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The Canadian Agriculture Weather Prognosticator

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World Weather At A Glance

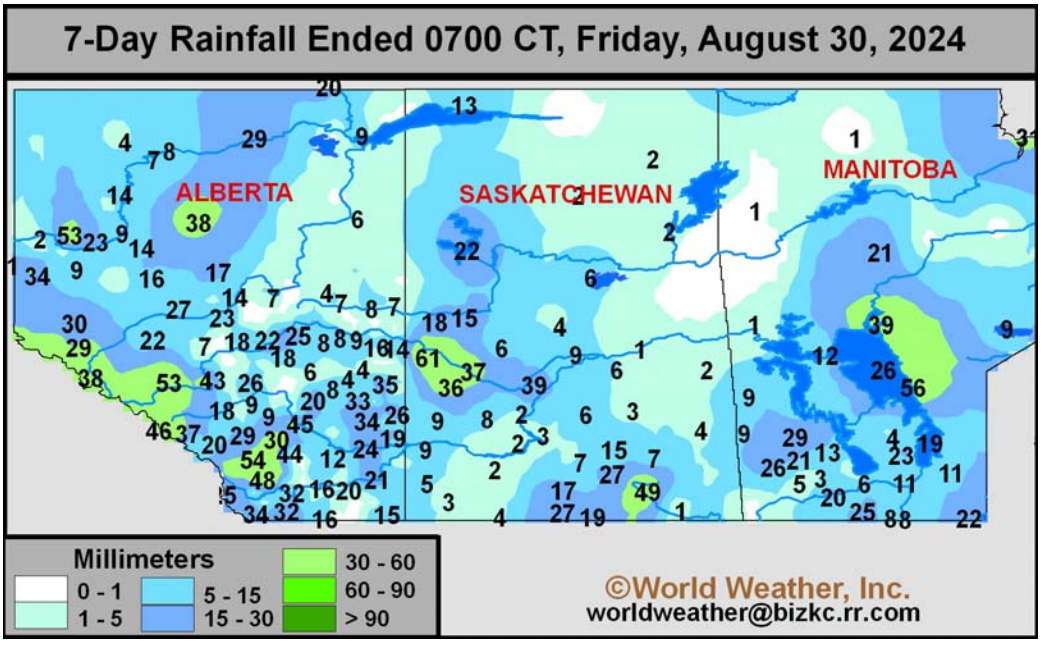
- Heat and dryness continue in Russia's Southern Region, Ukraine and a few neighboring areas
- China has finally begun to dry down after a wet summer. East-central areas need some rain
- India's monsoon has performed mostly quite well so far this year and it should finish the same way
- Southern Australia rainfall recently has improved the moisture profile for wheat, barley and canola in the early spring
- Argentina is still too dry in some west-central and northern crop areas, but the potential for relief later this spring is high
- Center west and center south dryness in Brazil at this time of year is normal and the rainy season is expected to begin a little slowly and improve in October.
- Southeastern Europe is too warm and dry for unirrigated crops.

Rain Disrupts Harvest; Drier Days Coming

Precipitation varied across the Canadian Prairies during the past week. A large section of Alberta outside portions of the northeastern and north-central production areas into northwestern and south-central Saskatchewan received 0.47 to 2.40 inches of rain for the seven-day period ending Friday morning. Much of Manitoba outside portions of the southwestern and northwestern production areas received 0.20 to 1.14 inches of rain. Most other production areas in Manitoba, Saskatchewan, and Alberta received trace amounts to 0.59 inch of rain. Some thunderstorms were noted with hail and damaging wind occurring in a few pockets. Minor damage or crop losses were suspected.

A large section of Alberta outside portions of Peace River country and the northeast corner of crop country, along with portions of southeastern Saskatchewan and west-central Manitoba, actually received near to above normal rain in recent weeks. Rainfall as a percent of normal ranged from 85% to 200% with wetter pockets in southern Alberta and southeastern Saskatchewan for the 30-day period ending August 29. The remaining production areas received near to below normal rainfall with several locations in west-central, southwestern, and central Saskatchewan, along with the extreme northwest corner of crop country in Alberta, receiving less than 40% of normal precipitation.

Severe moisture shortages are ongoing in southern Alberta, southwestern Saskatchewan, and neighboring locations despite rainfall this past week. Several other locations in Saskatchewan also have a shortage of moisture due to the lack of rain and periods of warm weather. Manitoba and the remaining locations in Alberta



Rain Disrupts Harvest; Drier Days Coming (from page one)

have adequate to marginally adequate soil moisture.

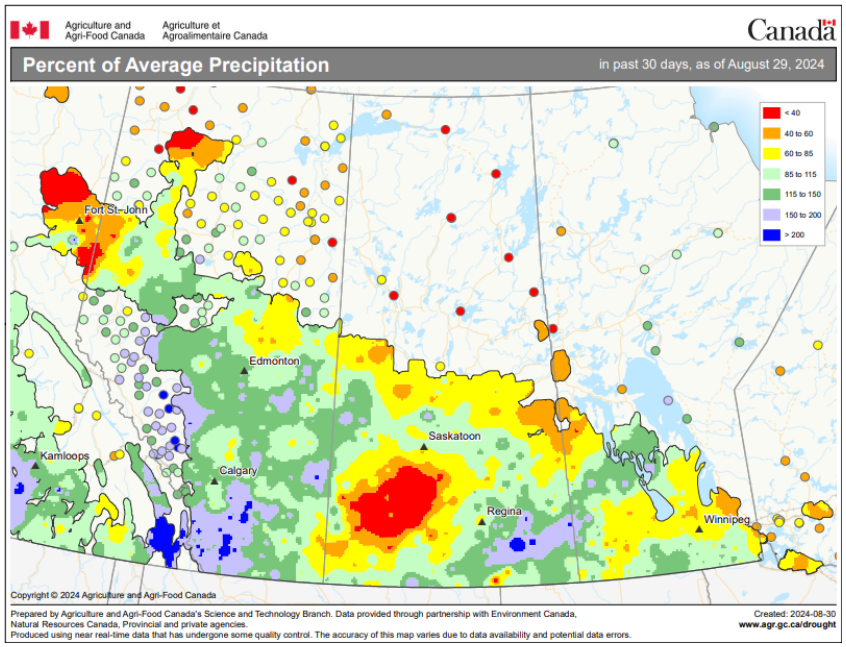
Harvesting is advancing at varying rates across the Prairies. As of August 27, harvesting in Manitoba was 8% complete. In Saskatchewan, the harvest was 25% complete as of August 26, up from 21% for the previous five-year average. In Alberta, harvesting was 7.7% complete as of August 20, down slightly from 8.1% for the 2019-2023 average. Rainfall during the past few days likely slowed or delayed the harvest in Alberta and northwestern Saskatchewan where some of the most significant rain occurred.

