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The Canadian Agriculture Weather Prognosticator

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Ontario And Quebec

Snowfall has been frequent in recent weeks and temperatures have been bitterly cold at times. Drier and warmer weather would be welcome, but not needed while winter crops are dormant.

WORLD WEATHER ISSUES

- Winterkill Impacted U.S. Hard Red Winter Wheat This Week
- Florida Citrus Areas Experienced Multiple Freezes, But Little Impact On Crops Resulted
- Torrential Rain In Peninsular Malaysia And Central Philippines Damaged Some Grain production In Late December And Early January
- Brazil Crop Conditions Remain Mostly Good
- Argentine Struggling With Dryness
- India Needs Rain For Its Winter Crops
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New Year Starts With Same Old Pattern

Happy New Year!

The start of a new year is always a time for new hopes and dreams, but on the weather front 2018 has not offered much opportunity for relief from drought. Worry continues to run high in some of the drier areas in the southern Prairies that spring is going arrive with no better soil moisture than we had last autumn.

To a certain degree, with the ground frozen and frost in it, a wetter biased winter really will not provide a huge opportunity for sustainable changes in moisture for the spring. Rain and snow in the spring will be, by far, more important than the precipitation that falls this winter. Lets just hope that is correct because so far this winter has not done much to change the farmer psyche across the drought stricken areas.

World Weather, Inc. is still looking for improvement in the spring, but changes in the midst of the winter will not be very likely. Obviously, this La Nina event has not performed traditionally with the only greater than usual precipitation confined to the southwestern corner of the Prairies. Most of that wet bias has been in southern Alberta from near Calgary to Pincher Creek, Lethbridge and some of the Milk River region. Most other areas have been drier than usual not only in the most recent 30 days, but in the past 60 days, as well. The reason for this has been due to the non-traditional La Nina event.

The jet stream has been orientated in such a manner to limit precipitation in the south-central parts of the Prairies and that has done nothing to change worry over dryness in central and southern Saskatchewan crop areas or in parts of Manitoba. The drier bias has been good for the water logged northern parts of Alberta and from northeastern Saskatchewan into northwestern Manitoba where there is no need for moisture after the past two years of surplus precipitation.

La Nina conditions are beginning to weaken and as that trend continues for a while there is hope for a change in precipitation across Canada. The sad part is that the changes in La Nina may not be significant until we get to February leaving January weather somewhat similar to December with a few bouts of colder than usual air, but the temperature anomaly for the entire month my be warmer biased in many areas

Certainly the start of January continued the bitter cold episode that started at the end of December, but the trend will abate during the coming weekend. Warmer air will overspread most of the prairies for several days, but a new bout of cold is expected to impact the region during the middle part of next week. Some snow will precede the event. Cold weather next week will only last a few days and then the trend will be for warmer than usual conditions for the balance of January and early February.

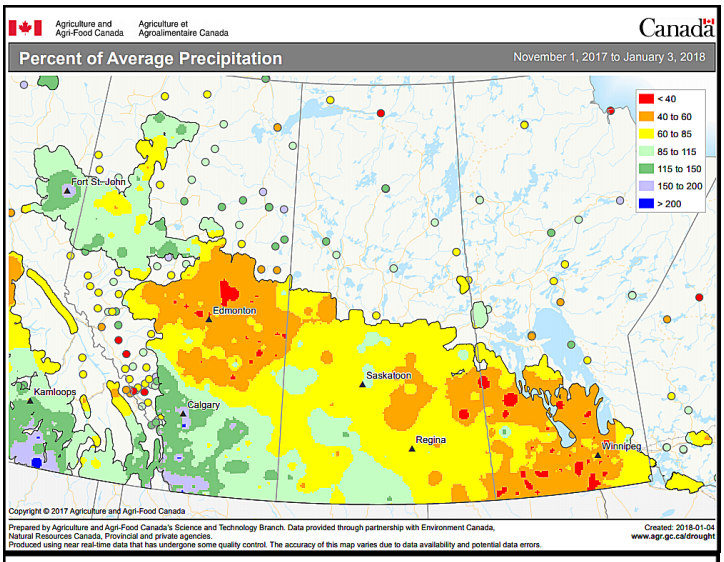
The more consistent warmer biased environment will lift the jet stream a little farther to the north allowing some greater precipitation opportunities to evolve. By no means, however, will there be frequent storms of significant sizes. The fact that we are deep into winter right now will not open up the soil for any moisture and whatever snow accumulation occurs

