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The Canadian Agriculture Weather Prognosticator

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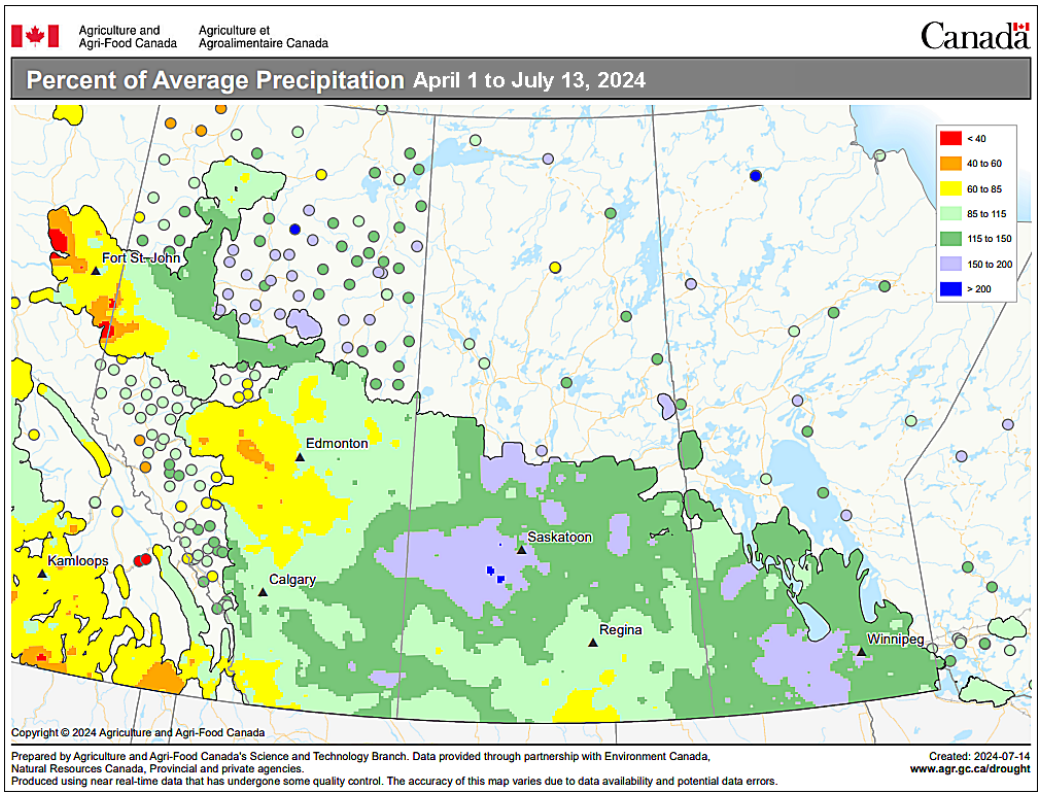
World Weather At A Glance

- U.S. Midwest, Delta and southeastern states have been seeing a good mix of rain and sunshine with seasonable temperatures to support corn and soybeans
- East Ukraine to western Kazakhstan is still too dry and the dryness is expanding northward
- China's dry region in the North China Plain is being relieved limiting the downside production potential for this year
- India's monsoon has been sufficient to support crops, though some heavy rain and flooding is forthcoming in central areas
- Australia's winter crops are establishing well
- Argentina will get some needed rain in the coming week to improve winter crop establishment
- Europe is drying out in the southeast and staying wet in the north
- Brazil Safrinha corn harvest going well

July To Finish Too Warm, Dry In West

Limited rainfall combined with periods of warmer than normal weather helped firm up the ground in much of the Canadian Prairies during the past week. The drying trend was welcome in several locations of Manitoba and Saskatchewan where excessive moisture and flooding were threatening production. There are also some locations in Alberta and southwestern Saskatchewan that have missed recent rain and the ground is quickly becoming too dry. Rain will have to fall soon in Alberta and western and southern Saskatchewan to maintain production potentials. A few of the drier fields in the southwest have already shown signs of decreasing production while a few fields of excessive moisture in northeastern Saskatchewan and northwestern Manitoba will be abandoned. Even though there are pockets of extreme weather present, the majority of the Prairies is seeing highly favorable weather this summer and production should be greatly improved over that of 2023. There is potential for some severe thunderstorms and brief bouts of heavy rainfall in the coming ten days while there will also be some locations suffering from hot, dry, conditions. The majority of the Prairies should remain in good shape with favorable production potential, but timely rain will be important. If it stays hot and dry over the next few weeks some additional



