

# 2021 Grape Maturity at OSU Research Vineyards

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Thanks to the continuous interest by Ohio growers and vintners and support by the Ohio Grape Industries Committee, we are pleased to resume monitoring fruit maturity progression of varieties grown at the research vineyards during the 2021 season. This information will be sent weekly to OGEN subscribers and posted on the program website, [Buckeye Appellation](#). The date of berry sampling and corresponding heat units or growing degree days (GDD) are included. Note that the GDD in your location could be higher or lower than that at our sites. For example, at the Wooster research vineyard, grape ripening of similar varieties is typically 1 to 2 weeks behind central and southern Ohio, and 1 to 2 weeks ahead of more northern latitude vineyards and on Lake Erie shores. To determine the GDD in your location, visit the [OSU-GDD Calculator](#). To learn more about monitoring fruit maturity and berry sampling, please read OSU factsheet at the following link: [Are your grapes ready to pick?](#) Click here for [Fruit maturity from previous years](#). We wish you bountiful and successful harvest!!

Grape maturity of grape varieties at the [Wooster](#) research vineyard:

## (1) Sampling Date: 8/9/2021 (GDD=1942)

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Brianna		252	12.4	2.96	12.0	10
Einset		215	15.3	2.96	9.9	16
Itasca		144	15.4	3.07	20.9	7
Jupiter		291	14.0	2.94	10.9	13
Vanessa		190	15.7	2.77	10.3	15

\*SS: soluble solids, which estimates sugar concentration in grape juice.

pH: measures active acidity (strength of H<sup>+</sup> ions) in grape juice using a pH meter.

TA: titratable acidity, or total acidity, measures actual amount of organic acid reserve in grape juice.

FMI: fruit maturity index = SS/TA\*10.

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**(2) Sampling Date: 8/16/2021 (GDD=2112)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Brianna		239	15.9	3.07	9.7	16
Einset		224	15.5	2.93	7.5	21
Itasca		157	16.6	3.14	16.1	10
Jupiter		330	14.5	3.05	7.8	19
Vanessa		209	15.2	2.96	8.4	18

**(3) Sampling Date: 8/23/2021 (GDD=2262)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Brianna	23-Aug	267	16.5	3.10	7.3	23
Chardonnay		163	15.4	2.96	13.5	11
Einset		249	17.9	2.97	6.6	27
Itasca		152	18.6	3.16	14.0	13
Jupiter		362	15.9	3.04	7.1	22
La Crescent		145	18.1	2.96	18.9	10
Marquette		159	19.2	2.93	18.2	11
Regent		215	17.5	3.10	9.4	19
Sauvignon blanc 27		171	15.4	2.83	15.3	10
Vanessa		231	16.5	2.97	6.9	24



**(4) Sampling Date: 8/31/2021 (GDD=2473)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella		142	15.6	2.75	12.4	13
Brianna	23-Aug	267	16.5	3.10	7.3	23
Chardonnay		185	17.1	2.89	10.3	17
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac		136	18.0	2.82	17.2	10
Frontenac blanc		259	19.7	2.84	15.3	13
Itasca		133	20.1	3.07	10.3	20
Jupiter		389	15.5	3.04	6.1	25
La Crescent		137	19.7	2.97	16.2	12
Marquette		159	20.4	2.90	15.1	13
Petite Pearl		108	16.9	3.24	9.0	19
Regent		192	17.8	3.31	6.9	26
Sauvignon blanc 27		167	17.5	3.19	10.6	17
Vanessa		233	17.1	3.42	4.7	36

**(5) Sampling Date: 9/7/2021 (GDD=2584)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella		224	17.5	2.89	10.2	17
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc		116	15.9	3.26	8.1	20
Chambourcin		220	14.4	2.97	12.6	11
Chardonnay		168	18.6	3.12	9.3	20
Crimson Pearl		126	19.4	3.30	8.0	24
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac		124	20	3.12	17.5	11
Frontenac blanc		120	22.2	3.15	15.7	14
Itasca		142	22.1	3.28	10.6	21
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent		148	21.2	2.98	15.8	13
Marquette		158	21.7	3.10	14.1	15
Petite Pearl		112	16.9	3.24	9.0	19
Regent		226	17.8	3.31	6.9	26
Sauvignon blanc 27		178	17.5	3.19	10.6	17
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona		206	18.3	2.77	10.1	18

