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The Canadian Agriculture Weather Prognosticator

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World Weather At A Glance

- Drought is not only prevailing in the Prairies, but southward through the northern U.S. Plains and throughout the western half of that country.
- West-central and northwestern Argentina is too dry raising concern over early corn and sunseed planting
- Brazil's early soybean and corn planting is expected to advance better this year than in 2020
- Australia rainfall may increase a little too much in the eastern part of the continent this spring and summer raising potential for a wet wheat, barley and canola harvest
- India's monsoon refuses to quit; drier weather is needed to protect pulse, oilseed, cotton and rice quality
- China's northern crop areas are too wet
- Russia's wheat region received some relieving rain for better establishment

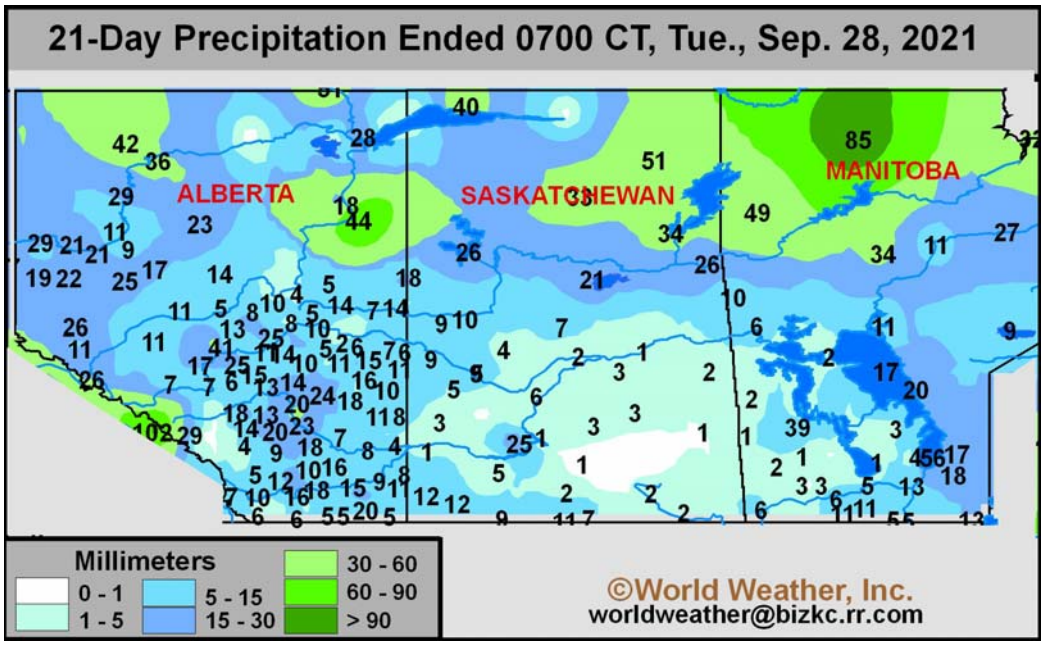
Canada's Drought And Summer Hang On

Canada's Prairies drought has not only hung on during September, but it may have worsened in a few areas. Relief that came in a part of the Prairies during late August and early September had some folks worried about too much moisture during the crop maturation and early harvest season. Since then, rain has been extremely limited and temperatures that were once starting to cool seasonably suddenly turned hot again.

The last part of September has produced temperatures much more summer like than autumn like. There have been some recent years when snow and rain were falling in September causing notable delays in farming activity. Now that harvest progress has advanced substantially ahead of normal in many of the driest areas, the urgency for rain is beginning to skyrocket to new heights.

Four years of drought in parts of the central and eastern Prairies has taken a big toll and this drought is not likely to end during the autumn or winter. However, if we can just get a couple of solid rain events over the next few weeks there might be a little more moisture in the soil that can be used in the spring. If the precipitation boost comes too late it might occur after the ground becomes frozen and that may reduce the amount of moisture that is in the soil in early spring 2022. The only good thing about the lack of soil moisture is that frost in the ground will not be nearly as substantial in the spring as normal and frost will come out of the soil faster if there is no moisture in the ground.

Most producers would rather have moisture in the ground and have to wait out the spring thaw than to go into winter with no moisture in the ground and have to wait on spring



Canada's Drought And Summer Hang On (continued from page 1)

rainfall for enough moisture to plant.

Now, not all of the Prairies are hurting for moisture. Western areas in Alberta are still favorably moist and rain seems to come and go periodically. Central parts of Alberta also received some timely rainfall this month making the dryness in that region a little less severe relative to surrounding areas.

Earlier this month and in late August there was significant rain that fell across a part of Manitoba and in a part of Saskatchewan. The moisture was welcome and remains in part, but the recent dry, warm to hot and windy weather has taken some of the moisture away.

No area in the Prairies is as dry as the majority of Saskatchewan, although there are large pockets in eastern and southern Alberta and in parts of Manitoba that have some very serious moisture shortages as well. These areas of serious dryness are not likely to go away during the balance of autumn or winter.