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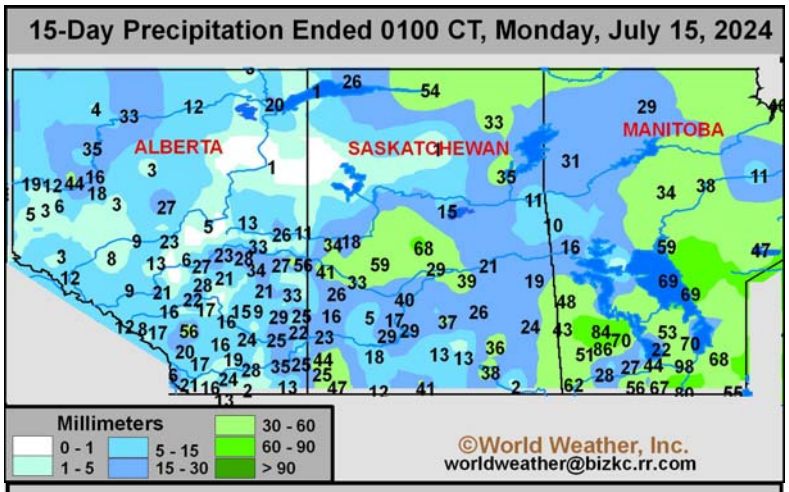
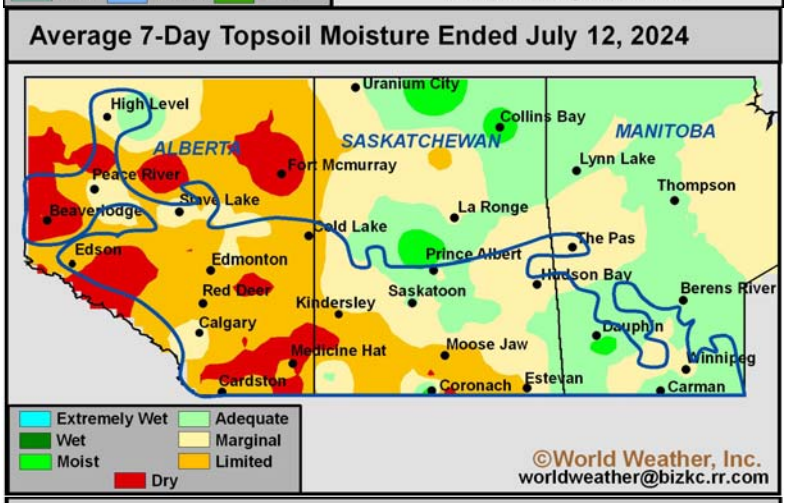
yield loss will result.

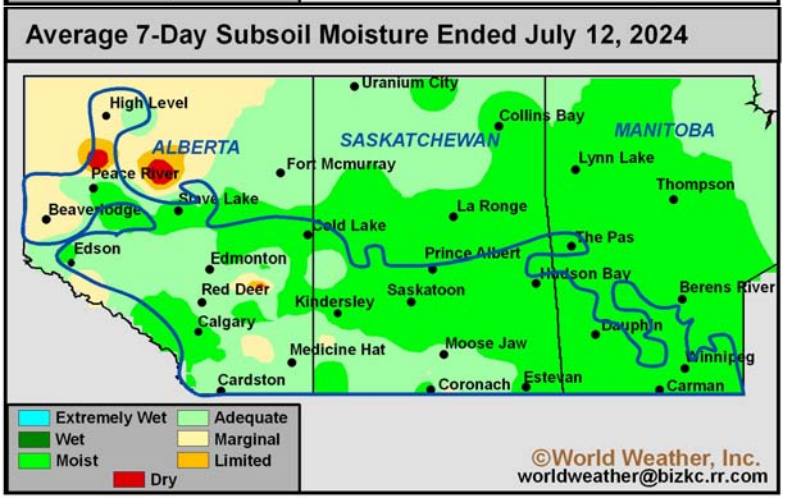
Earlier this month, worry was ramping up over the poor degree day accumulations across the Prairies. Crop development had slipped up to two weeks behind the norm and that was beginning way heavily on the minds of some producers and analysts. However, temperatures last week were far enough above normal to stimulate more aggressive crop development. Unfortunately, the warmer weather also stimulated as faster rate of drying in the fields and topsoil moisture quickly became depleted in Alberta and western and south-central Saskatchewan.

Not all crop areas dried out excessively, but those fields where soil moisture was not adequately recharged earlier this spring are now much too dry. Crop yield damage has occurred in a few fields, but the problem is not widespread. Subsoil moisture is still rated favorably in many areas, but not all. Notice the that subsoil moisture is rated short (marginal) on the accompanying charts in portions of south-central and interior southwestern Saskatchewan and interior southern and south-central Alberta. These areas are most seriously stressed and could be facing production cuts without general rain soon.

