

MIAX Futures

Minneapolis Hard Red Spring Wheat White Paper

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Minneapolis Hard Red Spring Wheat

MIAX Futures Exchange, LLC (MIAX Futures) has been the principal market for Minneapolis Hard Red Spring (HRS) wheat since 1881, offering futures and options contracts based on this unique commodity. Hard red spring wheat dominates North American wheat production and trade which makes it one of the most important crops on the continent. Hard red spring wheat’s unique growing season and quality characteristics generate price movement that is often quite different from other classes of wheat. Price spreads across wheat futures contracts—such as Hard Red Spring and Hard Red Winter—provide opportunities for traders. At the same time, Minneapolis HRS wheat futures provide a stable and predictable basis for hedgers and merchants.

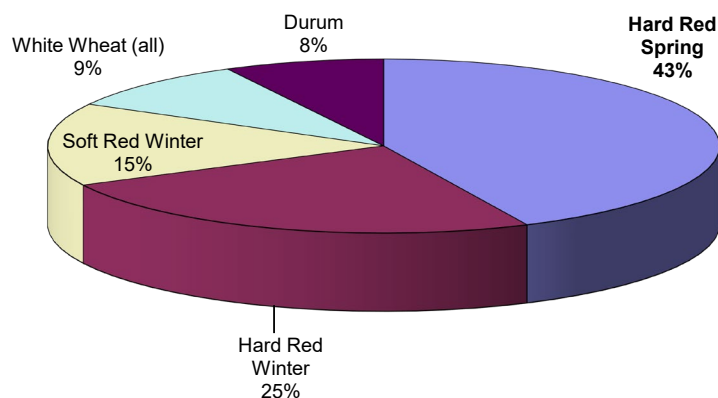
HRS Wheat Production

Hard red spring wheat is grown in the U.S. Northern Plains (e.g., North Dakota) and the Canadian prairies (e.g., Saskatchewan). As its name indicates, HRS wheat is planted in the spring and harvested in late summer with the September contract representing new crop delivery. In contrast, winter wheat is fall-planted and spring-harvested, with a July new crop contract.

Hard red spring wheat is premium milling quality wheat. The commercial standard HRS wheat specification is 13%-14% protein; whereas the hard red winter (HRW) is often 11% protein. Generally, the higher the protein content, the better the baking quality of the flour.

North American wheat production is dominated by HRS varieties. Figure 1 and Table 1 present U.S. and Canadian wheat production by class.

Figure 1. U.S. and Canadian Wheat Production by Class, 2021-23 Average



Source: United States Department of Agriculture, Statistics Canada, October, 2023

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Table 1. U.S. and Canadian Wheat Production, 2021-23 Average

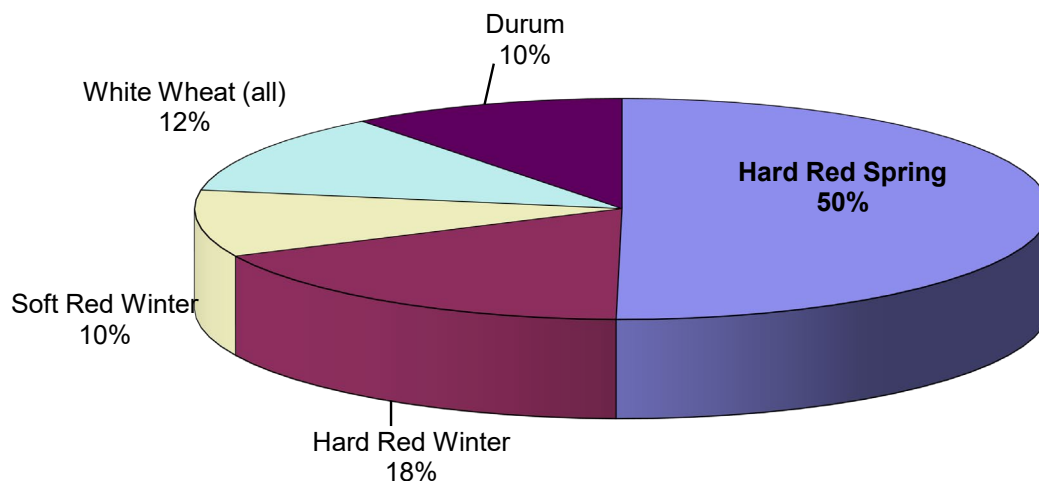
Wheat Class	Production (millions of bushels)			Quantity Percent	US \$/bu. Farm Price	\$ Millions Value	Value Percent
	U.S.	Canada	Total				
Hard Red Spring	385	792	1177	43%	8.58	10,099	45%
Hard Red Winter	622	50	673	25%	7.83	5,266	23%
Soft Red Winter	379	42	422	15%	7.11	2,997	13%
White Wheat (all)	237	18	256	9%	7.73	1,975	9%
Durum	53	158	211	8%	11.00	2,318	10%
Total	1677	1061	2737	100%		22,655	100%

Note: Figure 1 and Table 1 are based on the USDA and Stats Canada production estimates as of October, 2023.

