

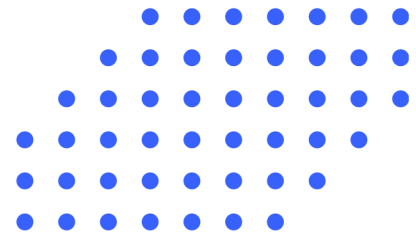


GLOBAL COMMODITY REPORT

CORN

July 2023

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This week's key takeaways

Current Risk to Price Trend



What is "Weighted Avg % Risk (WA%R)"?

WA%R is calculated as the total number of districts (in season) that are high risk, over the total number of districts. We strive to get 95% coverage of all the districts globally that are growing this commodity for export.

WA%R Strength of Price Predictions

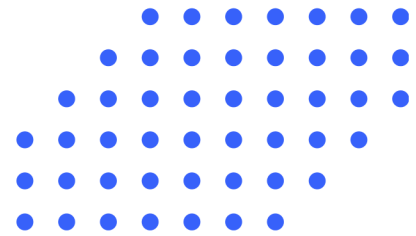
- +/- 05 % Moderate signal of price change
- +/- 10 % Likely signal of price change
- +/- 20 % Extremely likely signal of price change

Risk Outlook

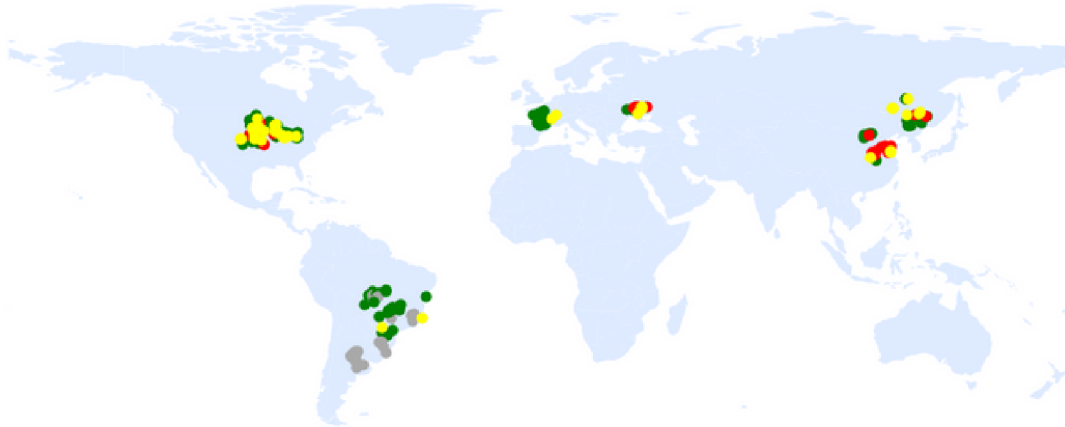
Primary Risk Driver: Drought

As of July 10th, the WA%R has observed a substantial decrease over the last 15 days. However, it is expected to increase substantially over the next 10-15 days by approximately 12% and 10% respectively. It is very likely that the price of corn will increase over the next 16 days.

This week's key takeaways (2)



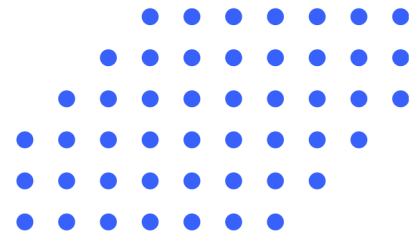
Global Weather Risk Points



Current High Risk Days

- **United States:** The United States saw a decrease in high risk days from 19% last week to 9% this week, indicating an improvement in the conditions for corn cultivation.
- **Brazil** Last week, Brazil's in season locations had 5% high risk days for its corn crops, which dropped slightly to 0% this week, indicating generally stable conditions for the moment.
- **France:** France had 10% high risk days last week and dropped moderately to 0%, suggesting increasingly favorable weather conditions for corn cultivation.
- **China:** In China, the percentage of high risk days decreased from 18% last week to 0% this week, showing an improvement in conditions.
- **Ukraine:** Ukraine experienced a slight decrease from 8% high risk days last week to 2% this week, hinting at a minor deterioration in growing conditions.

