The following tables and graphs provide data from 3 strawberry cultivar-selection experiments that were conducted over a 3-year period (2010-2012). Plants were grow during the winter/spring 2010; fall 2010 to spring 2011 and fall 2011 to spring 2012 in a double polyethylene covered greenhouse. Please see other parts of this website for construction of the greenhouse, benches and the capillary mat system that was used.

Table 1. Strawberry cultivars that were grown in each of the three experiments. Response type is indicated by the superscript numbers and an asterisk indicates a different source for the crowns. The plus (+) indicates a grade of crowns that possesses a larger root system (as per supplier).

Spring 2010	**Fall 2010 - Spring 2011**	**Fall 2011 - Spring 2012**
AC Wendy[1]	AC Wendy[1]	Albion[2]
Albion[2]	Albion B*[2]	Cavendish[1]
Cavendish[1]	Albion M*[2]	Chandler[1]
Chandler[1]	Cavendish[1]	Evie-2[2]
Darselect[1]	Chandler[1]	Evie-2+[2]
Evie-2[2]	Clancy[1]	Portola[2]
Honeoye[1]	Darselect[1]	Seascape[2]
KRS-10[1]	Evie-2[2]	Seascape+[2]
Seascape[2]	Honeoye[1]	
Strawberry Festival/July[1]	Portola[2]	
Strawberry Festival/August[1]	Seascape F*[2]	
Sweet Charlie[1]	Seascape N*[2]	
Tribute[2]	Strawberry Festival[1]	
[1] = June-bearing [2] = Day neutral	*Indicates different sources	+ = Premium Grade

Table 2. The results of the 2010 screening experiment (Experiment 1) in which 13 different strawberry cultivars were grown during the winter in a double-layer polyethylene greenhouse in Lincoln, NE. Crowns were planted in January and berries were counted and weighed weekly from March 3 through April 12, 2010.

Cultivar	Week 1		Week 2		Week 3		Week 4		Week 5		Week 6		Week 7		Totals	
	Number/	Mass (g)	Number/	Mass (g)	Number/	Mass (g)	Number/	Mass (g)	Number/	Mass (g)	Number/	Mass (g)	Number/	Mass (g)	Number/	Mass (g)
AC Wendy	0	0	9	186	11	232	31	470.47	25	299.33	42	492.28	12	117.93	130	1,798.01
Albion	40	614	28	428	43	548	54	545.74	35	381.35	11	120.42	3	34.54	214	2,672.05
Cavendish	0	0	0	0	12	322	27	487.42	29	425.58	36	299.85	10	124.38	114	1,659.23
Chandler	3	30	15	122	31	212	47	273.89	24	113.37	6	29.08	1	13.30	127	793.64
Darselect	0	0	0	0	0	0	13	177.52	32	414.05	47	405.88	17	116.85	109	1,113.50
Evie-2	0	0	0	0	3	64	24	477.26	57	1,047.36	52	634.16	17	165.95	153	2,388.73
Honeoye	0	0	0	0	3	50	28	373.16	61	556.44	67	422.37	11	48.12	170	1,450.09
KRS-10	0	0	0	0	0	0	0	0	9	211.63	35	729.12	10	175.03	54	1,115.78
Seascape	0	0	1	24	18	264	68	741.02	56	453.99	39	255.90	15	88.29	197	1,827.20
Strawberry Festival (July)	30	338	39	474	35	424	29	268.32	13	99.18	12	97.33	6	65.37	164	1,766.20
Strawberry Festival (August)	4	60	24	284	45	474	46	388.47	27	169.06	10	68.97	2	19.29	158	1,463.79
Sweet Charlie	4	32	17	132	18	124	6	36.32	1	4.58	12	143.34	3	32.65	61	504.89
Tribute	1	6	8	92	33	320	37	276.35	24	210.19	21	110.10	12	80.38	136	1,095.02

Table 3. Concentrations of glucose, fructose and sucrose as well as total sugars and a calculated sweetness index[z] for 13 strawberry cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE during the spring of 2010[y] (Experiment 1).

Cultivar	Glucose mg g^{-1}	Fructose mg g^{-1}	Sucrose mg g^{-1}	Total Sugars mg g^{-1}	Sweetness Index
Albion	9.33 a ±1.20	5.62 a ± 0.72	1.18 a ± 0.13	16.15 a ± 1.98	23.88 a ± 2.91
AC Wendy	6.76 ab ±1.20	4.33 ab ± 0.71	0.82 b ± 0.13	11.90 ab ± 1.96	17.81 ab ± 2.90
Strawberry Festival (B)	6.25 abc ± 1.20	3.94 ab ± 0.71	0.80 bc ± 0.13	11.03 abc ± 1.97	16.45 abc ± 2.90
Honeoye	5.75 bc ± 1.20	3.47 bc ± 0.71	0.75 bc ± 0.13	9.96 bcd ± 1.96	14.72 bcd ± 2.89
Seascape	5.47 bcd ± 1.20	2.57 bcde ± 0.71	0.73 bc ± 0.13	8.82 bcde ± 1.97	12.45 bcde ± 2.90
Strawberry Festival (A)	4.95 bcde ± 1.20	2.42 bcde ± 0.71	0.57 bcd ± 0.13	7.90 bcde ± 1.97	11.23 bcdef ± 2.90
Darselect	4.81 bcde ± 1.20	2.65 bcde ± 0.71	0.77 bc ± 0.13	8.18 bcde ± 1.96	11.87 bcde ± 2.89
Cavendish	4.35 bcdef ± 1.20	2.82 bcd ± 0.72	0.46 cd ± 0.13	7.61 bcdef ± 1.98	11.42 bcde ± 2.91
KRS-10	4.18 bcdef ± 1.20	1.66 cde ± 0.72	0.35 d ± 0.13	6.17 cdef ± 1.98	8.45 cdef ± 2.91
Evie-2	3.38 cdef ± 1.20	1.73 cde ± 0.72	0.52 bcd ± 0.13	5.60 cdef ± 1.98	8.02 def ± 2.91
Chandler	2.24 def ± 1.20	1.45 de ± 0.71	0.52 bcd ± 0.13	4.25 ef ± 1.96	6.33 ef ± 2.89
Sweet Charlie	2.00 ef ± 1.20	2.74 bcd ± 0.71	0.52 bcd ± 0.13	5.30 def ± 1.97	9.04 cdef ± 2.90
Tribute	1.23 f ± 1.20	0.71 e ± 0.71	0.28 d ± 0.13	2.18 f ± 1.97	3.18 f ± 2.90

[z]Calculated as per Keutgen and Pawelik.2007. Food Chem 105:1487-1494.

