

Barley 1 2020

Georgetown DE.

Plant 10/4/2029
Harvest 6/11/2020

Name	Sponsor	Head Type (6 row vs 2 row)	Yield bu/A		Moisture (at harvest)	T.W.	Height (in.)	Heading Date (Julian)
Hirondella	Virginia Tech	6	156.5	a	15.0	42.5	29	115
Faro	KWS	6	149.4	a	15.4	41.8	29	111
Thoroughbred	Virginia Tech	6	121.4	b	14.5	41.7	31	105
Flavia	Virginia Tech	2	120.9	b	14.9	41.8	25	114
Donau	KWS	2	119.5	b	14.9	40.9	27	116
Secretariat	Virginia Tech	6	115.2	b	15.1	41.1	29	101
Somerset	KWS	2	109.0	bc	15.3	38.9	30	116
Violetta	Check	2	100.6	bcd	15.0	39.6	25	110
Scala	KWS	2	82.7	cd	14.7	40.1	23	109
Nomini	Virginia Tech	6	82.4	d	15.7	40.3	33	99

LSD P=.05	26.49	0.7074	3.098	2.16	2.67
Standard Deviation	18.152	0.4876	2.135	1.49	1.84
CV	15.68	3.24	5.23	5.3	1.68
Grand Mean	115.74	15.07	40.84	28.13	109.5

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

WMBT 2020 National Winter Malt Barley Trial
Georgetown Delaware

Plant 10/4/2029
Harvest 6/11/2020

Variety	Yield bu./A		Moisture (at harvest)	T.W.	Lodging Score	Row Type	Heading date (Julian)	Height (In.)
KWS Orbit	159.61	a	13.673	38.93	1	6	116	34
PIXEL	156.4	ab	14.69	41.77	1.3	6	112	32
VISUEL	154.89	abc	14.63	41.13	2	6	115	32
KWS Faro	149.24	a-d	14.18	42.4	1	6	111	31
ENDEAVOR	149.1	a-d	14.43	42.07	2.7	2	108	28
AC13/028/53 (Marouetta)	141.53	a-e	13.923	43.27	2.3	6	112	34
KWS Flemming	136.85	a-f	13.583	40.53	1	6	115	33
Rossignola	135.66	a-f	14.24	42.37	1.3	6	112	35
DH140963	135.57	a-g	14.11	41.9	1.7	2	117	29
DELICATESSE	133.59	a-g	14.517	44.1	3	2	114	29
DH130910	130.09	b-h	14.826	44.31	1.3	2	111	31
KWS Donau	127.58	c-h	14.12	40.13	2.3	2	114	31
DH141132	126.08	d-i	13.923	40.2	1.7	2	116	28
08ARS632-5	124.71	d-j	13.947	40.3	2.3	2	114	31
THOROUGHbred	121.27	e-j	13.707	43.33	1	6	102	32
VA16M-81	121.1	e-j	14.19	42.77	1.7	2	101	32
Flavia	120.9	e-j	14.643	39.93	1	2	116	28
Lyberac	120.87	e-j	13.81	41.23	2.7	2	115	29
KWS Somerset	115.36	e-k	14.8	41.03	3.3	2	116	30
08ARS509-1	115.2	e-k	13.84	41.17	2.3	2	107	29
WINTMALT	114.19	e-k	14.74	42.73	2.3	2	116	32
KWS Scala	111.74	f-l	13.38	40.1	2	2	109	31
Hirondella	109.66	f-l	14.797	42.93	1.7	6	111	33
DH140088	107.9	g-l	14.34	39.93	3	2	109	29
Violetta	102.68	h-l	13.011	42.16	2.4	2	111	27
13ARS537-13	98.78	i-m	14.3	42.03	1.7	2	98	25
VA16M-84	97.26	j-m	14.303	41.97	1	2	101	34
CHARLES	87.8	klm	14.393	39.6	3	2	101	23

MW12_4007-001	84.23	lm	14.443	41.2	1	6	101	37
13ARS537-19	74.94	m	14.587	40.83	1.7	2	97	26

LSD P=.05	27.696	0.9068	3.121
Standard Deviation	16.926	0.5544	1.908
CV	13.86	3.9	4.59
Grand Mean	122.16	14.20	41.55

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).

