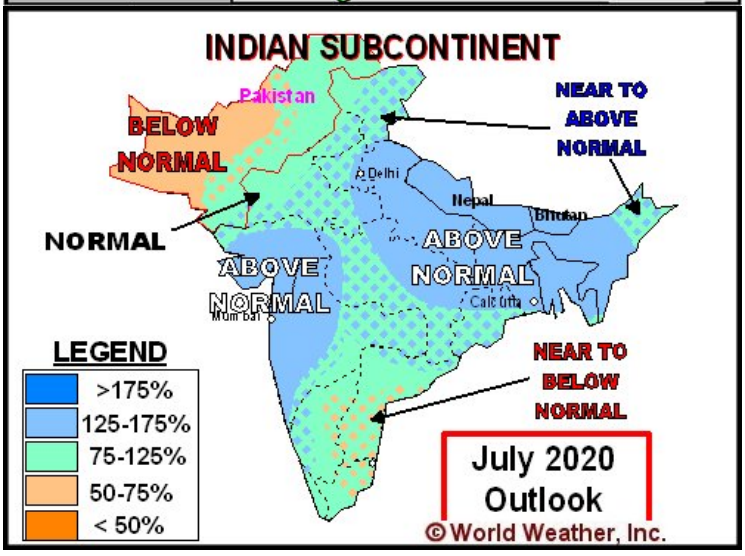
Obviously, the summer forecast is not going to be straight forward. A close watch on the tropics and weather in July will have much to say about late season crop weather. World Weather, Inc. still believes that corn will manage the drier and warmer weather relatively well, but soybeans, cotton, sorghum and peanuts could be in for a greater struggle later this summer especially if July is as warm and dry as it looks like it may be.

One last thing to consider for late this summer is also related to the tropics. If frequent storms impact the southeastern states the end result could be threatening to some of the crops produced in those areas. So, tropical cyclones could have a more direct impact on dropping production potentials in those areas impacted by the storms.

July India Weather To Be Equally Good To That of June

Rainfall in India during the month of June was abundant and sufficient enough to support aggressive early season farming activity and new crop development. The month of rain was probably among the best monsoon performing first months of the summer seen in many years. July weather is expected to be equally beneficial with rain reaching more significantly in northern parts of the nation. There will be a rising potential for flooding in the east and west-central parts of the nation.





Rainfall during the month of June was near to above average in a huge portion of the nation. The abundance of rain during the month allowed field-work to get started faster than usual in many areas. Even though rain totals for the month were substantial, the precipitation was spread out in such a manner that very little serious flooding occurred. Rain totals in a huge part of central and eastern India ranged from 6.00 to more than 10.00 inches with several locations in northeastern Madhya Pradesh, Bangladesh and a few far Eastern States' rain amounts ranged from 11.00 to more than 14.00 inches. The greatest rainfall was in Bangladesh where flooding was widespread and one location in that country reported 25.5 inches of rain for the month.

In contrast, rainfall in northwestern India was much lighter, but that area does not usually see much monsoon moisture until mid-July making the light rainfall in that region quite normal and of little concern. Rain totals in the far north were 50-72% of normal with one location in northwestern Rajasthan only reporting 13% of normal precipitation, but normal rainfall is not very much and these figures can be very misleading.

Overall, much of central through eastern India and in a few interior southern locations reported rainfall of one to nearly three times' normal and the bottom line was quite favorable for soil moisture. A huge part of India was reporting adequate to excessive moisture when June came to an end. The only dry areas were in the far north and northwest, but as noted above that is not unusual for this time of year and neither was the dryness that was noted along the lower east coast.