[y]Numbers in columns followed by the same letters are not significantly different at $P < 0.05$.

Table 4. Concentrations of phenols, flavonoids and anti-oxidant capacity in strawberries from 13 cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE during the spring of 2010[z] (Experiment 1).

Cultivar	Phenols	Flavonoids	AOAC
	mg g^{-1}	mg g^{-1}	*u*m Trolox g^{-1}
Albion	1.25 cd ± 0.15	0.44 abcde ± 0.07	43.10 ed ± 5.85
AC Wendy	1.06 d ± 0.15	0.28 e ± 0.07	32.75 d ± 6.31
Strawberry Festival (B)	1.60 abc ± 0.14	0.36 de ± 0.07	75.00 a ± 5.85
Honeoye	1.42 abcd ± 0.15	0.35 de ± 0.07	49.24 cd ± 6.31
Seascape	1.54 abc ± 0.14	0.58 a ± 0.07	67.55 ab ± 5.85
Strawberry Festival (A)	1.54 abc ± 0.14	0.38 bcde ± 0.07	74.70 a ± 5.85
Darselect	1.76 ab ± 0.15	0.62 a ± 0.07	73.00 a ± 6.31
Cavendish	1.46 abcd ± 0.15	0.54 abcd ± 0.07	67.87 ab ± 6.30
KRS-10	1.35 bcd ± 0.15	0.58 abc ± 0.07	51.63 bc ± 6.30
Evie-2	1.26 cd ± 0.14	0.45 abcde ± 0.07	54.49 bc ± 5.85
Chandler	1.67 abc ± 0.15	0.58 ab ± 0.07	68.52 ab ± 6.31
Sweet Charlie	1.83 a ± 0.15	0.41 abcde ± 0.07	58.34 abc ± 6.31
Tribute	1.07 d ± 0.15	0.37 cde ± 0.07	54.95 bc ± 6.31

[z]Numbers in columns followed by the same letters are not significantly different at $P < 0.05$.

Table 5a. Berry mass per plant[z] was calculated on a weekly basis for each of 13 strawberry cultivars for Week 1 (10/30/2010) through Week 6 (12/04/2010) (Experiment 2). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated with a capillary mat system. The interaction of Week number x Cultivar was significant starting at week 3 and then through the end of the experiment.

	Berry mass(g) per plant					
Cultivar	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**
Clancy	– – –	9.25 ±0.29	8.00 a ±0.26	9.12 b ±0.29	6.23 a ±0.29	7.75 a ±0.29
Portola	– – –	9.30 ±0.65	– – –	9.84 b ±0.63	14.06 b ±0.45	29.46 b ±0.37
Evie-2	15.42 ±0.63	4.15 ±0.37	7.04 a ±0.45	0.44 a ±0.45	7.60 ab ±0.62	19.67 bc ±0.37
Strawberry Festival	– – –	– – –	– – –	– – –	– – –	– – –
Albion M	– – –	10.64 ±0.37	9.95 a ±0.44	6.32 b ±0.45	6.12 ab ±0.32	11.71acd ±0.26
Albion B	– – –	– – –	– – –	5.59 ab ±0.64	– – –	14.90abdf ±0.45
AC Wendy	7.15 ±0.65	9.24 ±0.45	8.17 a ±0.64	10.08 b ±0.63	– – –	8.87ace ±0.63
Seascape N	3.81 ±0.45	3.71 ±0.45	4.99 a ±0.44	5.70 b ±0.32	9.43 ab ±0.31	7.95acf ±0.32
Seascape F	– – –	4.65 ±0.26	6.21 a ±0.29	7.02 b ±0.26	10.26 ab ±0.26	23.05bde ±0.26
Honeoye	10.02 ±0.29	4.38 ±0.32	8.24 a ±0.32	6.52 b ±0.44	1.62 c ±0.44	– – –
Chandler	– – –	3.08 ±0.64	5.61 a ±0.64	4.05 a ±0.63	16.36 b ±0.45	34.32b ±0.29
Cavendish	9.71 ±0.63	8.49 ±0.32	9.37 a ±0.29	5.49 b ±0.32	4.77 abc ±0.62	7.12 af ±0.45
Darselect	10.53 ±0.45	11.99 ±0.29	9.87 a ±0.26	8.30 b ±0.26	11.60 ab ±0.26	19.81bde ±0.29

[z] Numbers followed by the same letters are not significantly different at P<0.05

