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The Canadian Agriculture Weather Prognosticator

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WORLD WEATHER ISSUES

Cold, Wet Pattern Ends; Better Days Ahead

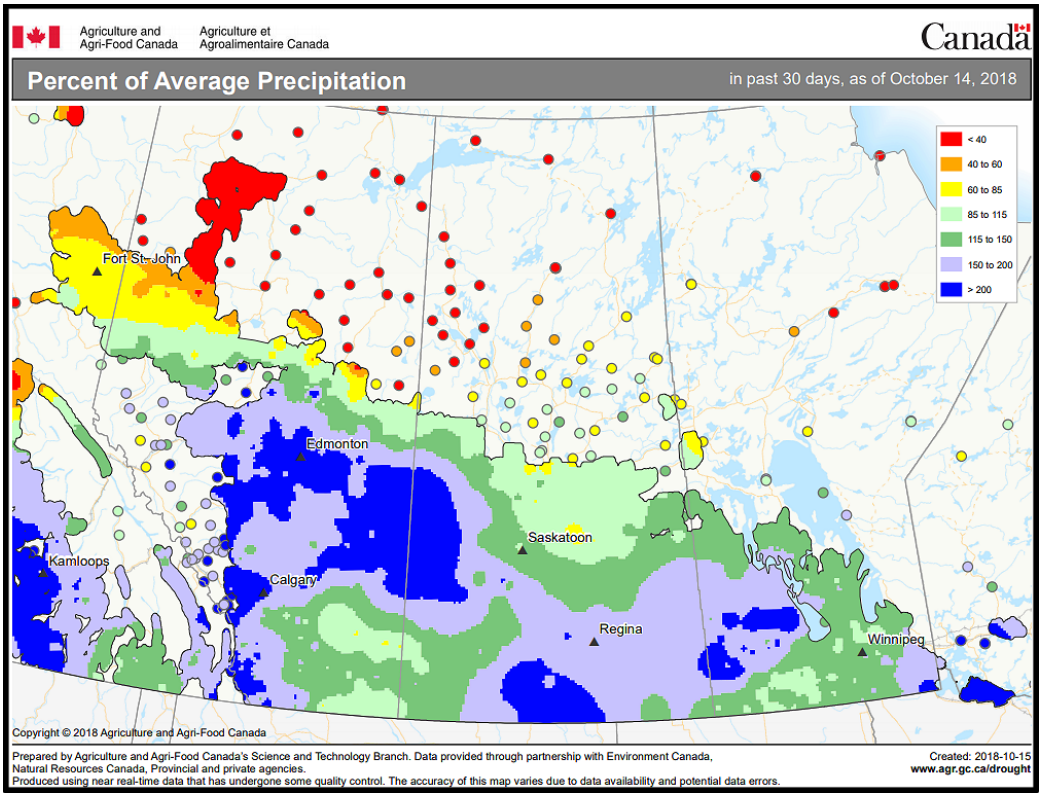
Finally, a break in the weather is under way. The cold conditions that occurred in the past few weeks was quite an anomaly with no other region in the world experiencing such anomalous temperatures. The cold weather coupled with an abundant rainfall pattern created mayhem for the Prairies and the lingering effects of the adversity will continue for a while.

Temperatures well below average were recorded throughout the Prairies and precipitation was notably above average for quite a few areas. Snow remains on the ground in parts of the region, but changing weather promises to bring that anomaly to an end in the next week.

Warm weather in Alberta during the weekend has already melted much of the recent snow and that which lingers will be gone soon as the western Prairies experience persistent warmer than usual biased conditions with very little precipitation.

The eastern Prairies are not expected to warm as well as the west for a little while, but relief is expected there, as well. The next few weeks will not provide ideal harvest weather, but it will be a major step forward from where we have been.

In the meantime, El Nino has begun a more aggressive development that should lead to additional better Prairies weather for harvesting.



