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Rose, T., Wilkinson, M. D., Lowe, C., Xu, J., Hughes, D. J., Hassall, K. L., Hassani-Pak, K., Amberkar, S., Noletto-Dias, C., Ward, J. L. and Heuer, S. 2022. Novel molecules and target genes for vegetative heat tolerance in wheat. *Plant Environmental Interactions*. 3 (6), pp. 264-289.
<https://doi.org/10.1002/pei3.10096>

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Means for each harvest variable and associated I

avg straw weight (g) plant⁻¹

LSD		12.62		
Temperature (C)	Cadenza	Paragon	Temperature	
18	48.4	53.6	51.0	
21	52.0	60.2	56.1	
24	52.3	59.2	55.8	
27	42.7	49.3	46.0	
30	44.5	52.9	48.7	
Cultivar		48.0	55.0	
LSD		4.93		

height at harvest (cm)

LSD		7.33		
Temperature (C)	Cadenza	Paragon	Temperature	
18	99.6	107.0	103.3	
21	97.0	107.4	102.2	
24	96.3	105.0	100.7	
27	88.2	92.8	90.5	
30	89.0	85.8	87.4	
Cultivar		94.0	99.6	
LSD		2.95		

max tiller # plant⁻¹ (at 53 days)

LSD		6.04		
Temperature (C)	Cadenza	Paragon	Temperature	
18	22.8	19.5	21.2	
21	27.5	20.5	24.0	
24	26.5	22.5	24.5	
27	35.0	25.2	30.1	
30	32.5	25.2	28.9	
Cultivar		28.9	22.6	
LSD		2.94		

spike # plant⁻¹ at harvest

LSD		5.14		
Temperature (C)	Cadenza	Paragon	Temperature	
18	18.8	14.8	16.8	
21	21.2	17.2	19.2	
24	23.0	20.2	21.6	
27	28.2	17.2	22.7	
30	22.5	19.8	21.2	

Cultivar	22.7	17.8
LSD	2.51	

spikelet # spike-1

LSD		2.13		
Temperature (C)	Cadenza	Paragon	Temperature	
18	23.2	26.2	24.7	
21	19.8	22.2	21.0	
24	18.4	18.5	18.5	
27	15.1	17.3	16.2	
30	14.1	14.0	14.1	

Cultivar	18.1	19.6
LSD	0.98	

spike length (cm)

LSD		1.15		
Temperature (C)	Cadenza	Paragon	Temperature	
18	12.9	15.6	14.3	
21	10.0	12.2	11.1	
24	9.9	11.0	10.5	
27	8.9	9.7	9.3	
30	8.5	8.3	8.4	

Cultivar	10.0	11.4
LSD	0.42	

spikelet # plant-1

LSD		73.34		
Temperature (C)	Cadenza	Paragon	Temperature	
18	432.0	385.7	408.9	
21	420.0	385.0	402.5	
24	449.5	374.5	412.0	
27	424.0	294.0	359.0	
30	315.0	273.4	294.2	

Cultivar	408.1	342.5
LSD	34.73	

total seed # per plant

LSD		176.11		
Temperature (C)	Cadenza	Paragon	Temperature	
18	1093.2	875.3	984.3	

21	836.8	814.3	825.6
24	958.8	801.5	880.2
27	879.8	674.8	777.3
30	708.0	566.4	637.2

Cultivar	895.3	746.5
LSD	66.81	

total seed weight plant-1 (g) at 13.5% moisture

LSD		8.84	
Temperature (C)	Cadenza	Paragon	Temperature
18	49.6	45.4	47.5
21	36.5	39.1	37.8
24	39.6	39.5	39.6
27	42.6	33.8	38.2
30	33.2	29.3	31.3

Cultivar	40.3	37.4
LSD	3.26	

seed_diam (mm)

LSD		0.23	
Temperature (C)	Cadenza	Paragon	Temperature
18	3.0	3.1	3.1
21	3.0	3.2	3.1
24	3.0	3.2	3.1
27	3.0	3.2	3.1
30	3.0	3.1	3.1

Cultivar	3.0	3.2
LSD	0.08	

seed_hardness SKCS Index (Single Kernel Characterizatic

LSD		5.86	
Temperature (C)	Cadenza	Paragon	Temperature
18	82.0	79.1	80.6
21	76.4	80.5	78.5
24	85.0	77.2	81.1
27	79.9	76.2	78.1
30	81.6	76.7	79.2

Cultivar	81.0	77.9
LSD	2.76	

seed_area (mm²)