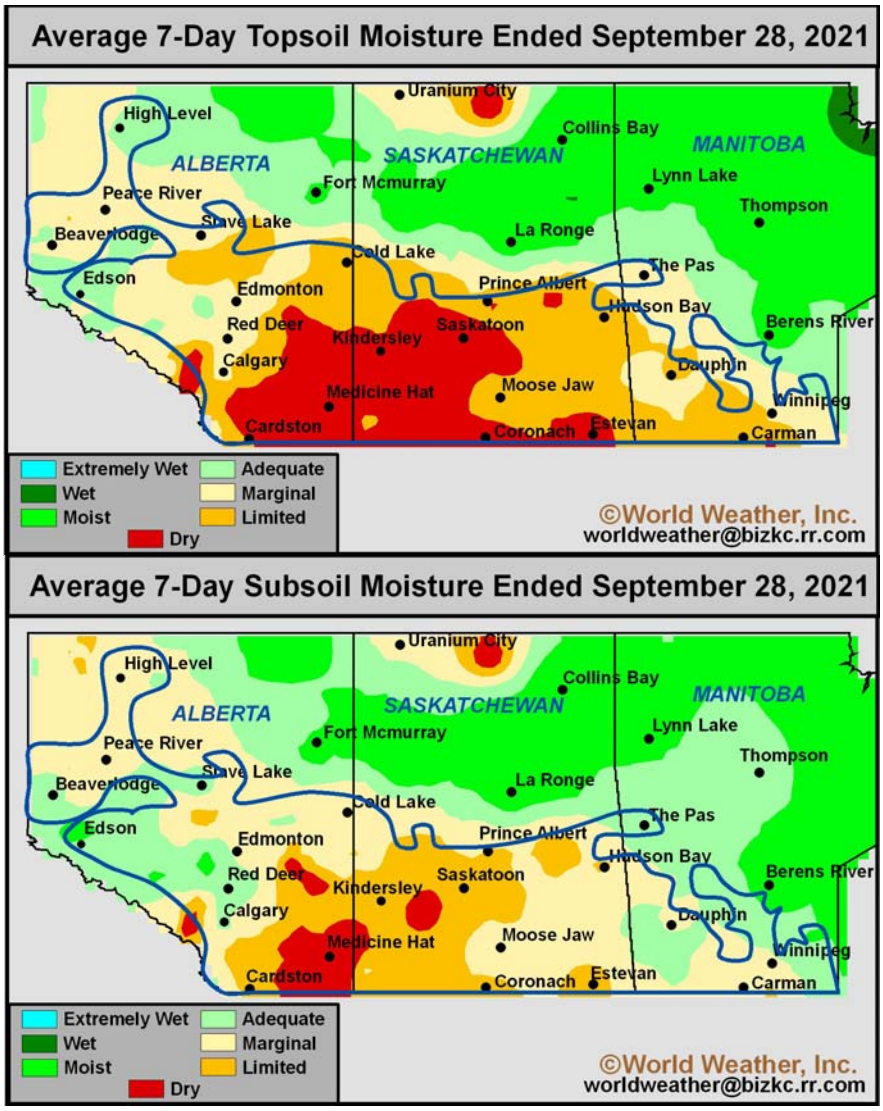
World Weather, Inc. does anticipate a short-term bout of potential moisture in October that will offer some relief to many areas prior to the arrival of colder weather. However, that moisture will not restore moisture profiles to normal. Much of it will not come close to fixing the long term moisture shortage, but the moisture will help to settle the dust and add a little moisture that will be of use in the early spring.

Despite the desires of many, The best medicine for the drought would be to get a few rounds of rain in October as temperatures start to cool and then bring in a significant snow event shortly after that. The snow would limit frost development in the soil and allow the previous rain to stay in the ground and not be evaporated away by strong drying winds that might occur later in the autumn. The snow would also be a blanket on the ground that would provide additional moisture for the soil any time temperatures get warm enough to melt some of the snow. Keeping snow on the ground all winter in this scenario would prove to be equally helpful for allowing snow that accumulates over winter to melt into the ground in the spring rather than running off.

If the ground stays snow free it will be more difficult to get additional moisture into the ground once frost develops until after the spring thaw. This winter's weather will include a persistent northwesterly flow pattern aloft with temperatures warmer biased in the west and cold in the east. Snow is not likely to be deep, but it should stick around longer than last year—although that is not saying much since the Prairies had very limited snow cover last year.

Winter precipitation will be greatest near the front range of the Alberta Rocky Mountains, but may be a little light elsewhere and yet more than last year.

No matter how you look at the situation across the Prairies there is no way that drought will not be carried into spring 2022. Those are famous last words, but in this case no one would likely complain if the forecast was flat out wrong. The more moisture that falls in the next few weeks the happier most us will be, but La Nina will be evolving in the next few weeks and that will put the brakes on any wetter bias that may be evolving during October.



October Moisture To Return East; November Wetter?

