

Table 1: 2010 CDVSFP Sweet Potato Variety Trial, Samascott Orchards, LLC, Kinderhook, NY

Variety Name	Plastic Type	# Jumbo roots/acre	Weight of Jumbo roots/acre (lbs)	Jumbo Average Size (lbs)	# Large roots/acre	Weight of Large roots/acre (lbs)	Large Average Size (lbs)	# Small roots/acre	Weight of Small roots/acre (lbs)	Small Average Size (lbs)	Weight of cull roots/acre (lbs)	Total # Marketable Roots/acre	Total Weight of Marketable Roots (lbs)	Overall Average Root Size (lbs)
Beauregard	black	1,072	3,341	3.1	20,725	13,471	0.65	17,509	4,002	0.23	1,054	39,307	20,815	0.53
Beauregard	IRT	357	1,622	4.5	18,939	16,652	0.88	12,507	4,038	0.32	2,716	31,803	22,312	0.70
Carolina Ruby	black	0	0	0.0	3,350	1,340	0.40	0	0	0.00	0	3,350	1,340	0.40
Carolina Ruby	IRT	0	0	0.0	8,040	5,226	0.65	13,400	3,417	0.26	0	21,440	8,643	0.40
Centennial	black	1,072	3,162	3.0	16,080	13,829	0.86	17,152	5,682	0.33	2,894	34,304	22,673	0.66
Centennial	IRT	0	0	0.0	10,720	8,201	0.77	4,288	1,179	0.28	2,841	15,008	9,380	0.63
Covington	black	357	1,072	3.0	23,584	16,330	0.69	13,221	3,037	0.23	554	37,163	20,439	0.55
Covington	IRT	0	0	0.0	18,377	12,577	0.68	8,040	1,455	0.18	651	26,417	14,032	0.53
Georgia Jet	black	5,360	21,440	4.0	42,880	30,552	0.71	0	0	0.00	26,800	48,240	51,992	1.08
O'Henry	black	0	0	0.0	25,728	17,608	0.68	11,256	2,037	0.18	2,814	36,984	19,644	0.53
O'Henry	IRT	3,216	8,147	2.5	11,256	12,462	1.11	20,368	6,325	0.31	2,224	34,840	26,934	0.77

Plants were planted on June 4, 2010 on raised beds mulched with either black emboss or IRT (infra-red Transmitting) mulch; Spacing = single row, 15", in-row and 6.5 between beds (center to center)

Size Categories: Jumbo = <2.0 lbs; Large = 1.0 - 2.0 lbs and at least 2 -3" in diameter; Small = 0.25 - 1.0 lbs and at least 1.5 -2.0" in diameter.

Plots were harvested on September 30, 2010 and placed into plastic totes and placed in a building for curing. Roots were then graded on November 23, 2010

Table 2: 2010 CDVSFP Sweet Potato Transplants versus Slips Trial, Samascott Orchards, LLC, Kinderhook, NY

Treatment	# Jumbo roots/acre	Weight of Jumbo roots/acre (lbs)	Jumbo Average Size (lbs)	# Large roots/acre	Weight of Large roots/acre (lbs)	Large Average Size (lbs)	# Small roots/acre	Weight of Small roots/acre (lbs)	Small Average Size (lbs)	# Cull Roots/acre	Weight of cull roots/acre (lbs)	Total # Marketable Roots	Total Weight of Marketable Roots (lbs)	Overall Average Root Size (lbs)
Slips	357	947	2.7	20,368	18,027	0.89	25,192	7,727	0.31	893	607	46,453	26,702	0.57
Transplants	2,403	7,227	3.0	9,611	11,395	1.19	16,265	5,037	0.31	2,772	822	28,279	23,658	0.84

Transplants were produced by collecting Beauregard variety slips from greenhouse plants in Geneva, NY and were placed in 72 cell trays in the greenhouse on May 12, 2010.

