

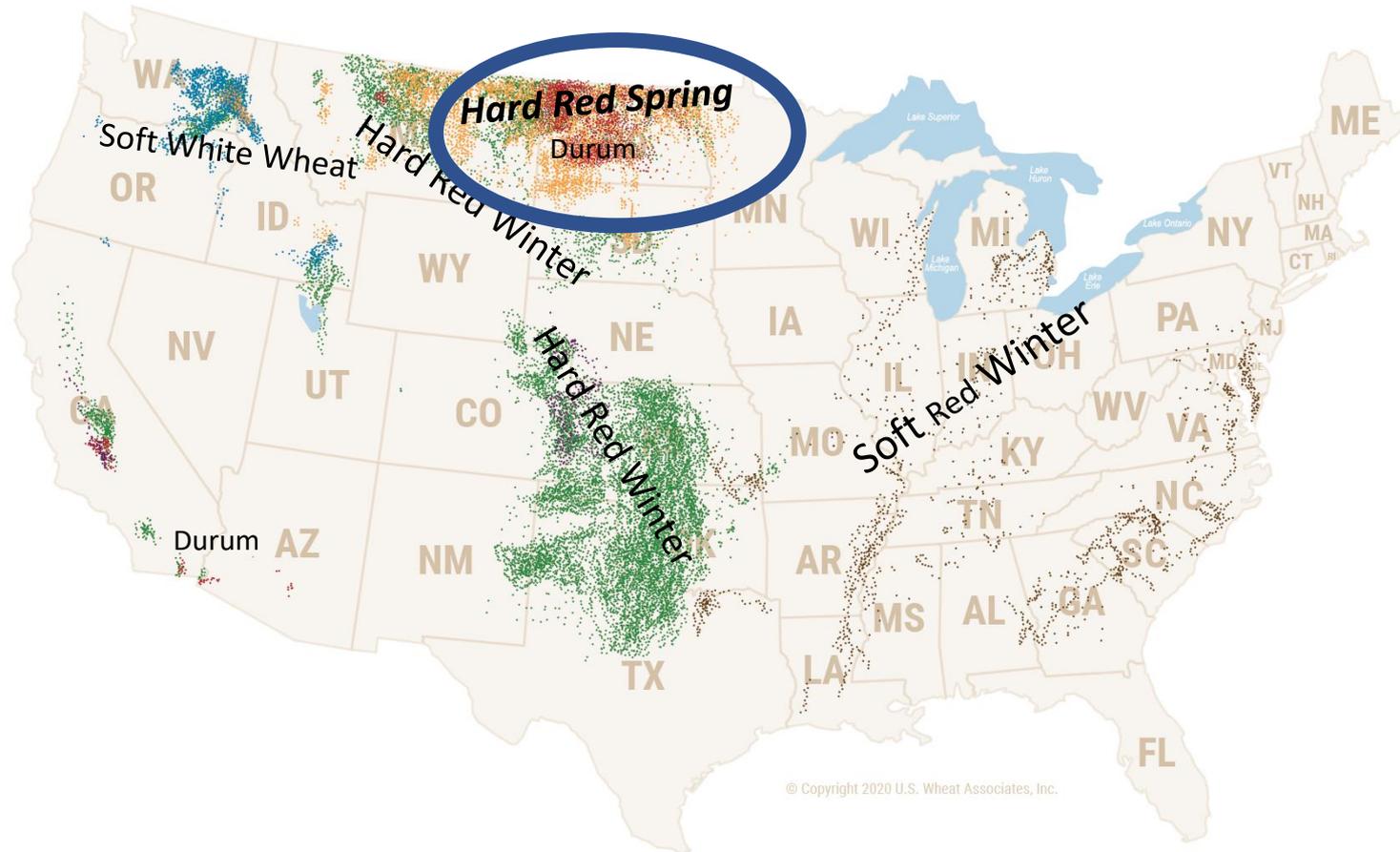
2023 U.S. Hard Red Spring & Durum Overview



Jim Peterson
Policy and Marketing Director
November 2023



U.S. Wheat Production by Class



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- **Hard Red Winter (HRW)**
- **Soft Red Winter (SRW)**
- **Hard White (HW)**
- **Hard Red Spring (HRS)**
- **Soft White (SW)**
- **Durum**



2023 Overview



- **U.S. HRS and durum wheat crops produced better than anticipated, given early season heat and marginal moisture for much of the region**
- **Higher planted area for both HRS and durum, with USDA estimated yields steady with 2022 for HRS, with slightly lower durum yields**
- **High grading crops overall, but quality challenges with vitreous kernel levels and pockets of low protein HRS**





2023 Overview



- Demand projected to see larger exports, but slightly lower domestic mill grind. Shortage of higher protein, high quality wheat on world market. Durum and HRS both seeing stronger exports to-date.
- Headwinds to U.S. demand and potentially stronger prices include cheap Russian wheat, distorted East European trade due to Ukraine outflow, tempered world economies and uncertainly about world conflicts



2023 Season for HRS and Durum



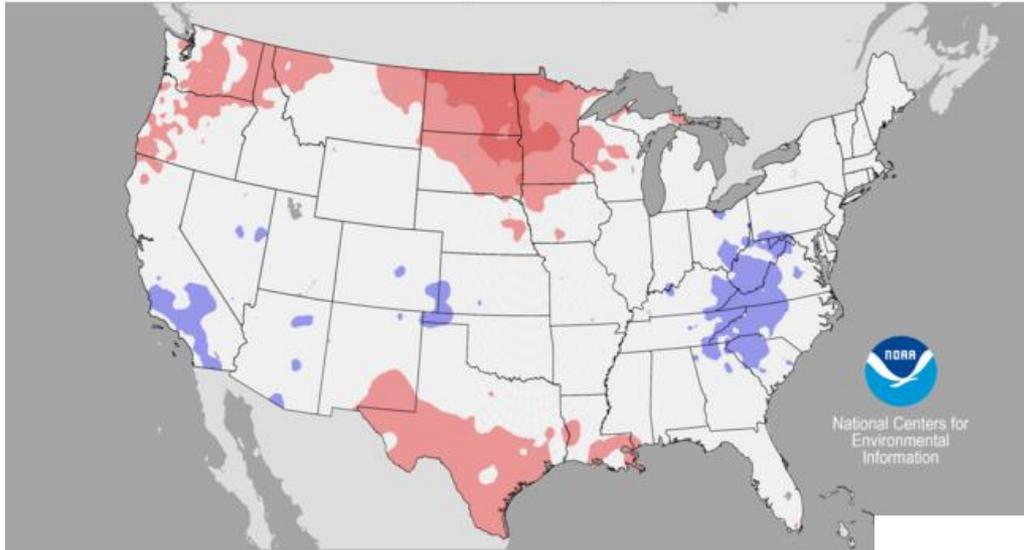
- **Planting:** Slow soil warm up and some late season snow storms and rains in the east. Still, most areas completed planting by late May and early June.
- **Growing season:** Hot temperatures early, especially across central and eastern areas. Marginal moisture in much of the region, with the exception of southwest and south central North Dakota. Cooler in latter half of the growing season, beneficial to kernel fill. Limited disease pressures.
- **Harvest:** Initial harvest pace better than latter. August brought rains, and frequent days of fog and heavy morning dews. Broad impact on crop color. Harvest mostly completed by late September, except for parts of northwest North Dakota.



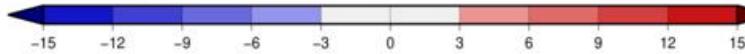
Mean Temperature Departures from Average

June 2023

Average Period: 20th Century



National Centers for Environmental Information



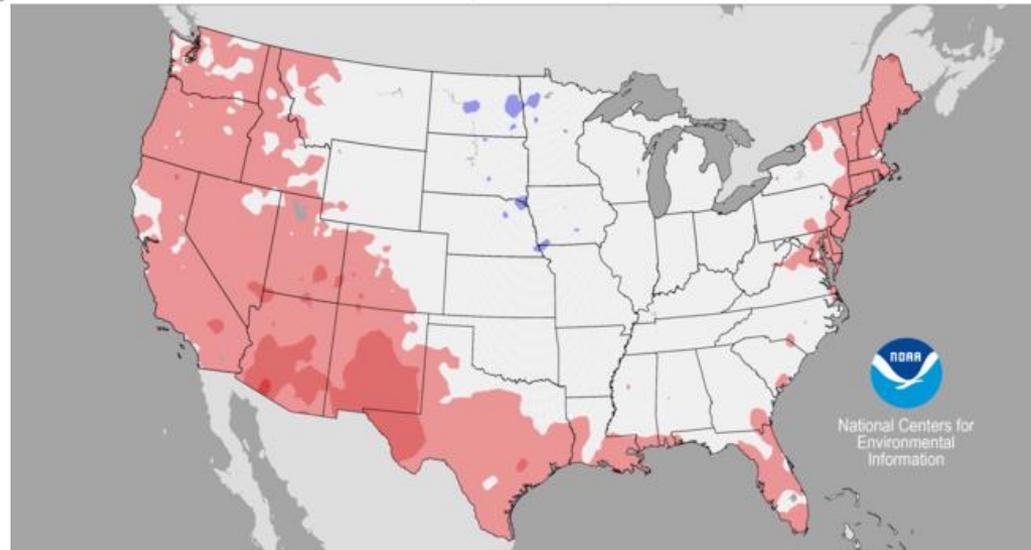
Created: Fri Jul 07 2023

Degrees Fahrenheit

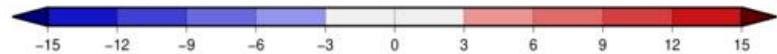
Mean Temperature Departures from Average

July 2023

Average Period: 20th Century



National Centers for Environmental Information



Created: Fri Aug 04 2023

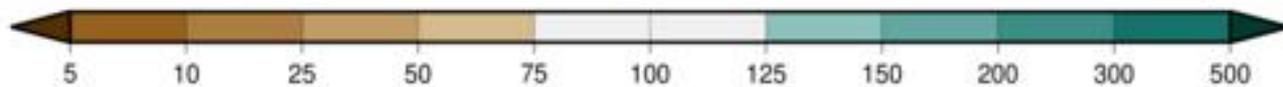
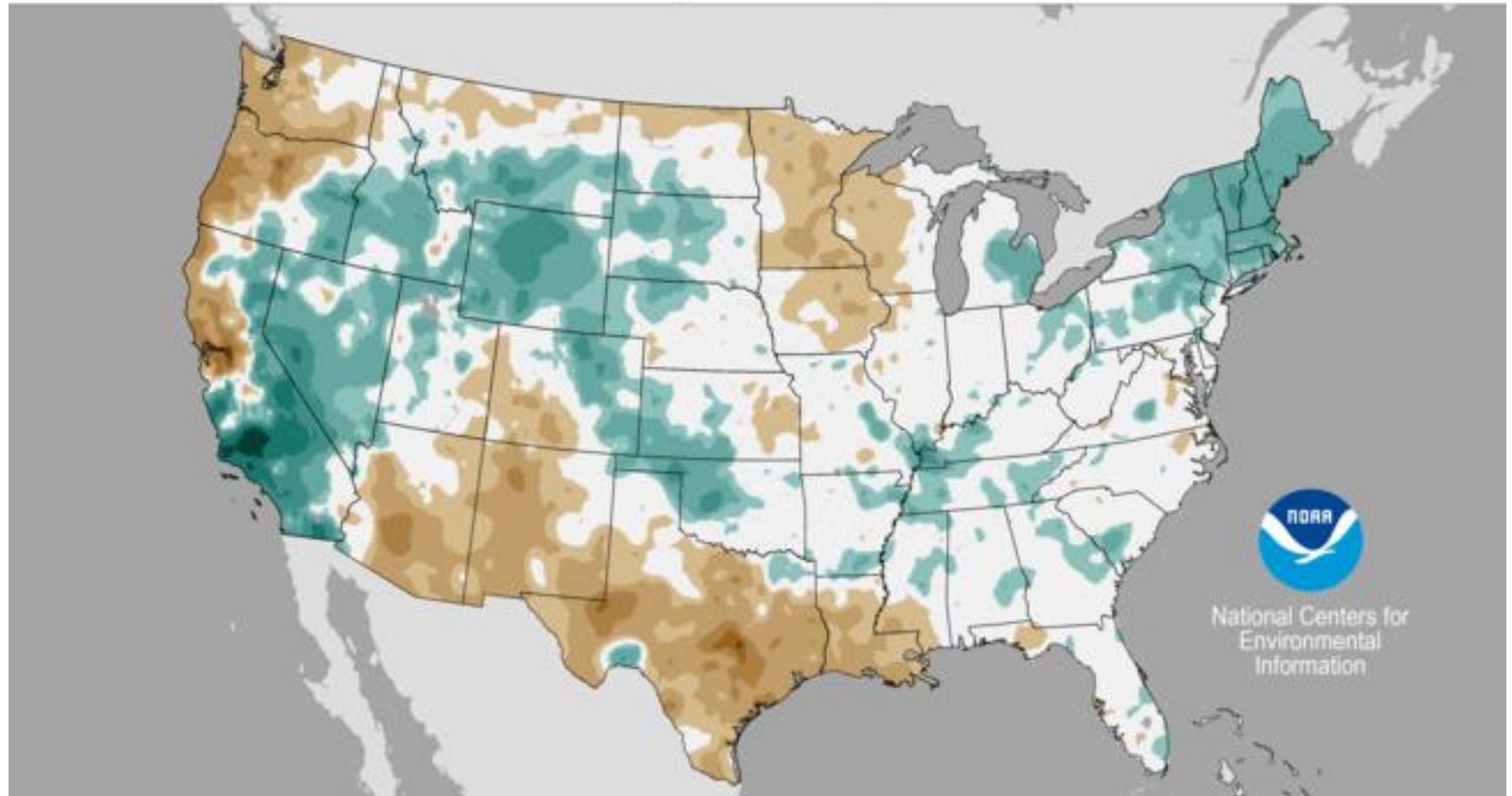
Degrees Fahrenheit

