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The Canadian Agriculture Weather Prognosticator

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WORLD WEATHER ISSUES

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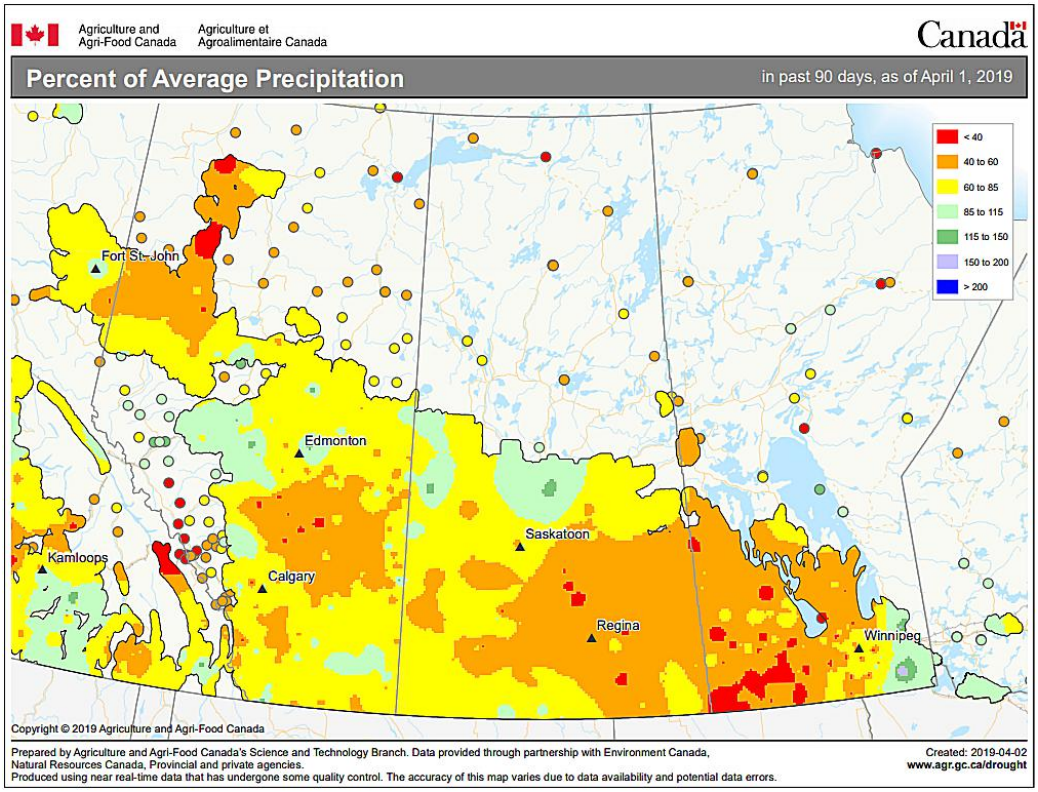
Erratic Moisture, Dryness Worries Prevail

The next few days will provide "opportunity" for moisture in the Prairies as a series of fast-moving weak weather systems impacts the region. Enough precipitation will fall in some areas to ease the past 60 days of limited precipitation, but a full replenishment of moisture in the drier parts of the Prairies is not likely. A returning pattern of limited precipitation is expected next week that will last through the middle part of this month.

Temperatures in the United States may trend cooler than usual, but readings in the Prairies will stay near and slightly warmer then usual.

El Nino has just reached a new peak of intensity and it will now subside a bit for the next few weeks. That will "slightly" raise the potential for a little precipitation erratically distributed in the Prairies during the second half of April and early May. Abundant precipitation, however, is not very likely.

Even though the environment will not be favorable for restoring subsoil moisture there may be just enough moisture to support some planting, germination and emergence in the driest areas. The biggest problem with the anticipated weather pattern in mid– to late April and early May is that the precipitation will not be evenly distributed and there will be pockets that do not receive very much moisture while others will get



Erratic Moisture Dryness Worries (continued from Page 1)