LSD		1.21		
Temperature (C)	Cadenza	Paragon	Temperature	
18	18.0	18.1	18.1	
21	17.7	18.2	18.0	
24	17.4	18.6	18.0	
27	17.2	18.6	17.9	
30	16.4	17.4	16.9	
Cultivar		17.3	18.2	
LSD		0.41		

seed_length (mm)

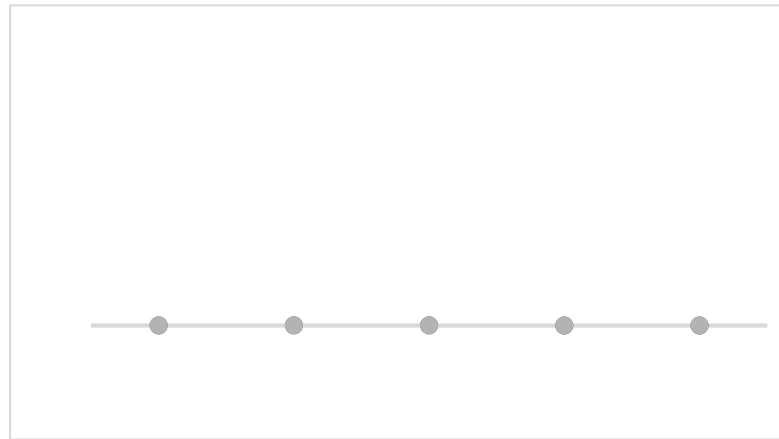
LSD		0.21		
Temperature (C)	Cadenza	Paragon	Temperature	
18	7.0	6.90	7.0	
21	6.8	6.80	6.8	
24	6.8	6.90	6.9	
27	6.8	6.90	6.9	
30	6.7	6.70	6.7	
Cultivar		6.8	6.8	
LSD		0.09		

seed_width (mm)

LSD		0.15		
Temperature (C)	Cadenza	Paragon	Temperature	
18	3.40	3.4	3.4	
21	3.40	3.5	3.5	
24	3.40	3.5	3.5	
27	3.40	3.5	3.5	
30	3.30	3.4	3.4	
Cultivar		3.4	3.5	
LSD		0.06		

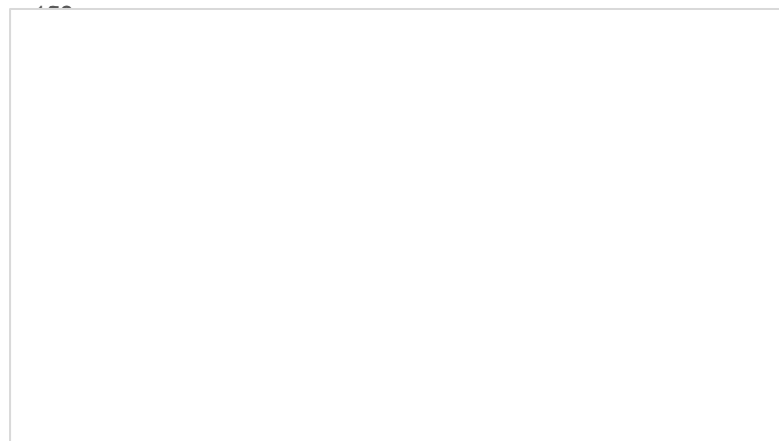
least significant difference (LSD)

LSD
10.58

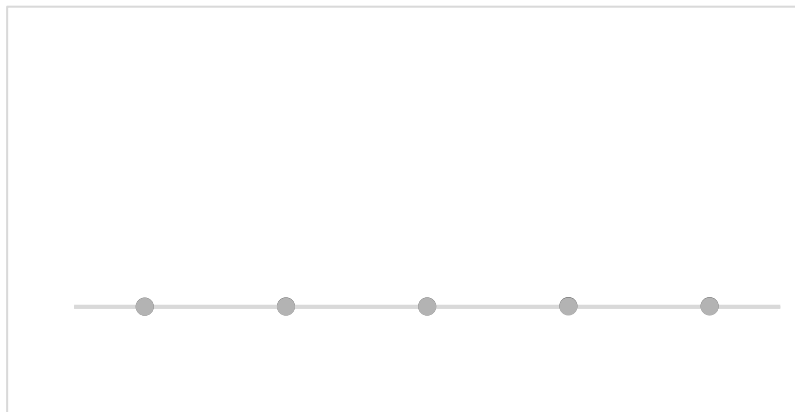


Straw weight (g)

