TO SUBSCRIBE CALL 913-383-1161 OR WRITE TO WORLDWEATHER@BIZKC.RR.COM

The Canadian Agriculture Weather Prognosticator

Volume X, Issue XVII | http://www.worldweather.cc | January 7, 2019

WORLD WEATHER ISSUES

- North Africa Wheat And Barley Areas In Morocco And NW Algeria Are Becoming Too Dry
- Spain, Portugal, Western France Drying Out
- Australia Continues To Suffer From Excessive Heat And Dry Conditions; Livestock Stress At Danger To Extreme Levels
- India Is Still Too Dry For Winter Crops, But Rain Is Expected In Late January And February
- U.S. Soil Is Saturated In Most Of the Midwest, Delta and Southeastern States; Drying Needed
- Winter Wheat Around The World Remains In Mostly Good Condition; Minor Winterkill May Have Occurred in December In northern China, SW Canada, Montana and Colorado
- Western Summer Crop Areas Of South Africa Are Still Too Dry, But Much Improved Weather Has Occurred In the East
- Brazil Will Become Too Dry Later This Month
- NE Argentina To Get Flooding Rain

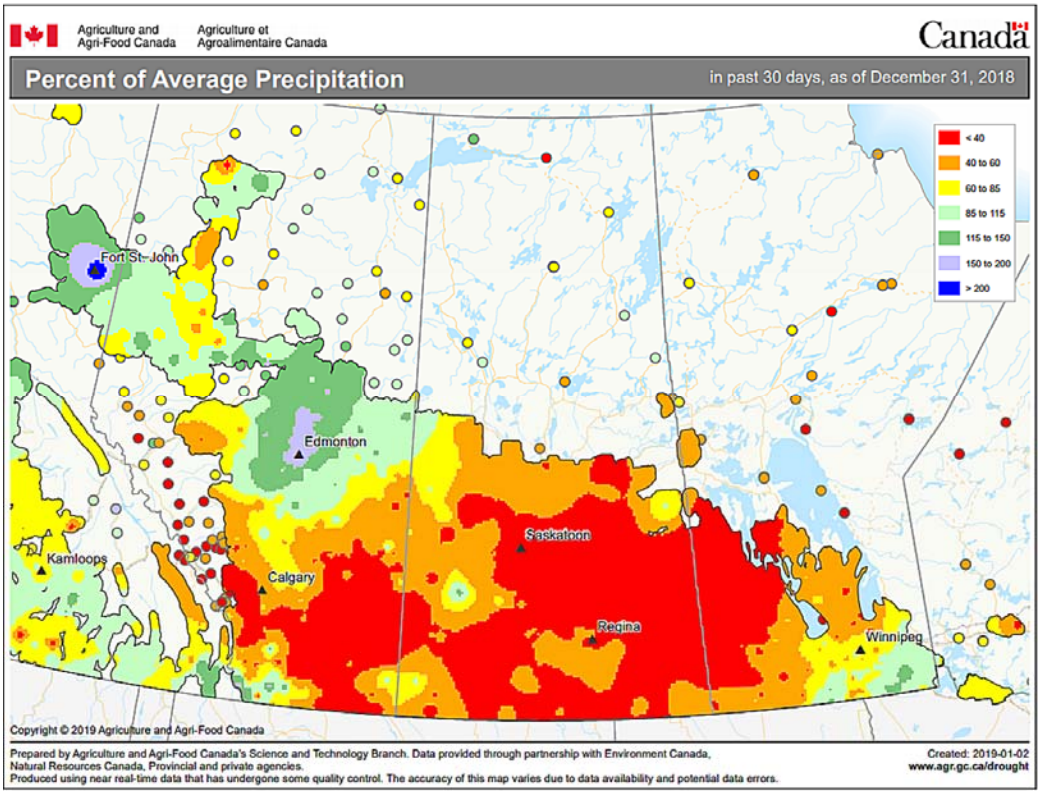
Missing Snow And Ongoing Drought

Drought continues to linger in the Prairies, despite some favorable autumn precipitation and some periodic snowfall. However, moisture deficits remain deep in the ground from southern Alberta to central and southern Saskatchewan and in parts of southern Manitoba.

Moisture deficits over the past two years has left some deep soil moisture, water reservoirs, river and stream flows and deep subsurface water supply below average. That could translate into another drought year in the Prairies if there is not a significant improvement in late winter or spring precipitation.

December was notably lighter than usual on precipitation in a large part of the Prairies, although December is not known as a significant precipitation month. However, in addition to the limited precipitation pattern, temperatures were notably warmer than usual and that induced faster drying rates in southern Alberta and some nearby areas of Saskatchewan. The situation allowed additional moisture losses to take place because of temperatures frequently rising above freezing.

The only wetter than usual areas in December were in the Peace River Region and other northwestern Alberta locations. Precipitation was also near to above average in southeastern Manitoba where much of the recent precipitation has occurred



Missing Snow, Ongoing Drought (from page 1)

as snow.