At 43% of total production and 45% of total production value, HRS is the largest wheat crop in North America.

Because of the world demand for premium milling wheat, HRS wheat tends to dominate North American exports and trade. Figure 2 and Table 2 show the relative proportion of U.S. and Canadian exports for each class of wheat. Fifty percent of combined U.S. and Canadian wheat exports are HRS, while the next closest class of wheat, HRW, represents 18% of the North American export market.

Figure 2. U.S. and Canadian Wheat Exports by Class, 2021-23 Average



Source: United States Department of Agriculture, Statistics Canada, October, 2023

Table 2. U.S. and Canadian Wheat Exports, 2021-23 Average

Wheat Class	Exports (millions of bushels)			Quantity
	U.S.	Canada	Total	Percent
Hard Red Spring	212	546	758	50%
Hard Red Winter	232	36	267	18%
Soft Red Winter	118	29	147	10%
White Wheat (all)	169	10	179	12%
Durum	21	137	157	10%
Total	751	758	1,510	100%

Note: Figure 2 and Table 2 are based on USDA and StatsCanada production estimates as of October 2023.

Clearly, HRS wheat is the most important wheat crop in North America in terms of production, value, and trade. Because of this, HRS wheat prices are important to the overall wheat industry.

Minneapolis Hard Red Spring Wheat Prices and Trade

Hard red spring wheat prices are susceptible to numerous supply and demand factors. Demand shocks often arise from an active export market, while summer weather in the Northern plains and Canadian prairies can create volatile swings in supply. Additionally, because of the milling quality of HRS wheat, relative supplies of high quality wheat can drive price trends even when the overall wheat market is quiet. Collectively, these factors result in unique price moves in the spring wheat futures market. The price action over the last seven years is shown in Figure 3.

Figure 3. Nearby Minneapolis HRS Wheat Futures, January 2015- September 2023

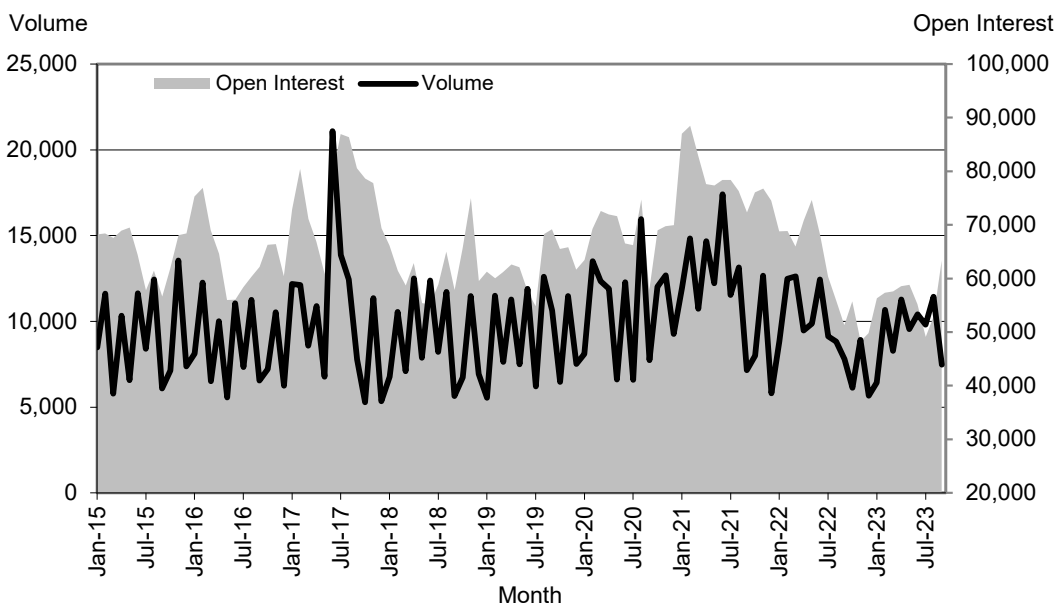


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Due in part to its' unique price action and the importance of HRS wheat in the international wheat markets, Minneapolis HRS wheat futures experience consistently good trade volume. From January of 2015 through September of 2023, daily volume averaged a very consistent 9,700 futures contracts with open interest pushing over 70,000 contracts in many months.

