

Vidalia Onion and Vegetable Research Center

Onion Variety Review
June 23, 2022



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EXTENSION

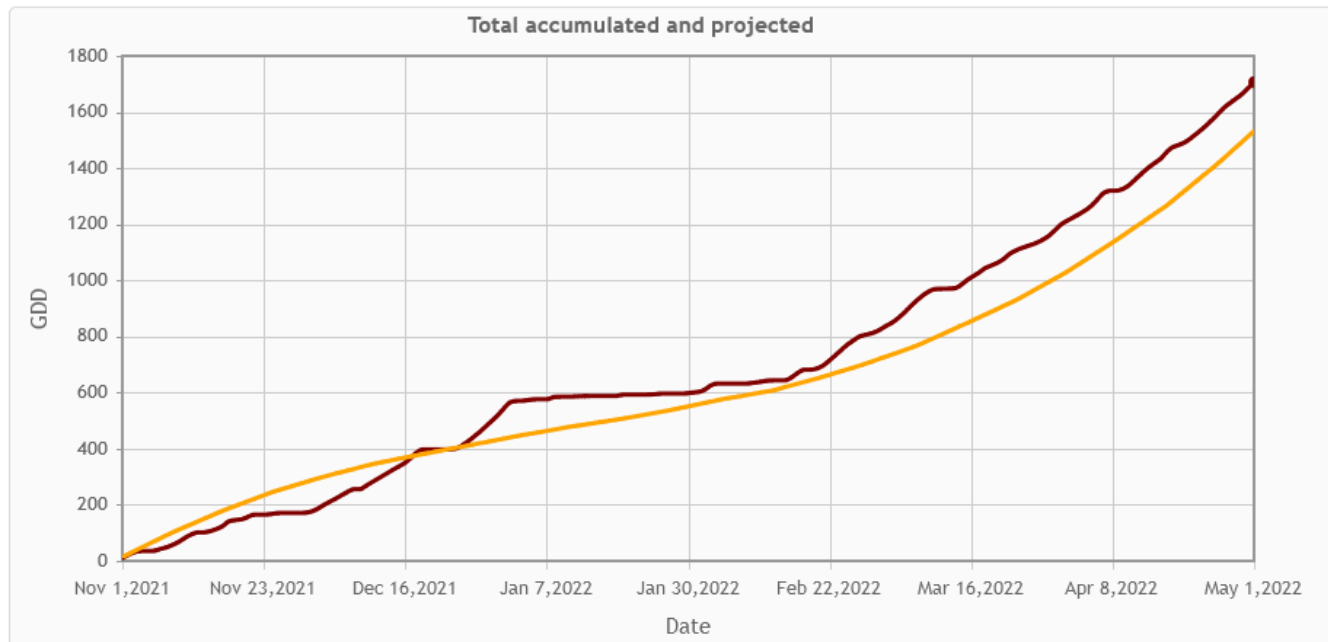


2021-2022 Season in Review

Model: 50 °F - Toombs County (GA)

Period [Nov 1 - May 1]:	This season	1707 GDD
	Last season	1589 GDD
	Historic average	1532 GDD

■ Current accumulation
■ La Niña years, long-term climatology
■ Historic Average



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2021-2022 Season in Review

Stanley Farms

Vidalia, Toombs County, Georgia

Historical Data

From:

To:

Submit

(Tmin,Tmax and Precipitation amount)

Date	Max Temperature [°F]	Min Temperature [°F]	Rain (in)
Mar 12	69	32.4	0.26
Mar 13	57.1	26.3	0
Mar 14	69	32.9	0

Purvis Farms

Glennville, Tattnall County, Georgia

Historical Data

From:

To:

Submit

(Tmin,Tmax and Precipitation amount)

Date	Max Temperature [°F]	Min Temperature [°F]	Rain (in)
Mar 12	69.2	33.4	0.15
Mar 13	56.9	27	0
Mar 14	69.7	32.2	0

John A. Flowers Blueberry Farm

Odum, Wayne County, Georgia

Historical Data

From:

To:

Submit

(Tmin,Tmax and Precipitation amount)

Date	Max Temperature [°F]	Min Temperature [°F]	Rain (in)
Mar 12	68.1	31.3	0.41
Mar 13	59.2	24.8	0
Mar 14	69.1	31.1	0



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Problems discovered at harvest



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Problems discovered at harvest



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Harvest and Drying Conditions

April 11, 5:30 pm



May 9, 8:30 am



Variety Trial

- 52 entries
- Planted Dec. 1st
- 150 lbs 5-10-15 after planting
- 300 lbs 5-10-15 early Jan
- 500 lbs 5-10-15 late Jan
- Cal Nitrate – 200 lbs Mid Feb