The moisture deficits that are present across the Prairies is nothing new, but it follows one of the wetter periods in recent history. Many years from 2008 through 2016 were unusually wet across the region. Flooding occurred frequently and temperatures kept milder than usual because of the frequent cloudiness and precipitation. The wetter than usual period was similar to that of the 1950s at which time the Prairies were unusually wet while key U.S. crop areas endured drought. The only seriously dry year in the United States in the past 10 years was 2012 and that was a notable drought.

In the meantime, the excessively wet years in Canada's Prairies seem to have abated with 2017 and 2018 notably drier biased.

Moisture deficits over the past couple of years were more than enough to counter surplus moisture that occurred in 2016 and worry is rising over weather prospects over the next few months.

El Nino has had a significant impact on Canada's weather this winter along with a notable period of warmer than usual ocean water in the Gulf of Alaska. These two features have worked together to induce a northwesterly flow of air aloft that has helped to curb rainfall across the central and eastern Prairies. The northwesterly flow aloft was also instrumental in creating below average temperatures in November, but warmer biased conditions evolved in December.

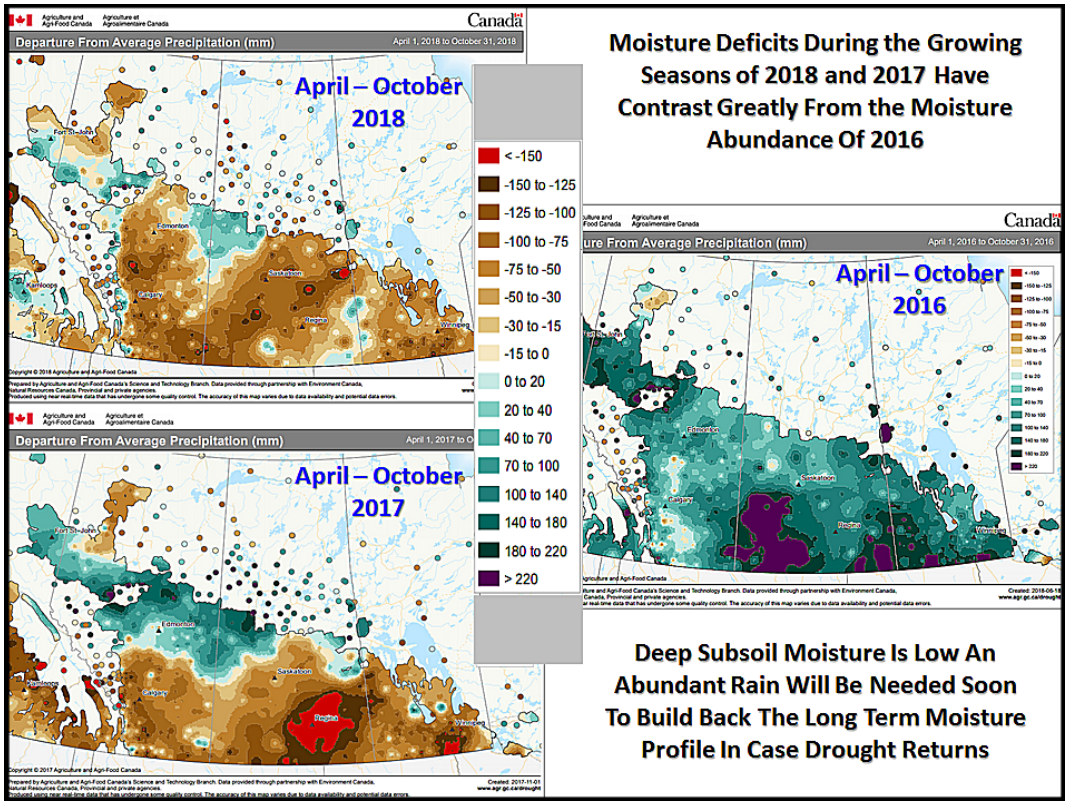
December's weather was more seriously influenced by El Nino and that usually results in a warmer and drier than usual bias across a large part of the Prairies during winter.

El Nino has been weakening recently and that suggests that some of the warmer and drier biased weather of late may abate for a while. If that occurs it would be a boon for the drier areas of the Prairies. Snow and rain are needed to improve the moisture situation prior the start of spring growth. However, with the ground frozen in many areas the odds are low for a significant boost in deep subsoil moisture prior to spring when the ground thaws.

World weather Inc. expects March to be a favorable month of "opportunity" across the Prairies. Opportunity for improving precipitation, soil moisture, runoff and snow depths. However, if El Nino strengthens again in the next few weeks all bets will be off and the Prairies could finish out the winter season with more drier than usual and warmer than usual conditions.

If March weather does not improve and remains drier and warmer biased the potential impact on spring planting and 2019 production potentials could become high. World Weather, Inc. believes there is a high potential for El Nino to continue either as a weak event or perhaps strengthen into a more meaningful event. In either case it may delay the opportunity for all of the Prairies to get sufficient moisture to ease up on long term moisture shortages.

