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The Canadian Agriculture Weather Prognosticator

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Canada Crop Weather Issues At A Glance

- Impressive Snow Depths Remain In Southern Manitoba And Parts of Quebec And Central And Northeast Ontario
- SW Ontario And Much Of the SW Prairies Have Little To No Snow

WORLD WEATHER ISSUES

- U.S. Hard Red Winter Wheat Areas Are Too Dry, But Rain Will Fall A Couple Of Times In The Coming Week
- Delays in U.S. Corn Planting May Occur Because of Rain and Cooler Biased Conditions In The South
- India's Crop Maturation and Harvest Season Is Advancing Well
- China Will Be Trending Too Wet Over The Net Week To Ten Days, Especially In The Yangtze River Basin
- South America Crops Are Poised For Large Production Year
- Europe And CIS Crops Are Favorably Rated
- Flood Potentials Are High In Southern Manitoba

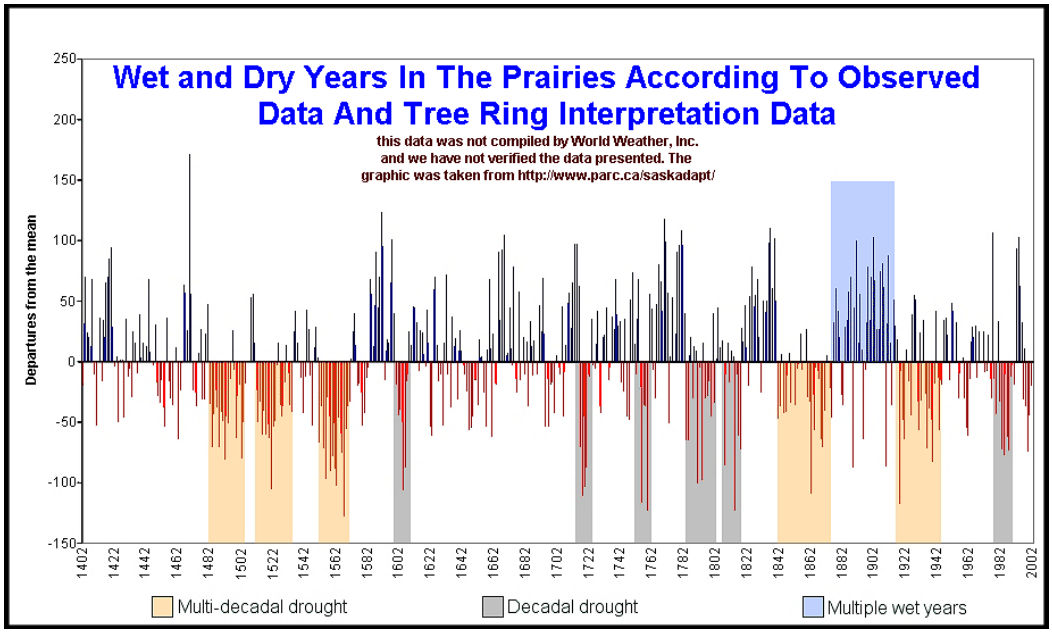
Wet Pattern Not Gone; Hope In El Nino

Data for last summer has not been completely compiled by Environment Canada, but the odds are very high that precipitation for summer was in the top wettest years in the recent recorded history in the Prairies. There have been 68 well documented years of data (not including 2016) that Environment Canada has collected and assessed and 5 of the 10 wettest years have occurred since the year 2001 and three of the wettest year have occurred since 2010. The wettest years (excluding 2016) include the years 2010, 2011 and 2014. World Weather, Inc. believes that 2016 will be ranked up there as well, but the official data is not available.

We have often compared this outbreak of wet weather to that of the 1950s when rainy weather was also a problem. Included in the top ten wettest years in the Prairies is 1951, 1953 and 1954. If we make the assumption that 2016 was in the top wettest years we can then conclude that between the 1950s and the early 2000s 7 out of the ten wettest years were recorded and obviously four of those have occurred in this current bout of wet weather years.

So when does the onslaught of wet weather end?. Over the years there have been many studies on drought and flood years in the Prairies. Two studies stand out significantly one was based on river flows on several key rivers in the Prairies and the other on a combination of observed weather and tree ring data. World Weather, Inc. does not have much confidence in the data sets for either study, but the results are somewhat believable and they shine a little light on how much longer this wet biased pattern might prevail.