Variety Trial—52 Entries

- 35 Yellow Granex/Vidalia Types
- 6 yellow grano
- 3 white
- 1 pink/red
- 7 red

Yellow Granex/Vidalia Types

<u>Solar</u>	<u>Wannamaker</u>	<u>Vilmorin-Mikado</u>	<u>Emerald</u>	<u>Seminis</u>	<u>Bejo</u>
Candy Kim	New Frontier	Fast Track	EMY 55455	PRR	Macon
Candy Ann	WI-129	Quick Start	EMY 55126	Sweet Agent	Pirate
Candy Joy			EMY 55843	Sweet Magnolia	Tania
			EMY 55457	Century	Alison
				Sweet Azalea	369
					Maragogi

<u>DP Seeds</u>	<u>American Takii</u>	<u>Nunhems</u>	<u>Sakata</u>	<u>Hazera</u>	<u>Crookham</u>
Sapelo	Superex	Plethora	404	A1298	OSYF12-7091
Georgia Boy		Vidora			OSYF10-4021
1407		5901			
Early Sweet		1011			



Dig Dates for Yellow Granex/Vidalia

December 1 planting date

Very Early (March 29)	Early (April 5)	Medium (April 13)	Medium-Late (April 20)	Late (April 28)
Candy Ann	Candy Kim	WI-129	EMY 55843	Macon
Candy Joy	New Frontier	Sweet Agent	EMY 55126	Nun 5901
Fast Track	Early Sweet	Pirate	EMY 55455	
Quick Start	Sakata 404	Tania	EMY 55457	
1407	Vidora	Maragogi	PRR	
Nun 1011	OSYF12-7091	Bejo 369	Sweet Magnolia	
	OSYF10-4021	Sapelo	Century	
		Plethora	Sweet Azalea	
		A1298	Alison	
			Georgia Boy	
			Superex	



Yellow Grano

<u>DP Seeds</u>	<u>American Takii</u>	<u>Nunhems</u>	<u>Hazera</u>
Timon	Rio Del Sol Rio Dulce	Dulciana Vulkana	Joelino

<u>Very Early (March 29)</u>	<u>Early (April 5)</u>	<u>Medium (April 13)</u>	<u>Medium-Late (April 20)</u>	<u>Late (April 28)</u>
	Dulciana	Timon		
	Vulkana	Rio Del Sol Rio Dulce Joelino		

White

<u>Seminis</u>	<u>DP Seeds</u>
Alba Blanca	White Phantom White Gaspare

<u>Very Early (March 29)</u>	<u>Early (April 5)</u>	<u>Medium (April 13)</u>	<u>Medium-Late (April 20)</u>	<u>Late (April 28)</u>
		Alba Blanca	White Phantom	
			White Gaspare	

Pink

Hazera

Sivan—Dug
April 20th.



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Red

<u>Seminis</u>	<u>Bejo</u>	<u>DP Seeds</u>	<u>Nunhems</u>
Red Maiden	Red Marvel Red Sensation	Lucille Chianti	Sofire Mata Hari

<u>Very Early (March 29)</u>	<u>Early (April 5)</u>	<u>Medium (April 13)</u>	<u>Medium-Late (April 20)</u>	<u>Late (April 28)</u>
		Red Maiden	Lucille	Chianti
		Red Marvel	Mata Hari	
		Red Sensation		
		Sofire		