This week's key takeaways (3)



Forecasted High Risk Days

- **Brazil:** In the next two weeks, Brazil is expected to see a temporary increase in high risk days to 2% in the week starting from July 16, followed by a decrease back to 0% the following week, indicating a short-lived period of adverse conditions.
- **China:** China's crops are forecasted to experience extreme volatility in high risk days, moving from 22% in the coming week, up to 60%, back down to 23% the following week, before peaking at 89% and then dropping to 0% the week after.
- **France:** France anticipates a mild rise in high risk days to 11% in the week of July 16, followed by a drop back to 1% the week after, suggesting a week of slightly heightened risk.
- **Ukraine:** Ukraine expects a peak of 18% high risk days in the coming week, which will sharply decrease to 2% and then 0% in the subsequent weeks, indicating a brief phase of potential challenges.
- **United States:** The United States is forecasted to see an increasing trend in high risk days, moving from 12% next week to 18% the week after, before substantially decreasing to 3%, highlighting a potential short-term concern for corn growers.

Catastrophes

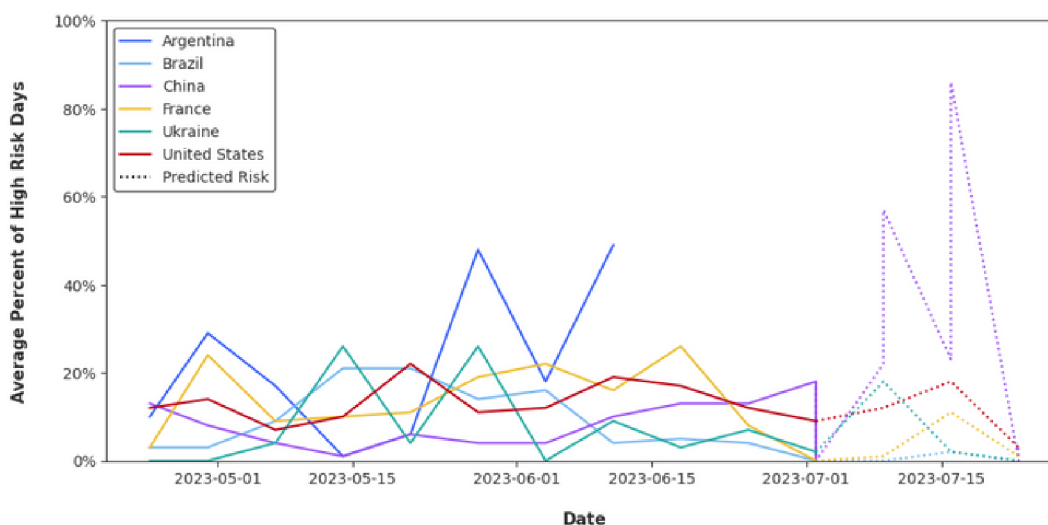
No new catastrophes reported in the last week.