There are also a few areas in the Peace River Region that are in a similar dilemma. In contrast, many of the crop areas in northern and eastern Saskatchewan that were running too wet a few weeks ago have the best soil moisture today and have the potential to coast right through the next ten days of dry and warm weather without much potential for lost yield.







The rainfall distribution in Alberta and south-central Saskatchewan has not been great enough to bolster soil moisture in a serious manner this spring and early summer suggesting another ten days to two weeks of poor rainfall and warm to hot temperatures could seriously stress crops and threaten production. Ideally two rain events of significance is about all that is needed to carry crops into the end of the growing season. However, getting significant rain to fall in Alberta and southwestern into south-central Saskatchewan will be very difficult prior to August and it still might be difficult in early August as well.

A larger than expected ridge of high pressure located farther to the west than expected is now the crux of western North America's problem with heat and dryness. This was a concern in late spring when so much rain was falling across the U.S. Midwest. The fear at that time was that the wet Midwest might prevent the summer high pressure ridge from staying over the region and that fear has come to fruition.

Some of the Trend modeling that was done by World Weather, Inc. this

(Continued on page 5)

July Drying Southwest; Greater August Rain

The high pressure ridge over western Canada has proven to be a bit too strong to allow storms into the Prairies from the west. Early July was supposed to be hot and dry; however, the second half of the month was expected to trend wetter. The latest forecast trends have been suggesting another bout of strong ridge development over western North America this week inducing a new bout of hot weather and perpetuating the drier bias. Totally dry weather is not expected, although most of the greatest thunderstorms will occur in the northern and eastern parts of the Prairies where the greatest rain is expected.

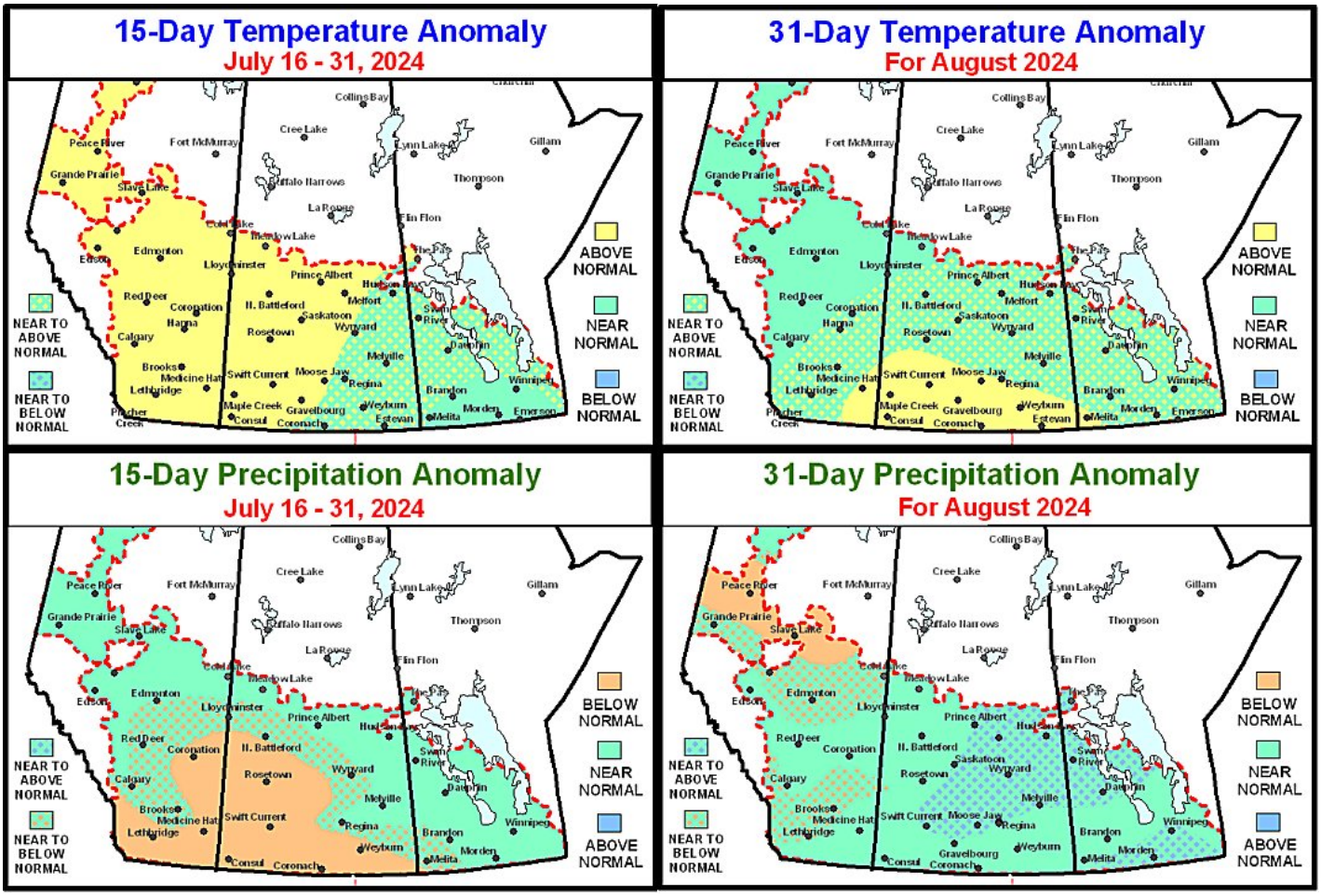
Warm temperatures during the next two weeks will be the biggest threat to the western Prairies where soil conditions are already drying down. The additional two weeks of restricted rain and warm to hot temperatures will further deplete soil moisture and increase crop stress.