Slips and transplants were field planted on June 4, 2010 on raised beds mulched with IRT (infra-red Transmitting) mulch; Spacing = single row, 15", in-row and 6.5 between beds (center to center)

Plots were harvested on September 30, 2010 and placed into plastic totes and placed in a building for curing. Roots were then graded on November 23, 2010

Table 3: 2010 CDVSFP Sweet Potato Single Rows versus Double Staggered Rows, Samascott Orchards, LLC, Kinderhook, NY

Spacing Trt.	# Jumbo roots/acre	Weight of Jumbo		# Large roots/acre	Weight of Large		# Small roots/acre	Weight of Small		Weight of cull roots/acre	Total # Marketable Roots/acre	Total Weight of Marketable Roots (lbs)	Overall Average Root Size (lbs)
		roots/acre (lbs)	Average Size (lbs)		roots/acre (lbs)	Average Size (lbs)		roots/acre (lbs)	Average Size (lbs)				
1X	1,061	2,680	2.5	16,192	13,241	0.82	15,243	4,266	0.28	969	32,495	20,187	0.62
2X	447	1,072	2.4	20,826	15,047	0.72	22,948	4,899	0.21	821	42,037	21,018	0.50

Spacings: 1X = 1 single row, 15" apart in the row and 6.5' between beds (center to center); 2X = a double staggered row, with plants spaced 18" in the row, with the two rows 12" apart and the same 6.5' between beds.

Plants were planted on June 4, 2010 on raised beds mulched with either black emboss or IRT (infra-red Transmitting) mulch; Spacing = single row, 15", in-row and 6.5 between beds (center to center)

Plots were harvested on September 30, 2010 and placed into plastic totes and placed in a building for curing. Roots were then graded on November 23, 2010

Table 4: 2010 CDVSFP Sweet Potato Plantings On IRT or Black Mulch Using Single Rows or Double Staggered Rows

Plastic Treatment	Spacing Treatment	# Jumbo roots/acre	Weight of Jumbo		# Large roots/acre	Weight of Large		# Small roots/acre	Weight of Small		Weight of cull roots/acre	Total # Marketable Roots/acre	Total Weight of Marketable Roots (lbs)	Overall Average Root Size (lbs)
			roots/acre (lbs)	Average Size (lbs)		roots/acre (lbs)	Average Size (lbs)		roots/acre (lbs)	Average Size (lbs)				
black	1X	893	2,473	2.8	15,745	13,780	0.88	15,187	4,528	0.30	1,374	31,825	20,781	0.65
black	2X	447	1,016	2.3	23,227	17,353	0.75	25,013	4,696	0.19	882	48,687	23,065	0.47
IRT	1X	1,228	2,887	2.4	16,638	12,702	0.76	15,298	4,003	0.26	564	33,165	19,592	0.59
IRT	2X	447	1,128	2.5	18,425	12,741	0.69	20,882	5,103	0.24	759	39,753	18,972	0.48

Plants were planted on June 4, 2010 on raised beds mulched with either black emboss or IRT (infra-red Transmitting) mulch; Spacing = single row, 15", in-row and 6.5 between beds (center to center)

Size Categories: Jumbo = <2.0 lbs; Large = 1.0 - 2.0 lbs and at least 2 -3" in diameter; Small = 0.25 - 1.0 lbs and at least 1.5 -2.0" in diameter.

Plots were harvested on September 30, 2010 and placed into plastic totes and placed in a building for curing. Roots were then graded on November 23, 2010

Table 5: The Effects of Floating Rowcovers and Plastic Mulches on the Number and Total Marketable Yield of Sweet Potato Roots (per acre).

Plastic Type	Rowcover Treatment	# Jumbo	Average			Average			Weight Small
			Weight Jumbo	Root Size (lbs)	# Large	Weight Large	Root Size (lbs)	# Small	
IRT	RC	504	1,180	2.34	2,772	3,595	1.30	19,572	10,584
IRT	NRC	588	1,554	2.64	5,796	7,589	1.31	20,664	11,008
BLACK	RC	420	1,138	2.71	3,864	5,183	1.34	21,252	11,075
BLACK	NRC	1,764	4,288	2.43	7,644	9,920	1.30	15,036	10,765

Table 6: The Effects of Two Different Plastic Mulches on the Number and Total Marketable Yield of Sweet Potato Roots (per acre).

Plastic Type	# Jumbo	Average			Average			Average	
		Weight Jumbo	Root Size (lbs)	# Large	Weight Large	Root Size (lbs)	# Small	Weight Small	Root Size (lbs)
IRT	546	1,367	2.50	4,284	5,592	1.31	20,118	10,796	0.54
BLACK	1,092	2,713	2.48	5,754	7,552	1.31	18,144	10,920	0.60

Table 7: The Effects of Floating Rowcovers on the Number and Total Marketable Yield of Sweet Potato Roots (per acre).