There is still some potential for El Nino or marginal El Nino conditions to evolve during the growing season 2019. If that evolves western and northern Alberta might finally get a chance to dry down, but late winter and early spring could be wetter biased. In the meantime, areas from central and southern Saskatchewan into Manitoba have opportunity for some needed rain that might finally ease up on some of the moisture deficits that are prevailing.



Little Change Likely Through February

January and February weather will be quite similar to that of December with near to below average precipitation in most of the Prairies. The only areas that will receive near to above-average precipitation will be in northwestern Alberta which is an area that has already been wet for an extended period of time. Flooding may become a potential threat in the spring if significant snowfall evolves over the next few weeks after the ground was already saturated last summer.

More seasonable amounts of precipitation will occur in northern parts of Saskatchewan while a larger part of Manitoba will receive near to above average precipitation.

Temperatures in January and February will still be warmer than usual in the majority of the Prairies with Alberta staying warmest relative to normal. The warm weather will induce periods of snow melt and the odds are high that snow cover will likely remain minimal at times through February. Any snow that falls in the southwestern Prairies will be lost to warm temperatures and new melting within a short period of each snowfall event.

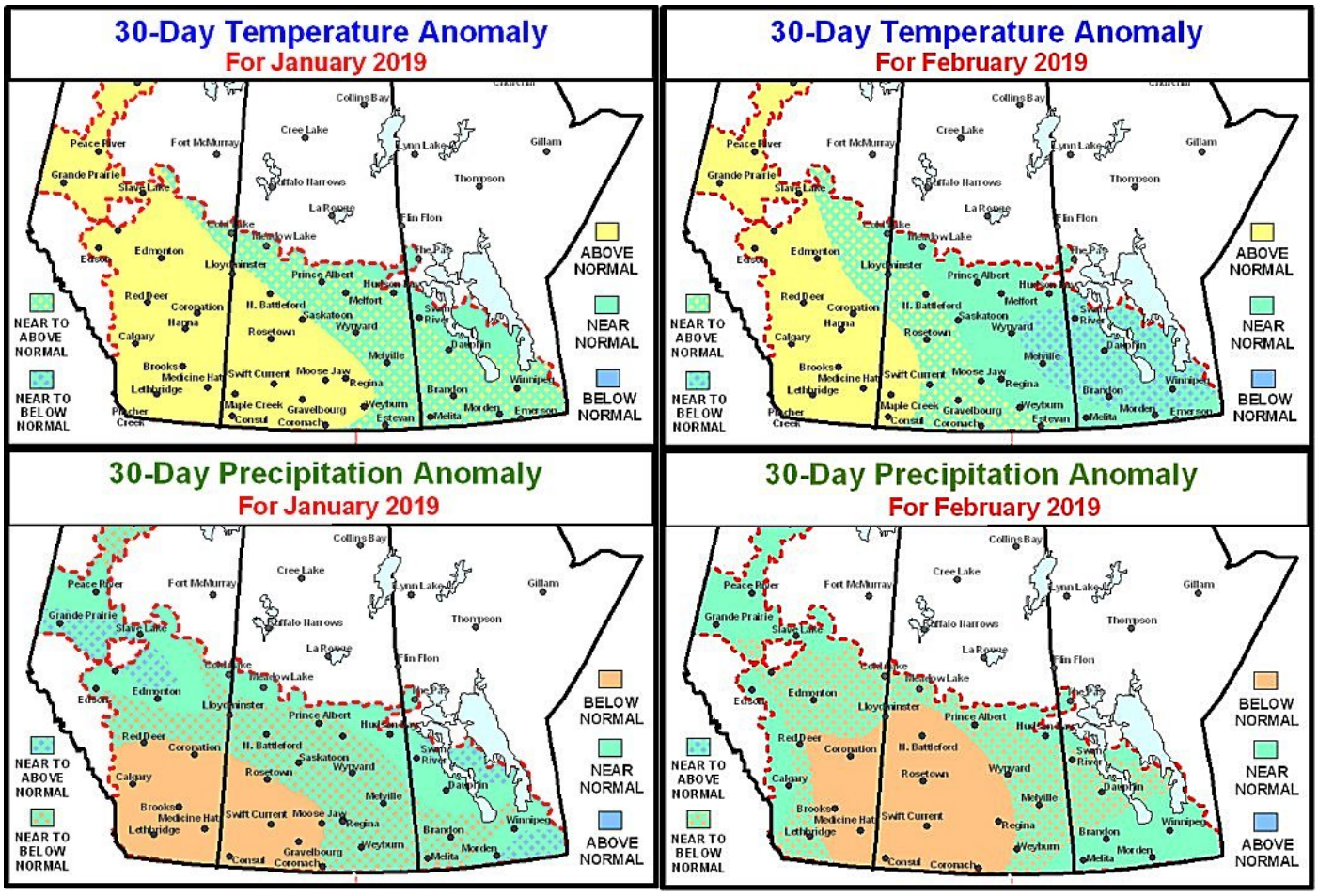
Temperatures will not be nearly as warm in the eastern Prairies as that of Alberta, although there will be some brief periods of notable warming. Some surges of cold in Manitoba and eastern parts of Saskatchewan will be significant enough to bring down average temperatures from their more lofty levels of late.

