

# MGEX Spring Wheat 2020

The Minneapolis Grain Exchange, Inc. (MGEX) has been the principal market for 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, MGEX HRS wheat futures provide a stable and predictable basis for hedgers and merchants.

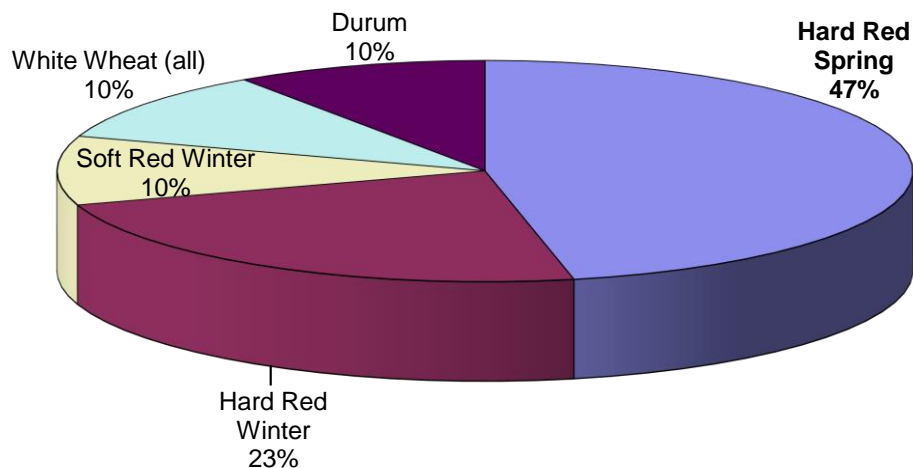
## **HRS Wheat Production**

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, 2020**



Source: United States Department of Agriculture, Statistics Canada, November, 2020.

**Table 1. U.S. and Canadian Wheat Production, 2020**

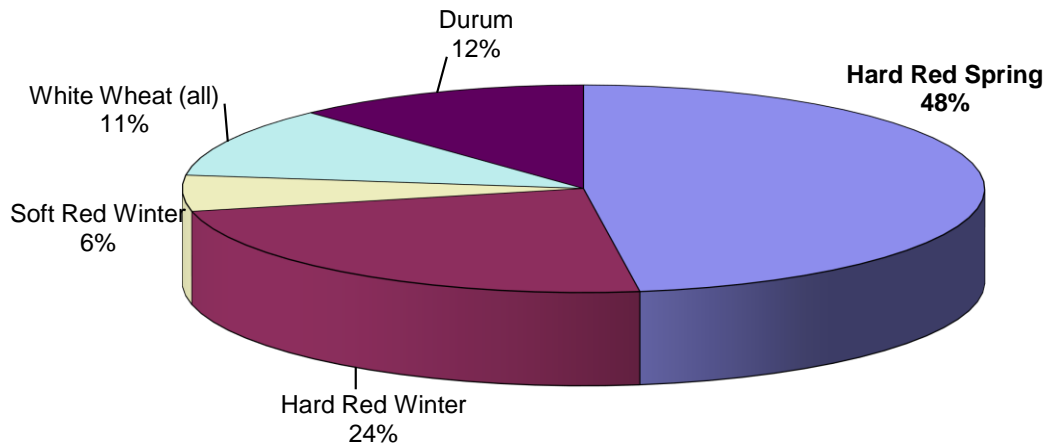
Wheat Class	Production (millions of bushels)			Quantity Percent	US \$/bu. Farm Price	\$ Millions Value	Value Percent
	U.S.	Canada	Total				
Hard Red Spring	530	908	1438	47%	4.50	6,471	44%
Hard Red Winter	659	60	719	23%	4.36	3,135	21%
Soft Red Winter	266	44	310	10%	5.06	1,569	11%
White Wheat (all)	302	18	320	10%	5.52	1,766	12%
Durum	69	225	294	10%	5.97	1,755	12%
<b>Total</b>	<b>1826</b>	<b>1255</b>	<b>3081</b>	<b>100%</b>		<b>14,696</b>	<b>100%</b>

Note: Figure 1 and Table 1 are based on the USDA and Stats Canada production estimates as of November, 2020.

