

# Spring Moisture

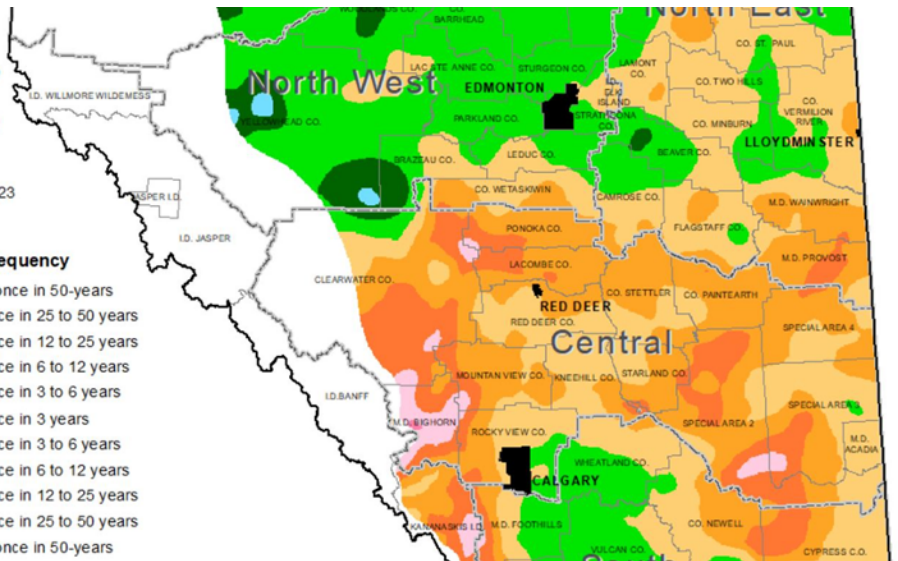
**Oct. 25**

It's no secret that soil moisture conditions are less than ideal going into spring this year. When we removed our soil moisture probes last fall, we did find some small pockets where soil moisture was good (4+ inches of moisture). But it was far more common to find below normal levels of 1 to 2 inches. This lined up very well with Alberta Ag information showing low to very low soil moisture levels as of October 25th.

**Spring Wheat Soil Moisture Reserves Relative to Long Term Normal to a Depth of 120 cm**

Estimated as of October 25, 2023

Condition	Frequency
driest	< once in 50-years
extremely low	once in 25 to 50 years
very low	once in 12 to 25 years
low	once in 6 to 12 years
moderately low	once in 3 to 6 years
near normal	once in 3 years
moderately high	once in 3 to 6 years
high	once in 6 to 12 years
very high	once in 12 to 25 years
extremely high	once in 25 to 50 years
wettest	< once in 50-years



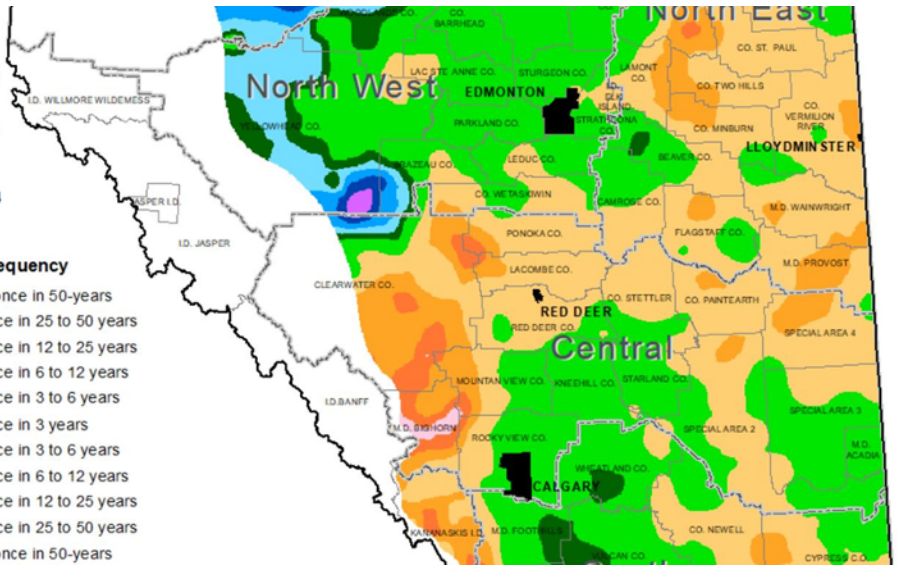
**Mar. 12**

Things have not exactly improved since fall. Cold weather precipitation has been hard to come by, only hitting between 30 to 60% of the thirty year average, leaving us with a soil moisture map that looks like this as of March 12th.

**Spring Wheat Soil Moisture Reserves Relative to Long Term Normal to a Depth of 120 cm**

Estimated as of March 12, 2024

Condition	Frequency
driest	< once in 50-years
extremely low	once in 25 to 50 years
very low	once in 12 to 25 years
low	once in 6 to 12 years
moderately low	once in 3 to 6 years
near normal	once in 3 years
moderately high	once in 3 to 6 years
high	once in 6 to 12 years
very high	once in 12 to 25 years
extremely high	once in 25 to 50 years
wettest	< once in 50-years





Heading into spring, we will need to keep soil moisture conservation top of mind. That means minimizing the use of heavy harrows and vertical tillage units that can dry out the seedbed. It also means being on top of weed control and making sure the winter annuals get controlled early before they steal moisture.

Some people will also look to mitigate risk by reducing fertilizer rates (especially nitrogen) at seeding, with the idea of top dressing in crop if

conditions warrant it. This is something we played around with a few years ago at the Battle River Training Field on wheat, and actually got a positive response in both yield and protein both years we did it. We applied enough N to support a crop of somewhere between 55 and 60 bushels of wheat and added enough P & K to support an 70 to 80 bushel crop, which is approaching the upper limits of this field's potential. We then top dressed 20 lbs of N just prior to the jointing stage of the wheat. In retrospect, if we were to do this trial again, I would do it a little different. The 20 lbs we top dressed was the amount we would have put in the blend at seeding to shoot for that 70+ bushel yield. I would likely top dress 30 lbs the next time to compensate for the lower nitrogen use efficiency that comes with broadcasting. And while we did treatments with both 46-0-0 through a spinner and 28-0-0 through a sprayer, we did not use stabilized nitrogen. The first year we did the trial we were able to time it up with a 1 inch rain that quickly moved the N into the soil. The second year, we got an initial rain of less than 4 mm; enough to dissolve urea granules, but not enough to move the N into the soil. The forecast rains we were trying to time hit about 4 days later, but I feel we had lost significant amounts of N to volatilization by then. A stabilized N would have helped reduce those losses.

Researchers in Saskatchewan have shown that top dressing N is not necessarily a sure thing and there are limits to the amount you can safely reduce rates at seeding. Their data showed that reducing N rates at seeding by any more than 30 pounds put the wheat in too big of a hole to make up the yield with top dressing. For a summary of the trials and findings you can check out this article on Top Crop Manager.

[Can split N applications in spring improve economics and maintain yields? Top Crop Manager West : March 2024](#)

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