Analysis of Country Risk Profiles

Average Percent of High Risk Days by Week



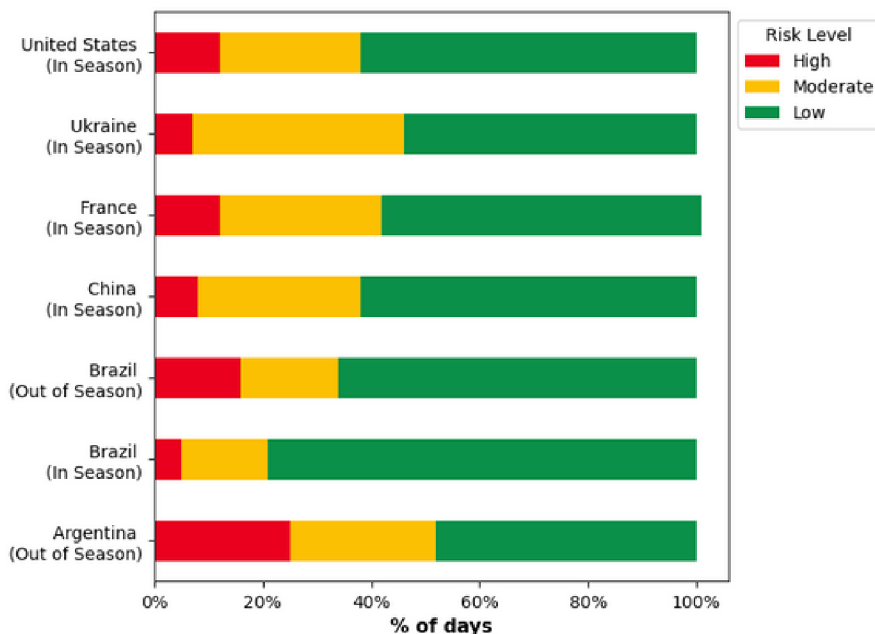
*Disclaimer: forecasted data is based on projected weather and is subject to change.

- Brazil (In Season):** Currently, Brazil is showing a stable low risk for its corn crops with last week and this week at 0% high-risk days. However, the forecasted data indicates a slight increase in risk to 2% next week, suggesting a potential for adverse conditions.
- China (In Season):** Present risk trends in China show improving conditions, with a significant decrease from 18% to 0% high-risk days for in-season crops. However, the forecast suggests major fluctuations with a peak risk of 89% expected next week before dropping, indicating varied conditions.
- France (In Season):** France currently maintains a low risk with 0% high-risk days. The forecast shows a slight uptick to 11% in the coming weeks, suggesting a temporary period of heightened risk before returning to stability.
- Ukraine (In Season):** Ukraine is witnessing a minor increase in risk with 2% high-risk days this week. The forecasted data suggests an immediate spike to 18% next week, but then dropping back to 2% soon after, highlighting a short-term risk.
- United States (In Season):** The United States is experiencing a drop to 9% high-risk days indicating an improvement. However, there is a forecasted spike to 18% in the coming weeks, followed by a decrease, suggesting a short-term challenge for growers.



Growing Season Risk Breakdown by Country

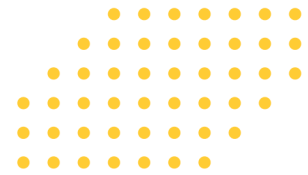
Breakdown of Risk Days for Growing Season



In Season Countries

- Brazil:** With high-risk days constituting only 5% for Goiás, Paran , Espirito Santo and Mato Grosso, and the vast majority of days being under low risk (79%), this signals predominantly favorable conditions conducive to corn cultivation.
- China:** China currently sees 8% of days as high risk, suggesting a manageable threat to production. Fortunately, with majority of the season classified under low risk (62%), overall stability in corn production is maintained.
- France:** With a 15% occurrence of high-risk days, there's a moderate risk outlook. Yet, 59% of days being under low risk offers a strong buffer, maintaining prospects for a solid yield for the growing season.

Continued on following page



Growing Season Risk Breakdown by Country (2)

- **Ukraine:** Ukraine observes a relatively minor 7% high-risk profile, with the predominant share of the season enjoying low-risk conditions, which bodes well for the corn cultivation and expected yield.
- **United States:** The U.S. encounters 15% high-risk days, hinting at potential output disruptions. Nevertheless, a substantial 62% of the season under low risk not only mitigates these concerns but also raises hopes for recovery and productive harvests.

Out of Season Countries

- **Argentina:** During the growing season, Argentina experienced a maximum high-risk rate of 26% in recent months, indicating significant challenges. The trend during this period showed an increase in risk, peaking towards the latter half.
- **Brazil:** Minas Gerais and Rio Grande do Sul faced a moderate degree of uncertainty with 18% high-risk days. However, the majority of the days were under moderate (19%) and low risk (63%), holding the regions' harvest afloat.