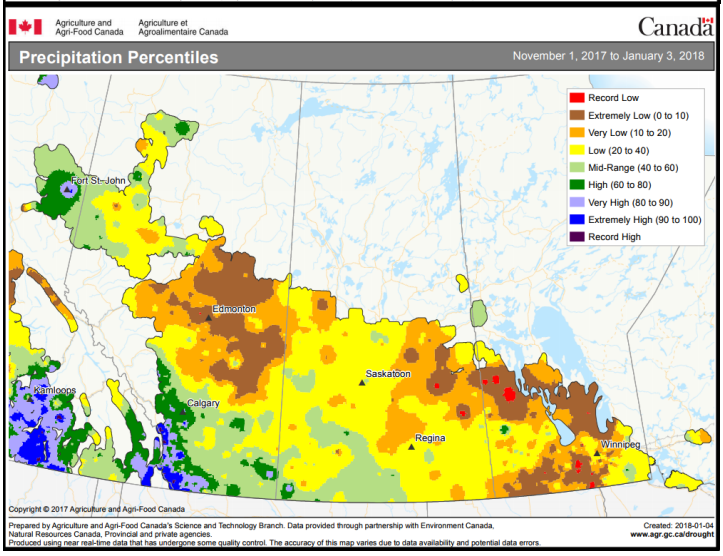
New Year Starts With Old Pattern (continued from page 1)

in the next few weeks will just sit on top of the soil with a limited potential for absorption into the ground during the spring warmup since the snow will melt before frost comes out of the ground leaving relief from drought up to spring weather patterns.

So far this winter season, November through January 3, precipitation has been below average in most of the northern and eastern portions of the Prairies with the Peace River region being the exception. The Peace River region, like southern Alberta has received near to slightly greater than usual precipitation with the greater than usual amounts confined to localized areas. Most of the Prairies have done no better than normal with precipitation totals since the beginning of November and that is no way to fix drought in the southern production areas.

The drier bias in north-central and northeastern Alberta, far northwestern Saskatchewan and northeastern Saskatchewan into northern Manitoba has been quite welcome and a necessary change that is needed if these areas are going to escape from their excessively wet environment that they were in during late 2016 and most of 2017. Having less snow on the ground relative to normal in some of these more northern production areas when spring rolls around will translate into a better environment, "potentially" for early spring farming activity. There will still need to be a period of net drying to get rid of moisture surpluses, but that can occur much easier without significant snow that has to melt first.





So far this winter some of the moisture deficits in northern Alberta, Manitoba and northeastern Saskatchewan places late 2017 in the top ten percentile of driest November/December periods. Record dry conditions have been suggested—at least out of the past 69 or 70 years in several locations in northern and southeastern Manitoba.

No weather pattern change great enough to fix the moisture deficits will occur over the next several weeks. Some drier biased conditions will continue across the northern Prairies during the balance of January and probably in February, as well. Temperatures will be a little cooler than usual in February after the second half of January is warmer biased. Some of the late January warmth will bleed over into early February with the middle to latter part of that month expected to be coldest.

Snow depths in the Prairies are greatest in far southern Alberta and from east-central Saskatchewan into the Interlake region of central Manitoba and northward. In between these two greater snow depth regions there is limited snow cover. Quite a few areas in west-central and central Saskatchewan into south-central Saskatchewan is reporting very limited snow depths. A few areas are snow free or nearly snow free which obviously leaves little opportunity for significant runoff in the spring.

Some of the areas with lowest snow cover are a part of the long term drought pattern that began early last summer suggesting the drought pattern has not ended. A dominating northwesterly wind flow aloft that limited summer precipitation last year remains the primary source for weather this winter and that has limited precipitation amounts.

Normally, La Nina years would be more generous with snowfall across the southern Prairies, but so far this year the greater than usual snow has been quite limited to the far southwestern corner of the Prairies.

Weather in the next few weeks will bring a little more precipitation to the Prairies, but as noted previously it will be very difficult to get enough snow to make a difference in soil moisture during early spring.

January, February Weather To Be Quite Mixed

Changing weather patterns should be expected a few times in the next two months. The change will make it difficult to get the temperature and precipitation anomalies just right, but January will be a month of transition moving away from the bitter cold that ended December and started the month and replacing it with another bout of warmer than usual conditions.

Cold weather in the eastern Prairies in early January will temporarily abate during the first weekend of the month, but follow up bout of cold will occur briefly in parts of the eastern Prairies next week. Once next week's bout of cold abates a more sustainable period of warming is expected and that will translate into better slightly better chances for snow.

January will still have a cold weather bias in the east because of the cold start to the month. However, temperatures near and beyond mid-month will be warmer than usual. The warm weather bias may prevail into the first week of February.