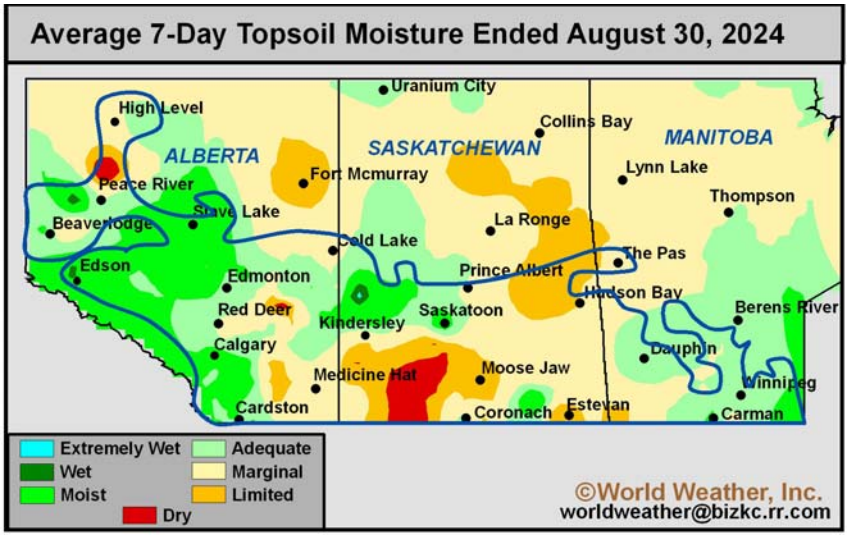
The need for drier weather is increasing for the Prairies that received the most significant rain recently as more crops mature and get ready for harvest. Any rain that falls in the near future will generally be too late to significantly impact yield potentials except for some soybean and flax areas.

Yields are highly variable across the Prairies this season. Manitoba and portions of eastern Saskatchewan had enough moisture to support relatively good late-season development conditions despite several fields trending drier in recent weeks. Production potentials are expected to be near or slightly above normal for many, but not all locations. There will be some production cuts due to late season dryness and for a few areas too much rain in the spring.

In eastern Alberta and western Saskatchewan, many areas dried down too much this summer and experienced too much warm weather to support normal development. Production potentials were lost due to heat and moisture stress and many producers are well below normal yields.

Drier- and warmer-than-normal weather is slated for much of the Prairies through the end of next week. A high-pressure ridge will settle over western North America helping to limit rainfall most days. A cool front will bring light and erratic rain to portions of the Prairies this week. Northern and western Alberta, will be wettest Monday night into Wednesday morning with 0.10 to 0.75 inch of moisture resulting. Other areas will be dry.





Another disturbance will produce light rain in other parts of the Prairies Wednesday and Thursday, though resulting rainfall will vary from a trace to 0.35 inch and locally more. Dry weather is expected after that for nearly a week and temperatures will be well above normal.

A high pressure ridge responsible for the drier biased conditions will briefly breakdown near mid-month allowing light rain to evolve, although temperatures will remain warm.

The lack of abundant rainfall and presence of warmer-than-normal temperatures will support relatively good conditions for crop maturation and harvesting across the Prairies for at least the next ten days to two weeks. The rain that does occur will be too light to keep producers out of the fields for an extended period of time and the moisture will be good for late season crops. Production potentials will remain mostly unchanged despite the net drying trend.

September Harvest Weather Looks Good

September weather should be good for most of the Prairies in relation to crop maturation and harvesting. The first half of the month will be notably dry and warm. Completely dry conditions are not likely, but the rain that falls should be brief and light having a minimal impact on field progress.

Temperatures in the first half of September will be above to well above normal in much of the Prairies, although Manitoba and southeastern and east-central Saskatchewan will have a little cooler bias once in a while. The impact will be to bring temperatures a little closer to normal in the eastern parts of the Prairies, but still averaging above normal.