Catastrophes

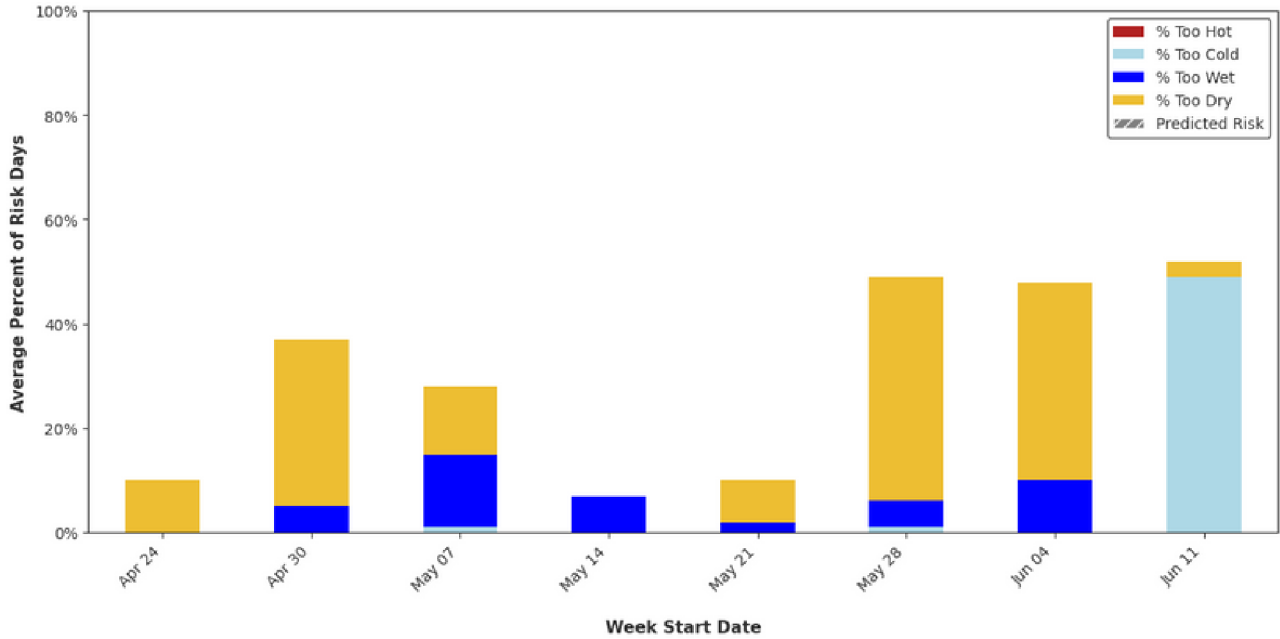
There were no reported catastrophes affecting the corn market this past week, indicating a period of relative stability amidst ongoing agricultural risks.