Even though the chart below only goes through 2002 we know that weather across the Prairies has



Wet Pattern Not Gone; Hope In El Nino (Cont. From Page 1)

trended much wetter in recent years with eastern parts of the region wettest since about 2008 and western areas wettest in the more recent years. World Weather, Inc. clearly believes the Prairies are in the midst of wet biased period that has already been occurring for multiple years, depending on location.

According the data presented on page 1 there have been some historical oscillations between wetter and drier biased years. Sometimes the wet and dry periods have lasted only for a few years and in other times they lasted for nearly a decade and there have been some extreme cases of multi-decadal wet periods. The chart presented is only provided for a visual aid in demonstrating that periods of wet and dry weather has occurred for an extended period of time across the Prairies. We have already documented the fact that the early to middle 1950s were a very wet period in the prairies and that many of the recent past years have been just as anomalously wet.

Based on the data set noted on page 1, there have been some periods of wet years that occurred over an extended period of time and other wet periods that were short lived. Predicting when then end of this series of wet years is going to take place is extremely difficult to do, but World Weather, Inc. believes it will take a very significant change in prevailing weather pattern to abruptly end the pattern and early indications for 2017 do not offer much hope for a change.

As we noted in the previous prognosticator A significant El Nino event would possibly offer some significant help to the situation, but most likely the coming El Nino biased environment is not likely to be strong, if it evolves at all. The odds will not be very strong that any El Nino like conditions that evolve in 2017 will have much power to do more than lighten up some of the rainfall, but even that would be welcome. So much of the Prairies is still saturated with moisture left over from 2016, but the situation could be worse had winter snowfall been many times greater.

Obviously, those comments pertain to much of Saskatchewan and a large part of Alberta, but not to southern and some central and northern Manitoba locations where too many blizzards occurred in the winter of 2016-17. The situation in Manitoba is extremely poor and the areas buried deepest in the snow need no precipitation for a few weeks to allow the snow to melt and the runoff to move downstream without any aggravation from additional precipitation. The potential for Manitoba's wettest areas to be dry through the spring (late March, April and May) is extremely low. There will be some bouts of warmer biased weather and there will be some periods of limited precipitation, but the odds of avoiding "significant" precipitation events in the next several weeks is quite low and that raises much concern about the prospects for planting in the province and some neighboring areas of eastern Saskatchewan. Abandonment will be a function of spring rain and snowfall.

In the meantime, looking at long term trends in the atmosphere there is not much reason to expect a sharp deviation from the wetter biased weather in the Prairies during the 2017 growing season. That does not mean it will be as wet as last year, but it does mean that rain will still occur in a routine manner for many areas maintaining high water tables, overrunning sloughs and a persistence in areas of standing water in various locations across the Prairies.

The best we can hope for in 2017 is that the resumption of frequent rain can be delayed long enough to get producers back into the fields with all crops planted. Spring is going to offer some warmer biased conditions—at least early in the season, but precipitation events will still come and go periodically and that will maintain moisture abundancies in many areas across the Prairies. Most of the problems will come from those areas that are still dealing with excessive moisture from 2016.

A combination of warmer biased temperatures and near to below average precipitation will occur in the next few weeks, but there is concern that rainfall will increase somewhat as the warmer days of late April and May arrive. World Weather, Inc. is not visualizing torrents of rain this spring, but it will not take much moisture to cause flooding in the eastern Prairies, a part of north-central Alberta, near the front range of the Alberta Rocky Mountains and in a few west-central Saskatchewan locations. However, the odds are still good that enough warmth and drying wind will occur at times to firm the soil sufficiently to support both the harvest of 2016 crops and the planting of 2017 crops.

Similar to late last summer, World Weather, Inc. advises not to wait for ideal weather to gain access to the fields. Some areas in the Prairies will find nearly ideal spring working conditions, but those areas will be mostly confined to the south-central, central and southwestern parts of Saskatchewan, as well as far northern Saskatchewan and in southern Alberta. Several other areas in east-central Alberta and a few in central Saskatchewan will get lucky with extended periods without large storm systems o that fieldwork can advance relatively well. However, some areas will still have a tendency to be a little too wet.