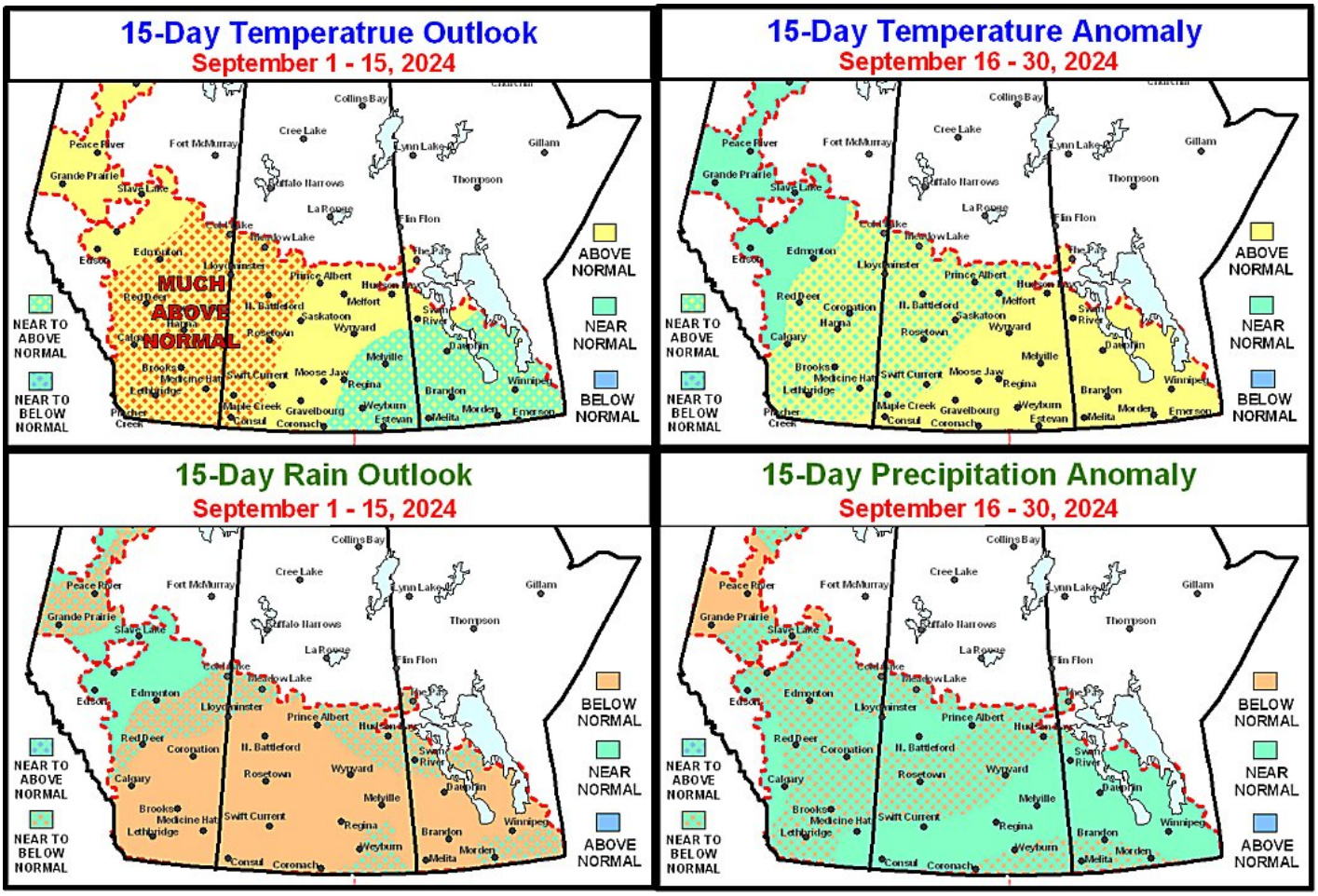
The warmest temperatures in the first half of September relative to normal are expected in central and eastern Alberta and western Saskatchewan.

Precipitation during the next two weeks will be below normal for nearly all of the Prairies. There is "some" potential for near normal rain in the Swan Hills and Slave Lake region to the Athabasca region and then southwest to the front range of mountains from Grande Cache to Sundre. There is a much higher potential for near to below normal precipitation in that "wetter-biased" part of Alberta rather than near normal with only one meaningful rain event expected.

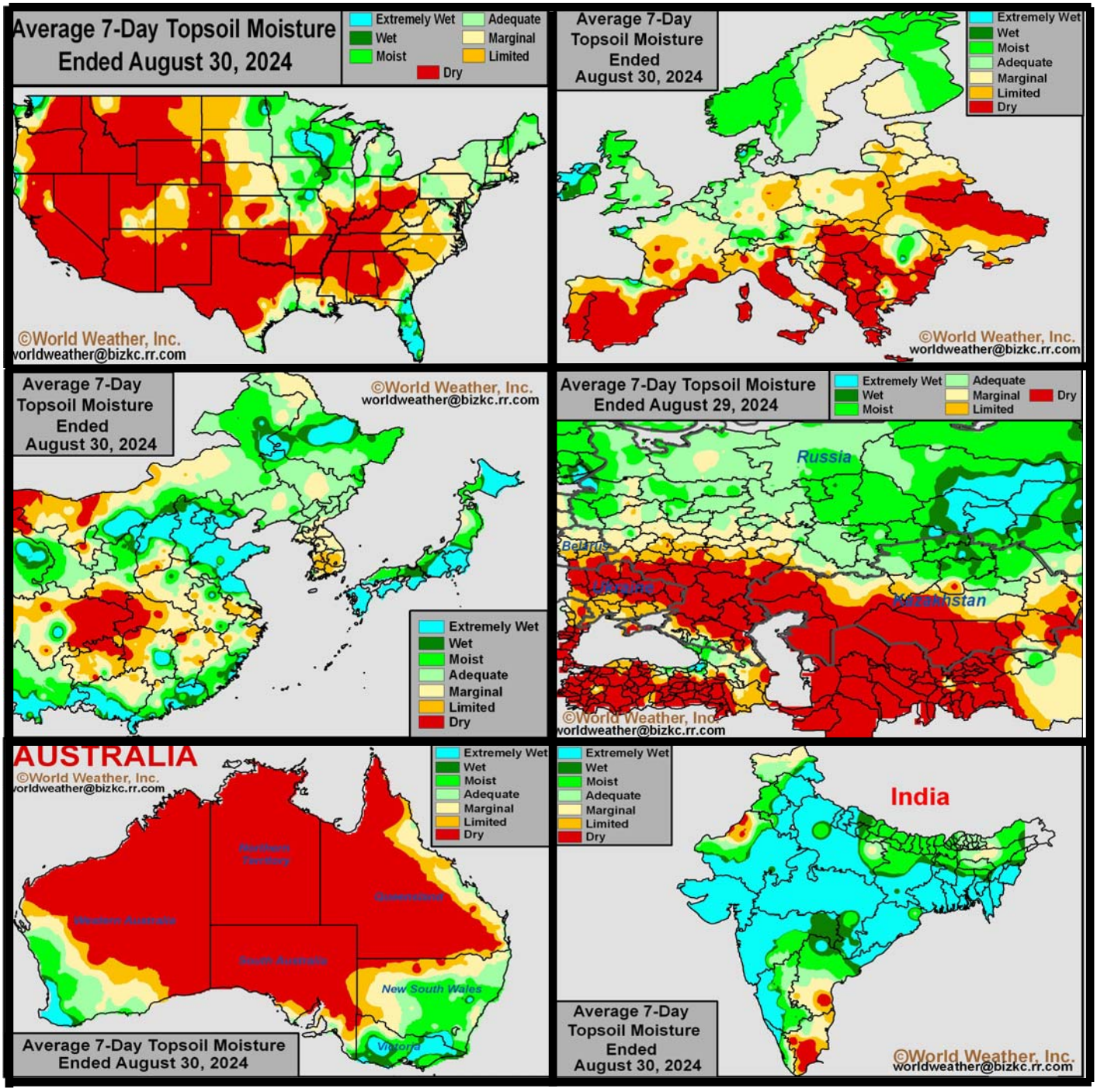
The second half of September will have a little more precipitation in it, but it should not present any serious disruptions to fieldwork. The moisture will occur periodically and it will slow crop maturation and harvesting for a bit, but it is unlikely that big soakings of rain will evolve during this period of time. The driest bias should be in the interior west and north parts of the Prairies, although the random nature of the precipitation will make it difficult to pinpoint the greatest precipitation potential.