October Weather Will Finish Many Times Better

The last two weeks of October will be about as different for the Prairies as night is in relation to day. Temperatures will become warmer than usual and precipitation will diminish greatly with many areas to receive minimal amounts of moisture.

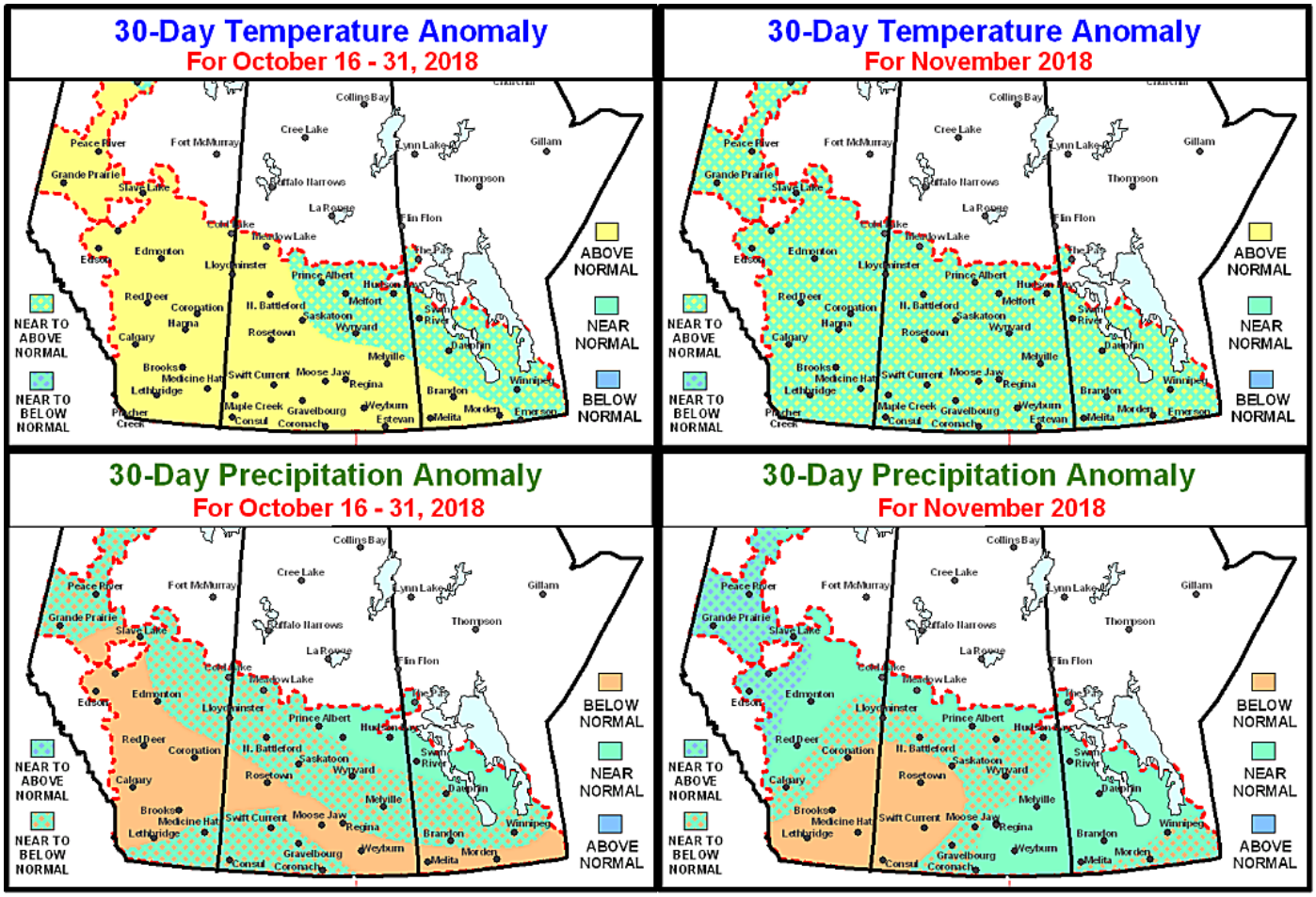
The coming ten days will be the driest for the Prairies with some increasing risk of precipitation coming in the last days of the month. The biggest difference in the late month precipitation compared to that in the first half of the month is that amounts will be light and somewhat erratic and temperatures will be warmer biased allowing some improved potential for drying between precipitation events.