At 47% of total production and 44% 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. Forty-eight percent of combined U.S. and Canadian wheat exports are HRS, while the next closest class of wheat, HRW, represents 24% of the North American export market.

**Figure 2. U.S. and Canadian Wheat Exports by Class, 2020**



Source: United States Department of Agriculture, Statistics Canada, November, 2020.

**Table 2. U.S. and Canadian Wheat Exports, 2020**

Wheat Class	Exports (millions of bushels)			Quantity Percent
	U.S.	Canada	Total	
Hard Red Spring	270	630	900	48%
Hard Red Winter	405	42	447	24%
Soft Red Winter	75	31	106	6%
White Wheat (all)	195	12	207	11%
Durum	30	195	225	12%
<b>Total</b>	<b>975</b>	<b>910</b>	<b>1,885</b>	<b>100%</b>

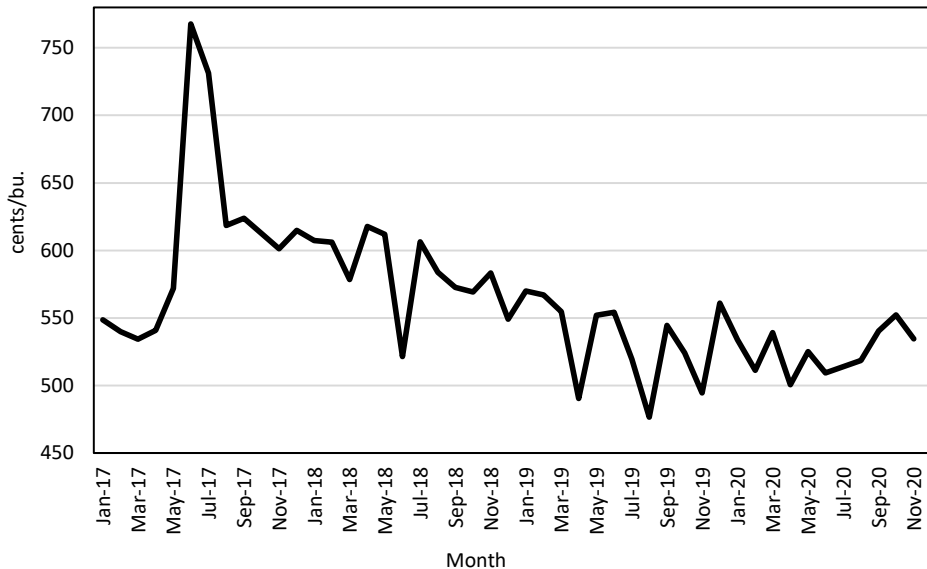
Note: Figure 2 and Table 2 are based on USDA and Stats Canada production estimates as of November, 2020.

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.

**MGEX Spring Wheat Prices and Trade**

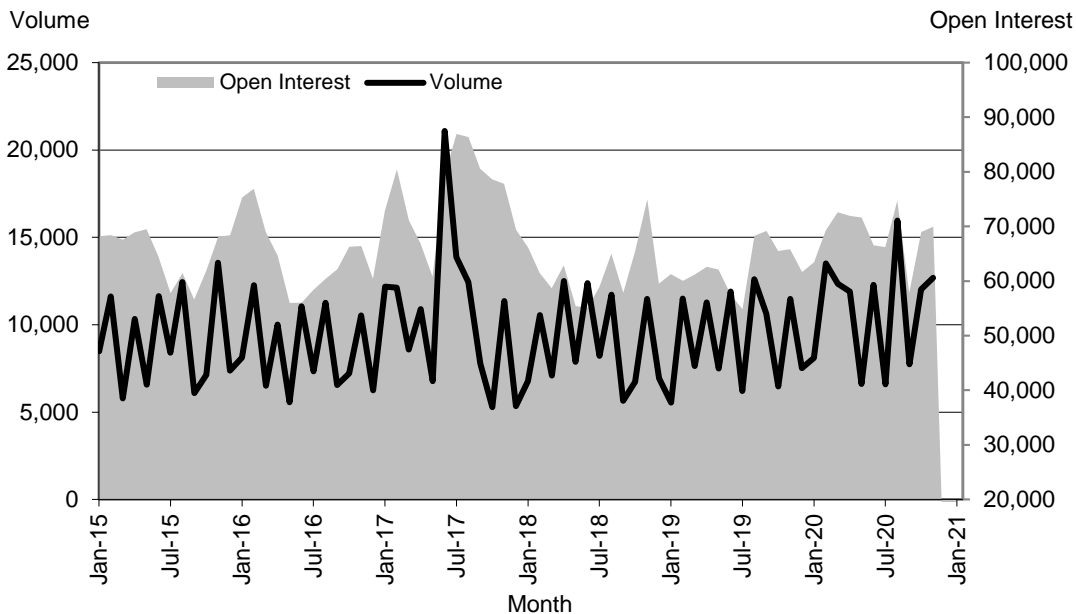
Hard red spring wheat prices are susceptible to numerous supply and demand factors. Demand shocks often arise from an active export market, while summer weather in the Northern plains and Canadian prairies can create volatile swings in supply. Additionally, because of the milling quality of HRS wheat, 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 three years is shown in Figure 3.