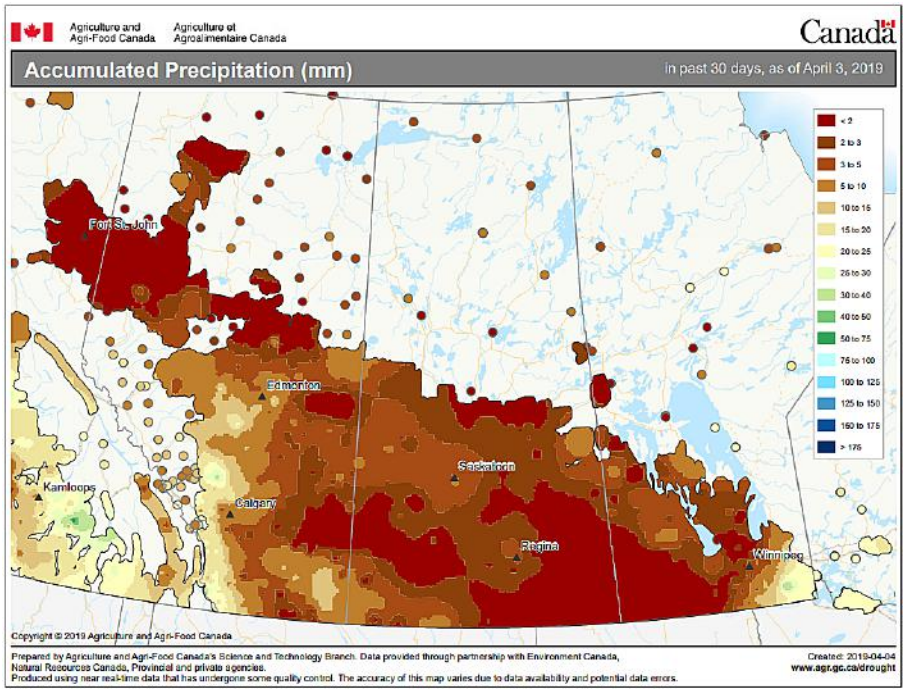
just enough. Very few locations from the central and south-central parts of Saskatchewan through east-central and southern Alberta will see any improvement in subsoil moisture. Temperatures will still be mild enough in the next few weeks to conserve moisture that evolves and it will not be quickly evaporated. Temperatures will not be unusually warm which will be very helpful in slowing the decline in soil moisture during the spring.

Even though El Nino will be weakening for a while it will still have some influence on the region. That influence has proved to be quite consistent from one El Nino event to another and the bias for less than usual precipitation in the areas described above. At the same time that the central and southwestern Prairies are staying in a drier than usual mode there will be some periodic precipitation events sufficient to keep the northwestern and far southeastern parts of the Prairies wetter biased.

Red River flooding in southern Manitoba will be a problem through the balance of April. A crest of flooding has already reached the Fargo, North Dakota region and it will soon reach the Canada border. Once flooding reaches the border it will dominate southern Manitoba's agricultural world for much of the next few weeks.

Overall, the forecast for the balance of April and early May has still not deviated much from that of the past couple of prognosticators. But before depression settles in your mind be sure to note that it will not be unusually warm and it will not be absolutely dry. There will be a few bouts of cooler biased temperature and enough precipitation will occur to slow drying rates and at least some areas will get enough moisture to temporarily improve topsoil conditions.

The active weather expected today through the first part of next week



might be foreshadowing weather for May and June, but we have to get there first and early planted crops will struggle with limited moisture for a while.

The drier bias that occurs next week through the middle of April will be followed by a resuming unstable atmosphere later this month at which time a few bouts of rain will come and go across the Prairies. However, all of the major storm systems plaguing North America will be in the United States and as long as that is the case the good general rain events that the Prairies need to reduce moisture deficits after two years of drought are not likely to evolve for a while.

Rain in the U.S. will be greatest in the central and southern Plains, central and lower Midwest and northern Delta regions through a large part of April. The last days in April and May will begin shifting the precipitation northwestward which will bring some of the wet biased conditions to the upper Midwest, Great Lakes region, northeastern Great Plains and southeastern Prairies. Some rain will either continue periodically or develop in western and northern Alberta in late April and May leading to a net drying bias for east-central and southern Alberta and much of Saskatchewan.

A ridge of high pressure will begin to evolve in the central United States in late May and June and it is during that time period that some of the active storminess that had been plaguing the United States will begin to impact the Prairies. The heart of summer is expected to be wettest from southern Alberta through central and southern Saskatchewan to parts of central Manitoba. The farther northwest one travels during the summer the direr biased weather may become.

Drought in the Prairies should break down in the interior south and will be absent from many areas, but dryness may eventually start to show in western and northern Alberta as time moves along.

Temperatures during the summer are not expected to be excessively warm for any great lengths of time, but they will bounce around a bit providing quite a mix for crops to evolve with.

