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The Canadian Agriculture Weather Prognosticator

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Ontario And Quebec

Late season summer crop weather has been good for Ontario and Quebec recently and change is not very likely. Crops should have a few weeks of favorable weather before the risk of frost and freezes begin in the second half of September.

WORLD WEATHER ISSUES

- Western Australia Has Received Much Needed Rain Recently To Help Induce Better Wheat, Barley And Canola Establishment Prior To Spring Growth
- Eastern Ukraine To Russia's Southern Region Remains In Drought With Some Production Cut Likely
- Southeastern Europe Also Remains In Drought Hurting Corn, Soybean And Sunseed Yields
- China Weather Remains Nearly Ideal
- U.S. Midwest Dryness Has Not Expanded Or Deepened Recently Because of Cool Weather
- India's Dryness Is Expanding In The Interior South And Northwest

Prairies May Escape Early Frost Damage

What a challenge this year has been to forecast! Had it not been for abundant subsoil moisture left over from last year in many areas the situation would have been many times worse.

The challenge is not over, however. Crops in the drought stricken areas in southern Alberta and central, southern and some west-central parts of Saskatchewan will be maturing quickly enough this season to avoid damage by frost or freezes. However, late planted crops in central and northern Alberta, northwestern Saskatchewan and in a few areas in northeastern Saskatchewan will need a little longer period of frost free weather to protect crops and assure their best production potential.

Earlier this season it looked as though much of the Prairies would have a risk of early frost and freezes. Some of that risk was a byproduct of drought and some of it was cyclical. Everything in life is about timing and that certainly applies here.

World Weather, Inc. believes it has found a cycle that will control our temperatures over the next several weeks. If we are correct, the next bout of cool weather for Alberta may come up in the last week of August. Temperatures could turn cool enough for some frost during that period of time not too much different from that which occurred in Russia's eastern New Lands last weekend. Early indications suggest the cool off will not be potent enough to cause serious freezes, but it could be nippy enough to impact some crops.

Another bout of cold weather may return very briefly in the first week of early September, but it should not be a very significant threat. After that first week in September, there may not be a viable threat of frost and freezes in Alberta again for a while.

It is too early to have any confidence in how much cool air will be around in late August and early September and there is some potential that it will not materialize at all, but those are the two most likely threat periods. If we get through that period without an incident the immature crops in Alberta may get another couple of weeks before the risk of frost and freezes returns.

In the meantime, the cool air masses that are advertised for Alberta should moderate as they move across the remainder of the Prairies reducing further the risk of crop damaging cold.

Pattern changes will evolve in mid-September that should start favoring the eastern parts of North America for cooler than usual conditions. Frost and freeze threats may evolve in the northern U.S. Midwest, southeastern Canada and the northeastern United States during the September 14-25 period and the further east that risk of cold gets the warmer the Prairies will be.

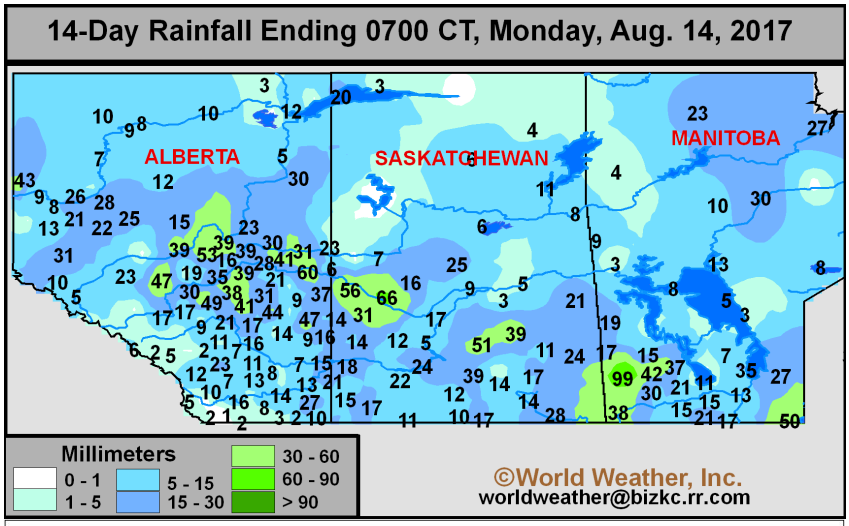
That does not leave the Prairies free and clear of the risk of early season frost and freezes, but based on this analysis there is certainly some hope that the region will miss out on damaging cold conditions at least earlier than usual.

Manitoba and possibly eastern Saskatchewan could be impacted by the Sep. 14-25 cool period in eastern North America and those areas could be impacted by some frost briefly at that time.

Driest Bias In Prairies Shifts West; Drought Remains

Drought remains in place across a big part of the Prairies and over the past few weeks there has been a westward shift in the driest conditions.