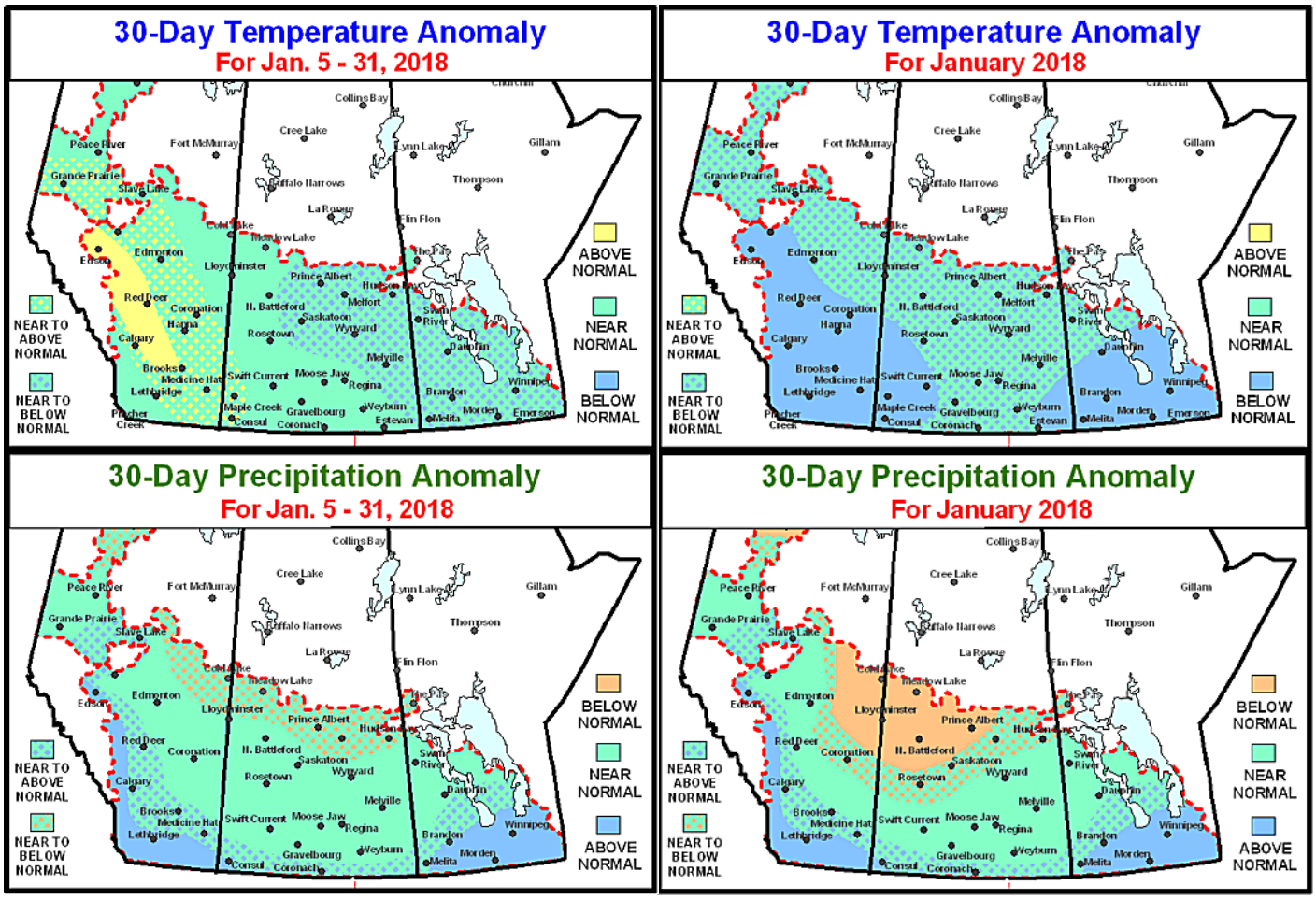
February temperatures are expected to trend much colder again near and beyond mid-month. The return of cold weather may not last long, but it could be another period of relatively potent cold.

Precipitation in January is expected to be greatest along the front range of the Rocky Mountains. Some greater than usual precipitation may also occur briefly in southernmost Saskatchewan, near the U.S. border. Southern Manitoba may get significant snowfall from one or two fair-sized storm systems, but the remainder of January will be drier biased.

The most consistent drier than usual weather during January will occur in the northernmost parts of the Prairies, Most areas not mentioned will receive a relatively normal amount of moisture in January, but that is not usually very much.

February's colder weather will induce some increase in precipitation in the west and southern parts of the Prairies. This part of the outlook is low confidence because if the cold is potent and fast-moving enough it will push through the Prairies so quickly that significant precipitation outside of the front range will not be likely. If, however, the cold comes into the region slowly there will be a couple of opportunities for timely precipitation events that will leave southern Saskatchewan wetter than usual.