Field Weights

Variety	lbs/plot	40 lbs boxes/A		Variety	lbs/plot	40 lbs boxes/A	
Macon	198.75	1804	a	A1298	149	1352	fghij
Sweet Magnolia	189.25	1717	ab	Vidora	148.87	1351	fghij
Superex	188.75	1713	ab	Sivan	148.75	1350	fghij
Sweet Azalea	185.75	1686	abc	Maragogi	147.25	1336	ghij
5901	185.37	1682	abc	Rio Del Sol	141	1280	hij
Century	181.25	1645	abcd	Joelino	140.1	1271	hijk
Alison	179.25	1627	bcde	Candy Kim	133.62	1213	ijkl
EMY 55455	178.5	1620	bcde	404	133.62	1213	ijkl
EMY 55457	175.37	1591	bcde	Early Sweet	133.37	1210	ijkl
Sweet Agent	174	1579	bcde	Red Marvel	132.24	1200	ijkl
EMY 55843	173.12	1571	bcde	Timon	132.05	1198	ijkl
WI-129	170.25	1545	cde	White Gaspere	131.75	1196	ijkl
GA Boy	168.75	1531	cde	Sapelo	131.25	1191	ijkl
Mata Hari	167.57	1521	cdef	Red Sensation	129.64	1176	ijkl
PRR	163.37	1483	defg	Red Maiden	129.5	1175	jkl
Pirate	162.25	1472	efgh	OSYF10-4021	126.12	1145	jkl
Rio Dulce	161.25	1463	efgh	Vulkana	124.8	1133	jklm
EMY 55126	160.57	1457	efgh	Dulciana	124.75	1132	jklm
Alba Blanca	157.75	1432	efgh	Fast Track	123	1116	jklm
Sofire	157.75	1432	efgh	Candy Ann	121.37	1101	jklm
Chianti	157.37	1428	efgh	1407	121.12	1099	jklm
Tania	154.6	1403	efghi	OSYF12-07091	120	1089	klm
Lucille	154.25	1400	efghi	Quick Start	115.87	1052	lm
Plethora	153.4	1392	efghi	Candy Joy	115.62	1049	lm
New Frontier	150	1361	efghi	1011	102.37	929	mn
369	149.99	1361	efghij	White Phantom	94.625	859	n

Conservative Tukey-Kramer Grouping for 1st Least Squares Means (Alpha=0.05)

LS-means with the same letter are not significantly different.

Proc GLM

Marketable Yields

Variety	lbs/plot	40 lbs bag/A		Variety	lbs/plot	40 lbs bag/A	
Macon	191.75	1740	a	Maragogi	144.25	1309	defghi
5901	179.25	1627	ab	Lucille	142.75	1295	defghi
Superex	178.5	1620	ab	Sivan	138.5	1257	efghi
Sweet Magnolia	176.75	1604	ab	Rio Del Sol	137.5	1248	efghi
Sweet Azalea	172.75	1568	ab	Joelino	136.78	1241	efghi
EMY 55455	169.5	1538	b	Timon	131.44	1193	fghij
Century	168.38	1528	b	New Frontier	129.25	1173	ghij
EMY 55457	166.5	1511	bc	Red Sensation	128.95	1170	ghij
EMY 55843	164.5	1493	bcd	404	126.5	1148	hij
Alison	164	1488	bcd	Red Maiden	125.5	1139	hij
Sweet Agent	161	1461	bcde	White Gaspere	123.5	1121	hij
WI-129	160.75	1459	bcde	Red Marvel	121.28	1101	hijk
GA Boy	160.25	1454	bcde	Candy Kim	119.75	1087	hijk
Mata Hari	159.94	1451	bcde	Vulkana	118.94	1079	hijk
Rio Dulce	157.75	1432	bcdef	Sapelo	118.75	1078	ijk
Alba Blanca	156	1416	bcdef	Dulciana	118.5	1075	ijk
Pirate	155.5	1411	bcdefg	Early Sweet	117.75	1069	ijk
EMY 55126	153.76	1395	bcdefg	Candy Ann	115.5	1048	ijk
Chianti	153	1388	bcdefg	Fast Track	113	1025	ijkl
Sofire	150.75	1368	bcdefg	OSYF10-4021	112.5	1021	ijkl
PRR	150	1361	bcdefg	Candy Joy	108.75	987	jkl
Plethora	149.22	1354	bcdefgh	1407	108	980	jkl
Tania	148.78	1350	bcdefgh	OSYF12-07091	106.25	964	jklm
369	146.73	1332	bcdefghi	Quick Start	100.75	914	klm
A1298	145.75	1323	cdefghi	1011	91.5	830	lm
Vidora	144.5	1311	defghi	White Phantom	84.5	767	m