During the winter, World Weather, Inc. suggested it might be difficult to restore soil moisture in the southwestern Prairies this year, though the odds were good that timely rain would occur more sufficiently in 2024 to support better production. That is still the road that we are on, but concern over the heat and lack of moisture in the next two weeks will lead to some production issues if there is not better rainfall soon.

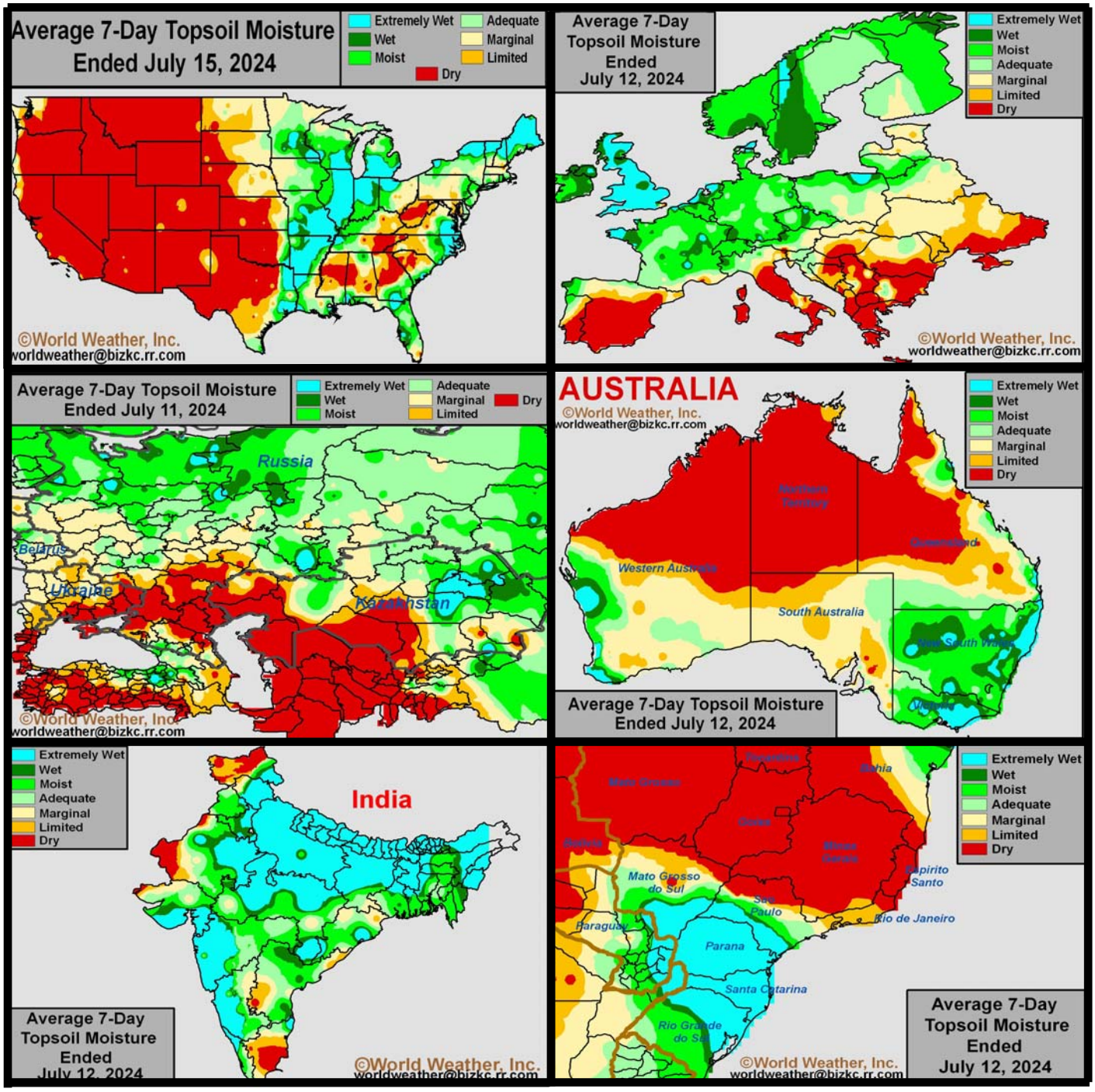
August weather is still expected to improve, but warm temperatures in the southwestern Prairies and near to below normal rainfall is going to make it difficult for late season crops to get the moisture needed to support the best yields. The central and eastern Prairies should do much better, but much will be determined by the intensity and position of the high pressure ridge. There is still some potential the ridge will be stronger than anticipated in August which might make the forecast shown below as being a little too optimistic for some areas.

