Pioneer Agronomy Update 4-17-2024

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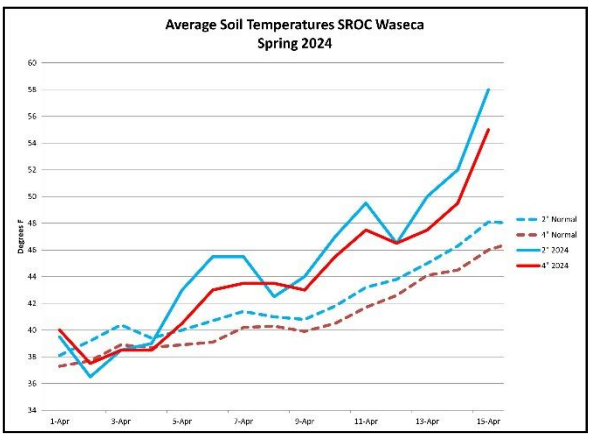
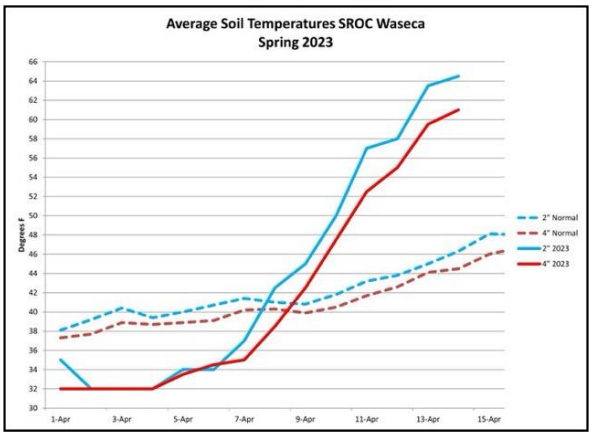
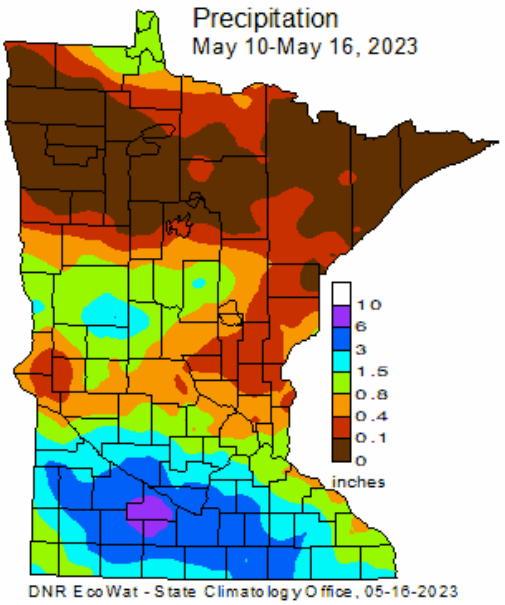
Area Update - *'To Plant or Not To Plant'…* *And if so, which do I plant: corn or soybeans?* That was the question many farmers had been asking themselves over the past week. My guidance when asked*: if soil conditions are fit go ahead!* The size of the farming operation also plays a part in that decision. If conditions weren't quite fit, those who farm fewer acres have the luxury of waiting longer for the possibility warmer/better planting conditions.

In my opinion last week was too early in the season to settle for less than ideal planting conditions. If conditions are borderline soybeans will be more forgiving of stand losses and variability in emergence. I have attached below Soil Temperature Data from the Southern Research & Outreach Center at Waseca. It's interesting to compare the 2023 chart (top) to the 2024 chart (bottom).





It is interesting to note similarities year over year as far as soil temperatures by date as well as the forecasted cool down in the April 16-20 timeframe. A year ago it wasn't early planting and cold weather following planting that resulted in wide-spread replanting of corn and soybeans, rather the period of excessive rainfall ranging from three to ten inches that occurred from May 10-16th.