Figure 4. Minneapolis HRS Wheat Futures Average Daily Volume and Open Interest, January, 2015-September, 2023



Wheat Spreading Opportunities

The Minneapolis HRS futures contract is one of three active wheat futures traded in the U.S. HRW wheat is traded on the Kansas City Board of Trade (KCBT) and soft red winter (SRW) wheat is traded on the Chicago Board of Trade (CBOT), both are divisions of the CME Group. Minneapolis HRS wheat can often move very different from the other wheats due to different growing seasons and demand factors. From a trading perspective, it is important to understand how these three wheat contracts relate to each other as price movements across the wheat contracts can provide opportunities to traders and merchandisers.

Figure 5 shows the price spread between nearby Minneapolis HRS wheat and nearby futures prices for KCBT HRW wheat prices. The spread has ranged from a high of over 250 cents per bushel to a negative 50 cents per bushel. An astute trader or merchandiser can utilize their understanding of quality and class spreads to take advantage of this variability.

Figure 6 shows the price spread for nearby futures on Minneapolis HRS wheat and CBOT SRW wheat futures. This spread relationship is also volatile—with a range of over 300 cents per bushel over the last 3 years—which provides ample spreading opportunities across contracts.

Figure 5. Minneapolis HRS Wheat – KCBT HRW Wheat Spread, January 2020 – September 2023

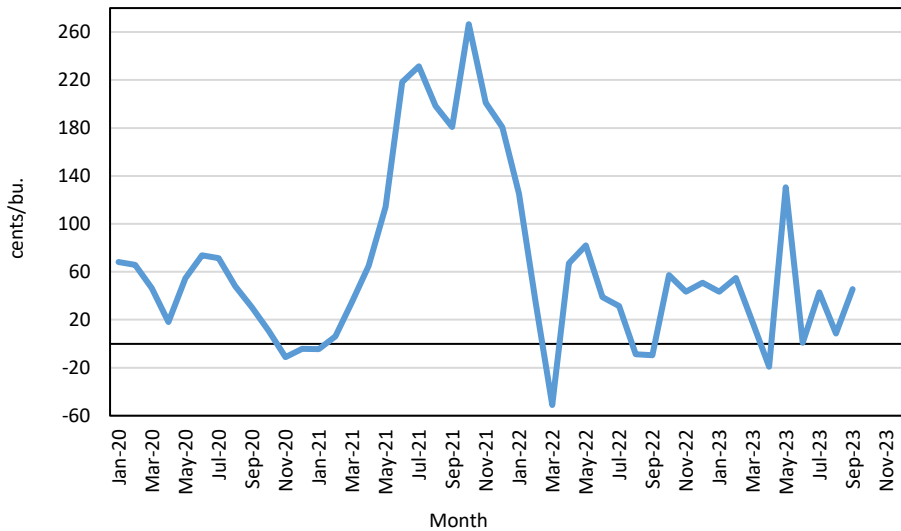
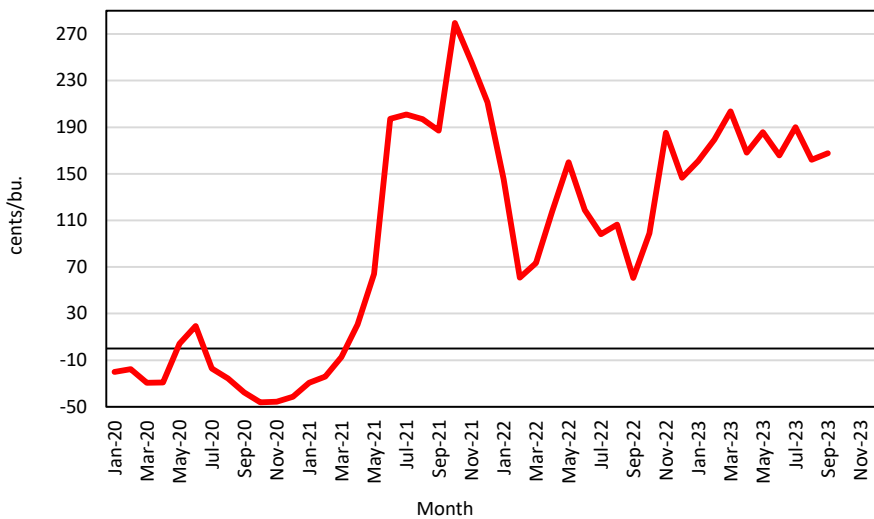