Table 5b. Berry mass per plant[z] was calculated on a weekly basis for each of 13 strawberry cultivars for Week 7 (11/11/2010) through Week 12 (01/15/2011) (Experiment 2). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant											
Cultivar	**Week 7**		**Week 8**		**Week 9**		**Week 10**		**Week 11**		**Week 12**	
Clancy	6.11 ad	±0.32	3.10 abc	±0.62	0.57 a	±0.44	3.53 a	±0.49	1.08 a	±0.37	– – –	
Portola	17.71 bc	±0.37	8.91 b	±0.63	3.69 bc	±0.45		– – –		– – –		– – –
Evie-2	28.53 c	±0.49		– – –	1.41 abc	±0.63		– – –	2.00 ab	±0.45	12.90 abci	±0.64
Strawberry Festival		– – –		– – –		– – –	19.41 b	±0.45	31.78 c	±0.29	25.56 ag	±0.37
Albion M	12.24 ac	±0.26	6.47 ab	±0.26	4.22 bc	±0.26	11.62 ab	±0.29	8.23 d	±0.26	9.20 abh	±0.23
Albion B	9.04 afg	±0.29	5.33 abeh	±0.44	7.58 bc	±0.32	7.98 ab	±0.29	13.00 cd	±0.26	25.65 cdg	±0.29
AC Wendy		– – –		– – –		– – –		– – –		– – –		– – –
Seascape N	3.16 e	±0.29	6.13 abd	±0.62	4.67 bc	±0.62	2.72 a	±0.46	5.42 ade	±0.62	6.64 abcdef	±0.62
Seascape F	5.90 dg	±0.26	1.89 cde	±0.29	5.28 bc	±0.36	4.71 a	±0.28	6.08 bdf	±0.45	3.97 ehi	±0.44
Honeoye	0.88	±0.64	0.54 df	±0.63		– – –		– – –		– – –		– – –
Chandler	13.75 abcf	±0.26	5.49 abg	±0.26	11.86 c	±0.29	7.42 ab	±0.26	13.87 cd	±0.26	17.10 abcf	±0.32
Cavendish		– – –	3.13 abef	±0.62	1.86 abc	±0.65	3.19 ab	±0.63		– – –		– – –
Darselect	4.35 deg	±0.29	1.16 cdefgh	±0.62	1.90 ab	±0.45	4.00 ab	±0.63	3.11 aef	±0.36	1.88 ef	±0.62

[z] Numbers followed by the same letters are not significantly different at P<0.05

Table 5c. Berry mass per plant[z] was calculated on a weekly basis for each of 13 strawberry cultivars for Week 13 (01/22/2011) through Week 18 (02/26/2011) (Experiment 2). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant											
Cultivar	**Week 13**		**Week 14**		**Week 15**		**Week 16**		**Week 17**		**Week 18**	
Clancy	– – –		– – –		– – –		6.88 abc	±0.64	– – –		30.61 abcde	±0.65
Portola	– – –		– – –		23.03 a	±0.63	25.86 b	±0.45	19.90 a	±0.37	89.08 bf	±0.32
Evie-2	26.10 ab	±0.65	12.98 a	±0.65	– – –		– – –		0.52 b	±0.63	40.66 cf	±0.36
Strawberry Festival	10.98 ab	±0.32	23.11 a	±0.37	7.04 ab	±0.44	3.78 acd	±0.44	2.57 c	±0.28	15.32 de	±0.29
Albion M	18.83 ab	±0.28	10.48 a	±0.44	18.92 a	±0.36	3.85 ce	±0.36	8.88 a	±0.36	13.04 e	±0.26
Albion B	23.00 b	±0.26	17.94 a	±0.32	16.09 a	±0.32	9.83 bd	±0.26	11.99 a	±0.26	50.86 abc	±0.26
AC Wendy	– – –		– – –		– – –		– – –		– – –		– – –	
Seascape N	– – –		– – –		– – –		– – –		– – –		40.91 abc	±0.26
Seascape F	8.66 ab	±0.62	1.95	±0.45	2.43 b	±0.44	0.81 ac	±0.63	2.64 bc	±0.47	30.65 acd	±0.29
Honeoye	– – –		– – –		– – –		– – –		– – –		– – –	
Chandler	8.28 a	±0.26	12.84 a	±0.32	8.89 a	±0.36	4.06 ae	±0.29	12.56 a	±0.26	36.66 ac	±0.26
Cavendish	– – –		– – –		– – –		– – –		28.45 a	±0.36	56.92 abc	±0.26
Darselect	– – –		– – –		– – –		– – –		13.08 ac	±0.68	– – –	

[z] Numbers followed by the same letters are not significantly different at P<0.05

Table 5d. Berry mass per plant[z] was calculated on a weekly basis for each of 13 strawberry cultivars for Week 19(03/11/2011) through Week 24 (04/12/2011) (Experiment 2). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant											
Cultivar	**Week 19**		**Week 20**		**Week 21**		**Week 22**		**Week 23**		**Week 24**	
Clancy	– – –		– – –		– – –		– – –		– – –		– – –	
Portola	74.97 a	±0.26	49.90 a	±0.26	89.98 af	±0.26	87.57 a	±0.26	61.43 a	±0.26	50.49abh	±0.26
Evie-2	70.13 ab	±0.29	52.60 a	±0.29	64.31abj	±0.27	69.00 abe	±0.26	36.78 ab	±0.26	97.64b	±0.26
Strawberry Festival	39.48 c	±0.26	36.92 ab	±0.32	52.30bcegh	±0.26	51.72 ac	±0.26	38.88 ac	±0.26	23.84cde	±0.26
Albion M	46.32 bcdf	±0.26	16.67 c	±0.26	28.33 d	±0.26	26.21 d	±0.26	12.09g	±0.26	14.12 d	±0.26
Albion B	62.98 adf	±0.26	45.68 a	±0.26	55.85ahi	±0.26	33.89cde	±0.25	33.92 bcde	±0.26	66.04 ab	±0.26
AC Wendy	32.65 ac	±0.65	36.89 ac	±0.63	65.82aek	±0.26	46.85bc	±0.26	37.01 ad	±0.26	45.52ac	±0.26
Seascape N	58.08 ac	±0.26	46.65 a	±0.26	52.53ac	±0.26	42.83 bcd	±0.26	34.30 ae	±0.26	43.44ac	±0.26
Seascape F	31.91 c	±0.26	19.52 c	±0.26	32.74cd	±0.26	31.05 cd	±0.26	15.85 fg	±0.26	37.61acf	±0.26
Honeoye	25.01 bcef	±0.45	16.39 bc	±0.45	34.20cd	±0.26	33.86 cd	±0.26	30.93 bcde	±0.26	31.70cgh	±0.26
Chandler	71.22 a	±0.26	50.57 a	±0.26	95.75fijk	±0.26	46.24 bcd	±0.26	29.78 bcde	±0.26	41.27 ac	±0.26
Cavendish	67.58 ade	±0.26	37.78 a	±0.26	65.52agi	±0.26	38.47 cd	±0.26	19.92 bcdef	±0.26	18.11defg	±0.26
Darselect	59.44 ac	±0.63	34.21 ac	±0.64	25.56 d	±0.45	30.65 cd	±0.26	24.06 bcdef	±0.26	66.74 ab	±0.29

[z] Numbers followed by the same letters are not significantly different at $P<0.05$

Table 6. Initial flowering date, number of plants flowering at that time, first harvest and peak harvest times for 13 strawberry cultivars grown from mid-September 2010 through mid-April 2011(Experiment 2) in a double-layer polyethylene greenhouse in Lincoln, NE. Total berry mass and number and average berry mass and number were not related to response type[z]. Plants/pots were spaced on 12 inch by 16 inch centers.