(**Extremely Wet Conditions 2023** over a 10-day period. South and east of Mankato 7 - 10 inches of rain resulted in widespread replanting of corn and soybeans)

Chilling Injury in Corn - Whenever planting starts early and there's rain and a cold spell in the forecast: *"chilling injury"* is the Buzz. Certainly, chilling injury can occur, potentially impacting both corn and soybeans. Yet the phenomenon is far more complex than: **Seed in the Ground + Cold Rain = Chilling Injury.** Variables such as: soil temperatures & soil moisture at the time of planting, planting depth, hybrid stress emergence tolerance and other factors impact the likelihood of chilling injury. Under our current conditions with soil temperatures in the upper 50's ahead of the rain I am not particularly concerned about chilling injury to corn or soybeans that have been planted.

Based on past experience I would consider fields that were worked and planted the same day at greater risk for potential emergence challenges due to potential soil crusting. Such fields should be watched closely as they approach emergence in about three weeks.

Seed Treatments & SDS in Soybeans- Over the past 6-8 years the frequency with which farmers are seeing Sudden Death Syndrome (SDS) is steadily on rise. In 2022 I was able to fly a field with my Drone where a farmer did a split planter with and without iLeVO. The difference we observed from the air was striking, and the yield monitor documented yield difference was 4 bu/ac.

That was ONE year, one location.

Below is a summary Pioneer Agronomy Sciences Research comparing soybean treated with and without the SCN rate of iLeVO, and the SDS rate with and without iLeVO.

- **Pioneer Agronomy Sciences 3 Years of Replicated Research 46 comparisons in known SCN and SDS environments: SCN rate of iLeVO 1.5 bu/ac, SDS rate of iLeVO 6.4 bu/ac**
- **Third Party Contract Research in Kansas, 2020 4.3 bu/ac average yield response**
- **2020 BASF 'On Farm Yield Report' iLeVO + Fungicide Insecticide seed treatment vs Fungicide Insecticide seed treatment without iLeVO +5.1 bu/ac response for iLeVO (MN, IA, NE, IL)**

Yield Gain bu/ac	Soybean Commodity Price $/bu								
	$11.00	$11.50	$12.00	$12.50	$13.00	$13.50	$14.00	$14.50	$15.00
.5 bu	-$4.5	-$4.25	-$4	-$3.75	-$3.50	-$3.25	-$3	-$2.75	-$2.5
1.0 bu	$1	$1.50	$2	$2.5	$3	$3.50	$4	$4.50	$5
1.5 bu	$2.50	$7.25	$8	$8.75	$9.50	$10.25	$11	$11.75	$12.50
2.0 bu	$12	$13	$14	$15	$16	$17	$18	$19	$20
2.5 bu	$17.50	$18.75	$20	$21.25	$22.50	$23.75	$25	$26.25	$27.50
3.0 bu	$23	$24.50	$26	$27.50	$29.00	$30.50	$32	$33.50	$35
3.5 bu	$28.50	$30.25	$32	$33.75	$35.50	$37.25	$39	$40.75	$42.50
4.0 bu	$34	$36	$38	$40	$42	$44	$46	$48	$50
4.5 bu	$39.50	$41.75	$44	$46.25	$48.50	$50.75	$53	$55.25	$57.50
5.0 bu	$45	$47.50	$50	$52.50	$55	$57.50	$60	$62.50	$65
5.5 bu	$50.50	$53.25	$56	$58.75	$61.50	$64.25	$67	$69.75	$72.50
6.0 bu	$56	$59	$62	$65	$68	$71	$74	$77	$80
6.5 bu	$61.50	$64.75	$68	$71.25	$74.50	$77.75	$81	$84.25	$87.50

Table 1- Return above the cost of iLeVO at SDS rate assuming $10/unit additional cost over std IST + FST

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Have an UNBELIEVABLE Week!!!