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World Weather

- La Nina is almost here. La Nina-like conditions are prevalent and should remain in January and early February
- North Africa is still too dry, although January may bring some much needed moisture
- Improving moisture profiles are also expected in Spain, Portugal, Turkey, eastern Ukraine, southern Russia and western Kazakhstan during the next several weeks
- China is drying down, but winter crops are dormant and have a low need for moisture until late February
- India received one quick round of much needed rain recently improving winter crop conditions, though much more is needed
- Brazil rain may slow early soybean harvest
- Eastern Argentina is drying out

Wetter Bias Seems To Be Season's Theme

Sixty-day precipitation totals across the Prairies have been near to above normal with a few exceptions. The first half of winter has rarely been this wet since at least 2006. The year that was most like this winter, so far, has actually been 2012. That does not mean as much as you might imagine, but there may be a few folks that talk about summer 2012 in North America this year because of that line and because of La Niña like conditions and the

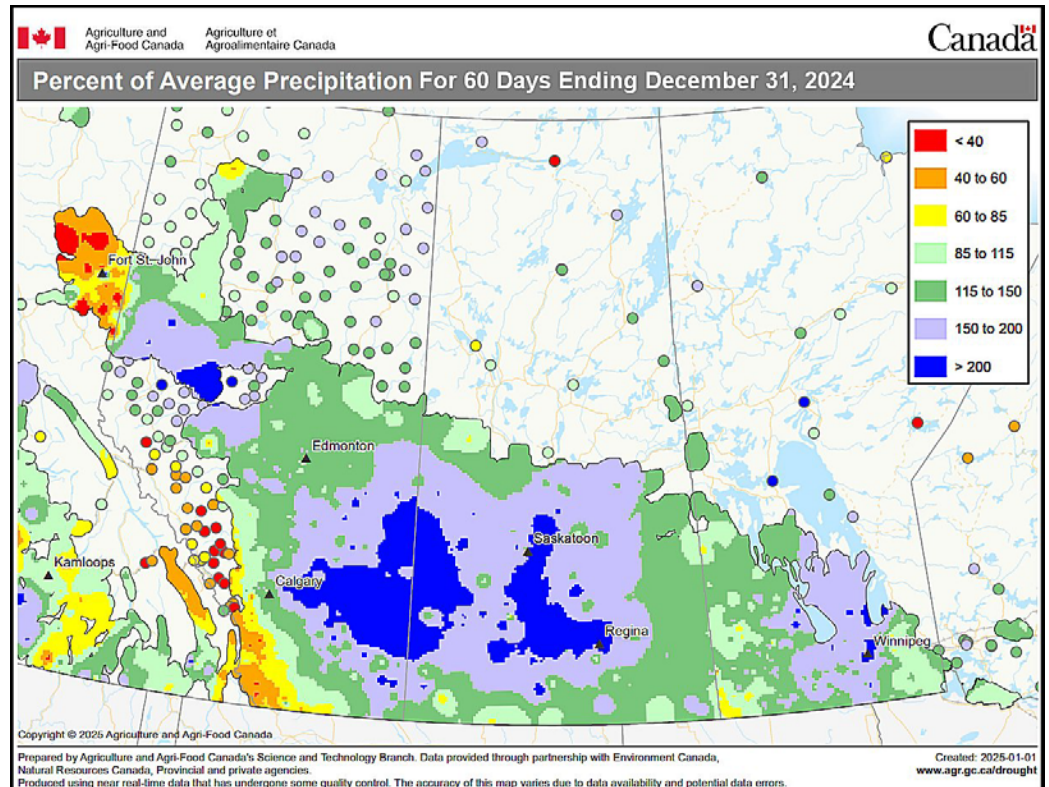
strongly negative Pacific Decadal Oscillation (PDO) that is present—all of which were around in 2012. Should we panic?

Despite the short term memory of recent past years of La Niña conditions, this event is much different and it is unlikely to last more than two months. The negative PDO may linger for a while, although that index is expected to steadily weaken over the next few months reducing the effect it may have on North

America weather as well.

So exactly what is happening in our weather? First, we are exiting from the multiple drought years in North America that are associated with the 22-year solar cycle. That does not mean we cannot have dryness in a part of the Prairies again this year, but widespread drought that occurred in North America from 2020 to 2024 is not likely to continue.

The wetter bias seen so far this winter has been a



November Weather No Omen For Winter (from page 1)

welcome change and speaks volumes about the changing atmosphere. La Nina like conditions may interfere with some of the precipitation anomalies in the next few weeks, but it will be cold enough to conserve the snowpack and maintain a good spring run-off outlook.

World weather, Inc. has been studying the 18-year cycle data looking for clues about 2025 and what has surfaced so far is a bias of near to above normal precipitation during the growing season. Confidence is not high that the wetter bias will be perpetuated through the entire growing season, but there is rising support for the wetter bias to remain during the second half of winter and into early spring.

Portions of the Prairies have potential to see the wetter bias come and go through the late spring. Precipitation correlation studies conducted for North America in recent weeks have suggested a greater than usual potential for wet biased conditions in the northern U.S. Plains and at least the southern Prairies., There are a couple of analog years that look quite wet, but given the lingering negative PDO and abating La Nina like conditions

there is reason to believe that further improvements to our long term moisture profile will take place.

The northern Prairies may not see as much precipitation abundance as southern areas might, but the region's greatest moisture deficits lingering from past years of drought are in the south. The potential problem that wet conditions may present in the spring is a delay or general slowdown in spring planting if the wetter bias prevails.