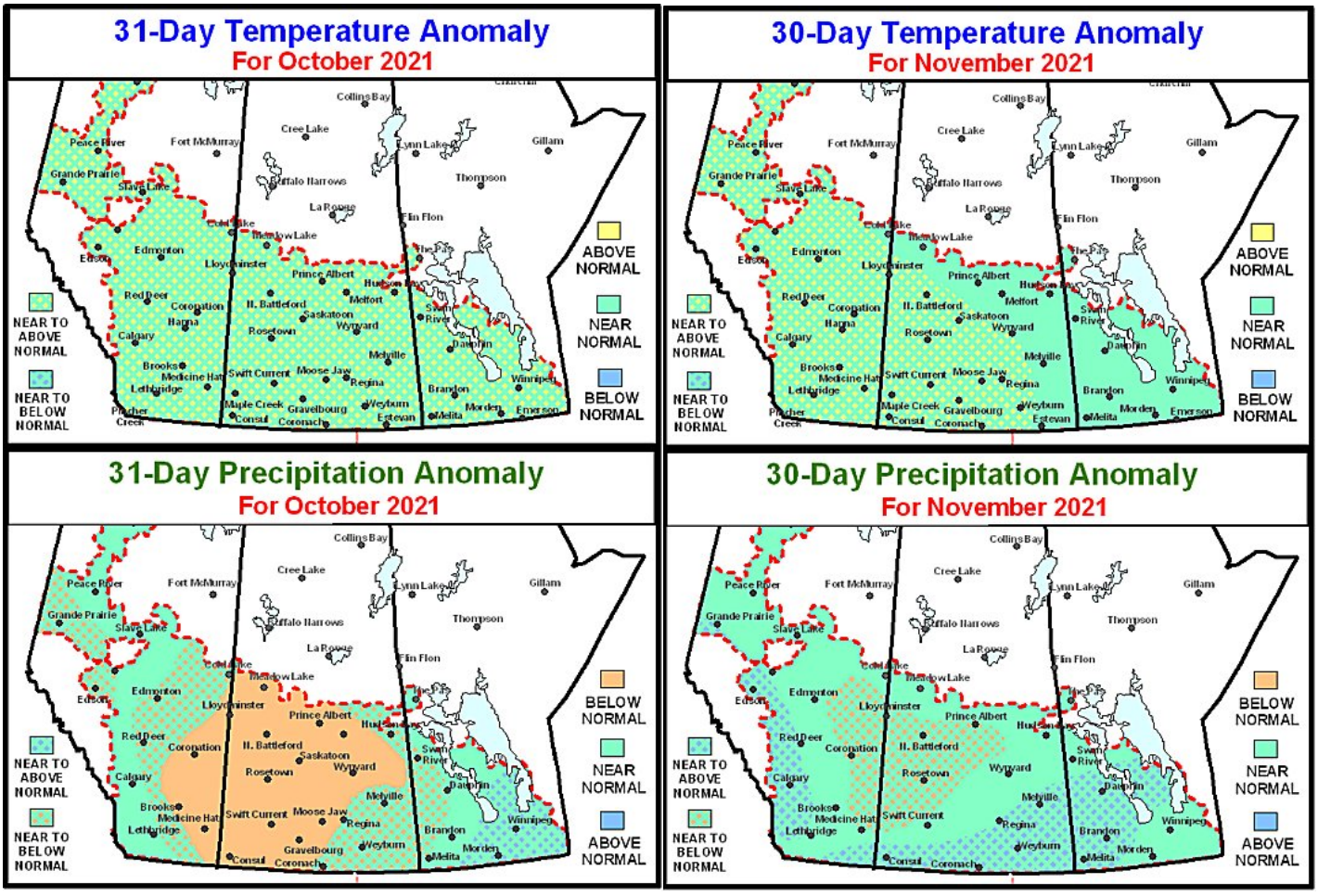
It is always next month that precipitation improves, but it never does improve….so it seems. A little boost in precipitation is expected late in the first week of October and during the second week of the month. World Weather, Inc. may be under playing the precipitation, but "when in a drought take it out" is the rule used in forecasting precipitation during a drought. There is a moderately good chance that too much rain has been withheld from a part of the eastern Prairies, but support for improved precipitation looks much better for November than October.

The unfortunate part of November's weather outlook is that the 18-year cycle says November will be more active, but La Nina should be in control of our weather by then and that should diminish the precipitation in many areas and in this case there may be a little too much precipitation advertised in the official November forecast. What a mess! A battle in the weather patterns will occur over the next few weeks. October's forecast is probably more on track than not, but La Nina will begin to influence the region during the second half of the month and that should squelch the improving precipitation bias that will attempt to evolve in the first half of October.

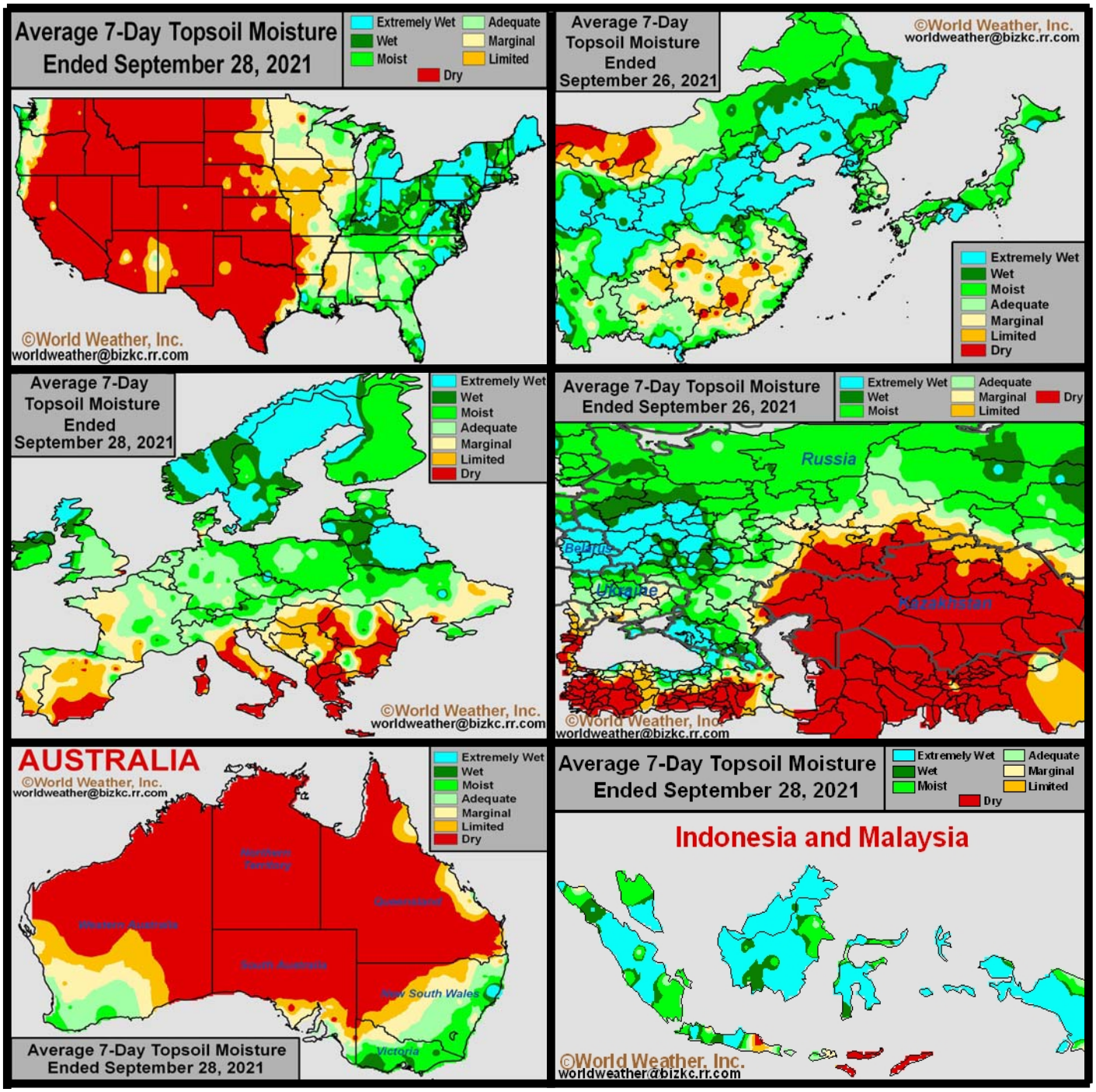
Later in the autumn and winter all of the weather indicators will become more in line favoring a northwesterly flow pattern across the Prairies with a ridge of high pressure in the west funneling colder air into the Prairies routinely during the heart of the winter. However, it is unclear how much cold this atmosphere will be capable of mustering up during the cold season ahead. Most likely it will be a lot because of the low humidity that is present over our part of North America. That low humidity will allow temperatures to fall faster and harder than in a more typical winter just as the recent warm weather was much hotter than normal because of the same phenomenon.

