Root Starch Summary

Root samples were taken at Sweet Tree in Essex County on December 13, 2016 and processed on December 15th. Samples were taken from 35 trees, 20 from an area generally mapped as defoliated and 15 from an undefoliated area. All but one of the trees in the area mapped as undefoliated had high starch content.

Starch Reading	Ranked as Defoliated?		
	No	Yes	Total
Depleted		4	4
High	14	6	20
Low		5	5
Medium	1	5	6
Total	15	20	35

Samples included 21 cores and 14 roots.

Core or Root?	Starch Reading				
	Depleted	High	Low	Medium	Total
Core	2	13	3	3	21
Root	2	7	2	3	14
Total	4	20	5	6	35

Trees that were sampled ranked mostly in category 1 for tree vigor.

Starch Reading	Tree Vigor		
	1	2	Total
Depleted	4		4
High	20		20
Low	5		5
Medium	4	2	6
Total	33	2	35

All trees that ranked as depleted, low or medium for starch had defoliation ratings of 3. Those that ranked high for starch included 14 trees with defoliation readings 0-2, but 6 trees with high starch readings had a defoliation rating of 3.

Starch Reading	Defoliation Rating				
	0	1	2	3	Total
Depleted				4	4
High	5	8	1	6	20
Low				5	5
Medium		1		5	6
Total	5	9	1	20	35

Foliage transparency varied widely for trees with high starch reserves, but ranged from 40-95 for trees with depleted, low, or medium readings. Trees ranked as depleted or low had 70-95 percent transparency.

Starch Reading	Foliage Transparency												
	20	25	30	35	40	45	70	75	80	85	90	95	Total
Depleted							1			1	1	1	4
High	4	3	2	2	2	1	2	1		1	2		20
Low							1		1	1	2		5
Medium					1		1		2		2		6
Total	**4**	**3**	**2**	**2**	**3**	**1**	**5**	**1**	**3**	**3**	**7**	**1**	**35**

Very little dieback (5% or less) was recorded for 72 percent of the 35 trees sampled. Eighty-five percent of the trees whose roots showed high starch had very little dieback.

Starch Reading	Dieback			
	5	10	20	Total
Depleted	3	1		4
High	17	3		20
Low	3	2		5
Medium	2	2	2	6
Total	**25**	**8**	**2**	**35**