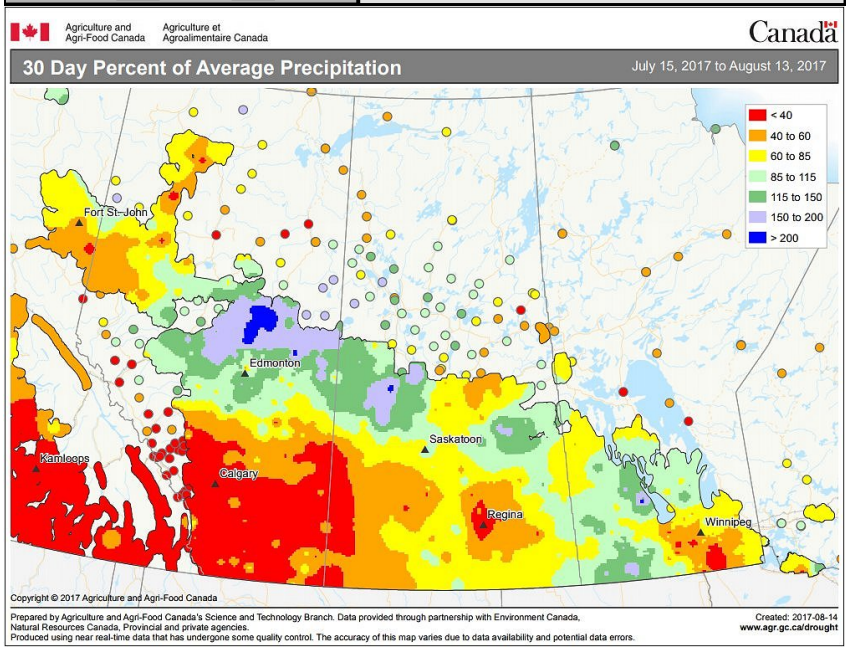
Rainfall in the past two weeks has increased across portions of western and northern Manitoba, easternmost Saskatchewan and in a number of locations scattered across central Saskatchewan to the northwestern corner of the province. Rain has also prevailed abundantly in northern Alberta. Total rainfall in these areas for the two-week period ending July 14 varied from 15 to 35 millimeters with local totals of 35 to 66 millimeters.



In contrast, rainfall in central and southern Alberta, far western and both south-central and southwestern Saskatchewan varied from 7 to 18 millimeters with a few greater amounts and a few lighter amounts. Areas near the Montana border in Alberta were driest.

Rainfall in the wetter biased areas noted above was mostly good for crops and helped to bring a little relief to areas that had been drying down. However, a few areas did not find the rainfall very welcome. a small part of northwestern Saskatchewan and areas west into north-central Alberta are a little too wet once again and the same is true in northeastern and a few east-central Saskatchewan locations near the Manitoba border. Most of the greatest rainfall in the eastern Prairies was concentrated on western Manitoba.

A few of the wetter areas noted above reported above average rainfall for the 30-day period ending Aug. 13 and soil moisture improved.



In contrast, much of the south half of Alberta and west-central through southwestern Saskatchewan reported less than 40% of normal precipitation. Some areas received less than 25% of normal rain. Areas further to the east were also drier than usual including much of central and southeastern Saskatchewan. Two other areas of below average precipitation in the most recent 30 days included southeastern Manitoba, including the Winnipeg and Portage Prairie region areas southward to the U.S. border. The Peace River Region is another area that has recently trended drier.

World Weather, Inc. believes the worst of the heat and dryness is about over for the Prairies, but mostly because of changing seasons. Cooler air will filter into the Prairies in the next few weeks slowing drying rates and offering a little more potential for rain to fall. A wet harvest is not likely this year—at least not like that of last year.

Some periods of light precipitation will come and go across the region slowing fieldwork at times, but no prolonged harvest delays because of extended rainfall are anticipated. The sad part of that forecast is with respect to recharging the soil with moisture for use in the spring.

September is expected to bring a little more moisture to the region, but it is not likely to fix long term moisture deficits and the odds are rising that winter will arrive with dryness remaining in the soil. That will place much pressure on winter precipitation to provide sufficient planting moisture in spring 2018. Once the snow melts and planting is complete, timely rain will be imperative to assure the best production potential.