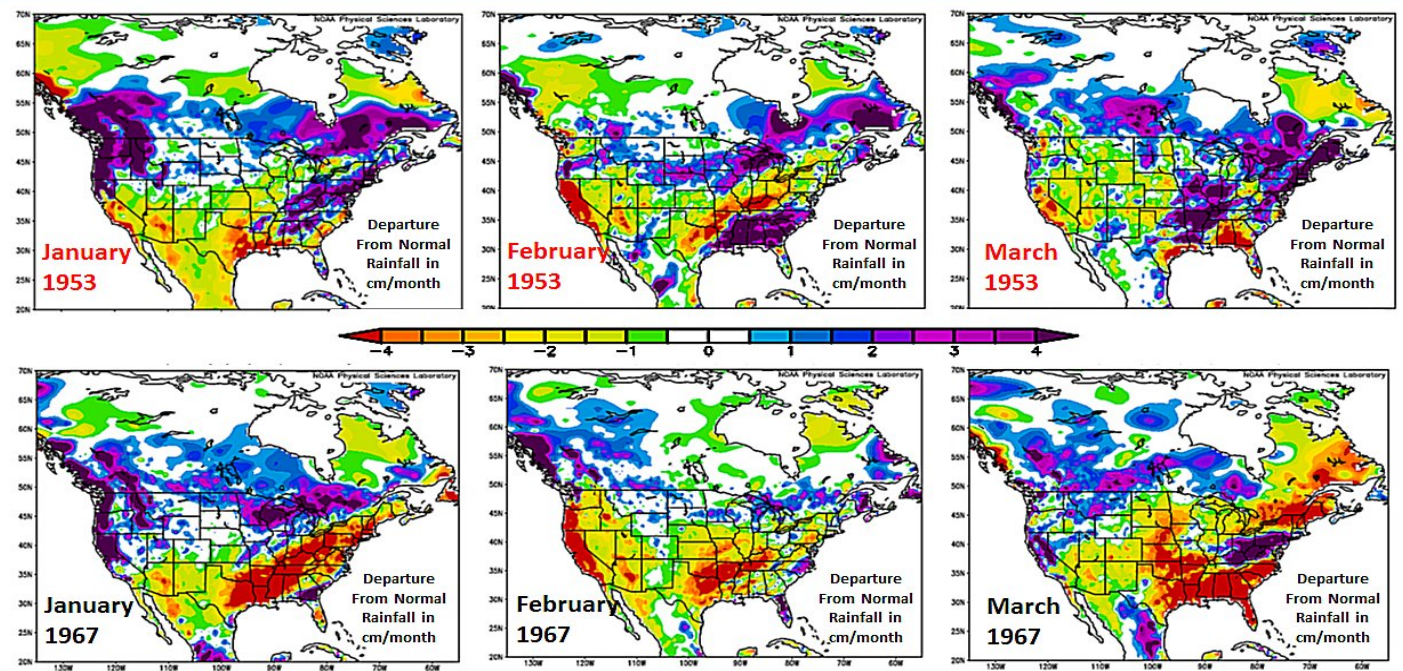
Longer range outlooks for the spring season will be very important this year since there is potential for frequent precipitation and possible delays to planting and routine fieldwork. As noted previously, though, it has not been satisfactorily sorted out which part of the Prairies might be most favored for the greatest precipitation. Additional research is necessary over the next two months to improve the spring planting outlook, but there is enough evidence that fieldwork may not advance as swiftly as it has in the past because of more frequent rain.

In the meantime, the next few weeks will generate more near to

above normal precipitation and cool temperatures for most of the Prairies. February temperatures should warm especially in the west and that may begin melting snow. Limited frost in the ground before this year's snow fell may help get some of that snow melt moisture into the soil for use in the early spring.

Early research has also suggested that the cold bias that may be over the Prairies this month may shift to the east in February and March. If that happens and temperatures trend warmer there may be some potential for early spring fieldwork prior to the arrival of rainy weather, but more research is needed.

Additional research for the winter and spring has produced two strong parallel years to this winter. The first was 1953 and that year is very important since it is a member of 18-year cycle giving that year quite a bit of influence on the forecast. 1967 is another year similar to this year and that year is not a member of the 18-year cycle. Both years are contributing to the already present bias for wetter spring conditions found in 2007, 1971 and 1989.



January And February To Bring More Moisture

Cold temperatures in the Prairies this week will begin to abate for a little while next week only to be followed by additional cold weather later this month. That should bring the average of temperatures across the Prairies in January below normal for the majority of the region.

Waves of snow during January will help to leave the month a little wetter than usual like those of November and December. Normal precipitation in the heart of winter across the Prairies is not very great and it does not take much moisture to induce above normal precipitation totals.

February will be a little different with a high pressure ridge that will have been most dominating in British Columbia during January drift into Alberta periodically resulting in warmer than usual temperatures.

The warm up will be disrupted periodically by short term bouts of cooler air and the contrast in airmass temperatures should be sufficient enough to generate periodic precipitation.