Better Weather To Evolve In Time

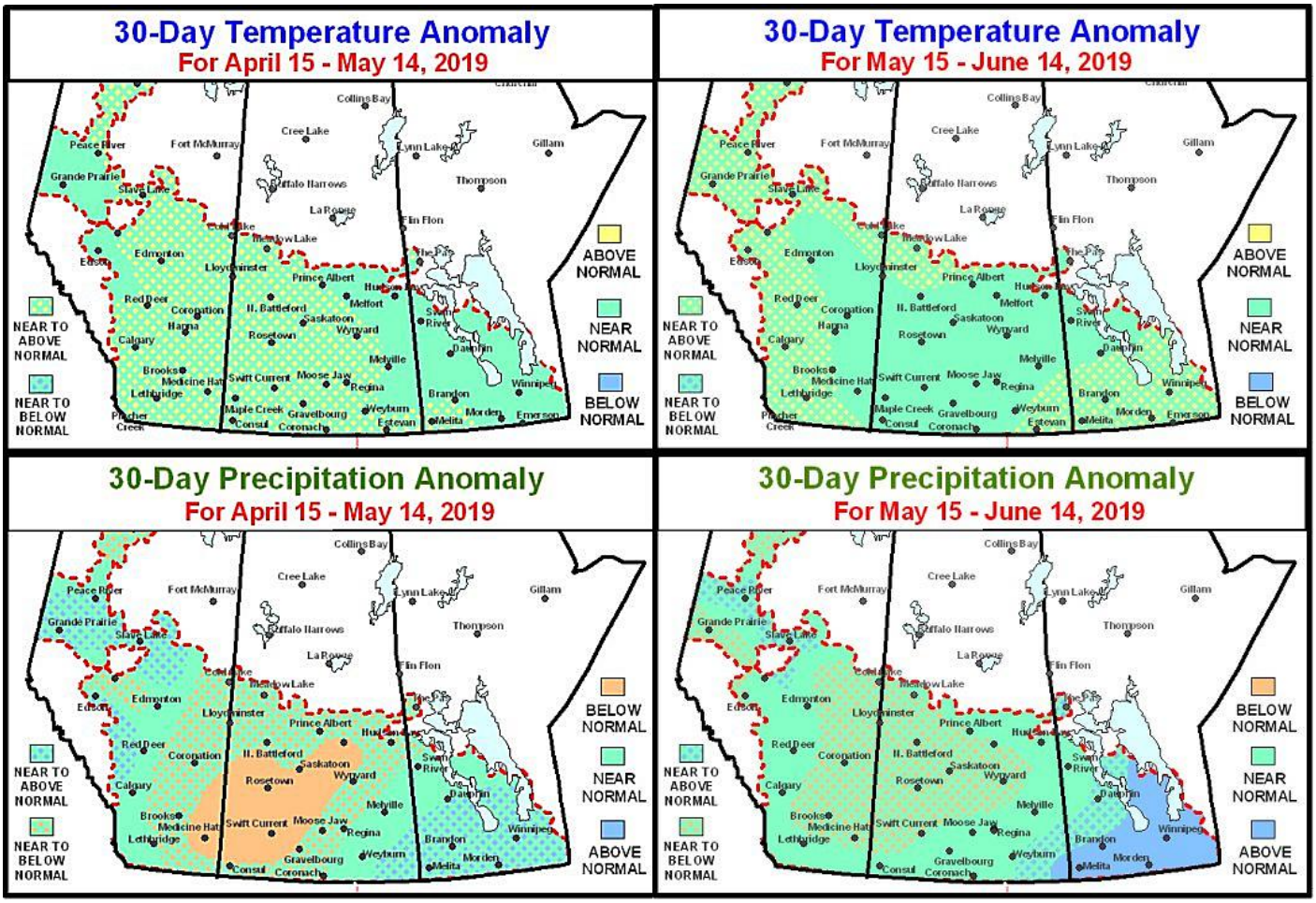
It was good to see the radar lit up with echoes at the time of this writing across many areas in the Prairies. It proves that there is still reason to hope for precipitation in areas that have struggled to get some of it in the past two years. Even though the forecast will have a bias toward below average precipitation in the central and western Prairies, we must remember that the trend will change as we get closer to the summer and that better timed and better distributions of rain will occur in the driest areas of the Prairies. Similarly as we move into summer there will be a lessening of moisture in the northwestern parts of the Prairies to bring relief from abundant wet conditions. Neither trend will necessarily fix all from the past few years of anomalous weather, but the change will at least be in the right direction for reducing recent anomalous weather.

Weather in the coming 30 days (April 15-May 15) will continue to perpetuate a below average precipitation bias in the central and southwestern parts of the Prairies while temperatures are slightly above average. Some central and southwestern Saskatchewan crop areas will be struggling for moisture into the first half of May and for them—taking advantage of moisture while moisture is present will be important. However, be careful not to get into the fields too far ahead of the normal last frost and freeze dates.