No Drought Busting Rain In Harvest Season

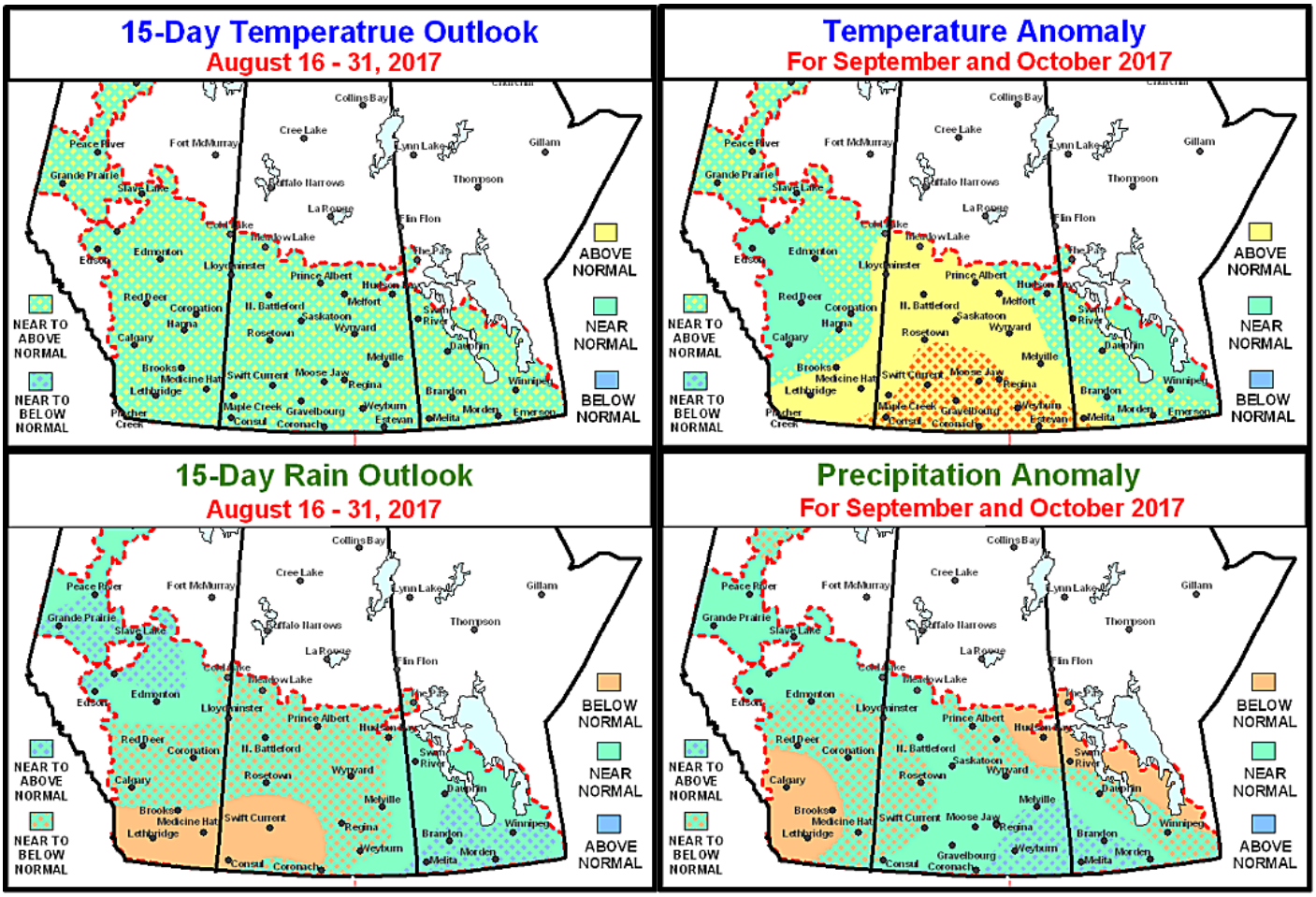
Seasonal changes are likely throughout the Prairies over the next 75 days, but drought busting rain is not very likely. Seasonal cooling is expected and that should set off some showers and thunderstorms periodically, but it looks as though the cool off will be rather sluggish and that will help to hold temperatures above average for the autumn harvest season.

Warmer biased conditions will not prevail week after week, but the bouts of cooling that evolve should be brief. The warmer biased conditions in September and October does not imply there will be no frost or freeze conditions, but the warmer bias suggests the cooler periods will be less intensive and shorter in duration relative to normal and that implies evaporation rates will be greater than usual making the potential for late season increases in soil moisture to be more difficult to achieve.

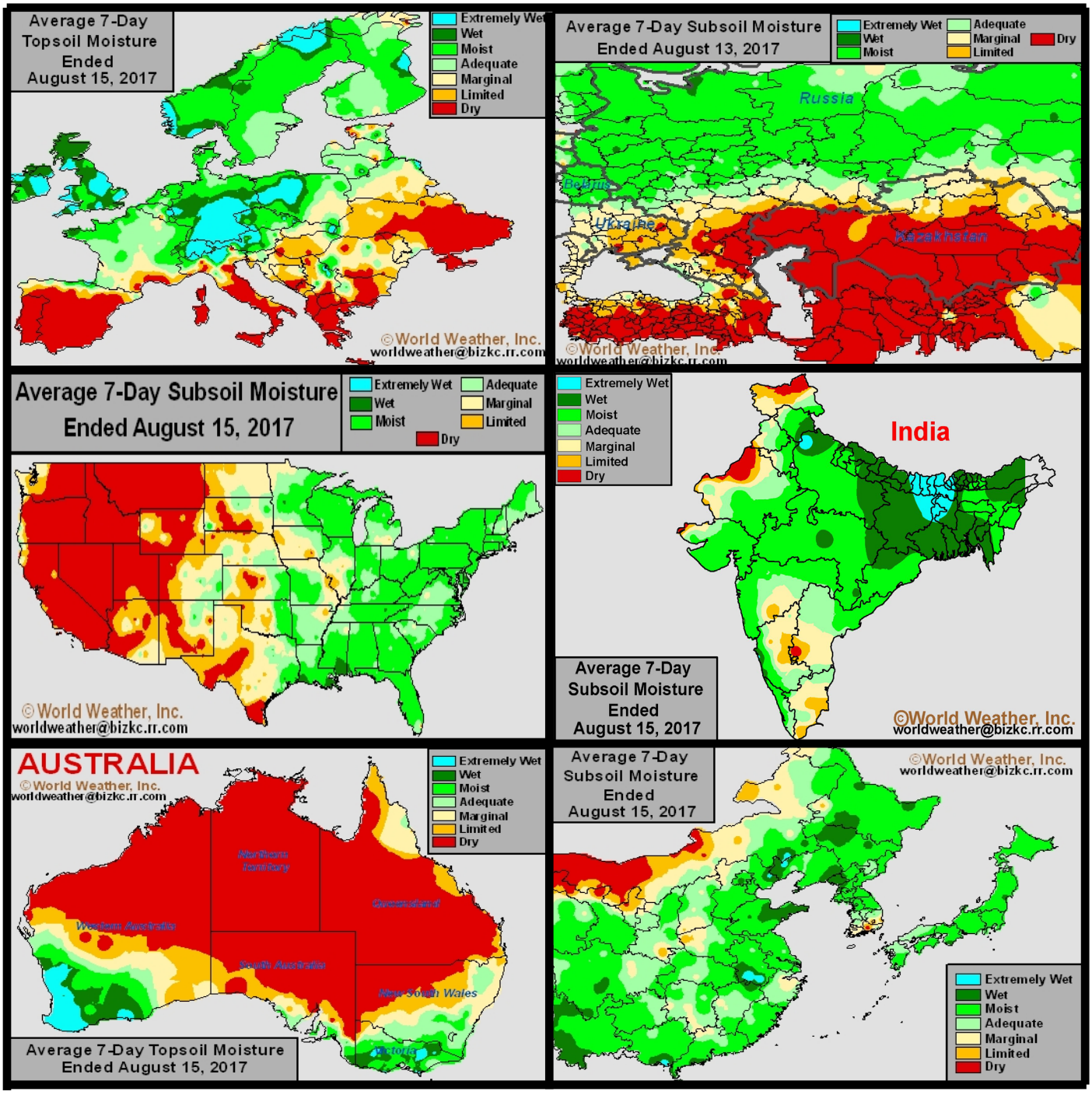
Frost and freeze conditions will occur briefly this autumn, but earlier than usual damaging freezes are not very likely. Frosty conditions are expected in the western Prairies in late August and early September and in the eastern Prairies in mid– to late-September. Crops in drought stricken areas are more advanced than usual and will be able to withstand frost and freezes a little easier this year than in most years.