This week's precipitation will still be bothersome for the northeastern most corner of Saskatchewan and across the Interlake region of Manitoba because of some lingering cool temperatures and a mix of rain and snow that will come in a couple of quick moving disturbances. Much of the eastern Prairies will see warmer biased conditions with less precipitation this weekend and next week.

A massive region of warm ocean water in the northern Pacific Ocean promises to promote a large upper level low pressure center near the Aleutian Islands and occasionally in the Gulf of Alaska. The upper level disturbance promises to produce multiple waves of precipitation that will move into the British Columbia Coast. The repetition of storm systems there will help to push a high pressure ridge a little deeper over the Prairies which is the primary reason for warming the region up over the next few weeks. There will still be some short term bouts of cooler weather occasionally, but no bitter cold or long lasting cold like that seen in the past few weeks.

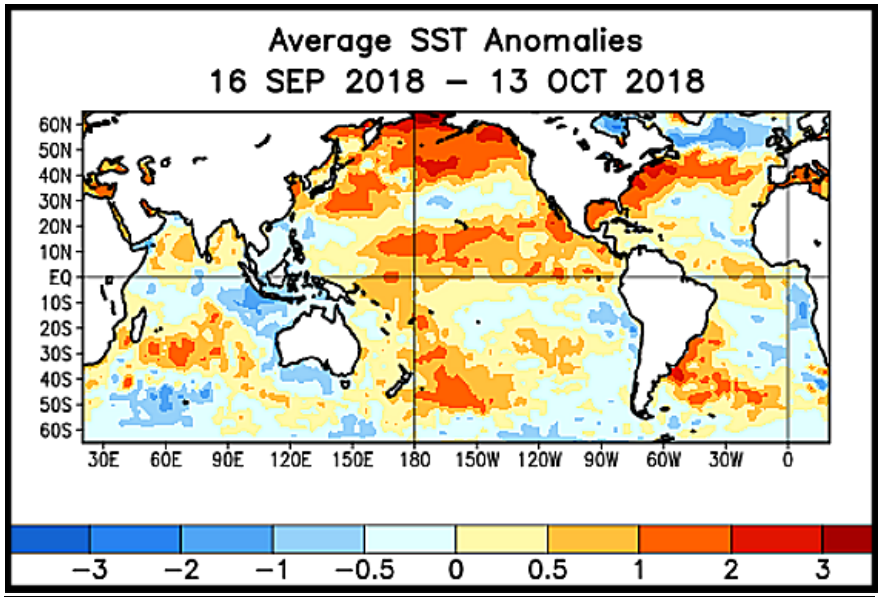
The only negative part of the new weather pattern evolving will be the potential for some rainfall to move across the Prairies infrequently to disrupt farming activity. Obviously from the graphics below, the bias will be for restricted amounts of precipitation. However, because of the risk of precipitation late this month and into November producers would be wise to take full advantage of the good weather while it is present.