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(6) Sampling Date: 9/13/2021 (GDD=2690)

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella		206	17.4			
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc		178	17.6			
Chambourcin		222	17.9			
Chardonnay		176	19.4			
Crimson Pearl		212	21.9			
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac		128	21.2			
Frontenac blanc	14-Sep	125	23.3	3.24	13.2	18
Itasca	9-Sep	138	20.6	3.12	10.2	20
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent		140	22.9			
Marquette	9-Sep	146	23	2.84	13.4	17
Petite Pearl		130	20.3			
Regent	10-Sep	223	20.4	3.01	6.5	32
Sauvignon blanc 27		180	18.5			
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona		192	18.5			

\* Do to technical issues with instrumentation, pH and RA are not reported



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**(7) Sampling Date: 9/20/2021 (GDD=2838)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella	16-Sep	206	17.4			
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc		174	18.8	3.23	9.8	19
Chambourcin		234	17.7	3.05	10.9	16
Chardonnay	21-Sep	157	21.0	3.35	7.4	28
Crimson Pearl	17-Sep	218	21.8	3.45	7.2	30
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac		114	23.6	3.28	13.9	17
Frontenac blanc	14-Sep	125	23.3	3.24	13.2	18
Itasca	9-Sep	138	20.6	3.12	10.2	20
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent		134	23.3	3.18	12.9	18
Marquette	9-Sep	146	23	2.84	13.4	17
Petite Pearl		118	22.9	3.47	7.1	32
Regent	10-Sep	223	20.4	3.01	6.5	32
Sauvignon blanc 27		198	20.6	3.10	8.0	26
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona		216	20.9	3.16	9.09	23

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**(8) Sampling Date: 9/27/2021 (GDD=2919)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella	16-Sep	206	17.4			
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc		180	19.1	3.26	9.5	20
Chambourcin		232	17.4	3.03	11.0	16
Chardonnay	21-Sep	157	21.0	3.35	7.4	28
Crimson Pearl	17-Sep	218	21.8	3.45	7.2	30
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac	23-Sep	130	22.5	3.40	14.4	16
Frontenac blanc	14-Sep	125	23.3	3.24	13.2	18
Itasca	9-Sep	138	20.6	3.12	10.2	20
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent	23-Sep	139	23.6	3.25	12.2	19
Marquette	9-Sep	146	23.0	2.84	13.4	17
Petite Pearl	28-Sep	119	23.5	3.51	7.2	33
Regent	10-Sep	223	20.4	3.01	6.5	32
Sauvignon blanc 27	28-Sep	184	22.0	3.23	7.3	30
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona		214	21.1	3.2	8.88	24

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**(9) Sampling Date: 10/4//2021 (GDD=2997)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella	16-Sep	206	17.4			
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc		174	19.3	3.28	9.9	19
Chambourcin		242	19.4	3.12	10.1	19
Chardonnay	21-Sep	157	21.0	3.35	7.4	28
Crimson Pearl	17-Sep	218	21.8	3.45	7.2	30
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac	23-Sep	130	22.5	3.40	14.4	16
Frontenac blanc	14-Sep	125	23.3	3.24	13.2	18
Itasca	9-Sep	138	20.6	3.12	10.2	20
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent	23-Sep	139	23.6	3.25	12.2	19
Marquette	9-Sep	146	23.0	2.84	13.4	17
Petite Pearl	28-Sep	119	23.5	3.51	7.2	33
Regent	10-Sep	223	20.4	3.01	6.5	32
Sauvignon blanc 27	28-Sep	184	22.0	3.23	7.3	30
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona	5-Oct	221	21.5	3.34	7.9	27