Data Source: nClimGrid

Precipitation Percent of Average

June–August 2023

Average Period: 20th Century



Created: Thu Sep 07 2023

Percent

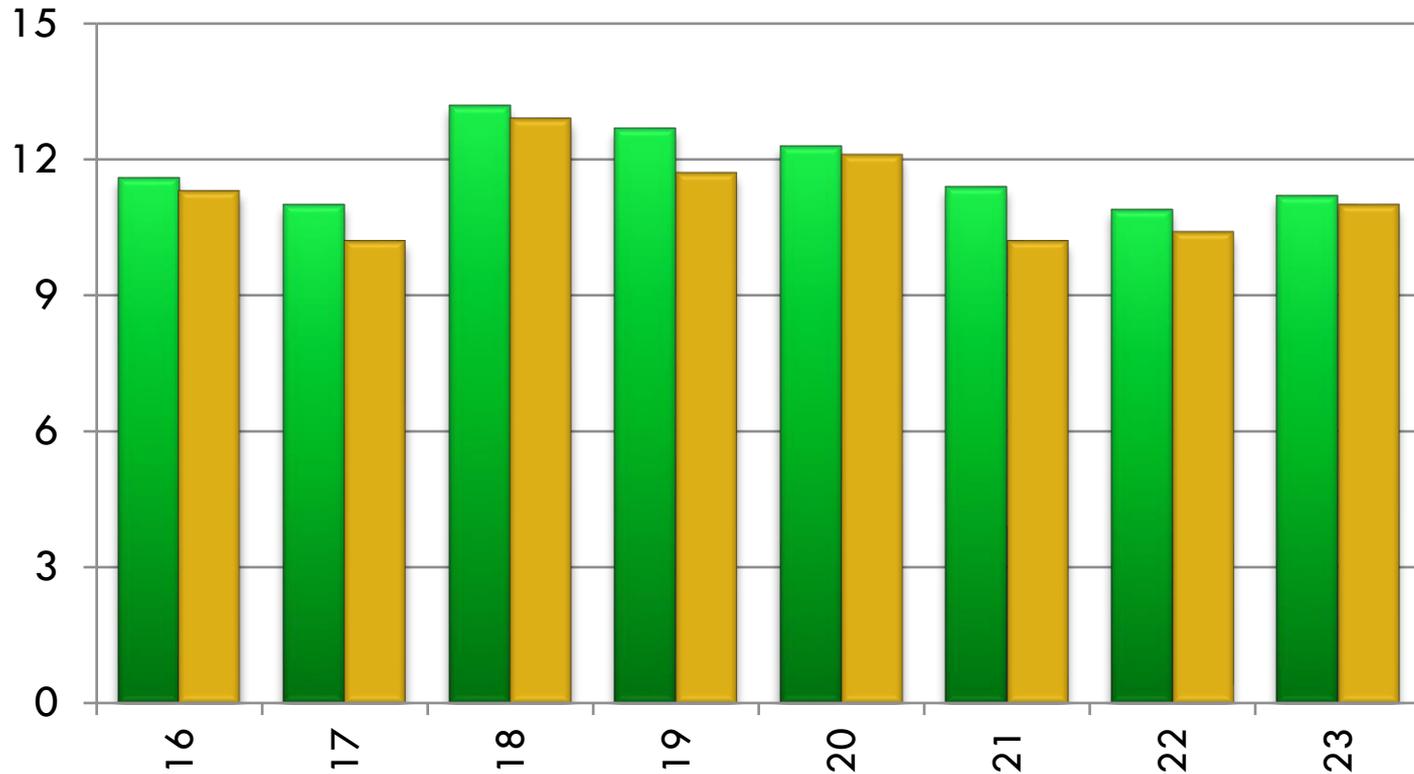
Data Source: nClimGrid

U.S. SPRING WHEAT PLANTED & HARVESTED AREA



Million Acres

■ Planted ■ Harvested



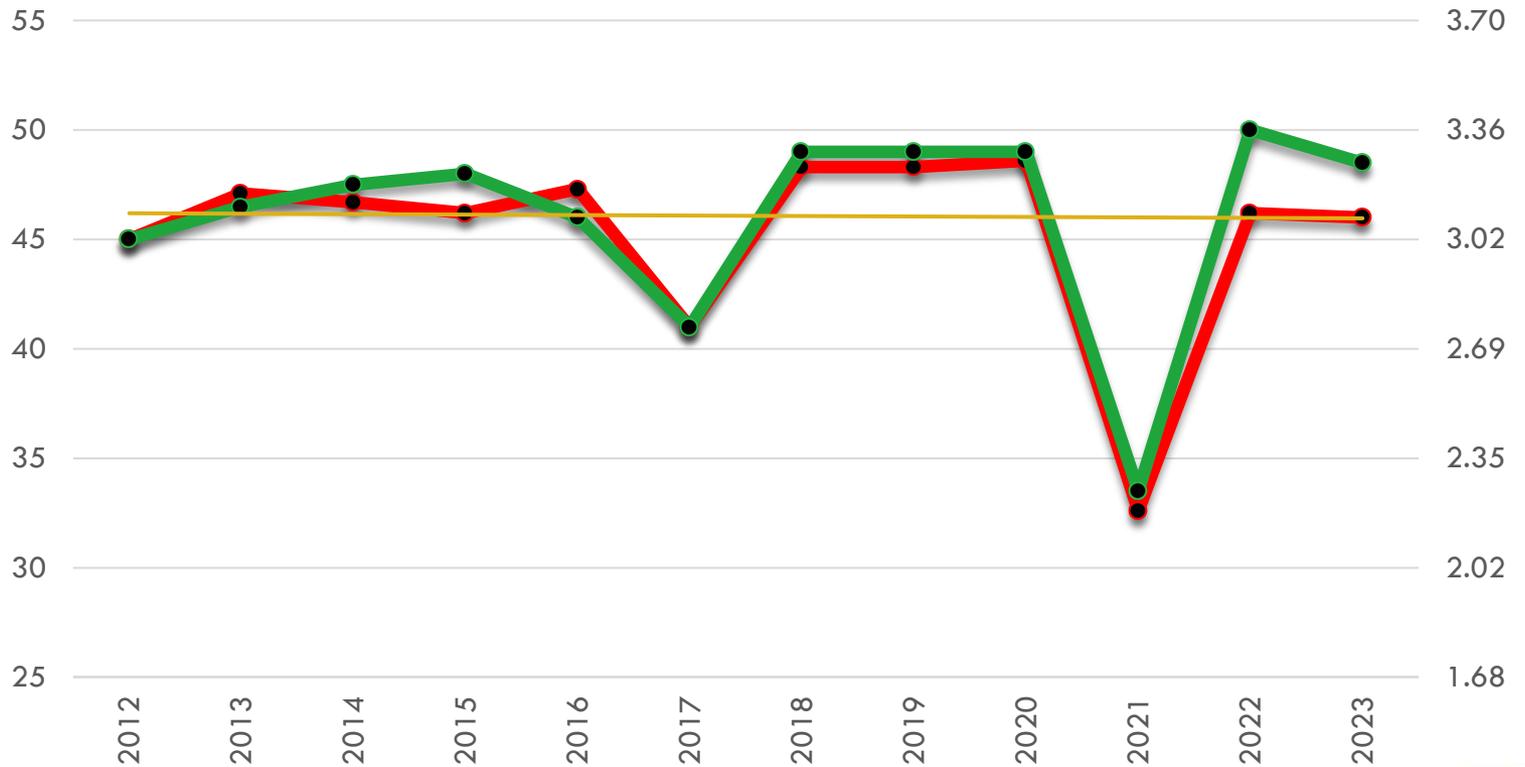
Average US and ND HRS Yields



Bushels Per Acre

Metric Tons Per Hectare

● U.S. Spring ● N.D. Spring



Source: USDA September

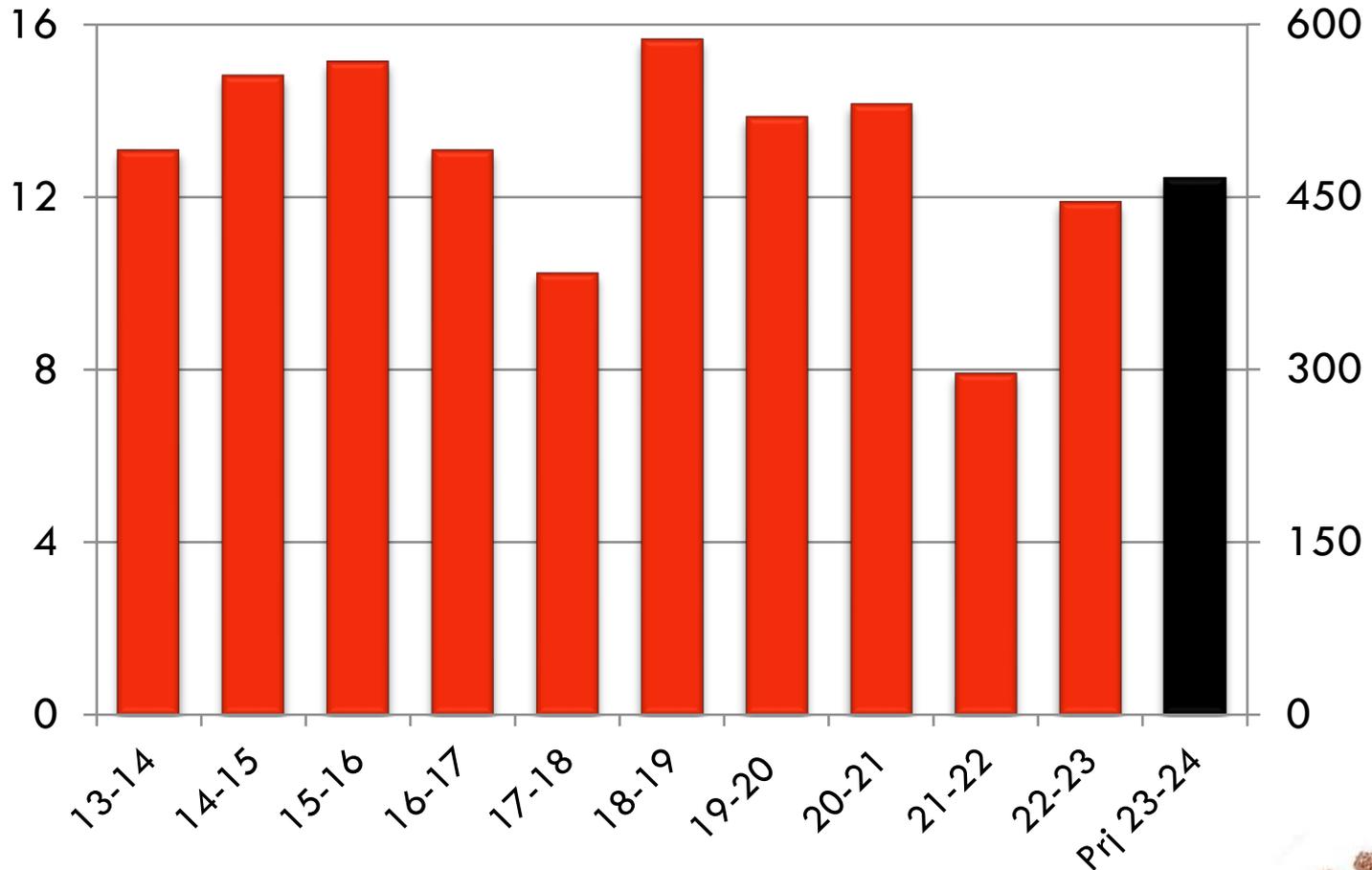


U.S. HRS PRODUCTION

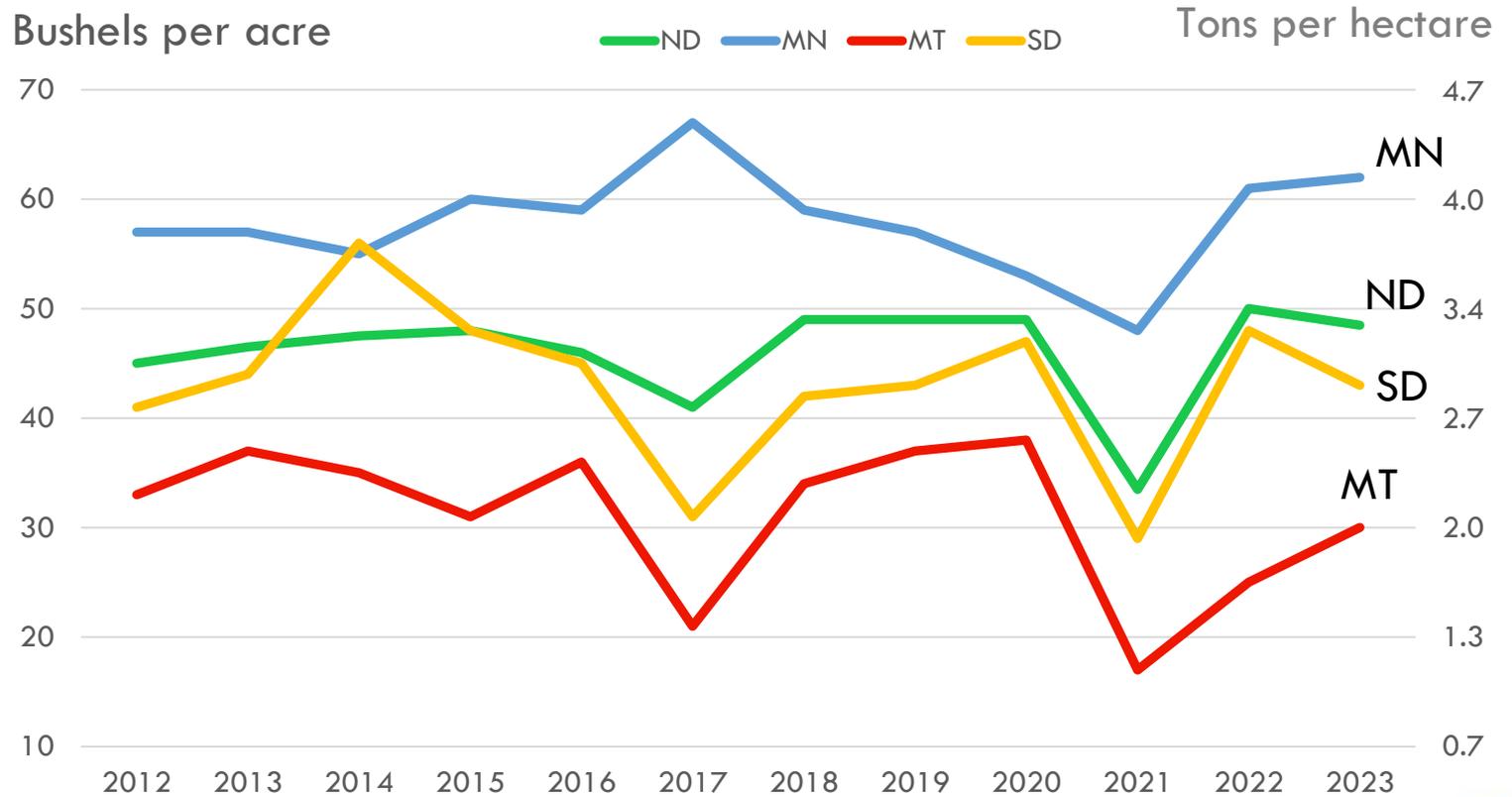


Million Tons

Million Bushels



Historical HRS Yields by State

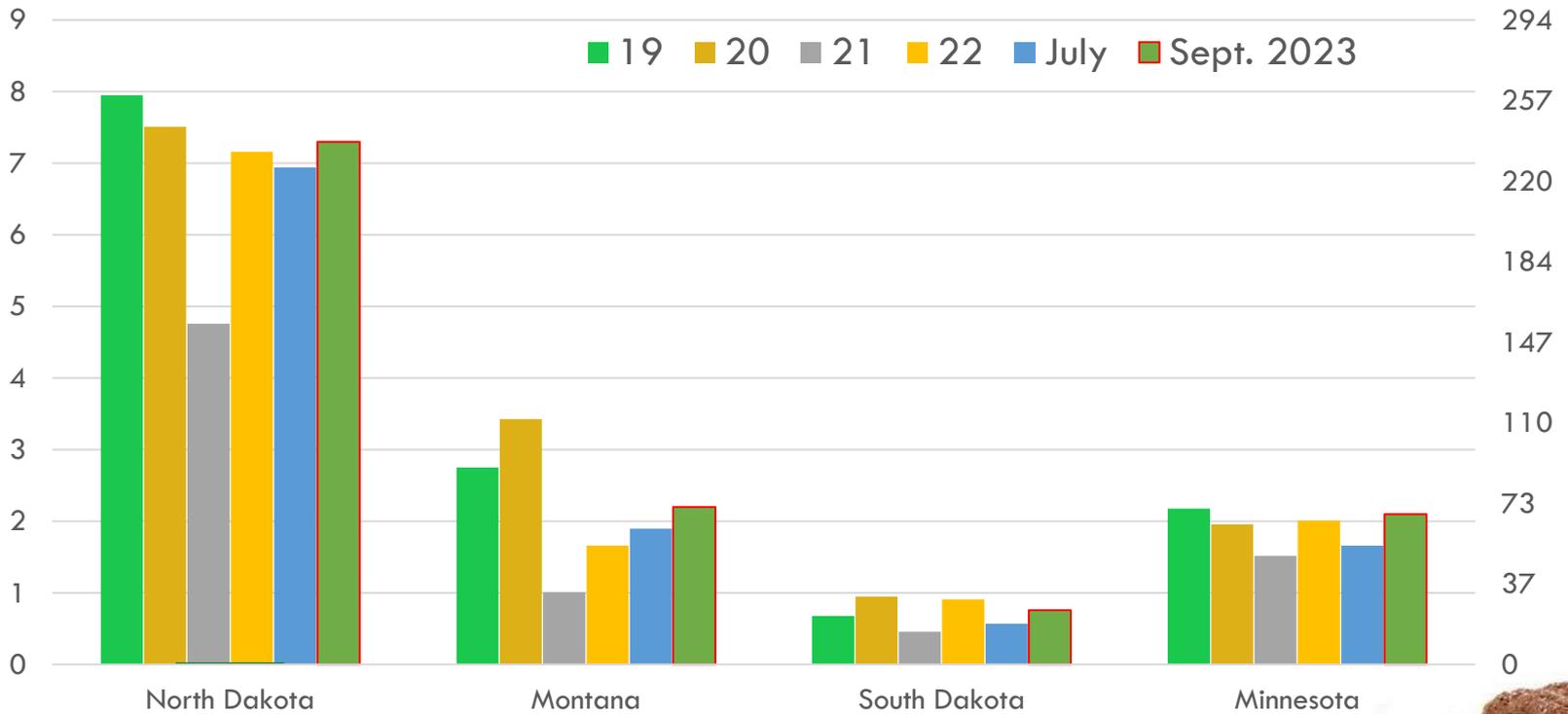


HRS Production by State



Million Tons

Million Bushels



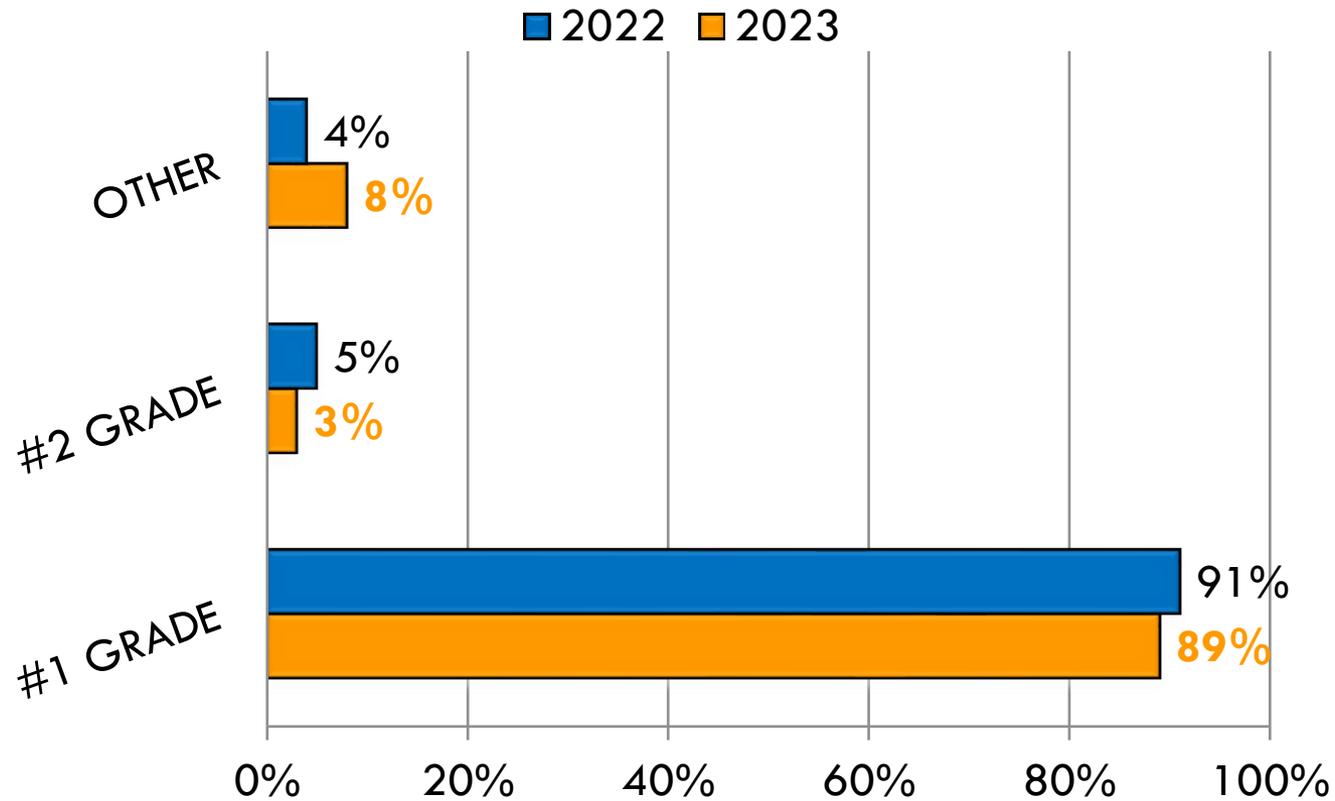
U.S. HRS 2023 Quality Survey



- **Samples (755) collected direct from producers and elevators during harvest, by NASS and NDSU Extension Agents**
- **Seven states surveyed**
- **Good overall crop in 2023**
 - **High grades but very low color in crop**
 - **Little to no damage, or DON**
 - **Protein levels skew a little lower compared to 2022 and 5 year avg. Some pockets of really low protein**
 - **Strong dough properties with good absorption, and improved loaf volumes**



HRS: Grade Distribution



2023 Quality Characteristics

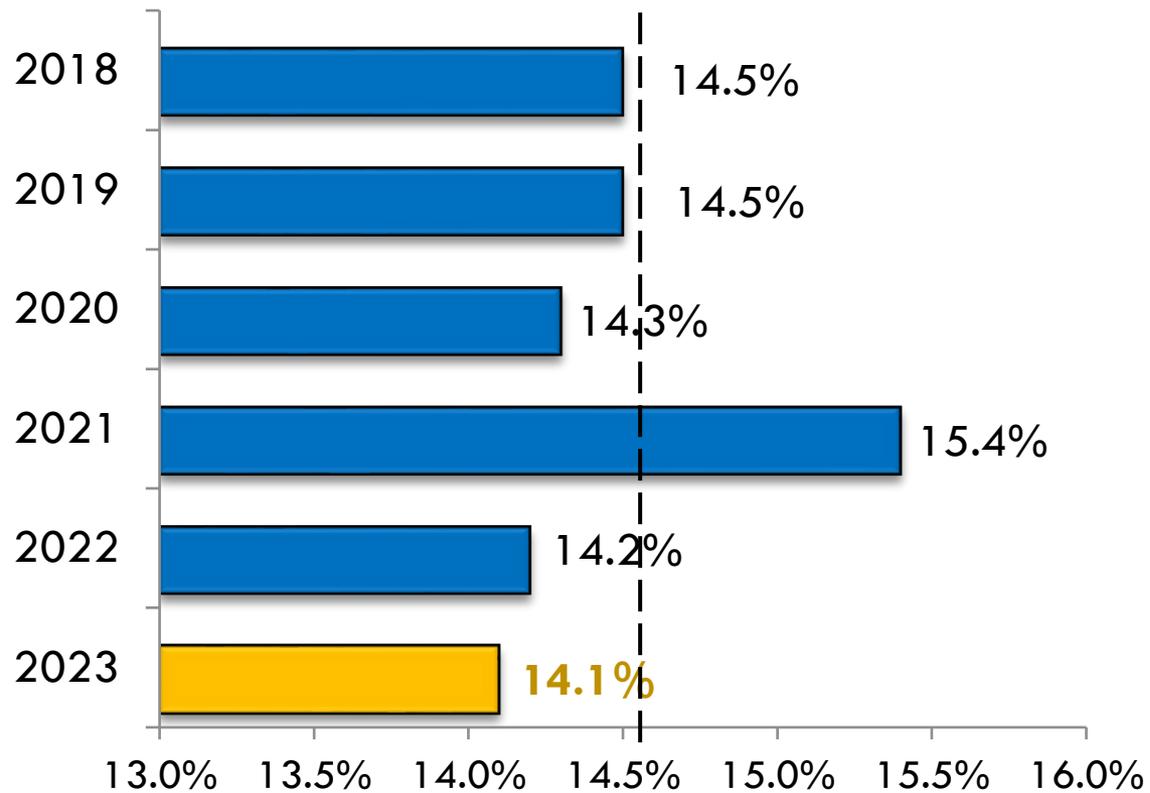
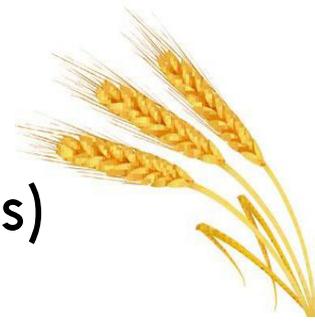