**Figure 3. Nearby Minneapolis HRS Wheat Futures, 2017-2020**



Due in part to its' unique price action and the importance of HRS wheat in the international wheat markets, MGEX HRS wheat futures experience consistently good trade volume. Through November of 2020, daily volume has averaged 10,885 futures contracts with open interest pushing over 70,000 contracts in some months.

**Figure 4. MGEX Wheat Futures Average Daily Volume and Open Interest, 2015-2020**



**Wheat Spreading Opportunities**

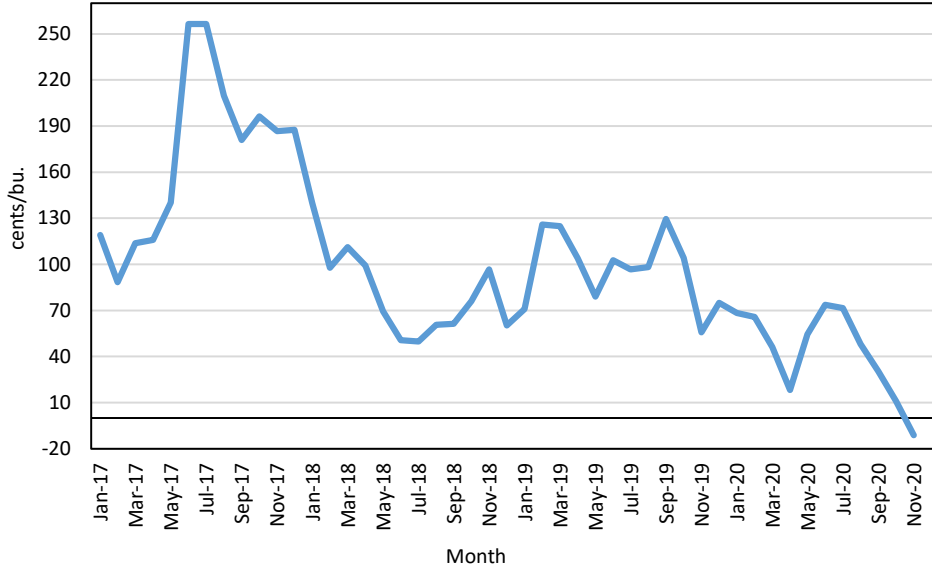
The MGEX HRS futures contract is one of three active wheat futures traded in the U.S. HRW wheat is traded on the Kansas City Board of Trade (KCBT) and soft red winter (SRW) wheat is traded on the Chicago Board of Trade (CBOT), both are divisions of the CME Group. Changes in KCBT and CBOT wheat prices tend to be very highly correlated with a simple correlation coefficient of 0.92 over the 2015-2019 calendar years. In comparison, the MGEX and CBOT wheat returns have a correlation of 0.72 and the MGEX and KCBT are correlated at 0.83 over the 2015-2019 period. MGEX wheat can often move very differently 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 MGEX 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 slightly negative. 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 MGEX 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. MGEX HRS Wheat - KCBT HRW Wheat Spread, 2017-2020**