If January and February's forecast verifies there will still be need for significant spring rain to end drought.



Argentina Has A Dryness Problem

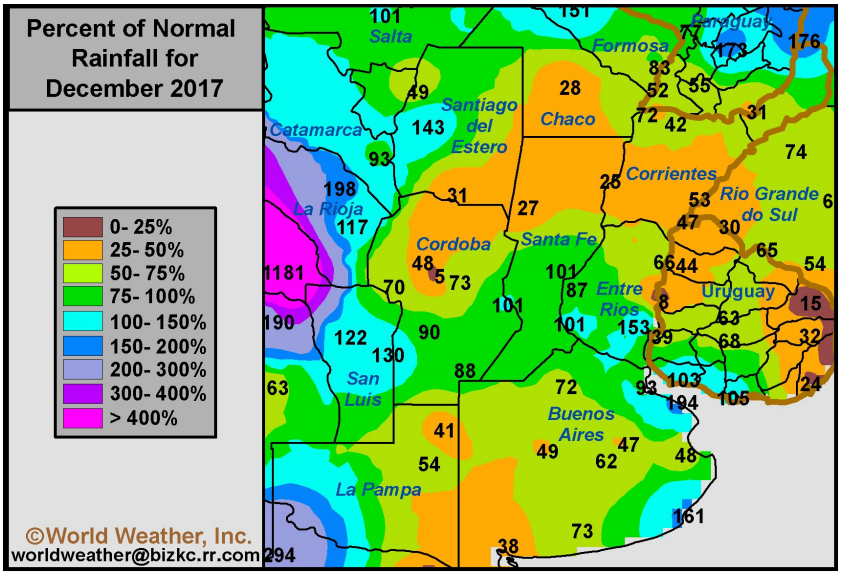
December weather in Argentina was notably drier biased in the northern one-third of the nation's grain and oilseed production region. Many areas reported less than 40% of normal precipitation. Buenos Aires and eastern La Pampa, meanwhile, trended much drier in the second half of the month and that allowed topsoil conditions to firm dramatically. By the end of December there was virtually no moisture in the topsoil in Buenos Aires or La Pampa, but subsoil moisture was rated marginally adequate to short. Some areas in Buenos Aires and La Pampa were becoming as dry as northern Argentina was during much of December with top and subsoil moisture running short to very short.

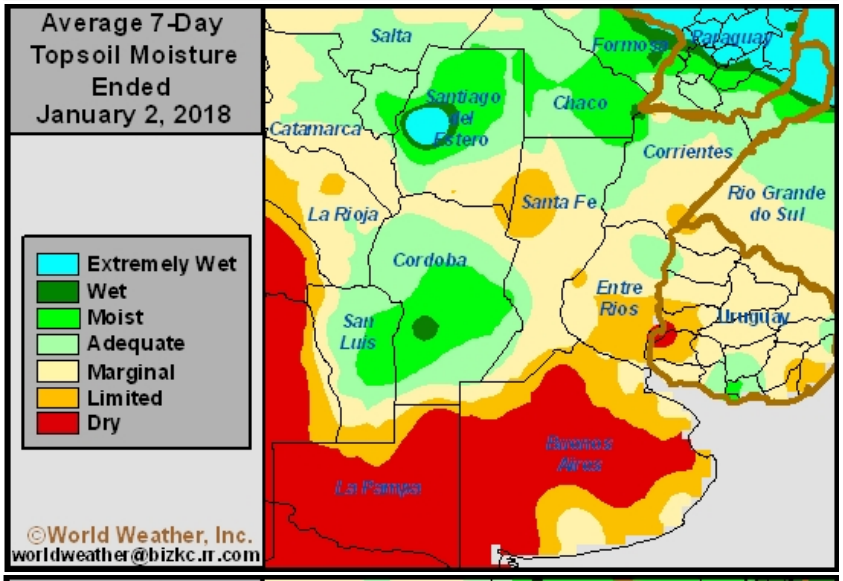
In contrast, central Argentina grain and oilseed production areas reported a more timely precipitation pattern that brought rain to Cordoba, parts of southern Santa Fe and Entre Rios in a timely manner. That was changing in the final days of December and early January at which time rainfall was having a tough time countering evaporation rates and accelerated net drying was beginning to evolve.