Production potentials in the eastern Prairies look to be very good except in those few areas that suffered from washed out fields in the spring. Alberta and a few western and southern Saskatchewan locations will be most at risk of late season yield declines if there is not timely rain as advertised here.

La Nina may begin to influence the world in September which could make that month a little warmer than usual with rainfall increasing for a period when seasonal cooling begins.



Selected Weather Images From Around The World



U.S. weather has been good in the heart of the Midwest so far this month with routinely occurring rainfall supporting aggressive corn and soybean development and this pattern should prevail for at least another ten days. Some areas in the U.S. Plains and interior southeastern states are too dry and the same is true in much of southern Europe. Areas from Italy to Ukraine will have to have rain soon to protect unirrigated spring and summer crops and not much is expected for a while. Dryness in Ukraine extends farther to the east to the southern Ural Mountains region and western Kazakhstan and that area must have rain immediately to stop the decline in crop conditions. Most winter grain and oilseeds in Australia are rated well, though there is need for more rain. India's weather is expected to turn much wetter soon and that should eliminate many of the drier biased areas in central parts of the nation. Argentina will get rain late this week and southern Brazil will finally get a chance to dry out into late month.

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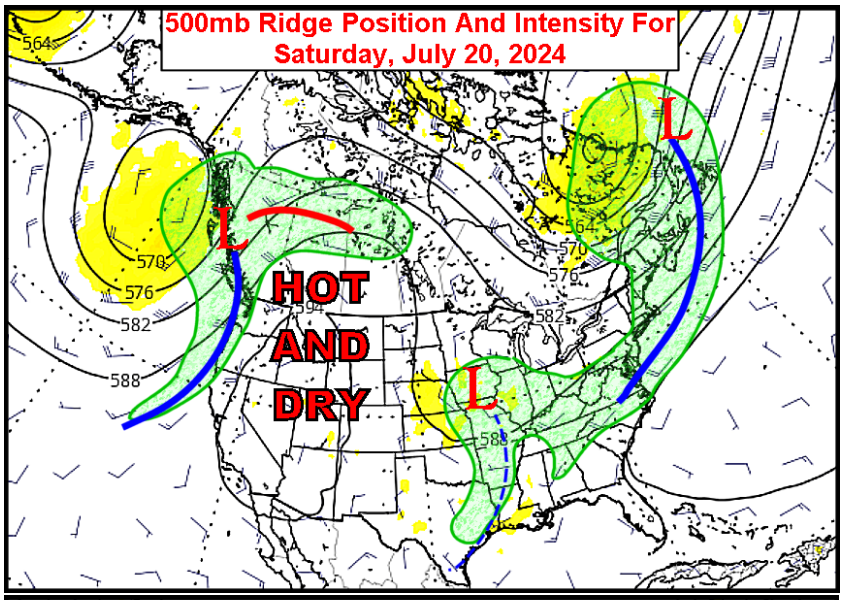
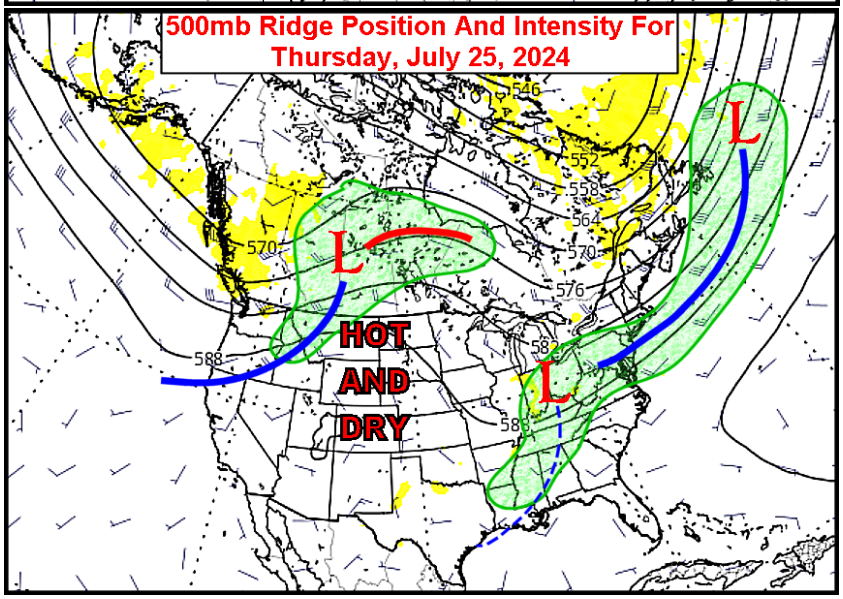
past winter suggested the summer ridge had potential to be strong because that is what happened in five out of six analog years, but the ridge was expected to be over the central U.S. because that was the area that should have been dry in the late spring. Hurricane Beryl and other weather systems moving through the Midwest and Great Plains made the ground wet favoring crop development, but also creating an environment that was not accommodating of a strong ridge of high pressure like the one anticipated for this summer. Instead of the ridge being over the Plains it set up over the western United States and that is where the intense heat and persistent dryness has been.