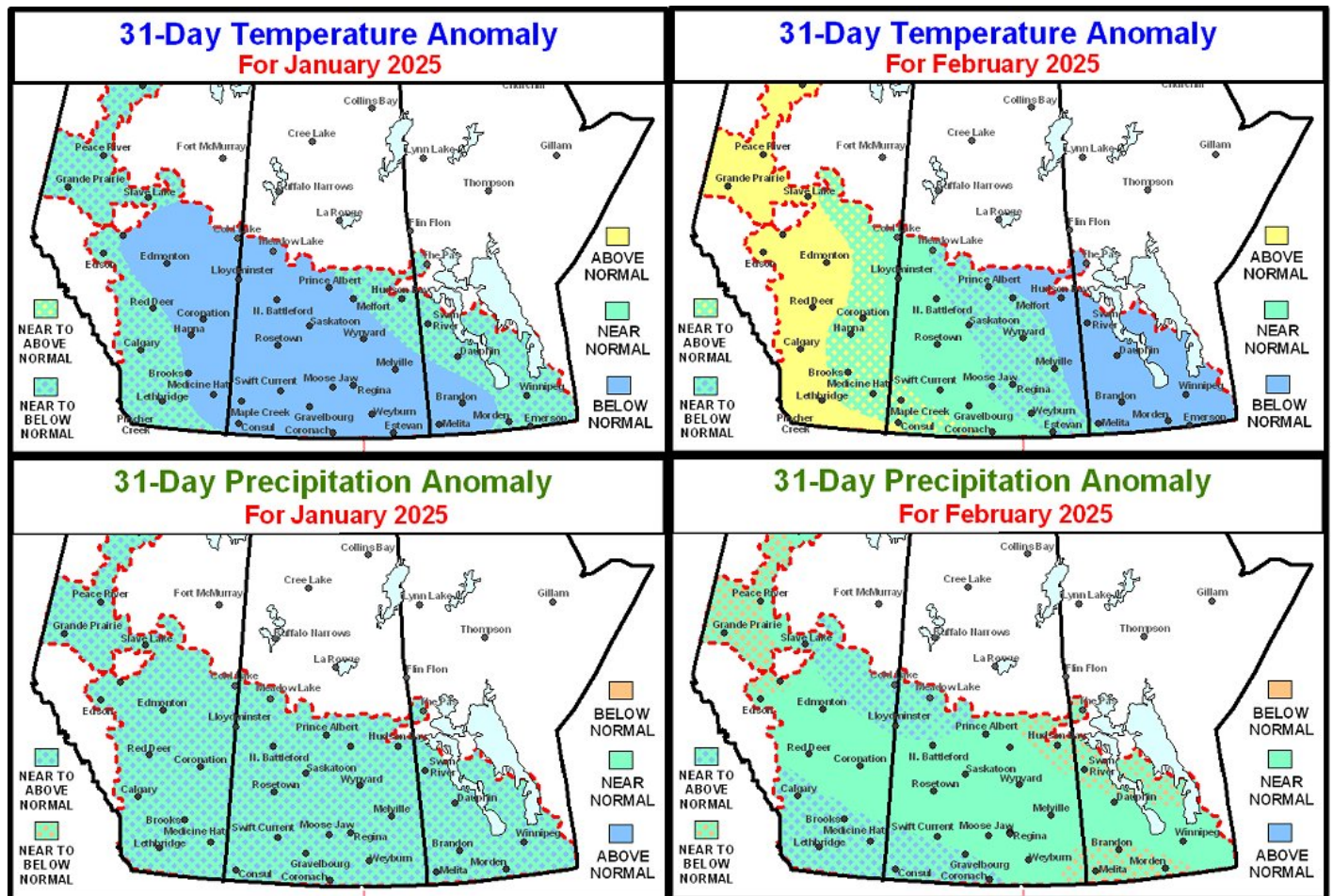
February precipitation will be greatest in the southwestern Prairies and across the northern part of Alberta to northwestern Saskatchewan. A slight drier than usual bias is expected to evolve in northeastern Saskatchewan and portions of both northern and southern Manitoba. A part of the Peace River Region may also be drier than usual in February.

Temperatures next month will be most above normal in western and southern Alberta and that is when some areas will experience snow melt which should help improve topsoil moisture as it seeps into the soil. Now some areas in southern Alberta have no snow on the ground today, but

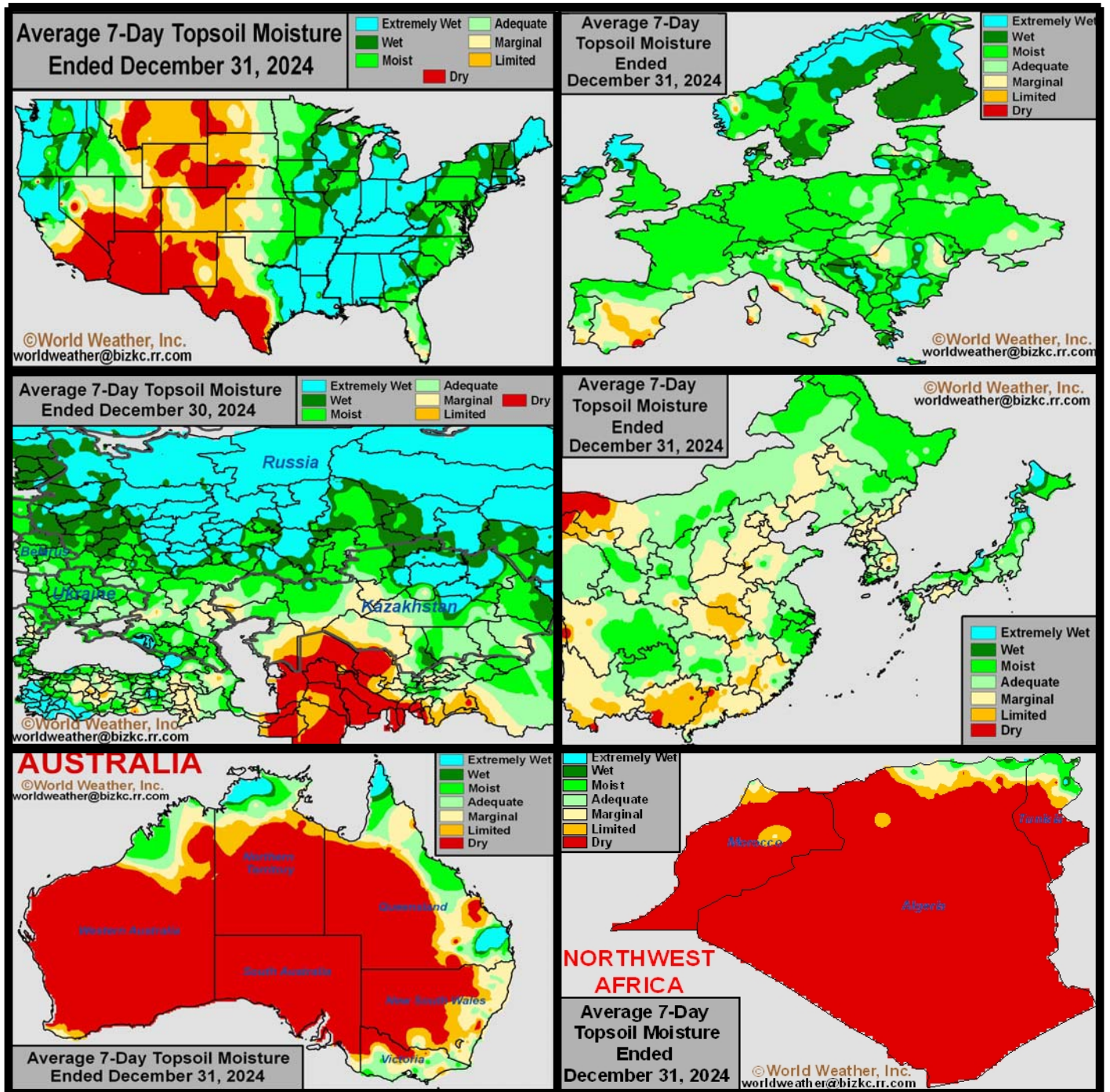
snowfall in January will change that situation and the melting of that snow will lead to better topsoil moisture.

