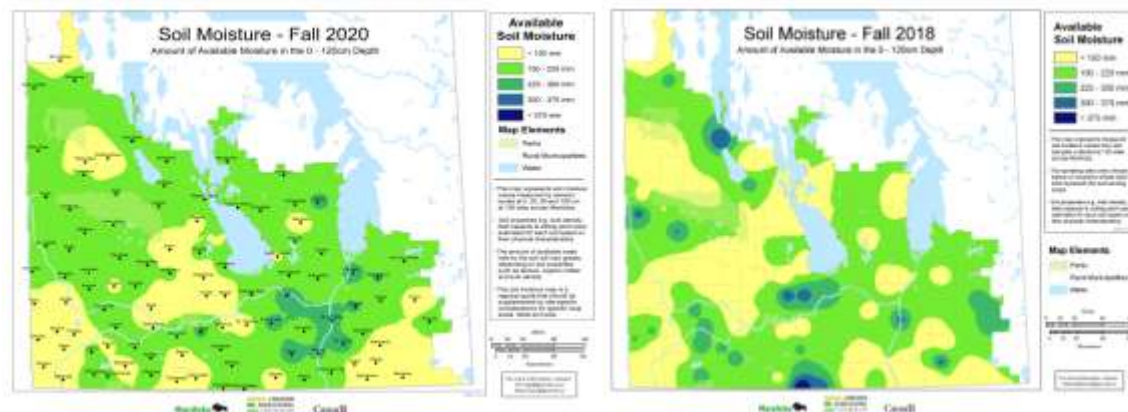


Planning for and Dealing with Drought

By John McGregor, MFGA Extension Support

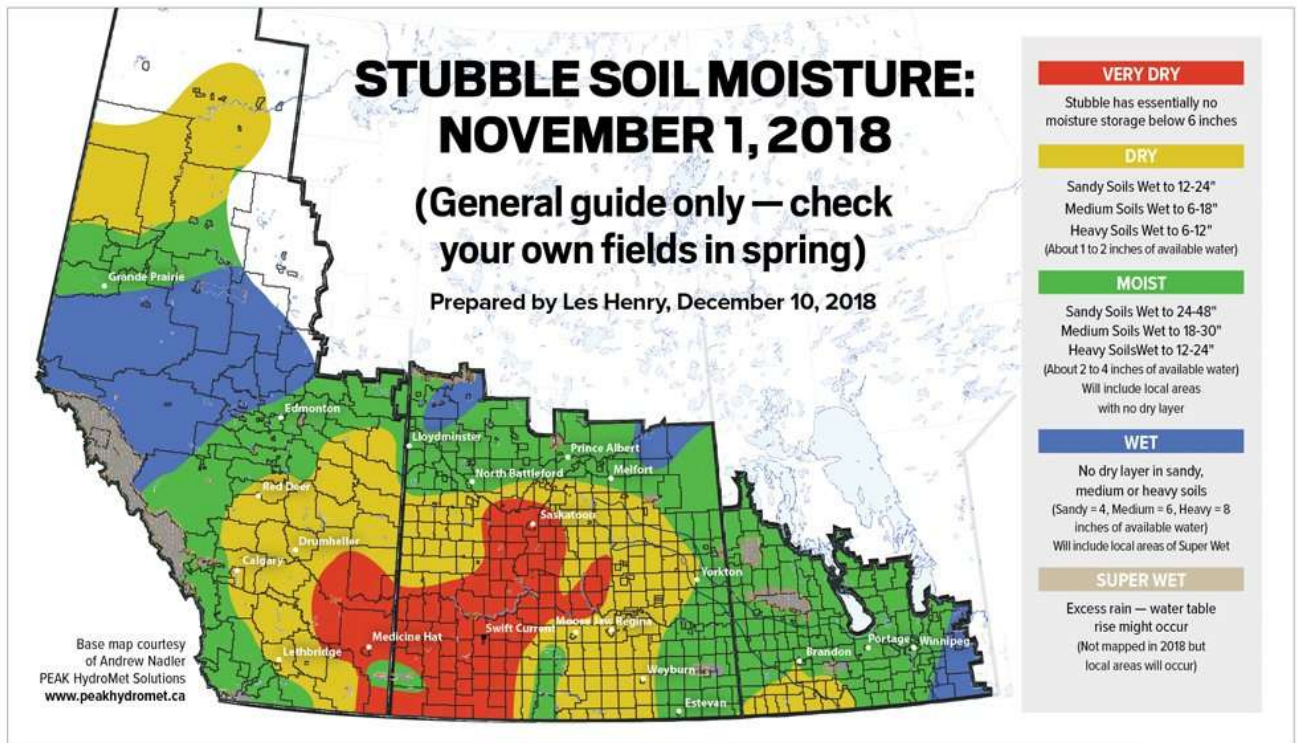
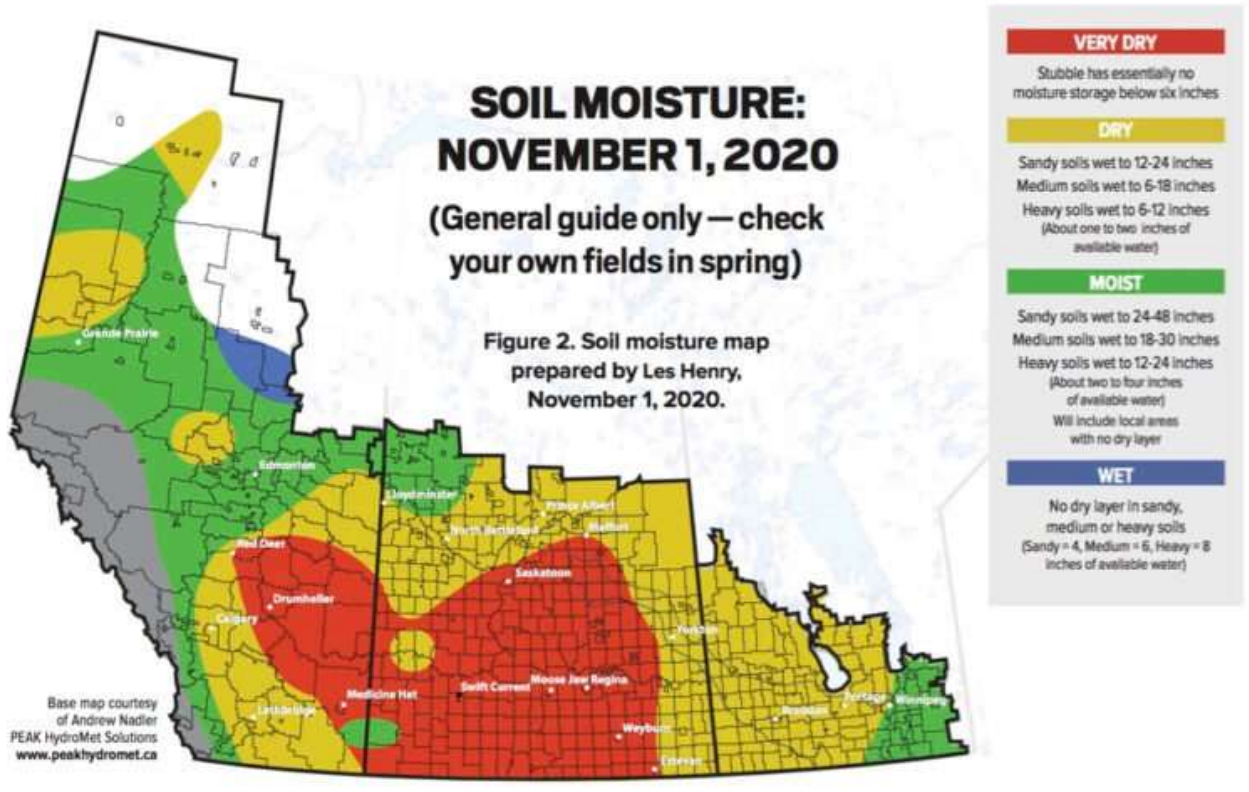
For the past three years, Manitoba has experienced below normal moisture conditions. 2018 and 2019 were extremely dry during the growing season and while 2020 started off with good soil moisture conditions (due to above normal rainfall in 2019), it ended with most of Manitoba having low moisture conditions.

Looking at the 2 charts below you can see that 2020 and 2018 are similar in available moisture.