The high pressure ridge noted so far this summer has been intense and located over the U.S. Great Basin suppressing monsoon moisture from flowing out of Mexico into the Rocky Mountains and further limiting moisture flux into the Prairies. The longer this pattern prevails the more difficulty there will be in breaking it down and the greater the threat to crops in the western Prairies.

There is still potential for cool air to move southward from northern Canada in early to mid-August, but that coolness may not bring the best chance for rain to the region—not without some kind of moisture flux into the region and there is not much of that coming any time soon. The cooler air will be welcome, but if it does not come around prior to the second week of August there could be a considerable amount of crop stress in the last week of July and early August that could threaten crops more significantly.

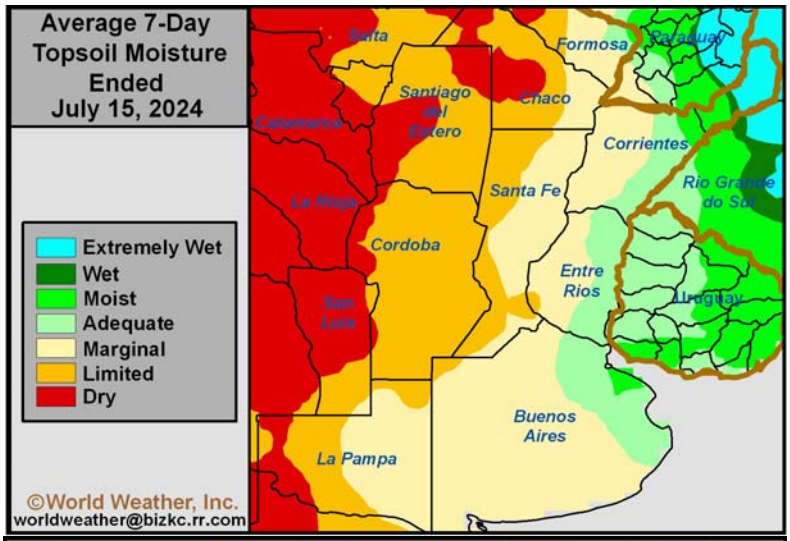
Most of that threat, however, will be in the west unless the ridge shifts to the east. A shift in the ridge position to the east was also expected in response to La Nina and the negative phase of Pacific Decadal Oscillation (PDO). However, La Nina has not yet evolved and probably will not show up before August and September which is too late to fix the ridge position and dryness for the summer. The negative PDO has also been diminishing recently and the combination of less potential influence from PDO and La Nina along with the wetter bias in the Midwest and Great Plains raises the potential for leaving the high pressure ridge farther to the west than originally expected.

The eastern Prairies, meanwhile, should have great summer production year with the exception of some abandoned fields because of too much moisture earlier this season. A very close monitoring of the western Prairies is certainly warranted over the next few weeks for some signs of change.

High pressure will prevail over western North America during most of this week with the heat and dryness expanding from Alberta into Saskatchewan by Saturday and then farther to the east during the Sunday through July 23 period. A new frontal system will then evolve in western Canada bringing some temporary cooling and scattered showers and thunderstorms to the Prairies during the middle to latter part of next week. Any relief that occurs, though is expected to be temporary and much more rain will be needed to support long term crop development.