Soil moisture in the southern Prairies is still well below normal in many areas because of multiple years of drought. Hopefully the precipitation coming in the spring will not be such a large volume that the ground becomes excessively wet and flooding evolves. That is not presently in the forecast, but it would not be out of the realm of possibilities for such an event to take place. Many of the worst droughts in modern history have been followed substantial periods of rain that saturated the ground and induced flooding. That may not occur this year, but it should not be a surprise if such conditions evolve.

A more formal forecast for the spring will be released next month.



Selected Weather Images From Around The World



U.S. weather in recent weeks has saturated the topsoil with moisture from the Mid-South region through the Midwest and in a part of both the northeastern and northwestern states. Most of the Great Plains are dry biased and will need moisture in the spring to support planting and early season crop development. China has been drying out in recent weeks and that will continue for a while longer. Southeastern China should be driest during January and February because of La Nina like conditions. There is potential for Spain, Portugal, North Africa and the Black Sea region of Turkey, Ukraine and Russia to get greater precipitation this month. That could lead to improved winter crop conditions prior to aggressive spring crop development. More rain will still be needed in North Africa. Eastern Australia's summer crops will trend wetter later this month and in February. In the meantime, recent drying in the far south of Australia has been ideal in promoting winter crop maturation and late season harvesting.

Southern Brazil Will Continue To Dry Down

Several areas in southern Brazil were dry or received limited rainfall during the past week. The region still had ample moisture to support aggressive growth despite the lack of rain. With at least another week to ten days of drier than normal conditions, additional drying is expected. The need for timely rain will increase later this month to maintain a good environment for soybeans, rice and first-season corn. Other locations in Brazil received enough rain to maintain aggressive growth. Waves of rain will persist in the coming week. Minas Gerais may receive enough rain to promote localized flooding that may damage a minor amount of crop. Overall production potentials will remain generally favorable.

Rainfall varied significantly across the main production areas in Brazil during the past week. Minas Gerais, Goiás, much of Sao Paulo outside the southwest corner, and much of Mato Grosso received anywhere from 1.50 to 5.00 inches with local amounts near 8.00 inches in Minas Gerais for the seven-day period ending Tuesday morning. Southern Bahia, Mato Grosso do Sul, and southwestern Sao Paulo received 0.50 to 3.50 inches with pockets in southern Mato Grosso do Sul that received little or no rain. Parana, Santa Catarina, and the eastern half of Rio Grande do Sul received 0.16 to 1.18 inches of rain with local amounts up to 2.50 inches. Western Rio Grande do Sul was mostly dry.

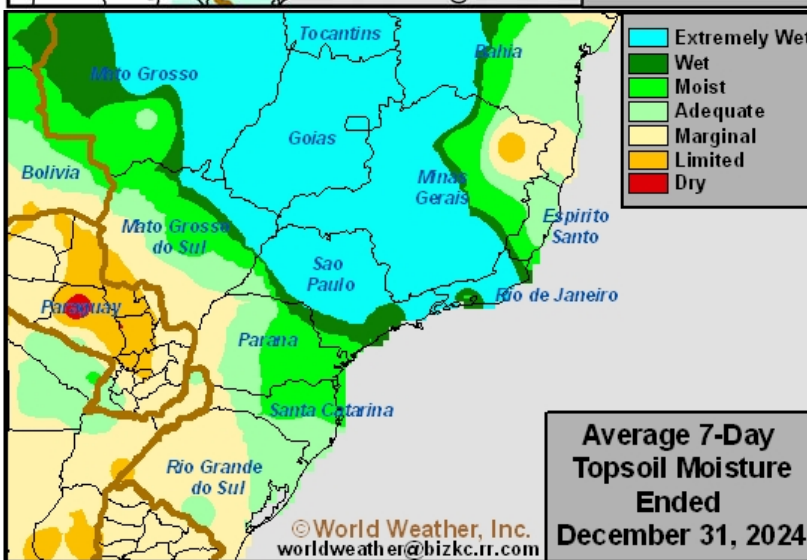
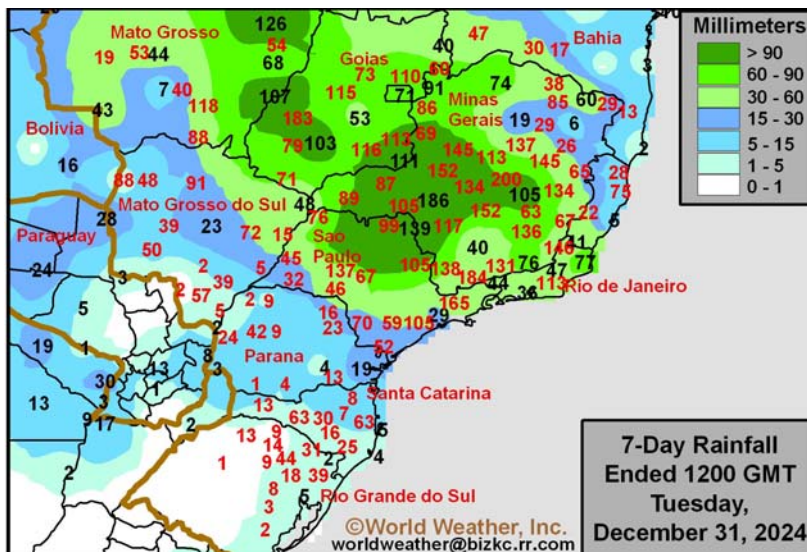
Temperatures were near normal with highest readings in the upper 20s and later 30s Celsius. Pockets in southern Brazil only warmed to the lower 20s. Lowest temperatures were in the rang of 10-20 with pockets in Mato Grosso and Minas Gerais only