Temperatures in the second half of September are expected to continue warmer biased in most of the Prairies with the exception of the Peace Country, Swan Hills region, Slave Lake area and most other production areas to the west of the Alberta Highway Two corridor. Temperatures may be most anomalously warm in the eastern Prairies, though that is only because cooling in the second half of the month will be last to reach that area.

Overall, the month's weather should be mostly good for harvest progress. The quickest field progress will be early in the month, but it should still progress well in the second half of the month, despite some periods of rain.



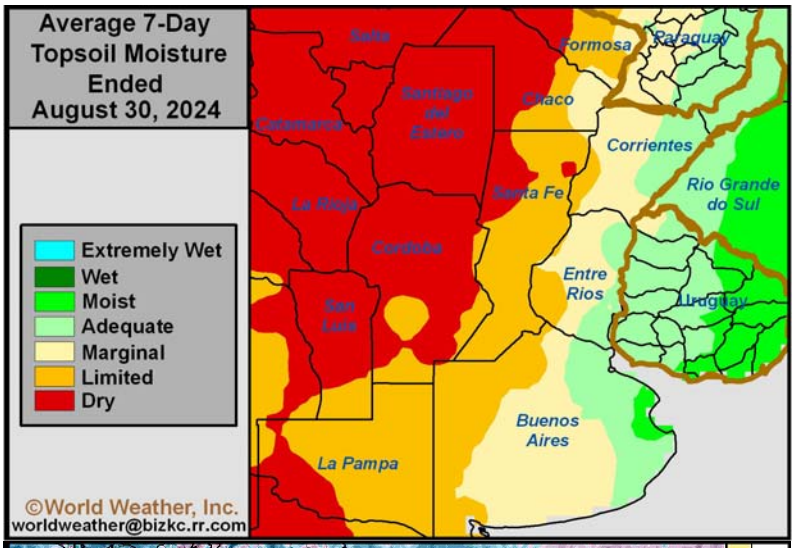
Selected Weather Images From Around The World

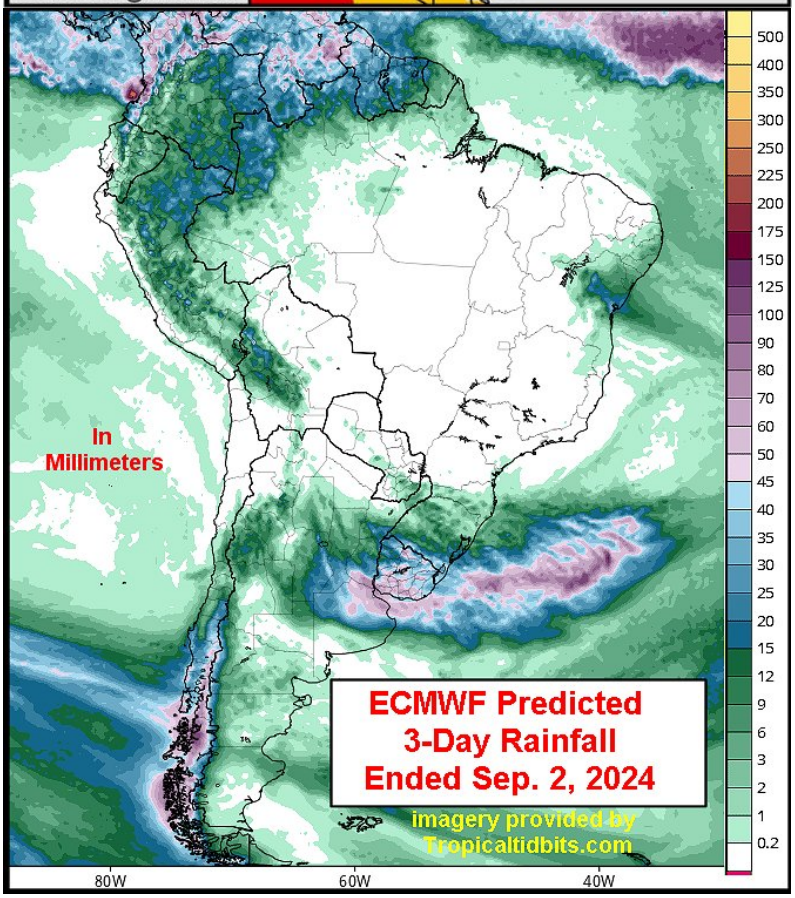


Much improved weather has evolved in China over the past couple of weeks. Too much rain was prevalent in late July and early August possibly hurting production for some crops in the north. Recent drier weather in east-central and northeastern crop areas has improved the moisture profile for late season crops. India continues abundantly to excessively wet in the central and north with recent flooding in Gujarat, western Madhya Pradesh and neighboring areas. Only far southern India is considered to be a little too dry. Australia's wheat and barley in Queensland is beginning to reproduce, though it is too dry and warm threatening yield. Crops elsewhere are still rated favorably except South Australia where there is need for rain. Dryness continues to threaten crops from SE Europe through SW parts of Russia while U.S. weather has been and should continue mostly good. Weekend rain should have brought dryness relief to the lower U.S. Midwest, Delta and southeastern states and additional rain should occur this week.

