The Canadian Agriculture Weather Prognosticator

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Ontario, Quebec Wet

Just like in the Prairies, portions of Ontario and Quebec have also continued wetter biased in recent weeks and planting of corn and soybeans is off to a poor start. Excessive moisture is present and further delays to fieldwork may be forthcoming.

WORLD WEATHER ISSUES

- Wet Biases Do Not Stop At The U.S. Border. Most Of The U.S. Corn Belt And Central Plains Have Dealt With Frequent Rain, Too, But Planting Progress Has Advanced Around The Frequent Rain
- Argentina Continues
 Wetter Biased This
 Month, But Drying Is
 Expected And Harvesting
 Is Advancing Well
- Brazil's Second Season Corn Has Been Stressed In the North, But Yields Are Still Good; Rain Is Coming This Week
- Western Australia,
 Wheat, Barley And Canola Areas Need Rain;
 Planting Elsewhere Is
 Going Well
- China Weather Is Advancing Well
- Europe Weather Has Recently Improved

Northern Rains Push Limit; Changes Likely

Rainfall in the first half of May looked very similar to that of the month of April making six weeks of frequent precipitation and too much moisture. The precipitation, of course, followed the horrendous autumn weather perpetuating a wet weather pattern that looks as though it will never end.

Rainfall so far this growing season has reached the upper 10th percentile of wettest periods for April through May 14 across the Peace River region and east through the northern fringes of crop country extending southward to Edmonton and further to the east.

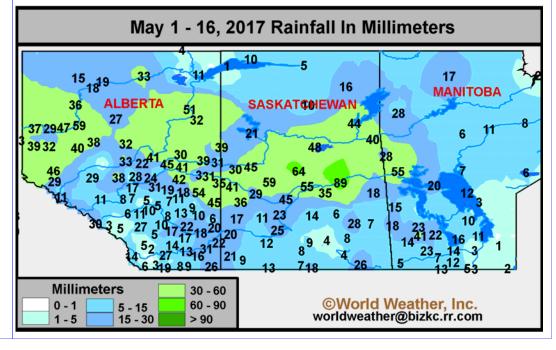
across northern Saskatchewan, including the Macklin/Provost areas and east of Prince Albert and north into non-agricultural areas. Needless to say, the region has totally saturated soil and considerable standing and running water following the latest round of significant rain.

Total rainfall since May 1 has varied from 10 to 64 millimeters across much of the described region.

Nipawin, Saskatchewan reported 89 millimeters of rain since the beginning of this month. All of the areas shown in green on the map below are way too wet and many other areas shown in the darker blue

are not far behind. Localize problems are prevailing in northeastern Saskatchewan, especially in the Hudson Bay area.

The wettest areas in western, central and northern Alberta needed six weeks of dry weather when the growing season began to get the old crop harvested and the new one planted and instead the region has had 6 weeks of excessive moisture. Actually the greatest rain has not occurred constantly throughout the period, but when the ground is as wet as it is today it does not take much moisture to induce new or expanding flood conditions.



Northern Rains Push Limit (continued from page 1)

Several areas in the described wettest region in northwestern and north-central parts of the Prairies have been pushing the record for the wettest first six weeks of the growing season. Those areas at or above the record are shown as dark purple on the chart below.

In contrast to the very wet conditions that have been prevailing in the north and western parts of the Prairies many areas in the south have been drying out and just this

week two complaints were registered from areas south of Regina about the ground getting too dry.

After considerable fear about serious flooding in the Red River Basin area of southeastern Saskatchewan and southern

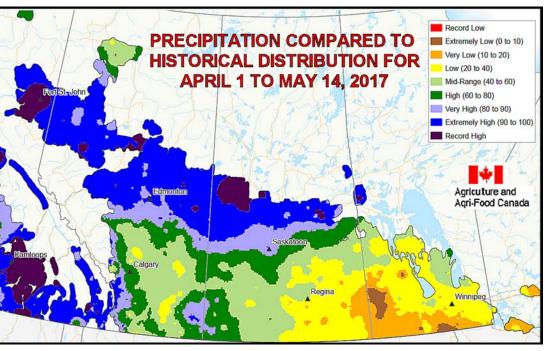
Manitoba the region has experienced unusually dry conditions this spring and that has translated into an excellent planting season. Manitoba has reported the best field progress so far this season, although other areas in the drier regions of southern Saskatchewan and some areas in southern Alberta are also moving along swiftly.

