

SUPPLEMENTAL TABLE 1. Whole leaf nutrition in late summer by cultivar in 2018 and 2019.

	N	P	K	Ca	Mg	Na	Zn	Fe	Cu	Mn	S	B	Cl
2018													
Cultivar	% dry weight					mg/kg dry weight							
Alachua	1.23lm	0.21bf	1.00lp	2.04ch	0.35bl	580.2af	33.95ab	863.1ab	9.85b	270.9ef	1060.1gi	33.01fg	561.7ab
Albemarle	1.22lm	0.19bf	0.94mp	2.15bg	0.46af	463.9ci	26.97ab	1474.7ab	9.75b	315.6ef	1039.1hi	31.02fg	507.5b
Black Beauty	1.45fm	0.18cf	1.28gp	1.67ei	0.24jn	507.4bg	41.74ab	916.7ab	10.77b	117.1f	1096.9gi	27.20g	480.4b
Black Fry	1.19m	0.18cf	0.91np	2.07bh	0.38ak	578.8af	31.16ab	992.9ab	9.10b	253.2ef	987.4i	29.64g	519.3ab
Bountiful	1.33hm	0.16f	0.82p	2.05ch	0.33dm	601.1ad	34.97ab	816.5ab	9.36b	266.4ef	1081.0gi	29.24g	487.8ab
Carlos	1.41gm	0.20cf	1.08ip	1.92ci	0.33dm	810.0ab	23.83b	1184.5ab	10.46b	305.6ef	1099.1gi	34.30fg	600.5ab
Creek	1.31im	0.18ef	0.87op	1.89ci	0.52ab	668.9ad	30.08ab	1201.5ab	12.67ab	147.6f	1107.2gi	34.86fg	1183.7a
Darlene	1.47gm	0.21bf	1.19hp	1.92ci	0.27hn	509.0bg	27.45ab	580.5ab	9.73b	245.1ef	1218.6fi	35.16fg	754.2ab
Delicious	1.33hm	0.26af	0.87jp	1.89ci	0.55a	692.4ad	27.71ab	1373.2ab	9.90b	201.4ef	1134.4gi	32.86fg	492.5b
Dixie	1.35hm	0.20cf	1.07op	1.84di	0.41ai	487.5cg	41.45ab	799.3ab	9.16b	147.7f	1188.6fi	41.62fg	583.6ab
Dixiered	1.48em	0.19cf	0.99lp	2.53ac	0.30fn	651.6ad	37.14ab	1612.4ab	8.91b	313.4ef	1255.8fi	30.73fg	768.1ab
Doreen	1.28jm	0.22cf	1.01lp	2.74ab	0.46af	578.8af	38.60ab	1845.2ab	14.45ab	230.9ef	1228.9fi	40.05cg	477.4b
Dunstan's Dream	1.83ae	0.32ab	1.73cg	2.20bg	0.30fm	278.3fj	52.77a	1228.1ab	16.26ab	158.8f	2009.4cd	70.78ab	1310.8a
Eudora	1.60cj	0.21bf	1.36fn	2.96a	0.33dm	597.7ae	47.52ab	1897.4ab	16.09ab	191.4ef	1472.8ef	37.68eg	418.8b
Fry	1.59ck	0.23bf	1.44ek	2.08bh	0.29gn	473.2ci	43.35ab	1144.6ab	12.66ab	245.5ef	1334.9fh	34.36fg	478.3b
Granny Val	1.57ck	0.24bf	1.50ej	2.30af	0.42ai	664.3bd	36.39ab	1476.0ab	18.26ab	146.9f	1288.3fi	43.83cg	528.4ab
Hall	1.42fm	0.23bf	1.33go	1.90ci	0.45ag	435.7dj	34.85ab	1739.7ab	19.15ab	147.2f	1235.9fi	37.00fg	391.0b
Higgins	1.63ci	0.19df	1.48ek	1.83di	0.30fn	664.8ad	32.94ab	1354.7ab	15.34ab	321.3ef	1190.9fi	33.01fg	540.0ab
Hunt	1.54dm	0.21bf	1.41el	1.93ci	0.31em	557.9bf	38.96ab	1036.3ab	11.47b	222.3ef	1326.1fi	42.59cg	399.2b
Janebell	1.44fm	0.20cf	1.14hp	1.61gi	0.30fm	545.8bg	25.76b	808.9ab	9.48b	203.3ef	1152.1fi	29.12g	366.2b
Late Fry	1.35hm	0.22bf	1.02kp	1.62gi	0.45ag	626.7ad	35.22ab	1017.9ab	10.11b	592.1be	1109.7gi	40.85cg	505.2b
Loomis	1.36hm	0.21bf	0.99lp	1.70ei	0.40aj	753.5ac	28.06ab	906.0ab	8.82b	144.9f	1299.3fi	34.99fg	493.7b
Magnolia	1.63cj	0.21bf	1.28gp	1.70ei	0.30fm	574.6af	32.78ab	1518.2ab	14.82ab	102.6f	1367.0fg	39.00dg	464.2b