	2023	2022	5 Year Avg.
Test Weight (lb./bu.)	61.2	62.1	61.7
Total Defects (%)	0.7	0.9	1.1
Vitreous (%)	57	73	74
Thousand Kernel Weight (g)	34.5	30.9	31.3
Protein (%)	14.1	14.2	14.6
Falling Number	389	390	383
Grade	1 NS	1 NS	1 NS

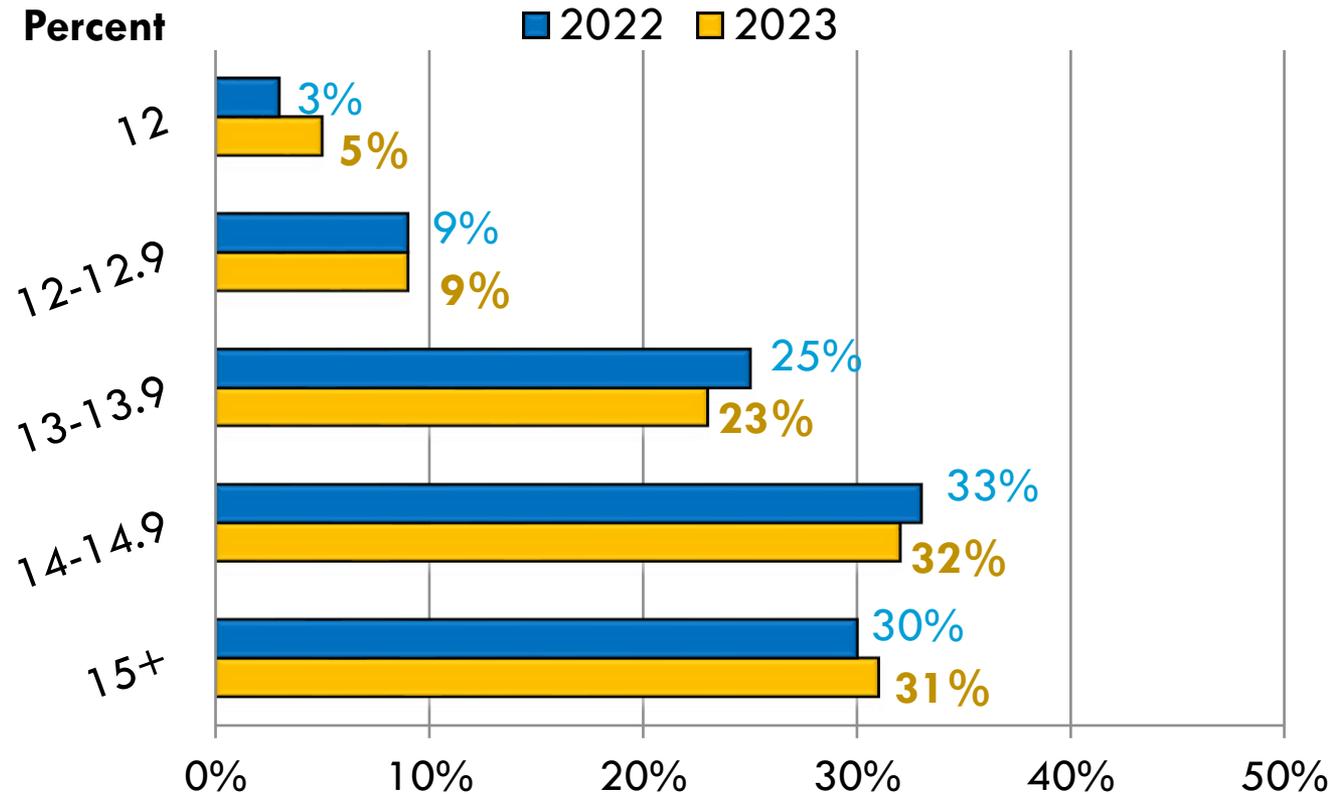


HRS: Protein Content (12% moisture basis)