City/State	DGES Georgetown/DE	Network Elevation	DEOS 45 ft.
Latitude	38° 38' N	Longitude	75° 27' W

Daily Agricultural Statistics for April, 2020

Day	Avg Temp (°F)	Max Temp (°F)	Min Temp (°F)	GDD (base 50 °F)	Avg RH (%)	Max RH (%)	Min RH (%)	Daily Solar (MJ.m ⁻² .day ⁻¹)	Avg Wind Speed (mph)	Rainfall (in)	Ref ET (in.day ⁻¹)	Avg Soil Temp (°F)	Max Soil Temp (°F)	Min Soil Temp (°F)	Avg VWC	Max VWC	Min VWC
1	44.4	53.9	40	0	68.5	89.1	38.3	14.9	7.9	0.01	0.11	51.6	53.8	49.7	0.18	0.183	0.177
2	49.8	60.2	38.7	0	45.4	79.4	28.7	24.5	10.1	0	0.17	50.7	53.7	47.7	0.177	0.18	0.173
3	52.1	58.8	45.3	2	48.1	67	37.3	20.9	12.1	0	0.17	51	53.6	48.4	0.172	0.175	0.168
4	48.3	52.1	39.2	0	79.7	97.4	67.2	9.5	4.8	0	0.06	52	54.2	50.4	0.166	0.168	0.163
5	51.8	64.7	36.5	0.6	73.6	99.1	44	19.8	3.4	0	0.12	52.7	57.1	48.6	0.162	0.166	0.158
6	55.4	68.1	44.5	6.3	69.5	95.4	20.8	24.1	3.7	0	0.16	55.7	60.6	51.8	0.157	0.16	0.152
7	56	71.4	41.2	6.3	82.1	97.4	42.7	14.6	2.6	0.02	0.11	55.8	59.8	52.6	0.153	0.156	0.15
8	62.9	76.8	50.5	13.7	73.4	97.7	40.4	21.3	6.8	0.14	0.18	58.5	62.4	55.5	0.148	0.152	0.145
9	57.5	75.3	49	12.2	66.2	98.3	30.9	18.1	9.8	0.03	0.2	58	61.4	55.5	0.146	0.148	0.143
10	46.3	50.9	40.9	0	38.3	51.7	29.7	18.8	14.2	0	0.16	52.5	55.4	50.5	0.146	0.148	0.144
11	47.3	59.7	33.1	0	44.9	74.9	24	25.1	6.4	0	0.16	51.2	55.6	47.3	0.143	0.146	0.14
12	57	73	39	6	67.1	98.2	33.5	17.9	7.4	0.08	0.17	53.2	57.1	49.3	0.139	0.142	0.136
13	65.3	77.2	58.5	17.9	82.9	95	54.3	8.7	12.9	1.04	0.15	58.1	61.2	55.7	0.146	0.159	0.136
14	51.7	60.9	44.8	2.8	56.2	80.4	33.1	21.9	4.5	0	0.14	58.1	62.1	54.8	0.163	0.166	0.159
15	43.3	51.3	35.3	0	68.6	94.2	33.5	20.3	6.6	0.22	0.11	55.1	57.9	52.4	0.168	0.171	0.163
16	44.8	52.3	35	0	50.9	83.3	27.3	26.6	7.5	0	0.14	52.6	55.5	49.9	0.169	0.172	0.166
17	45.6	58.9	30.2	0	59	91.6	26.6	20.9	4	0	0.12	51.9	56.2	47.8	0.165	0.169	0.161
18	49.5	60.7	34	0	73.4	93.8	49.5	10.9	7.7	0.11	0.1	52.7	53.9	50.6	0.161	0.163	0.16
19	48.4	62	30.1	0	68.3	97	36	24.2	5.5	0	0.14	51.4	55.6	46.9	0.16	0.164	0.156
20	51.5	57.7	44.5	1.1	80.1	95.9	56.1	9	3	0.08	0.07	53.6	55.4	52.5	0.156	0.158	0.155
21	53.8	68.2	44.1	6.2	70.4	98	33.8	17.8	9.3	0.16	0.17	53.6	56.5	50.8	0.155	0.157	0.153
22	45.5	57.8	33.5	0	44.2	84	18.1	28.5	7.3	0	0.17	51.7	55.1	48.4	0.155	0.158	0.152
23	51.6	64.7	38.4	1.5	75.7	96.6	47.9	10.5	2.6	0.32	0.08	52.1	54.8	49.3	0.153	0.155	0.151
24	54.4	60.4	49	4.7	97	99.7	92.1	6	4.3	0.95	0.04	55.3	57.2	54	0.187	0.212	0.151
25	52.3	61.9	47.5	4.7	81.9	98.6	40	22.9	3.2	0.15	0.13	57.2	61.9	53.6	0.196	0.204	0.188
26	55.2	63.4	49	6.2	95.1	98.8	84.7	7.9	4.2	0.16	0.06	57.6	59.6	55.8	0.192	0.196	0.19
27	48.7	54.9	43.6	0	77.1	97.6	52.8	10.6	8.2	0.05	0.09	55.6	57.9	53.5	0.192	0.193	0.19
28	50.7	62.3	39.1	0.7	64	92	37.7	21.6	3.9	0	0.13	54.9	59.2	51	0.186	0.192	0.18
29	61.6	72.1	50.1	11.1	67.8	81.4	54.5	21	4.9	0	0.15	58.4	62.7	54.2	0.176	0.181	0.171
30	64.1	71.8	57.9	14.8	80.1	97.8	61.3	12.7	11.6	0.7	0.13	60.3	61.8	58.8	0.172	0.189	0.166