El Nino still provides some hope for improvement, but early indications are that its influence will come later rather than earlier. Field access will have to occur just as soon as enough firming occurs to not damage the fields when heavy equipment is driven through them. Taking full advantage of the drier and warmer days will be essential for success.

Spring Will Bring Some Challenges, Frustrations

Waiting for the best conditions for field access this spring will be quite challenging for some areas because of the already wet conditions of soil and the prospects for at least some periodic precipitation. Completely dry is not very likely for a while and when it does evolve it may not last quite long enough to bring the best environment for fieldwork in the areas that were wettest last autumn.

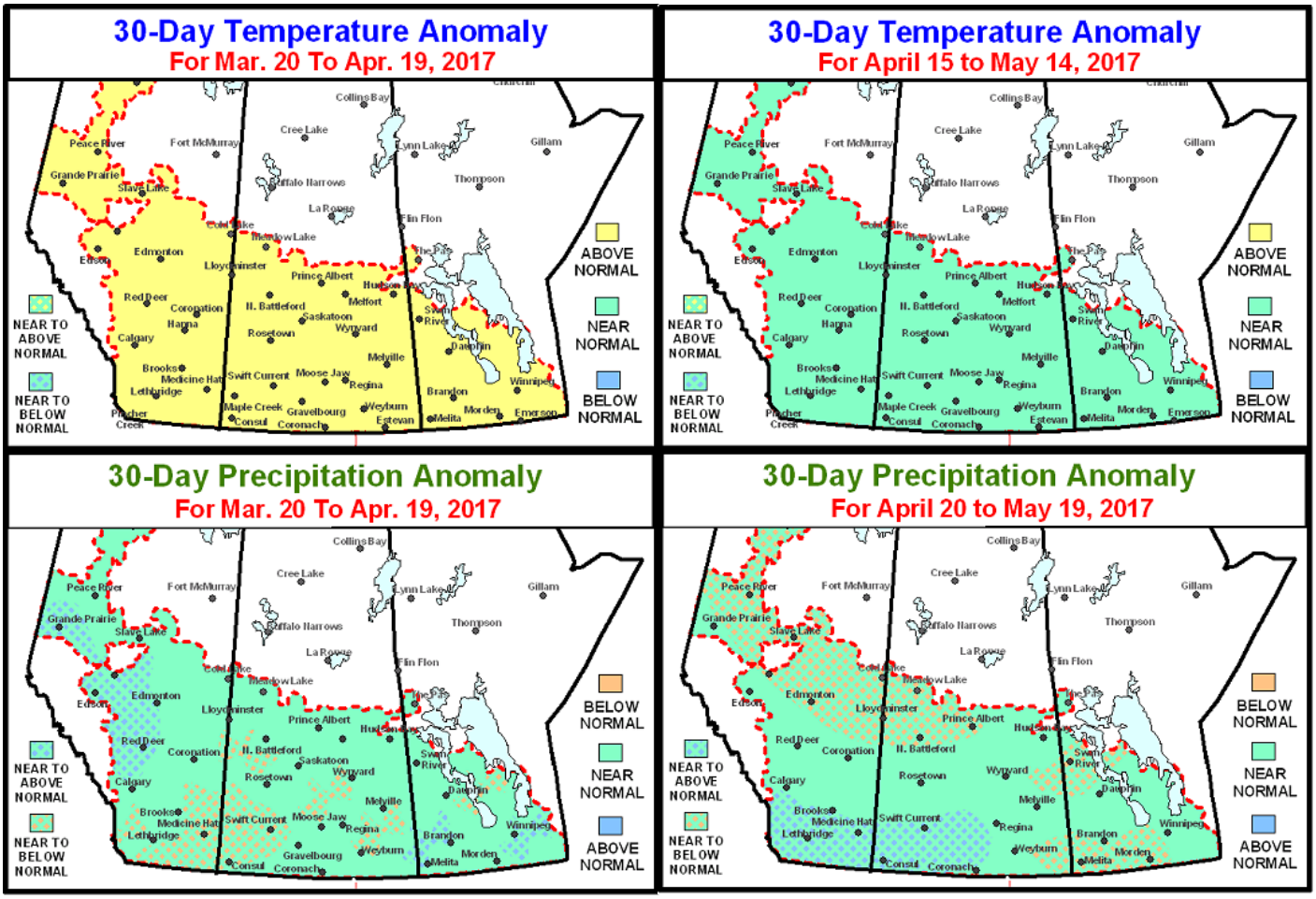
Certainly, southern Manitoba needs no precipitation through the next few weeks and temperatures need to be as warm as possible, but those ideal conditions are not expected. There is potential that—at least for a while – the jet stream will be most active in the contiguous United States. Each time that a succession of storm systems impacts the U.S. Midwest, Plains and/or southeastern states it will reduce the amount of atmospheric energy, moisture and potential precipitation that will impact the Prairies. Therefore, the more stormy the United States becomes the better odds that the Prairies will experience extended periods of "limited" precipitation and possible "warmer-biased" weather.