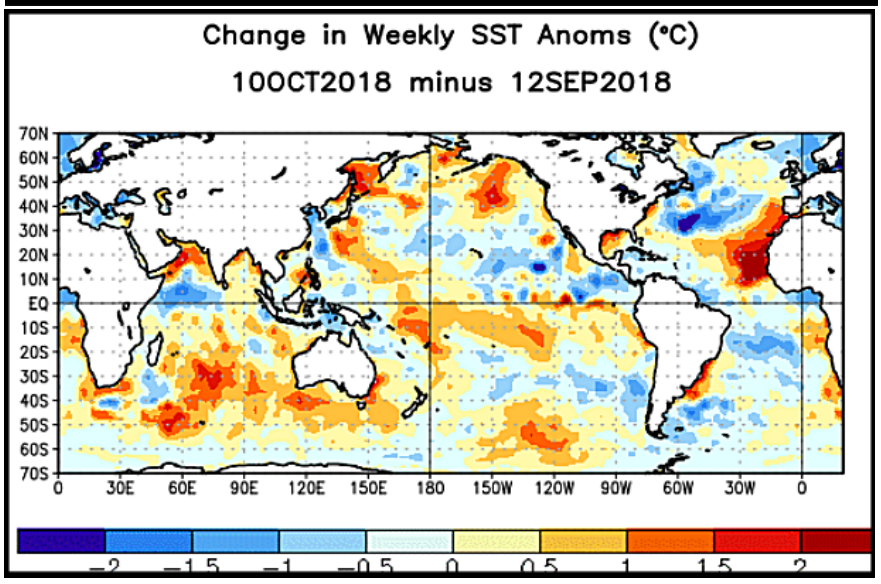
The outlook for November will be mostly favorable for ongoing fieldwork, but there will be some tendency for the Peace River Region to trend wetter biased once again and a few periods of light precipitation will impact the eastern Prairies while the best drying conditions may be in the central and southwestern parts of the region.



El Nino Gets Boost From Westerly Wind Burst

A large region of anomalous westerly wind blowing across the central equatorial Pacific Ocean in the past few weeks has jump-started El Nino. Surface ocean temperatures are beginning to warm across the eastern equatorial Pacific Ocean and a notable increase in upwelling has begun in the eastern parts of the ocean. Each of these changes are accelerating the development of El Nino which for a while in September looked as though it might never get started.





A broad region of anomalously westerly wind put pressure on the ocean and induces a long wave of water to develop that moves with the wind from west to east. The downward pressure that the wind places on the ocean induces a warming trend in the water. This is most easily understood by thinking about a bicycle pump. When air is compressed heat is given off and the same thing happens when any type of matter is compressed. The westerly winds blowing hard down on the water causes some compression and as a result of that the surface water temperature tends to increase.