Monthly Agricultural Statistics

Temperature & RH	Soil	Miscellaneous
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Avg Temp (°F)	52.2	Avg Soil Temp (°F)	54.4	Avg Wind Speed (mph)	6.7
Highest Max Temp (°F)	77.2 (13th)	Highest Max Soil Temp (°F)	62.7 (29th)	Avg Solar (MJ.m⁻²)	531.6
Lowest Min Temp (°F)	30.1 (19th)	Lowest Min Soil Temp (°F)	46.9 (19th)	Rainfall (in)	4.22
Avg RH (%)	68.3	Avg VWC	0.165	Monthly GDD (base 50 °F)	118.8
		Highest Max VWC	0.212 (24th)	YTD GDD (base 50 °F)	249.5
		Lowest Min VWC	0.136 (13th)	Monthly Ref ET (mm)	98.4

Day	Avg Temp (°F)	Max Temp (°F)	Min Temp (°F)	GDD (base 50 °F)	Avg RH (%)	Max RH (%)	Min RH (%)	Daily Solar (MJ.m ⁻² .day ⁻¹)	Avg Wind Speed (mph)	Rainfall (in)	Ref ET (in.day ⁻¹)	Avg Soil Temp (°F)	Max Soil Temp (°F)	Min Soil Temp (°F)	Avg VWC	Max VWC	Min VWC
1	58.4	63.6	55.4	9.5	84.5	99.2	67	11.8	5.2	0.02	0.09	60.2	62	58.7	0.189	0.192	0.186
2	60.2	70	51.2	10.6	55.3	82.5	24.3	28.7	6.8	0	0.21	60.4	65.5	56.2	0.183	0.189	0.175
3	66.5	78.6	56.6	17.6	66.9	91.2	50.4	14.2	5.8	0.29	0.15	61.2	64.4	58.5	0.174	0.178	0.169
4	65.2	73.2	55.2	14.2	63	98.9	29.3	28.2	9	1.37	0.22	64	67	61.7	0.198	0.231	0.17
5	53.4	59.1	46.6	2.9	58.8	92.7	37.4	16.9	3.7	0.18	0.12	60.4	62.3	58	0.182	0.186	0.178
6	48.2	50.8	46	0	94.8	97.4	89.7	6.1	3.5	0.2	0.04	58	59.8	57	0.183	0.187	0.178
7	53.2	63.3	44.2	3.8	63	97	27.6	29.6	7	0.01	0.18	58.3	62.5	54.9	0.185	0.19	0.179
8	58.3	69.9	47	8.4	60.6	91.8	30	18.8	9.7	0.11	0.19	58.2	61	55.4	0.177	0.182	0.173
9	42.8	49.8	35.4	0	50.1	88.8	30.4	27.4	11.8	0.09	0.14	54.5	57.6	51.8	0.176	0.179	0.174
10	49.6	61	33.4	0	49.8	79.1	26	30.2	6.8	0	0.18	53.8	58.9	49	0.173	0.178	0.167
11	55.1	63.2	47.4	5.3	58.3	86.1	29.8	21.6	9.1	0	0.17	55.8	59.5	53.4	0.166	0.17	0.162
12	49.8	59.2	40.7	0	53.5	83.9	29.5	23.1	7.8	0	0.16	54.4	57.6	51.5	0.162	0.165	0.158
13	53.4	67.5	36.6	2	54.6	93.5	23.7	30	3.7	0	0.18	56	61.7	50.4	0.156	0.161	0.15
14	59.4	72.8	39.2	6	67.1	96.1	34.7	21.4	4.9	0	0.17	57.8	61.7	53	0.149	0.154	0.145