Each time the U.S. weather pattern becomes less active it will raise the potential for a Prairies storm system and if that occurs the chances of significant rain and/or snow will rise and that could set back spring fieldwork.

World Weather, Inc. believes conditions will not be too bad across the Prairies, but they will not be ideal. The best drying and warmer biased conditions may occur in the balance of March and early April. There is some concern that late April and May will trend a little wetter biased and that is when the U.S. weather needs to be as active as possible to help minimized the potential for major storminess in the Prairies.

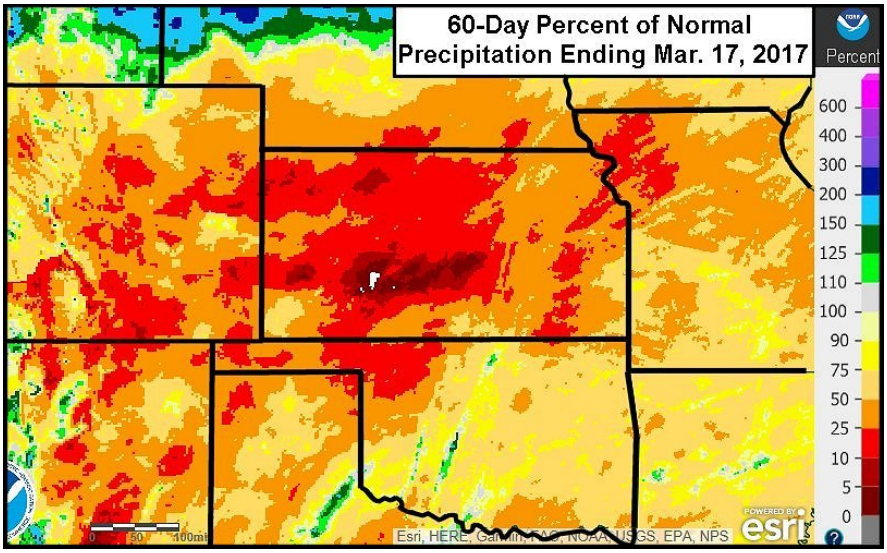
The outlook for summer still looks to be favorably to abundantly moist again, although not as excessively wet as last year. That implies that early spring will be most important for firming the soil and getting fieldwork completed. Summer is likely to be wet enough to present some challenges to spraying and other farming activity putting much pressure on the start of the growing season and a quick planting season.

El Nino still provides some hope for needed drying later in the year, but it will not offer much help during the spring since it is not likely to be evolving until after the majority of spring and summer crops have been planted.



U.S. Hard Red Winter Wheat Will Drink Soon

Weather pattern changes are coming soon to bring an end to months of limited precipitation and very warm to occasionally hot temperatures in the U.S. hard red winter wheat production region. The situation has become quite serious in the past 30 days, but World Weather, Inc. believes production potentials have not been seriously hurt because of frequent freezing that has limited crop development while it has been dry. Time is running out, however, with freezing temperatures coming to an end and soil moisture now at its lowest levels of the season.



Rainfall over the past 60 days has been no more than 0.50 inch and temperatures have periodically reached into the upper 20s and lower 30s Celsius removing that moisture and much more. Two bouts of high wind with low humidity have occurred in the past ten days and that has exacerbated the situation. Frequent freezing and thawing of topsoil has induced heaving and some root damage might have also occurred.

Yield potential are not what they once were, but thanks to the frequent freezes, World Weather, Inc. does not believe there is much serious loss. Crops came out of dormancy in a dry environment. Some greening and early development likely began, but the combination of frequent freezes and low soil moisture restricted crop development. Damage to wheat would have been many times worse if it had come out of dormancy with sufficient soil moisture and started growing aggressively and then ran into heat and moisture stress.