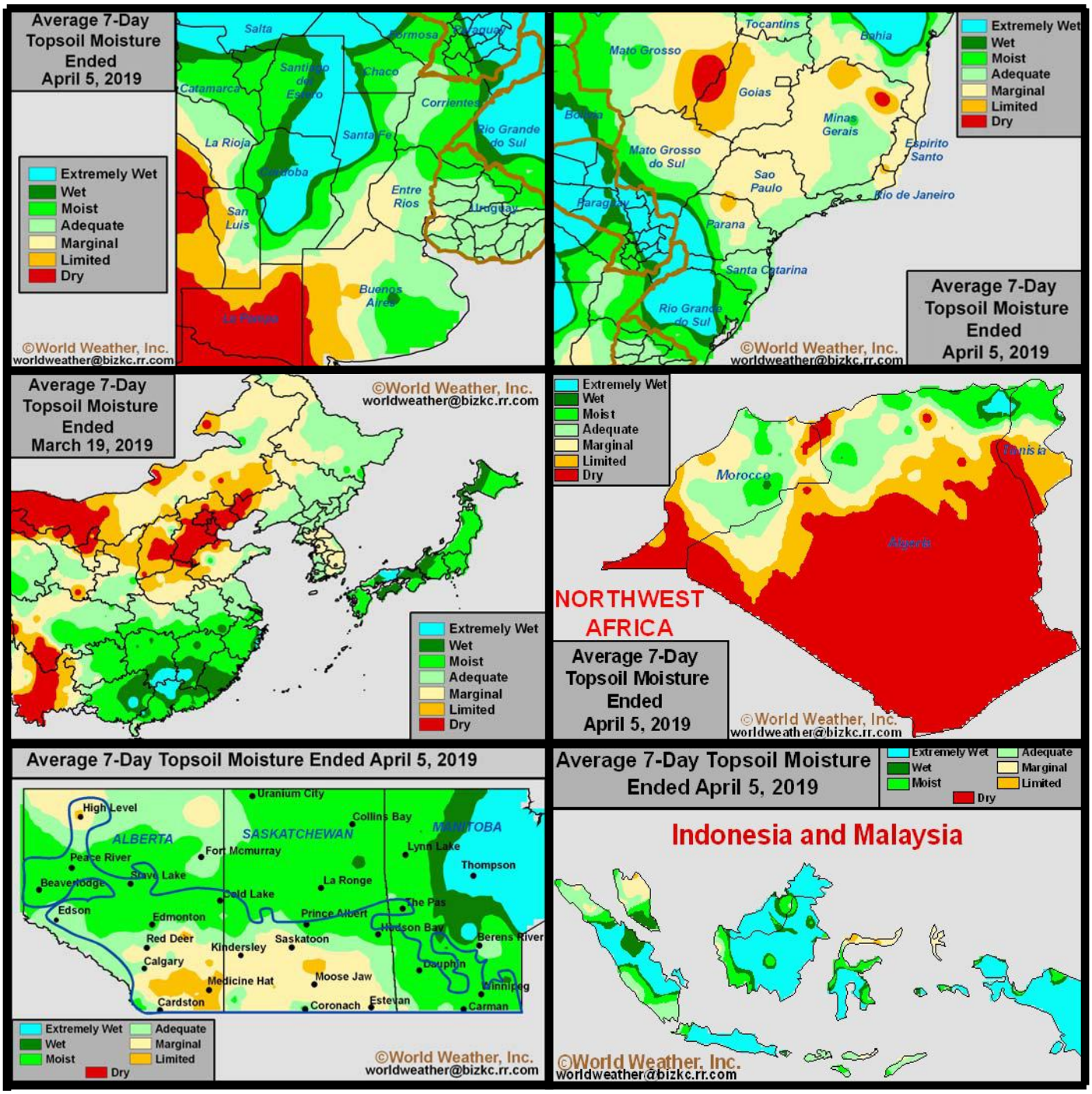
Precipitation late this month and in early May will be more frequent in Manitoba and extreme southeastern Saskatchewan as well as in northwestern Alberta and along the front range of mountains in southwestern Alberta. Temperatures will average close to normal in the wetter biased areas and a little warmer than usual elsewhere.

The May 15-June 14 period offers some change. The wet bias in the U.S. should shift northwest and Manitoba and southeastern Saskatchewan will see more rain more frequently. There is some potential that the wetter bias shown on the map below will shift more significantly to the northwest than illustrated, but we need more evidence of the change before printing it so watch future Prognosticators for a possible change for late May and June.

There should also be more precipitation during the May15-June 15 period in the drier areas of Saskatchewan and eastern Alberta and there will be some potential for a few timely rain events of which we must take full advantage of . Temperatures in this time period may be a little milder for a while in the heart of the prairies with a couple of cool shots likely.



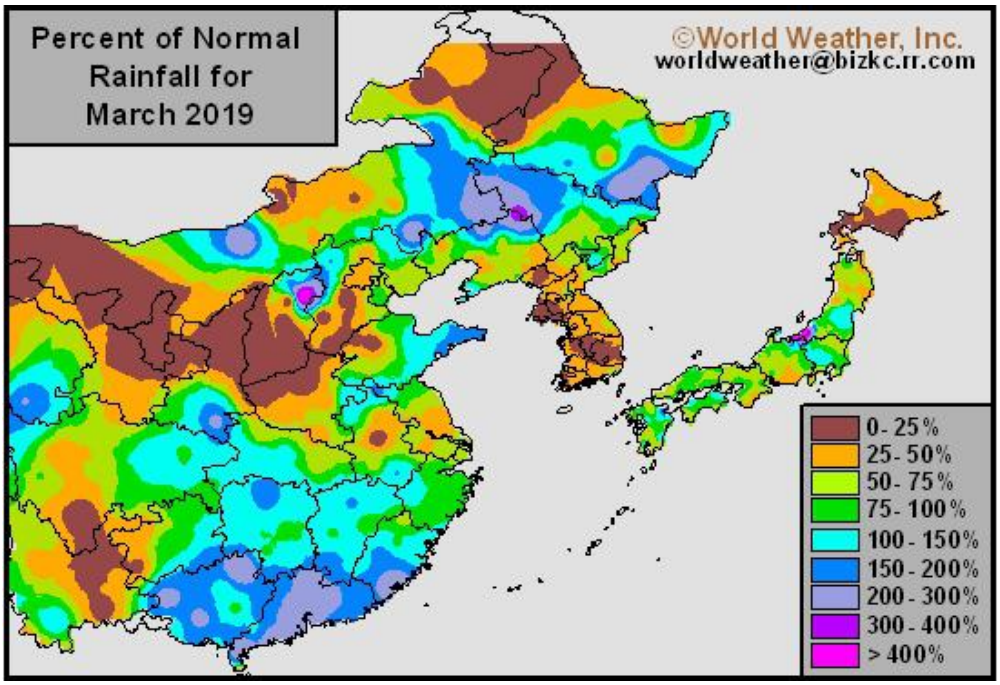
Selected Weather Images From Around The World