Cultivar	Type[z]	Flowering		1st harvest	Peak times	Total (g)	Ave. berry mass per plant (g)	Total number	Ave. number per plant
AC Wendy	Jb	10/05/10	3 plants	10/22/10	March	2,853.85	158.55	211	12
Albion B	d-n	10/26/10	1 plant	11/16/10	March/ April	10,353.39	431.39	1,155	48
Albion M	d-n	10/05/10	2 plants	11/03/10	**December** March	5,144.41	214.35	515	21
Cavendish	Jb	10/05/10	6 plants	10/30/10	March	8,073.25	336.39	664	28
Chandler	Jb	10/05/10	1 plant	11/04/10	**December** March	11,078.50	461.60	1,271	53
Clancy	Jb	10/05/10	1 plant	11/01/11	**November**	584.52	30.76	96	5
Darselect	Jb	10/05/10	7 plants	10/28/10	**November** April	2,323.69	116.19	260	13
Evie-2	d-n	10/05/10	3 plants	10/30/10	March/April	7,358.88	334.50	668	30
Honeoye	Jb	10/05/10	8 plants	10/23/10	March/April	2,781.72	132.46	347	17
Portola	d-n	10/05/10	1 plant	11/05/10	**December** March/April	6,096.42	320.86	397	21
Seascape F	d-n	10/05/10	8 plants	11/02/10	**December** March/April	5,657.28	235.72	708	30
Seascape N	d-n	10/05/10	3 plants	10/29/10	**December** March/April	7,751.34	322.97	893	37
Strawberry Festival	Jb	12/07/10	4 plants	12/29/10	March/April	3,928.89	196.44	375	19

[z] Jb = June-bearing; d-n = day-neutral

Table 7. Concentrations of glucose, fructose and sucrose as well as total sugars and a calculated sweetness index[z] for 13 strawberry cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE during the spring of 2011[y] (Experiment 2).

Cultivar	Glucose mg g^{-1}	Fructose mg g^{-1}	Sucrose mg g^{-1}	Total Sugars mg g^{-1}	Sweetness Index
Albion	3.15 ab ±0.49	1.75 abc ± 0.27	1.38 bc ± 0.24	6.28 ab ± 0.98	9.03 abc ± 1.41
AC Wendy	3.73 a ± 0.64	2.39 ab ± 0.36	2.54 a ± 0.32	8.66 a ± 1.30	12.66 ab ± 1.86
Strawberry Festival (B)	1.51 c ± 0.64	0.87 d ± 0.36	0.83 bc ± 0.32	3.20 bc ± 1.30	4.62 d ± 1.86
Honeoye	2.42 abc ± 0.64	1.48 bcd ± 0.36	1.52 b ± 0.32	5.42 abc ± 1.30	7.88 bcd ± 1.86
Seascape	1.59 c ± 0.49	0.87 d ± 0.27	0.94 bc ± 0.24	3.39 bc ± 0.98	4.84 d ± 1.41
Darselect	3.74 a ± 0.64	2.57 a ± 0.36	2.45 a ± 0.32	8.75 a ± 1.30	12.94 a ± 1.86
Cavendish	3.36 ab ± 0.64	2.20 ab ± 0.36	1.05 bc ± 0.32	6.61 ab ± 1.30	9.83 abc ± 1.86
Evie-2	1.62 c ± 0.64	1.10 cd ± 0.36	1.19 bc ± 0.32	3.91 bc ± 1.30	5.76 cd ± 1.86
Chandler	1.81 bc ± 0.64	1.21 cd ± 0.36	0.75 bc ± 0.32	3.77 bc ± 1.30	5.61 cd ± 1.86
Clancy	1.88 bc ± 0.64	1.22 cd ± 0.36	0.65 c ± 0.32	3.75 bc ± 1.30	5.56 cd ± 1.86
Portola	1.51 c ± 0.64	0.72 d ± 0.36	0.73 bc ± 0.32	2.96 c ± 1.30	4.16 d ± 1.86
Grocery	1.62 c ± 0.64	1.04 cd ± 0.36	1.17 bc ± 0.32	3.83 bc ± 1.30	5.6 cd ± 1.86

[z]Calculated as per Keutgen and Pawelik. 2007. Food Chem 105:1487-1494.

[y]Numbers in columns followed by the same letters are not significantly different at $P < 0.05$.