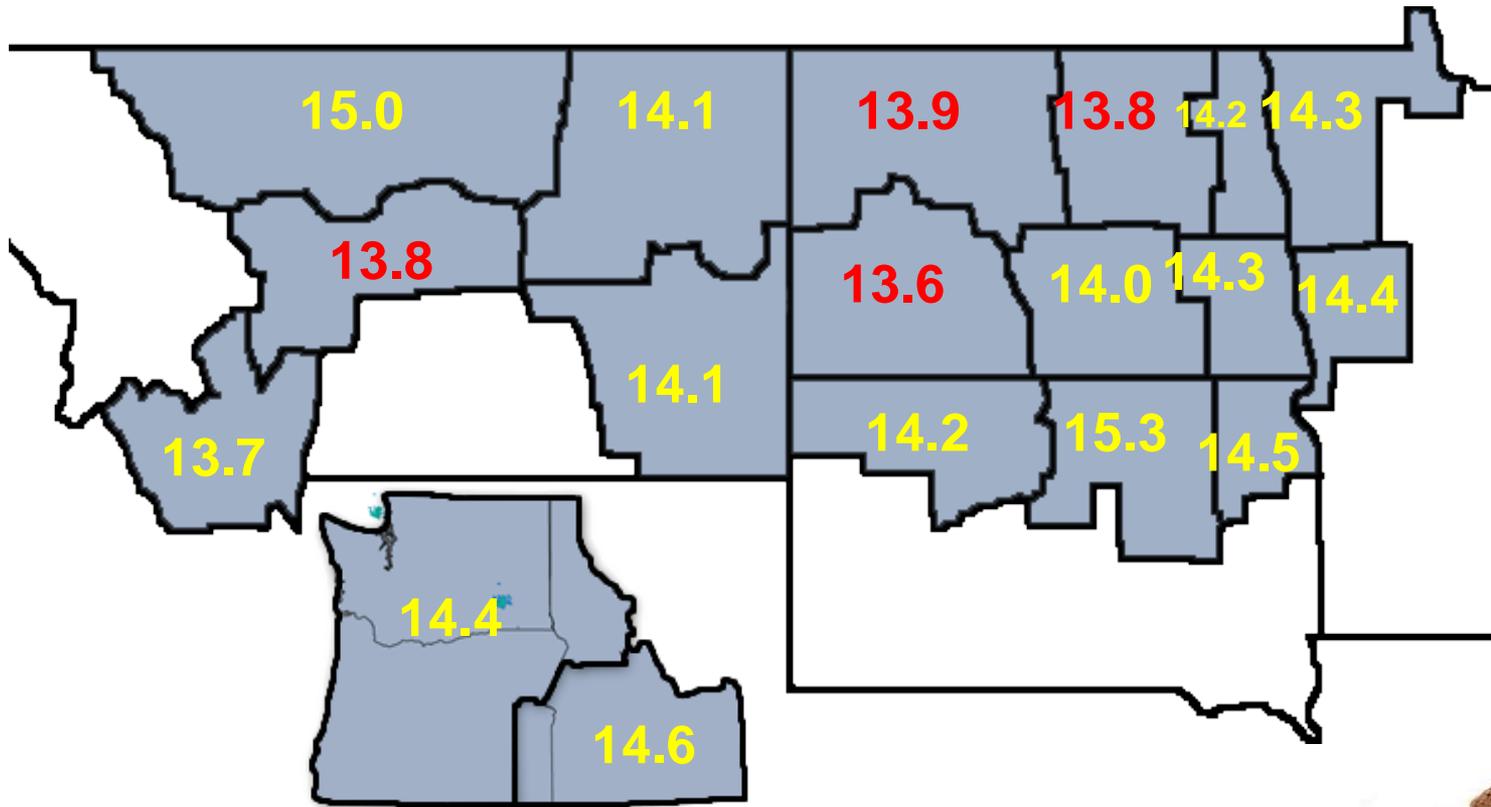
- - - 5 yr avg is 14.6%



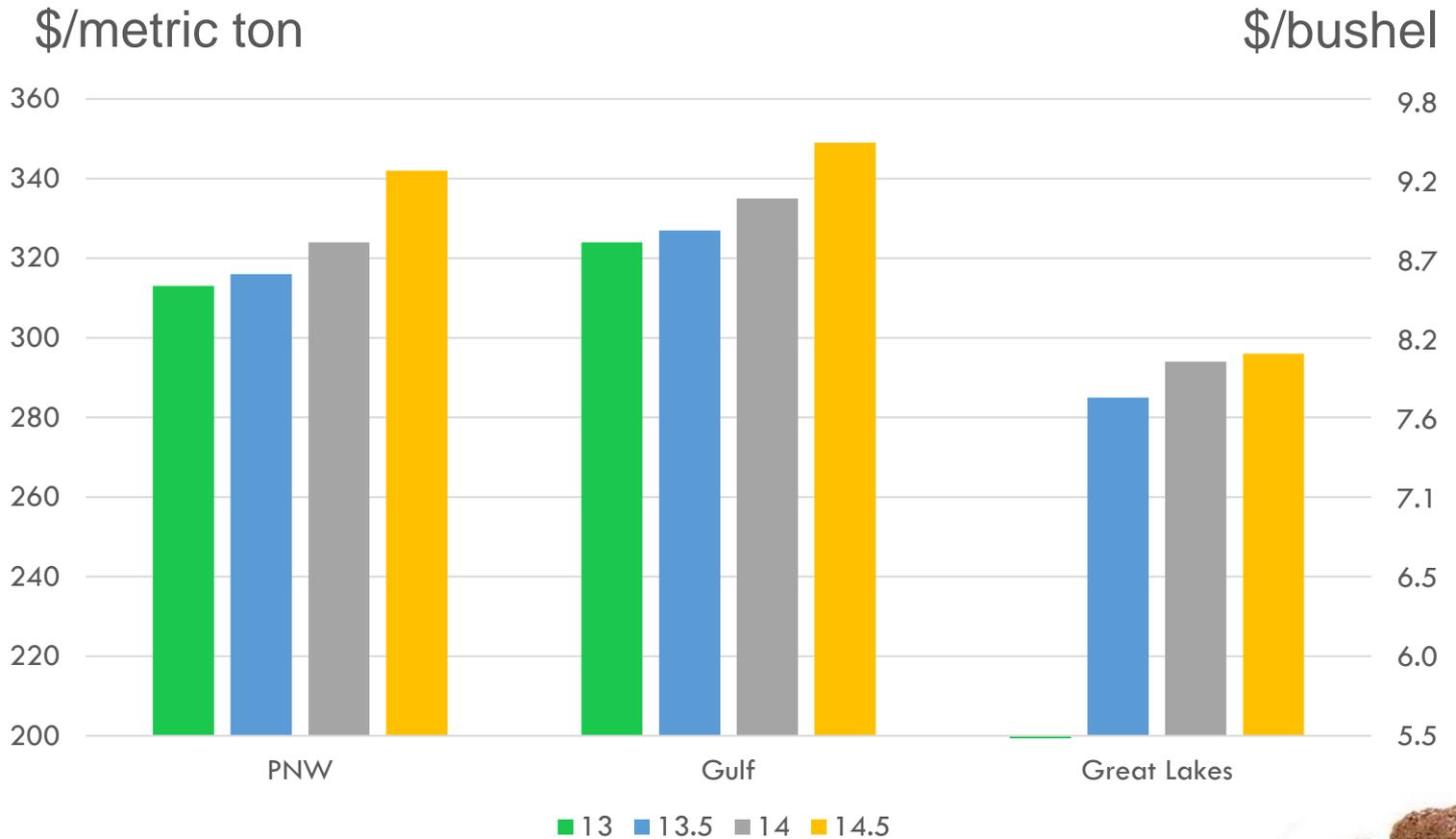
HRS: Protein Content Distribution



HRS: Protein by Area

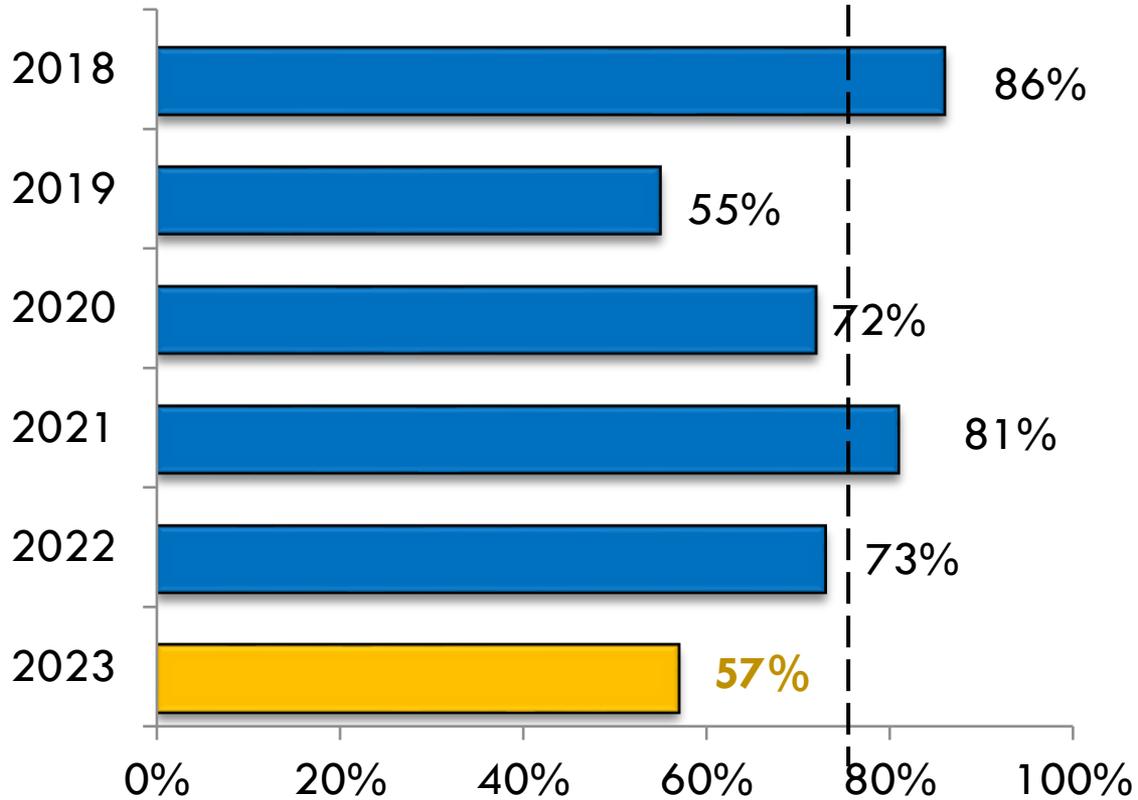


HRS – Protein Premiums FOB price quotes

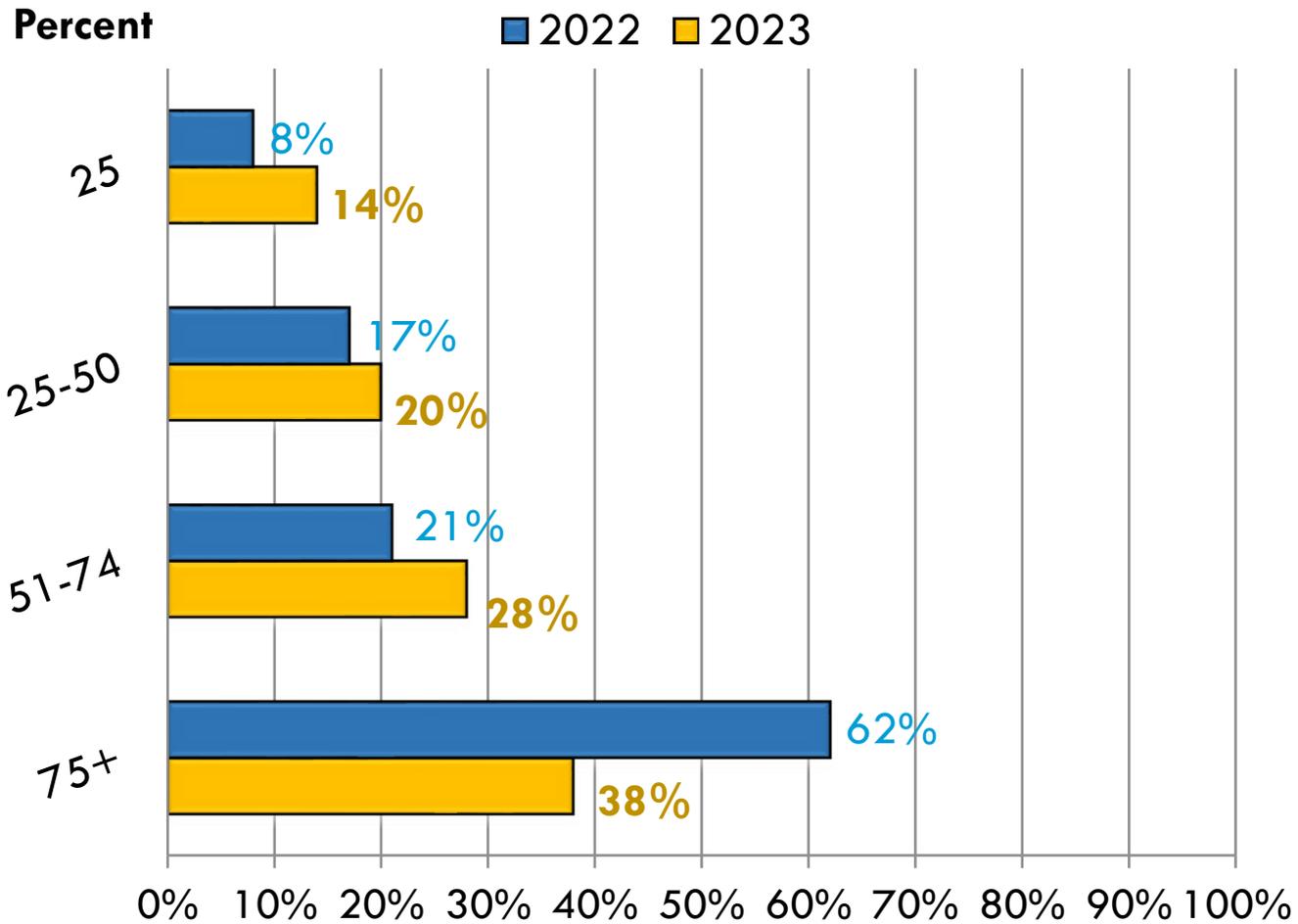


HRS: Vitreous Kernel Content

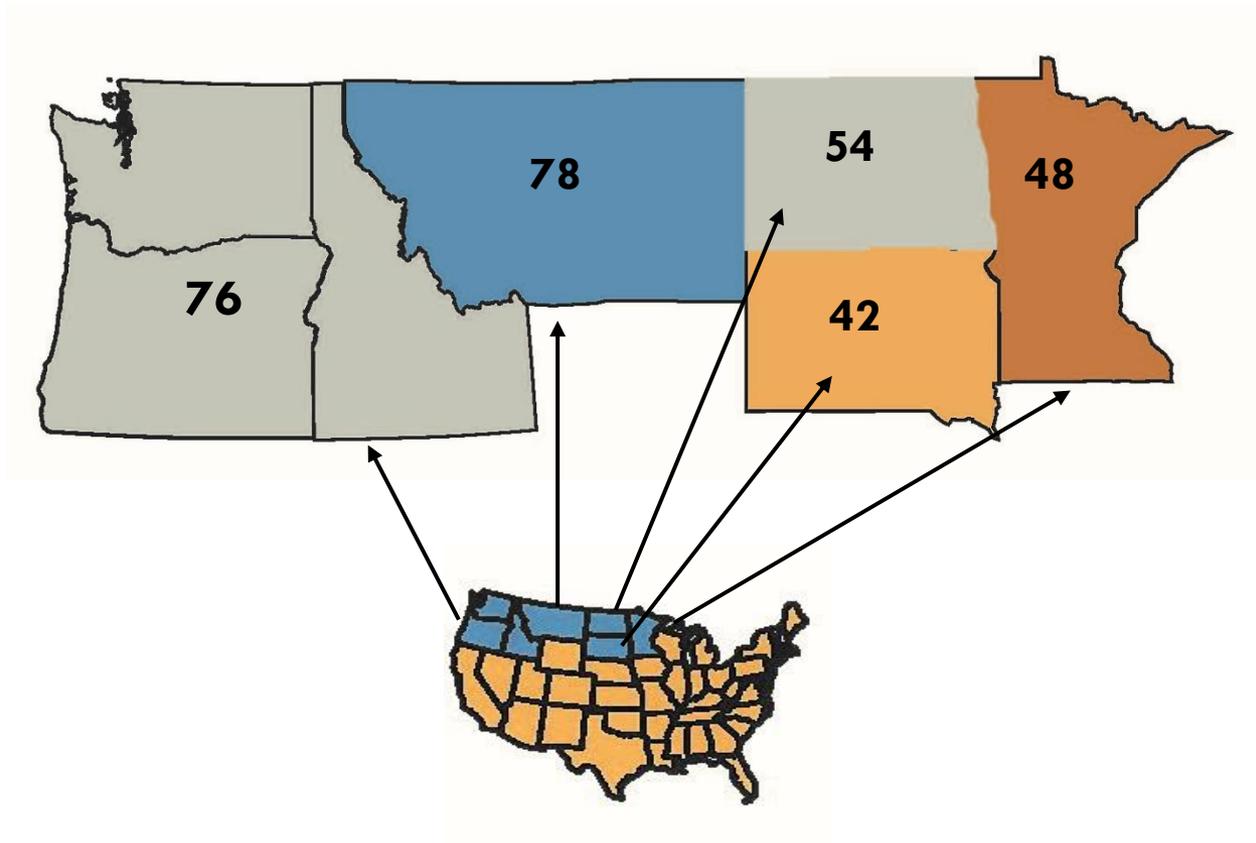
- - - 5 yr avg is 74%



HRS: Vitreous Kernel Content Distribution



HRS: 2023 Vitreous Content by State



2023 Flour / Dough Quality Characteristics



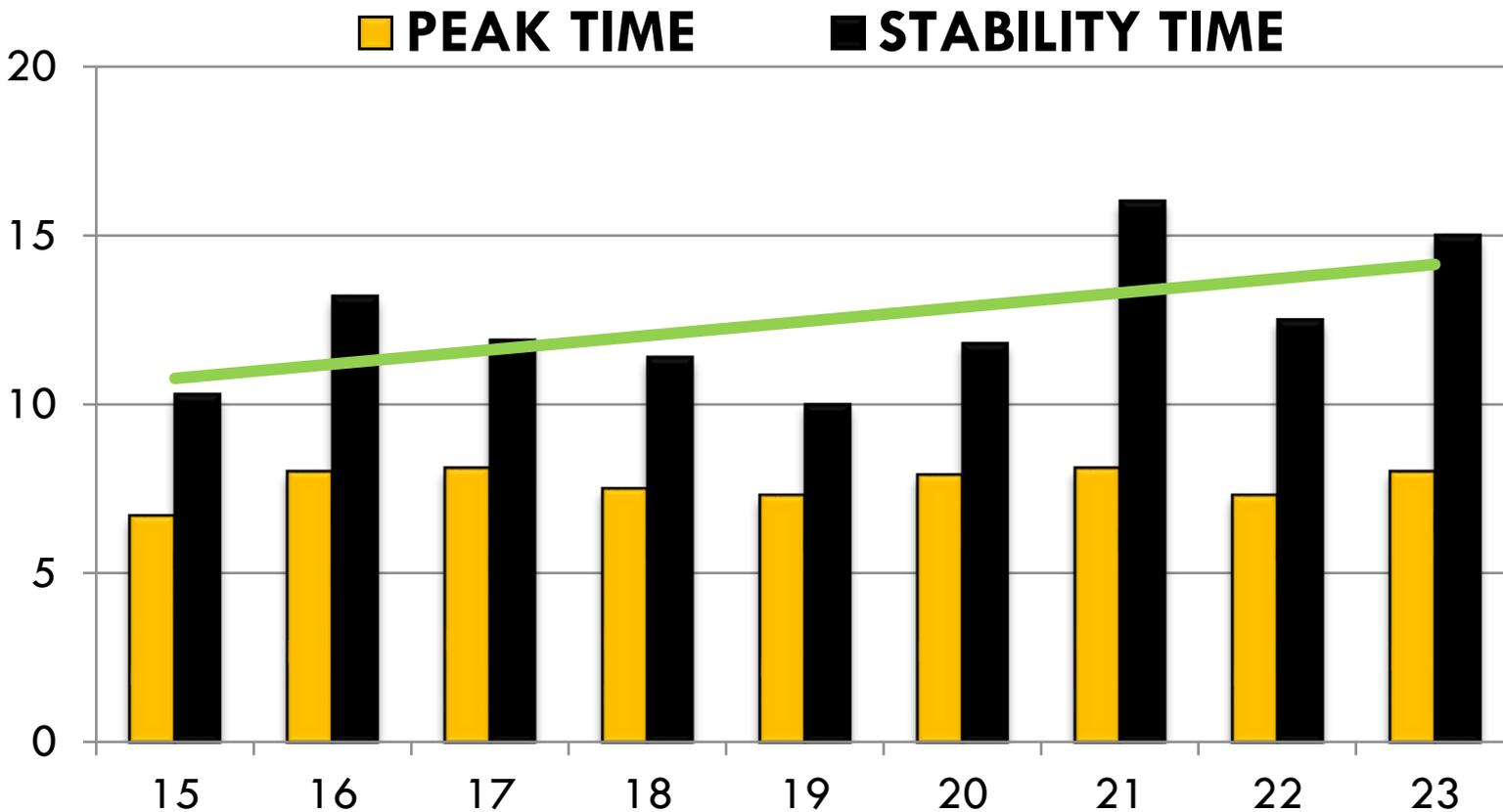
	2023	2022	5 Year Avg.