minimal.

Planting is winding down in much of Brazil. As of December 29, soybean planting was 98.2% complete. First-season corn planting was 80.8% finished. Rice planting was 92.8% finished while 66.1% of the dry beans were in the ground. Cotton planting was 25.2% finished. The main production areas had ample moisture to maintain aggressive growth, even in the drier areas of southern Brazil. Production potentials remain favorable for the soybeans due to the rain and greater than usual acreage.

A few locations had begun harvesting the earliest planted soybeans and first-season corn in recent days. With the harvest set to expand in the coming weeks for the early crop, the wettest locations in center-west and center-south Brazil would benefit from a break from the heavier rainfall. Additional rain in the coming weeks may slow maturation and harvesting, reduce quality, and raise concerns for wet weather diseases.

Southern Brazil will trend drier than usual during the coming week as a La Niña-like weather pattern evolves across the country. Periods of erratic rainfall will still through Saturday as disturbances pass nearby. Moisture totals by next Tuesday morning will range from 0.35 to 1.50 inches in Parana, Santa Catarina, and northern and eastern Rio Grande do Sul. Other areas in Rio Grande do Sul will receive little to no rain. Tempera-



cooling to the lower 20s.

Soil moisture is rated adequate to excessive in much of Brazil. However, portions of western Rio Grande do Sul have marginally adequate moisture in the topsoil due to the lack of rain during the past week. Localized flooding was possible in the wettest areas of Minas Gerais, though overall damage was suspected of being

Brazil May Soon See A Little Heat, Dryness (from page 5)

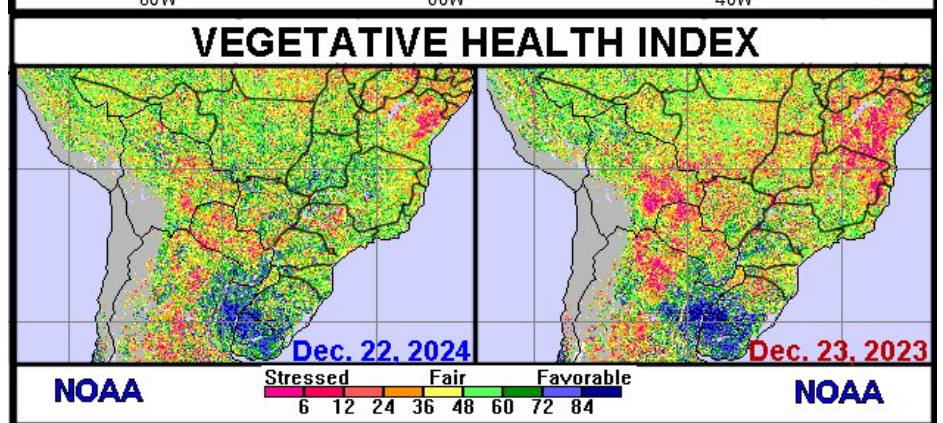
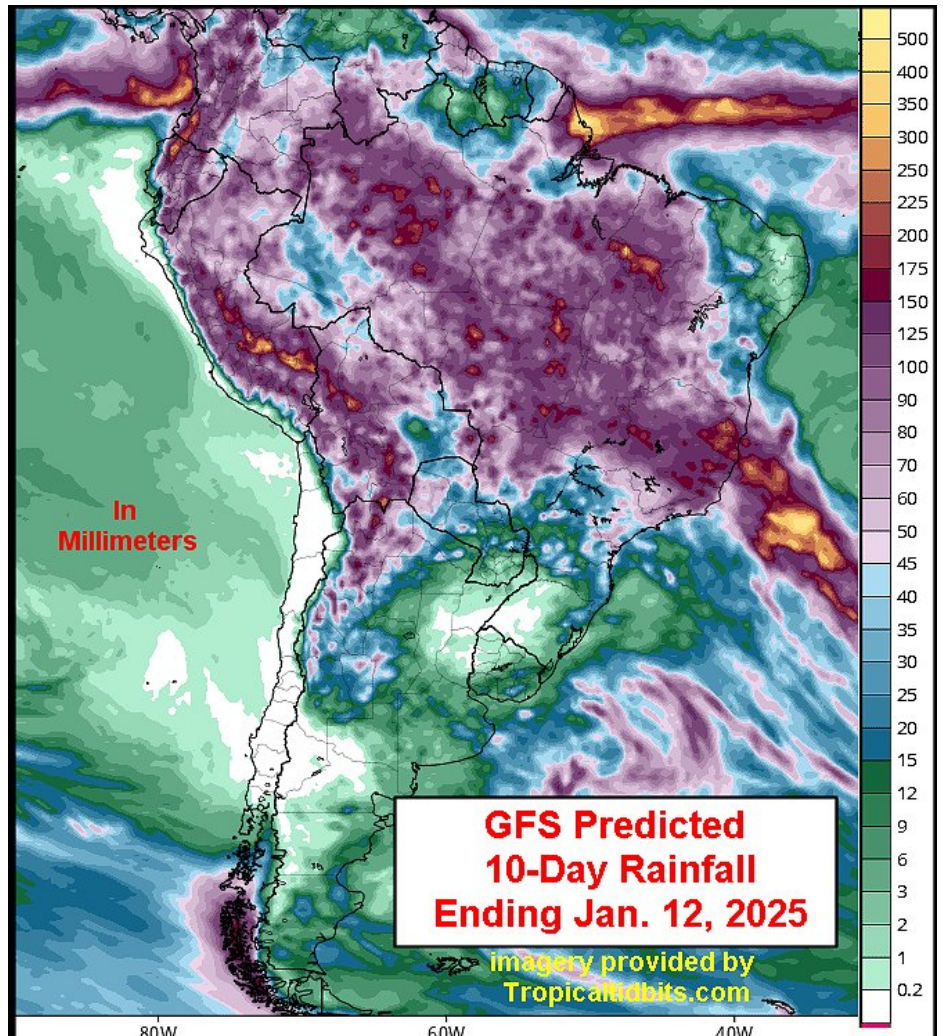
tures will be near to slightly above normal with daytime highs often reaching the upper 70s and 80s. Areas near the Argentina and Paraguay border will often warm to the 90s as well. Low temperatures will be in the 50s and 60s with pockets only cooling to the lower 70s.