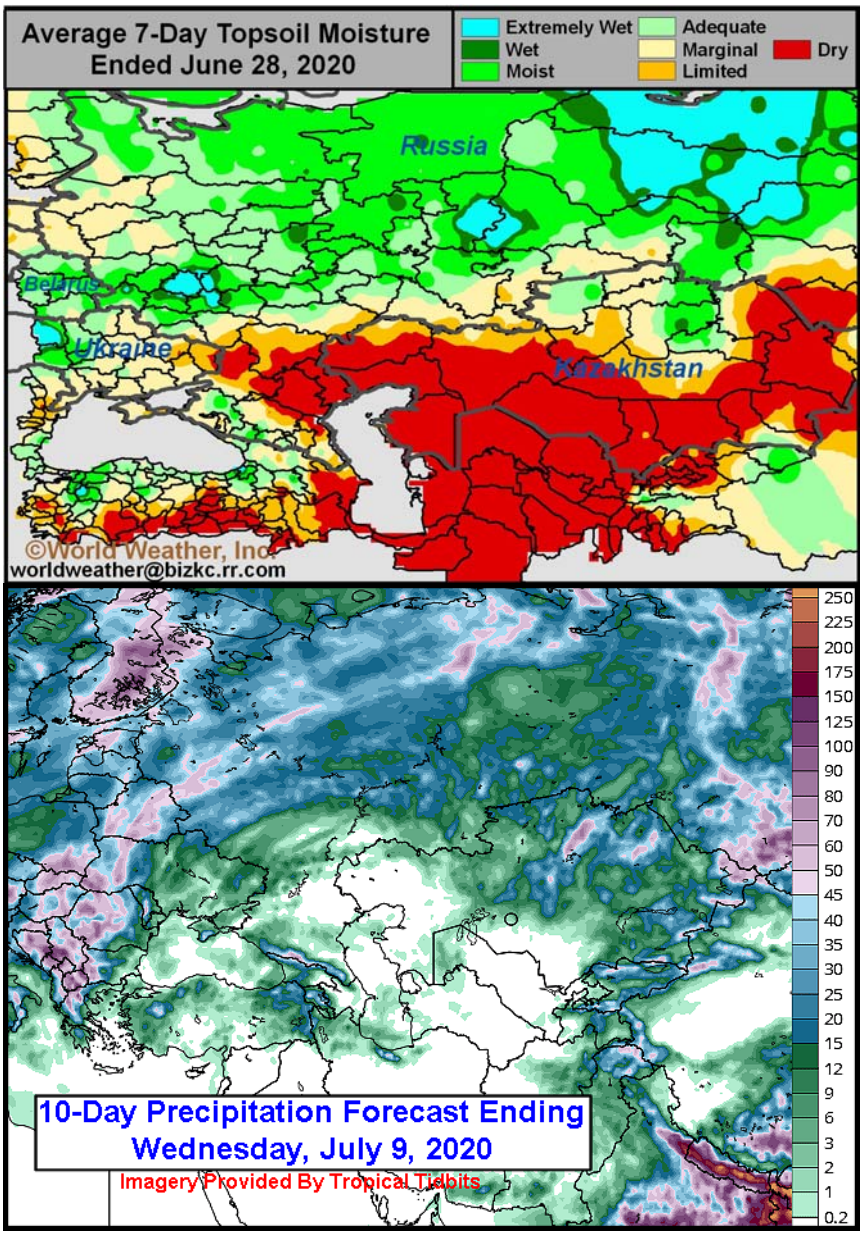
July weather is expected to perform quite well also. Rainfall will be near to above average in most of India with only the far south expecting a little moisture deficit relative to normal. Rainfall in Pakistan is expected to begin, but it may be a little lighter than usual in the west while close to normal near the India border. Northwestern India will start getting rainfall in July and sufficient amounts will occur to support most crop needs.

There will be some potential for flooding in July in both west-central and eastern parts of the nation and that will have to be closely monitored. Most of the significant flooding may occur in the Ganges River Basin which might be welcome for a while since that region carried some significant rainfall deficits in last year's monsoon – at least until late in the year.

Summer crop development should advance well in July, although there may be some potential need for a little replanting if some of the rain becomes too great.

Eastern Black Sea Region Begins Drying Faster

Limited rainfall continues to impact portions of the Black Sea region and this trend will continue for no less than the next ten days and perhaps longer. The latest soil assessment clearly shows the continued expansion of dryness northwest from Russia's Southern region and western Kazakhstan. Crop moisture stress is steadily rising in unirrigated summer crops in the region while winter cereals are maturing and beginning to be harvested in a favorable environment.



Rainfall has been minimal recently over a region from central and eastern Ukraine through a large part of Russia's southern region to the lower Volga River Basin and Kazakhstan. The lack of rain has occurred while temperatures have been seasonably warm with daily afternoon temperatures over the past week varying in the 80s and some lower 90s Fahrenheit. The heat and dryness has combined to accelerate losses in soil moisture which in turn has been increasing crop moisture stress.

Most of Kazakhstan and parts of Russia's Southern Region have been drier biased for an extended period of time and the recent warm and dry weather farther to the west has been allowing this dryness to expand westward. Today's topsoil moisture has already slipped into the short and very short categories in eastern Ukraine where soil moisture had been more favorably rated just one week ago.

The drying trend will continue with limited rainfall and seasonably warm temperatures through the next ten days. Some computer forecast models have suggested this trend will last more than two weeks, but confidence in that extended outlook is a little low. In the meantime, unirrigated corn, soybeans and sunseed produced in the region will continue to experience increasing moisture stress.

Winter crops have benefited from the drier tendency recently since wheat, rye and other crops have been moving through the filling and maturation stages of development. Some early harvesting has also been reported in Kazakhstan and some neighboring areas in southern Russia. Dry and warm conditions for these crops can be quite supportive of quick maturation and harvest progress.

Most other areas in western portions of the Commonwealth of Independent States will continue to experience a good mix of weather supporting normal crop development. Production potentials should be mostly good in western Ukraine, Belarus, western and northern Russia and Moldova.