Rainfall since April First has been well below average in parts of west-central and southern Manitoba shown in orange and brown on the accompanying chart.

Statistically speaking, it is at times like this when record and near record setting rainfall is achieved that there is a high probability of a weather phase change. We are on that brink of change today and over the next few weeks a change will evolve that will greatly reduce northwestern Prairies' precipitation and will eventually increase rain in the southeast. The evolution of change will come slowly, but the changes will become visible in the next two to three weeks.

Unfortunately, for some of the wettest areas in the northwest the change cannot happen quick enough to get the sitional period will not completely stop all rain, but it will slowly taper off.

Our two most favored analog years for 2017 were 1981 and 1963. We were leaning on 1981 during the our winter talks and initial predictions for the 2017 production year. But the year that has been most like this year is 1963. That year was also a wet one for the Prairies, but conditions improved as the summer advanced and by autumn 1963 there



warmer and drier bias in the weather for much of the Prairies. Unfortunately. 1963 bred aweak El Nino event by late summer and that is still looking a little doubtful for this year. However, if El Nino does evolve we could

was a

ground dried out and crops seeded before optimum planting dates expire. Insurance coverage programs may expire before some of the planting can be completed. Some producers are hoping that an extension of government insurance programs will take place this year so that the wettest areas will have a chance to get planted.

Looking back at some of our previous comments and considerations for this growing season we recall first that the latter part of May and early June looked to be the best time for a change in the pattern and relief from recent trends and that looks like it has potential to verify, although the tran-

benefit from an extended growing season and that would be a Godsend for folks who will not be able to plant until very late this year.

Before you start placing your bets on El Nino, be cautious because the event may not evolve at all and if it does it may be very weak and nontraditional possibly reducing the potential benefits of a drier and warmer autumn. But, if you are a gambler that may be something to shoot for. If, however, El Nino, does not evolve and we continue on the track we are on now a normal to slightly later than usual first frost event will occur. The situation will be closely monitored. page.

Changing Weather Likely Next Few Weeks

As in any water leak after you turn the water off it takes a while for the dripping to stop. That is the best way to describe weather in the wettest areas of the Prairies during the next couple of weeks. The majority of the flooding rainfall is over, but the atmosphere will still take a while to reduce the precipitation pattern to dry enough conditions for improved field conditions and planting prospects.

Small weather systems will move from northwest to southeast across the Prairies for the balance of May and each will produce some occasional rainfall. Amounts in each event will vary greatly and there will still be potential for some locally heavy rain. Southern Alberta will get some of that rainfall today before ending Thursday and there will be some other pockets of locally great rainfall in the next week to ten days, but no general soaking like that of this past week or like

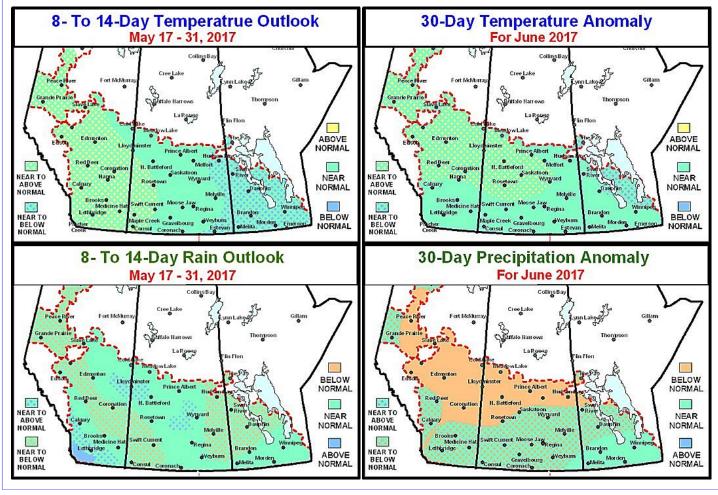
that of the past six weeks—at least not in the water logged areas across the west and northern parts of the Prairies.

June weather is expected to improve most with warmer temperatures returning to the west and central parts of the Prairies while a little cooler bias occurs for a while in the easternmost parts of the production region.