Snow cover during January and February will be most significant in the Peace River region and east from there to Edmonton and Cold Lake. Several areas in Manitoba's Interlake region will also receive some significant snowfall during the next few weeks. The areas of lightest snowfall and most limited snow cover will remain over the central and southwestern parts of Saskatchewan and southern Alberta.

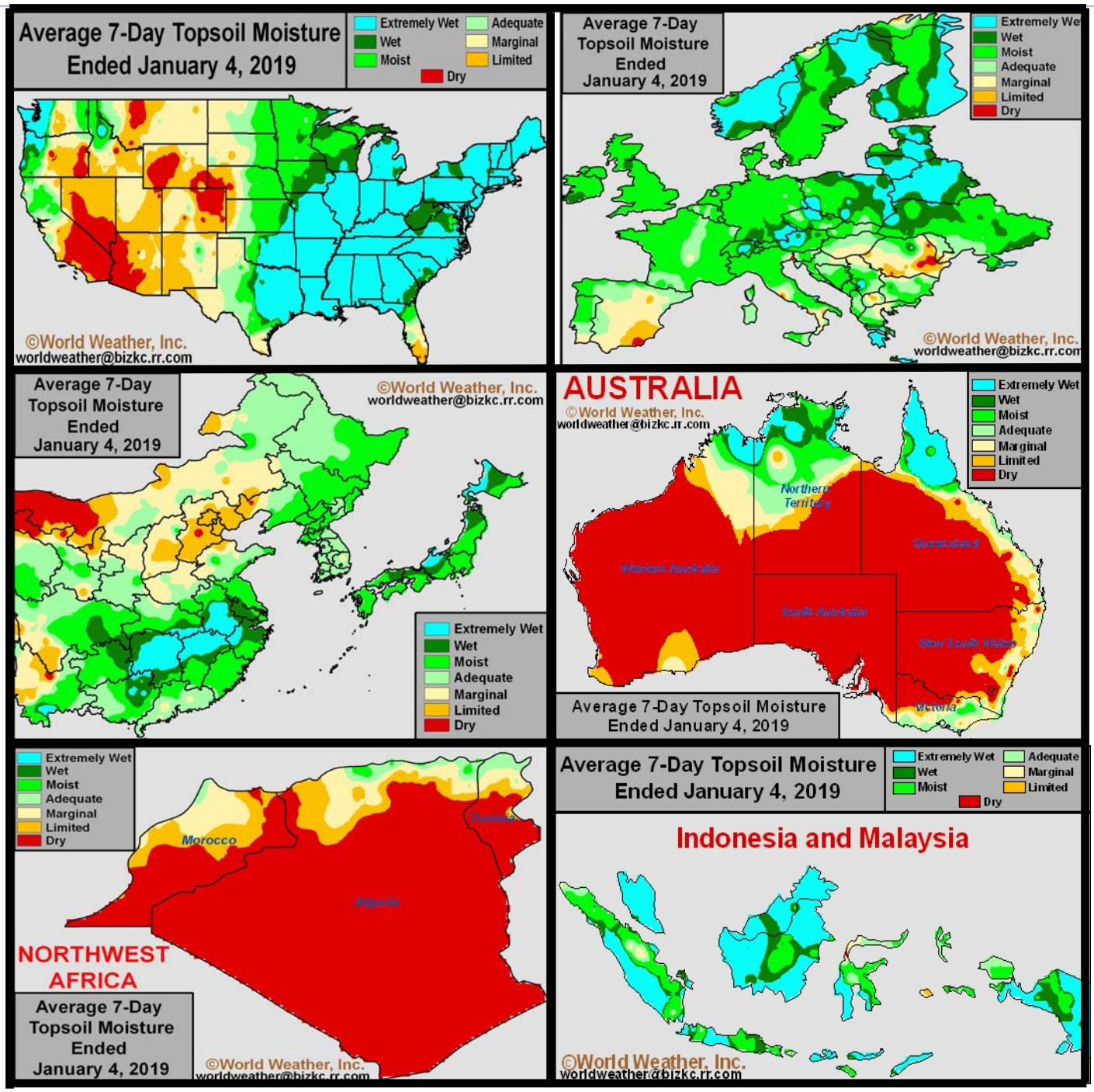
If weather occurs as suggested for January and February the need for significant drying will be tremendous in northwestern Alberta during the early spring so that crops can be planted without delays. In the meantime, soil conditions from southern Alberta to central and southern Saskatchewan will likely remain drier biased—at least in the subsoil.

Spring fieldwork and soil conditions will be largely determined by weather in the late winter and the situation needs to be monitored.