Center-west, center-south, and northeastern Brazil will receive varying amounts of rain during the coming week. Mato Grosso and Goias into Minas Gerais, southern Bahia, Rio de Janeiro, and Espirito Santo will see some of the most frequent and significant rain. Moisture totals by next Tuesday morning will range from 1.50 to 5.00 inches with local amounts of 7.00 inches or more in Minas Gerais. Mato Grosso do Sul and Sao Paulo will receive 0.50 to 2.00 inches of rain with local amounts of 3.00 inches or more in northern Mato Grosso do Sul. Temperatures will be near or slightly below normal with daytime highs reaching the 80s and lower 90s most days. However, several locations in Minas Gerais and neighboring areas will only warm to the 70s on a frequent basis due to the rain. Low temperatures will be in the 60s and 70s.

Southern Brazil and portions of Sao Paulo and southern Mato Grosso do Sul will trend drier and slightly warmer than normal. The remaining production areas will receive rain on a frequent basis with temperatures trending near or slightly below normal.

Aggressive drying is slated for much of southern Brazil during the next ten days to two weeks. The lack of abundant rain will be beneficial for the earliest planted soybeans that will be maturing in the coming weeks. However, the ground may become too dry to support ideal growth for other crops. Additional drying later in January could impact production potentials for some of the driest fields.

The remaining production areas



in Brazil will have ample moisture to support aggressive growth in the coming weeks. Localized flooding will be a concern in Minas Gerais and neighboring locations, though crop and structural damage should be minimal. Aggressive soybean and

first-season corn development is expected. Maturation and harvesting may remain sluggish and the need for drier weather will increase. Early-season planting prospects for the Safrinha corn will otherwise remain relatively good.

India Receives Much Needed Rain; More Needed

A weather disturbance from the west promoted much-needed relief to dryness this past weekend easing long term dryness. Rainfall was greatest from northern Maharashtra and Madhya Pradesh to Himachal Pradesh and Uttarakhand while other production areas either missed out on the rain or did not receive enough to counter evaporation. The rain was beneficial for short-term crop improvements, though other rabi crop areas in northern, central, western, and eastern India need additional rain for ideal long-term crop conditions.

remaining locations in India were generally drought-free.

Recent rainfall was well-timed in northern and central India. These areas were too dry to support ideal establishment and early-season development of winter (rabi) crops most notably in rain-fed fields. However, much more was needed in coming weeks to maintain a good outlook for production. Crop conditions may deteriorate if drier weather returns for several weeks. Southern India has ample moisture for its rabi crops and prospects are good for the region.

Jammu and Kashmir into Himachal Pradesh will still see periods of rain later this week and weekend as disturbances track nearby. These areas will receive 0.25 to 1.50 inches of rain with local amounts of 2.50 inches or more in Jammu and Kashmir by next Monday morning. The remaining locations in India will be mostly dry. Extreme southern and northern India will again have a few opportunities for spotty rain January 7 – 13 while dry weather persists in most other production areas.

Rain-fed fields in particular have been struggling with dryness and need moisture for aggressive growth. Drier-biased conditions will return for at least the next week to ten days.

Punjab, Haryana, Himachal Pradesh, and Jammu and Kashmir into eastern Rajasthan, Madhya Pradesh, southern Chhattisgarh, Andhra Pradesh, and portions of Odisha and Tamil

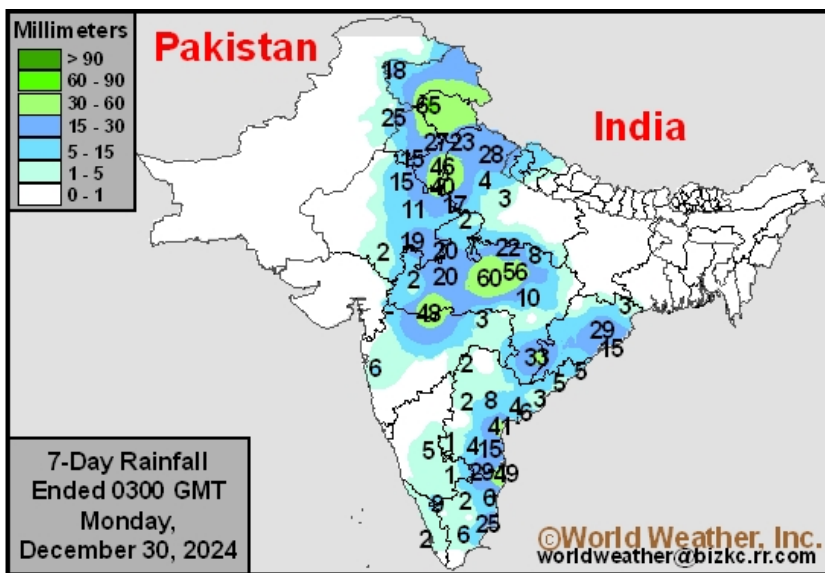
Nadu received 0.43 to 2.56 inches of rain for the seven-day period ending this morning. A few locations in Kerala, Karnataka, Telangana, and Maharashtra also received up to 0.32 inch of moisture while little to no rain fell elsewhere.