The most important part of the forecast for this autumn is the rainfall outlook. Precipitation is expected to be a little greater than usual in the southeastern Prairies while near to below average elsewhere. The environment will contrast greatly with that of last year and there should not be any serious reason why crops cannot be harvested before the first snow flies. Unlike last year, farming activity should wind down swiftly because of dryness. The exception will be in northern and central Alberta where crops were planted latest and where rainfall has been most abundant in recent weeks. Crops in these areas will not be ready for harvesting on the usual schedule and that does raise the potential for a little quality decline.

Worry will rise about the driest areas in the Prairies during the autumn season because of low soil moisture. However, late autumn and early winter should bring on "some" increase in precipitation that will be welcome and should help set the stage for a fair spring 2018 planting season. Timely rain will be required in the spring for those crop areas that go into winter without adequate soil moisture and that may be a large portion of the Prairies.



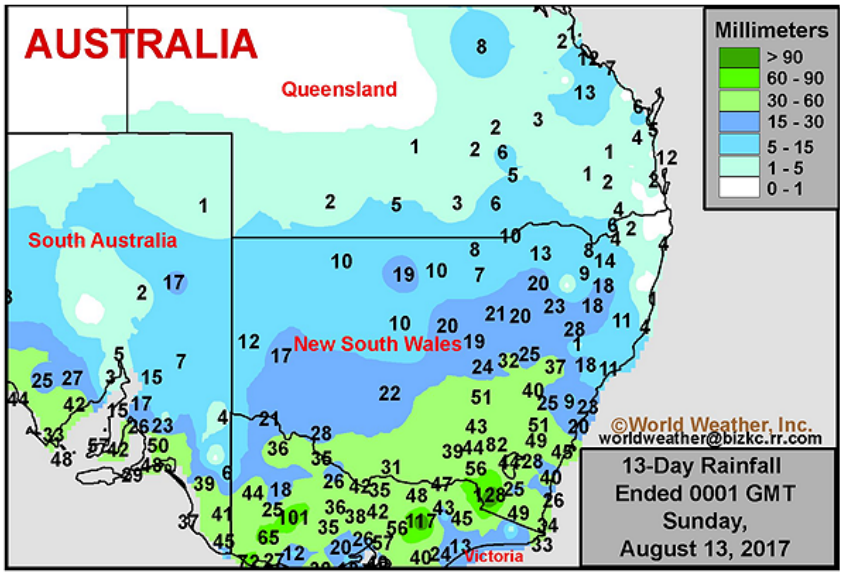
Selected Weather Images From Around The World



Some partial relief to dryness occurred in southeastern Europe this past week, but the region is still in need of a generalized rain. The same is true for areas from eastern Ukraine into the Russian Lower Volga River Basin and Southern Region. A little too much rain has occurred recently in Germany, western Poland, parts of the United Kingdom and in northern Russia slowing farming activity, but improvements were expected in most of these areas during the coming week. Western Australia experienced the greatest boost in topsoil moisture recently and its winter crops have "opportunity" to develop better root and tiller systems prior the reproductive season in September. Follow up rain will be very important. Queensland and northern New South Wales, Australia now have the biggest problem with dryness and significant rain must fall in the next few weeks to support reproduction of wheat, barley and some canola. South Australia also needs rain. In the meantime, China weather has been and will continue nearly ideal while India is experiencing a growing need for significant rain after nearly three weeks of net drying.