Spring And Summer Outlooks To Be Released in February Prognosticator



Selected Weather Images From Around The World



Soil conditions around the world have not changed greatly from those of this past month. The only exception is in North Africa where there has been a steady rate of decline in soil moisture because of restricted precipitation and seasonable temperatures. Southeast Asia has continued to receive routinely occurring rainfall that has left soil moisture more than sufficient to carry on crops through any short term bout of dryness that might evolve in the next few weeks. Australia has endured the most stressful conditions recently with no precipitation and very warm to hot temperatures. Extreme highs in much of Australia recently have varied from 38 to 47 degrees Celsius. China's weather has maintained a wetter than usual soil bias in the interior south while northern parts of the North China Plain and a part of the Yellow River Basin have been drier biased. U.S. weather has been quite wet recently with soil conditions saturated in most areas east of the Great Plains. Western U.S. weather has been lighter than usual on precipitation and that has been reflected in soil moisture. Europe still has moisture deficits, but drought has been greatly eased.

Argentina's Greatest Rain Shifting North This Week

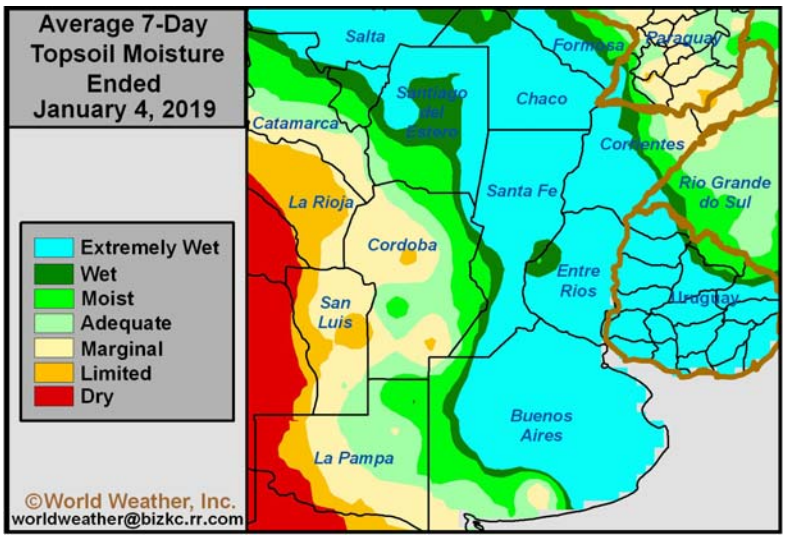
Two significant waves of rain impacted southern Argentina during the past week. Some wheat quality decline may have occurred because of the rainfall in Buenos Aires and some neighboring areas. The wetter bias in southern Argentina will shift northward during the next seven days and flooding rainfall may impact a part of north by this time next week. Most summer crops in the nation are still rated quite favorably with little change likely.

One wave of heavy rain impacted Buenos Aires last weekend and the other bout of significant rain occurred Tuesday into this morning. Total rainfall for the week ending today varied from 1.00 to 3.00 inches in central and eastern Buenos Aires with local totals of 3.00 to 6.38 inches. The moisture was welcome for summer crops, but not nearly so great for wheat that was maturing and being harvested. Wheat quality declines likely resulted and some areas in east-central parts of the province likely endured a little local flooding. Harvest progress was put on hold and drier weather in this coming week will help get some fieldwork under way again in time.

Rainfall also ranged from 1.00 to 2.00 inches with local totals of 2.00 to 3.00 inches from northeastern La Pampa and southeastern San Luis through southern and eastern Cordoba to western and southern Santa Fe. Similar amounts of rain occurred in Formosa and a few locations in northwestern and eastern Chaco as well as northwestern Corrientes. Rainfall in most other areas varied from 0.15 to 0.75 inch with a few totals around 1.00 inch.

Soil moisture is generally favorable in much of Argentina. Santiago del Estero and northern Cordoba have a minor shortage of moisture due to the lack of significant rain and recent periods of warm to hot weather. In contrast, the ground is saturated and some local flooding may have occurred during the past week in Buenos Aires and a few southern Santa Fe and eastern Cordoba locations.

Summer crop growth and development advanced favorably in a large portion of Argentina during the past week. Some minor crop stress was suspected in Santiago del Estero and northern Cordoba where dryness was most prevalent for the week. The biggest issue for crops was in Buenos Aires due to threat on winter wheat quality and delays in harvesting because of soggy field conditions.



Argentina's crops are in good shape except in a few areas of Cordoba. The difference between now and this time last year is tremendous. Last year the nation was enduring one of its most severe droughts in modern history and crop conditions were in a steady decline that eventually dropped yields by as much as half of normal. This year's production will be many times better and probably greater than average if rain continues to occur in timely intervals.

Buenos Aires and La Pampa will be drier than normal during the next seven days. Brief periods of light rain will occur at times, though much of the precipitation will be rapidly lost to evaporation. Seasonable temperatures will dominate the week with daytime highs peaking in the 80s and lower 90s with a few pockets in the 70s. These areas will have enough moisture to maintain aggressive crop growth through the middle of next week despite the lack of rain. However, timely precipitation will be needed later this month to reverse the drying trend that evolves during the next seven days.