Appendix

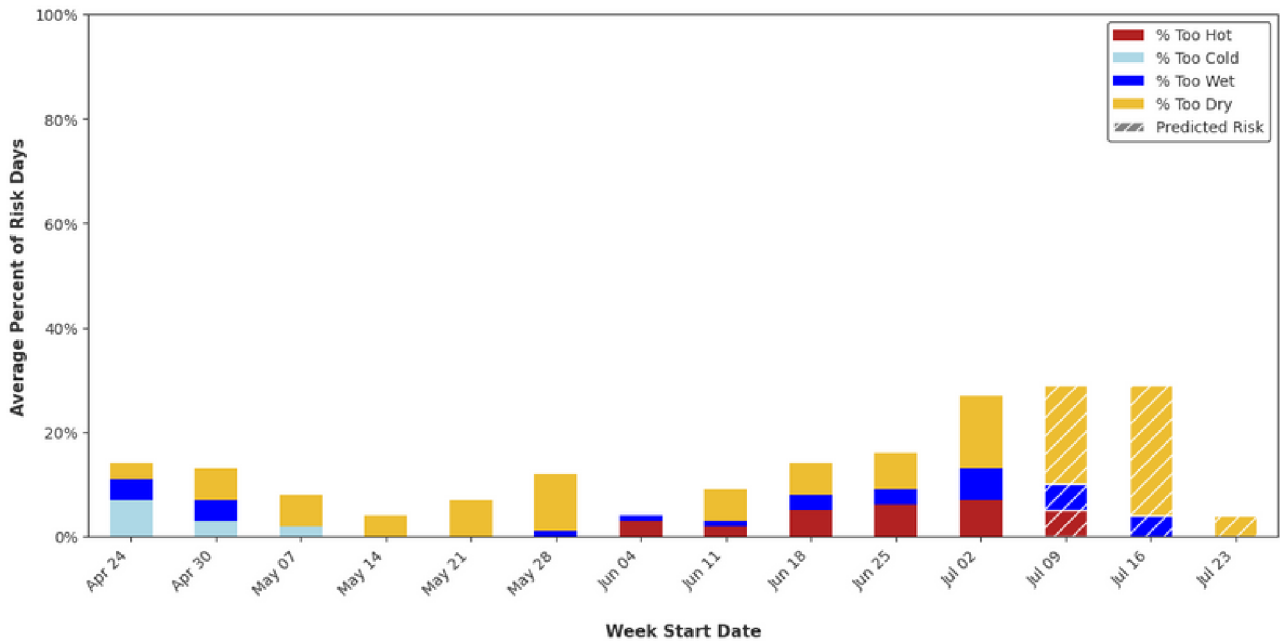


Average Percent of Risk Days by type of Risk for Argentina



*Categories may overlap and are potentially > 100%. For example, if 10% of days are too hot and too dry, both the 10% too hot and 10% too dry will display.

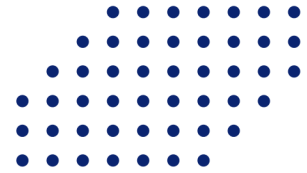
Average Percent of Risk Days by type of Risk for China



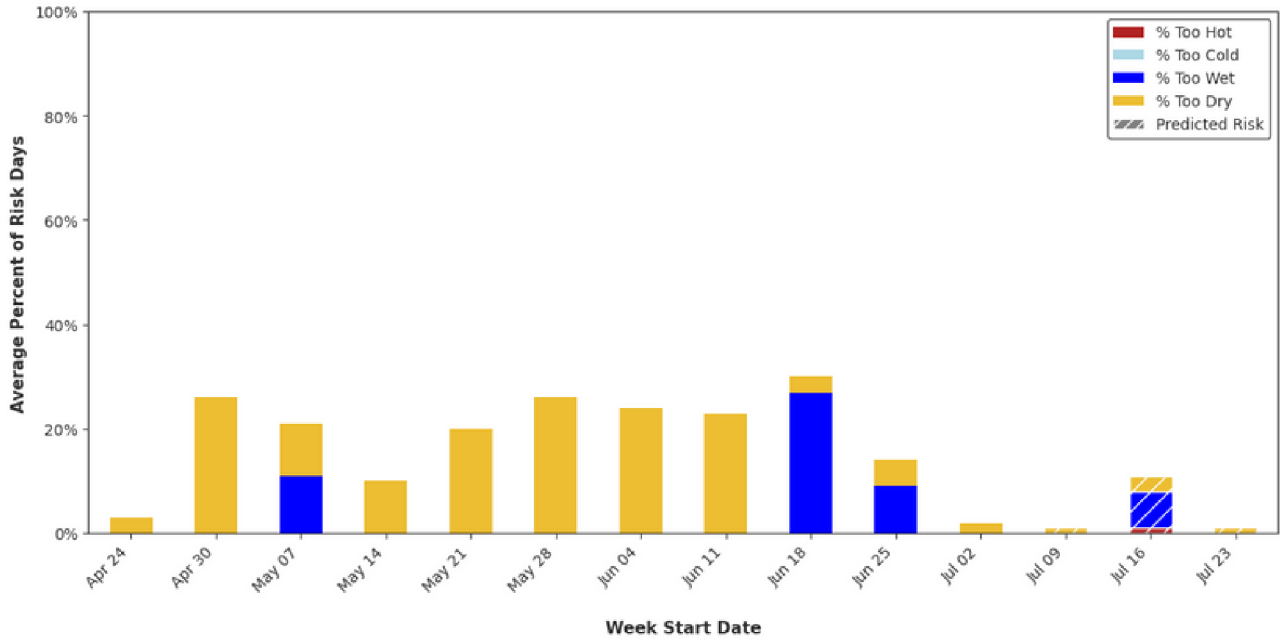
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Appendix (2)