East-Central Australia Rain Need Rising Exponentially

Australia's winter wheat, barley and canola production areas have had had some restricted precipitation at times this winter raising concern that crops may not be well established as the spring growing season begins. Some crops in Queensland and northeastern New South Wales will be reproducing in a few weeks and dryness must be eliminated soon to prevent accelerated production cuts due to poor soil moisture during the reproductive process. In the meantime, winter crop improvements have been significant in parts of Western Australia recently, but follow up rain will be needed for the entire nation soon.



Rainfall so far this month has been most significant in southern parts of the nation. Victoria, southern New South Wales and much of Western Australia have received significant rain in the past couple of weeks and that has helped improve the outlook for early spring crop development. Dryness earlier this season was quite serious in Western and South Australia, but changes have occurred since the beginning of August offering some improvement.

Victoria and southern New South Wales had the best planting moisture last autumn and early in the winter. However, a period of drier than usual conditions occurred over multiple weeks during mid-winter allowing parts of the region to trend drier. Recent rain, however, has restored topsoil moisture for a more favorable outlook for the start of aggressive spring crop development that usually begins in late August and especially September.

Queensland and northern New South Wales, like South Australia, received very little rain during the bulk of autumn and winter seasons. That left unirrigated winter crop fields either unplanted or poorly established. August rainfall is always critical for these crop areas because of the early arrival of warm weather and the reproductive season.

Reproduction of wheat and barley in Queensland usually occurs as early as the final days in August and in the first two weeks of September. Rainfall since the beginning of this month in this region varied from nearly nothing to 0.50 inch. Dry or mostly dry conditions occurred in many previous weeks and these crop areas tend to be warmer than other areas in the nation at times in most winter seasons. That allows winter crop development to occur slowly during June, July and August. As temperatures trend warmer in August, crop development often accelerates placing a greater demand on soil moisture.

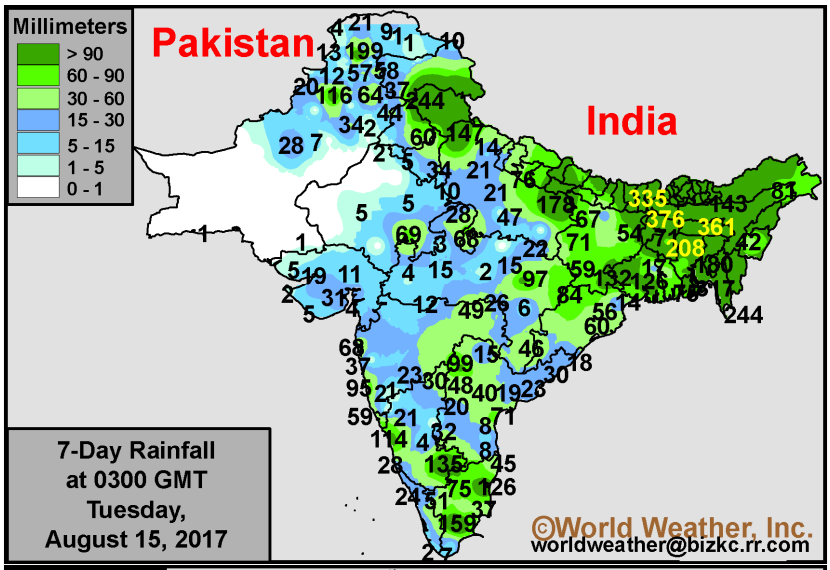
The lack of rain recently has left the ground too dry in Queensland and northern New South Wales to support reproduction later this month and next. Substantial rain is needed in the next few weeks to adequately recharge the soil with moisture and to induce better crop development ahead of reproduction. The absolute most important time for rain will be late this month through September to assure the best yielding crops in east-central Australia. As dry as the region is this year, rain will have to fall substantially over an extended period of time to restore soil moisture and water supply and to restore production potentials.

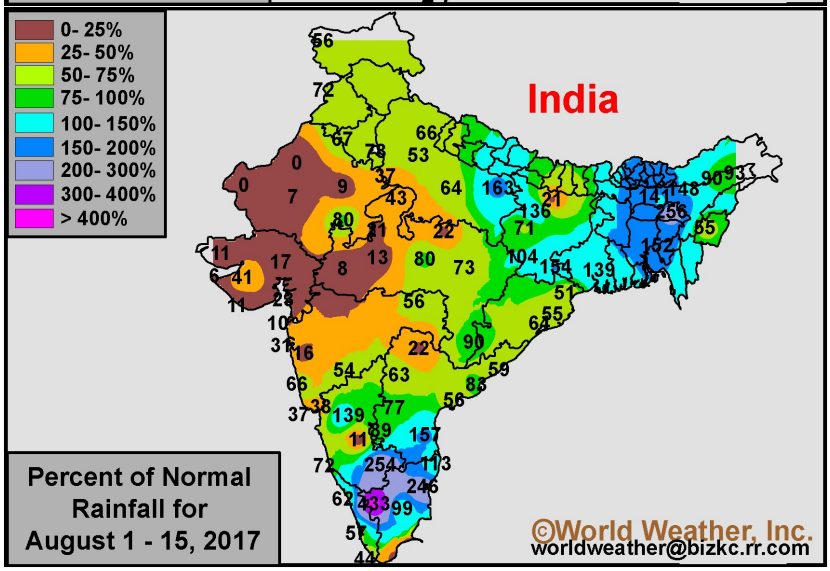
There is still need for additional rain in all of Australia during the next few weeks as spring arrives. However, the situation is most serious in Queensland and northern New South Wales to support reproduction of wheat and barley that begins soonest. The moisture is also needed for canola in northern New South Wales, sugarcane in Queensland and the potential for unirrigated spring crop planting. South Australia and northern Western Australia will also have need for additional rain soon, although reproduction will not begin quite as quickly as that in Queensland and northern New South Wales.