(Go to <https://www.gov.mb.ca/agriculture/environment/soil-management/manitoba-fall-soil-moisture-survey.html> for more information)

Looking at it another way, the charts produced by Andy Nadler of PEAK HydroMet Solutions show fall stubble soil moisture levels. Again comparing 2020 with 2018 we see that the dry and very dry conditions have expanded right across the prairies.



Granted, it may be too early to predict a drought for 2021 but with below normal snowfall amounts to date, forage producers should have plans in place should 2021 forage production fall below normal.

In the late summer and fall of 2019 - in the midst of a forage shortage - MFGA set up a [Hay Relief](#) webpage in an effort to provide information on dealing with feed shortages. Manitoba came into 2020 with very low feed supplies and due to the dry conditions of 2019, pastures and hay fields were extremely stressed. With the excess moisture in the fall of 2019 and a good start to 2020, hay inventories returned to normal to slightly below; however with the dry conditions going into the fall of 2020, it may be time to be proactive in planning for another below normal production year.

Grazing Management

Decisions about managing during a drought are often based on weather forecasts. Because droughts seem to be occurring more frequently, forage producers should be developing both short- and long-term strategies to deal with them.

Drought reduces forage growth in pastures and when forage is in short supply, it is tempting to continue grazing until all the forage is gone. But if pastures exit the drought in poor condition, the road to recovery is much longer. This is something that we saw in 2019 when rains returned in the fall and some pastures that had been overgrazed weren't able to fully take advantage of the moisture to adequately recover.

Grazing management during drought periods is about protecting energy and nutrient reserves. Lack of moisture suppresses plant growth and root development. Without adequate roots, plants cannot pull moisture and nutrients from the soil, which further limits plant growth. A healthy root system is very important because 50 to 80 percent of the plant growth occurs below the soil surface.

Drought conditions force plants to use their stored sugar to grow replacement leaves, capture solar energy, and proceed with photosynthetic processes to manufacture sugars. Grazing management is very much about protecting energy and nutrient reserves in newly formed buds.

To do this, plants need a rest from grazing to restore energy reserves. Slowed plant growth generally means rest periods must be longer. **Livestock should not return to the pasture until grasses re-grow to about 8 to 10 inches.** The rule of thumb of "graze half, leave half" should change during slowed growth. Increasing grazing stubble height helps shade and cool the soil, which reduces evaporation and conserves moisture. Maintaining an adequate amount of stubble or residue will also encourage root development below the soil surface.

If your pastures contain deep-rooted forage plants such as, orchard grass, meadow brome and/or alfalfa you may want to adjust your grazing strategy to help conserve adequate stubble heights. This will extend the active growth period by allowing roots to reach moisture in the lower soil levels.

Rotational grazing is key to managing grazing pressure. Short grazing periods for any one area, and long rest times, are especially important during a drought. Lowering stocking rates on larger pieces of land over a long grazing period will support over- and under grazing patterns.

But in an extreme drought situation, some paddocks can be grazed heavily as a sacrifice pasture, allowing more rest time for the other paddocks. Rotate animals off these sacrifice areas once grazing conditions no longer meet their needs.

Remember drought does not impact all farms to the same extent. Even pastures or portions of pastures within a farm might not be affected the same. The impact will depend on how pastures were treated in the years prior to a drought. Plan on turning animals into pastures only for short periods of time and allow longer rest periods. Don't graze pasture when grass is less than four inches tall and do not allow them access until grass grows to eight to 10 inches. Under these conditions, confine the livestock to a pasture where hay can be fed if necessary or develop a strategic emergency rotational grazing plan such as grazing annual crops. Be prepared to make proactive changes if periods of drought are prolonged. Remember to reduce stocking on all types of forage.

Finally, have a plan to supplement hay and pasture requirements. These may include: sourcing hay before supplies become tight and/or prices increase; sourcing additional area for grazing (pasture or cropland) if available in your area; and finally, consider utilizing annual crops to supplement grazing and or hay/silage.

Next month we will look at incorporating annual crops as part of a drought management strategy.

One final note: **Forage Insurance**. March 31 is the last day to apply for, cancel, or make changes (add or delete crops, change coverage levels) to Select Hay Insurance, Basic Hay Insurance and options.

[Canadian Drought Monitor](#)

[Manitoba Fall Soil Moisture Survey](#)

[MFGA Hay Relief](#)

[Drought Management Strategies](#)