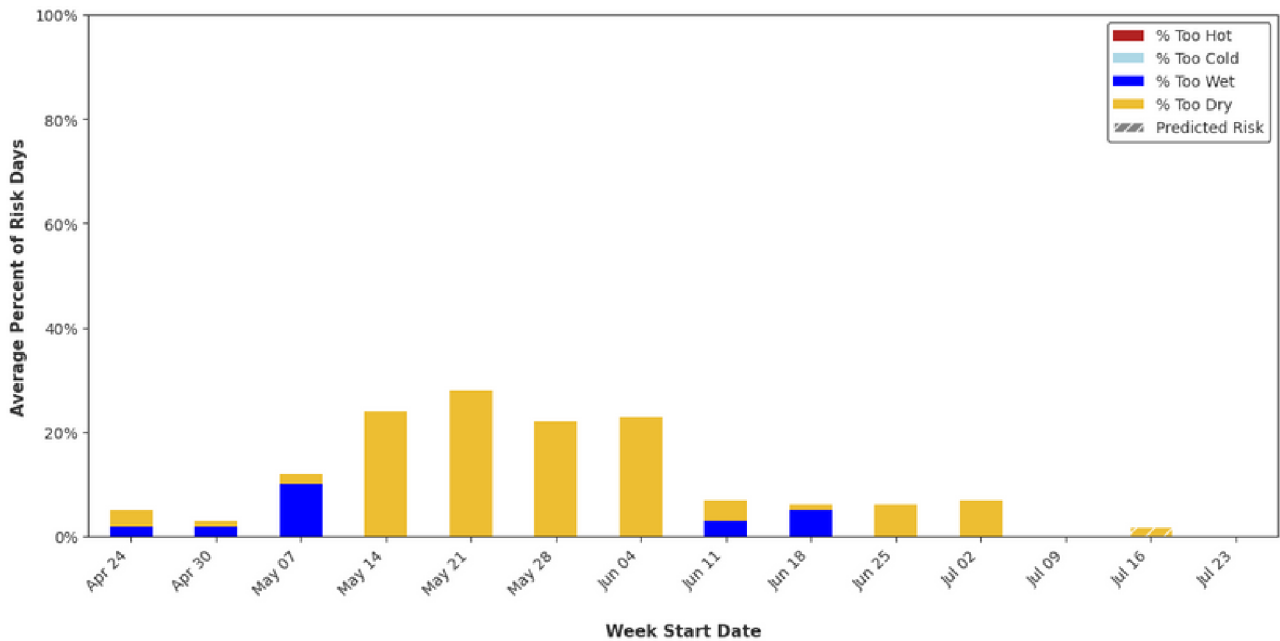


Average Percent of Risk Days by type of Risk for France



*Categories may overlap and are potentially > 100%. For example, if 10% of days are too hot and too dry, both the 10% too hot and 10% too dry will display.