China soil conditions in the north are a concern, especially in the North China Plain. Seasonal rainfall will have to kick in significantly in May and June to ensure dryness does not fester into a threatening drought. Winter crops in the driest area are mostly irrigated, but spring and summer crops are mostly rain-fed and planting will begin late this month and get aggressive in May. North Africa rainfall recently brought some dryness relief in time to support reproducing and filling winter wheat and barley. The Canadian Prairies are still dealing with dryness in central and southern crop areas of Saskatchewan and east-central and southern Alberta with restricted relief expected in the next few weeks. Southeast Asia's palm oil areas of Indonesia and Malaysia have continued to report timely rainfall a mostly good crop development conditions, despite the presence of El Nino. Change is not expected to be very great in the next few weeks. Drying in Brazil is not likely to become an issue since more rain will fall in the next ten days. Second season corn in Brazil is poised to be a huge crop. Southwestern Argentina dryness has hurt a few crops, but not many.

North China Plain To See Little Relief From Dryness

Dryness that may end up being the most significant since 2001 in the North China Plain may be partially eased with some rain Sunday into Monday. However, the relief is expected to be limited and temporary. The region's dryness may be a greater threat to rain-fed spring and summer crops rather than to winter wheat since much of the wheat crop is irrigated, but the region must begin receiving periodic rain soon to stop a rising tide of concern over dryness for the region. There is still plenty of time for rain to fall without harming any of the region's production potential, but the situation will need to be closely monitored until significant rain falls.



Soil moisture remains rated short to very short for much of the North China Plain and central Yellow River Basin. Warmer weather in recent weeks brought winter crops out of dormancy and began increasing the need for soil moisture. Irrigated crops are well established and new season crop development should occur swiftly as seasonal warming continues. However, dryland winter wheat and rapeseed need significant rain in the near future to support greening and new crop growth.

Precipitation across China was variable in March. Areas near and south of the Yangtze River received 75-200% of normal rainfall with portions of Guangxi, Guangdong and southern Fujian receiving upwards to three times' the norm. However, Yunnan and southern Sichuan reported less than half of their normal precipitation. Several areas from east-central Inner Mongolia through southern Heilongjiang were also wetter than normal for the month while much of the North China Plain, central Yellow River Basin, and remaining portions of northern China reported near to below normal precipitation. Northern Shaanxi and much of Shanxi into Henan and southern Hebei received less than 25% of normal precipitation.

Shanxi, Hebei, northern Henan, northern Shandong, northwestern Liaoning and northern Shaanxi are dry or critically dry. These areas were drier biased last autumn and have not received much precipitation of significance since then. Most other portions of the North China Plain into central Inner Mongolia have a shortage of moisture as well. The Yangtze River Basin has mostly adequate soil moisture with pockets in Hubei that are marginally dry. Southern China has mostly adequate to abundant soil moisture, though Yunnan and southern Sichuan are also dry or critically dry.

Winter wheat conditions are variable across the North China Plain and central Yellow River Basin. Several fields are irrigated and most of the crops in those areas established favorably last autumn. Soil temperatures are warm enough to bring some of the crops out of dormancy and early season development conditions have been mostly good. However, some of the crop is rain-fed and may not have established well due to dryness last autumn. Early season plant development potential is poor due to dryness, but a single rain event of significance in the next few weeks might induce enough improvement for a burst in crop growth and development. Timely precipitation will be needed soon to protect production potentials. In the meantime, irrigated crops will continue to evolve normally with their production potential staying good.

The North China Plain and central Yellow River Basin will be mostly dry through Saturday. A few isolated showers will move across a few locations, though resulting rainfall will be too light to counter evaporation. A disorganized disturbance passing across central China will then promote scattered shower activity in most locations Sunday and Monday. Rainfall during this time will range from 0.15 to 0.70 inch, although local amounts may approach 1.00 inch. Sporadic, mostly insignificant, rainfall will again during the balance of next week. After that, there is potential for another better-developed disturbance to impact the region April 13 – 14. Confi-

North China Plain To See Little Relief (continued from Page 5)