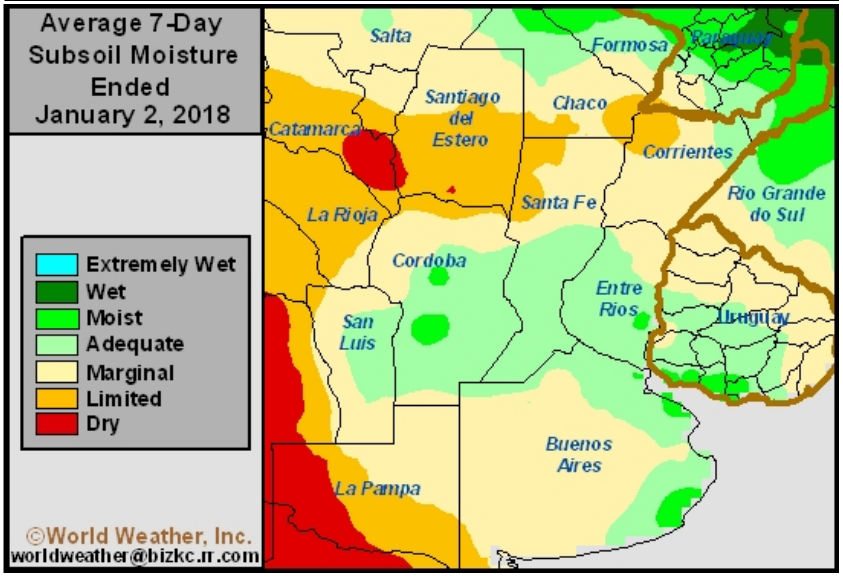
Some rain was moving into southern Argentina at the time of this writing and it was expected to shift northward Friday. Resulting precipitation was expected to be mostly too light to counter evaporation and areas east of Cordoba began firming up in the final days of December and early January. That makes the next two weeks critically important for most crop areas in the nation.

Some planting of summer crops was still incomplete at the beginning of January. The planting season is normally winding down in the first half of this month and the door will soon close for planting and farmers will have to gamble on significant rain falling or not to help them decide to plant or not.

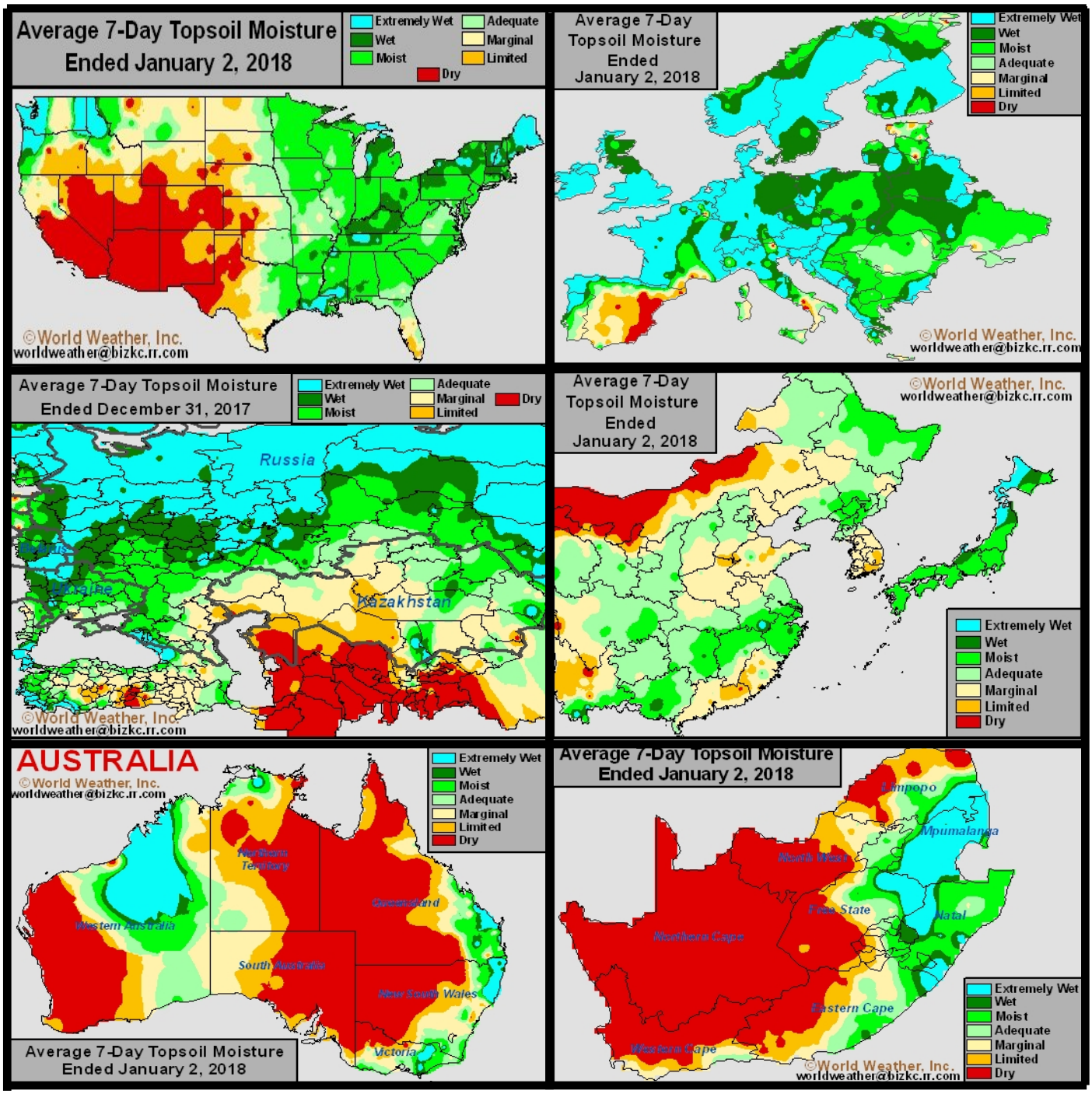
A ridge of high pressure is expected over Argentina this weekend and early next week that will prevent rain from falling and send temperatures well above average. The added stress will likely culminate in a critically important rain event near mid-month. If significant rain does not occur in the January 12-16 period there is a good chance that a larger part of Argentina will lose production either from abandoned fields or due to falling yield potentials due to drought.