**(10) Sampling Date: 10/11//2021 (GDD=3124)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella	16-Sep	206	17.4			
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc		186	19.9	3.28	8.2	24
Chambourcin		278	21.9	3.11	9.8	22
Chardonnay	21-Sep	157	21.0	3.35	7.4	28
Crimson Pearl	17-Sep	218	21.8	3.45	7.2	30
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac	23-Sep	130	22.5	3.40	14.4	16
Frontenac blanc	14-Sep	125	23.3	3.24	13.2	18
Itasca	9-Sep	138	20.6	3.12	10.2	20
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent	23-Sep	139	23.6	3.25	12.2	19
Marquette	9-Sep	146	23.0	2.84	13.4	17
Petite Pearl	28-Sep	119	23.5	3.51	7.2	33
Regent	10-Sep	223	20.4	3.01	6.5	32
Sauvignon blanc 27	28-Sep	184	22.0	3.23	7.3	30
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona	5-Oct	221	21.5	3.34	7.9	27



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**(11) Sampling Date: 10/19/2021 (GDD=3228)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Aromella	16-Sep	206	17.4			
Brianna	23-Aug	267	16.5	3.10	7.3	23
Cabernet franc	14-Oct	186	19.9	3.28	8.2	24
Chambourcin	19-Oct	261	22.9	3.27	8.7	27
Chardonnay	21-Sep	157	21.0	3.35	7.4	28
Crimson Pearl	17-Sep	218	21.8	3.45	7.2	30
Einset	31-Aug	259	19.8	3.41	4.2	48
Frontenac	23-Sep	130	22.5	3.40	14.4	16
Frontenac blanc	14-Sep	125	23.3	3.24	13.2	18
Itasca	9-Sep	138	20.6	3.12	10.2	20
Jupiter	8-Sep	427	18.3	3.18	5.0	37
La Crescent	23-Sep	139	23.6	3.25	12.2	19
Marquette	9-Sep	146	23.0	2.84	13.4	17
Petite Pearl	28-Sep	119	23.5	3.51	7.2	33
Regent	10-Sep	223	20.4	3.01	6.5	32
Sauvignon blanc 27	28-Sep	184	22.0	3.23	7.3	30
Vanessa	1-Sep	252	17.8	2.75	4.5	39
Verona	5-Oct	221	21.5	3.34	7.9	27

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Grape maturity of grape varieties at the ***Kingsville*** research vineyard:

**(1) Sampling Date: 8/23/2021 (GDD= 2239)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		121	15.0	3.11	15.3	10
Gruner Veltliner		185	14	2.99	13.2	11
Pinot gris		161	15.4	3.01	10.4	15
Pinot noir		176	15.4	3.11	11.6	13
Regent		209	15.8	3.08	10.2	15

**(2) Sampling Date: 8/30/2021 (GDD= 2432)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		124	17.2	3.40	9.8	18
Cabernet franc		151	13.2	3.01	14.3	9
Gruner Veltliner		208	16.0	3.21	8.9	18
Pinot gris		171	17.0	3.19	8.3	21
Pinot noir		180	17.4	3.33	9.0	19
Regent		233	17.2	3.30	8.5	20
Sauvignon blanc		188	15.0	3.06	10.4	14



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**(3) Sampling Date: 9/8/2021 (GDD= 2596)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		129	19.0	3.46	8.9	21
Cabernet franc		171	15.8	3.06	11.7	14
Gruner Veltliner		217	17.6	3.25	9.27	19
Pinot gris		172	18.8	3.32	6.6	29
Pinot noir		195	18.8	3.41	8.5	22
Regent		246	18.6	3.35	6.2	30
Sauvignon blanc		217	18.6	3.11	11.0	17