Average Percent of Risk Days by type of Risk for Brazil



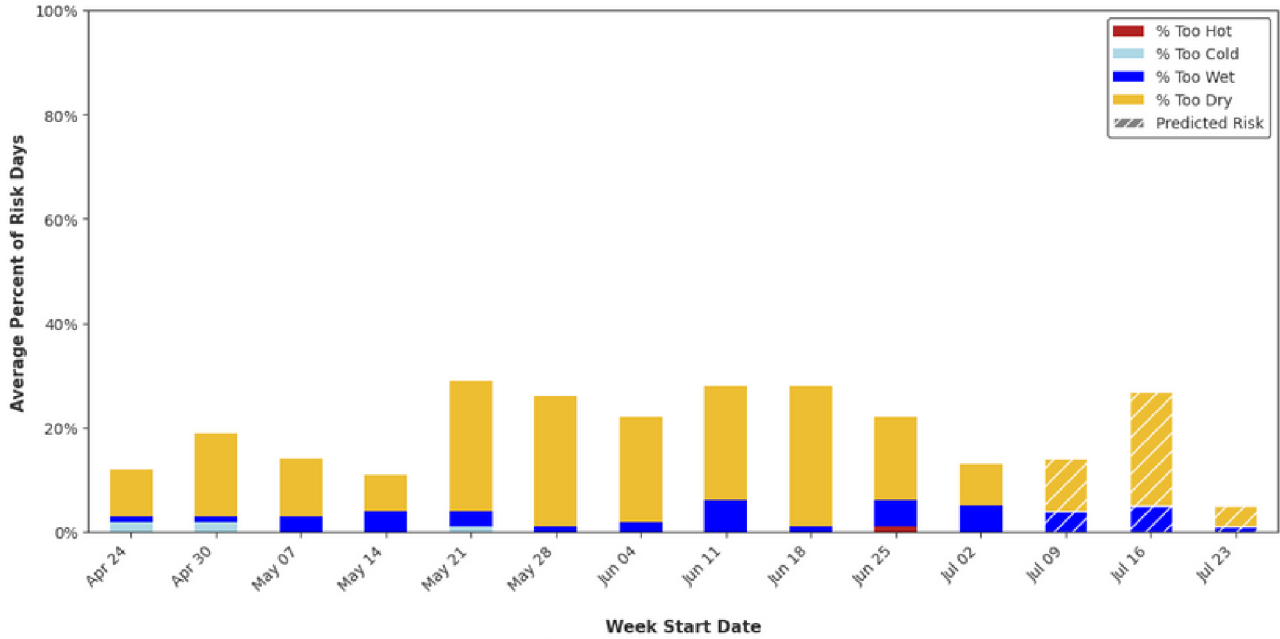
*Categories may overlap and are potentially > 100%. For example, if 10% of days are too hot and too dry, both the 10% too hot and 10% too dry will display.



Appendix (3)