**Figure 6. MGEX HRS Wheat -CBOT SRW Wheat Spread, 2017-2020**

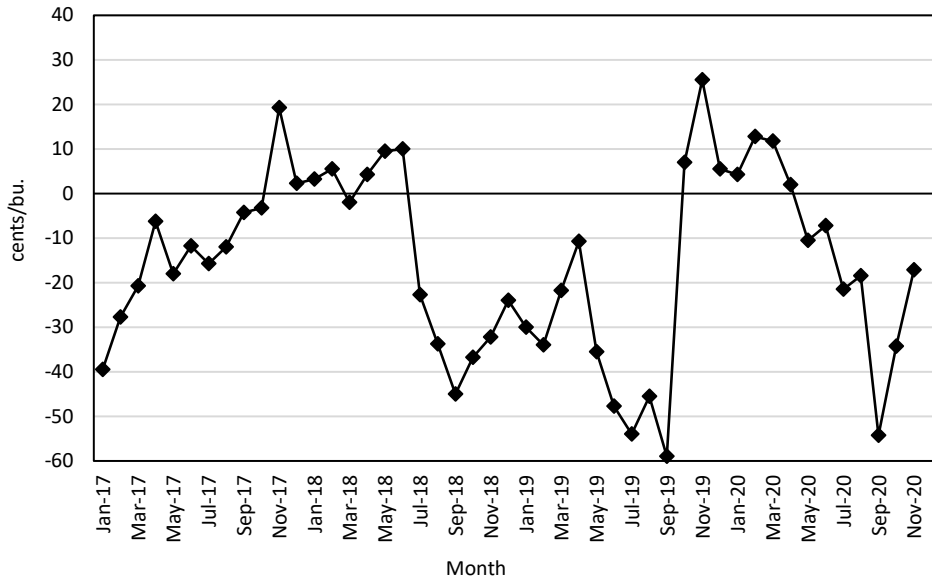


### **Spring Wheat Hedging Opportunities**

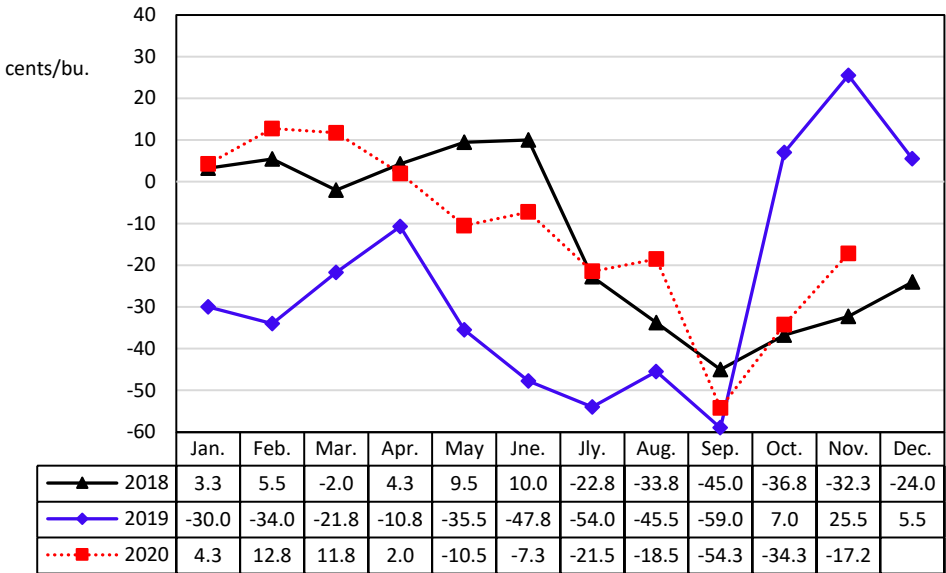
Hedgers and merchandisers rely on stable and predictable basis patterns to manage risk and profitably merchandise wheat. The MGEX spring wheat contract provides a predictable cash-futures basis at both country elevator locations and terminal markets.

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.