Flour Extraction (%)	69.9	67.0	67.8
Farinograph Absorption (%)	62.9	63.0	62.9
Farino Stability (min)	15.2	12.5	12.4
Loaf Volume (cc)	969	931	967



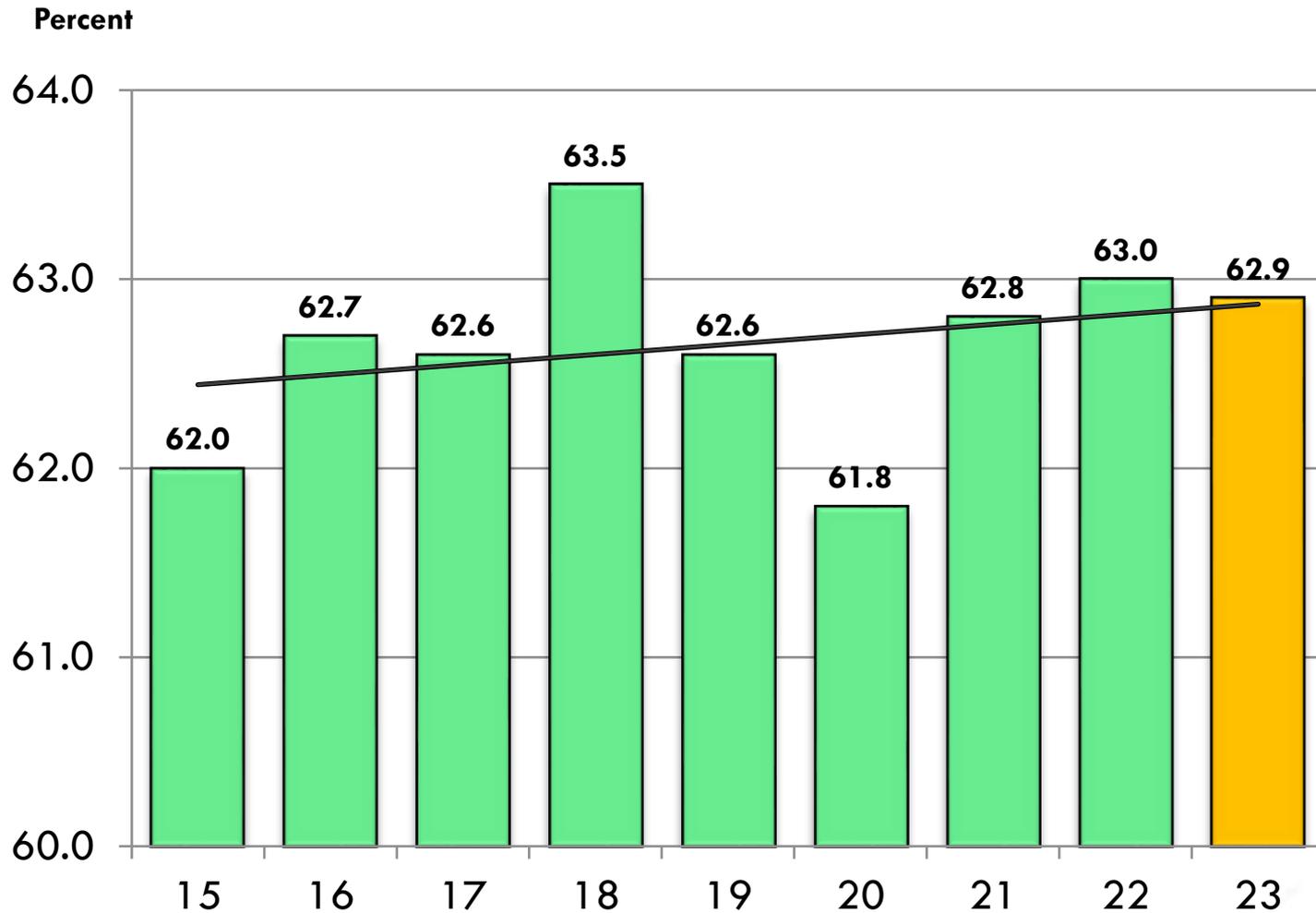
U.S. HRS: Dough Stability Farinograph Results



Minutes



U.S. HRS: Crop Avg Farinograph Absorption





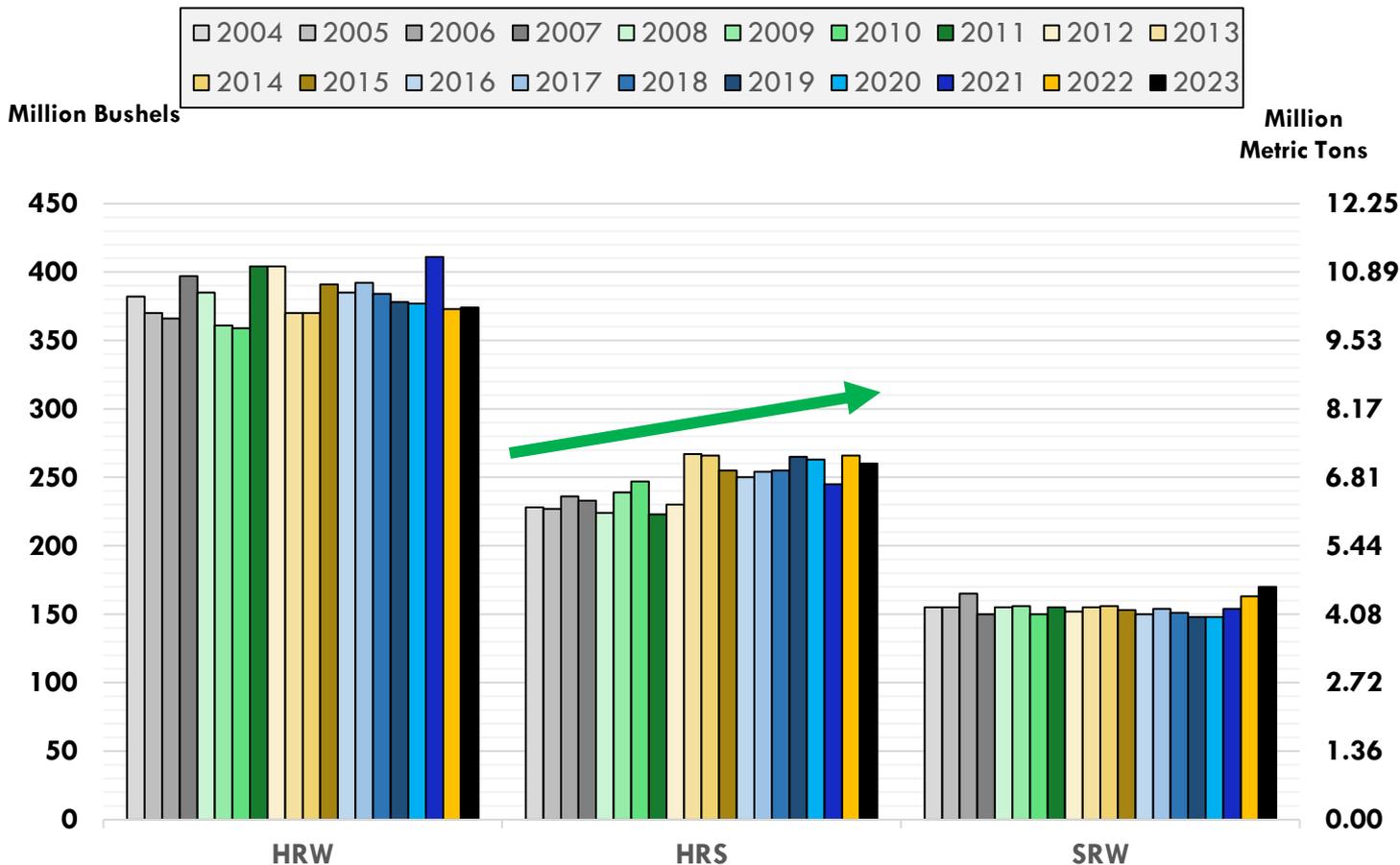
U.S. HRS Demand Trends



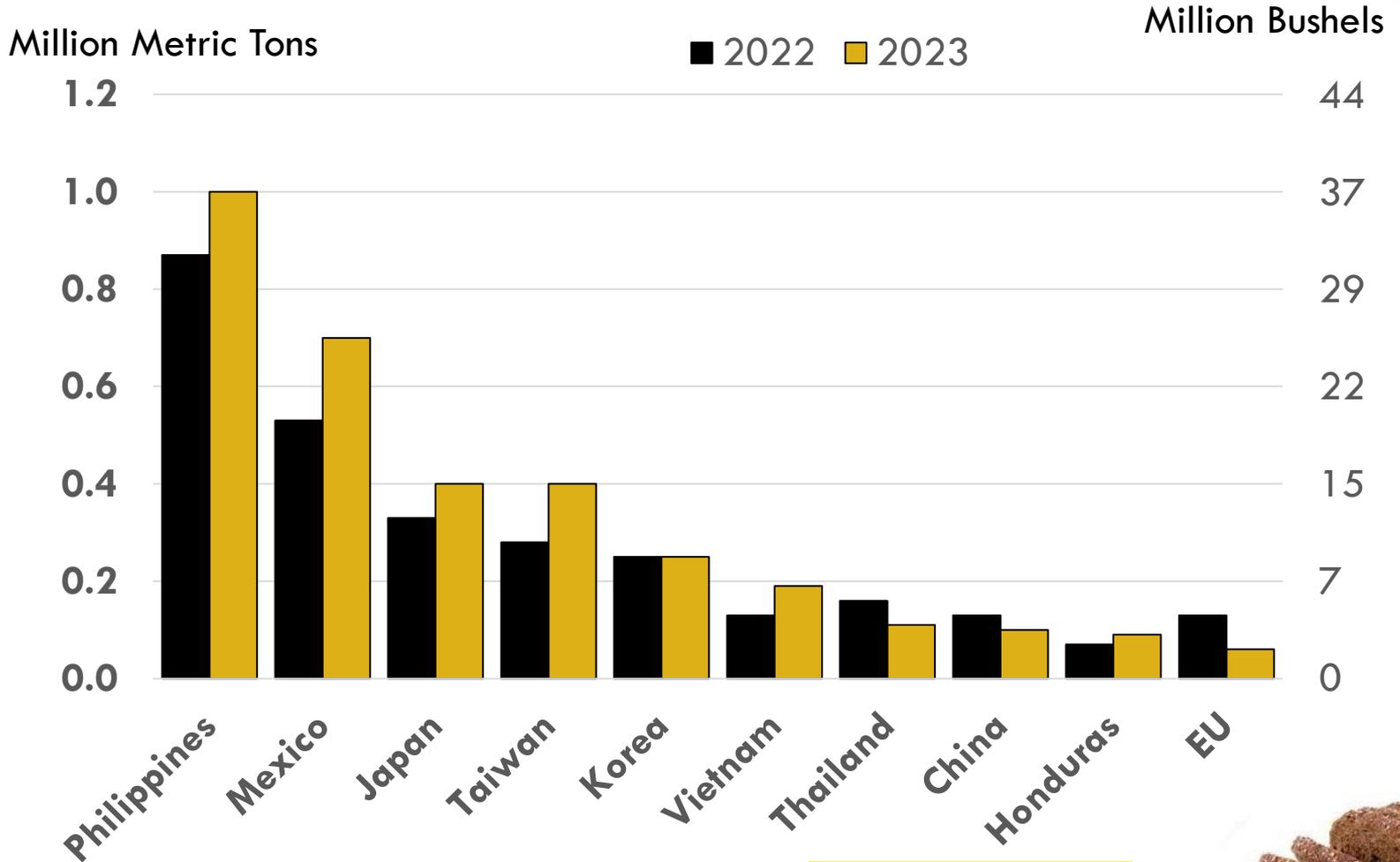
Source: USDA



U.S. WHEAT FOOD USE BY CLASS



Top HRS Markets Export Pace 2023 vs. 2022



As of October 20, 2023

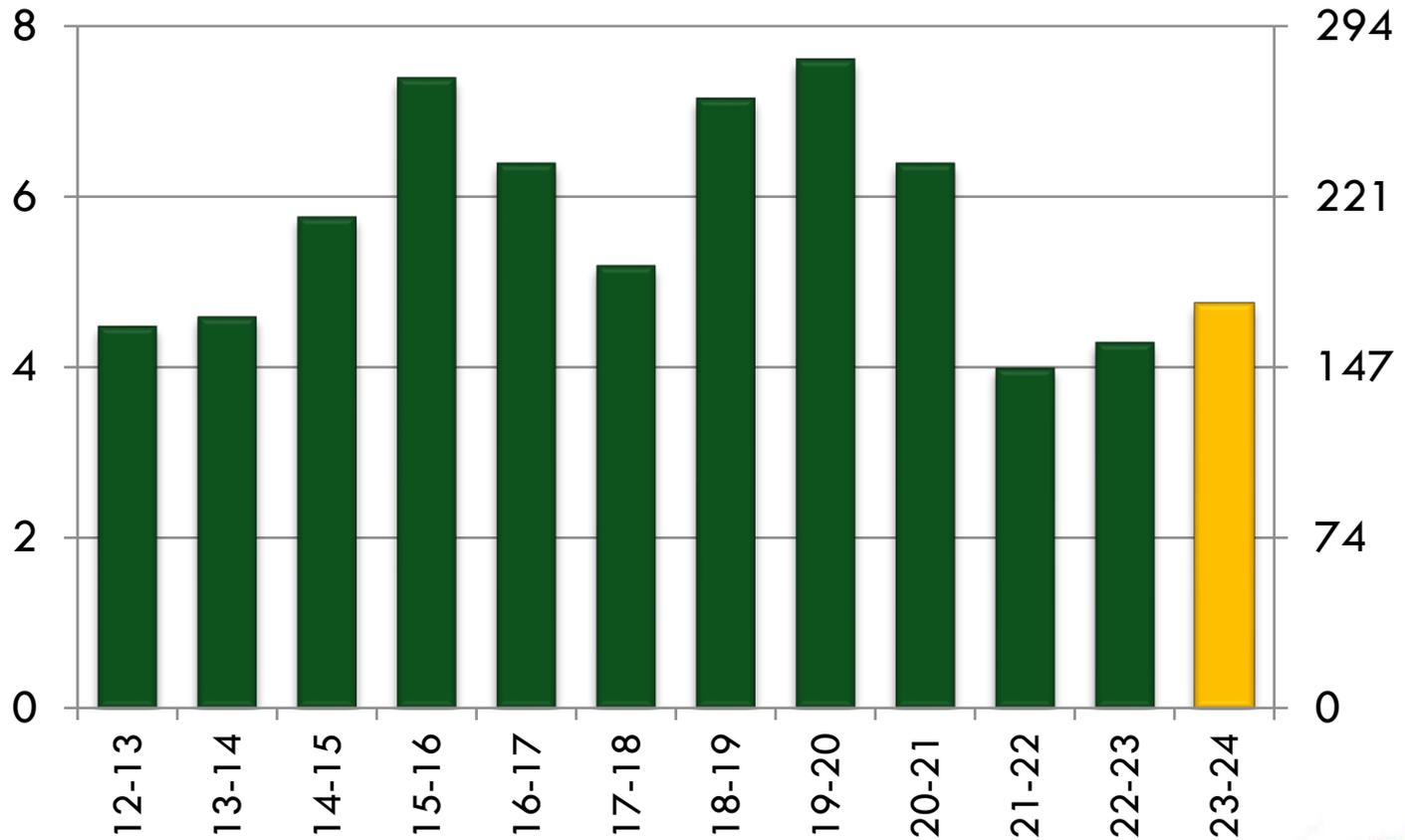


U.S. HRS STOCKS (As of June 1)



