

# 2019 STANDARD DEVIATION

Sample standard deviations and ranges are provided to indicate how widely dispersed the survey values were and thus to indicate how much confidence can be placed in the average values reported. The “true” average value of a population is typically expected to fall within two standard deviations of the reported average of the sample values. Thus, larger standard deviations indicate greater possibility for larger differences between the “true” average and the average reported.

## HARD RED WINTER

HARD RED WINTER	COMPOSITE			GULF			PNW			CALIFORNIA		
	Standard Deviation	Range		Standard Deviation	Range		Standard Deviation	Range		Standard Deviation	Range	
		Min	Max		Min	Max		Min	Max		Min	Max
Test Weight (lb/bu)	2.0	54.3	65.5	0.4	54.3	63.7	1.9	57.3	65.5	1.8	54.1	65.6
(kg/hl)	2.6	71.6	86.0	2.4	71.6	83.7	2.4	75.5	86.0	2.3	71.4	86.2
Damaged Kernels (%)	0.4	0.0	2.8	0.5	0.0	2.8	0.3	0.0	2.1	0.4	0.0	7.8
Moisture (%)	1.4	8.0	14.8	1.0	8.7	14.1	1.7	8.0	14.8	1.0	6.6	11.7
Protein (%) 12%/0% moisture basis	0.92	8.4/9.5	14.8/16.8	0.76	8.7/9.9	14.1/16.0	1.13	8.4/9.5	14.8/16.8	1.2/1.4	9.0/10.2	14.6/16.6
1000 Kernel Weight (g)	3.4	24.6	47.0	2.4	24.9	39.7	4.2	24.6	47.0	3.8	30.8	50.0
Falling Number (sec)	33	216	474	27	216	472	37	227	474	57	203	587
<b>Sample Count:</b>	494			320			174			198		

## HARD RED SPRING

HARD RED SPRING	COMPOSITE			WESTERN REGIONAL			EASTERN REGIONAL		
	Standard Deviation	Range		Standard Deviation	Range		Standard Deviation	Range	
		Min	Max		Min	Max		Min	Max
Test Weight (lb/bu)	2.0	51.4	65.6	2.2	51.4	65.6	1.8	55.7	65.3
(kg/hl)	2.6	67.81003	86.1742	2.9	67.8	86.2	2.3	73.4	85.74763
Damaged Kernels (%)	0.9	0.0	8.9	0.9	0.0	7.6	0.9	0.0	8.9
Vitreous Kernels (%)	28	1	99	27	1	99	26	1	99
Moisture (%)	1.1	7.8	13.9	1.4	7.80	13.9	0.6	11.1	13.9
Protein (%) 12%/0% moisture basis	1.2/1.3	9.5/10.8	17.9/20.3	1.4/1.5	9.5/10.8	17.9/20.3	1.0/1.1	11.6/13.1	17.8/20.2
1000 Kernel Weight (g)	4.1	20.3	44.8	4.0	20.3	43.7	3.9	25.9	44.8
Falling Number (sec)	61	66	553	52	83	495	64	66	553
<b>Sample Count:</b>	473			227			246		

Hard red spring and durum samples are dried to a maximum moisture level of 14% prior to testing.

# 2019 STANDARD DEVIATION

## SOFT RED WINTER

SOFT RED WINTER	COMPOSITE			EAST COAST			GULF PORTS		
	Standard	Range		Standard	Range		Standard	Range	
	Deviation	Min	Max	Deviation	Min	Max	Deviation	Min	Max
Test Weight (lb/bu)	1.6	49.5	61.2	1.9	50.1	61.4	1.9	49.5	60.7
(kg/hl)	2.0	65.4	80.5	2.4	66.1	80.7	2.4	65.4	79.8
Moisture (%)	0.9	10.4	16.9	1.0	10.3	15.6	1.1	10.4	16.9
Protein (%) 12%/0% moisture basis	0.78	7.41	13.6	0.83	8.1	12.8	0.9	8.1	13.6
1000 Kernel Weight (g)	3.8	18.2	48.4	3.5	19.3	37.8	5.0	21.8	48.4
Falling Number (sec)	45	137	360	32	179	394	56	151	350
Sample Count:	261			62			199		

## DURUM

DURUM	NORTHERN DURUM			DESERT DURUM®		
	Standard	Range		Standard	Range	
	Deviation	Min	Max	Deviation	Min	Max
Test Weight (lb/bu)	1.7	56.5	65.1	1.1	61.6	64.4
(kg/hl)	2.2	74.6	84.7	1.4	80.2	83.8
Damaged Kernels (%)	1.9	0.0	13.4	0.4	0.0	1.0
Vitreous Kernels (%)	28	3	99	1	96	99
Moisture (%)	1.0	9.4	13.3	0.6	6.7	8.4
Protein (%) 12%/0% moisture basis	1.2/1.4	11.4/13.0	16.8/19.1	0.6/0.7	13.9/15.9	15.2/17.2
1000 Kernel Weight (g)	4.2	34.4	53.5	4.7	41.2	54.6
Falling Number (sec)	123	62	550	171	461	945
Sample Count:	91			7		

Hard red spring and durum samples are dried to a maximum moisture level of 14% prior to testing.

## SOFT WHITE

SOFT WHITE	SOFT WHITE			CLUB		
	Standard	Range		Standard	Range	
	Deviation	Min	Max	Deviation	Min	Max
Test Weight (lb/bu)	1.5	54.9	64.6	1.3	55.7	63.2
(kg/hl)	2.0	72.3	84.9	1.7	73.4	83.1
Damaged Kernels (%)	0.1	0.0	1.3	0.0	0.0	0.0
Moisture (%)	1.0	7.3	14.2	0.9	7.6	11.8
Protein (%) 12%/0% moisture basis	1.1/1.2	6.9/	15.9/	1.2/	7.6/	13
1000 Kernel Weight (g)	4.6	21.0	48.5	3.3	20.6	39.8
Falling Number (sec)	35	152	431	34	238	386
Sample Count:	438			113		