Several areas in northern and eastern India were enduring various levels of drought as of December 25. Precipitation in the past few days likely helped ease some of the dryness, though not enough fell to completely fix the moisture deficits. The

Eastern India and the remaining production areas in western India remain too dry to support ideal rabi crop prospects. These areas missed out on rain from the western disturbance and concern is rising over dryland production potentials. Vegetative health indices are already deteriorating, most notably in Uttar Pradesh, Bihar, Chhattisgarh, and neighboring locations. A few more weeks of drier weather may reduce production potentials

Drier-than-normal weather is slat-

ed for much of India this week. Net drying is slated for much of India for at least the next ten days to two weeks. Southern India will still have enough moisture to support a relatively good environment for new rabi crop development, though the need for rain will increase later in January. Northern and central India will have enough moisture to support new growth during the next few days as well. However, most locations will rapidly lose moisture from the recent rain and crop conditions may deteriorate. Western and eastern India will also remain too dry for ideal crop prospects. Timely rain will be imperative prior to and during reproduction to support the best production. Reproduction for most crops will occur from late January through all of February making the next several weeks very important for India's winter crop production potential.



Net drying is slated for much of India for at least the next ten days to two weeks. Southern India will still have enough moisture to support a relatively good environment for new rabi crop development, though the need for rain will increase later in January. Northern and central India will have enough moisture to support new growth during the next few days as well.

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Argentina Subsoil Moisture Rated Well; Drying Likely

Timely rainfall and seasonable to occasionally cooler biased temperatures in Argentina in recent weeks has held soil moisture at favorable levels, but that is about to change. Little to no rain for the next ten days to two weeks and warming temperatures will lead to a firmer topsoil within a week and crop moisture stress by mid-month. The driest areas will be in central and east-central parts of the nation.

Topsoil moisture is already rated marginally adequate to short with a few pockets very short. Subsoil moisture is rated more favorably at adequate levels except in La Pampa where the ground is too dry. Decreasing topsoil moisture will stress recently planted crops and could result in poor establishment. Well established crops are likely in good shape with little change likely for a while.

Corn and soybean planting are wrapping up across Argentina with over 80% of the crop estimated in the ground as of December 27 according to Argentina's Buenos Aires Grains Exchange. Planting of the other coarse grains, oilseeds, and cotton is either finished or in the final stretches as well. In the meantime, nearly 90% of the winter wheat had been harvested and should finish in the coming days.

Recent rainfall has continued to support relatively good crop establishment and short-term development

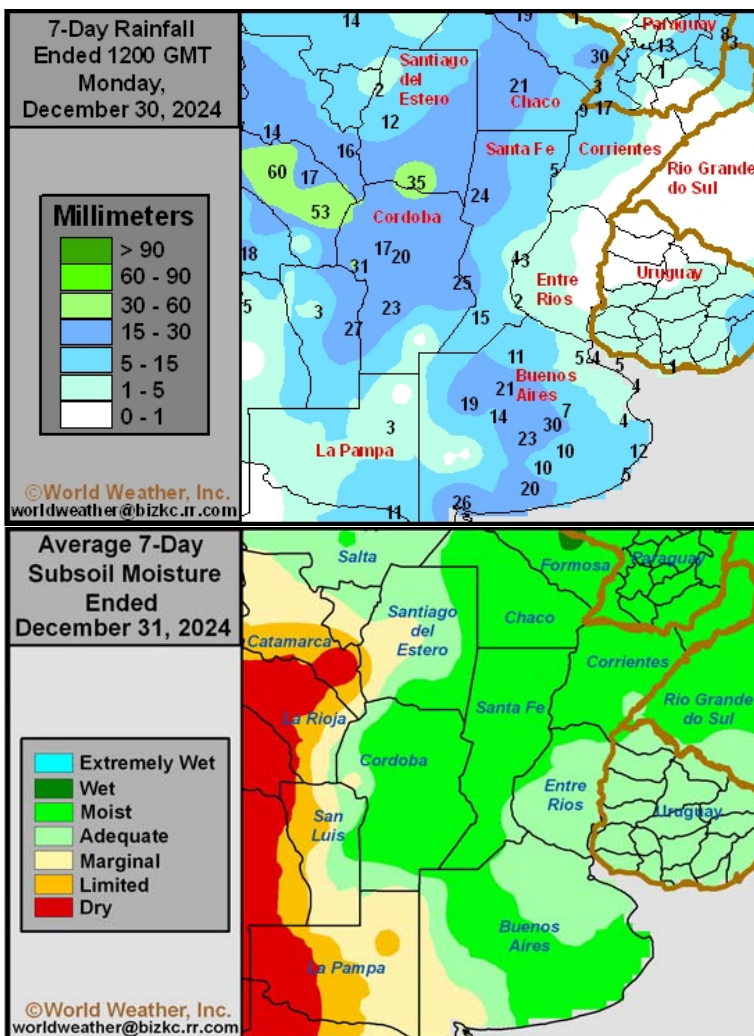
for much of Argentina. Periods of dryness may have limited aggressive growth at times and the need for timely rain remains high.

A La Nina-like weather pattern will promote drier than normal conditions for much of Argentina this week.

mosa will receive 0.25 to 1.00 inch of rain with locally greater amounts by next Monday morning. Little to no rain will occur elsewhere. Drier than normal weather will likely persist January 7 – 13, though periods of erratic rainfall are still expected.