October precipitation should increase for a little while and the cooler temperatures that should come during the month will help to conserve the moisture that does fall through slower evaporation. The need for greater precipitation will remain extremely high, though, because of the low moisture profile.

Temperatures in October and November will be cooler biased than those of late, but colder than usual temperatures may still not evolve very often leaving a warmer bias for many areas—at least until the second half of November. Alberta will be most consistently warm biased.



Selected Weather Images From Around The World



Hot temperatures have not just been limited to Canada recently. Much of the central United States has also been very warm to hot further depleting soil moisture across the Plains and into a part of the western Corn Belt, but many of these areas will get some rain in the coming week. China is too wet in its northern crop region resulting in some delay to its summer crop maturation and harvest progress, but the moisture will help ensure good moisture for winter crop emergence and establishment later this autumn. Europe dryness problems are mostly in the south and it is still early enough that the "problems" could easily be resolved over the next few weeks if timely rain evolves as it is predicted. Russia's winter crop areas experienced improved topsoil moisture during this past week helping to improve the outlook for crop emergence and establishment. The Volga River Basin had been too dry during much of the planting season. Southern and Eastern Australia are trending wetter and that will bode well for its winter crops.

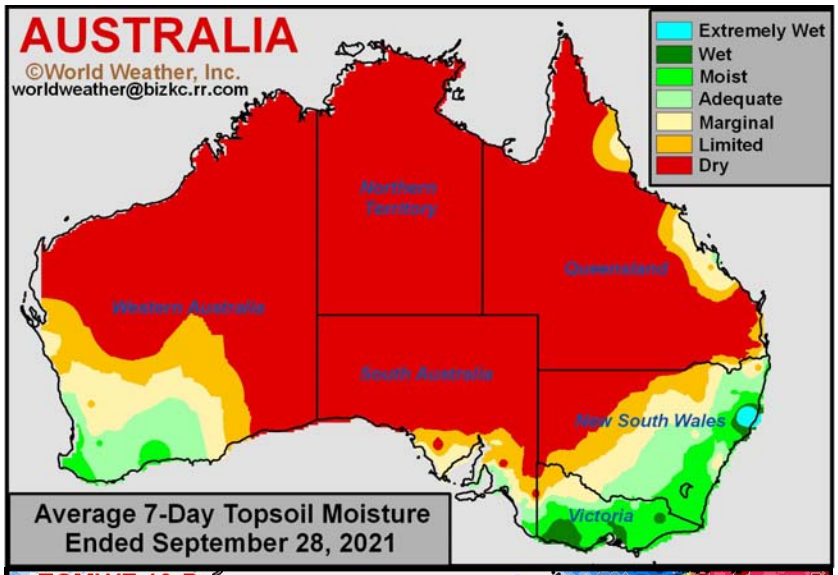
Eastern Australia Wheat Vulnerable To Wet Harvest

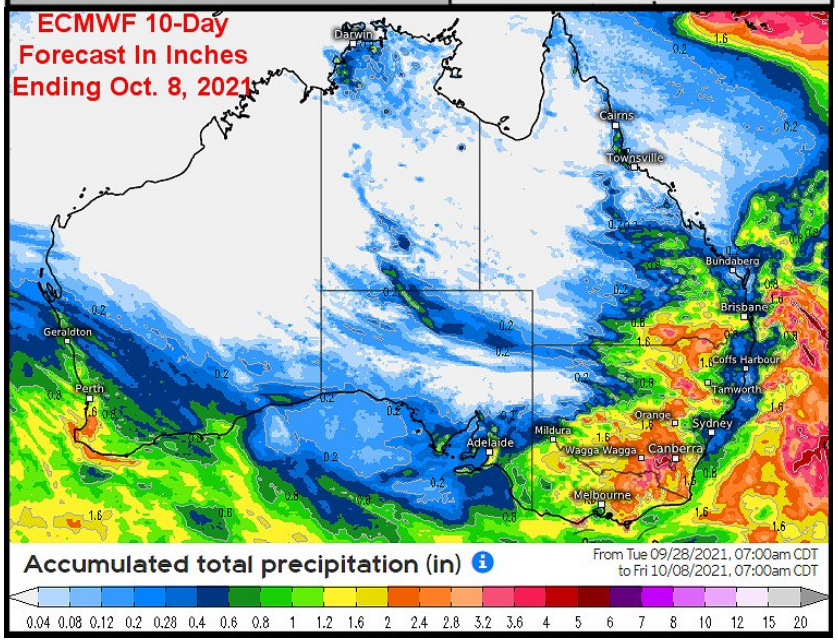
Another La Nina event is breathing heavily down the necks of world agriculture and another notable impact on world weather will begin as the month of October unfolds. Australia could join a growing list of weather impacted wheat production areas around the world with a potential for loss even though the crop is looking extremely good.