Plastic Type	# Jumbo	Average			Average			Average	
		Weight Jumbo	Root Size (lbs)	# Large	Weight Large	Root Size (lbs)	# Small	Weight Small	Root Size (lbs)
No Rowcover	1,176	2,921	2.48	6,720	8,755	1.30	17,850	10,886	0.61
Rowcover	462	1,159	2.51	3,318	4,389	1.32	20,412	10,830	0.53

Size Categories: Jumbo = <2.0 lbs; Large = 1.0 - 2.0 lbs and at least 2 -3" in diameter; Small = 0.25 - 1.0 lbs and at least 1.5 -2.0" in diameter.

These plants were all planted in a single row, 15" down the center of a 4" raised mulched bed on 6.5' centers and a 34" bed top width.

Table 8: The Effects of Spacing and Plant Density on the Number and Total Marketable Yield of Sweet Potato Roots (per acre).

Spacing Treatment ¹	# Jumbo	Weight Jumbo	Average Root Size (lbs)	# Large	Weight Large	Average Root Size (lbs)	# Small	Weight Small	Average Root Size (lbs)
1x, 6"	298	682	2.3	6,109	7,904	1.29	22,946	11,443	0.50
1x, 12"	1,043	2,414	2.3	4,470	5,833	1.31	14,900	8,299	0.56
2x, 18"	745	1,676	2.3	5,215	7,025	1.35	20,264	10,445	0.52
2x, 12"	0	0	0	5,066	6,370	1.26	28,012	13,783	0.49

Size Categories: Jumbo = <2.0 lbs; Large = 1.0 - 2.0 lbs and at least 2 -3" in diameter; Small = 0.25 - 1.0 lbs and at least 1.5 -2.0" in diameter.

¹ 1x represents a single row down the center of the mulched bed and a 2x indicates a double staggered row with 14" between rows. The 6", 12" and 18" represent the in-row spacing. These were all planted on 4" raised mulched beds on 6.5' centers and a 34" bed top width.

Table 9: Comparing the Use of Sweet Potato Transplants to Traditional Slips and Plant Spacing on Total Marketable Number and Yield of Roots.

Spacing Treatment ^{1,2}	# Jumbo	Weight Jumbo	Average Root Size (lbs)	# Large	Weight Large	Average Root Size (lbs)	# Small	Weight Small	Average Root Size (lbs)
TP, 1x, 6"	0	0	0	466	559	1.20	32,154	14,073	0.44
TP, 1x, 12"	0	0	0	3,029	3,495	1.15	19,572	10,089	0.52
TP, 2x, 18"	0	0	0	3,495	4,485	1.28	29,125	13,631	0.47
TP, 2x, 12"	0	0	0	1,631	2,127	1.30	34,018	15,308	0.45
SP, 1x, 12"	0	0	0	0	0	0.00	11,417	5,382	0.47

Size Categories: Jumbo = <2.0 lbs; Large = 1.0 - 2.0 lbs and at least 2 -3" in diameter; Small = 0.25 - 1.0 lbs and at least 1.5 -2.0" in diameter.

¹ 1x represents a single row down the center of the mulched bed and a 2x indicates a double staggered row with 14" between rows. The 6", 12" and 18" represent the in-row spacing. These were all planted on 4" raised mulched beds on

² TP Stands for Transplant and SP stands for traditional slip.

Table 10: The Effects of Spacing and Plant Density on the Number and Total Marketable Yield of Sweet Potato Roots (per acre).

Treatment #	# Jumbo	Wt Jumbo	# Large	Wt Large	# Small	Wt Small	# Culls	Wt culls
2x, 6"	2,860	8,581	12,668	17,020	64,361	32,324	72,738	10,717
2x, 12"	2,559	6,377	13,777	18,323	35,819	18,087	40,543	6,278
2x, 18"	5,546	14,540	12,780	17,096	23,631	12,954	27,224	5,401
1x, 12"	4,600	13,258	8,573	12,233	21,329	12,024	27,812	5,458
1x, 15"	4,758	13,839	8,129	11,222	16,060	9,457	19,628	3,014
1x, 6"	4,588	11,681	9,368	12,179	40,531	20,782	40,914	5,984

Table 11: The Effects of Spacing and Plant Density on the Average Size Sweet Potato Root.

Treatment #	Average Jumbo Root Size (lbs)	Average Large Root Size (lbs)	Average Small Root Size (lbs)	Average Cull Root Size (lbs)
2x, 6"	3.00	1.34	0.50	0.15
2x, 12"	2.49	1.33	0.50	0.15
2x, 18"	2.62	1.34	0.55	0.20
1x, 12"	2.88	1.43	0.56	0.20
1x, 15"	2.91	1.38	0.59	0.15
1x, 6"	2.55	1.30	0.51	0.15