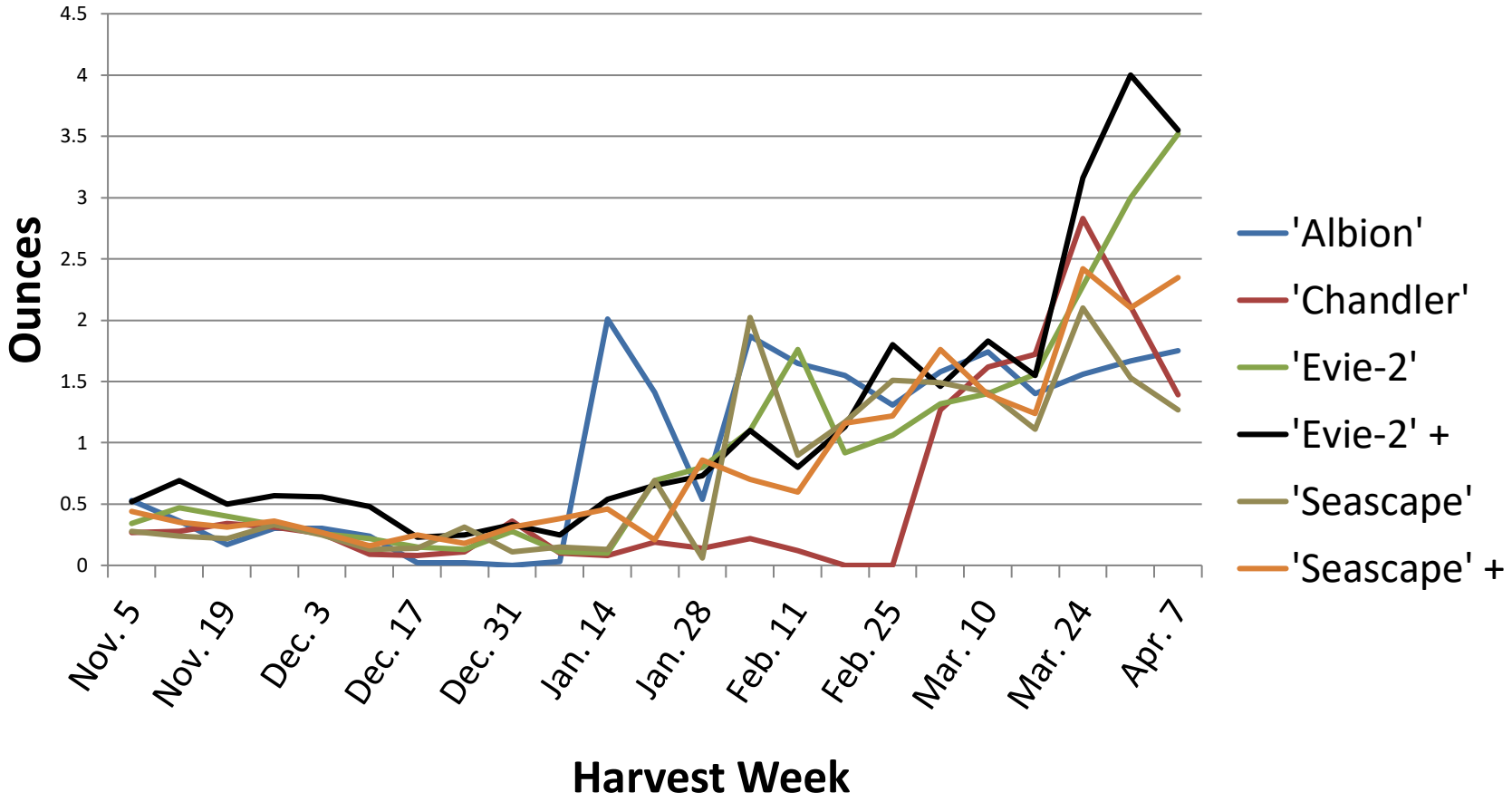
Table 8. Concentrations of phenols, flavonoids and ant oxidant capacity (TEAC) in strawberries from 13 cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE during the spring of 2011[z] (Experiment 2).

Cultivar	Phenols mg g^{-1}	Flavonoids mg g^{-1}	TEAC *u*m Trolox g^{-1}
Albion	1.36 abc ± 0.12	0.53 abc ± 0.06	72.47 ab ± 5.86
AC Wendy	0.93 d ± 0.12	0.31 f ± 0.06	46.43 c ± 8.28
Strawberry Festival (B)	1.47 ab ± 0.12	0.48 bcdef ± 0.06	90.32 a ± 8.28
Honeoye	1.17 bcd ± 0.12	0.49 bcde ± 0.06	74.07 ab ± 8.28
Seascape	1.51 a ± 0.08	0.64 a ± 0.04	81.70 a ± 5.86
Darselect	1.55 a ± 0.12	0.59 ab ± 0.06	84.76 a ± 8.28
Cavendish	1.07 cd ± 0.12	0.42 cdef ± 0.06	77.40 ab ± 8.28
Evie=2	1.37 abc ± 0.12	0.54 abc ± 0.06	87.54 a ± 8.28
Chandler	1.34 abc ± 0.12	0.45 bcdef ± 0.06	89.33 a ± 8.28
Clancy	1.57 a ± 0.12	0.52 abcd ± 0.06	68.53 abc ± 8.28
Portola	1.07 cd ± 0.12	0.32 ef ± 0.06	46.58 c ± 8.28
Grocery	1.07 cd ± 0.12	0.35 def ± 0.06	56.46 bc ± 8.28

[z]Numbers in columns followed by the same letters are not significantly different at $P < 0.05$.

Figure 6. Average Mass of Berries Harvested per Plant

2011 - 2012



In both graphs, these are raw numbers that were averaged over replications (no statistical implications).