La Nina events in Australia traditionally generate greater than usual rainfall across eastern portions of the nation. Queensland has been in the grasp of drought for many years and still has notable soil moisture and water supply shortages that have already hurt the reproduction of wheat and barley this year. The drought in Queensland has become the "new normal" as the world likes to call significant change that occurs without reversion. The truth of the matter is that La Nina events in the past have induced some impressive rain events during the spring and summer seasons and that could happen again this year.

Last year's La Nina event was different. It tried and succeeded (for a little while) in bolstering soil moisture, but the wetter biased conditions never became consistent enough to fully restore soil moisture. Drought actually resumed after a short period of relief and Queensland has been struggling with dryness ever since.

A new La Nina event is expected this month and it will be an aggressive event changing weather patterns around the world in less than six weeks and some of the changes will be significant. For Australia, there is already a rain event under way in the east this week and that will increase soil moisture to some degree. The precipitation event is independent of La Nina. The Queensland harvest of small grains should occur before there is much more rain, but there is more concern over the outlook for New South Wales and Victoria grains than Queensland because La Nina's greatest rainfall influence may occur simultaneously with the harvest season in those areas.





Farmers are hoping that the delayed start to La Nina will delay its influence on eastern Australia as well. The biggest worry is that rain frequency will rise sufficiently to introduce grain quality declines and wet weather diseases that could cut into production. If too much rain falls during the harvest, fieldwork would be delayed and the risk of head sprouting could take the current crop, which is still advertised to be the second greatest on record, and reduce it to feed grain.

In some La Nina events, summer rainfall in Queensland has been great enough to induce massive flooding of its farmland. Some of those heavy rain events of the past have harmed cotton and sorghum production, but some producers may be looking forward to that possibility to finally get water supply restored. For now, the situation is just speculation, but World Weather, Inc. believes rain in eastern Australia will be much greater than that of last year and a notable improvement in soil moisture and water supply is expected. However, some of that recovery will come at a cost and that may be to harm winter and summer crop production in some areas.

Another One For The Record Books

Persistent heat and dryness over the past few years and especially this growing season has the ground and air across the Prairies extremely dry and that leads to wild swings in temperature. Most recently the Prairies have been subjected to some extreme heat, but in about ten days when the temperatures turn cooler it may surprise you to see how cold they may get. It is not a bad idea to be preparing for that now because weather conditions will change—at least for a little while in no more than ten days.

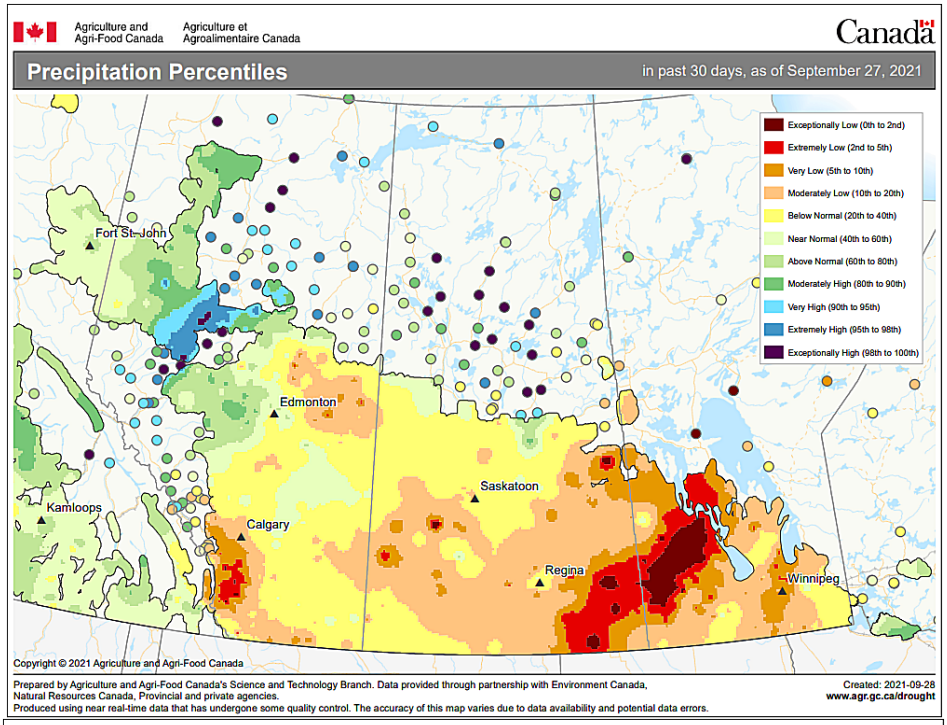
Late August and early September had many folks thinking the drought was breaking and it did for a very brief period. Not long enough to prevent the next ridge of high pressure from putting the Prairies back into an extended period of dryness.