Colossal Yields

Variety	lbs/pl ot	40 lb boxes/A		Variety	lbs/plot	40 lb boxes/A	
Macon	57	517	a	New Frontier	5	45	efgh
Sweet Magnolia	34	309	b	Rio Dulce	4.5	41	efgh
	32.75				4.5		efgh
Sweet Azalea		297	bc	404		41	
	29.75				3.75		efgh
Sweet Agent		270	bcd	Early Sweet		34	
Century	24	218	bcde	Candy Kim	3	27	efgh
	23.75				3		efgh
Superex		216	bcde	Quick Start		27	
	21.59				3		efgh
EMY 55126	06	196	bcde	Rio Del Sol		27	
EMY 55455	21.5	195	bcde	Timon	2.7758	25	efgh
5901	19	172	cdef	369	2.6834	24	efgh
GA Boy	17.5	159	defg	Joelino	2.5442	23	fgh
	17.25				2.5		gh
WI-129		157		OSYF12-07091		23	
EMY 55457	15.5	141	efgh	1407	2.25	20	gh
EMY 55843	13.5	123	efgh	A1298	2.25	20	gh
	12.75				2		gh
Alison		116		Sapelo		18	
PRR	11	100	efgh	Red Marvel	1.8922	17	gh
Lucille	11	100	efgh	White Phantom	1.5	14	gh
Chianti	10.5	95	efgh	Tania	1.0442	9	gh
	10.25				0.75		h
Pirate		93		Candy Ann		7	
Vidora	10	91	efgh	Fast Track	0.75	7	h
	8.003				0.5		h
Red Sensation	4	73	efgh	Alba Blanca		5	
Sofire	7	64	efgh	Red Maiden	0.5	5	h
	6.892				0.5		h
Mata Hari	2	63	efgh	White Gaspare		5	
OSYF10-4021	6.5	59	efgh	Candy Joy	0.25	2	h
Maragogi	6	54	efgh	Dulciana	0	0	h
	5.455				0		h
Plethora	8	50	efgh	Vulkana		0	
Sivan	5.25	48	efgh	1011	0	0	h

Conservative Tukey-Kramer Grouping for Trt Least
Squares Means (Alpha=0.05)

LS-means with the same letter are not significantly different.

Proc GLM

Jumbo Yields

Variety	lbs/plo t	40 lbs boxes/A		Variety	lbs/plo t	40 lbs boxes/A	
5901	154.5	1402	a	Lucille	123.5	1121	defgh
Superex	153	1388	ab	Vidora	123.5	1121	defgh
	149.75				120.77		defghi
Rio Dulce		1359	ab	Joelino		1096	
EMY 55843	148.75	1350	abc	Rio Del Sol	117	1062	efghi
Alba Blanca	148.25	1345	abc	Sivan	116.25	1055	fghi
Alison	147.75	1341	abc	New Frontier	114.5	1039	fghi
EMY 55457	146.5	1329	abcd	Red Sensation	111.79	1014	fghij
Mata Hari	146.27	1327	abcd	Red Marvel	109.94	998	ghij
Tania	144.27	1309	abcd	404	107.75	978	hij
EMY 55455	143.75	1305	abcd	Sapelo	106.5	966	hij
Century	143	1298	abcd	Red Maiden	105.5	957	hijk
Pirate	141.25	1282	abcd	Timon	105.12	954	hijkl
GA Boy	139.5	1266	abcd	White Gaspare	103.75	942	hijkl
WI-129	138.75	1259	abcde	Candy Kim	103.5	939	hijkl
Sweet Magnolia	138.75	1259	abcde	Vulkana	100.62	913	hijkl
Plethora	138.23	1254	abcdef	Dulciana	100.5	912	hijkl
Sweet Azalea	138	1252	abcdef	Fast Track	97.25	883	ijkl
Sofire	137.5	1248	abcdef	Early Sweet	96.5	876	ijkl
Chianti	134.75	1223	abcdef	Candy Ann	96	871	ijkl
PRR	134	1216	abcdef	OSYF10-4021	89	808	jkl
Maragogi	133.5	1212	abcdefg	Candy Joy	86.5	785	mjkl
	133.39		abcdefg		85.25		mjkl
369		1211	h	1407		774	
A1298	132	1198	bcdefgh	OSYF12-07091	84	762	mkl
Macon	131.25	1191	bcdefgh	Quick Start	80	726	ml
EMY 55126	125.98	1143	cdefgh	White Phantom	67	608	mn
Sweet Agent	124.75	1132	defgh	1011	57	517	n

Conservative Tukey-Kramer Grouping for Trt Least
Squares Means (Alpha=0.05)

LS-means with the same letter are not significantly different.