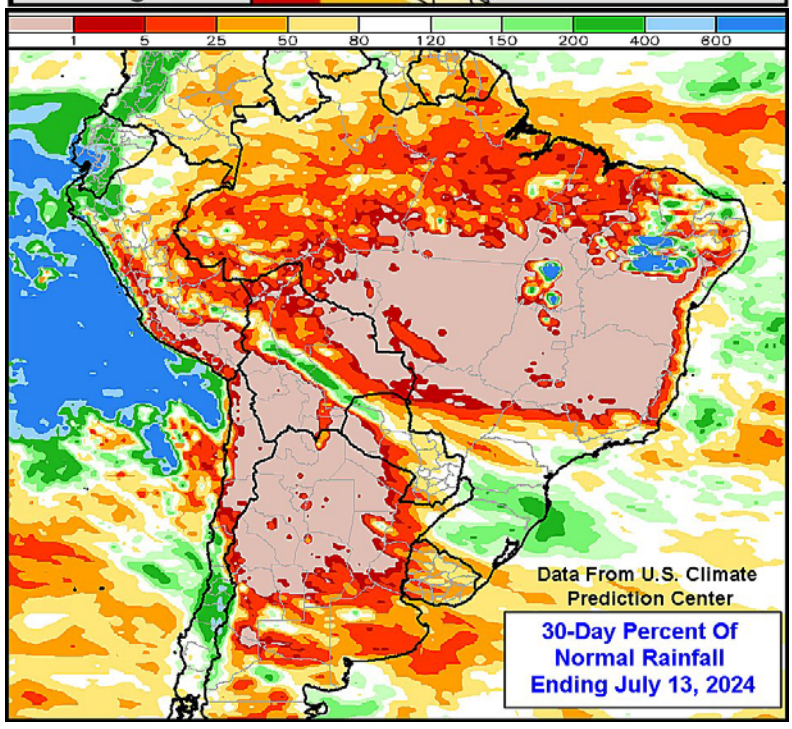
Argentina Wheat Establishment To Improve From Rain

Winter wheat and barley establishment has been a little slow this season due to low soil moisture and colder than usual temperatures, but the crop has potential. Improved soil moisture and warming is all that is needed to ensure a successful start to the growing season. Some of that needed moisture is expected late this week into early next week. The precipitation will stall summer crop harvesting and may delay any remaining winter crop planting, but the moisture will be ideal in supporting a well-established winter crop.



Argentina crop areas were dry during the past week and temperatures were quite cool with hard freezes occurring throughout its key agricultural region.

Soil moisture was rated marginally adequate to short in the eastern one half of the nation while short to very short in the west. The dry conditions have been beneficial for aggressive harvesting of summer crops as well as the planting of winter grain. As of July 11, soybean harvesting was complete, corn harvesting was 80% done, cotton harvesting was 83% finished and 87% of the peanuts were out of the ground. Sorghum harvesting was 92% finished.



Winter wheat and barley planting is coming to an end in Argentina. As of July 11, both wheat and barley planting was 86% complete. The crop has established relatively well, although cool temperatures and limited soil moisture may not have stands quite up to ideal levels. Rain and warmer temperatures would be ideal in getting the crop in the best possible condition prior to spring development.

Dry weather will persist for much of Argentina through Thursday. A frontal boundary will then promote erratic rainfall for portions of central Argentina Friday and early Saturday with another disturbance expected to generate rain this weekend as well. Moisture totals by next Monday morning will range from 0.25 to 1.00 inch in much of central and southern Argentina with local amounts of 1.50 inches or slightly more. Northern Argentina will be mostly dry. The main production areas will receive little to no rain July 23-29.

Temperatures will trend near to slightly above normal for much of Argentina this week. the warmer bias will be ideal in stimulating greater crop establishment, although some crops have drifted into semi-dormancy after recent hard freezes. The warm up may support some emergence and establishment in the south, though the warmest conditions and best development potential will be in the north. The temperature profile will trend near normal July 23 – 29.

Rain Friday and this weekend may be enough to slow late-season harvesting and general fieldwork for the main Pampas farming region. No major delays or quality impacts are expected. Harvest conditions will likely improve during the second week of the outlook once drier weather returns. In the meantime, late season planting of winter wheat and barley will advance swiftly in the coming days especially after rain falls. The moisture should induce better root and tiller development whenever temperatures are warm enough to spur on a little development.