Argentina's Only Rain For Ten Days Ends During Weekend

A weather disturbance moving through Argentina Friday and Saturday brought some welcome rain to wheat and barley production areas from the northeastern two-thirds of Argentina into southeastern Cordoba, southern Santa Fe and southern Entre Rios. Amounts varied from 0.20 to 0.79 inch most often, although local totals to 1.36 inches in central Buenos Aires and local amounts of 1.00 to 3.20 inches in northeastern Buenos Aires. In contrast, the southwest and northern portions of the nation were left dry.





The relief from dryness will benefit wheat and barley in the vegetative and tillering stages of development. More rain will be needed before aggressive spring growth begins later in September and October.

Central and western Argentina has had some light precipitation events in recent weeks; however, widespread precipitation of more than 1.00 inch has not occurred across these crop areas since mid-April and early May. Most of the wheat and barley crop was planted in late May and June with fieldwork advancing well because of favorable soil moisture at that time. However, the region started to dry down in June and July leaving some crops in a struggle for the best establishment. With that said, though, most crops have a root system that could still generate aggressive crop development and new tillers in the next few weeks if significant rain were to fall. The past two days of rain brought some rain to a part of the production region, though greater amounts will still be needed in the western and northern production regions.

The rain reported Friday and Saturday was perfect for easing dryness in central and northeastern Buenos Aries and a few immediate neighboring areas, but the driest areas in Argentina are in the west and north and there was no relief to most of that region.

September is normally the month that seasonal warming begins and greater evaporation is likely to take place. Frost and freezes usually end in the north and the demand for soil moisture and/or rainfall will steadily rise late this month.

The drier biased forecast that is now expected for at least the next week to ten days will not lend much relief to producer fears that another drought year is in the making. Some forecasters have suggested La Nina will return this year and that sends chills up the backs of most Argentina farmers because of recent past La Nina events resulting in widespread drought.

This year should be different with more timely and beneficial rain expected partially because La Nina is not expected and partially because of the prevailing weather patterns suggest more frequent storm passages starting late this month and continuing into October and November.

A close watch on Argentina is warranted. If late September and October do not turn wetter production potentials will fall again.

SE Europe To SW Russia Dryness Eating Into Crop Yields

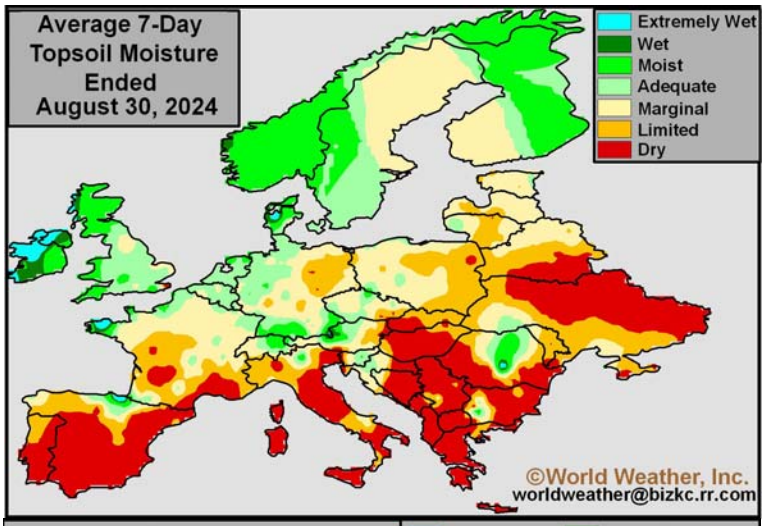
A large section of the Balkans region in southeastern Europe, Ukraine, and Russia's Volga River Basin and USDA defined 'Southern Region' have been drier or much drier than normal during the past month. Rainfall ranged from 25% to 80% of normal with several pockets in eastern Ukraine, western Romania, Serbia, and Hungary only receiving 5% to 25% of normal moisture for month of August . Temperatures in recent weeks were also warmer than normal with daytime highs often reaching the upper 20s and 30s Celsius

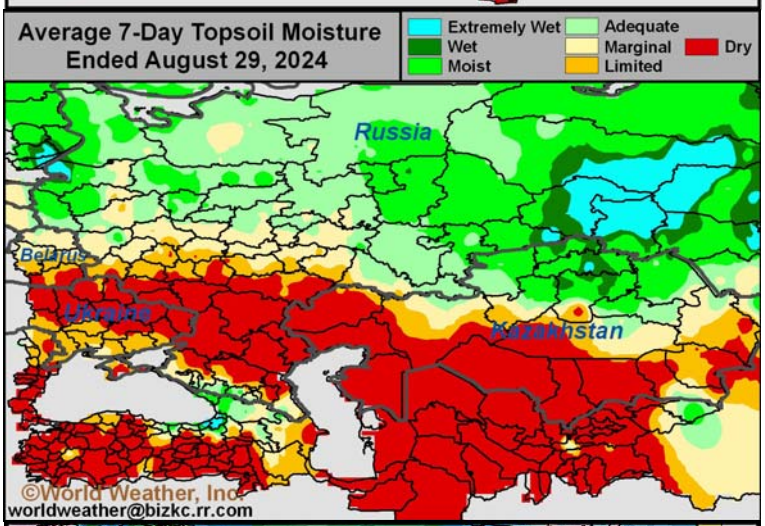
Soil moisture is rated short to critically short from southeastern Europe and Ukraine into Russia's Volga River Basin and 'Southern Region' except in areas near the Black Sea where it is rated more favorably. Unirrigated coarse grain, oilseed, sugarbeet and other crops deteriorated in recent weeks as the ground firmed. Moisture stress has already reduced production potentials and likely caused some of the crops to mature early. It is quickly becoming too late to turn around crop production potentials with significant rain especially since the forecast downplays any change for rain away from the Black Sea for at least ten days.