The recent days of hot weather have been more damaging to previously developing wheat in Texas and Oklahoma than to Kansas, Colorado or parts of Nebraska where some of the greatest moisture deficits and absolute dryness exits.

Many areas in the southwestern Plains have been dry for 30 days or more and a large part of the surrounding region has received less than 25% of normal precipitation. The majority of wheat areas have reported no more than half of the usual amount of rain which is the crux of the problem along with the dryness. However, the calendar says it is March 20 and the most important part of the growing season is still coming and rainfall expected during the next week to ten days could seriously change crop conditions and production potential. The rain needs to be significant and well distributed. An erratic rainfall pattern that does not bring sufficient moisture to all areas will only stimulate more aggressive crop development for a little while until soil moisture is exhausted and then crop stress will set in and seriously harm production potentials.

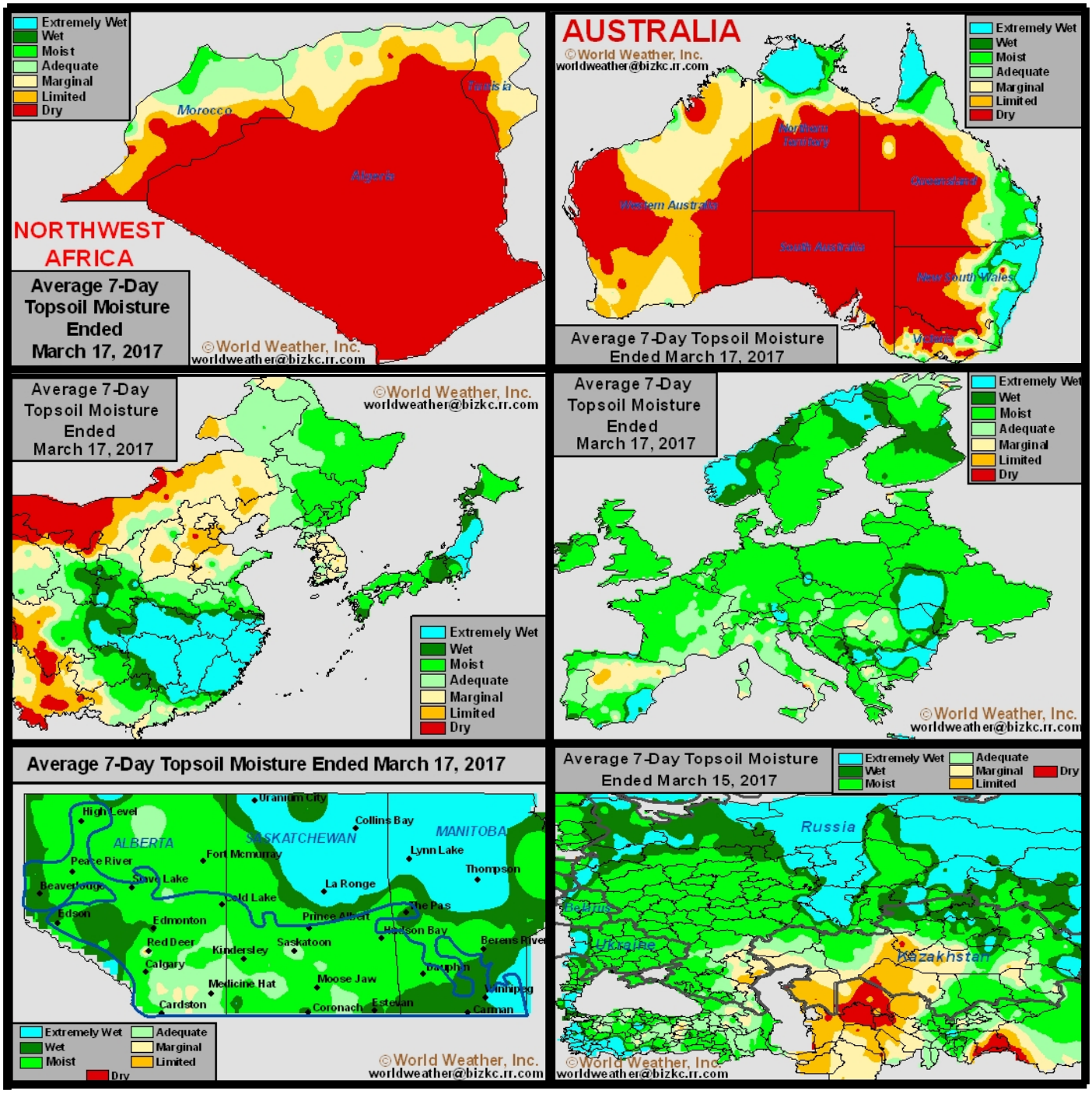
The 60-day rainfall has not been much better with much of the key wheat production areas reporting less than half of the usual rainfall. The area is quite dry and if there is going to be a favorable response to rain the moisture has to fall immediately.