15	73.4	82.9	63.8	23.4	61.7	77.1	45.5	26.8	10.9	0	0.27	63.1	67.9	59.2	0.141	0.146	0.136
16	69.5	78.5	54.9	16.7	67.6	85.5	52.4	22	6.6	0	0.19	65.8	69.7	63	0.134	0.137	0.13
17	58	66.2	52.4	9.3	82.3	99	58.3	14.3	3.5	0	0.1	62.9	65	61	0.131	0.133	0.129
18	57.5	61.2	54.6	7.9	86.5	98.5	60.8	7.7	6.7	0.07	0.08	61.6	62.5	60	0.13	0.131	0.129
19	56.8	63.6	52.1	7.8	60	78.9	41.2	23.1	8.6	0	0.17	60	63	57.6	0.128	0.131	0.125
20	52.5	57.2	49.3	3.3	73	89.7	54.2	14.1	6.6	0	0.11	58.5	60.3	56.8	0.125	0.127	0.123
21	57.4	66.1	49.4	7.7	82.1	95.3	66.8	21.7	4	0	0.13	59.8	64.4	56.2	0.122	0.125	0.118
22	64.9	77.2	55.5	16.4	92.8	98.3	71.5	12.1	4.2	0.49	0.1	63	66.8	60.5	0.119	0.12	0.117
23	68.6	80.7	56.3	18.5	84	99.1	50.8	24.4	4	0.58	0.19	67.4	72.3	63.3	0.124	0.129	0.118
24	56.5	61.1	53.9	7.5	91.4	98.2	80.5	9.4	4.2	0	0.07	65	68.6	63.7	0.132	0.134	0.129
25	61.1	69.9	56.2	13	89.8	98.9	74	14	3.6	0.01	0.1	64.6	67.6	62.3	0.134	0.136	0.132
26	63.6	74.5	56.8	15.7	90.1	99.9	69.8	18.6	2.4	0	0.13	66.6	71.1	63.6	0.132	0.135	0.129
27	67.6	78.1	57.3	17.7	87.6	99.9	68.9	21.1	3.6	0.05	0.15	69	72.4	65.6	0.129	0.132	0.126
28	73.7	82	68.4	25.2	88.6	97.9	71.5	13	6.8	0.33	0.12	70.4	72.7	68.6	0.126	0.128	0.124
29	76.4	86.4	70.2	28.3	84.9	95.8	61.8	15.3	8	0.02	0.17	71.8	74.6	69.8	0.123	0.125	0.121
30	75.2	82.4	63.2	22.8	67.4	95	25.2	26.6	5.4	0	0.24	73.5	77.2	70.9	0.119	0.122	0.116
31	65.7	73.3	54	13.7	52.9	92	30.1	31.6	6.3	0	0.23	71.1	74.5	68	0.116	0.119	0.112

Monthly Agricultural Statistics

Temperature & RH		Soil		Miscellaneous	
Avg Temp (°F)	60.4	Avg Soil Temp (°F)	62.2	Avg Wind Speed (mph)	6.1
Highest Max Temp (°F)	86.4 (29th)	Highest Max Soil Temp (°F)	77.2 (30th)	Avg Solar (MJ.m ⁻²)	623.8
Lowest Min Temp (°F)	33.4 (10th)	Lowest Min Soil Temp (°F)	49.0 (10th)	Rainfall (in)	3.82

Avg RH (%)	71.7	Avg VWC	0.149	Monthly GDD (base 50 °F)	335
		Highest Max VWC	0.231 (4th)	YTD GDD (base 50 °F)	584.5
		Lowest Min VWC	0.112 (31st)	Monthly Ref ET (mm)	120.3
				YTD Ref ET (mm)	379.1