The ten-day to two-week rainfall forecast is not offering any serious change to dryness in Queensland or northern New South Wales. Many other areas in southern Australia will likely experience a net decline in soil moisture, as well, but with recent rainfall most crops from Western Australia to Victoria and southern New South Wales will experience a short term bout of improvement. Follow up rain will be critical for all of the nation beyond the next ten days. World Weather, Inc. believes southern Australia will receive additional rain later this month, but concern over dryness in Queensland and northern New South Wales will continue high.

India Needs Rain Before Crop Losses Mount

Dry weather that impacted central and northern India beginning in late July has persisted through August 15 and for some areas another week will pass before rain chances improve. Crop stress in the past couple of week has steadily risen increasing the potential for production cuts in soybeans, groundnuts, cotton, rice and sorghum. A boost in rainfall is advertised for the second half of this month, but time is running out for a general soaking of rain to occur before additional production cuts evolve.





Rainfall over the past week was minimal to non-existent from southwestern Pakistan into Rajasthan, Madhya Pradesh, portions of Gujarat and parts of the region from interior western and northern Maharashtra into southwestern Telangana and northern Andhra Pradesh. Rain totals in much of the described region was less than 0.80 inch and many areas were dry. Highest temperatures in the dry region of Pakistan and northwestern Rajasthan peaked in the range of 95 to 111 degrees Fahrenheit. Highs in the remainder of the drier biased region were mostly in the upper 80s through the lower 90s.

Much greater rainfall occurred in eastern and parts of southern India during the past week. Portions of Bangladesh reported 8.00 to 14.80 inches of rain resulting in some flooding. Surrounding areas received 2.00 to more than 5.00 inches. Rain also fell significantly in Uttaranchal and far northernmost portions of Uttar Pradesh where 5.78 to 9.60 inches of rain occurred. A few other areas in far southern Karnataka into Tamil Nadu reported 3.00 to more than 5.00 inches. Most other areas in India reported highly varying amounts of rain with totals mostly under 2.00 inches.

Rainfall during the first half of August was well below 25% of normal in western Madhya Pradesh, in portions of Maharashtra, Gujarat and Rajasthan. Much of west-central India reported less than half of normal rainfall. That contrasted with totals of two to more than four times normal in northern Tamil Nadu and southern Karnataka. Some areas in Bangladesh reported 1.0 to 2.5 times the normal rainfall while most other areas reported mostly 50-100% of normal moisture.

The lack of heat in India has helped to prevent the dry biased pattern from drying the nation exceptionally fast. However, the drying trend is not over and a notable decline in topsoil moisture is under way and will become more noticeable a week from now.

Relative to last week's report, far southern India has trended wetter and that has reduced the size of the driest biased region. However, there is still a large part of western and southern Maharashtra through southern Maharashtra into central Karnataka and northern Andhra Pradesh that continues too dry. Substantial rain must fall in the region soon to protect the long range outlook for crops in the region. Another area of concern is in guar, cotton and some groundnut production areas from Gujarat into northern Rajasthan and in many other areas in central and southwestern Pakistan. Some crop areas in northwestern Rajasthan are critically dry, but other areas have received enough rain in recent weeks to minimize the loss in topsoil moisture.

The blaring theme in the weather pattern for the next two weeks is inadequate rainfall for areas from western Maharashtra into northwestern portions of Andhra Pradesh and

India Needs Rain Before Crop Losses Mount (continued from page 6)

southwestern Telangana. Rainfall in that region is expected to be erratic and light in both forecast weeks ending August 22 and August 29. If the forecast verifies some additional crop stress will impact sugarcane, soybean, groundnut, sorghum, cotton and rice production areas.

The most important soybean region in the nation is in Madhya Pradesh and northeastern Maharashtra and that is an area that should see improved rainfall during the next two weeks. Sufficient rainfall is expected in central India during the coming week to bolster soil moisture and a further expansion of the moisture boost to the west northwest will occur next week that will bring moisture to Pakistan, Rajasthan and Gujarat.

Overall, the bottom line to India's weather in the next two weeks will be for improved rainfall and crop conditions from Madhya Pradesh to southern Pakistan, including portions of Gujarat and Rajasthan. That will help to reduce moisture deficits that have become significant in the past few weeks, but much more rain will still be needed in Gujarat and especially Maharashtra.