One ounce = 28.35 grams

Figure 5. Average Number of Berries Harvested per Plant
2011 - 2012

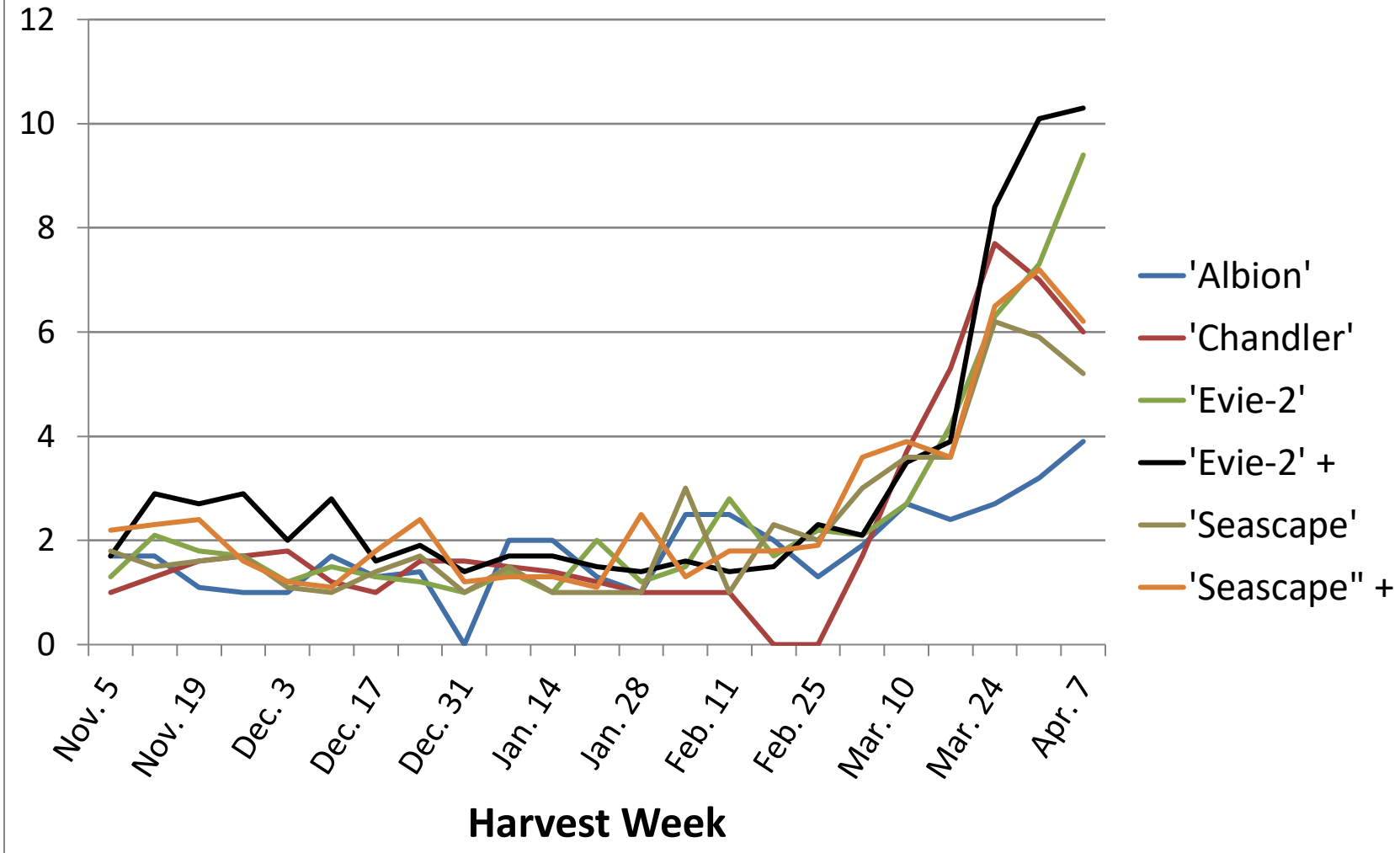


Table 9a**.** Berry mass per plant[z] (LSMeans) was calculated on a weekly basis for each of 13 strawberry cultivars for Week 1 (10/30/11) through Week (12/04/2011) (Experiment 3). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant					
Cultivar	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**
Albion	14.70 a ±0.14	9.57 ac ±0.14	3.65 a ±0.24	5.11 a ±0.34	6.95 ab ±0.29	2.73 a ±0.47
Seascape	6.17 b ±0.15	6.17 b ±0.12	5.09 ab ±0.23	5.87 a ±0.23	5.91 a ±0.21	2.82 a ±0.31
Chandler	8.15 bc ±0.20	8.42 ab ±0.14	8.75 bcf ±0.22	7.78 ab ±0.17	4.48 a ±0.20	2.50 a ±0.30
Portola	13.22 ad ±0.15	12.22 cd ±0.12	6.77 abd ±0.23	12.60 bcd ±0.27	13.12 bc ±0.25	4.36 a ±0.37
Seascape+	8.91 be ±0.14	8.34 ab ±0.13	6.95 beh ±0.22	8.40 ac ±0.18	7.00 a ±0.19	2.97 a ±0.28
Evie-2+	14.25 a ±0.17	17.82 ±0.13	13.52 c ±0.21	14.73 d ±0.17	14.91 c ±0.16	13.03 ±0.24
Cavendish	11.84 acef ±0.14	11.05 ade ±0.12	6.60 aefg ±0.21	6.80 a ±0.17	4.28 a ±0.21	2.65 a ±0.41
Evie-2	9.01 bdf ±0.16	12.31 ce ±0.12	10.37cdgh ±0.21	8.88 ac ±0.17	6.95 a ±0.16	3.80 a ±0.27

[z]Numbers in columns followed by the same letters are not significantly different at P <0.05.

Table 9b. Berry mass per plant[z] (LSMeans) was calculated on a weekly basis for each of 13 strawberry cultivars for Week 7 (12/17/2011) through Week 12 (01/21/2012) (Experiment 3). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant											
Cultivar	**Week 7**		**Week 8**		**Week 9**		**Week 10**		**Week 11**		**Week 12**	
Albion	0.43 a	±0.57	0.42 a	±0.53	– – –		0.54 af	±0.53	61.31 a	±1.58	41.19 a	±0.86
Seascape	2.68 bc	±0.38	5.24 be	±0.37	2.69 a	±0.42	4.55 abd	±0.77	1.86 bc	±0.85	20.74 ab	±1.06
Chandler	1.48 ab	±0.38	1.38 ac	±0.34	10.94b	±0.35	0.92 ac	±0.48	0.85 bd	±2.34	4.94 b	±0.52
Portola	2.65bd	±0.49	0.95 ad	±0.73	4.04 ab	±0.55	– – –		– – –		– – –	
Seascape+	5.45cde	±0.31	9.50 b	±0.35	9.25 b	±0.28	5.44 b	±0.51	9.39 ab	±0.64	6.38 b	±0.66
Evie-2+	5.69cd	±0.31	6.29 bf	±0.31	5.93 b	±0.22	4.25 be	±0.44	7.19 ab	±0.50	7.01 b	±0.47
Cavendish	0.82 ab	±0.69	2.07 cdef	±0.52	10.05 b	±0.70	– – –		– – –		– – –	
Evie-2	2.27be	±0.35	1.71 cd	±0.33	6.16 ab	±0.50	0.99 cdef	±0.58	0.53 cd	±0.59	2.49 b	±0.74

[z]Numbers in columns followed by the same letters are not significantly different at P <0.05.