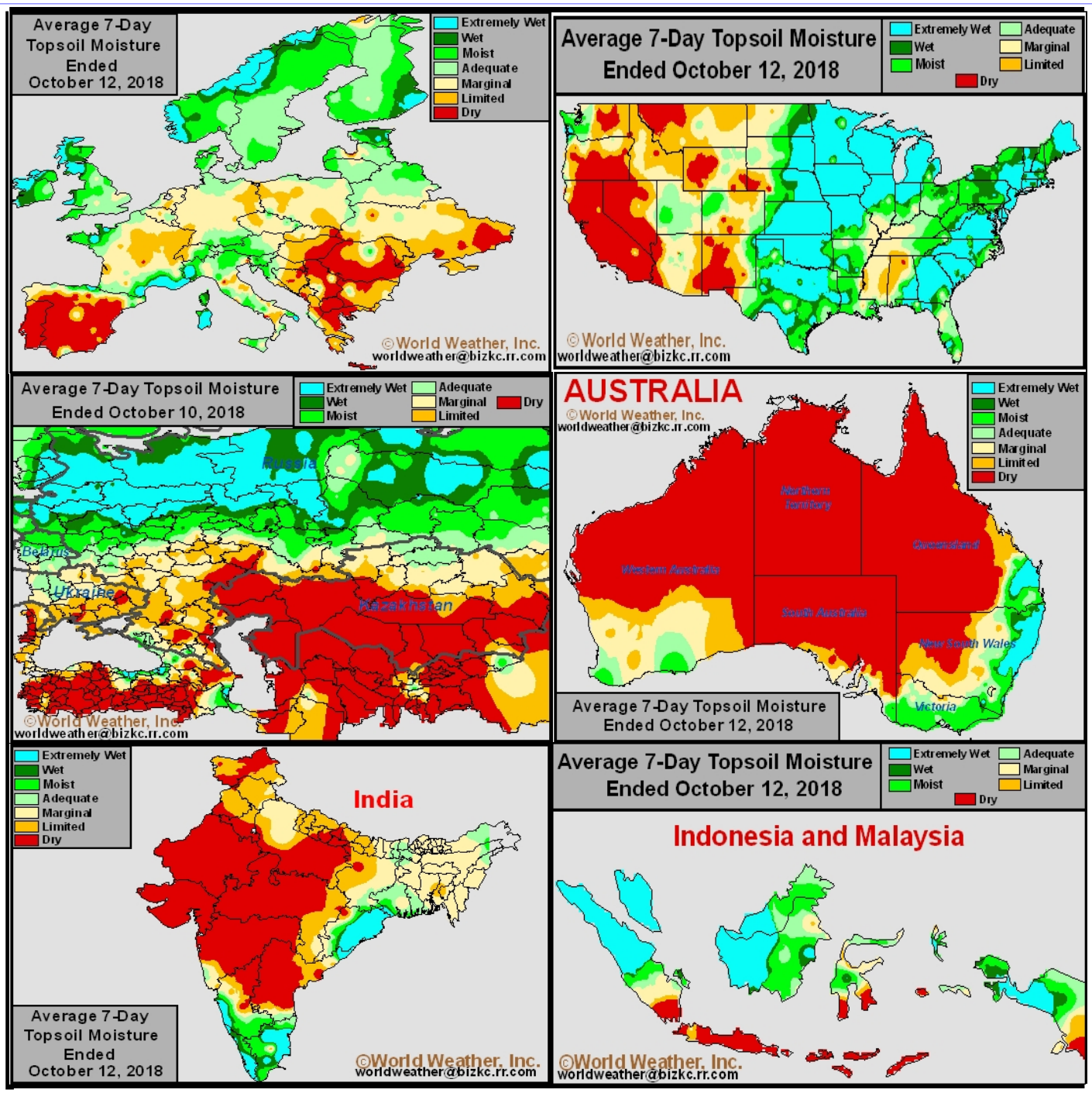
Putting downward pressure on the water also lowers the water level near where the westerly wind burst takes place. Pushing the water downward not only increases the water temperature, but it causes the water downwind to rise up to higher levels. This rising motion of water in the eastern equatorial Pacific Ocean results in a strengthened upwelling current that naturally exists in the eastern Pacific Ocean off the coast of South America. Enhancing the upwelling current in the ocean then allows warmer than usual ocean water that is lurking below the surface of the ocean to move closer to the surface of the ocean or actually to the surface of the ocean. This results in additional surface water warming.

El Nino is partially defined by anomalously warm ocean water between the International Dateline and the coast of South America within 20 degrees north and 20 degrees south of the equator. Once this ocean body of water becomes anomalously warm a huge low pressure system develops over the water and once that evolves world weather patterns start to change and that is how we get to El Nino. All of these changes result from a westerly wind burst and according to research scientists such a burst occurred in late September and ever since the ocean surface temperatures have been steadily rising.

Rising ocean temperatures imply El Nino is evolving and world weather will soon be changing including dryness in Southeast Asia, eastern Australia, South Africa and parts of southern India. El Nino tends to make parts of South America favorably moist and North America tends to do better with precipitation during the summer months, although in recent decades there has been a tendency for the western Prairies to have drier than usual summers.

In Canada, the bias with El Nino is strongest during the winter months and the association tends to be drier and warmer than usual from November through February and sometimes in March.