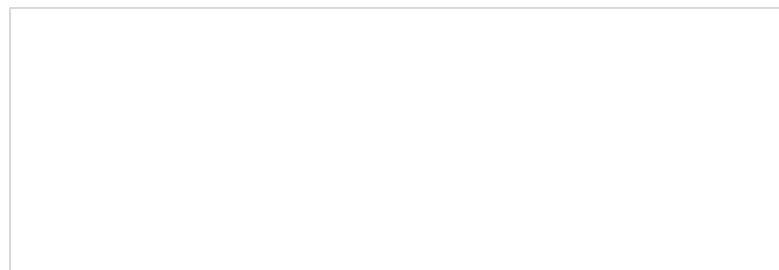
LSD
6.05

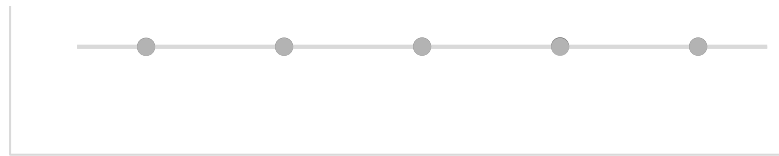


LSD
4.25

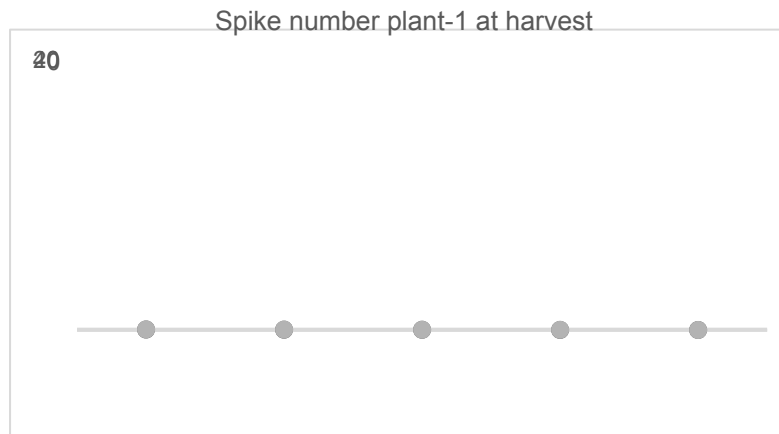


LSD
3.62

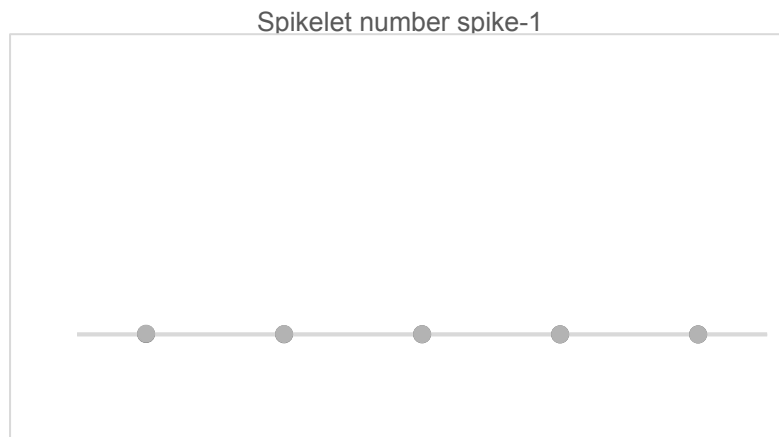




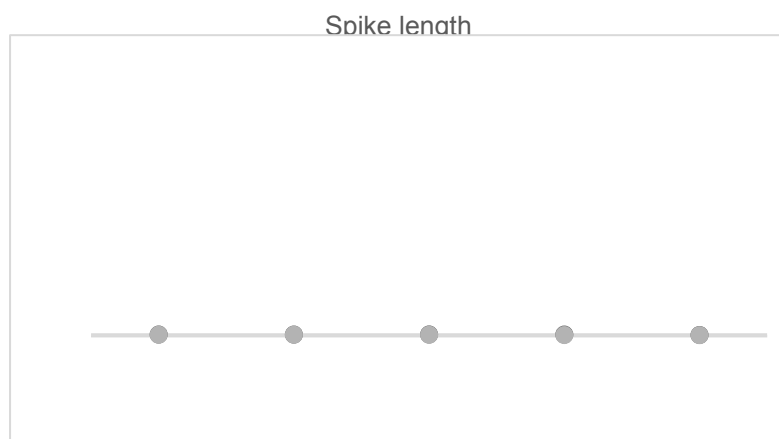
LSD
1.6



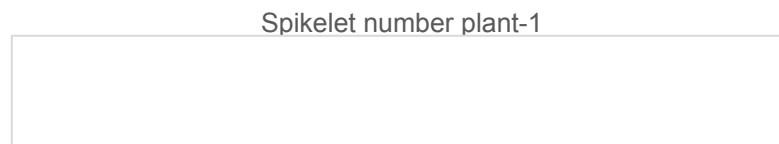
LSD
0.99



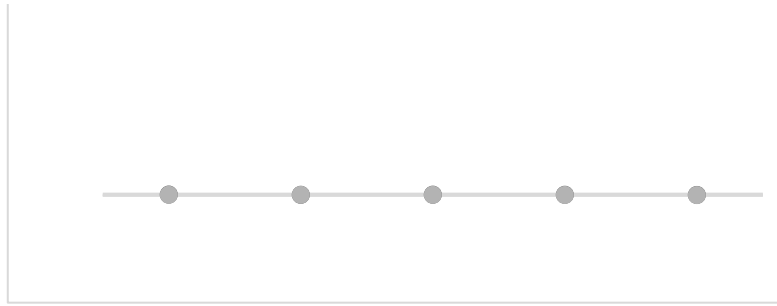
LSD
53.51



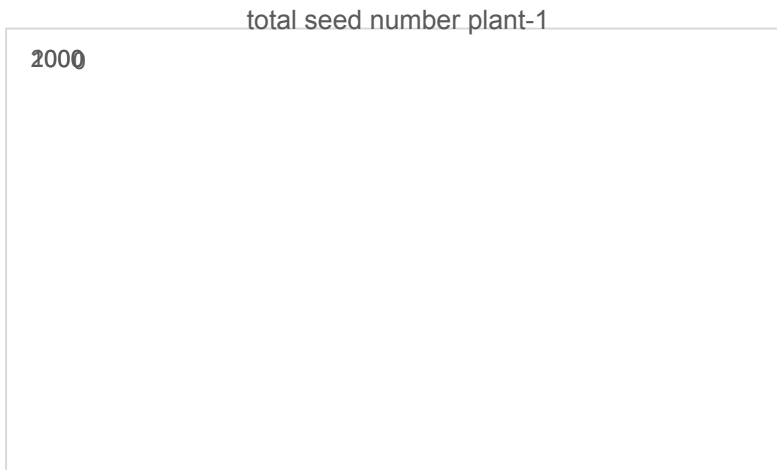
LSD



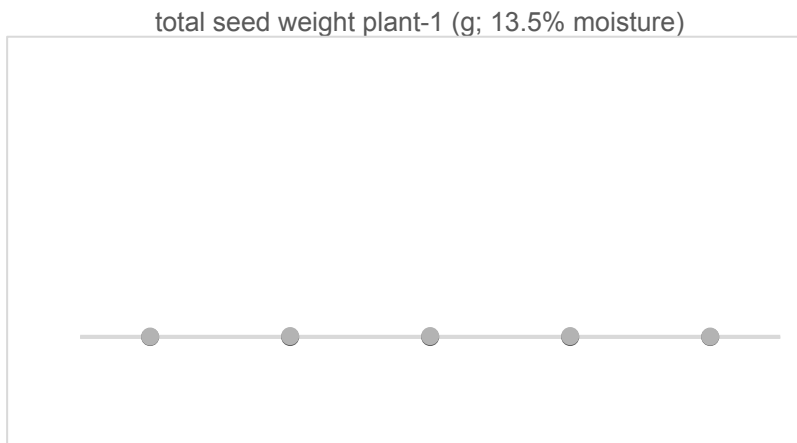
149.64



LSD
7.6