Rain will fall Thursday into Friday of this week and again during mid-week next week with at least one more follow up event in the first days of April. World Weather, Inc. believes coverage of measurable rain will be sufficient to induce crop improvements, but the key to how well crops respond will be in temperatures following the rain and in the distribution of the moisture itself.

Early indications suggest that by the end of next week rainfall will vary from 0.50 to 1.50 inches in much of the wheat production region with several areas in the north and east getting over 2.00 inches. The driest areas will be in the southwest where areas from southwestern Kansas to western Texas may not get as much rain as other areas. The best chance for rain in the southwest Plains will be during the mid-week storm a week from now. Some lighter rain will fall late this week that will be more of a tease for some crop areas than a serious incentive for change.

Temperatures are expected to continue warmer than usual after the rain falls, but readings will be much closer to normal than they have been and there will be a few days in which temperatures will be mild to cool. Damaged wheat loves a cool and moist environment. Yield potentials in many damaged wheat fields of the past have been greatly improved by new tillering that occurs during mild to cooler periods of rain that follow a damaging weather event. World Weather, Inc. does not believe the temperatures and rainfall will be quite as ideal for the best tillering, but some improvement in production is still expected.

Selected Weather Images From Around The World



North Africa rainfall needs a little boost to assure the best reproductive conditions this spring. Some of the needed rain is expected to evolve in this coming week, but more will be needed soon. Europe soil moisture is still rated favorably in most of the winter grain and oilseed production areas. There is need for a little moisture boost in the southwest and a few areas in southeastern parts of the continent, but there is no area of serious dryness that poses a significant threat to early season crop development. Snow melt in Russia continues to advance relatively well. Portions of Russia's Southern Region are starting to dry out more notably. China soil moisture is rated favorably in most areas, but the North China Plain is becoming a little dry and rain will be needed soon. The Yangtze River Basin in China is becoming too wet. Canada's Prairies moisture is a little short in southern Alberta and excessive in southern Manitoba. In Australia, soil conditions are beginning to moisten up in the east, but it comes too late for some summer crops.

South America Weather Reinforces Big Crops

Despite flooding in Argentina that was quite serious at times during the spring and heart of summer, the nation is producing a large soybean, corn and sorghum crop. World Weather, Inc. has been warning subscribers for a very long time that Argentina would produce better than early season estimates which at one time suggested a 10% cut in production because of flooding earlier this year.