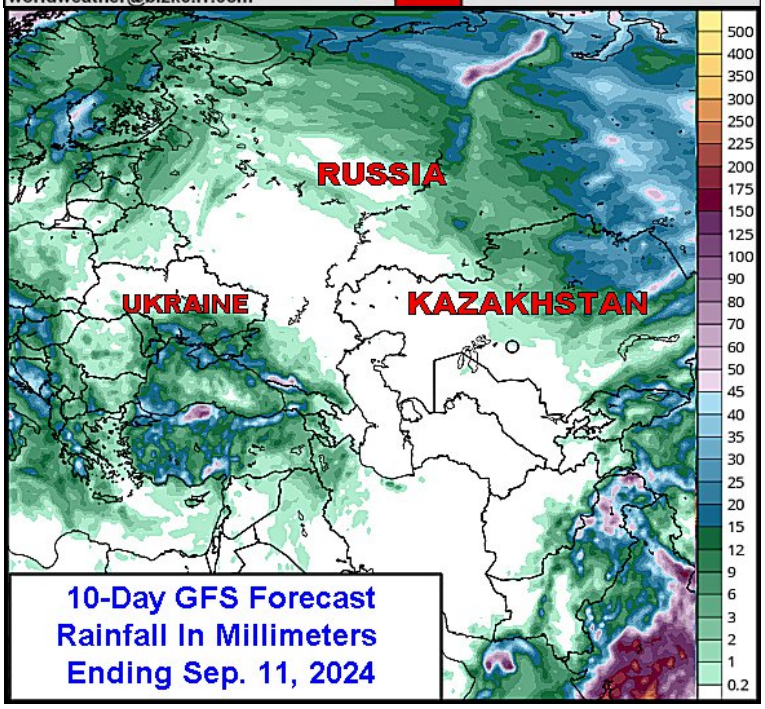
Harvesting of winter grains and oilseeds advanced well with few disruptions in recent weeks due to the lack of rain. Yield potentials were reduced in southern Russia and eastern Ukraine due to dryness earlier this year.

Drier and warmer biased conditions will persist from the Balkan Region through Ukraine into Russia's Volga River Basin and 'Southern Region' (away from the Black Sea coastal region) through September 11. A high-pressure ridge will prevail over these areas in coming days and will limit rainfall. A few locations will still receive light rain, though resulting amounts will be lost to evaporation or be too light to impact long-term soil conditions. Daytime highs will often reach the upper 20s and 30s, though portions of Southeast Europe will only warm to the lower 70s during periods of rain near the Black Sea. High pressure elsewhere will continue to limit rainfall and promote warmer biased conditions.

The environment will remain less than favorable to poor for summer grains, oilseeds, and other crops for at least the next ten days. Additional drying will likely further reduce production potentials and cause more late season crops to mature early. Maturation and early-season harvest prospects should advance faster than usual due to the lack of rain.

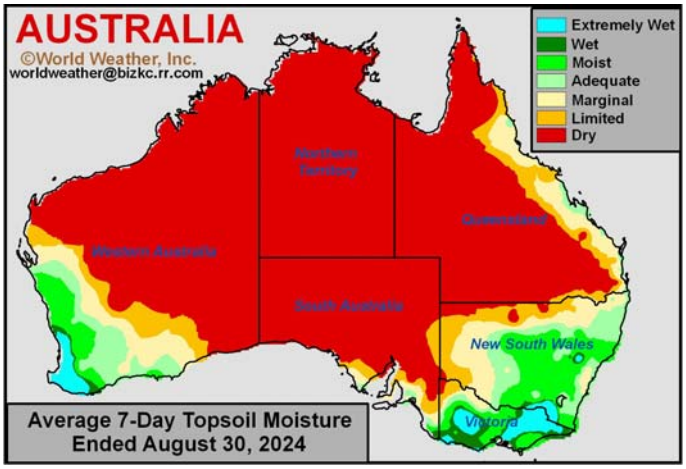






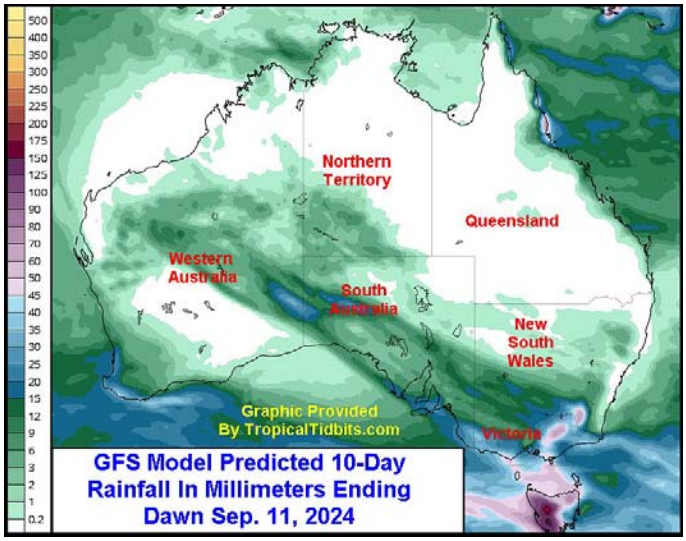
Australia Winter Grain, Oilseed Prospects Favorable

Highest temperatures during the past week in Queensland and far northern New South Wales reached into the upper 20s to lower 30s Celsius. Such temperatures are extremely warm for this time of year and the environment of warm to hot temperatures and no rain with limited soil moisture had to translate into a stressful environment for nearly all of the unirrigated wheat and barley fields in the region. Parts of South Australia were also very warm to hot, but crops in that region are not nearly as far advanced as those in Queensland leaving adequate time for improved weather prior to reproduction.