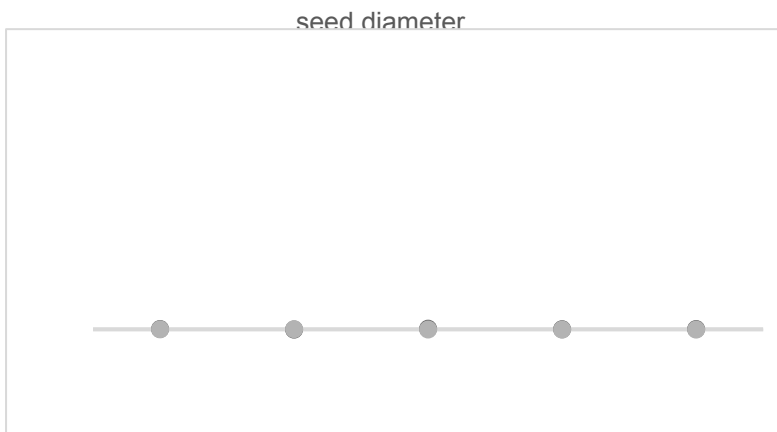


LSD
0.2



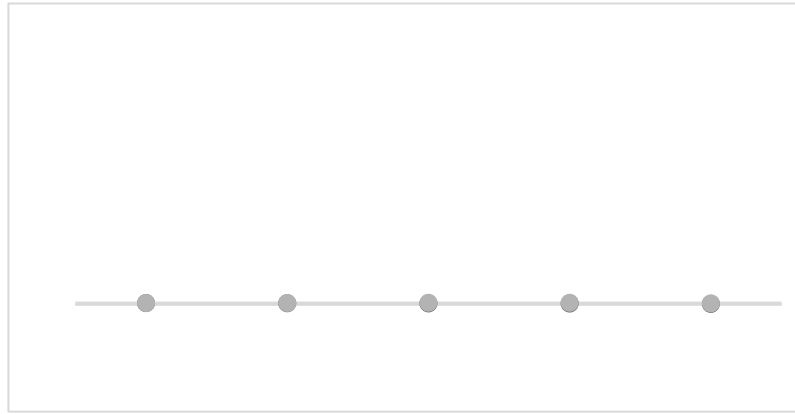
on System)

LSD
4.3



LSD

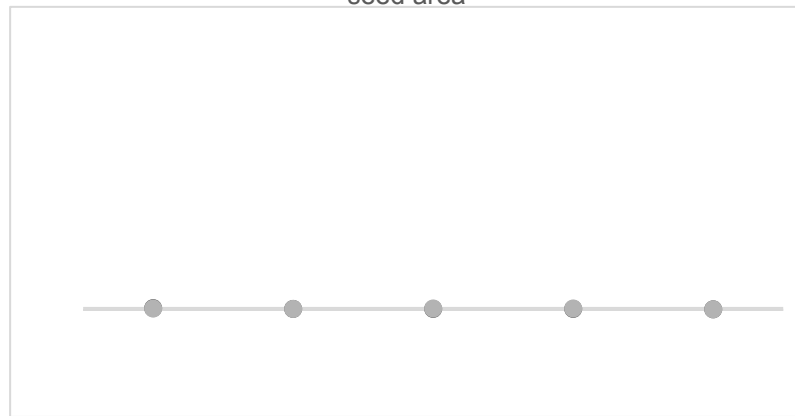
1.07



seed area

LSD

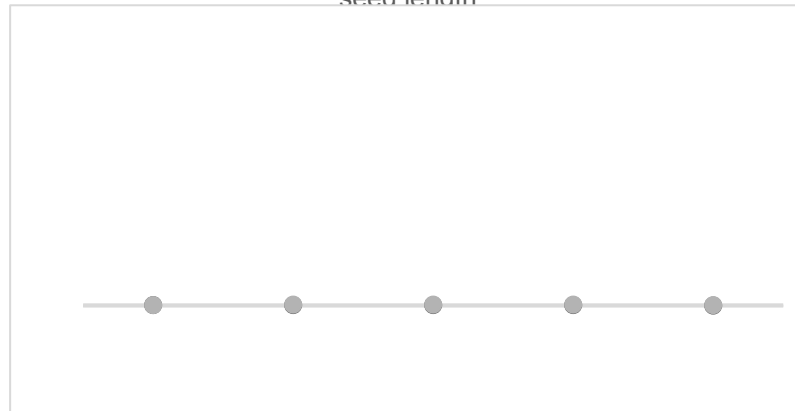
0.17



seed length

LSD

0.13



P-values from a two-way ANOVA for each harvest variable

	Temperature	Cultivar	Temperature.Cultivar
avg straw weight (g) plant-1	0.233	0.008	0.992
height at harvest (cm)	<0.001	0.001	0.056
max tiller # plant-1	0.002	<0.001	0.606
gradientTiller	0.606	0.087	0.007
gradientHeight	0.775	0.003	0.205
kernel_diam	0.566	<0.001	0.795
kernel_hard	0.505	0.032	0.106
seed_area	0.185	<0.001	0.235
seed_length	0.091	0.297	0.352
seed_width	0.229	0.002	0.223
spike # plant-1 at harvest	0.024	<0.001	0.191
spikelet # spike-1	<0.001	0.005	0.157
spike length (cm)	<0.001	<0.001	0.002
spikelet # plant-1	0.001	0.001	0.367
total seed # per plant	0.003	<0.001	0.340
total seed weight plant-1 (g) at 13.5% moisture	0.007	0.079	0.220