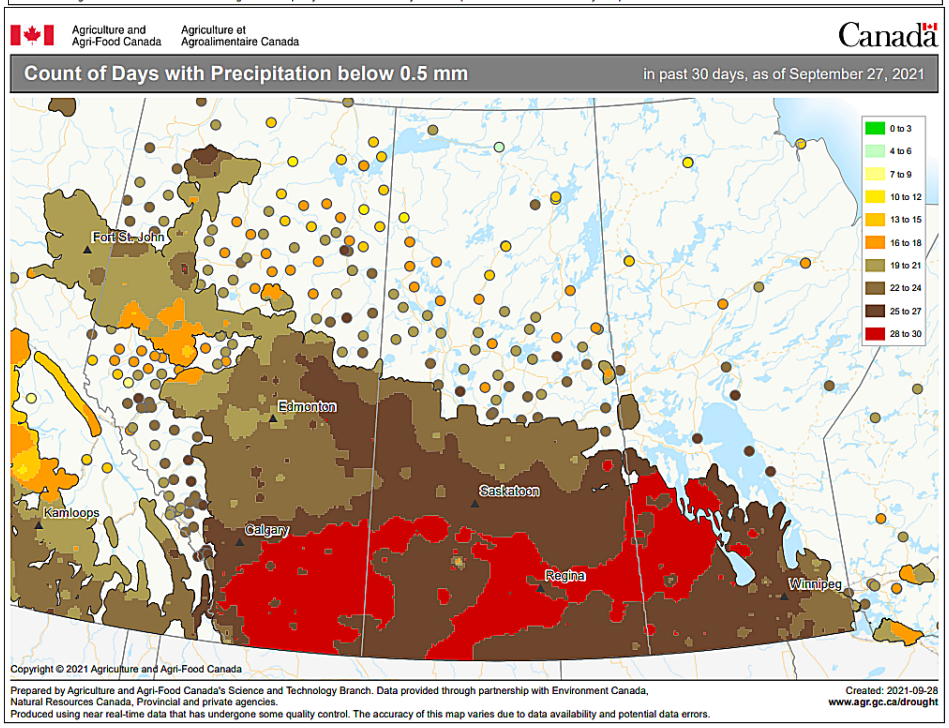
Record and near record heat and dryness were noted in a small part of the eastern Prairies during the most recent 30 days. That statistic fades quickly when considering parts of the Prairies have been in a drought for four years. The most recent stretch of hot and dry weather has been impressive though. Many areas from southern and east-central Alberta through the heart of Saskatchewan to northwestern Manitoba have failed to get half of one millimeter of moisture over the past 30 days. Many other areas were only impacted measurable moisture a few times over the entire period.

The most frequent rainfall has occurred from the Peace River Region into western and central Alberta and those areas have the best soil moisture and have had to deal with at least a little slowdown in harvesting periodically. But no harvest delays of significance have occurred lately. As of Sep. 28, Manitoba was 91% done with this year's harvest well ahead of the 77% average.

In Saskatchewan, the harvest was 89% done on Sep. 20 which was well ahead of the 63% average and another 7% had been swathed at that time and has likely been collected since then. That brings the harvest to nearly 96% complete today. In Alberta, this year's harvest was 78.8% done on Sep. 21 which compares to 41.4% average for that date.

Now, more than ever with so much of the harvest complete the focus is on getting moisture into the region before the ground freezes up. World Weather, Inc. believes we are ten days away from colder weather and the transitional period will offer our first opportunity for at least "some" needed moisture. In the meantime, the recent record setting 30-degree heat is just about over.





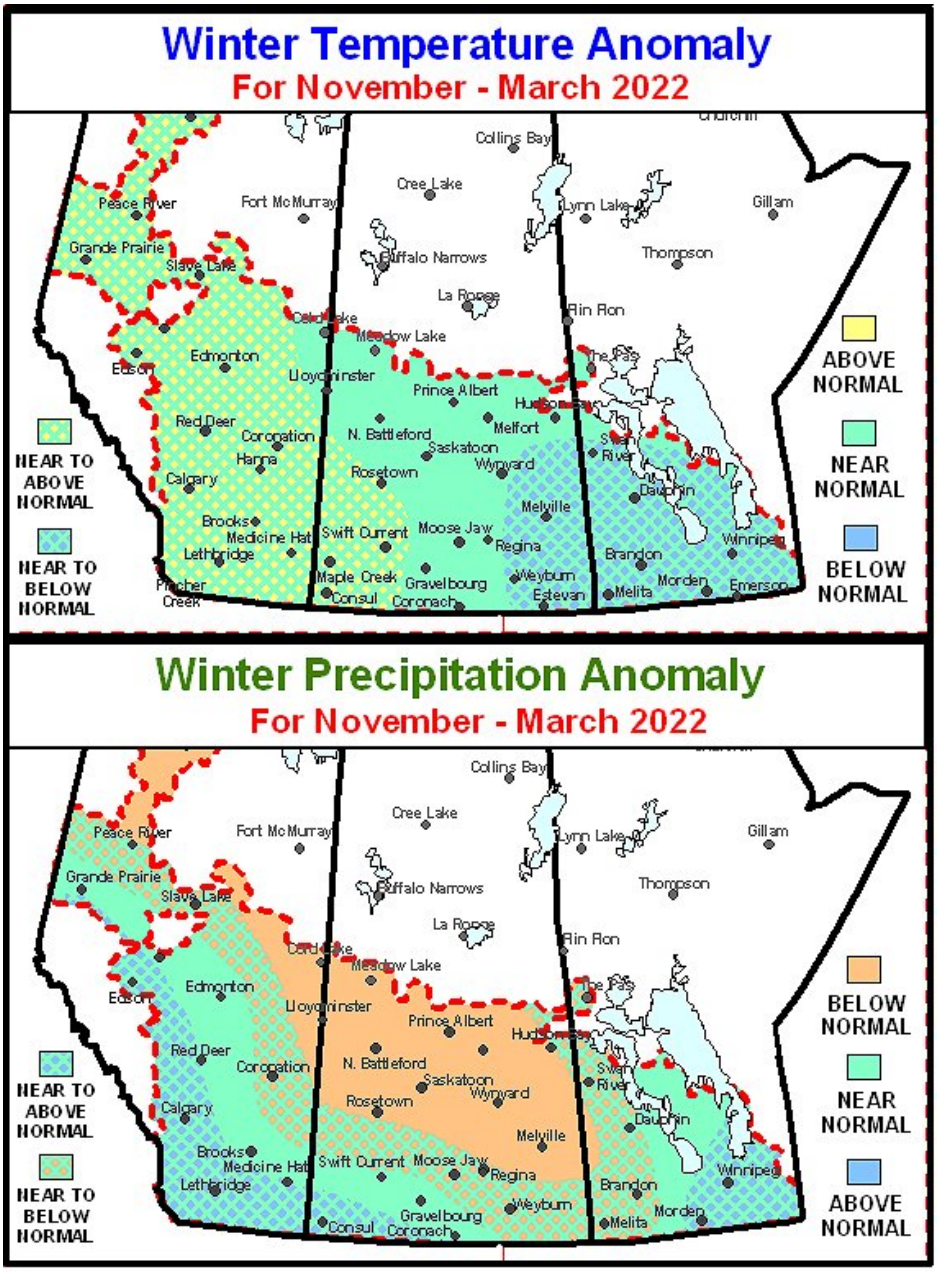
Winter, Early Spring Will Not Offer Much Relief