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Magoon	1.46fm	0.29ae	1.35fn	1.90ci	0.48ae	645.8ad	33.22ab	1277.9ab	11.30b	741.0ad	1355.1fh	44.91cg	548.9ab
Pam	1.37hm	0.19df	1.16hp	2.18bi	0.36bl	497.4cg	40.68ab	2684.3a	20.91ab	270.0ef	1150.5gi	28.83g	425.0b
Scuppernong	1.32hm	0.24bf	1.26gp	1.76di	0.48ad	600.2ad	29.46ab	1309.5ab	12.25ab	923.1ab	1242.2fi	38.14eg	488.9b
Southern Home	1.44fm	0.25bf	1.38fm	2.34ae	0.43ah	883.2a	33.52ab	1774.3ab	16.60ab	483.9cf	1257.0fi	42.54cg	536.4ab
Southern Jewel	1.56cm	0.19cf	1.16hp	1.95ci	0.37bl	481.9ch	27.78ab	685.1ab	10.33b	372.7df	1175.8fi	35.09fg	803.6ab
Southland	1.43fm	0.20cf	1.53ej	1.69ei	0.35cl	436.1dj	33.76ab	899.8ab	10.54b	795.1ac	1215.0fi	37.84eg	464.6b
Sterling	1.33hm	0.23bf	1.16hp	1.64fi	0.50ac	578.9af	34.24ab	1912.3ab	15.52ab	1016.7a	1239.1fi	36.29eg	600.4ab
Supreme	1.42fm	0.24bf	1.19hp	1.56gi	0.33cm	584.3af	33.69ab	964.6ab	11.23b	747.5ad	1232.3fi	38.38eg	564.8ab
Triumph	1.25km	0.21bf	1.27gp	1.89ci	0.38ak	586.7af	42.64ab	1665.9ab	12.85ab	172.5f	1178.0fi	30.27g	466.6b
Welder	1.29im	0.21bf	1.15hp	1.58gi	0.44ag	494.1cg	31.90ab	2276.2ab	24.26a	1024.9a	1096.9gi	37.00eg	497.0b
101-14 MGt.	1.89bc	0.25bf	2.03bd	1.36i	0.17mn	129.2j	25.40b	330.1ab	10.86b	142.1f	1799.2ef	56.34be	317.7b
1103P	1.67bc	0.27af	1.80bf	1.67ei	0.32dm	168.9ij	32.78ab	807.2ab	11.50b	112.6f	1716.2ce	60.19bc	307.9b
140Ru	1.73bg	0.37a	1.58dh	1.44hi	0.37bl	165.7ij	27.46ab	400.7b	10.96b	284.0ef	1901.4cd	68.51b	238.7b
420A	1.87ad	0.23bf	1.54ei	1.94ci	0.41aj	170.6hj	42.73ab	695.5ab	12.05b	475.5cf	2049.8bc	89.25a	279.3b
Matador	1.76bf	0.31ac	2.47a	1.82di	0.27in	239.1gj	39.38ab	1284.6ab	17.78b	126.9f	2340.0ab	50.98bf	530.6b
Schwarzmann	1.98b	0.30ad	2.15ac	1.95ci	0.22kn	286.8gj	46.39ab	270.9b	12.48b	164.2f	2096.3bc	67.01b	346.1b
Black Spanish	1.62ch	0.21bf	1.88be	2.15bg	0.29gn	572.4bf	32.83ab	573.4b	9.59b	146.9f	1472.3ef	68.11b	970.4ab
Blanc du Bois	1.90ac	0.23bf	1.68dg	2.43ad	0.21ln	616.0bd	38.97ab	344.9b	12.19b	100.8f	1783.1ce	59.11bd	1090.3a
Victoria red	2.11a	0.27bf	2.25ab	2.09bh	0.13n	527.6bg	34.27ab	313.9b	9.16b	96.1f	2417.6a	67.30b	597.8ab
Significance	***	***	***	***	***	****	**	*	**	***	***	***	***
Pooled by Type													
Muscadine	1.41b	0.21c	1.17b	1.95b	0.38a	578.4a	34.14	1297.9a	12.56	361.2a	1198.7b	35.45b	580.2b
Rootstock	1.82a	0.29a	1.93a	1.70c	0.29b	193.4b	35.69	631.5c	12.61	217.6b	1983.8a	65.38a	336.7c
Hybrid	1.79a	0.26b	1.78a	2.23a	0.27b	562.9a	38.45	853.5b	12.93	199.7b	1805.0a	60.82a	872.5a
Significance	***	**	***	*	*	***	ns	**	ns	***	***	***	**
2019													