Selected Weather Images From Around The World



Australia's summer crops are mostly produced in eastern and central Queensland and central New South Wales. Most of the production region has been drier biased in recent weeks with hot temperatures and that has stressed crops and raised worry over unirrigated production potentials. Significant rainfall is not very likely for a while. Western parts of South Africa have also suffered from poor rainfall so far this growing season. Dryness in eastern Northern Cape, western Free State and much of North West will likely translate into falling yield potentials without improved rainfall soon. Some of the dryness shown in east-central China on January 2 has already been eased by a significant rain and snow event that occurred across the region earlier this week. The long term outlook for winter crops in China is very good. Dryness in Europe and the western CIS is slowly being eroded away by periods of rain and snow. Greater moisture is still needed in Spain and parts of Russia's Southern Region. In the U.S. dryness is still a problem in the Great Plains where winterkill occurred this week due to bitter cold and limited snow cover.

Brazil Crop Weather Still Good; Some Drying South

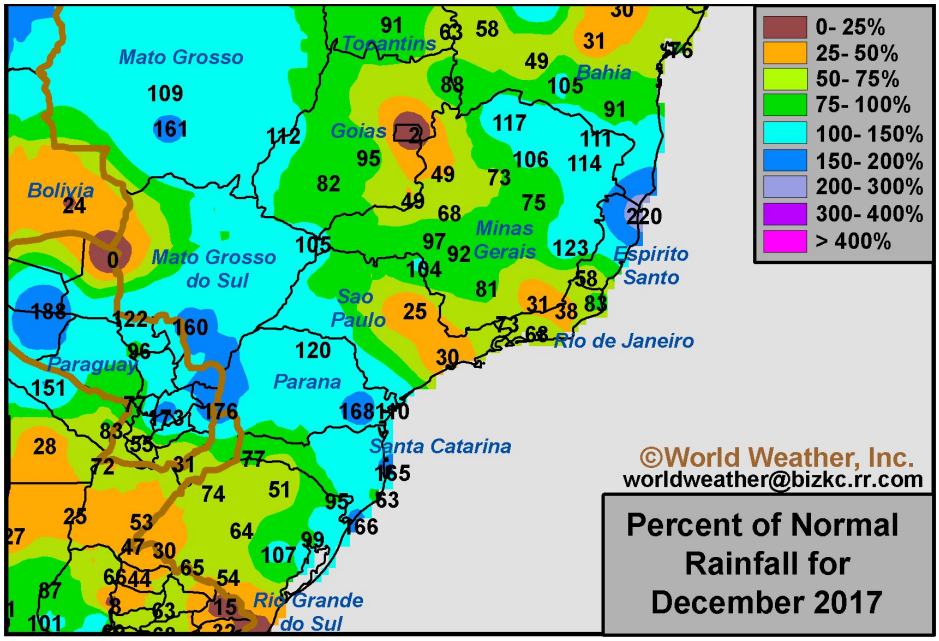
Brazil weather varied quite a bit in recent weeks, but the bottom line has been mostly good for production potentials. The biggest issue with dryness appears to be in the far northeast corner of the nation where top and subsoil moisture are rated poorly. This same region in northeastern Brazil has been fighting drought for years and even though rainfall has been more routine this year water supply and soil moisture are still well below average suggesting crop stress will eventually get the best of the production potential from that region.