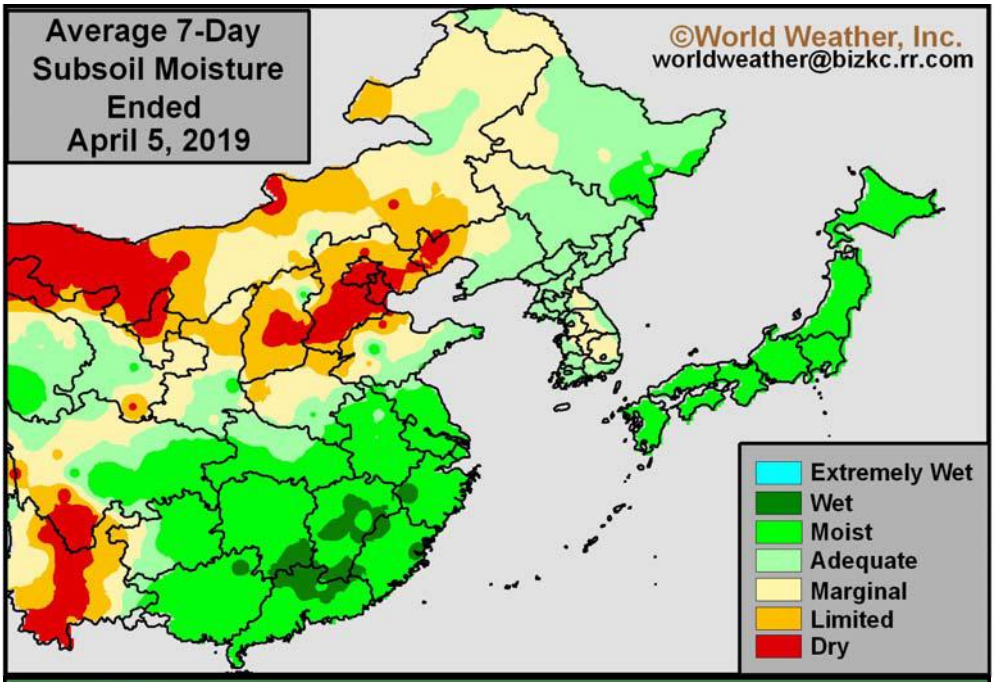
dence in the April 13-14 event is low.

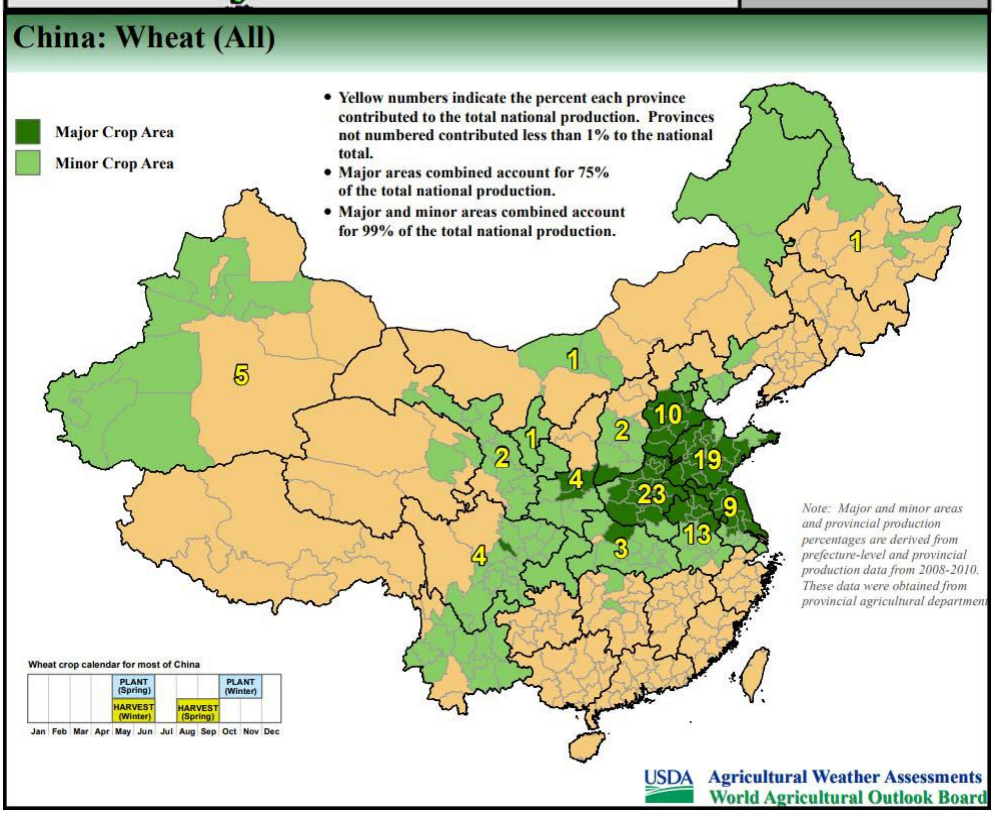
Overall, the main winter wheat and rapeseed areas in the North China Plain and central Yellow River Basin will see "some temporary" relief from dryness during the next week to ten days. Rain totals will not be enough to seriously change moisture deficits and follow up rain will be imperative. However, some of the dryland areas may receive enough rain to briefly improve development conditions.