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Alachua	1.92bf	0.15de	0.76cd	2.02ae	0.15de	270.5bf	32.82b	59.21	5.49eg	184.2ab	1475.4gd	34.23fg	-
Albemarle	1.75f	0.16ce	0.70d	1.71ce	0.26be	377.0bd	30.77b	92.16	4.74g	115.0ab	1274.3d	38.59dg	-
Black Beauty	1.86cf	0.14e	0.89bd	1.91ae	0.19bf	331.1be	34.01ab	171.60	5.98cg	99.7ab	1384.4hk	38.50eg	-
Black Fry	1.85cf	0.15de	0.75cd	2.15ae	0.23af	249.2bf	37.92ab	91.88	6.42cg	119.5ab	1446.8hk	34.77fg	-
Bountiful	1.91bf	0.14e	0.67d	1.99ae	0.24af	373.6ad	34.37ab	86.07	5.74dg	147.4ab	1441.2hk	38.33eg	-
Carlos	2.03af	0.15ce	0.73cd	2.21ae	0.26ae	610.9a	34.59ab	112.29	5.90dg	169.7ab	1616.2dk	45.68bg	-
Creek	1.92bf	0.17be	0.75cd	1.75ce	0.25af	322.1bf	32.49b	81.60	6.33cg	102.9ab	1474.5gk	42.77bg	-
Darlene	2.16af	0.19ae	0.99ad	1.76ce	0.21af	161.1cf	30.14b	71.43	7.40bg	163.2ab	1557.1dk	45.14bg	-
Delicious	2.02af	0.16be	0.77cd	1.82be	0.19bf	407.4ac	30.71b	86.48	5.99cg	138.6ab	1550.3ek	44.18bg	-
Dixie	1.92bf	0.15ce	0.71d	2.08ae	0.20bf	195.5bf	26.76b	73.05	6.01cg	118.0ab	1436.8hk	34.74fg	-
Dixiered	1.87cf	0.17be	0.81bd	1.89be	0.14ef	339.2be	29.30b	70.23	5.25g	114.3ab	1465.3hk	40.95bg	-
Doreen	1.81df	0.15ce	0.66d	1.99ae	0.22af	392.1ac	34.78ab	66.18	5.45eg	110.2ab	1447.8hk	41.47bg	-
Eudora	2.07af	0.21ae	1.41ab	1.67ce	0.17bf	219.1bf	32.64b	47.01	7.69bg	169.4ab	1713.4bi	48.53bg	-
Fry	1.75f	0.18be	0.92ad	2.02ae	0.22af	288.5bf	36.27ab	91.95	6.72cg	130.9ab	1682.2bj	47.10bg	-
Granny Val	1.96bf	0.17be	1.08ad	2.24ae	0.22af	338.4be	31.91b	104.53	7.55bg	195.5ab	1560.2dk	55.45bg	-
Hall	1.87cf	0.17be	0.86ad	2.08ae	0.23af	310.7bf	34.14ab	61.81	5.98cg	135.4ab	1554.0dk	45.04bg	-
Higgins	2.22af	0.19ae	0.98ad	2.09ae	0.23af	207.3bf	31.36b	70.12	7.47bg	170.1ab	1700.7bj	63.14ad	-
Hunt	1.96bf	0.18be	0.82bd	1.8be	0.21af	282.5bf	32.54b	61.70	5.76dg	179.9ab	1501.5fk	57.74af	-
Janebell	2.02af	0.19	0.85bd	1.99ae	0.22af	250.5bf	26.19b	74.38	6.04cg	104.5aba	1567.4dk	46.91bg	-
Late Fry	1.95bf	0.18ae	0.85bd	1.92ae	0.19bf	252.3bf	27.27b	51.78	5.35g	107.1b	1479.0gk	44.52bg	-
Loomis	1.80ef	0.16be	0.75cd	1.99ae	0.22af	313.7bf	27.97b	102.07	6.41cg	190.6ab	1352.4ik	39.24cg	-
Magnolia	2.14af	0.20ae	0.96ad	1.75ce	0.23af	269.8bf	35.36ab	128.28	7.12cg	151.3ab	1624.1ck	58.54af	-
Magoon	1.95bf	0.19ae	0.98ad	1.57de	0.23af	216.8bf	35.07ab	56.78	6.53cg	157.5ab	1407.6hk	47.59bg	-
Pam	1.87cf	0.17be	0.83bd	1.95ae	0.17bf	367.3ad	34.09ab	73.86	6.29cg	111.1ab	1396.1hk	42.79bg	-
Scuppernong	2.03af	0.18ab	0.94d	1.73ce	0.16cf	214.8bf	31.56b	51.29	6.48cg	106.7ab	1511.9fk	39.13cg	-
Southern Jewel	2.10af	0.19ae	1.24ad	1.84be	0.15df	179.6cf	31.62b	41.97	7.29bg	88.9ab	1485.2gk	42.20bg	-
Southland	1.77f	0.16ce	0.88ad	2.13ae	0.18bf	261.5bf	30.88b	74.14	5.38fg	112.7ab	1308.9ik	32.65g	-
Sterling	1.80ef	0.15ce	0.76cd	2.03ae	0.26ad	452.1ab	45.29ab	120.72	5.23g	161.8ab	1414.0ck	37.73eg	-
Supreme	2.07af	0.18be	0.70d	1.98ae	0.18bf	264.3bf	34.49ab	66.28	7.07cg	123.7ab	1524.0hk	47.48bg	-