Weather pattern changes in June will allow for some greater high pressure ridge building to take place across the central United States and for a while this feature will be large enough to curtail rainfall in many areas across the Prairies and central U.S. A few areas will trend notably drier while other areas get some timely rainfall to support very good early season crop development potentials. There will be many comments

of concern about developing dryness in June, especially following some private forecast services in the U.S. that predicted drought for Canada later this year. Be cautious with that one, but World Weather, Inc. agrees that a drier bias will evolve in Alberta and northwestern Saskatchewan later in the growing season that will put some of the surplus moisture concerns of early spring into the history books to not be soon forgotten.

Part of the weather trend change that will evolve in June will not be completed until July. It is during July that the odds are strong that a southwest flow pattern will evolve across the Prairies returning wetter biased conditions to portions of Saskatchewan and Manitoba while Alberta's central and north continues drier biased. The July scenario expected is consistent with our previous forecast images for the summer.



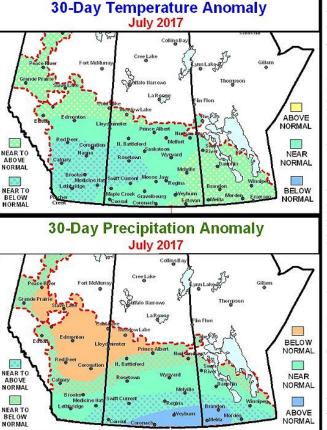
July Will Complete The 2017 Weather Pattern Change

The biggest change in North America weather that is expected in

July is the start of the 2017 monsoon season in the southwestern United States. The combination of abundant moisture in all of western North America from the winter and spring precipitation pattern and the induction of monsoonal moisture from Mexico will enhance summer rainfall.

Even through the source of monsoonal moisture will be far removed from Canada the upper air wind flow will help bring some of that moisture into the southern Prairies beginning in July and continuing in August. The moisture should not be allowed to get too far north, but just enough so that the southern half of the Prairies see normal to above normal rainfall.

The tricky part of the summer outlook is going to be in determining how much high pressure will be present in the Prairies. The stronger high pressure is present aloft over the Prairies the more limited a northward advance of monsoonal rainfall will



into the Prairies. World Weather, Inc. believes sufficient moisture will reach areas near and south of Highway One produce frequent rainfall, but areas further north between highways 16 and one will be a little more restricted at times. Sufficient amounts of rain will fall, though, to support summer crops and help induce good yields.

Most of the driest weather in the Prairies will be in central and northern Alberta and northwestern Saskatchewan, but even though those areas will receive less than usual rainfall there should still be enough moisture to support crop development and a reasonably good production year. With that said, obviously production will be reduced in the region because of late planting and possibly, in some cases, no planting at all.

Temperatures in July will trend warmer than usual in the eastern and far northwestern parts of the Prairies while a pool of cooler biased air may settle over the southwest. The contrast in air masses will result in the some assistance in the development of summer rain and thunderstorms events that will prevent the eastern Prairies from drying down like that of the west.

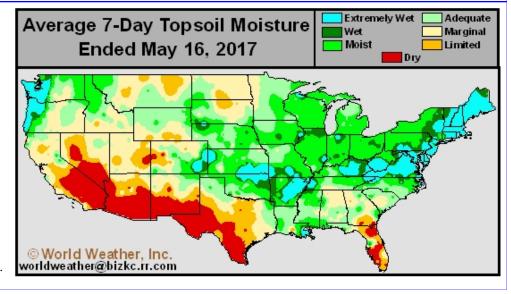
August weather may be similar in the sense of perpetuating the July trend, but September will end the monsoon flow and allow the upper air pattern to gradually change.