Queensland and far northern New South Wales were dry over the past ten days while nearly all other wheat, barley and canola areas received rain. The moisture was great for crops still mostly in the vegetative and tillering stages of development in the south.

Moisture shortages persist across Queensland due to the lack of rain for the past several weeks. Northern New South Wales is also drying down while other production areas have adequate to excessive moisture.



Warmer weather combined with the lack of moisture may have stressed winter wheat and barley in Queensland and northern fringes of New South Wales. Irrigated areas have enough moisture to support new growth compared to the unirrigated areas. Minor losses will be possible if dryness and warmer weather persist in the coming weeks. Other production areas in New South Wales and much of Victoria, South Australia, and Western Australia have ample moisture to support aggressive winter wheat, barley, and canola development.

Dry or mostly dry weather is slated for Queensland and New South Wales this week. A few light showers will be possible in southern New South Wales, though any rain that does occur will be rapidly lost to evaporation. Western Australia, South Australia, and Victoria will only have a few opportunities for light rain as well with the passage of frontal boundaries. Most locations will only receive 0.10 to 0.50 inch of rain with local amounts of 1.00 to 2.00 inches along the coast in both southwestern Western Australia and southern Victoria. A few other showers will occur similarly in the Sep. 9-15 period.

Warmer-than-normal weather will persist in Queensland and far northern New South Wales this week. Daytime highs will peak in the range of 20s to lower 30s most days. Northern New South Wales will also warm above normal at times. Seasonable temperatures are expected in the remaining production areas with highs often reaching the teens and lower 20s . Temperatures will continue near to above normal in the Sep. 9-15 period.

Aggressive drying will persist for Queensland and northern New South Wales for at least the next ten days. The environment will further deteriorate for winter wheat and barley, most notably in the dryland areas. Some production losses will be possible, although there is still time for improved rain to develop.

Other winter grain and oilseed production areas in the south will still have enough moisture to support new growth despite the lack of abundant rain. The exception will be in parts of South Australia where more rain is needed. Timely rain may be needed throughout the south in the second half of this month to maintain a good outlook.

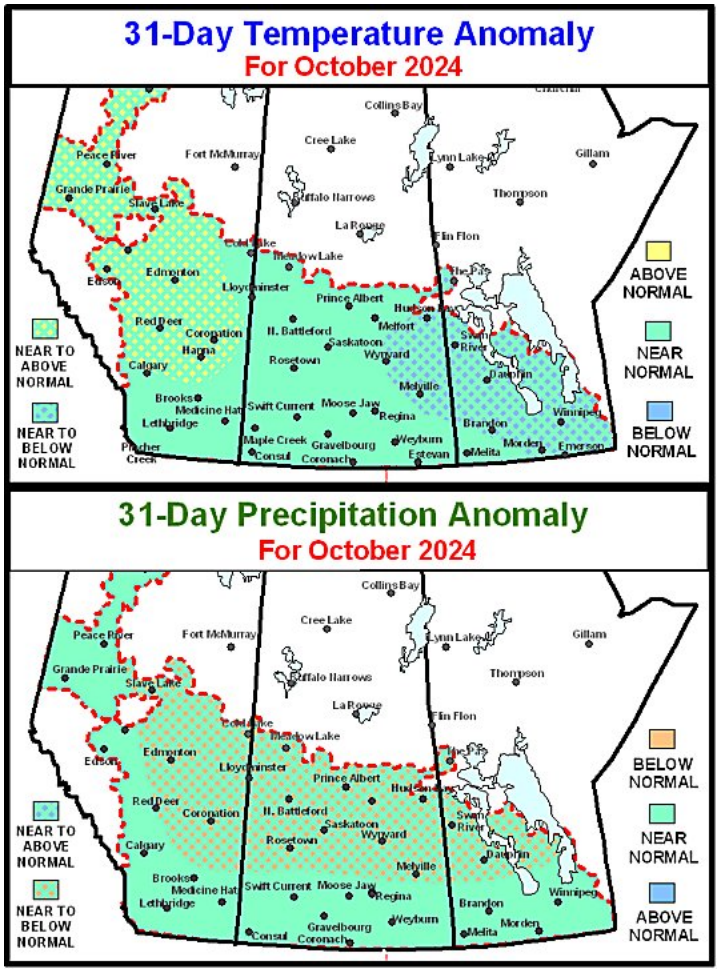
October In Canada Prairies "May" Be Wetter

La Nina has still not evolved in eastern equatorial Pacific Ocean after months of NOAA predicting it was coming. Other forecasting entities like the Australia Bureau of Meteorology and now New Zealand's weather service have been playing down the potential for La Nina.

World Weather, Inc. has also been diminishing the potential for La Nina in recent weeks because of limited evidence that enough cooling was occurring or going to occur in the eastern equatorial Pacific Ocean to induce such an event. The official word from World Weather, Inc. is that La Nina is not likely in the balance of 2024, although there is potential for La Nina-like conditions to evolve. A full blown La Nina event is not expected.

The absence of La Nina will create some frustration in the longer range outlook for autumn 2024 in most of North America because the analog years supporting the 18-year cycle are tainted with ENSO events unlike what is expected this year. In other words, two out of the three most recent 18-year cycle years were La Nina events and the third was El Nino. Since the odds favor a neutral ENSO autumn and possibly the same for this winter, guidance from the longer range modeling is going to be conflicting and that will reduce the potential accuracy for the 30– and 90-day outlooks. Forecasters will be watching for short term weather anomalies to develop that will help guide the longer range forecast. Until the time occurs that a more dominating weather pattern evolves, confidence in the longer range forecasts will be lower than usual.