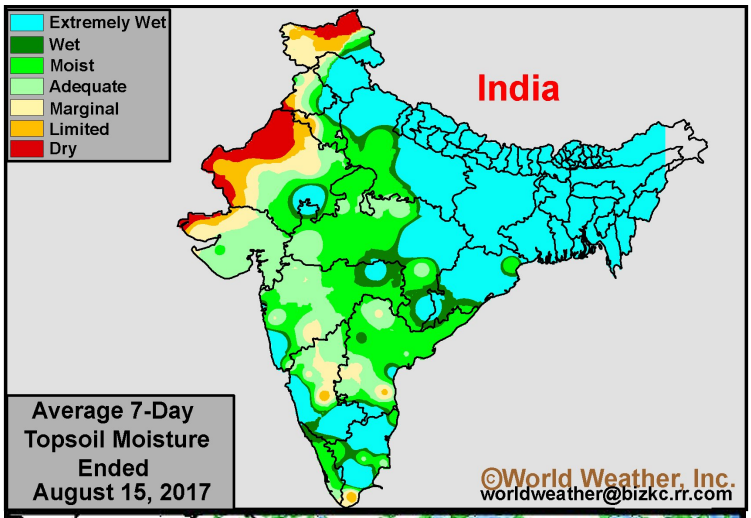
Sugarcane, rice and a host of grain and oilseeds produced in Maharashtra are destined for lower yields this year even though weather conditions will have been sufficient to produce a relatively normal amount of rain for the bulk of the nation.

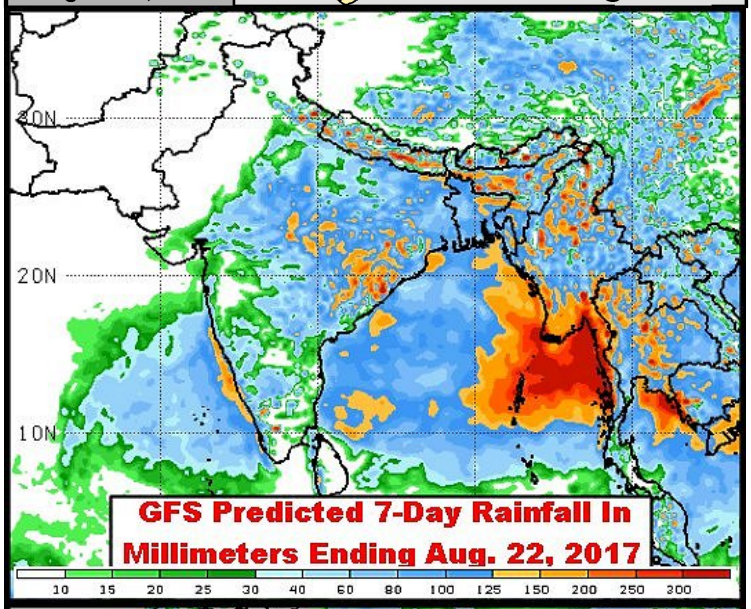
The India Meteorological Department's latest summary of rainfall from June 1 through August 15 clearly illustrates the poor rainfall distribution this season. Much of the nation has slipped to below average rainfall for the season to date with a national departure from normal of 4%. East and northeastern India and Northwest parts of the nation are still carrying a slight surplus of moisture, but many other areas are now reporting below average rainfall with Central India running a deficit of 8% and the south nearly 16%. Western Uttar Pradesh, Haryana, Punjab and the Delhi regions were among some of the driest areas along with Marathwada, Vidarbha and parts of Karnataka where rainfall has been 25% to 31% below normal.

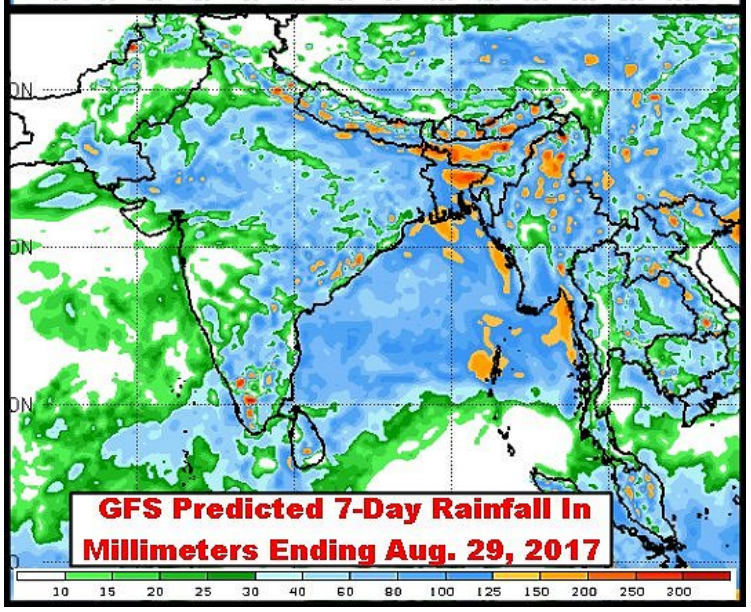
Portions of Pakistan have also suffered from dryness this summer, but a large part of the nation's summer crops are irrigated.

Some rain will fall in Pakistan next week, but the best yields usually occur in years in which timely rain occurs to supplement irrigation.

Hot temperatures in Pakistan are expected to continue for another week, but just as soon as rainfall increased the heat will back off and crop conditions will start improving.