U.S. Midwest Wet Again

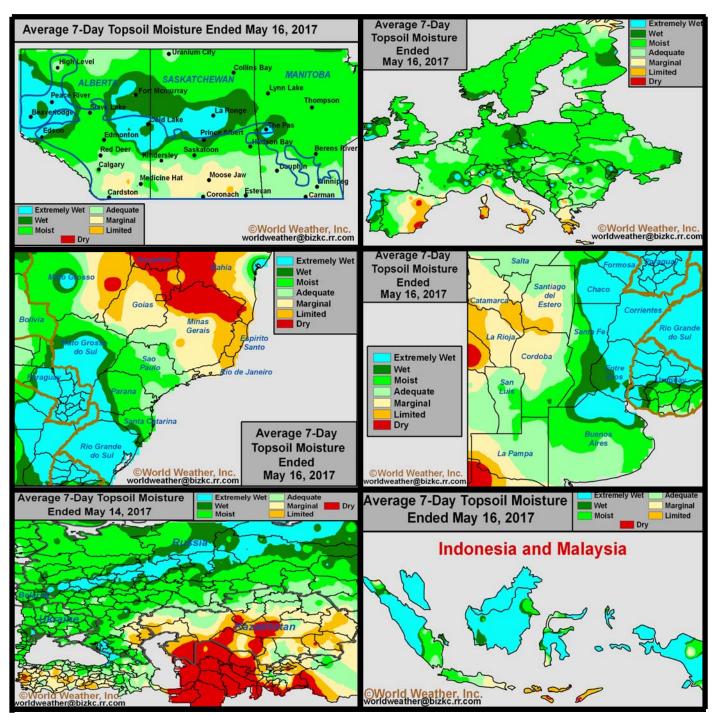
Recent warm temperatures in the U.S. central Plains and Midwest has given the region a chance to dry down, especially after the weekend and Monday were dry.

Changes this coming week will produce another period of generalized rain from the central Plains into the heart of the Midwest restoring saturated field conditions and inducing some local flooding.

Fieldwork will be delayed once again and cooler temperatures will follow the rain to slow drying rates.



Selected Weather Images From Around The World



Soil moisture in the Prairies varies from excessive in the north to short and locally very short in the south. A small boost in rainfall is needed briefly in the southern Prairies while a prolonged period of dry weather is needed in northern parts of the production region. In the meantime, soil conditions across eastern Canada have recently improved after the region from Ontario to Quebec was too wet earlier this season. Much of the European continent and western portions of Asia have favorable soil moisture, although there are some pockets that are a little drier biased and a few that are wet. The outlook in Europe is for a transition toward wetter conditions in the northwest and drier conditions from Ukraine into western Russia. Rain will fall frequently between the Black and Caspian Seas for a while. In South America, soil conditions are saturated with moisture from eastern portions of Argentina into southern Brazil and additional rain in this region over the coming week will lead to some flooding in interior southern Brazil. Southeast Asia oil palm production areas are experiencing mostly very good conditions with little change likely.

Beneficial Rain Likely In Eastern Australia This Week

Beneficial rain will return to Australia later this week. The best chances for improving rainfall will occur Wednesday into Saturday when nearly widespread rain will increase over eastern parts of the nation. The mois-

ture will be greatest over New South Wales and immediate surrounding locations where a boost in topsoil moisture should allow for aggressive planting of winter crops following the rain. However, some pockets of dryness will prevail over portions of South Australia, southeast Queensland and Western Australia where greater rainfall will be needed to provide the best environment for barley, canola and wheat planting and early development.

A lack of rainfall during the early portions of May in Western Australia, Queensland and some New South Wales' locations has left many of Australia's winter crop production areas dry. Soil conditions are too dry to support aggressive winter planting of barley, canola, wheat or pulse crops. But the dryness has allowed for maturation and

harvesting of summer crops.

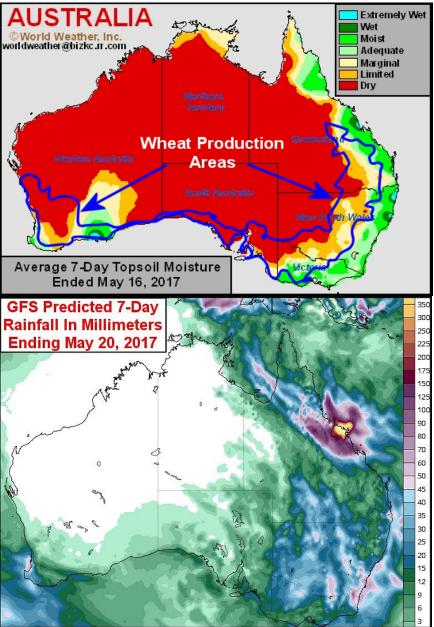
The only exceptions to the lack of rain have been along the eastern coast of Queensland and New South Wales as well as southern and central Victoria where soil moisture is favorably rated. With that said, conditions

earlier in April were far better for much of southeastern Australia where planting likely advanced most significantly. Victoria, eastern South Australia and southern New South Wales received significant rain last

and yet just enough to maintain favorable soil moisture for early season crop development.