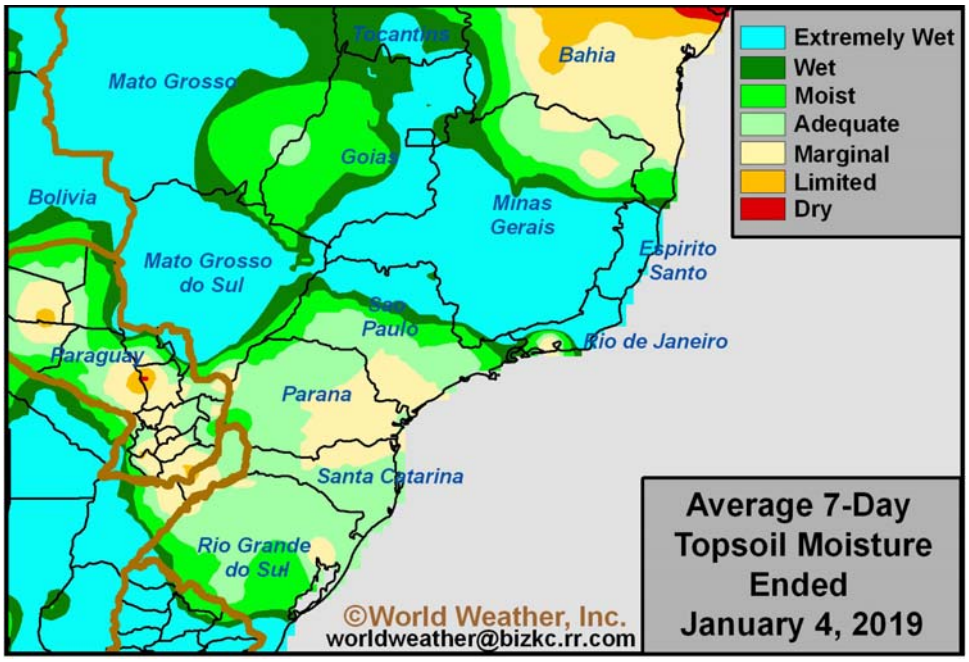
Rain will fall in northern and central Argentina through the middle of next week. The first wave of showers and thunderstorms will advance over these areas today and Thursday with lingering showers in the north Friday and Saturday. Another round of rain will advance over these areas Sunday and Monday. Far northern Argentina will see periods of light and erratic rain into the middle of next week as well. Moisture totals will be excessive by next Wednesday morning from northern Santa Fe through Corrientes and a part of northern Entre Rios where 1.50 to 4.00 inches will fall with local totals approaching 6.00 inches.

Soil conditions in the drier areas of eastern Argentina will slowly improve during the coming week. The remaining production areas in northern and central Argentina will receive abundant to excessive amounts of rain resulting in saturated soil conditions and flash flooding. Fieldwork will be slowed by the rain, but crop development potentials will likely be great once drier and warmer weather resumes.

Flooding is possible in Corrientes and some neighboring areas, but most crops will handle the situation without a negative impact on production.

Brazil Drying May Come Late To Harm Some Soybeans

The New Year brought in a little excitement to a "ho-ho-ish" late December market place because of weather adversity in South America. Much of Brazil, of all places, was advertised to receive below average precipitation during a large part of January while excessive rain was suggested for northern Argentina and Rio Grande do Sul Brazil. The market place was starved for incentive for a more active trade environment and for a brief period all it took was a weather forecasting group to get a little caught up in the moment to hype up the market trade interest. From a commodity futures price perspective the rumor of problems was welcome and sparked a little more interest in agricultural trades, but is there really a reason for the excitement?



Brazil's weather was nothing short of ideal going into December, but then a three week period of dry weather evolved in the sandier soil production areas of interior southern Brazil. The lack of rain and warmer biased temperatures took abundant soil moisture and quickly depleted it raising some crop stress. The dryness was most significant centered on Mato Grosso do Sul, Paraguay and neighboring border areas of Parana and Sao Paulo. The last ten days of December, however, brought sufficient relief to end the stressful period. Many soybeans were setting and filling pods during the three-week rainfall hiatus reducing yields and inducing the first setback in production for this growing season.

Sufficient amounts of rain occurred in late December to restore favorable topsoil moisture and everyone went home for the holidays thinking Brazil production was still looking good. Immediately after the start of the New Year Brazil's forecast started trending drier, but only after a welcome respite from the previous dry period had revitalized many crops. The advertised dryness in Brazil was and still is predicted to be most significant in northeastern Brazil. Bahia, Piaui and northern Minas Gerais will not be receiving much useful moisture for a while. In fact, some computer forecast programs were suggesting limited rain for those areas during the balance of January. The forecast may not be all that wrong, but how important is northeastern Brazil soybean and corn country?

Corn and soybean production estimates vary in northeastern Brazil from 8-10% if we include Tocantins. That suggests if all crops were lost in the region soybean production in Brazil would be down a maximum of 10%. Crops in the region got off to a very good start this year. Timely rainfall occurred early in the rainy season and routine showers and thunderstorms occurred along with seasonable temperatures to spur on one of the best starts to the growing season seen in years. Not only was crop development ahead of the usual schedule, but production potentials were better than average.