Million Tons

Million Bushels

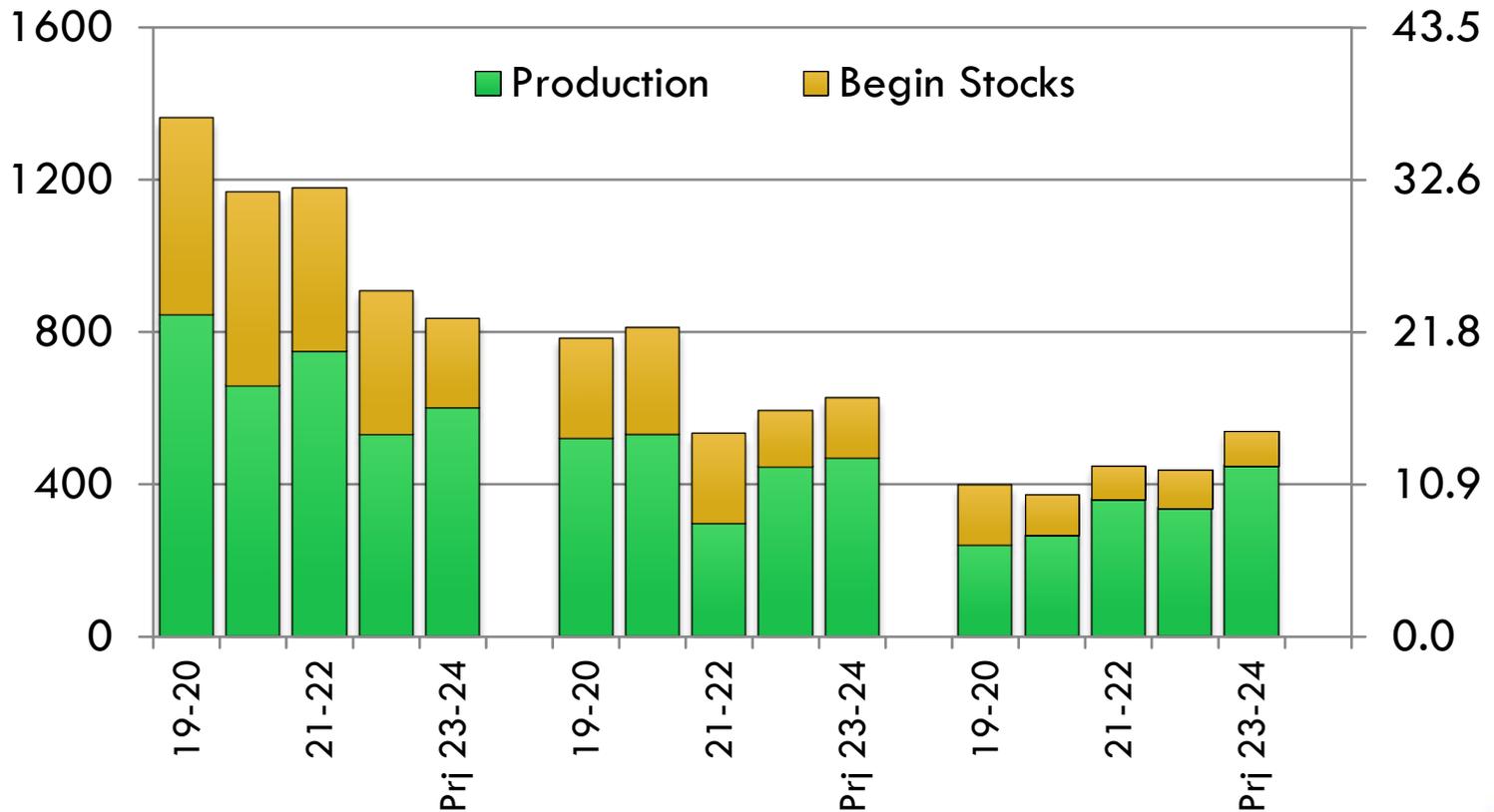


U.S. Wheat Supply by Class



Million Bushels

Million Tons



Hard Red Winter

Hard Red Spring

Soft Red Winter



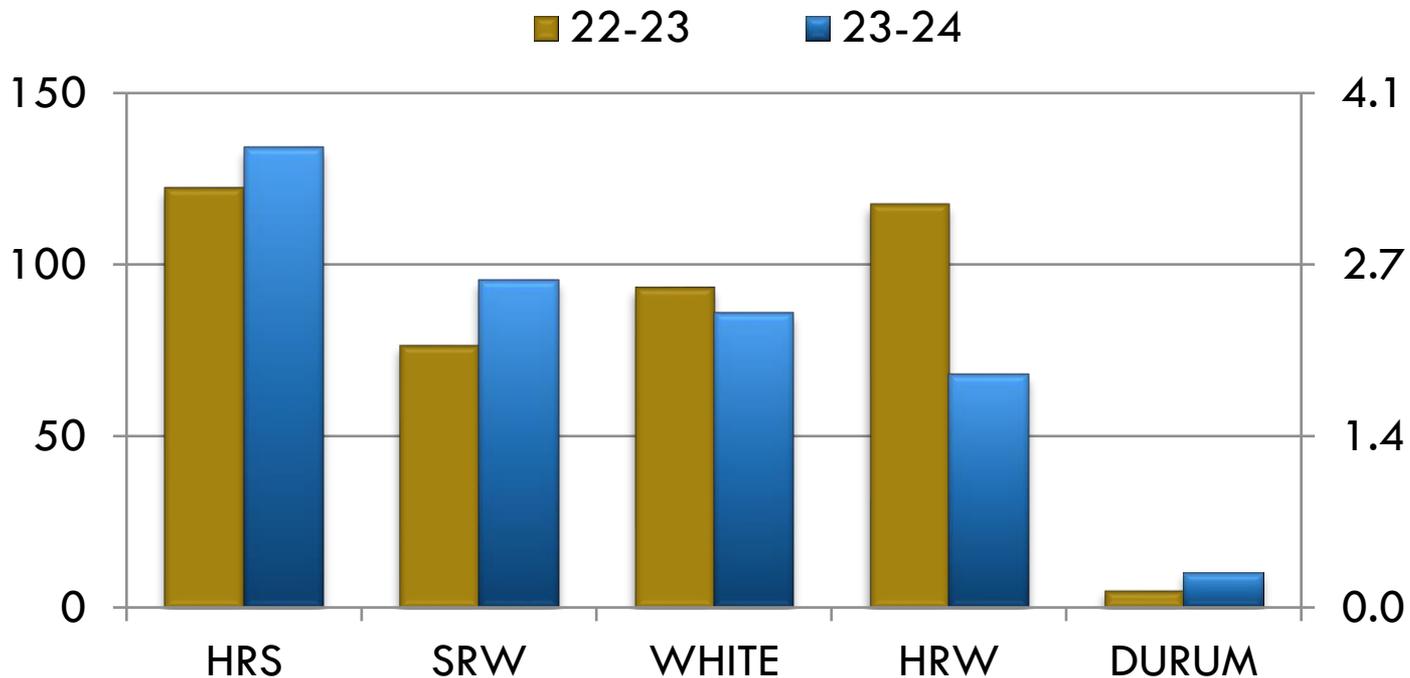
Export Pace for U.S. Wheat

(Shipments and Sales as of mid-October 2023)



Million Bushels

Million Tons



U. S. FUTURES TRENDS

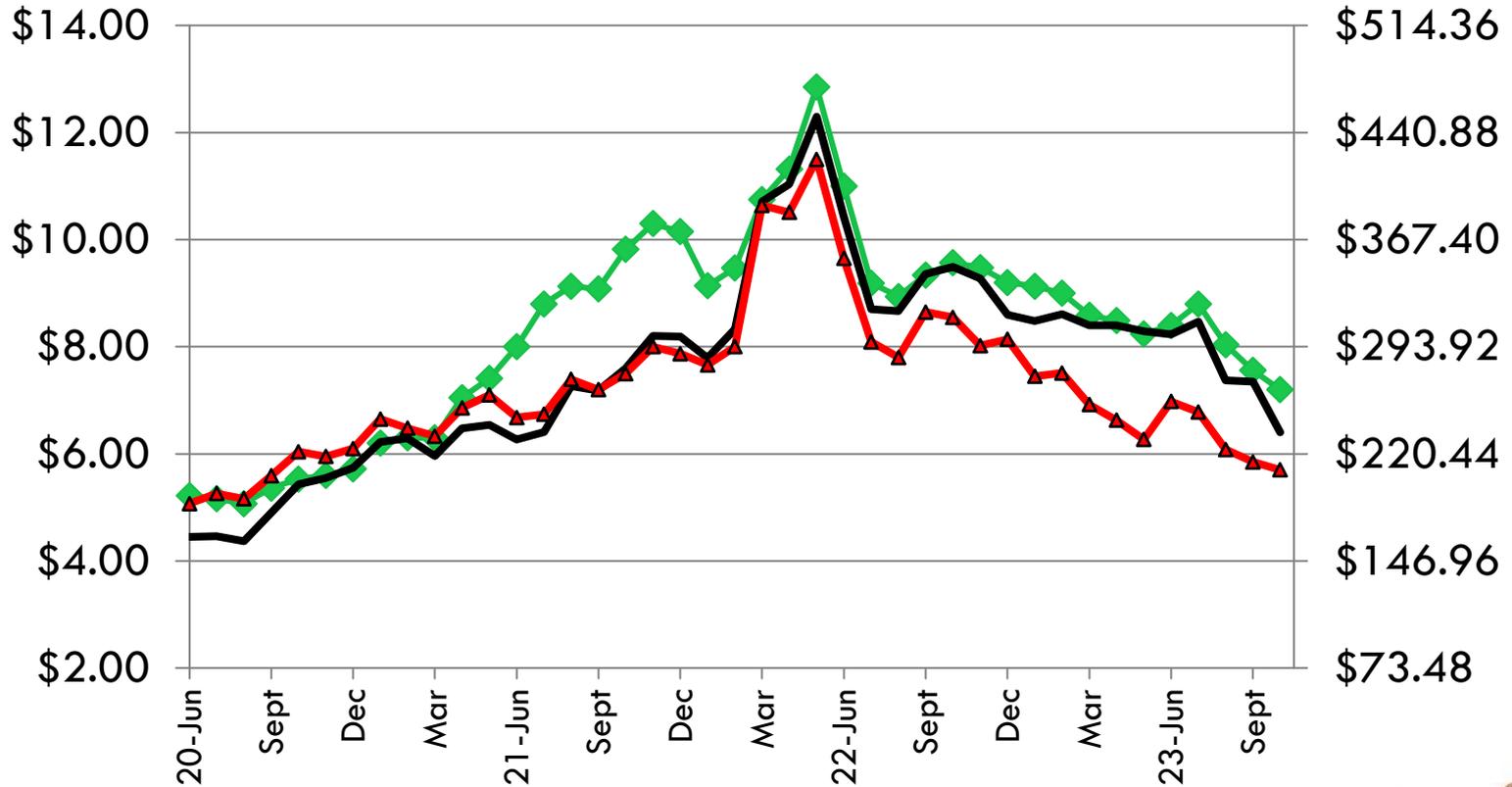
Minneapolis – Hard Red Spring
 Kansas City – Hard Red Winter
 Chicago – Soft Red Winter – World prices



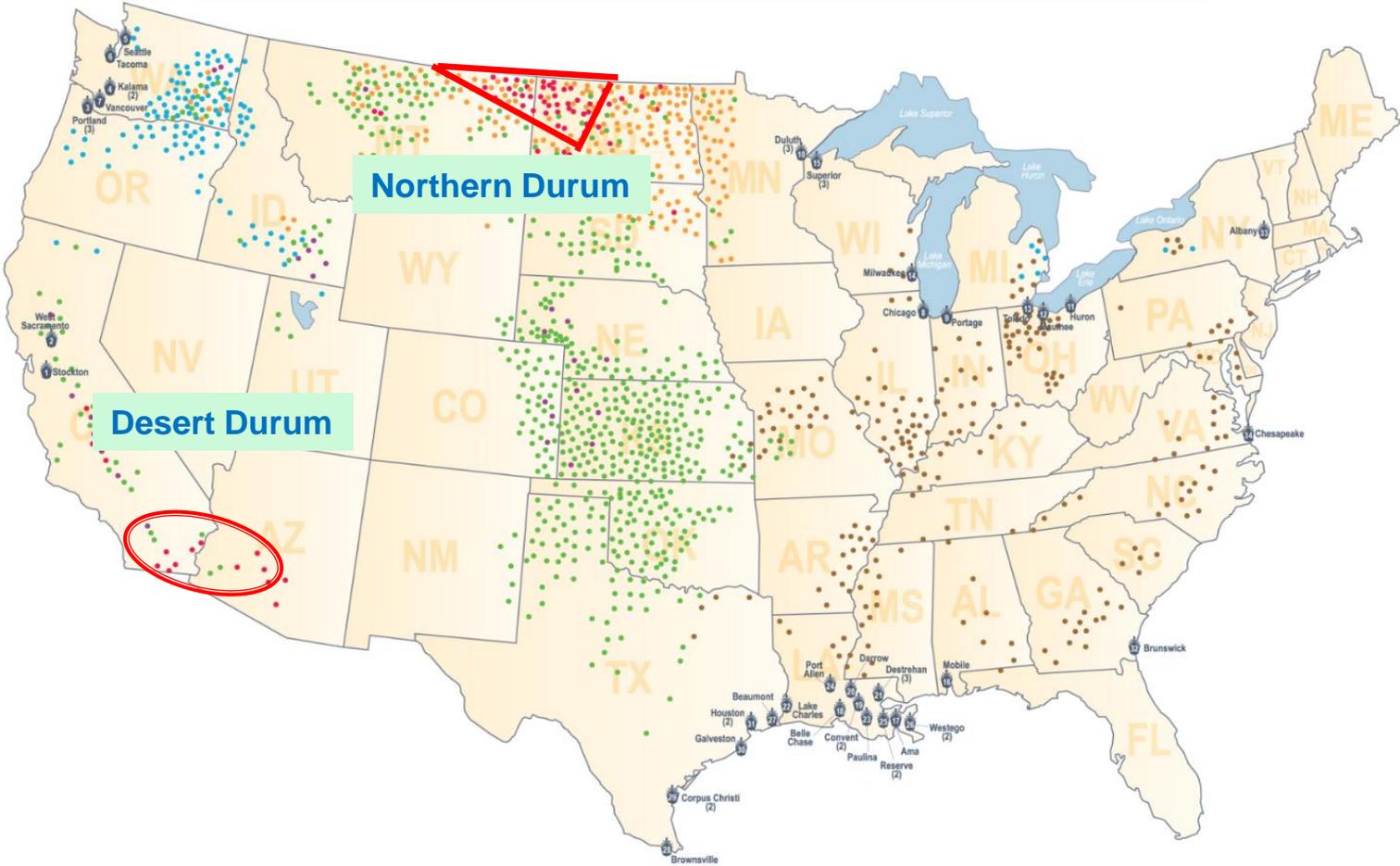
\$ per Bushel

\$ per Ton

◆ MGE — KCBOT ▲ CBOT



U.S. Durum – 2023



2023 U.S. Durum Situation



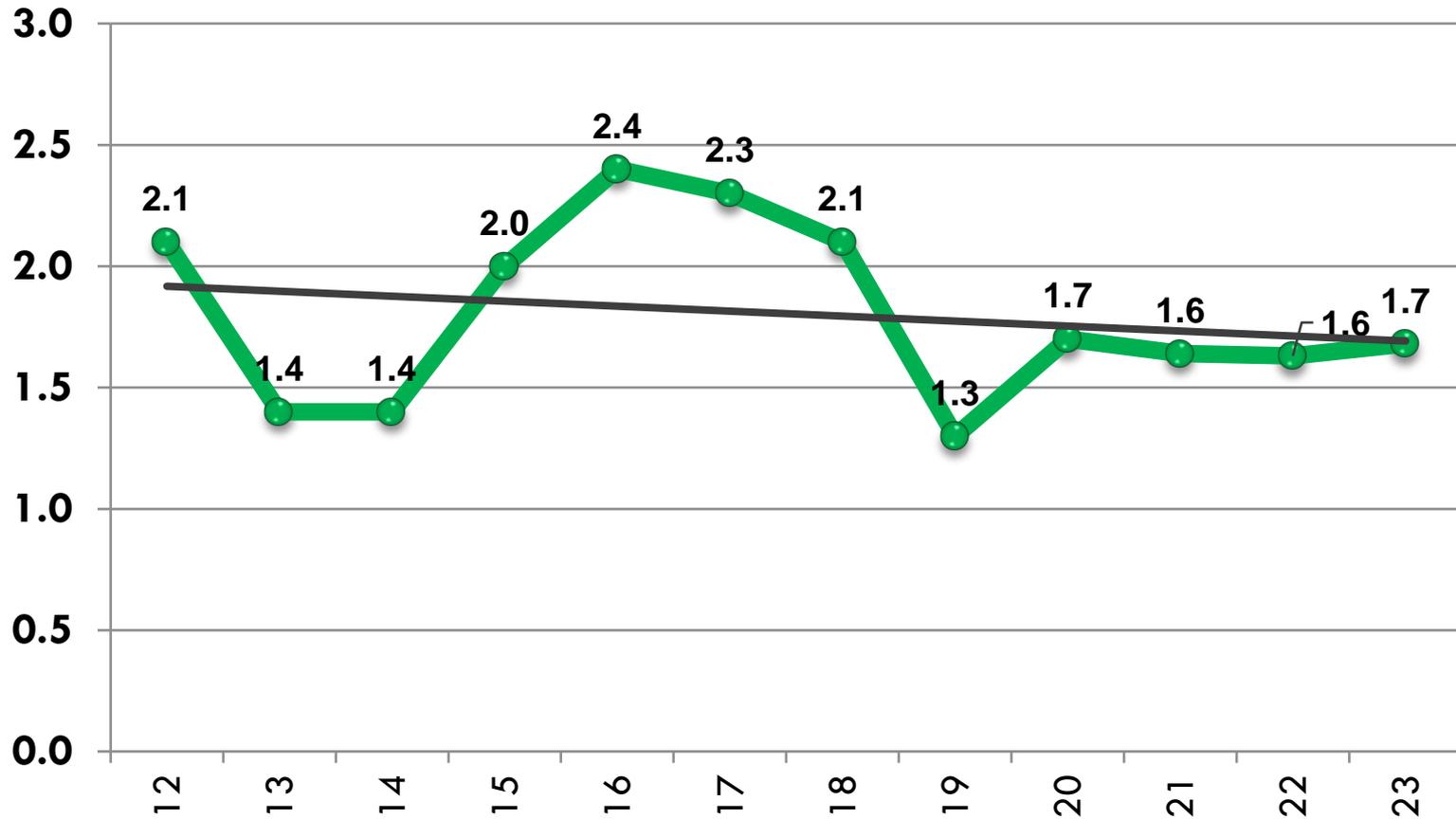
- U.S. durum plantings higher in Northern region, but lower in Desert Durum area
- Some pockets of planting delays, but near normal for most part
- Yields were near trend line to slightly below in most areas, but better than pre-harvest expectations
- Good quality crop in many areas, but a lot of variability in some factors due to rains and extended harvest period
- U.S. production pegged at 59 million bushels, down from 64 million in 2022
- Prices rallied sharply in August, but have since slid back down to late spring values