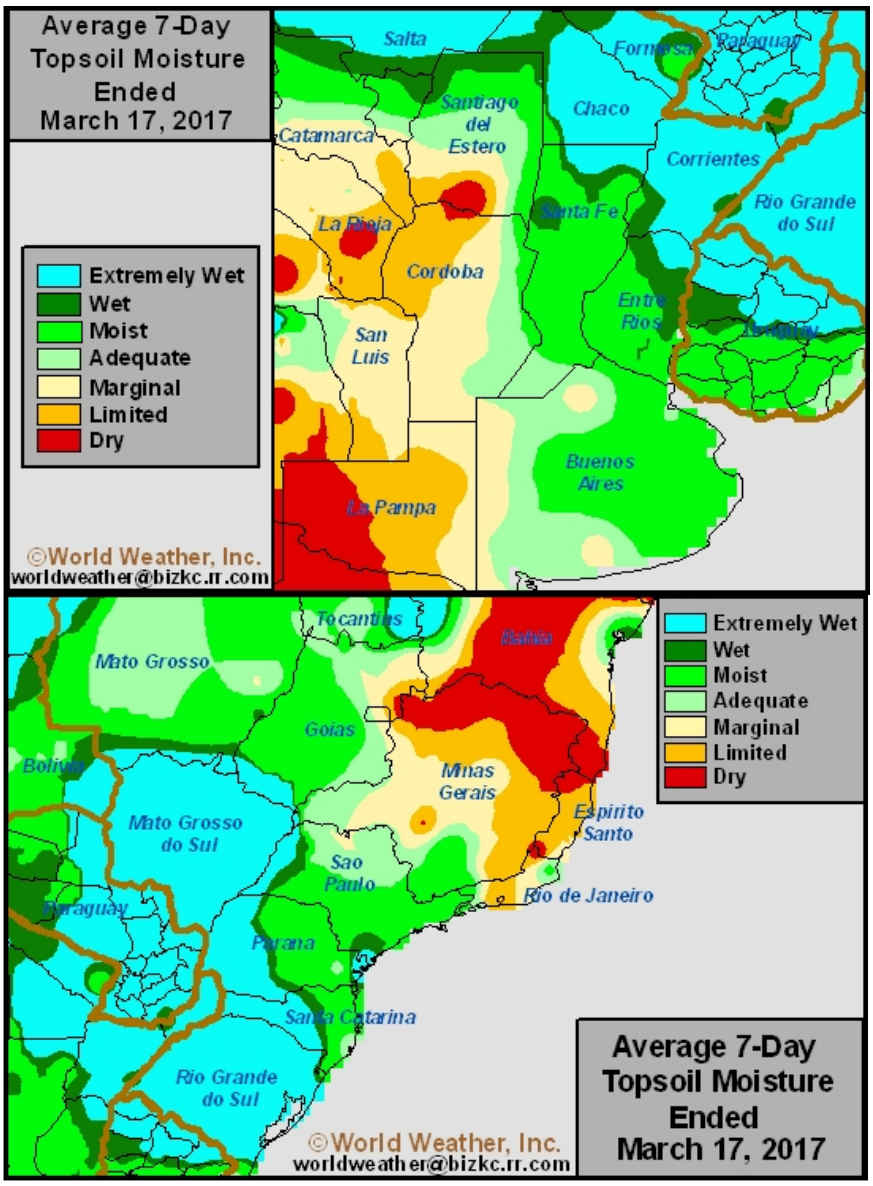
Recent weather has been warm, humid and showery. Well timed rainfall and sufficient soil moisture has left crops in a good position to develop aggressively. Yield potentials are now higher than most other times during the growing season and there is not much time left for another failing in weather patterns.

Weather conditions in the coming week will provide well timed rainfall for most of the nation and ongoing warm weather is expected to assure the best possible yield potentials for soybeans, late corn, sorghum and groundnuts. Cotton is the only crop in Argentina that has not bided well with the wetter bias this summer. Recent rainfall became greater than expected and that may be harming fiber quality for early maturing crops.

Brazil weather has also been good this summer. Well-timed rainfall and seasonably warm temperatures have helped assure a nearly ideal environment for summer crop development.

Brazil has had some interesting bouts of excessive rain during the harvest of soybeans and early corn. The wet conditions were suspected of causing harvest delays and some of the soybeans were harvested with very high moisture content. The wet harvest has added some cost to producer's bottom line because of necessary grain drying.

Weather conditions in Brazil are expected to continue adequately to abundantly wet for another couple of weeks. Seasonal rainfall usually diminishes during April at which time subsoil moisture is needed to carry on normal crop development. This is especially critical for late planted second season crops which may run short to very short of moisture during reproduction and filling.



Most weather forecasts for South America continue to promote a good mix of rain and sunshine over the next two weeks perpetuating very good late season fieldwork and crop development.

The bottom line for both Brazil and Argentina remains very good with high yields and good crop quality likely for the remaining crop season. Production potentials will be high and that may keep a little downward pressure on world commodity futures prices.

In the meantime, U.S. planting prospects look very good, although there will be a little too much moisture for a while in early April slowing the start of fieldwork, but the long term outlook because of moisture is expected to remain very good.

South Africa summer crop production is much improved over the past two years of drought. Australia will be closely monitored because of the potential for some El Nino related weather later in the year. El Nino years tend to leave eastern Australia in the dry during spring and summer.