A few rain showers evolved briefly over eastern Queensland and northeast New South Wales last weekend,

> but resulting moisture was too brief and erratic to provide a lasting impact on soil moisture or crop conditions. With that said rain will increase over Australia's major winter crop production areas Wednesday into Saturday. The rainfall will temporarily boost topsoil moisture and aggressive planting should take place following the rainfall. Resulting rainfall will be greatest over the far southeastern corner of the nation. Rain totals will range from 0.50 to 2.00 inches over New South Wales and immediate surrounding locations of southern Queensland, Victoria and southeast South Australia. Most other locations will receive rain totals varying up to 0.50 inch and some of the greatest rainfall will miss portions of southeast Queensland where pockets of dryness will prevail. The moisture will be most beneficial for plant-



month to temporarily bolster soil moisture and support planting. Most of the beneficial moisture is gone except in the areas noted above. Rainfall since April has been infrequent enough to allow for good field progress in the previously wettest areas ing of canola, barley and wheat while some disruption to summer crop harvesting will occur.

In the meantime, Western Australia is too dry for aggressive planting and abundant rain is needed.

Brazil Rainfall To Slow Harvest, Improve Safrinha Corn

Showers and thunderstorms are expected in much of center west, center south and far southern
Brazil during the Thursday through Sunday period. Some of the rain will be heavy enough to slow or delay early season harvesting of sugarcane and coffee while contributing to slower late season rice harvesting. The precipitation will induce some flood-

ing and could have a temporary impact on second season corn, although no negative impact on production is expected. Some beneficial moisture may reach into Mato Grosso and Goias corn and cotton production areas which had been trending too dry recently.

Topsoil conditions are saturated with moisture in much of Rio Grande do Sul. portions of Mato Grosso do Sul and western sections of Parana and Santa Catarina. Late season harvesting and general fieldwork was slowed in many of these areas during the past week because of the wet conditions. Other production areas did not receive enough rain to significantly bolster soil moisture or impact the harvest or fieldwork in most locations.

Rio Grande do Sul was largely wetter than normal since the beginning of May. Rainfall was one and a half to more than three times normal in most areas with portions of northern Rio Grande do Sul only receiving 65-91% of normal precipitation. Pockets in Mato Grosso and southwestern Minas Gerais were also wetter than usual, but the rain reported in each area occurred over a single day or two leaving the remainder of the month to date period dry.

The other production areas reported near to below normal precipitation with a broad region in Bahia, western, northern and eastern Mato Grosso into Goias and a part of Mato Grosso were dry or mostly dry along with Rio de Janeiro and Espirito Santo. The lack of rain promoted aggressive fieldwork in most locations. The lack of rain was also promoting some late

GWS Predicted 7-Day
Rainfall In Inches
Ending May 16, 2017

season crop stress especially from western Minas Gerais through Goias to eastern Mato Grosso. Some of the drier areas have been dry for several weeks and temperatures were very warm to hot resulting in the depletion of topsoil moisture and stress for second season crops.

A general boost in precipitation was expected to take place across southern, center west and center south Brazil during the Wednesday night through Sunday period. Rainfall is expected to become excessive for many areas from Mato Grosso do Sul and parts of northern Parana into southern Minas Gerais. The greatest rain will fall in Sao Paulo where torrential amounts are expected to result in flooding. Some locations across the wettest are will receive 2.00 to 4.00 inches of rain with local totals of 5.00 to 6.00 inches. Such amounts of rain will quickly saturate the soil and cause flooding.

Too much rain in citrus, sugarcane, coffee and late developing rice production areas in interior southern and center south Brazil will result in harvest delays. Some of the excessive rain will negatively impact the quality of unharvested rice and cotton in center south production areas and could reduce sucrose values in maturing sugarcane. Most crops will recover from any adversity that comes from too much rain as long as dry weather evolves and prevails for a while. Not all of the rain expected will be a negative factor for crops. Lighter rainfall is expected in center west corn and cotton production areas where there is likely to be

some improvement in topsoil moisture. The moisture will ease crop moisture stress and induce a better environment for crops to finish the reproductive and filling season more favorably. Some yield potential has been lost in eastern Mato Grosso and parts of Goias and western Minas Gerais because of persistent dry and warm weather, but the rain expected late this week and into the weekend will help put an end to that stress and improve late season crop development potentials.

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