Selected Weather Images From Around The World

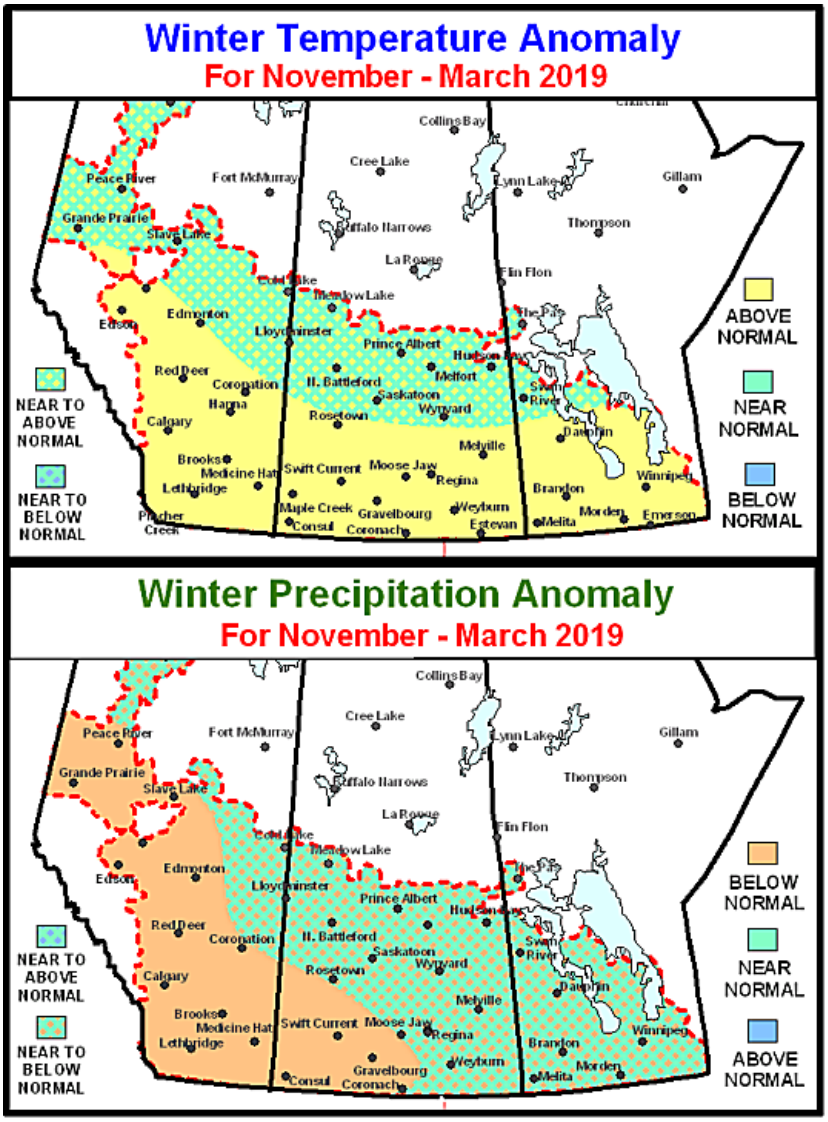


Europe soil moisture continues well below average in a large part of the continent. There is need for greater rain and the sooner it occurs the better off winter crops will be. There has been enough rain to temporarily moisten the topsoil for improved crop emergence and establishment, but without a more soaking rain crops could run short of moisture and may not be as well established as usual. In the United States, the situation is quite different with too much moisture in the Midwest resulting from the past few weeks of abundant rain and more recently cool temperatures. Harvest delays are becoming significant in the U.S. Midwest, but there is sufficient dry weather coming that should allow fieldwork to slowly resume later this month. Another dry area in the world is southern Russia and some areas in both neighboring Kazakhstan and eastern Ukraine where winter crops may not be as well established this year as they should be. Australia has been experiencing greater rain recently supporting winter crops that are still reproducing and filling in the south. Southern Indonesia needs rain while rain in India will continue in the south.

Winter In Prairies: Classic El Nino With A Twist

Now that the ocean is warming and the odds are much higher that El Nino will evolve in the next few weeks the winter outlook can be solidified. El Nino should be the biggest influence on our weather over the next few weeks. However, because El Nino is getting a slow start the most anomalous warm weather is expected in December, January and February.