**(4) Sampling Date: 9/13/2021 (GDD= 2685)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		135	20.0	3.71	7.3	28
Cabernet franc		177	17.0	3.34	10.2	17
Gruner Veltliner		217	18.4	3.48	6.32	29
Pinot gris		166	18.8	3.38	6.4	29
Pinot noir		188	20.4	3.58	7.5	27
Regent		231	19.6	3.52	4.5	43
Sauvignon blanc		225	19.4	3.28	9.8	20

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**(5) Sampling Date: 9/20/2021 (GDD= 2819)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		190	20.2	3.70	6.9	29
Cabernet franc		176	18.4	3.29	7.9	23
Concord		397	15.6	3.21	8.12	19
Gruner Veltliner		234	18.8	3.44	5.75	33
Pinot gris	14-Sep	166	18.8	3.38	6.4	29
Pinot noir		178	21.0	3.62	7.0	30
Regent	17-Sep	231	19.6	3.52	4.5	43
Sauvignon blanc		195	20.0	3.21	8.4	24

**(6) Sampling Date: 9/27/2021 (GDD= 2915)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		145	21.2	3.90	7.0	30
Cabernet franc		185	19.6	3.39	8.0	24
Concord		424	16.6	3.29	6.47	26
Gruner Veltliner	23-Sep	234	18.8	3.44	5.75	33
Pinot gris	14-Sep	166	18.8	3.38	6.4	29
Pinot noir	20-Sep	178	21.0	3.62	7.0	30
Regent	17-Sep	231	19.6	3.52	4.5	43
Sauvignon blanc	24-Sep	195	20.0	3.21	8.4	24

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**(7) Sampling Date: 10/4/2021 (GDD= 2995)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		141	20.4	3.80	6.3	33
Cabernet franc		184	20.4	3.47	6.4	32
Concord		443	17	3.35	6.08	28
Gruener Veltliner	23-Sep	234	18.8	3.44	5.75	33
Pinot gris	14-Sep	166	18.8	3.38	6.4	29
Pinot noir	20-Sep	178	21.0	3.62	7.0	30
Regent	17-Sep	231	19.6	3.52	4.5	43
Sauvignon blanc	24-Sep	195	20.0	3.21	8.4	24

**(8) Sampling Date: 10/11/2021 (GDD= 3120)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell		148	20.0	4.07	5.7	35
Cabernet franc		167	20.2	3.53	6.7	30
Concord		421	17.2	3.40	6.29	27
Gruener Veltliner	23-Sep	234	18.8	3.44	5.75	33
Pinot gris	14-Sep	166	18.8	3.38	6.4	29
Pinot noir	20-Sep	178	21.0	3.62	7.0	30
Regent	17-Sep	231	19.6	3.52	4.5	43
Sauvignon blanc	24-Sep	195	20.0	3.21	8.4	24



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**(9) Sampling Date: 10/20/2021 (GDD= 3237)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Cabernet franc		164	21.4	3.48	6.9	31
Concord		395	18.4	3.46	5.2	35
Gruener Veltliner	23-Sep	234	18.8	3.44	5.75	33
Pinot gris	14-Sep	166	18.8	3.38	6.4	29
Pinot noir	20-Sep	178	21.0	3.62	7.0	30
Regent	17-Sep	231	19.6	3.52	4.5	43
Sauvignon blanc	24-Sep	195	20.0	3.21	8.4	24

**(10) Sampling Date: 10/20/2021 (GDD= 3237)**

Variety	Harvest Date	100 Berry wt (g)	SS (%)	pH	T.A. (g/L)	FMI
Arandell	11-Oct	148	20.0	4.07	5.7	35
Cabernet franc	20-Oct	164	21.4	3.48	6.9	31
Concord	21-Oct	395	18.4	3.46	5.2	35
Gruener Veltliner	23-Sep	234	18.8	3.44	5.75	33
Pinot gris	14-Sep	166	18.8	3.38	6.4	29
Pinot noir	20-Sep	178	21.0	3.62	7.0	30
Regent	17-Sep	231	19.6	3.52	4.5	43
Sauvignon blanc	24-Sep	195	20.0	3.21	8.4	24

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