**Figure 7. North Central Montana - MGEX HRS Wheat Basis, 2017-2020**

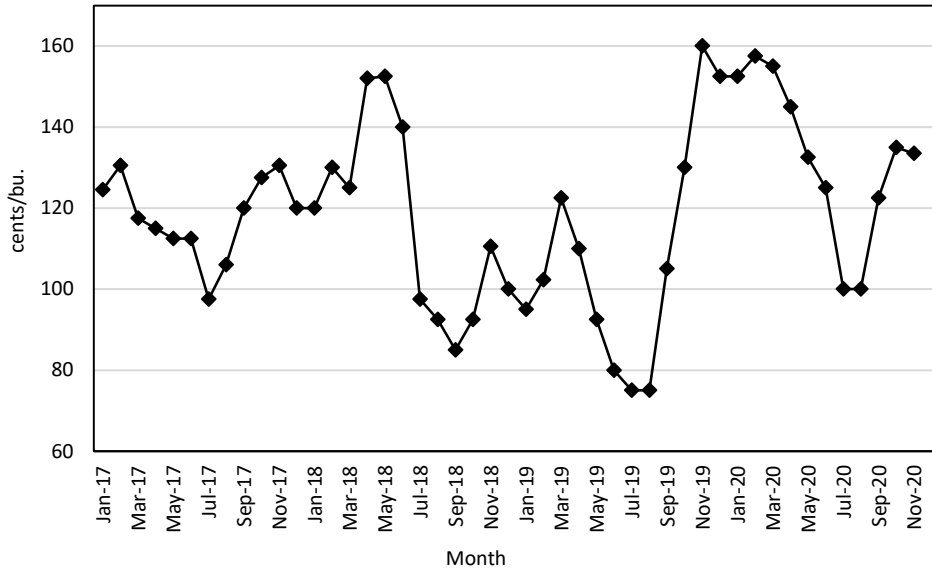


**Figure 8. North Central Montana - MGEX HRS Wheat Basis, Seasonal Trend, 2018-2020**

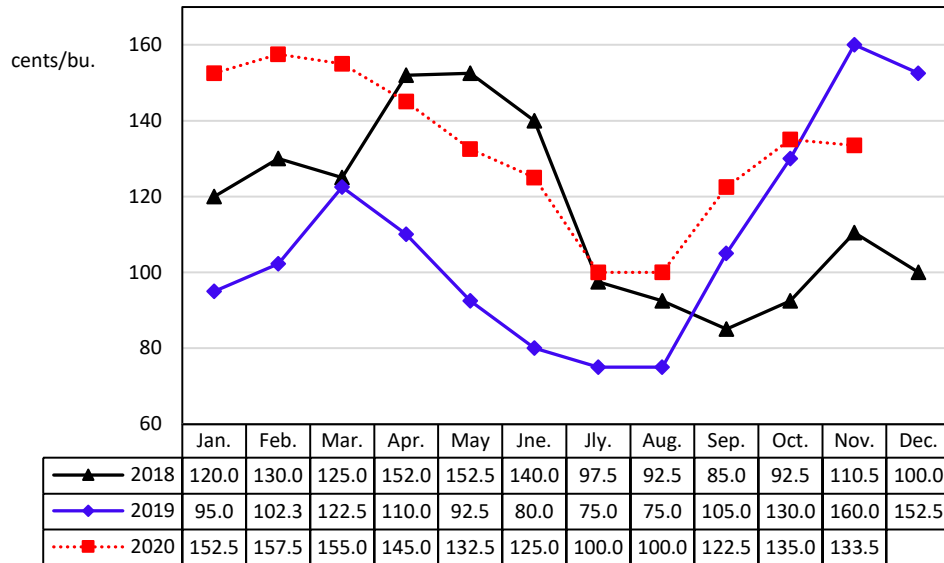


The analogous graphs are shown for the Portland export market in Figures 9 and 10. The export basis is positive (reflecting transportation costs to the Portland market) and has a fairly large range (Figure 9). But, the seasonal variation provides a very predictable pattern for merchandisers (Figure 10)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

**Figure 9. Portland - MGEX HRS Wheat Basis, 2017-2020**



**Figure 10. Portland - MGEX HRS Wheat Basis, Seasonal Trend, 2018-2020**





## **Conclusions**

HRS wheat, traded on MGEX, is the dominant class of wheat in North America in terms of quantity, value, and trade. MGEX spring wheat futures provide access to the pricing of HRS wheat for the industry. The MGEX spring 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 MGEX HRS wheat futures and prices at country elevators as well as export terminals. Overall, the MGEX HRS wheat futures contract provides a highly liquid tool for trading and hedging in North America's flagship wheat.