There is another very interesting pattern evolving in North America right now. There is a very warm pool of ocean water in the northern Pacific Ocean especially from the Aleutian Islands into the Gulf of Alaska. The warm water promises to produce frequent storm system into British Columbia in the next few weeks and it will also support a ridge of high pressure over western parts of North America. The ridge will help induce some waves of colder than usual air moving south from the Arctic. These cold waves may disrupt the El Nino warm bias periodically during the winter bringing on a few bouts of notable cold weather that will not likely last long, but just long enough to remind us all that it is winter even though the average temperatures will be above normal.



There is also some potential that the large area of warm water in the northern Pacific Ocean will help generate some rather large storm systems when the heart of winter gets here and more cold air is present aloft of the warm ocean water. That environment could lead to some impressively large storm systems in the Gulf of Alaska and southward into the U.S. Pacific Northwest. During the heart of winter, storms that reach the U.S. Pacific Northwest may move to the southeastern Prairies periodically. Mid-winter storm systems that impact the southeastern Prairies may contain more than the usual amount of moisture and some impressive rain and snow events may occur.

The forecast map shown here does not reflect above average precipitation for any part of the Prairies this winter, but given the dynamics noted above between the warm ocean water, cold air aloft and larger storm systems that are expected to develop along the British Columbia and U.S. Pacific Coast there is some potential for a little more than usual winter precipitation in a part of the southeastern Prairies and certainly in western British Columbia. A revision in the forecast map may be necessary if it becomes more plausible for this scenario to play out with less influence from El Nino.

Temperatures November through March will be warmer than usual throughout the Prairies, but remember there will still be a few surges of impressive cold.

If the forecast for this winter verifies, some of the driest areas in the Prairies may still have moisture deficits when spring arrives. It is unclear what weather patterns will be prevailing in the spring, but many computer weather forecast models suggest El Nino will be waning while an old weather pattern that resulted in dryness for the United States in 1983 may develop next summer. If that happens there will be some potential for better weather in the Prairies during 2019.

Recent rain and snow have added some moisture into the soil across Canada's Prairies and that might help support fieldwork and early season crop development in the spring. However, greater precipitation will still be needed in many areas to more adequately recharge the soil with moisture for crop use in the summer.

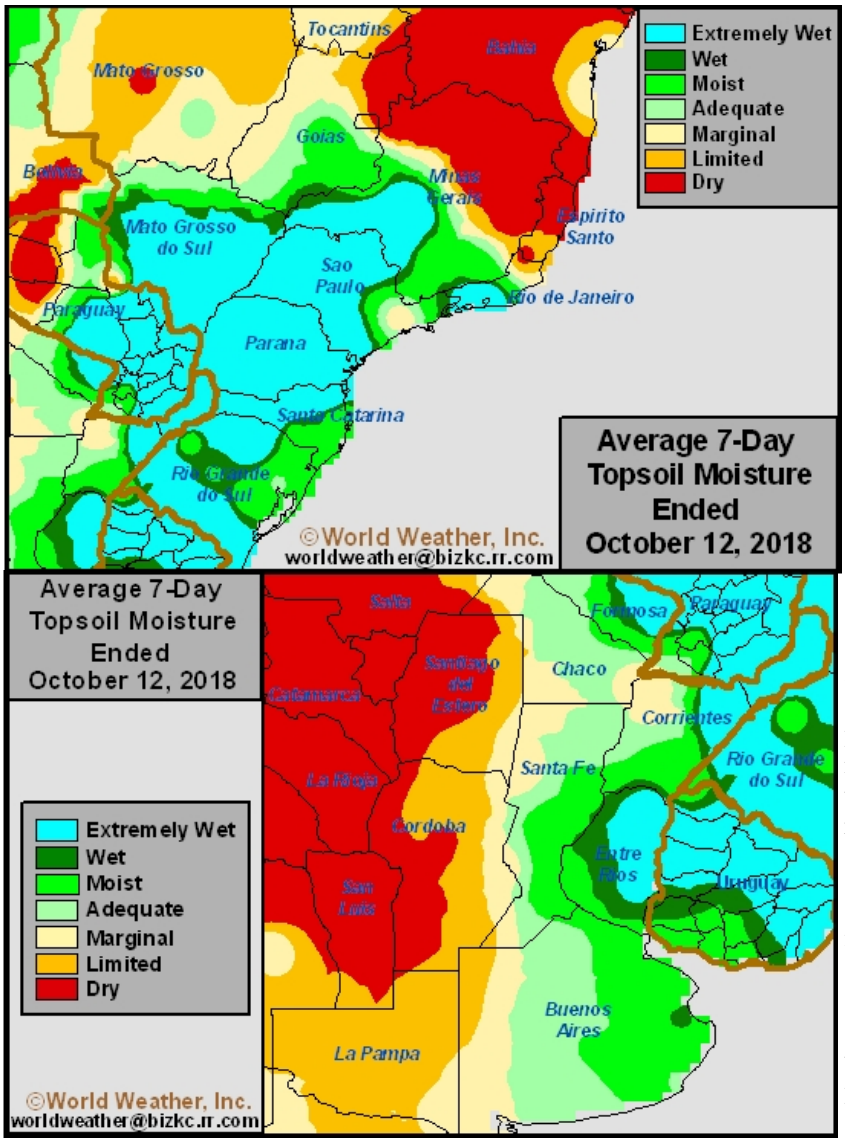
Argentina Dryness To Be Eased; Brazil Plenty Moist