Figure 6. Minneapolis HRS Wheat –CBOT SRW Wheat Spread, January 2020 - September 2023



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Spring Wheat Hedging Opportunities

Hedgers and merchandisers rely on stable and predictable basis patterns to manage risk and profitably merchandise wheat. The Minneapolis HRS wheat contract provides a predictable cash-futures basis at both country elevator locations and terminal markets.

Figures 7 and 8 show the cash-futures basis for North Central Montana elevators (as reported by the USDA). As shown in Figure 7 the country basis can have a large range. However, the movements within the range are generally predictable. As shown in Figure 8, the weakest basis in Montana occurs during the late summer harvest and the basis strengthens through the following spring. The low water levels on the Mississippi River and difficulty in moving barges created an unusually weak basis in the fall of 2023 (and a great opportunity for elevators to place storage hedges).

Figure 7. North Central Montana - Minneapolis HRS Wheat Basis, January 2020-September 2023

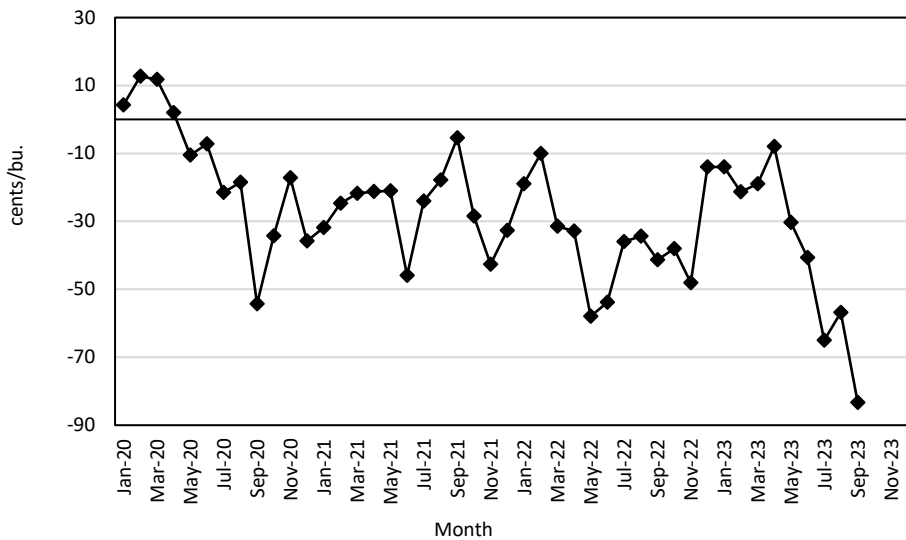
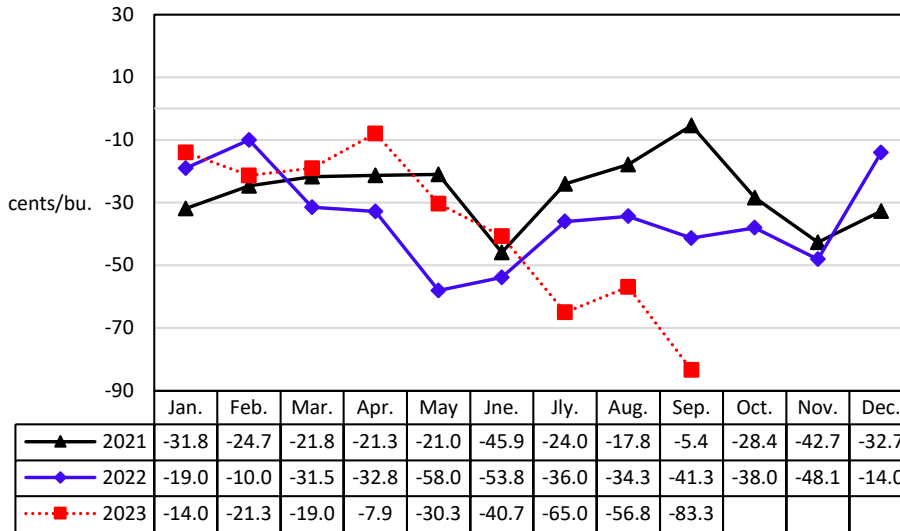
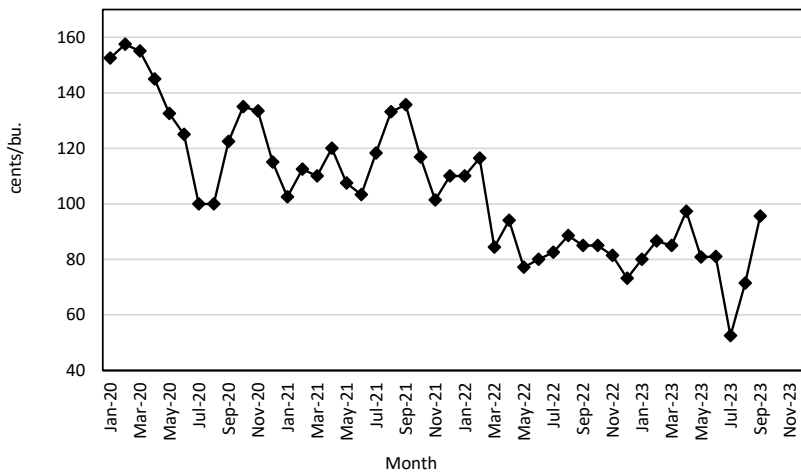