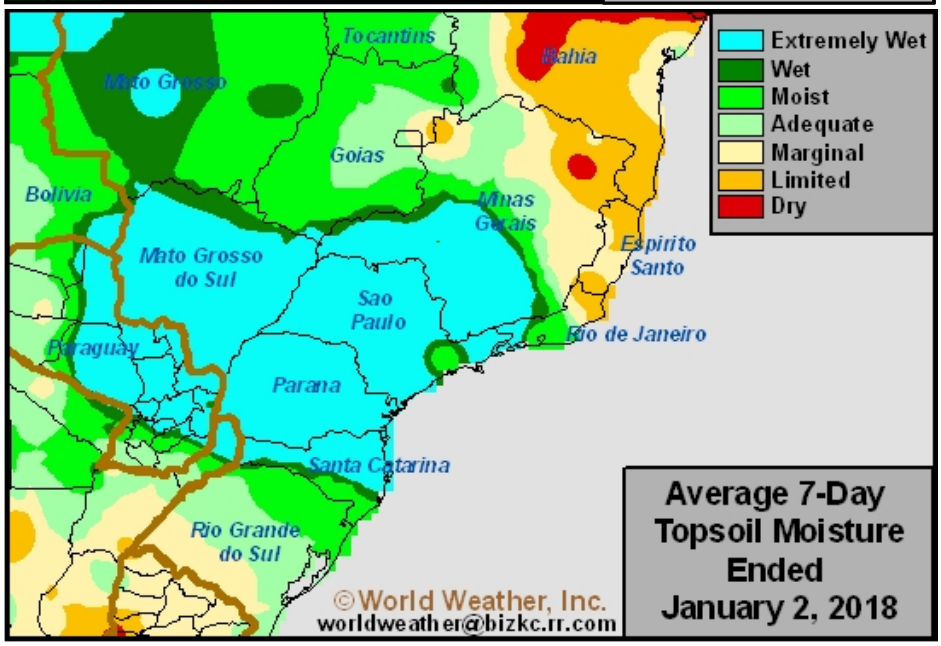
Soil moisture elsewhere in Brazil is mostly rated quite favorably. There has been a recent bout of excessive moisture across center south production areas that has started a new round of worrying with the harvest of early season crops coming up soon. Drier weather will be needed before too long to support grain and oilseed maturation and early harvesting.

Poor rainfall in late September and October this year delayed planting in Mato Grosso and some areas southeast into center south production areas. The delayed planting will lead to later harvests and that could leave second season corn and cotton more at risk of running out of moisture during reproduction later this year.

Outside pf northeastern Brazil the only area of interest because of some net drying is in southern Brazil. Parts of Rio Grande do Sul and neighboring areas of Paraguay, Uruguay and eastern Argentina are drying down. Significant precipitation will be needed by mid-month to stave off a threat of dryness and crop stress. Most of the greatest drying is expected over this next seven-day period.

Rain in southern Brazil may resume near mid-month and that will translate into a very important period for possible crop stress relief. If significant rain fails to evolve the stress in southern Brazil and neighboring areas could harm production potentials.