In cases like this, the two best forecasting tools to use are; 1) persistence and 2) normal or average-biased conditions. Because of the changing seasons, there will be potential for a change in weather in October and World Weather, Inc. believes some of this change may begin in late September with more frequent precipitation of light intensity. By October, though the jet stream will have begun to shift to the south and that should put the Prairies into a better position to receive more meaningful precipitation events periodically. That is what will be watched for; however, until the seasonal pattern begins to change identifying the new weather pattern will be difficult.



For now, the outlook for October in the Prairies will include a continued warmer bias in the northwest and some potential for cooling in the eastern parts of the region. The temperature anomalies should not be very great because the pattern should bring frequently changing temperatures to the region.

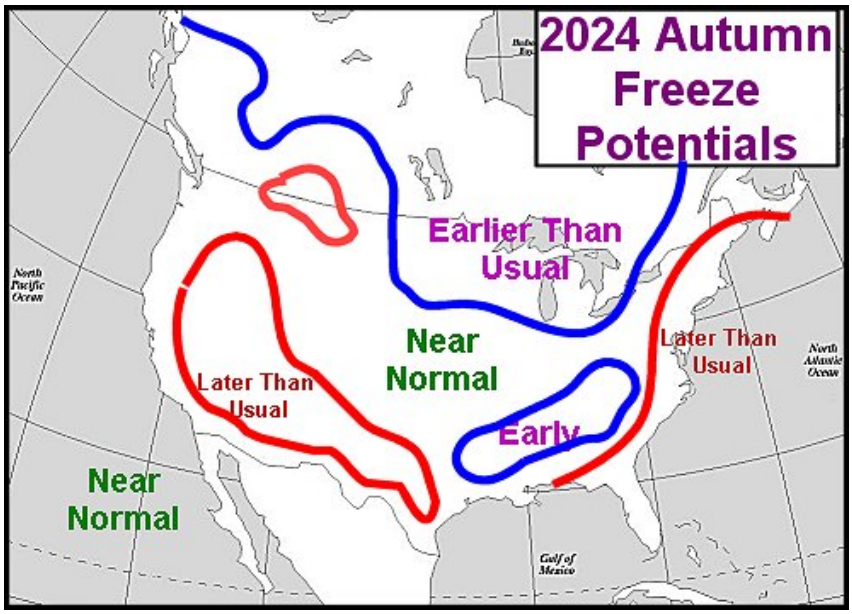
The frequently changing temperature profile will induce varying amounts of precipitation across the Prairies. Early indications suggest normal precipitation in the south and far west while near to below normal precipitation in other areas. However, <u>be extremely cautious with this outlook. World Weather, Inc. sees the potential for the Prairies to be wetter and it would be best to plan the harvest as if it will begin raining frequently soon and that way there will be less potential to be caught off guard when and if the precipitation does start to increase frequently.</u>

The jet stream should become more active in late September and especially in October bringing more frequent disturbances across the Prairies and that should result in frequently changing temperatures as well. The forecast should be closely monitored for change especially in the latter parts of this month.

U.S. Midwest Frost, Freeze Potential May Be Early

The warm weather bias expected in the first half of September in the Prairies should help minimize the potential for earlier than usual frost and freezes to occur in many areas especially in the west, although there is some concern for the dry areas of Saskatchewan and Alberta. As noted in previous prognosticators, dry air heats and cools faster than moist air and the heart of the Prairies is dry.

The unusually warm weather in this first half of September should keep frost and freeze potentials limited to a few areas in northern Alberta and a few areas in Manitoba and/or the northeastern part of Saskatchewan. If dryness is not eased in the second half of September frost and freezes may begin to occur periodically in the central and western Prairies, but if the pattern becomes more active with frequent disturbances passing through the Prairies there would be potential for some of the seasonal coolness to be later than usual. If, however, there is not much precipitation in late September the odds will improve for frost and freezes in the dry areas.



Most summer crops in the dry areas of the Prairies are already maturing and being harvested. Two weeks from now, after a period of dry and warm weather, the bulk of all remaining crops in the region will be mature or at least mature enough to not be impacted by frost or freezes. Manitoba and a few crop areas in northeastern Saskatchewan and perhaps a few in northern and western Alberta may still need a little more time for crops to fully mature in order to not be harmed by frost or freezes.

The greatest risk of earlier than usual frost and freeze conditions may be in the U.S. Midwest and a part of Ontario and Quebec this year. Those areas seem to be positioned to experience the coolest weather relative to normal during mid– to late-month. Many crops in those areas will be maturing during that period of time and a little frost probably will not harm most crops; however, a harder freeze could have a quality impact.

Immature soybeans in the U.S. Midwest may be most at risk of crop damage if frost and freezes occur earlier than usual. The impact would most likely be on bean quality rather than a loss in production. Corn and most other crops in the northern and central Midwest should be free of vulnerability to any early season cold if it comes in mid– to late September as expected.

Most of the interior western United States and the Atlantic Coast States as well as the southwestern Plains should experience later than usual frost and freeze potentials.

Looking further out in time this autumn and winter, there are several subtle indications suggesting eastern North America may have a colder than usual winter this year. At the minimum, Quebec, eastern Ontario, and areas from the eastern Midwest to the middle and northern Atlantic Coast states will have the potential for a few bouts of notable coolness. Western parts of North America may not experience as much coolness, although they, too, will experience some short term bouts of coolness.

Early indications have also suggested greater than usual snowfall in western and southern Alberta, southwestern Saskatchewan and from the lower and eastern U.S. Midwest into the middle and northern Atlantic Coast States. Above normal precipitation is also a possibility in California and the U.S. Pacific Northwest coast while rain will be a little closer to normal British Columbia and the U.S. Rocky Mountains region. Near to below normal precipitation is likely in the northern and central Prairies and from the U.S. Delta into the southeastern states. The U.S. central and southwestern Plains should see a good mix of rain, snow and sunshine this autumn and winter.