October and November would normally present an opportunity for the Prairies to get some needed relief from persistent dryness. The October outlook does present some moisture near the middle of the month, but mostly in the east and then drier and warmer biased conditions return for a while after a short term bout of cooling.

November's outlook without La Nina would bring a succession of weather systems into the Prairies for the best opportunity for relief from dryness prior to winter's arrival. However, La Nina should be developing aggressively in the second half of October and should dominate the Prairies in November. The La Nina pattern will work against the precipitation boost that is otherwise advertised. La Nina will want to produce a ridge of high pressure over the western Prairies, create a northwest airflow aloft and bring waves of colder air through the region. The 18-year cycle data suggests a more routine occurrence of weather systems coming across the southern and eastern Prairies producing some periodic precipitation. As a result, November will trend cooler, but there could be some significant snowfall to spread across the Prairies, especially in the east.

Shortly after that, La Nina will dominate the winter. However, the anticipated ridge of high pressure may be shifted a little farther to the east than usual so that a larger portion of the coldest air will be in the eastern Prairies and more likely in the U.S. Midwest and deep south.

The northwesterly flow aloft resulting from the La Nina pattern will suppress precipitation in the heart of the Prairies, but there would be potential for some near to above average precipitation up against the mountains in southwestern Alberta and in southwestern Saskatchewan as well as in southeastern Manitoba. However, if the ridge shifts too far to the east both of the near to above average precipitation anomaly areas will be diminished and the western Prairies will be more significantly warm biased. That would leave a large part of the Prairies with no opportunity for serious moisture boosting until mid-spring. Regardless of which pattern verifies the heart of the Prairies will have very little chance for notable precipitation after November until mid– to late spring.



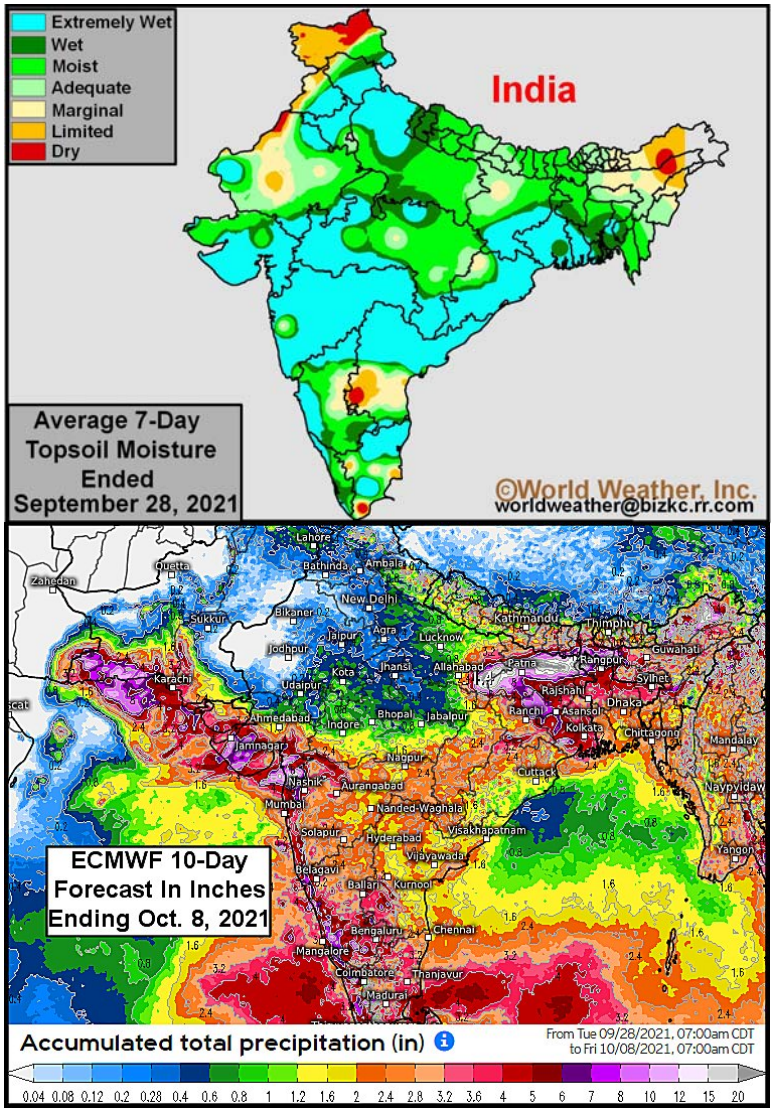
India's Monsoon Will Finally Begin To Withdraw

India's recent rainfall has been more active than usual in the central and northern parts of the nation. Normally, monsoon precipitation would have withdrawn from the north during the middle two weeks of September. The delayed withdrawal has slowed summer crop maturation and harvest progress and that could lead to some quality declines in pulse crops and some of the other oilseed, rice and cotton crops produced in the region.

Monsoonal rainfall will slowly withdraw from much of Rajasthan outside some of the southern and eastern production areas into Punjab in coming days. Brief periods of light rain will still occur, though resulting rainfall will generally be lost to evaporation. The lack of significant rain will improve cotton maturation and harvesting in areas that are excessively wet. There will be enough moisture to maintain aggressive growth outside the driest areas in Rajasthan as well.