In the meantime, winter wheat and rapeseed conditions in the Yangtze River Basin are mostly favorable. Timely precipitation was noted in most locations during the past several weeks. Plant development got off to a good start this year, although some pockets in Hubei have dried out a little in more recent days. The region will see a mixture of rain and sunshine during the next two weeks that will help keep soil moisture near current levels and support accelerated crop development. Winter wheat and rapeseed production prospects are generally favorable.

Rice planting is either starting or will begin in the coming days for the southernmost provinces. Guangxi, Guangdong, and Fujian all saw several waves of rain in recent weeks that helped keep soil moisture at adequate to abundant levels. The erratic rain pattern will continue for these areas during the next two weeks as well. Planting and establishment will advance swiftly in most locations.

Yunnan is too dry to support aggressive planting. Early season corn planting has either been delayed or has resulted in uneven emergence and establishment because of dryness. The region will have several opportunities for rain in the coming weeks that should start to reverse some of the dryness.

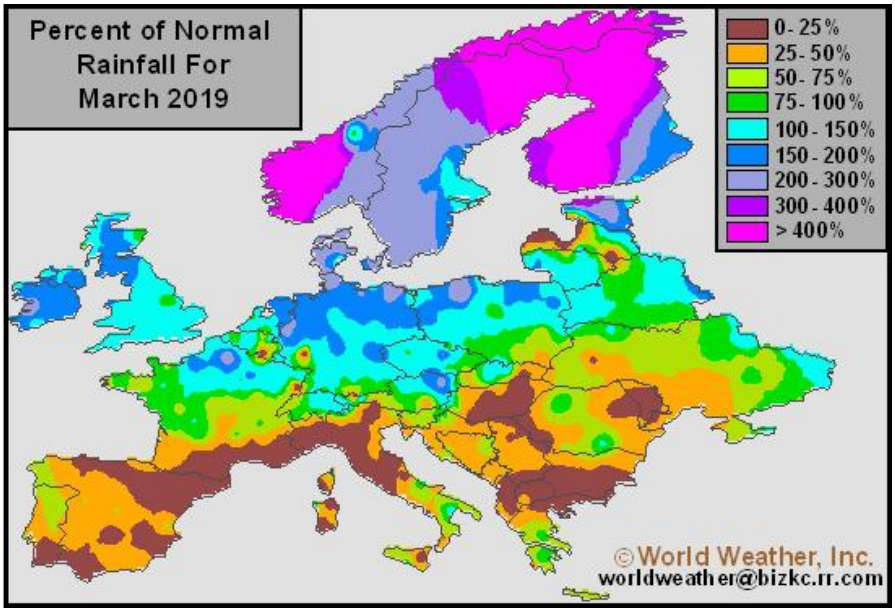




Spring crop planting in Northeast China, northern Hebei, and central Inner Mongolia is still a few weeks away from starting. Soil moisture is rated is adequate to marginally short and most areas will see a mix of erratic precipitation and sunshine during the next two weeks that will not significantly impact long-term soil conditions. Timely precipitation will be needed later this month into early May to support favorable planting conditions.

Dryness in Southern Europe To Diminish

The Iberian Peninsula, southern France, and portions of Italy into southwestern sections of the Balkan region have been drying down in recent days. Many areas have become short to very short of moisture in the topsoil limiting early season crop development. Aggressive spring planting normally begins in April, but without precipitation soon there may not be much winter or spring crop growth. Much of southern Europe will see a good mix of rain and sunshine during the next week to ten days offering some needed improvement for farming activity and crop development. Areas farther to the north in Europe have mostly adequate soil moisture and weather in that area will likely trend a little cooler and drier for a while.



Drier-biased conditions were noted from the Iberian Peninsula, southern France, and Italy through much of the Balkan region during March. Precipitation totals were less than half of normal and temperatures were warm enough to induce some expansion of dry conditions. Ukraine precipitation was 25-75% of normal and the remaining production areas from Western Europe into Poland and the Baltic States received 75-200% of normal precipitation for the month.

Much of the region in southern Europe that reported poor rainfall in March is also reporting short to very short topsoil moisture. The lack of precipitation combined with seasonal warming has gradually firmed the ground. Soil moisture in other portions of Europe is generally adequate.

The ground is warm enough to promote early season planting, germination and emergence of early spring crops and the greening and early development of winter crops in most of southern and central Europe. Soil temperatures have not reached the optimal level for corn, cotton or rice development except in portions of Portugal and Spain, although some planting has begun in anticipation of improved conditions. Winter crop development is most advanced in southwestern parts of the continent while only greening and in the vegetative stage of development in central and northern areas. Early season crop development has been a little slow in some areas because of the combination of dry and cool soil conditions.