Western Argentina has been dealing with dryness a little longer than desired by some producers this spring. However, World Weather, Inc. does not view the dryness situation as being the start of another drought year. Relief from dryness is expected to evolve soon. Some of the early sunseed and early corn may not be well established and there is some potential that a few of the driest areas were not planted as they normally are by this date in October.

However, Argentina will begin to receive shower and thunderstorms more frequently over the next few weeks. Sufficient rain will occur in time to support soybean planting which usually begins in November. Some of the early corn and sunseed planting will be done later than usual, but that does not imply lower production for this year. As long as timely rainfall occurs during the reproductive and filling stages of development Argentina production is likely to be satisfactory.

Dryness is most significant from La Pampa and western most Buenos Aires through Cordoba and a few far western most Santa Fe locations to Santiago del Estero and parts of Salta. Top and subsoil moisture in these areas remains rated short to very short. An insufficient amount of moisture is available to crops in the region for normal development. Some unirrigated crops that were planted in limited moisture have either not emerged or established well or are waiting for significant rain before germinating and emerging.

Eastern Argentina soil moisture is many times better than that in the west and crops are suspected of performing well.



Brazil soil and crop conditions are quite a bit different from those in Argentina. Rain has been occurring routinely in many of the nation's most important grain, oilseed, citrus, sugarcane, coffee, cotton and rice production areas.

A little too much rain has occurred recently from Mato Grosso do Sul and western and northern Sao Paulo into Rio Grande do Sul. Some winter wheat produced in the far south of Brazil has likely suffered from too much moisture. Delays in harvesting and a general decline in wheat conditions may have occurred in some of the wettest areas.

Recent rainfall has been frequent and great enough to slow planting progress. A short term bout of drier weather would be welcome.

The wet bias in southern Brazil has recently slowed summer crop planting. Early-season soybeans have been planted in many areas and the moisture abundance has helped to ensure good early season crop development potential. However, too much of a good thing can be a problem. Some temporary drying is needed to help firm the topsoil for better field progress.

A little farther north in center west and center south Brazil a good mix of rain and sunshine has occurred to support aggressive planting progress and good early season crop development.

Greater and more frequent rain would be welcome in center west and northern portions of center south Brazil along with northeastern parts of the nation. Dryness remains in these areas, but rain often does not develop until late October leaving plenty of time for improvement.