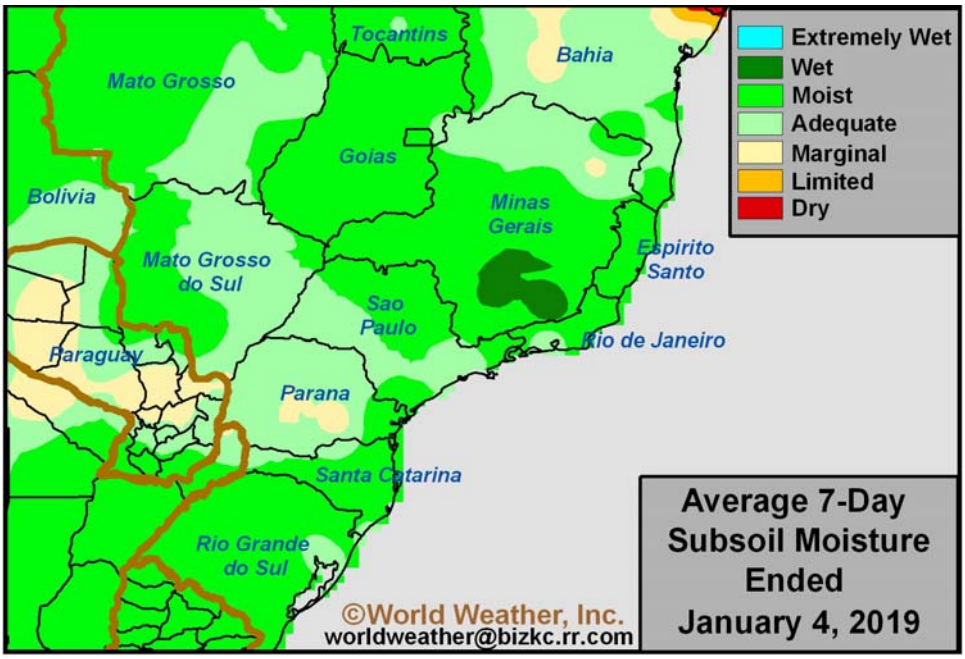
Inducing dryness to northeastern Brazil in January after an earlier-than-usual start to planting and aggressive crop development is certainly not going to result in a 10% loss in production. Crops may suffer a reduction in soybean size and some quality decline, but a serious production cut is not very likely especially if crops are nearing full maturation because of earlier than usual planting. Perhaps production declines because of late season dryness will reduce production by 2-4%.

In the meantime, subsoil moisture in the previously dry areas of interior southern Brazil remains a little short. Late December rainfall moistened the topsoil, but left subsoil moisture a little low. A few showers and thunderstorms in the first week of January preserved the situation leaving topsoil moisture mostly good while subsoil moisture was short. Add to this a forecast of below average rainfall and warmer biased temperatures in weeks 2 and 3 of January and what do you get?

Well, the second week of January will be a period of net drying for many areas. However, favorable topsoil moisture in the interior south of Brazil will buy the region one week of time without rain before crops start being stressed. Crop stress will begin

Brazil Drying May Come Too Late (continued from Page 6)

during the latter part of January's second week, but mostly on the lighter (sandier) soil. Adequate subsoil moisture in the remainder of Brazil at the end of December will support crops for up to two weeks of rain free conditions and seasonably warm temperatures if the topsoil is already dry. However, topsoil conditions in much of Brazil during the first days of January were favorably moist except from Rio Grande do Sul to Sao Paulo where the ground was a little dry. These drier biased areas then received rain late in the first week of January and enough occurred to moisten the topsoil favorably.



Now, as the second week of January begins the only seriously dry area in Brazil is in Bahia and neighboring areas of the northeast. All other production areas in the nation will experience net drying during the week, but it will take most of the week to exhaust topsoil moisture. Another week of drying is then needed in the heavier soil areas to dry down subsoil moisture enough to start stressing crops. By that time the calendar will say January 21 and the big question to ask at that point is how much soybean is left immature and unharvested after the earlier than usual start to planting?

The answer is – not much. Only a small part of the soybean crop will still be in the ground developing during late January that could be adversely impacted by ongoing dryness and much of the crop that remains should be maturing. Some late season yield and crop quality decline will be possible, but it is unlikely to be very serious loss.

The bottom line is that net drying will impact Brazil's production areas, but it is not likely to have a big impact on soybean production because of the reasons stated here. The huge record setting crop once talked about in November will be reduced, but a smaller crop than that of 2018 may be hard to achieve unless January weather becomes harsher than currently expected.

In the meantime, drying will have an impact on rice, coffee, sugarcane, citrus and other crops, but the impact will be determined by late January and February weather. World Weather, Inc. expects some improving rainfall during February in particular, but the last ten days in January should bring some improvement, as well. Citrus and coffee have deep root systems and will not likely be dry enough for a long enough period of time to be seriously impacted by dryness. Rice and sugarcane might be impacted a little more and will be closely monitored.