U.S. Durum Planted Area



Million Acres



Source: USDA Sept 2023



U.S. DURUM WHEAT

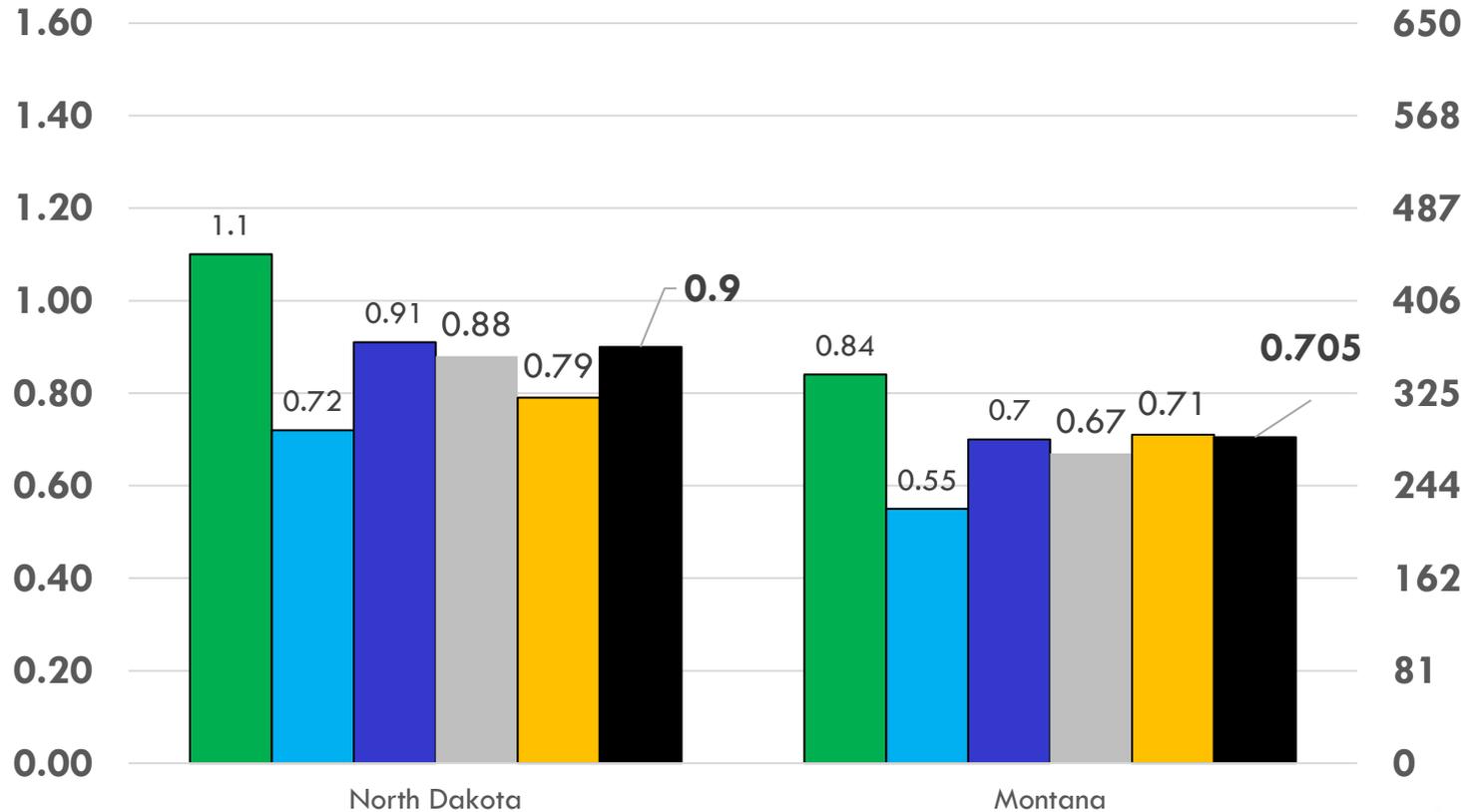
NORTHERN DURUM PLANTED AREA BY STATE



Million Acres

Thousand Hectares

■ 18 ■ 19 ■ 2020 ■ 2021 ■ 2022 ■ 2023



Source: USDA

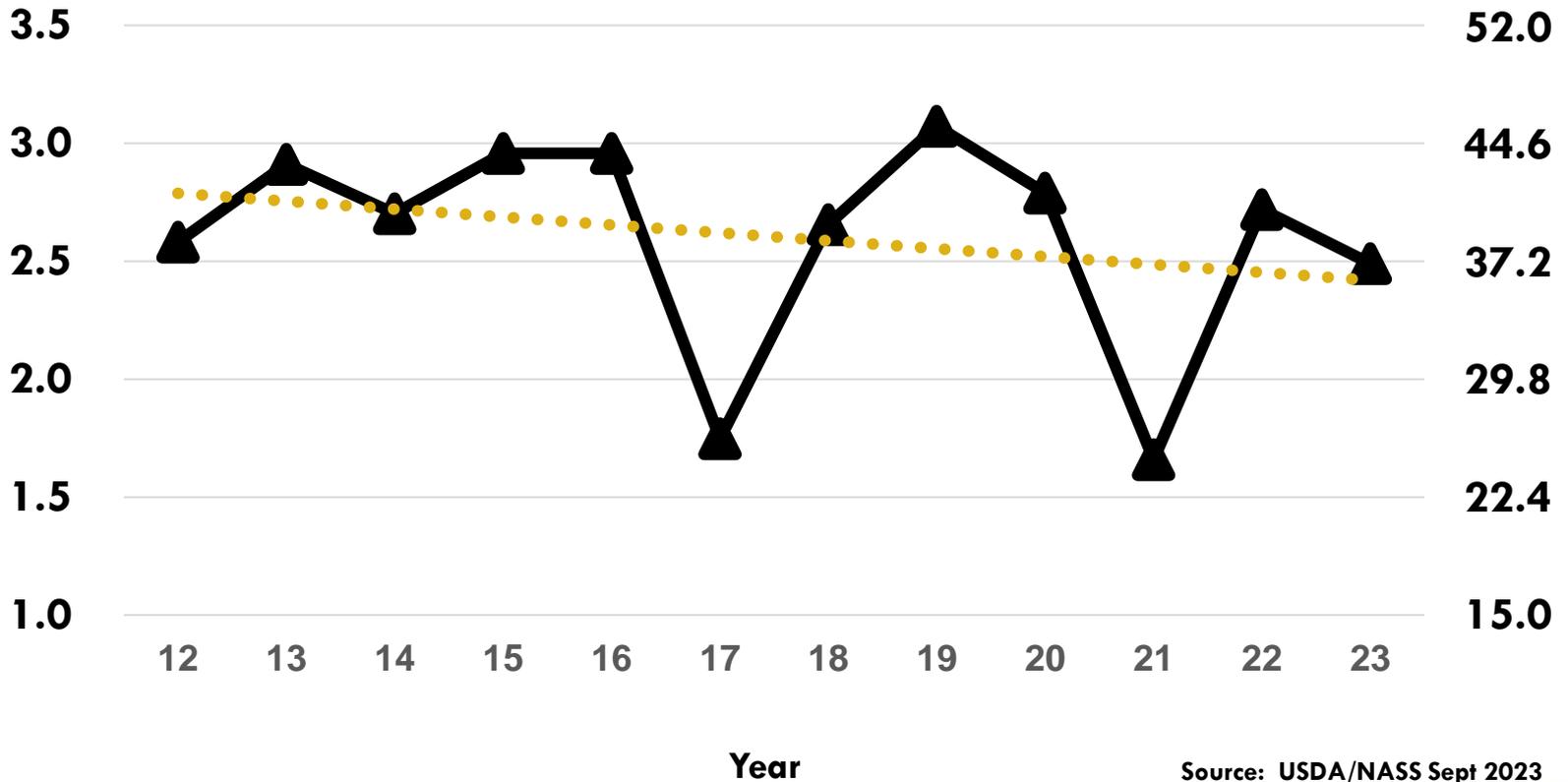


U.S. DURUM YIELD



Metric ton / hectare

Bushels / acre



Source: USDA/NASS Sept 2023

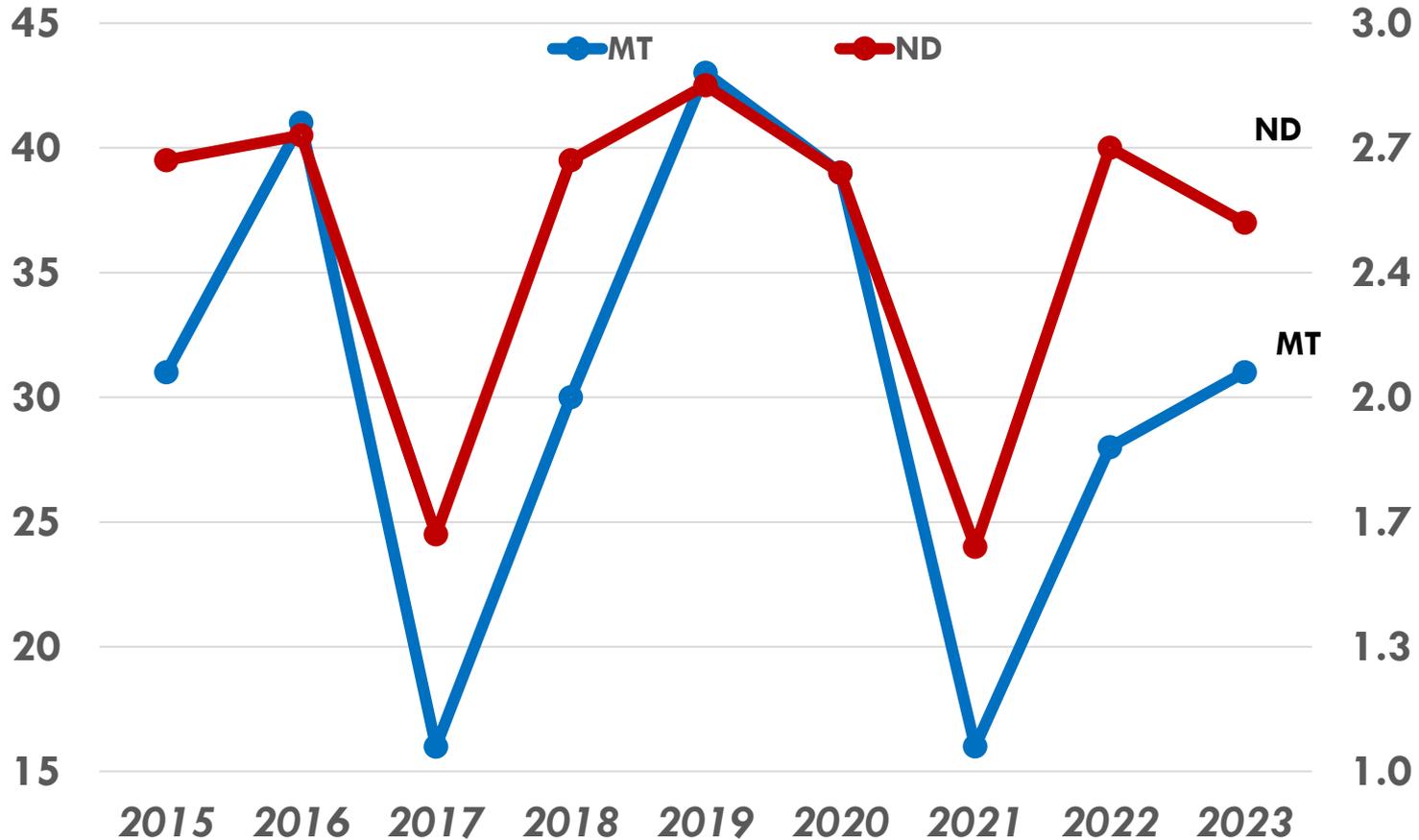


Durum Yields by State



Bushels/acre

Tons/Hectare



USDA Sept

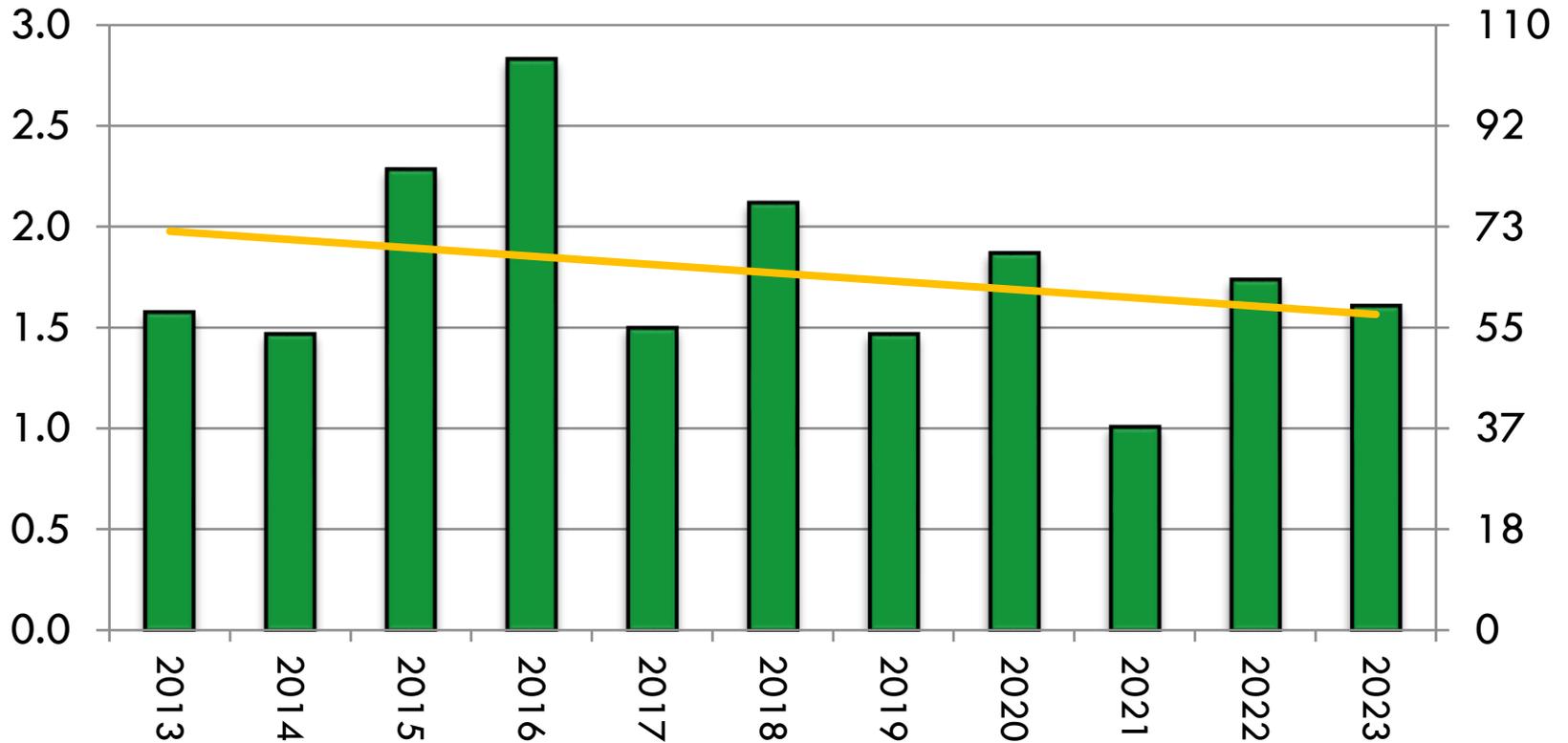


U.S. DURUM PRODUCTION



Million Tons

Million Bushels

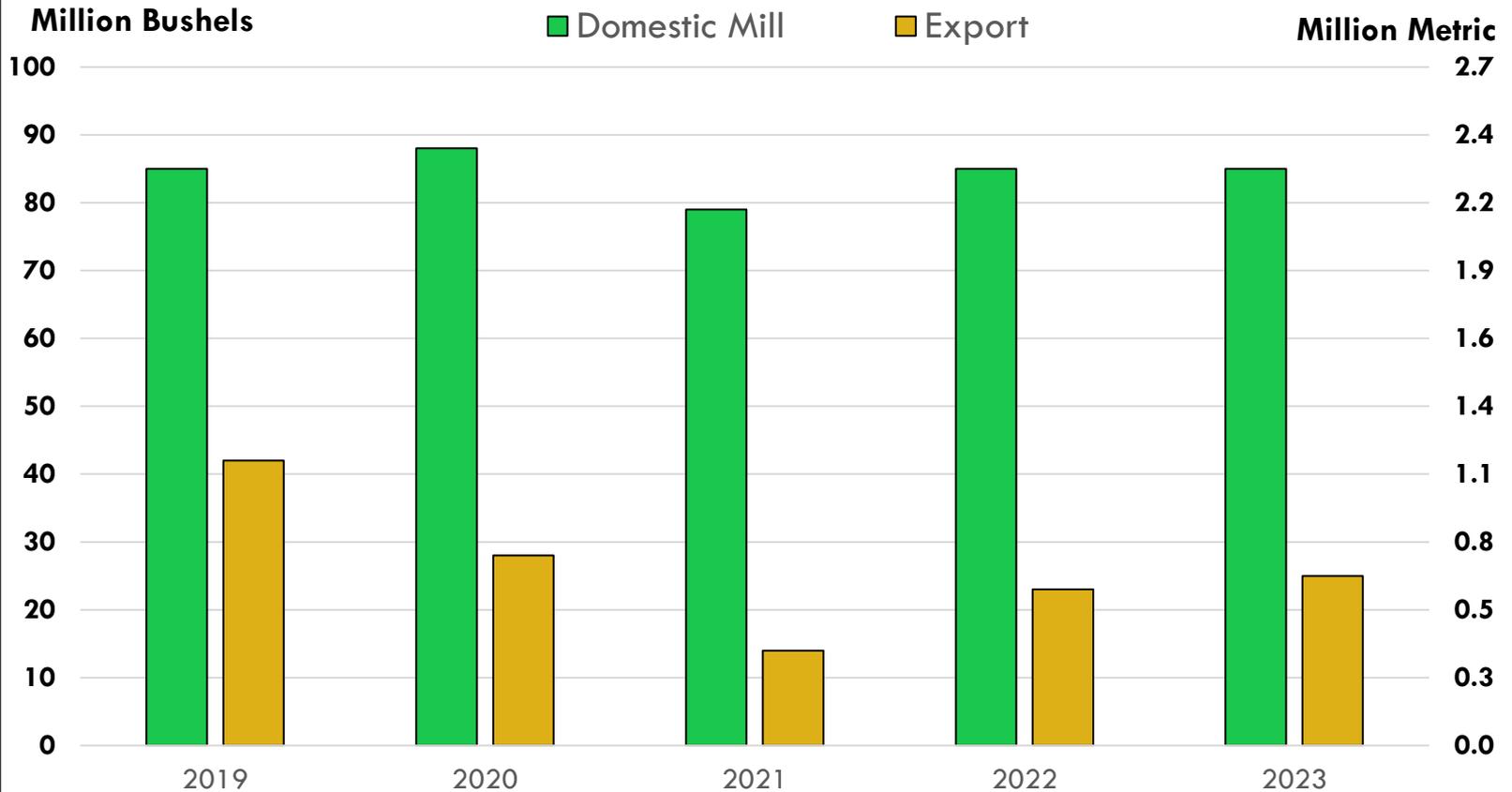


Source: USDA Sept 2023





U.S. Durum Demand Trends



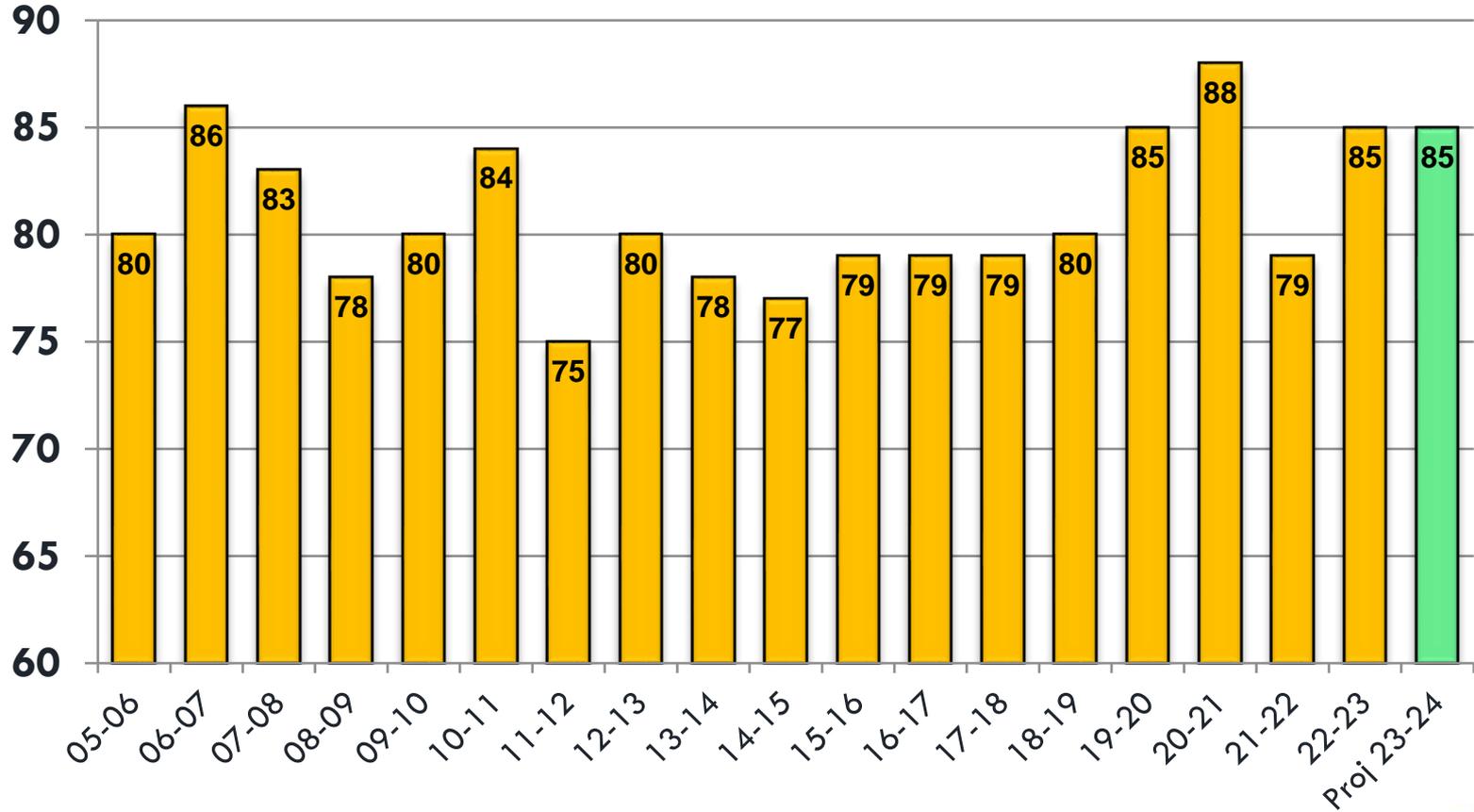
Source: USDA



U.S. FOOD USE OF DURUM



Million Bushels



Source: USDA Oct 2023

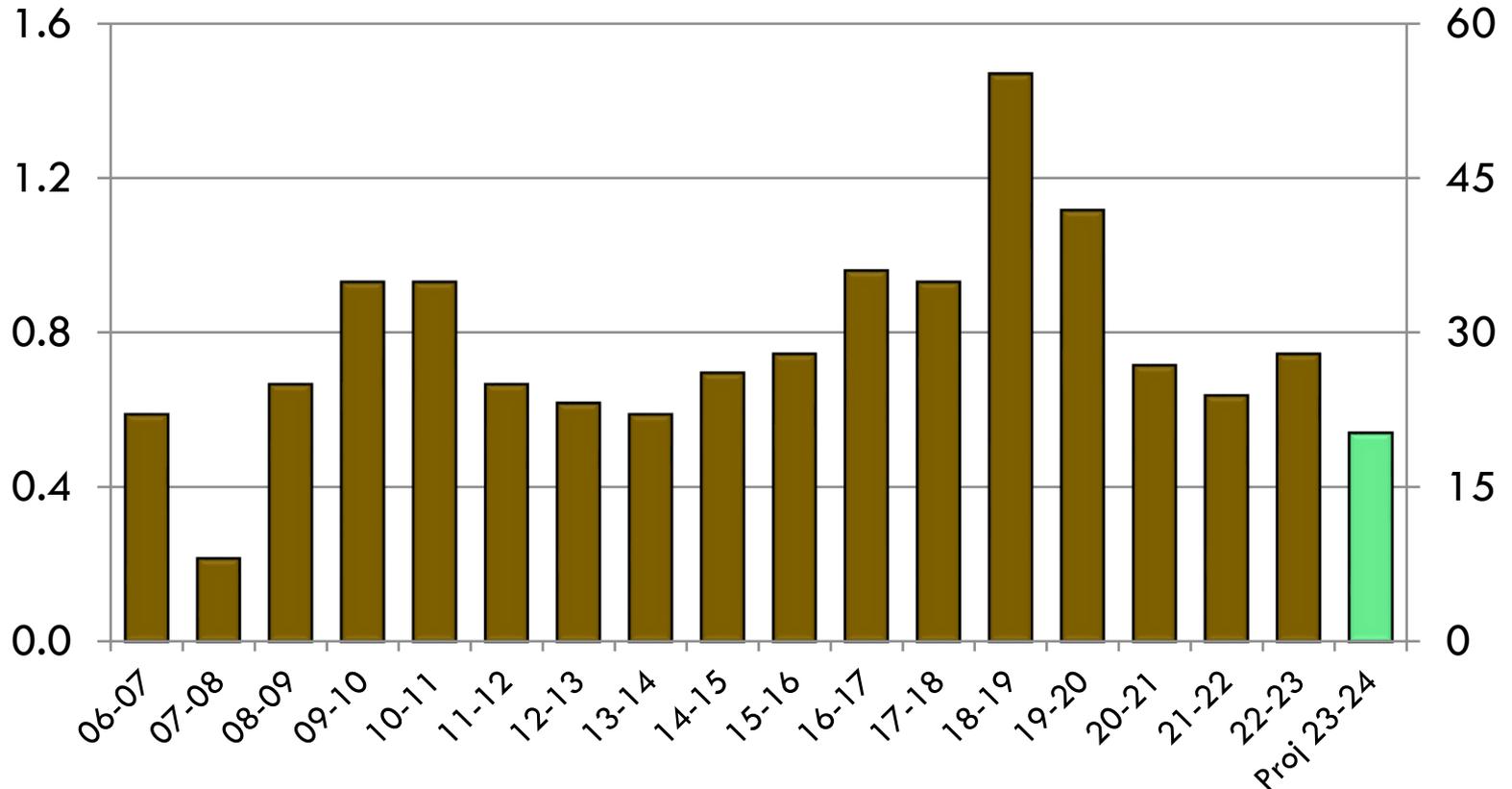


U.S. Durum End of Year Stocks May-June



Million Tons

Million Bushels



Source: USDA Oct 2023

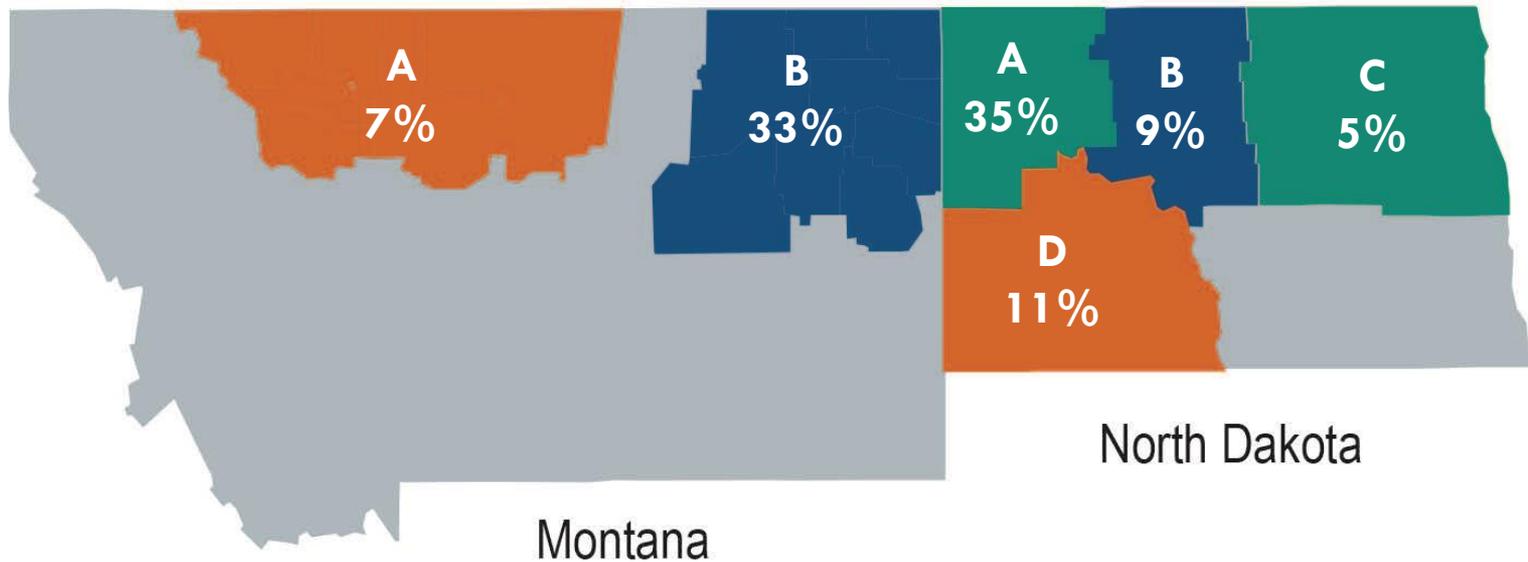


Northern Durum 2023 Quality Survey

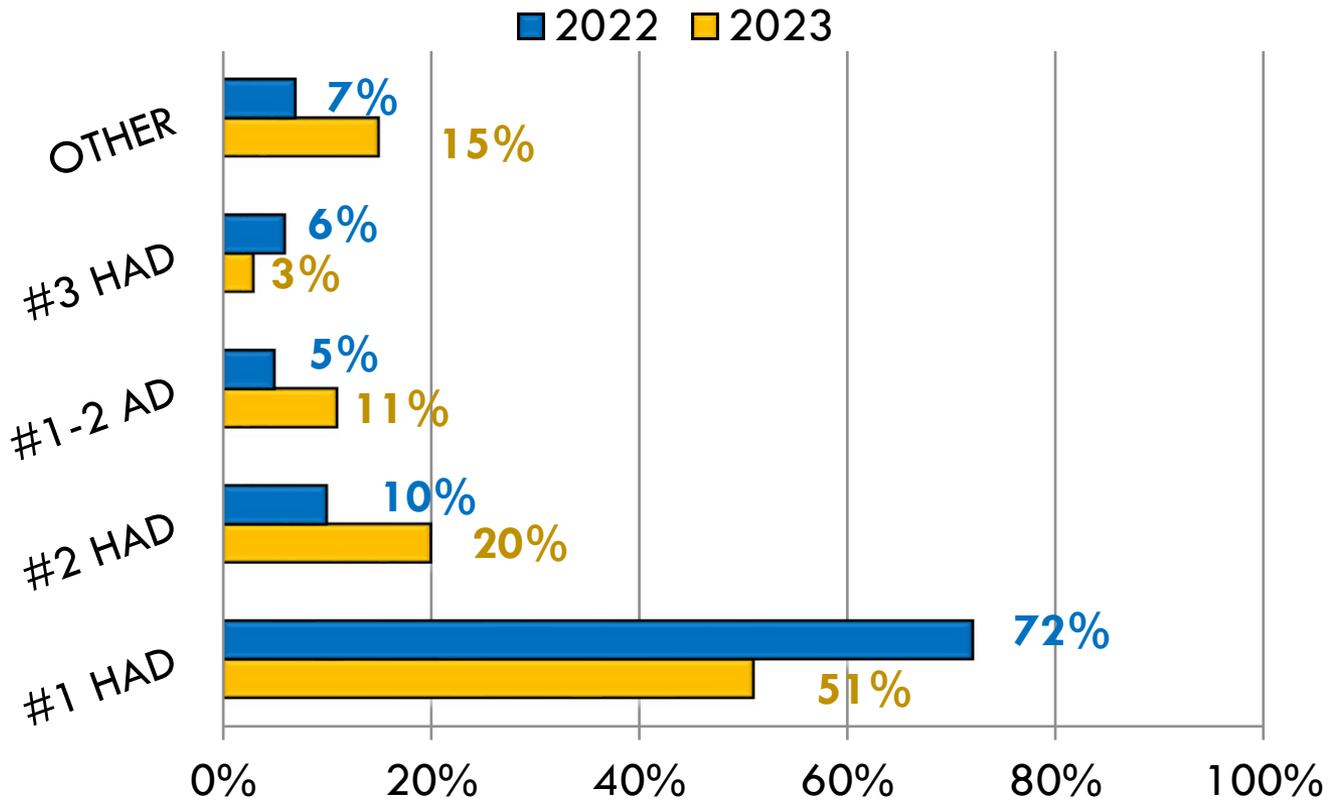
- **225 samples collected direct from producers and elevators during harvest, by NASS and NDSU Extension Agents**
- **Six different regions analyzed**
- **Good overall crop in 2023, but some lower kernel characteristics**
 - **High grades, but lower vitreous kernels**
 - **Little to no DON**
 - **High protein crop with some pockets of lower protein**
 - **Similar color scores to a year ago**
 - **Higher cooked weight with slightly less cooked firmness**



APPROXIMATE SHARE OF REGIONAL PRODUCTION



U.S. Northern Durum: Grade Distribution



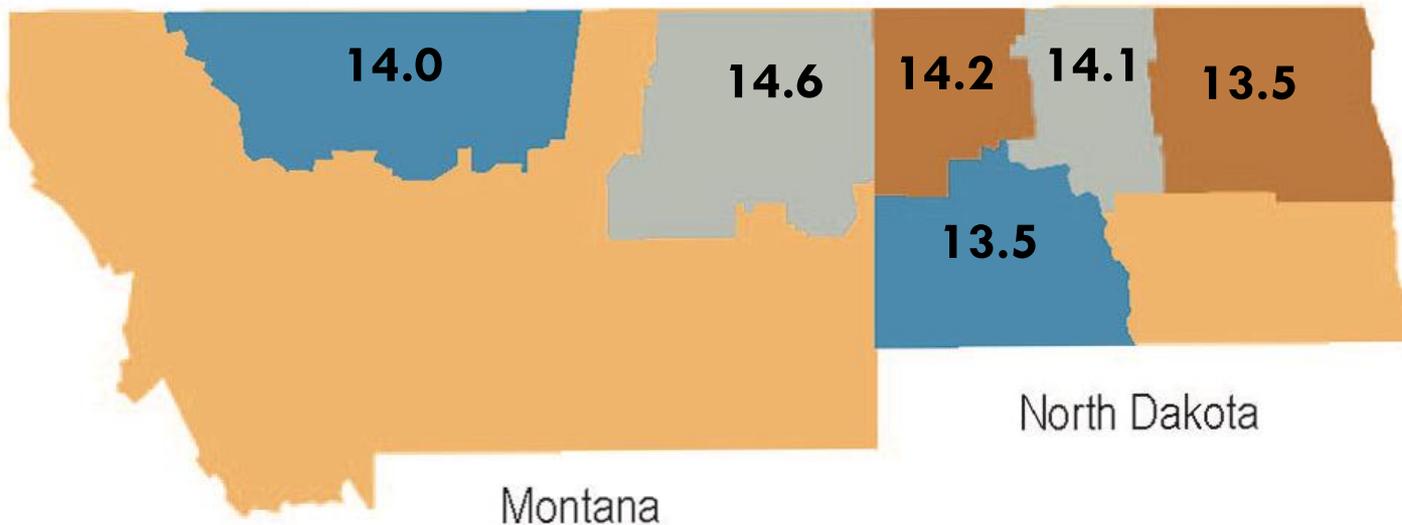
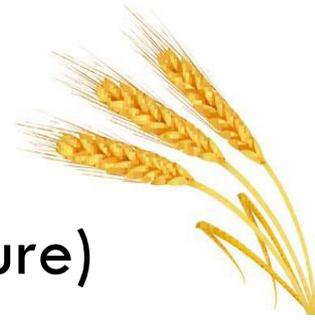
Durum Grading & Kernel Characteristics



	2023	2022	5-Year Avg.
Test Weight (lbs/bu.)	61.3	61.8	61.4
1000 KWT (g)	40.9	40.4	42.8
Damage (%)	0.4	0.1	0.7
Total Defects	1.0	1.1	1.5
Vitreous Kernels (%)	79	92	84
Protein (12% moisture)	13.9	13.7	13.9
Falling Number (seconds)	390	430	410
DON	<0.1	<0.1	0.1
Grade	1 HAD	1HAD	1HAD