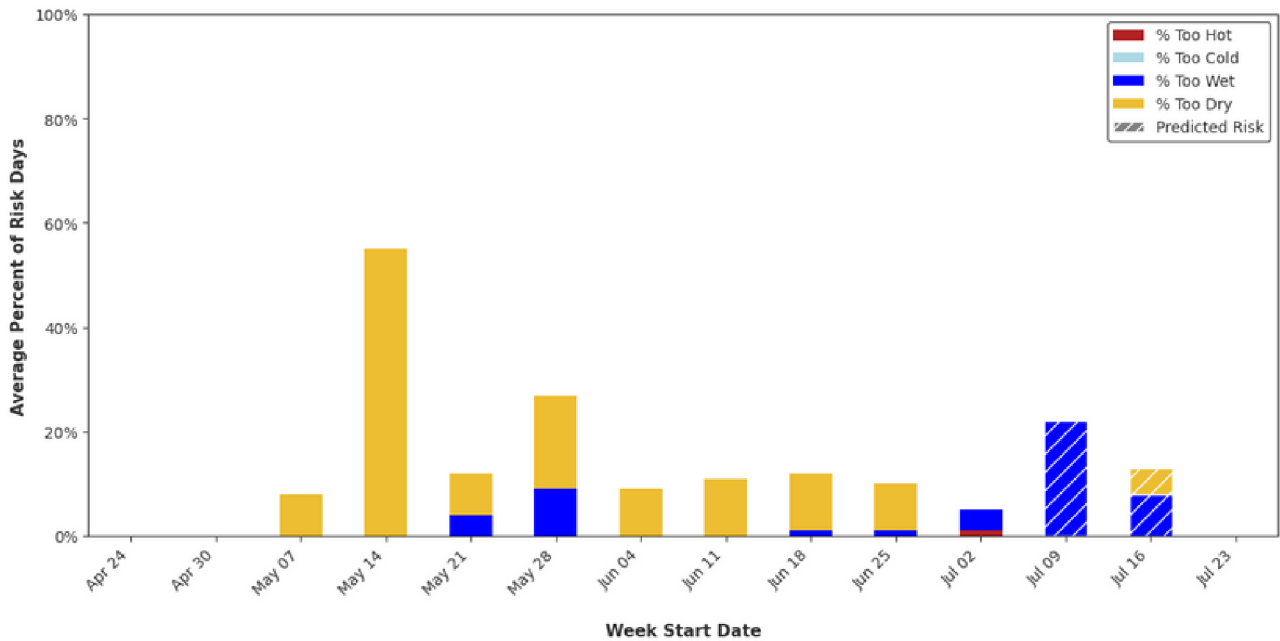


Average Percent of Risk Days by type of Risk for United States



*Categories may overlap and are potentially > 100%. For example, if 10% of days are too hot and too dry, both the 10% too hot and 10% too dry will display.

Average Percent of Risk Days by type of Risk for Ukraine



*Categories may overlap and are potentially > 100%. For example, if 10% of days are too hot and too dry, both the 10% too hot and 10% too dry will display.



Appendix (4)



Weighted Average % Risk Historical Context

Get a sense for how current risk

year	Avg	Min	Max	Stddev
2023	14	6	21	5
2022	17	5	36	9
2021	14	9	26	5
2020	20	10	40	9
2019	20	11	33	7

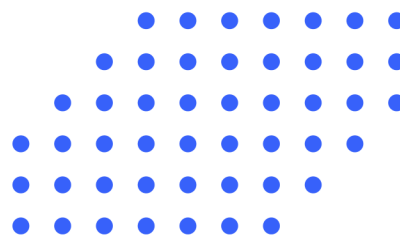
In the previous five years, the average WA%R has fluctuated between 14-20%. The minimum WA%R has been trending downward from 11% to 6%, while the maximum has been fluctuating between 21-40%. Standard deviation for WA%R has been consistently under 10.



An in-depth view of the risk to price changes, with today as a baseline of 0.

Risk to price has increased 12% in the last 15 days, and is forecasted to increase 10.2% in the next 15 days.

Key Features & Methodology



Helios' artificial intelligence platform analyzes billions of signals in real-time to identify agricultural supply risks globally. Harnessing daily and historical climate data for over 14 million locations, Helios goes beyond generic analyst reports to give you the most effective and granular predictions for all the commodities we cover. The following factors facilitate the early insights and accuracy of our models' predictions:

Over 150 countries tracked daily in our database

- Real-time climate data across over 14 million unique locations down to the specific latitude and longitude of a given supplier/farm
- Our data covers the last 20 years for every location, undergoing updates every 24 hours, enabling our model to update daily with the latest data available

Farm-specific precision

- Over 90% coverage of all districts growing a particular commodity
- Data coming from a combination of satellites and weather stations

60,000 global news sources updated every 15 minutes

- Our model is constantly scanning news sources for updates that could influence commodity supply and price
- Seamless integration to our model's risk assessment and supply predictions

Machine learning models specific to each commodity we cover

- Our models are tailored to each unique commodity, incorporating risk analysis for each commodity and location pairing

Ongoing data analysis and incorporation of new sources

- Our models are constantly improving with new data updated every 24 hours
- We update our models as new risks present themselves, increasing the accuracy of our predictive features

Our team of specialists is available 24/7 to answer any questions and respond to any requests. Please reach out to us at hello@helios.sc.