Table 9c. Berry mass per plant[z] (LSMeans) was calculated on a weekly basis for each of 13 strawberry cultivars for Week 13 (01/28/2012) through Week 18 (03/10/2012) (Experiment 3). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant					
Cultivar	**Week 13**	**Week 14**	**Week 15**	**Week 16**	**Week 17**	**Week 18**
Albion	15.81 a ±1.31	83.53 a ±1.04	53.25 a ±0.76	38.06 ab ±0.40	35.37 a ±0.24	32.21 a ±0.19
Seascape	5.24 ab ±2.33	14.33 a ±1.05	8.28 a ±1.06	15.50 ab ±0.54	33.45 a ±0.21	38.32 a ±0.17
Chandler	1.71 bc ±0.91	3.63 ±1.32	2.32 ±0.72	– – –	– – –	31.67 a ±0.27
Portola	1.01 ac ±2.35	31.73 a ±1.53	62.60 a ±0.81	70.28 ab ±0.75	58.46 a ±0.31	93.21 ±0.19
Seascape+	47.73 ac ±1.29	14.16 a ±0.84	5.19 a ±0.55	16.53 a ±0.39	29.82 a ±0.21	47.45 a ±0.19
Evie-2+	9.49 a ±0.88	21.39 a ±0.60	13.77 a ±0.50	20.03 ab ±0.31	45.01 a ±0.22	36.86 a ±0.17
Cavendish	20.84 ac ±2.24	70.34 a ±1.45	35.74 a ±0.55	52.95 b ±0.39	32.67 a ±0.18	49.73 a ±0.17
Evie-2	7.93 ac ±0.81	13.37 a ±0.65	18.81 a ±0.55	16.49 ab ±0.33	23.65 a ±0.21	32.32 a ±0.17

[z]Numbers in columns followed by the same letters are not significantly different at P <0.05.

Table 9d. Berry mass per plant[z] (LSMeans) was calculated on a weekly basis for each of 13 strawberry cultivars for Week 19 (03/28/2012) through Week 24 (04/12/2012) (Experiment 3). Plants were grown in a double-layer polyethylene greenhouse located in Lincoln, NE and fertigated using a capillary mat system. The interaction of Week number x Cultivar was significant for all weeks.

	Berry mass(g) per plant											
Cultivar	**Week 19**		**Week 20**		**Week 21**		**Week 22**		**Week 23**		**Week 24**	
Albion	47.18 abd	±0.14	36.61 abc	±0.16	38.47 a	±0.17	45.28 ac	±0.15	41.45 a	±0.17	34.16 ac	±0.23
Seascape	38.68 ae	±0.14	28.45 b	±0.17	54.00 ab	±0.17	36.48 ab	±0.15	30.82 a	±0.17	21.43 ab	±0.23
Chandler	43.82 afg	±0.17	44.81 c	±0.17	71.35 bc	±0.14	54.01 ad	±0.16	34.20 a	±0.17	27.43adf	±0.15
Portola	70.10 bcf	±0.15	71.54	±0.17	116.35 d	±0.18	121.47 e	±0.15	92.03 b	±0.18	66.24 e	±0.24
Seascape+	33.80deg	±0.15	30.73 abc	±0.16	51.01 ace	±0.17	47.34 af	±0.15	39.60 a	±0.17	18.24 bf	±0.23
Evie-2+	51.71 ac	±0.14	39.55 abc	±0.16	81.84bdef	±0.17	102.33 eg	±0.15	92.58 b	±0.17	56.65 ce	±0.23
Cavendish	41.42acd	±0.14	28.05 ab	±0.16	15.15	±0.17	24.01 b	±0.15	18.29	±0.19	8.67	±0.25
Evie-2	36.85ad	±0.14	37.38abc	±0.16	56.71 acf	±0.17	72.71 cdfg	±0.15	80.50 b	±0.17	48.10cde	±0.23

[z]Numbers in columns followed by the same letters are not significantly different at P <0.05.

Table 10. Initial flowering date, number of plants flowering at that time, date of first harvest and total number of strawberry plants that were grown from mid-September through April 2012 (Experiment 3) in a double-layer polyethylene greenhouse in Lincoln, NE and fertigated using a capillary mat system. Total and average berry mass per plant were not related to response type[z].

Cultivar	Type[z]	Flowering time		1st harvest	Total (g)	Average berry mass per plant (g)	Total number	Average number per plant
Albion	d-n	09/30/11	31 plants	10/27/11	12,019.92	293.17	844	21
		01/31/12	41Total					
Cavendish	Jb	09/30/11	30 plants	10/27/11	8,851.37	221.28	864	22
		01/31/12	40 Total					
Chandler	Jb	09/30/11	5 plants	11/05/11	13,657.37	333.11	1,639	40
		01/24/12	41 Total					
Evie-2	d-n	09/30/11	26 plants	11/01/11	18,453.09	439.36	1,776	42
		02/14/12	42 Total					
Evie-2 +	d-n	09/30/11	33 plants	10/31/11	25,681.53	570.70	2,595	58
		01/31/12	45 Total					
Portola	d-n	09/30/11	27 plants	10/31/11	17,011.89	739.65	984	43
		01/31/12	23 Total					
Seascape	d-n	09/30/11	22 plants	10/31/11	10,593.08	294.25	1,246	35
		01/31/12	36 Total					
Seascape +	d-n	09/30/11	28 plants	10/31/11	11,378.54	379.29	1,277	43
		10/24/11	30 Total					

[z] Jb = June-bearing; d-n = day-neutral

Table 11. Concentrations of glucose, fructose, sucrose, total sugars and a calculated sweetness index for grocery store berries and 8 strawberry cultivars which were grown in a double-layer polyethylene greenhouse in Lincoln, NE and fertigated using a capillary mat system during the spring of 2012[z] (Experiment 3).