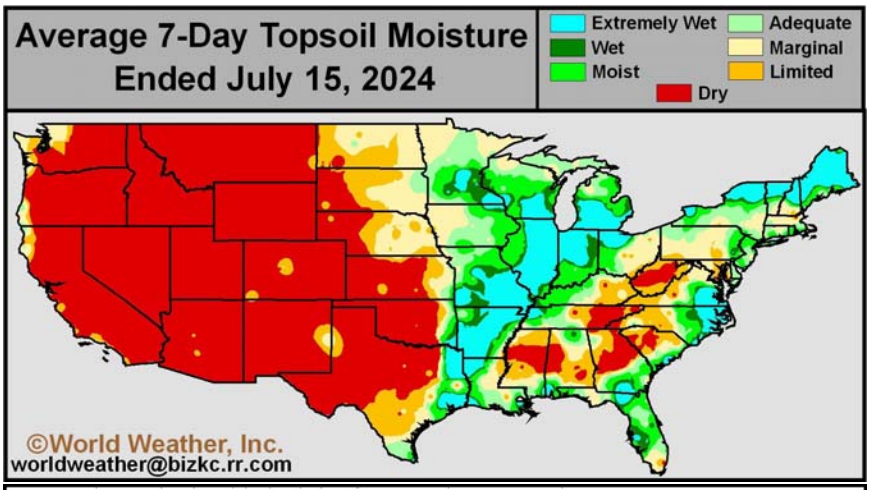
U.S. Midwest Crops To Benefit From Rain, Mild Weather

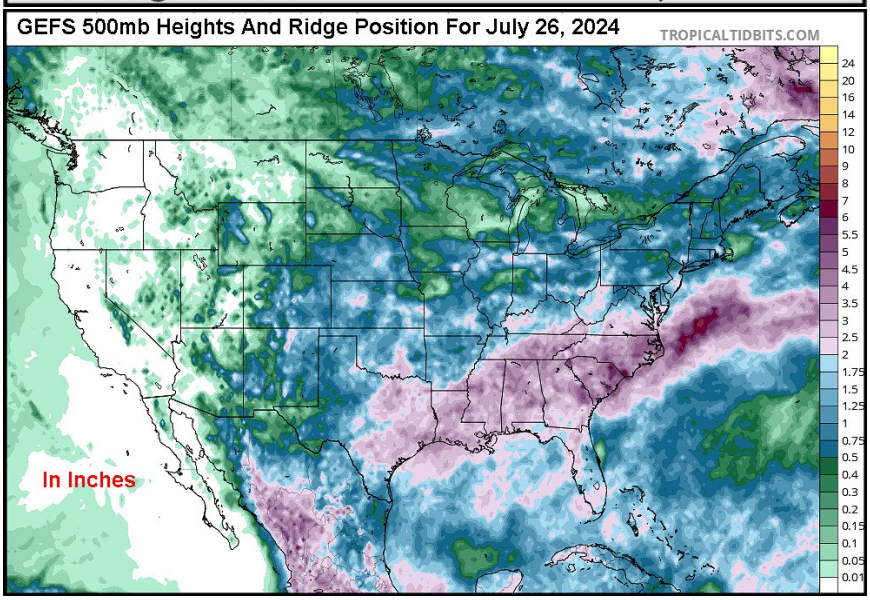
Ample moisture continues to support good corn and soybean conditions in much of the U.S. Midwest. The region saw several waves of rain during the past week with warm, but not hot, temperatures. The region will see a good mix of rain and sunshine this week to perpetuate the favorable summer crop environment.

Remnants of Hurricane Beryl produced widespread rain across the central and eastern Midwest during the week ending Monday morning. Some amounts reached over 6.00 inches while 1.00 to 4.00 inches were common. Showers and thunderstorms also occurred to the east and west as weak weather systems moved across the region before and after Beryl.

Temperatures trended cooler after Beryl's moisture moved through the Midwest and warming was noted once again during the weekend. Now, another bout of cooling is expected and the lack of persistent heat this summer has been primary in maintaining a very good outlook for summer crops.

The latest soil assessment shows dryness creeping back into the great Plains and the northwestern Corn and Soybean Belt, but only in the topsoil. Subsoil moisture is still rated favorably. The only other U.S. crop area that is not doing well with subsoil moisture is the interior southeastern states and the southern Plains where there is dryness in both the top and subsoil.





The latest Drought Monitor suggests the eastern Midwest is still a little too dry as is the southeastern states which, coincidentally occurred in 1983, 1998 and 2016 which were years in which we moved from El Nino in the first quarter to La Nina late in the year.

A good mix of rain and sunshine is expected across most of the Midwest, the Delta and southeastern states during the next ten days. Some limited rain is possible in the upper Midwest, though that area was wettest in this past weekend. Areas from the southern Plains through the Delta to the southeastern states will be wettest in the next ten days with 2.00 to more than 4.00 inches of rain possible in at least a part of the region. Lighter rain will fall farther north into the Midwest.

Temperatures will be cooler than usual this workweek and that in combination with the rainfall expected should translate into a fine environment for summer crop development. The milder bias may continue into next week and then some warming is expected.

Sufficient moisture is expected in the next ten days to maintain a very good outlook for summer crops and that is not something the markets want to hear right now because of falling market prices. August is the earliest that a change in weather might happen.