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Triumph	1.78f	0.15de	0.67d	1.92ae	0.27ad	391.5ac	34.61ab	143.79	5.35g	159.3ab	1427.5hk	44.62bg	-
Welder	1.92f	0.18be	0.90ad	1.75ce	0.17bf	168.4cf	28.95b	87.46	6.18cg	105.9ab	1412.5hk	45.65bg	-
Dunstan's Dream	2.41af	0.26ab	1.18ad	2.50ad	0.25ae	30.6e	57.16a	76.48	10.04ac	141.1ab	1941.1ae	63.28ac	-
Southern Home	2.36af	0.26ab	1.33ac	1.55de	0.22af	218.3bf	30.03b	123.35	13.00a	153.9ab	1635.5ck	43.75bg	-
101-14 MGt.	2.55ae	0.24ae	1.17ad	1.56de	0.23af	37.7e	27.94b	58.05	7.82bg	80.9ab	1946.5ad	45.32bg	-
1103P	2.56ad	0.24ad	1.17ad	1.64ce	0.26ae	35.3e	28.74b	71.46	8.58bg	70.2b	2074.3ab	59.81ae	-
140Ru	2.45af	0.21ae	0.89ad	1.50e	0.33a	31.5e	29.26b	67.97	8.07bd	112.6ab	1921.9be	51.24ag	-
420A	2.38af	0.17be	0.64d	2.75av	0.28ac	50.7e	37.76ab	114.40	6.35cg	137.9ab	1888.1bf	74.57a	-
Matador	2.65ab	0.28a	1.47a	1.31e	0.21af	35.9e	45.11ab	58.54	9.43be	79.3ab	1938.5ae	50.53ag	-
Schwarzmann	2.64ab	0.26ab	1.23ad	1.48e	0.21af	30.6e	32.59b	195.40	9.56bd	115.3ab	1860.5bg	45.14bg	-
Black Spanish	2.25af	0.25ac	0.98ad	2.55ac	0.29ab	213.2bf	33.77b	62.31	9.44be	195.6b	1773.3bh	64.13ab	-
Blanc du Bois	2.57ac	0.22ae	0.95ad	2.76ab	0.26ae	150.0cf	32.51b	68.10	11.26ab	86.4ab	2014.2ac	50.70ag	-
Victoria red	2.72a	0.23ae	1.23ad	2.86a	0.13f	263.2bf	34.88ab	83.54	9.43af	146.4ab	2325.5a	51.76ag	-
Significance	***	***	***	***	***	***	**	ns	***	***	***	***	-
Pooled by Type													-
Muscadine	1.94b	0.17b	0.86b	1.93ab	0.21b	299.32a	32.61b	82.97b	6.21c	136.94a	1490.09b	44.05b	-
Roostock	2.51a	0.23a	1.08ab	1.79b	0.26a	38.35c	33.75b	94.35a	8.50b	107.00b	1927.63a	56.15a	-
Hybrid	2.47a	0.24a	1.13a	2.44a	0.23b	202.19b	37.67a	82.76b	10.63a	144.65a	1937.93a	54.73ab	-
Significance	***	***	***	***	**	***	*	**	***	***	***	***	-
Interactions													-
Year	**	***	***	ns	***	***	ns	**	***	***	***	***	-
Cultivar x year	ns	***	**	***	***	***	ns	*	***	***	***	***	-

^ans, and *, **, *** indicate not significant and statistically significant at the 0.05, 0.01, 0.001 level of probability, respectively.

^bData not available.

^cMeans followed by different letters are significantly different at the 95 % level (Tukey's HSD)