Other areas in northern India will see a mix of monsoonal rain and sunshine during the coming week. A few light showers will occur through Thursday before more widespread rain evolves Friday into early next week. Moisture totals by next Tuesday morning will range from 0.50 to 2.00 inches with drier pockets in Haryana. Cotton maturation and harvesting may be sluggish at times, though no additional quality impacts are expected. Development for other summer crops will continue with few concerns.

The remaining production areas in India will continue to see several waves of monsoonal rain during the coming week. Another weak tropical system could bring significant rain to portions of southern India this weekend. Rainfall by next Tuesday morning will range from 1.00 to 4.00 inches. Portions of Karnataka, Tamil Nadu, and southern Andhra Pradesh could also receive more than 6.00 inches of moisture. Flooding will be a concern in western India today and Wednesday and minor soybean, groundnut, rice and cotton damage will be possible. Drier weather will be needed later this week into October to reduce the potential for greater damage to crops in the region because of excessive moisture.



Late-season monsoonal rain is setting the stage for a good start to winter planting season in much of India later this year. There will be plenty of moisture for aggressive establishment and growth outside the drier areas in Rajasthan. However, the wet environment may also slow or delay summer crop maturation in the wettest locations, which could impact planting of the winter crops.

La Nina conditions are expected to dominate the winter and that usually translates into good winter crop production potentials for much of the nation. A close watch will be warranted in rapeseed, lentil and other pulse production areas to make sure rainfall is not excessive. Most likely winter crop production will be high and summer crops will likely dry down sufficiently enough and soon enough to protect crop quality after later than usual monsoonal rain.

Northern China Too Wet; Drying Still A Week Away

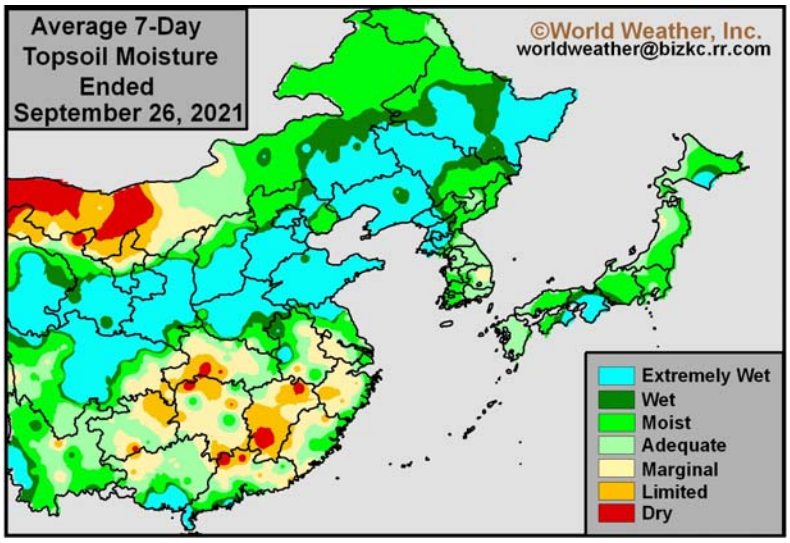
Northern and central Sichuan into portions of the central Yellow River Basin and North China Plain saw several waves of rain in the past week, although more recent weather has improved briefly. Flooding likely occurred in the wettest locations and more damage was suspected to some crops that had been inundated with too much rain earlier this summer.

Additional rain will evolve from northern Sichuan and much of Shaanxi and Shanxi into Shandong and southern Hebei this weekend into early next week causing a return of flooding with some crop damage and quality reductions possible. Many areas in Northeast China and the southernmost provinces will also see rounds of rain into next week that may disrupt maturation and harvesting

Needless to say, most of these areas have saturated top and subsoil moisture suggesting delays to summer crop maturation and harvesting has likely resulted and may be continuing despite the past few days of drier weather. Winter wheat planting was also delayed because of the wet conditions and this may continue for a while as more rain begins this weekend.

Farther to the south the soil conditions are much drier and rainfall was notably lighter during the past week while temperatures were above normal. The warm weather and limited rainfall in the interior southeastern and some east-central parts of China allowed the topsoil to dry down and is now rated marginally adequate to very short. Subsoil moisture, however, was still rated favorably and supported good late season crop development. The drier bias has been great for maturing early season crops and supporting their harvest.

Flooding likely occurred during the week ending Sep. 27 in the Yellow River Basin and North China Plains and crops in the region were suspected of being negatively impacted. Some damage to grains, oilseeds, cotton, and other crops was possible, although not confirmed. Cotton may have been most impacted, but crops in low-lying areas were vulnerable as well. An extended period of drier and warmer weather is needed for these areas to firm the ground and support a better environment for maturation and harvesting.



Northeast China is also too wet in many locations to support ideal corn, soybean and rice maturation and harvesting. These areas have not been wet enough to promote significant flooding or crop quality declines, but dry weather is still needed to get crops to mature and be harvested more normally.

Northern Sichuan and much of Shaanxi and Shanxi into Shandong and southern Hebei will receive additional rainfall through the middle of next week. The most significant rain will occur this weekend and Monday. Scattered showers will persist Tuesday as well before drier weather resumes later next week. Rainfall prior to this coming weekend should be limited and much of the region will continue to dry down after last week's flooding rain. Moisture totals by next Wednesday morning will range from 3.00 to 7.00 inches and local amounts of 10.00 inches or more in northern Sichuan and portions of Shaanxi and Shanxi. Southern Hebei and northern Shandong will receive 2.00 to 5.00 inches of rain and locally more. Flooding will evolve again this weekend from northern Sichuan into Shaanxi and Shanxi. Additional crop damage and quality declines may occur as well. Summer crop maturation and harvest progress may marginally improve during the next few days before the next round of heavy rain evolves. Harvest delays and minor quality reductions are also expected in southern Hebei and portions of Shandong where the rain will be less intensive.