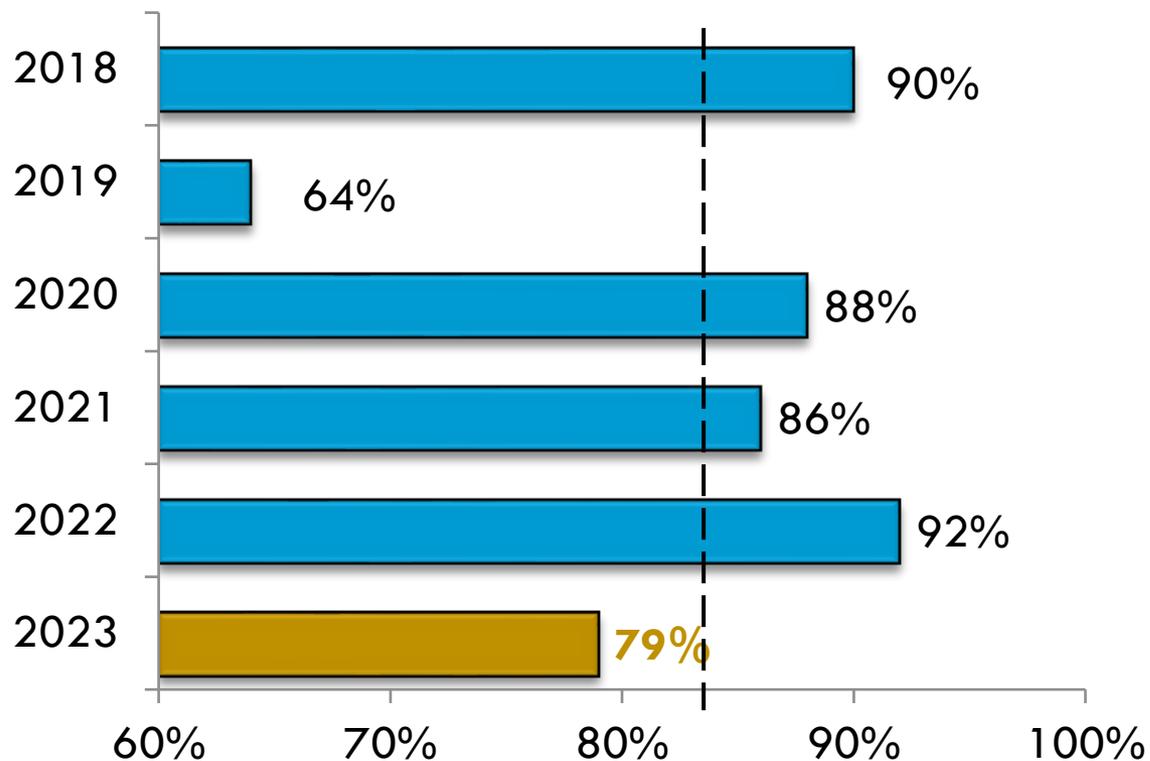
U.S. Northern Durum: 2023 Protein Content (12% moisture)



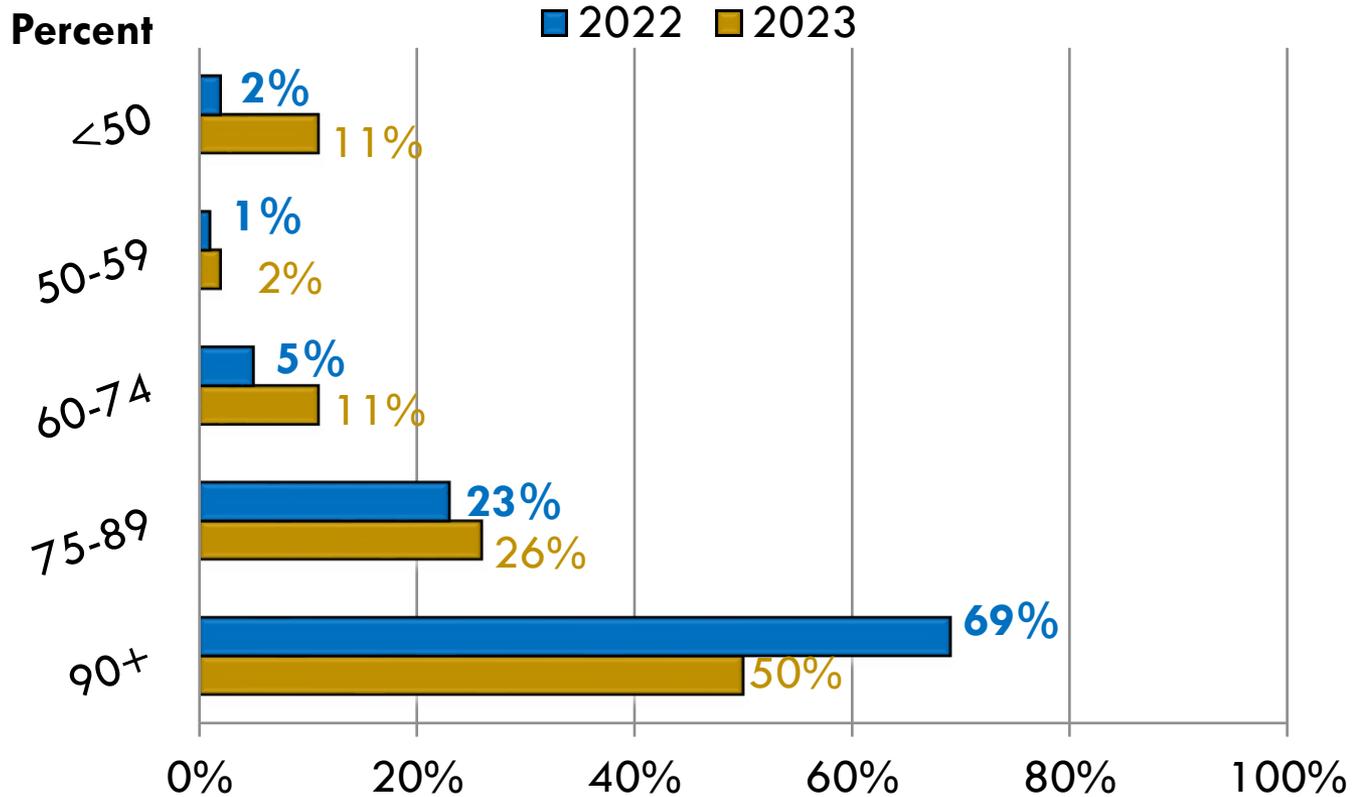
U.S. Northern Durum: Vitreous Kernel Content



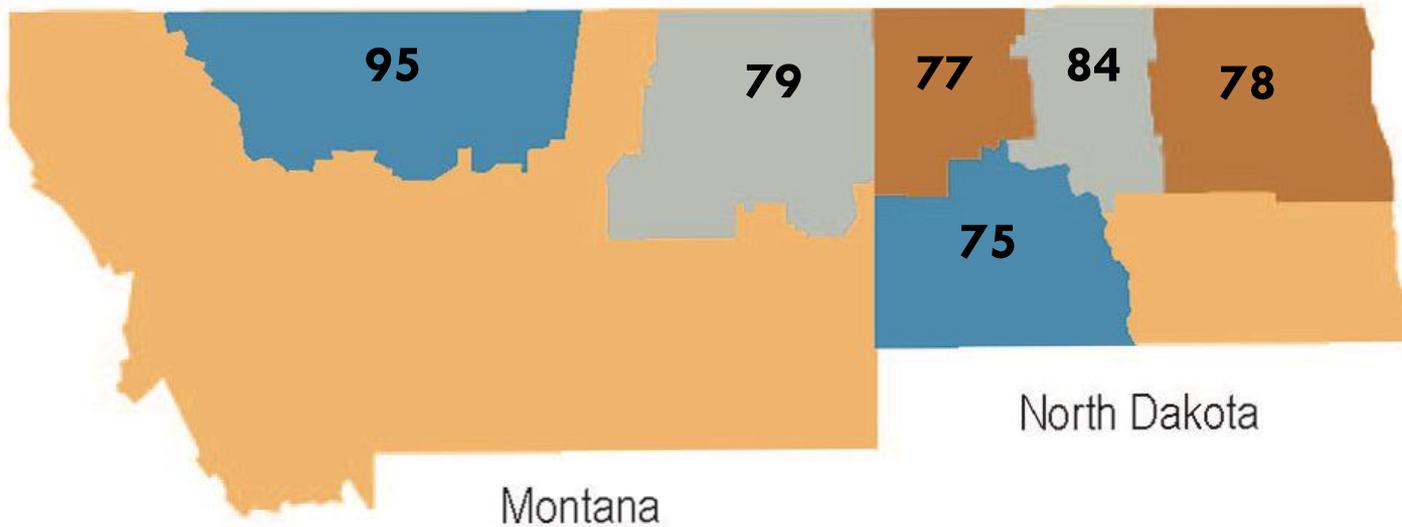
- - - 5 yr avg is 84%



U.S. Northern Durum: Vitreous Kernel Content Distribution

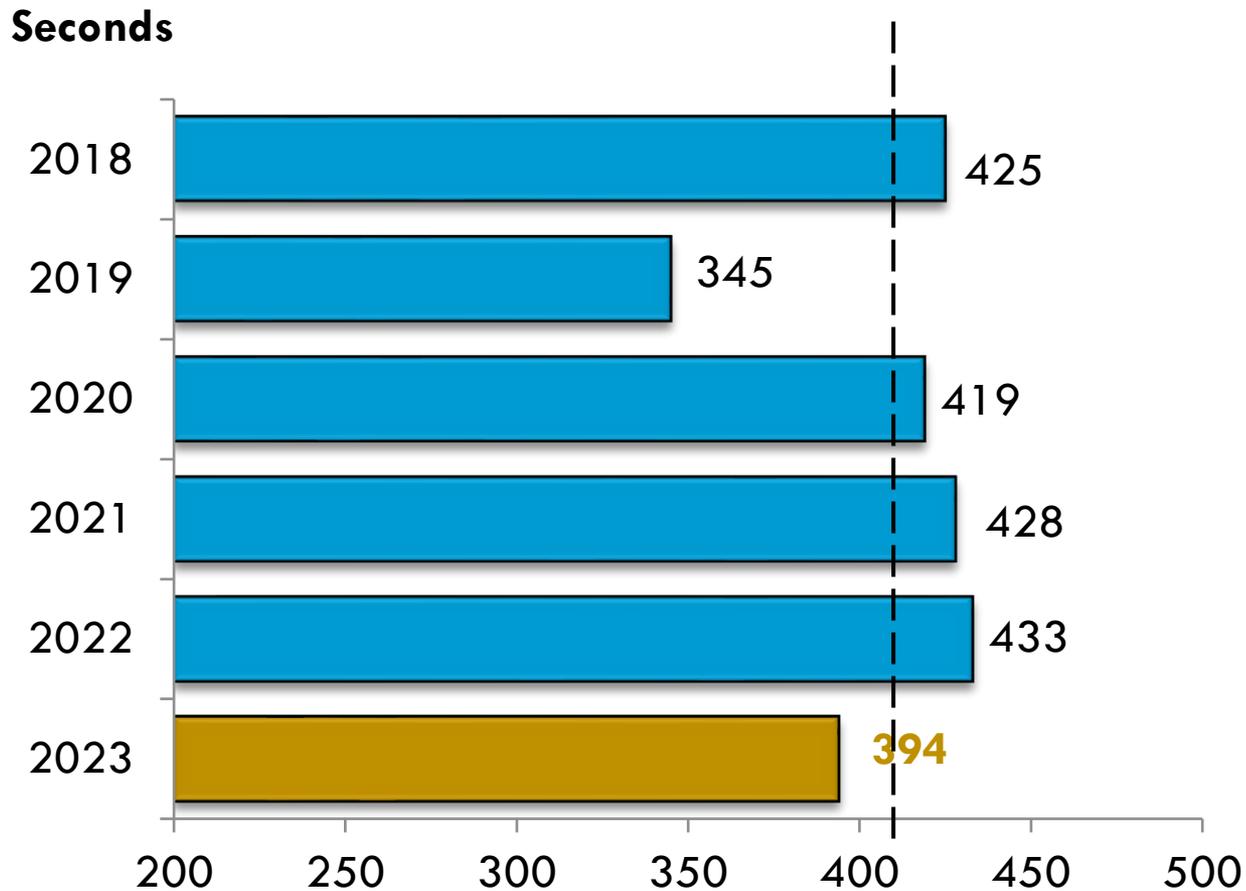


U.S. Northern Durum: 2023 Vitreous Kernels (percent)

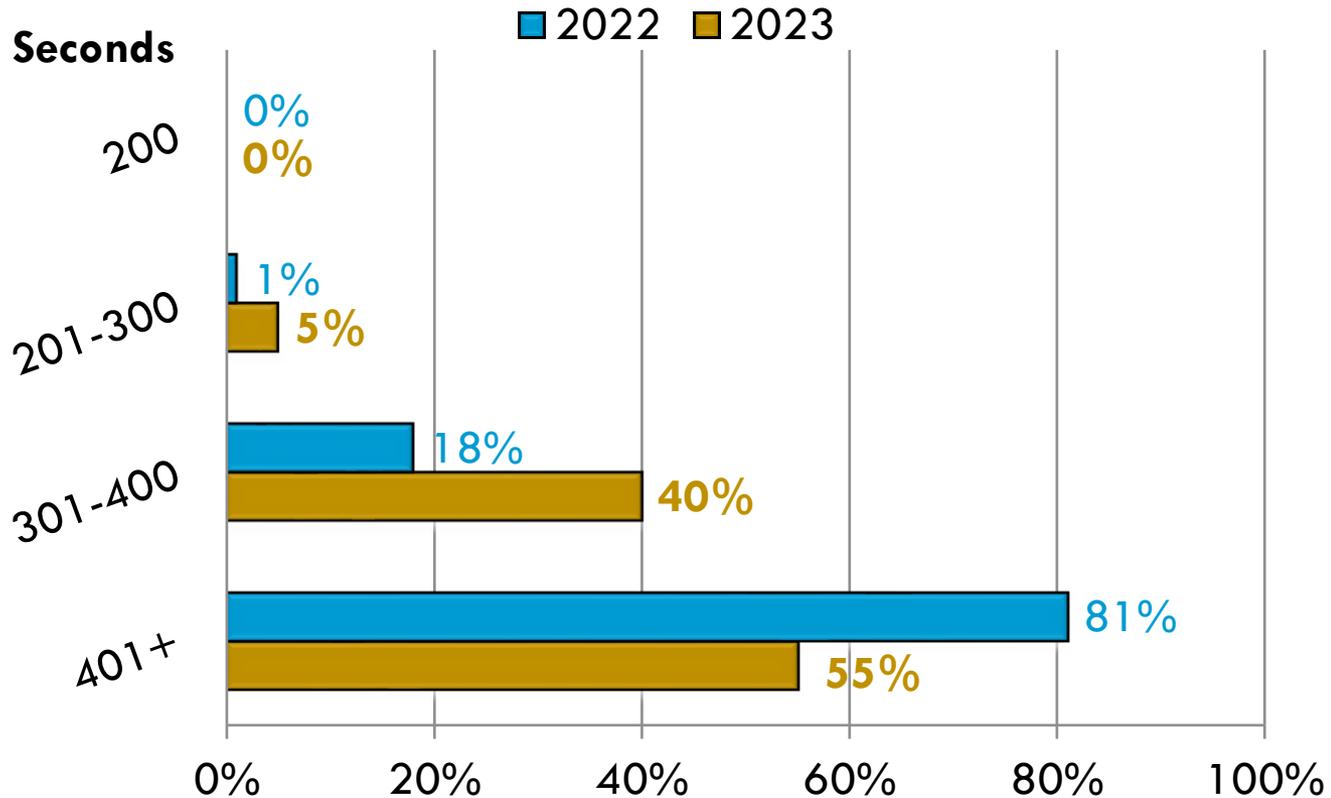


DURUM: Falling Number

- - - 5 yr avg is 410 seconds



U.S. Northern Durum: Falling Number Distribution



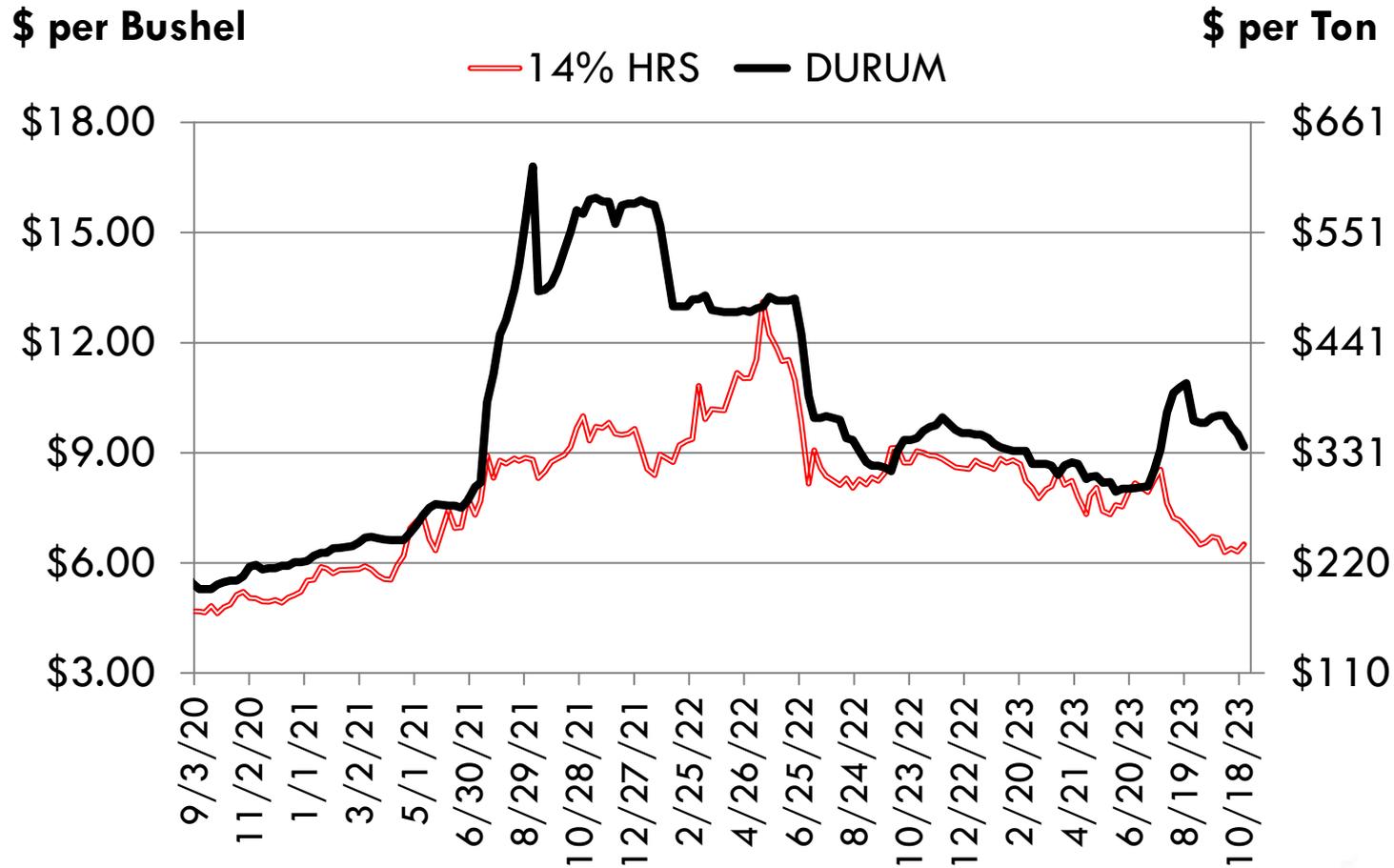
U.S. Northern Durum 2023 Spaghetti Processing Data



	2023	2022	5-Yr Avg
Color Score	8.3	8.5	8.3
Cooked Weight (g)	31.6	29.7	31.2
Cooked Loss (%)	7.3	6.7	6.9
Cooked Firmness (g cm)	3.9	4.5	4.2



Average N.D. Hard Red Spring and Durum Wheat Producer Bids



Source: Elevator weekly prices 10/23/23



THANK YOU

QUESTIONS?