Cultivar	Glucose	Fructose	Sucrose	Total Sugars	Sweetness
	mg g^{-1}	mg g^{-1}	mg g^{-1}	mg g^{-1}	Index
Albion	2.59 ab ± 0.48	2.61 ab ± 0.40	2.68 ab ± 0.51	5.65 ab ± 1.71	12.19 abc ± 1.97
Seascape	2.52 ab ± 0.34	2.32 ab ± 0.29	2.96 a ± 0.36	4.93 b ± 1.71	11.85 abc ± 1.40
Seascape +	-	-	-	9.98 a ± 1.71	-
Cavendish	2.08 b ± 0.48	2.34 ab ± 0.40	0.89 c ± 0.51	7.26 ab ± 1.71	8.42 bc ± 1.97
Evie -2	2.36 ab ± 0.34	2.18 b ± 0.29	2.85 a ± 0.36	7.03 ± 1.21	11.22 abc ± 1.40
Evie -2+	-	-	-	-	-
Chandler	2.86 ab ± 0.48	2.65 ab ± 0.40	2.80 a ± 0.51	4.18 b ± 1.71	12.72 ab ± 1.97
Portola	1.68 b ± 0.48	1.53 b ± 0.40	1.29 bc ± 0.51	5.79 ab ± 1.71	6.94 c ± 1.97
Grocery	3.49 a ± 0.48	3.31 a ± 0.40	3.66 a ± 0.51	5.93 ab ± 1.71	16.02 a ± 1.97

[z] Numbers in columns followed by the same letters are not significantly different at $P < 0.05$.

Table 12. Concentrations of phenols, flavonoids and ant oxidant capacity (TEAC) for grocery store strawberries (purchased; cultivar unknown) and 8 strawberry cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE and fertigated using a capillary mat system during the spring of 2012[z] (Experiment 3).

Cultivar	Phenols mg g^{-1}	Flavonoids mg g^{-1}	TEAC *u*m Trolox g^{-1}
Albion	1.23 ab ± 0.11	0.41 b ± 0.05	43.00 bc ± 5.22
Seascape	1.44 a ± 0.08	0.55 a ± 0.04	60.48 a ± 3.94
Seascape +	-	-	-
Cavendish	1.31 ab ± 0.11	0.49 ab ± 0.05	63.65 a ± 5.22
Evie -2	1.24 ab ± 0.11	0.39 b ± 0.04	57.84 a ± 5.22
Evie -2+	1.02 bc ± 0.11	-	41.04 c ± 5.22
Chandler	1.44 a ± 0.11	0.47 ab ± 0.05	56.60 ab ± 5.22
Portola	0.82 c ± 0.11	0.23 c ± 0.05	34.40 c ± 5.22
Grocery	1.27 ab ± 0.11	0.42 b ± 0.05	42.16 bc ± 5.22

[z]Numbers in columns followed by the same letters are not significantly different at P <0.05.

Table 13. Measurements of °Brix for 8 strawberry cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE and fertigated using a capillary mat system during the spring of 2012[z] (Experiment 3). The higher the number the lower the amount of sugar a winemaker would need to add to the strawberry juice to produce a sweet wine.

Cultivar	Week 1		Week 2		Week 3	
	Fresh	Frozen	Fresh	Frozen	Fresh	Frozen
	°Brix					
Albion	8.55 a ± 0.62	8.00 a ± 0.68	7.83 a ± 0.37	7.58 a ± 0.34	7.10 a ± 0.33	7.03 a ± 0.38
Seascape	8.31 a ± 0.57	9.23 a ± 0.93	7.42 a ± 0.43	7.31 ab ± 0.38	6.57 ab ± 0.33	6.52 ab ± 0.47
Seascape +	8.06 ab ± 0.80	-	7.37 ab ± 0.52	7.73 a ± 0.34	6.07 abc ± 0.47	6.10 abc ± 0.41
Chandler	7.85 ab ± 0.57	7.45 ab ± 0.51	7.05 abc ± 0.33	6.53 bc ± 0.34	6.04 bc ± 0.30	6.14 abc ± 0.41
Evie-2+	7.32 abc ± 0.53	6.10 b ± 0.53	6.27 bc ± 0.30	6.23 c ± 0.34	5.58 c ± 0.27	5.18 bc ± 0.38
Evie-2	6.32 bc ± 0.68	7.05 ab ± 0.51	6.15 bc ± 0.33	6.30 c ± 0.34	5.28 c ± 0.30	5.12 c ± 0.38
Cavendish	6.19 c ± 0.68	6.04 b ± 0.78	5.95 c ± 0.43	5.93 c ± 0.34	5.49 c ± 0.38	5.16 bc ± 0.63

[z]Numbers in columns followed by the same letters are not significantly different at P <0.05.

Table 14. Measurements of ºBrix[z] for 8 strawberry cultivars that were grown in a double-layer polyethylene greenhouse in Lincoln, NE and fertigated using a capillary mat system during the spring of 2012[z] (Experiment 3). The higher the number the lower the amount of sugar a winemaker would need to add to the strawberry juice to produce a sweet wine.

Cultivar	Week 4		Week 5	
	Fresh	Frozen	Fresh	Frozen
	°Brix			
Albion	7.95 a ± 0.41	7.10 a ± 0.34	8.47 a ± 0.36	7.17 b ± 0.32
Seascape	6.58 ab ± 0.63	7.14 a ± 0.37	8.27 a ± 0.61	8.52 a ± 0.43
Seascape+	7.48 a ± 0.63	7.12 a ± 0.37	-	9.12 a ± 0.43
Chandler	6.58 ab ± 0.63	6.36 ab ± 0.41	-	6.72 bc ± 0.32
Evie-2+	5.70 b ± 0.33	5.72 b ± 0.37	6.54 b ± 0.29	6.35 c ± 0.27
Evie-2	5.66 b ± 0.35	5.68 b ± 0.34	6.54 b ± 0.29	6.02 c ± 0.20
Cavendish	-	-	-	-

[z] Numbers in columns followed by the same letters are not significantly different at P <0.05.