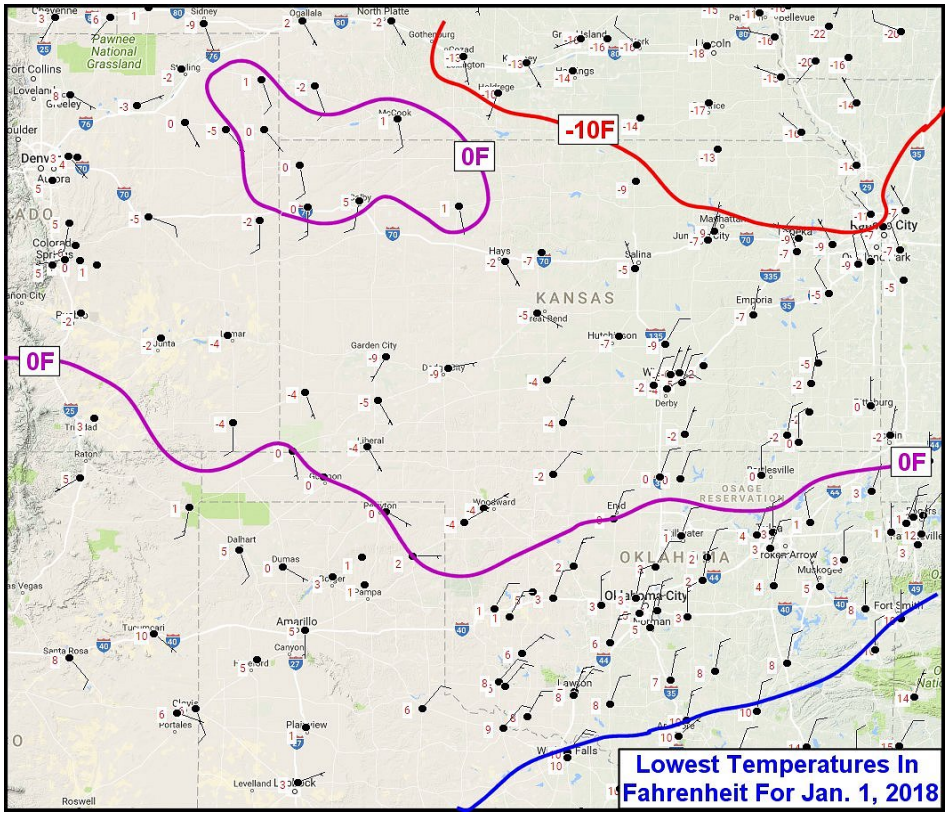


In the meantime, center west and center south Brazil will receive frequent showers and thunderstorms. The wetter bias could lead to excessive amount of moisture and possible local flooding. Flooding rain could be a negative factor for early season crop maturation and harvest progress. If the wet bias lasts too long there will be additional delays to harvesting further raising concern over planting conditions for second season corn and cotton. If planting is delayed too long the rainy season will end before reproduction occurs and that may translate into lower yields.

For now, most of Brazil's summer crop production potential remains somewhat similar to that of last year. However, there is a fair chance that production may be down a little over that of last year, but no crisis is expected. The crop will remain sufficiently large to maintain low futures and cash prices for new crop corn and soybeans.

Winterkill Suspected In Kansas, Oklahoma Wheat

Bitter cold temperatures occurred this morning throughout much of the Great Plains and into a part of the Midwest. Subzero degree temperatures Fahrenheit were noted in many areas as far south as northern Oklahoma raising the potential for some winterkill because the region in southern Kansas, southeastern Colorado and Oklahoma into the Texas Panhandle was largely free of "significant" snow cover and temperatures slipped as low as -9 Fahrenheit in the snow free areas of southwestern Kansas.



Lowest temperatures this morning, January 1, slipped below zero Fahrenheit as far south as northern portions of the Texas Panhandle and northern Oklahoma. Mostly clear skies, light wind and limited snow on the ground likely contributed to the extreme conditions in wheat production areas. Extreme lows slipped to -9 degrees Fahrenheit at Garden City and Dodge City, Kansas as well as in a few areas north of Wichita, Kan. Lows of -5 to zero were common in the far southernmost counties in Kansas into northern Oklahoma while readings of -1 to +5 occurred in the northern Texas Panhandle. Most of central Oklahoma reported low temperatures in the positive single digits and all of these readings occurred with little to no snow on the ground.

Damage to winter wheat will vary widely from one field to another and many crops may have survived the cold. Damage assessments will not be very accurate until spring when the crop awakens from dormancy. The first sign of permanent damage will be no greening in the spring. However, some crops may green up and develop relatively well, but their reproductive parts will be sterile preventing normal grain formation and fill to take place. It is still possible that under favorable conditions this spring the wheat crops will set new tillers in an attempt to repair production potentials and if that occurs it is possible that the injured crop might still produce relatively well.

Hard red winter wheat areas in the central Plains were planted in a mostly favorable environment, but soil moisture became depleted shortly after planting leaving some crops poorly established. The weaker plants might have been more vulnerable to damage this morning, although sometimes the more moisture the plant has in its leaves and crown the higher the potential for permanent damage in a situation like this. The very dry conditions that have occurred in recent weeks may have minimized plant moisture in unirrigated fields and that might have helped enabled crops to survive a little better than expected because it is often the moisture in the plant cells that freezes and breaks down the cell walls leading to plant death.

Losses will be speculated over for the next few weeks, but until greening evolves and crops begin developing more aggressively it will be difficult to assess the impact of this morning's freeze.

Temperatures Monday afternoon will not rise above the teens and lower 20s Fahrenheit in the coldest areas noted above and low temperatures Tuesday morning will be back into the positive single digits. A more significant warming trend is expected the remainder of this week with no additional threats of damage.

In the meantime, low temperatures in the positive and negative single digits also occurred in the lower Midwest from Missouri to Ohio and mostly in the positive single digits in Kentucky and parts of Tennessee and northeastern Arkansas. Most of the areas reporting near and below zero Fahrenheit temperatures were snow covered, but those in the positive single digits were not. Very little, if any damage likely occurred to soft wheat in the lower Midwest. Crops farther to the north were not harmed by colder temperatures due to adequate snow cover.