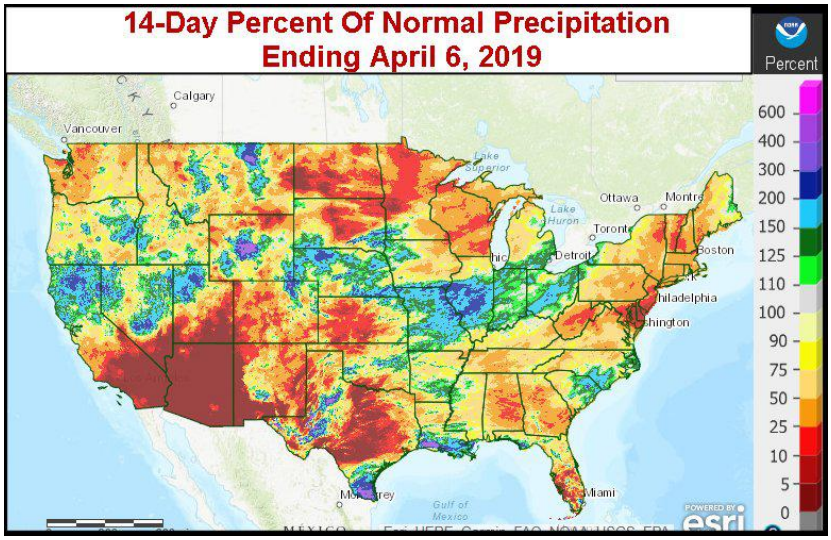
A series of disturbances will bring erratic precipitation to much of Europe during the next seven days. The greatest precipitation is expected from the Iberian Peninsula and southern France through Italy to the Balkan countries. Moisture totals by next Thursday morning will range from 0.50 to 2.50 inches most often with local amounts over 3.50 inches. Areas farther to the north will also have opportunities for precipitation. Moisture totals will generally range from a trace to 1.00 inch with locally greater amounts in the United Kingdom, northern France, and western Germany. A mixture of precipitation and sunshine is expected April 12-18 as well.

Temperatures in Spain, France, and the United Kingdom will trend near to below normal through next Thursday. Other production areas in Europe will experience warmer than usual condition. The ground will slowly warm in many locations across the continent, although periods of precipitation in the south and west will hinder this process at times.

Soil moisture will gradually improve in the drier biased areas of southern Europe during the next two weeks. Many areas will also warm enough to stimulate faster crop development and a boost in fieldwork will likely take place during periods of rain-free weather. Northern Europe may be a little cooler biased for a while, but that should not do much more than slow plant growth rates for a while.

Caution Advised Over U.S. Wet Bias

U.S. flooding has been significant in recent weeks and the outlook for much of the states calls for additional rain to fall frequently in the next few weeks. However, some caution is advised in the outlook—at least when the forecast is applied against farm progress. How many times have we see farmers in South America get their crops planted when it looks like an horrendous task? Better yet, how may times have our producers in the Prairies been faced with similar conditions and yet still managed to get crops in the ground.



As you know it is possible for so much rain to fall that land goes unplanted. We have seen it before here in the Prairies, but it is typically a very rare occurrence and the same it true for most other areas in the world. U.S. farmers are like those anywhere else—resilient when the weather chips are down and relentless in attempting to get the job done. Today's planting technology here in the Prairies as well as down in the states has reached the point when planting can be completed in a relatively short period of time.

The smaller farm sizes found in the states relative to those in the Prairies will also enable many of the producers an "opportunity" to get into their fields and get some aggressive planting accomplished when the time is right. Similar to the prairies in the late 2000s and early 2010s fieldwork did not get completed last autumn because of the wet bias was already in place at that time. In fact, many of the U.S. Midwest farms were wetter biased for the past 8 months and some upwards to a full year. That wet bias has not only persisted in the Midwest, but in the lower Mississippi River Basin and southeastern states as well. There have only been 7 times since the late 1800s that such conditions have occurred in all three of these regions at the same time and six of those seven have occurred since the arrival of the 21st century.

Many of the wetter biased patterns in the United States were not followed by drought, but were years in which planted was completed and weather conditions improved later in the year. So be cautious of that fact when considering a potential for a year in which U.S. planting might not get completed. Late planting is probable, however, and corn yields usually come down in those years that corn planting is notably late.

It is also extremely interesting to not that while the U.S. has been in flood for the past few weeks, the weather has paused in a favorable manner with recent precipitation lighter than usual. Now that temperatures in the states are beginning to warm the potential for heavier rainfall in the future is rising, but so will the drying rates between storm systems.

So with all that said, be cautious of assuming the worst for U.S. Planting. Farmers there will likely challenged this spring, but that does not mean they will fail at their mission. The odds are actually more in favor of their success than supportive of a serious disaster.

Late Season Frost Potentials In Prairies

Temperatures in the Prairies over the next couple of weeks will remain seasonable. Some cooling may occur near mid-month and readings late this month will be mostly near to above average, but it would not be surprising to see a short-term burst of coolness at the end of this month. That late month cool off may be repeated a couple of times in May, but the average temperatures will stay more warmer biased than cool. World Weather, Inc. is watching May for a "possible" quick and brief cool off, but as of this writing sees no significant threat. Watch for an update on this.