Proc GLM

Medium Yields

Variety	lbs/plot	40 lbs bae/A	Variety	lbs/plot	40 lbs bae/A
1011	34.5	313 a	1011	34.5	313 a
Timon	23.8016	216 b	Timon	23.8016	216 b
Candy Joy	22	200 b	Candy Joy	22	200 b
1407	20.5	186 b	1407	20.5	186 b
OSYF12-07091	19.75	179 b	OSYF12-07091	19.75	179 b
Red Maiden	19.5	177 bc	Red Maiden	19.5	177 bc
White Gaspare	19.25	175 bc	White Gaspare	19.25	175 bc
Vulkana	18.8016	171 bc	Vulkana	18.8016	171 bc
Candy Ann	18.75	170 bc	Candy Ann	18.75	170 bc
Dulciana	18	163 bc	Dulciana	18	163 bc
Quick Start	17.75	161 bc	Quick Start	17.75	161 bc
Early Sweet	17.5	159 bc	Early Sweet	17.5	159 bc
Rio Del Sol	17.5	159 bc	Rio Del Sol	17.5	159 bc
Sivan	17	154 bc	Sivan	17	154 bc
OSYF10-4021	17	154 bcd	OSYF10-4021	17	154 bcd
White Phantom	16	145 bcde	White Phantom	16	145 bcde
Fast Track	15	136 bcde	Fast Track	15	136 bcde
404	14.25	129 bcdef	404	14.25	129 bcdef
Joelino	13.5339	123 bcdef	Joelino	13.5339	123 bcdef
Candy Kim	13.25	120 bcdef	Candy Kim	13.25	120 bcdef
A1298	11.5	104 bcdef	A1298	11.5	104 bcdef
Vidora	11	100 bcdefg	Vidora	11	100 bcdefg
369	10.4087	94 cdefg	369	10.4087	94 cdefg
Sapelo	10.25	93 cdefg	Sapelo	10.25	93 cdefg
New Frontier	9.75	88 cdefg	New Frontier	9.75	88 cdefg
Red Marvel	9.3067	84 cdefg	Red Marvel	9.3067	84 cdefg
Red Sensation	9.2443	84 cdefg	Red Sensation	9.2443	84 cdefg

Conservative Tukey-Kramer Grouping for Trt Least Squares Means (Alpha=0.05)

LS-means with the same letter are not significantly different.

Proc GLM

Culls

Variety	lbs/ plot	40 lbs bag/A	Variety	lbs/plo t	40 lbs bag/A
New Frontier	20.7 5	188 a	White Gaspare	8.25	75 ab
Early Sweet	15.6 25	142 ab	Mata Hari	7.2884	66 ab
Alison	15.2 5	138 ab	404	7.125	65 ab
Quick Start	15.1 25	137 ab	Macon	7	64 ab
Candy Kim	13.8 75	126 ab	Sofire	7	64 ab
OSYF12-07091	13.7 5	125 ab	EMY 55126	6.8751	62 ab
OSYF10-4021	13.6 25	124 ab	Candy Joy	6.875	62 ab
PRR	13.3 75	121 ab	Pirate	6.75	61 ab
1407	13.1 25	119 ab	Vulkana	6.2547	57 ab
Sweet Agent	13	118 ab	Dulciana	6.25	57 ab
Sweet Azalea	13	118 ab	Tania	6.208	56 ab
Century	12.8 75	117 ab	5901	6.125	56 ab
Sweet Magnolia	12.5 113	113 ab	Candy Ann	5.875	53 ab
Sapelo	12.5	113 ab	Chianti	4.375	40 ab
Lucille	11.5	104 ab	Vidora	4.375	40 ab
1011	10.8 75	99 ab	Red Maiden	4	36 ab
Red Marvel	10.6 218	96 ab	Plethora	3.792	34 ab
Superex	10.2 5	93 ab	Joelino	3.708	34 ab
Sivan	10.2 5	93 ab	Rio Del Sol	3.5	32 ab
White Phantom	10.1 25	92 ab	Rio Dulce	3.5	32 ab
Fast Track	10	91 ab	A1298	3.25	29 ab
WI-129	9.5	86 ab	Maragogi	3	27 ab
EMY 55455	9	82 ab	369	2.7092	25 ab
EMY 55457	8.87 5	81 ab	Alba Blanca	1.75	16 b
EMY 55843	8.62 5	78 ab	Timon	1.0047	9 b
GA Boy	8.5	77 ab	Red Sensation	0.922	8 b

Conservative Tukey-Kramer Grouping for Trt Least
Squares Means (Alpha=0.05)

LS-means with the same letter are not significantly different.

Proc GLM

<u>Variety</u>	<u>4 year Marketable Average (40 lb boxes/A)</u>
Macon	1119.68905
Sweet Magnolia	1065.479167
Alison	1002.257825
Emy 55455	1000.69845
Sweet Azalea	991.8672
Vidora	976.365625
Pirate	963.125
Tania	941.43125
New Frontier	926.314075
Sweet Agent	919.828125
Plethora	914.015625
Century	899.6783333
PRR	866.232825
Candy Ann	862.239075
1407	854.295325
Fast Track	836.7047
Candy Kim	801.534375
Sapelo	797.595325
Quick Start	796.03595
Candy Joy	783.8125
Emy 55126	782.828125
WI-129	730.51095