In the meantime, second season corn planting could experience slow germination, emergence and establishment because of dryness in January. Corn that is stressed in the early weeks of development can lose some yield potential, but if rainfall is timely even though below average it is possible the crop will not lose much production potential especially if rain increases in February as advertised leading to aggressive plant development. February and March could bring on some huge improvements in second season corn and that might translate into a better than expected crop given dryness during planting.

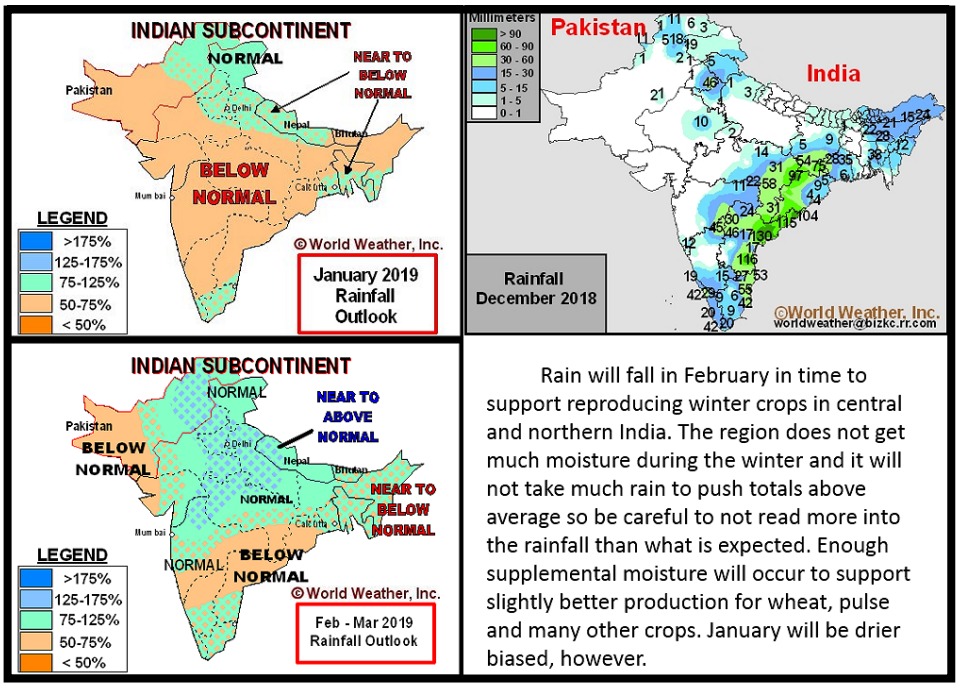
Overall, expect some stress during the balance of January, but most that will be on traders' faces rather on crops. A seriously small crop is not likely, despite some yield reductions. In the meantime, Argentina will get a good mix of rain and sunshine even though some flooding will occur periodically due to heavy January rainfall.

India Rainfall Prospects Are Improving

India's weather over the past few weeks has been quite dry. The phenomenon actually has little to nothing to do with El Nino. El Nino makes India drier than usual during the summer, but in winter it usually generates greater than usual precipitation in parts of northern India.

This year's wetter biased rainfall anomaly has not verified. The same has occurred in eastern Australia, New Zealand, Indonesia, Malaysia, Brazil or South Africa. These areas were influenced by El Nino development for a little while, but the phenomenon has been so weak that it has failed to generate the usual impact on world agriculture.

Little change will occur during January for India. The nation will continue drier biased as it has been except in the extreme north where some rain is expected periodically. The remainder of India will experience net drying conditions through the balance of this month.



Changes may still occur during February and early March. World Weather, Inc. is expecting a short term bout of rain that may benefit wheat, rapeseed, millet, sorghum and several other crops including a few late season pulse crops.

Normal rainfall in India during the winter months is not very much and a single precipitation event can generate enough moisture to push monthly totals above average. No more than one or two rain events are expected in February and March, but enough rain will fall to reduce some of the crop stress present today while crops reproduce and fill.

Some of the early season winter crops, including some pulse crops, may get rain too late in the season to seriously improve production potentials, but some of the late reproducing crops can still benefit.

Temperatures over the balance of January may be near to slightly above average and readings in February should not be excessively hot, but may have a slight warmer bias.

Irrigated winter crops will benefit from whatever precipitation that occurs in February. March is not always a good month to get significant precipitation because it can alter the quality of some crops. None of the rain is expected to be great enough to seriously harm winter crops.

Confidence in the February/March rainfall is not as high as it could be, but with El Nino providing a weakening signal there is potential that other weather patterns will have greater influence on late winter and early spring weather conditions.

In this particular year, the 18-year cycle has suggested an opportunity for more cool weather in the Eastern Hemisphere for a brief period of time in February and if that verifies it will bring the Jet Stream farther south over northern India and that should bring the brief rain opportunity.

Some rain was reported in December, but it was mostly confined to the southeast parts of the nation, but a little moisture occurred randomly in the north. The northern December shower activity was not great enough to make a serious change to winter crops and much of the southeast rain failed to reach into pulse crop country.

Some shower activity also occurred in northern India during the first week of January, but the end result was similar to that of December.