Figure 8. North Central Montana - Minneapolis HRS Wheat Basis, Seasonal Trend, January 2020 – September 2023



The analogous graphs are shown for the Portland export market in Figures 9 and 10. The export basis is positive (reflecting transportation costs to the Portland market) and has a fairly large range (Figure 9). But, the seasonal variation provides a very predictable pattern for merchandisers (Figure 10) where a weak harvest-time basis gives way to basis strength throughout the winter and into the early spring. Again, transportation issues on the Mississippi river resulted in a strong rail basis in Portland in the fall of 2023.

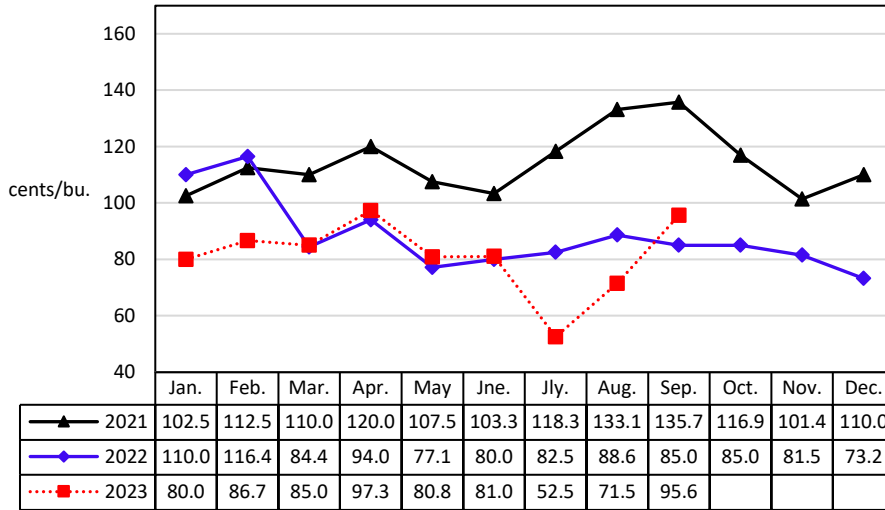
Figure 9. Portland - Minneapolis HRS Wheat Basis, January 2020-September 2023



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Figure 10. Portland - Minneapolis HRS Wheat Basis, Seasonal Trend, January 2021 – September 2023



Conclusions

Minneapolis HRS wheat, traded on MIA X Futures, is the dominant class of wheat in North America in terms of quantity, value, and trade. Minneapolis HRS wheat futures provide access to the pricing of HRS wheat for the industry. The Minneapolis HRS wheat contract provides numerous trading opportunities for those with knowledge of price spreads between HRS, HRW, and SRW wheat. Hedging and merchandising opportunities are enhanced by a stable and predictable basis between the Minneapolis HRS wheat futures and prices at country elevators as well as export terminals. Overall, the Minneapolis HRS wheat futures contract provides a highly liquid tool for trading and hedging in North America’s flagship wheat.

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