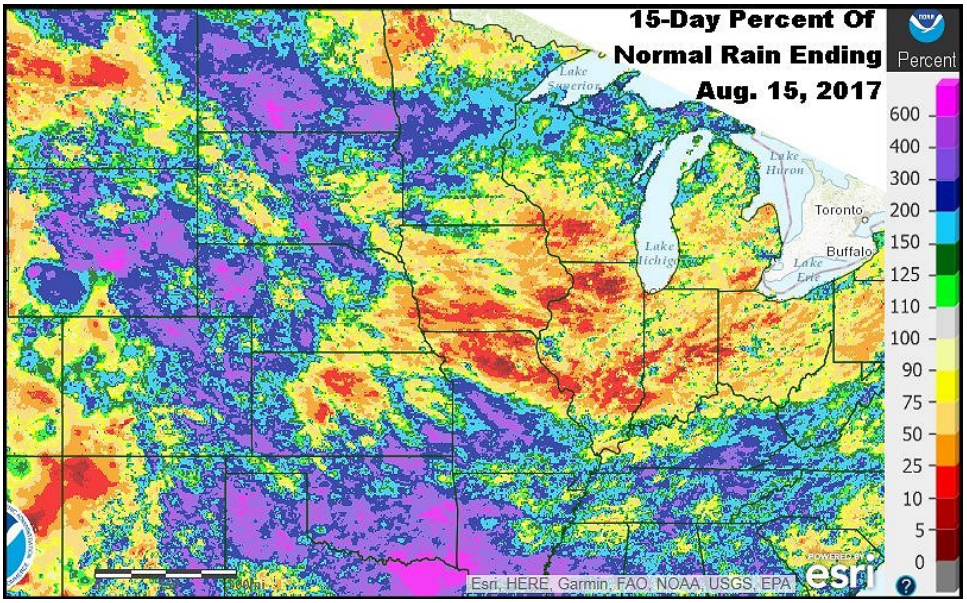


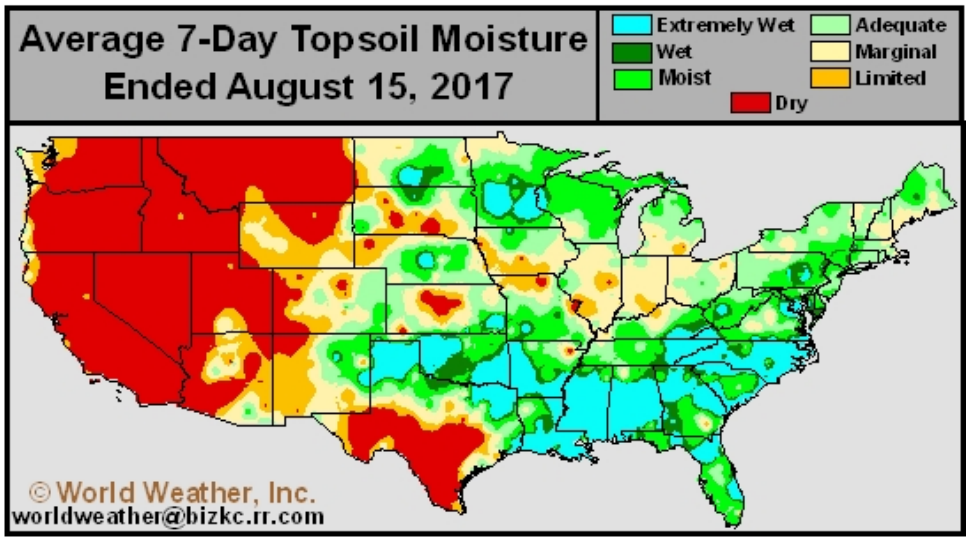


U.S. Midwest Early August Weather Still Drier Biased

U.S. Midwest weather in the first half of August was nearly as dry as other months this summer, but the lack of heat helped to conserve soil moisture and prevent crops from becoming more seriously stressed.

The USDA suggested better than expected crop conditions were present across the Midwest in its latest report released in early August. However, the rainfall data certainly does not reflect the good conditions and neither do the crop condition indices.





The first half of August was notably drier biased once again across parts of Iowa, Illinois and northeastern Missouri where dryness was reported in other months this summer. Some of the region received less than 25% of normal rainfall while a larger part of the Midwest reported 50-75% of normal

The only wetter biased areas in the Midwest were limited to southeastern North Dakota and central and southwestern Minnesota. Most other areas reported below average precipitation.

The driest areas in the Corn and Soybean Belt during July were in Iowa, eastern Missouri and southwestern Illinois along with a few other areas in Nebraska, South Dakota and southern Minnesota . The biggest difference in the weather this month compared to that of last month is that temperatures have been varying 4 to 7 degrees Fahrenheit below average across the central Great Plains and western Corn Belt. The same region in July reported temperatures 2 to 5 degrees above average. The relief was welcome and most importantly it occurred in such a manner to stop the decline in crop conditions.

Some rain fell in the first half of August, although it was obviously lighter than usual. The limited rainfall and cool weather was quite helpful in stopping the decline in crop conditions. However, stress remained during early August and there is still a significant need for improving soil moisture. To give soybeans and late season corn the best environment to finish out the crop in.

Weather over the coming week will trend wetter and warmer in the Midwest and that should lead to “some” improvement in crop conditions and induce some better yield potential. However, the situation must still be closely monitored until significant rain has actually fallen.