Temperatures will trend near to above normal for much of Argentina this week. Daytime highs will peak to the 80s and 90s most often with portions of northern Argentina warming above 100 degrees through mid-week. Pockets in southern Argentina will also only warm to the 70s at times. Low temperatures will be in the 60s and 70s with pockets in southern Argentina often cooling to the 50s. Seasonably warm weather will be most common January 7 – 13.

Aggressive drying is slated for central and east-central Argentina for at least the next week to ten days. The spotty rain will slow drying rates at times, though a reduction in soil moisture is expected for most locations. Development conditions will slowly deteriorate as the ground firms across the region. No long-term production impacts are expected as long as rain returns later in January. However, additional dryness may raise concerns for production cuts. Late-season planting, winter wheat harvesting, and general fieldwork will otherwise advance swiftly.



Disturbances will still promote scattered showers and isolated thunderstorms through the end of the workweek before dry or mostly dry weather evolves over the weekend. Portions of La Pampa, Buenos Aires, Cordoba, Santiago del Estero, Chaco, and For-

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Summer Pressure Ridge Not Strong; May Limit Rain North

Research for weather in summer 2025 across the Prairies has revealed many signals and they are a bit conflicting. A weak high pressure system shows up in most of the 18-year cycle analog years which helps to support some timely rainfall across at least parts of the Prairies.

There is at least a little concern about the orientation of the summer high pressure ridge in some of the analog years. The ridge still has a similar structure to that of the past few years in which dryness showed up during the summer. The ridge is orientated in such a manner that portions of the Prairies will experience drier weather during July and August.

The dryness advertised for the coming summer is different from that of previous years. First, June weather should still be promoting showers and thunderstorms across at least southern portions of the Prairies and most likely the ridge of high pressure will not be fully developed until July.

Preliminary research suggests that the orientation of the ridge may limit precipitation in the northeast part of the Prairies and possibly in a part of the Peace River Region. Looking at the daily loops of high pressure suggest many changes will take place

from one week to another and that is very important for preventing any particular area from drying out excessively. However, there is some subtle suggestion in the data that the northeastern parts of the Prairies may be one of the less favored areas for rain. That would include northeastern Saskatchewan and northern and east-central Manitoba. Some of the data suggests a larger

mean ridge position that would disfavor rain in the region there would still be some precipitation at times. Most likely the rain would be below normal.

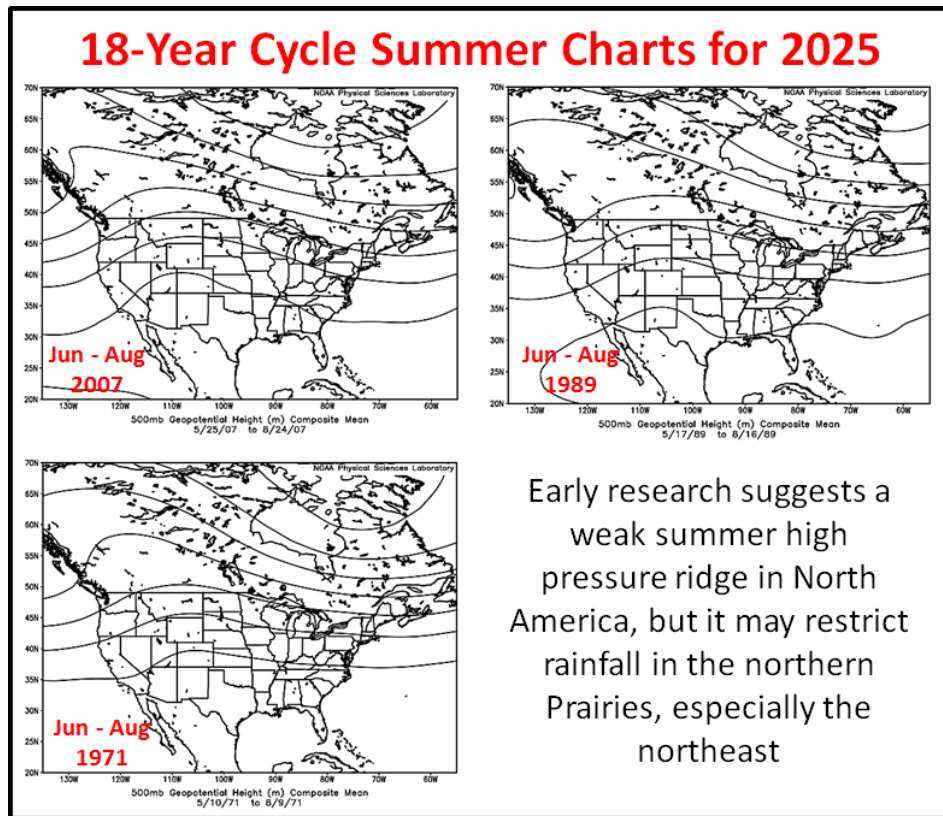
The issue with high pressure in the Prairies this summer continues to be researched. The situation looks enough different from that of recent past years that the drier bias in

southwestern parts of the Prairies looks less likely to occur, but the drier bias in this coming summer may be farther to the northeast.

There is also evidence that frontal boundaries dropping through eastern Canada will become stationary across the northern U.S. Midwest and northern U.S. Plains. That frontal boundary could be a trigger for showers and thunderstorms at the peak of the ridge of high pressure over the Prairies which further

complicates the outlook.

An official forecast for the summer will be released next month and ongoing research will hopefully resolve the issue over summer wet and dry areas across the Prairies. Confidence is rising though that the southwestern Prairies will not see another crazy dry year like those of the recent past years.....fingers crossed.



Early research suggests a weak summer high pressure ridge in North America, but it may restrict rainfall in the northern Prairies, especially the northeast

part of Manitoba may be impacted by a drier finish to the summer. Confidence is still very low because of variations in the data from one analog year to another.

Dryness in the Peace River region is also up for debate because of what looks to be quickly changing weather patterns from one week to another. Even though there is a

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