

2008 New England Environmental Horticulture Economic Impact survey results

Table 1. Survey mailing numbers and percents, by state and totals.

State	Original number of firms	Firms mailed survey	Percent of state firms surveyed	State expansion factor	Ineligible firms	Total firms, % of region
	Col. A	Col. B	Col. C	Col. D	Col. E	Col. F
CT	4659	848	18.2	5.5	1305	3354 (28.1%)
ME	1407	260	18.5	5.4	394	1013 (8.5%)
MA	7128	1294	18.2	5.5	1996	5132 (43.1%)
NH	1530	278	18.0	5.5	428	1102 (9.2%)
RI	1081	198	18.3	5.5	303	778 (6.5%)
VT	755	141	18.7	5.4	211	544 (4.6%)
Total	16,560	3019				11,923

Col. A—Final list after merging, deduping, and changes from initial postcard mailing to all on semifinal list as described below.

Col. B—Proportionate to original numbers from each state, for a total budgeted of about 3000 overall.

Col. C—Amount surveyed of original number.

Col. D—Multiplier for survey results for those surveyed to equal original number.

Col. E—Estimated number of invalid firms extrapolated from survey results.

Col. F—Estimated total firms by state and region, resulting from ineligible firms (col. E) subtracted from original number (col. A).

The mailing list was based on the one used in 2005, to which a purchased list of appropriate NCAIS codes was merged and purged in June 2008, followed by a manual deduping with sorts by firm and zipcode. This list was then NCOA checked with the USPS. To this semifinal list of 18,392 was mailed an alert postcard in July 2008, with returns for bad addresses purged (col. A).

The budget allowed for two mailings, with followup postcards, to about 3000, which were randomly picked allowing for proportionate numbers for each state total firms. Surveys were mailed August 15 and October 1, with reminder postcards two weeks after each of these mailings. Numbers of invalid firms (not appropriate, not in business, or under 50% income from this industry) were calculated for each state, with apparent discrepancies among states in return rates from this group (ranging from 11% to 44% invalid). For this reason, the regional invalid mean (28%) was used as a better indicator of invalid firms for each state, so was used in for state calculations (col. E). The results may be conservative, with a total number of firms being 12,299 if individual state invalid return rates are used.

This list known to be conservative, with more firms existing. This mailing and survey does not include the many firms who sell products of this industry but who have other NCAIS listings, such as mass marketers, seasonal outlets such as hardware or feed stores, and roadside markets. Mass marketers and chain stores account for a majority of bedding

sales in many areas in spring, yet are not included in this survey as they view their information as proprietary. This list, as mentioned, included purchased addresses from a NCAIS database, which upon review is believed to be several years old and does not include many new and smaller firms such as independent landscapers.

Table 2. Survey returns for 2008, by state and totals.

State	Firms surveyed 2008	Total returned 2008	Percent returned 2008	Percent returned 2005	Percent returned 2002	Percent returned 1999	Response expansion factor 2008
CT	848	78	9.2	9.6	13.1	18.3	10.9
ME	260	48	18.5	17.0	19.0	34.0	5.4
MA	1294	109	8.4	9.2	13.5	21.8	11.9
NH	278	34	12.2	14.4	20.3	28.3	8.2
RI	198	18	9.1	8.1	15.1	19.3	11.0
VT	141	38	27.0	25.1	31.0	40.3	3.7
Total	3019	325	10.8	11.4	15.7	24.1	

The response factor is the multiplier for total returned to result in total surveyed. A percentage of firms returning surveys were either no longer in business or not appropriate for this industry, marking "no" on the first question. If this percentage is deducted from the total returned, for a valid number of returns, as well as the same percentage from those surveyed, for a valid number surveyed, the same response factor would apply.

Special note for following result tables: Based on a lower number surveyed, and similarly low response rate to the previous survey, results are based on a low number of responses. This may be the reason some state incomes and results are dramatically lower or somewhat different from previously. A comparison to the previous survey in several area breakdowns such as type of business indicates that, even though lower numbers of surveys, they appear representative of the total population in many respects.

Recommendations for the next survey process, based on reflection on the above, include:

1. Move mailing time to February-March, when industry members may be less busy, meaning beginning the database process the previous November.
2. Consider one mailing to twice as many, to result in higher returns since the return rate from the first mailing is generally double (about 6%) that of the second mailing (about 3%). This time two surveys with two reminder postcards were tried, based on experienced gleaned from similar surveys elsewhere. The repetitive mailings in this region did not appear substantial in increasing return rates.
3. Mail each state surveys with a cover letter from that state Extension specialist only, or other respected and known authority in that state. For this and each previous survey, the highest returns were usually for Maine and Vermont, whose specialists wrote the cover letter and whose names appeared on it.

Another consideration would be to drop the online survey, due to almost no response from industry members. Over the three years this has been offered as an easy option, online return rate of those surveys returned was 16% in 2002, 11% in 2005, and 7% (20 out of about 300 returns) in 2008.

Table 3. Incomes by state and region. Incomes by state (survey results reported on first line of each state, expanded on state total lines), state percent of region total, and expansion factors (below state names), by state and income category (\$millions). Based on expansion factors from Tables 1 and 2.

State	<\$1	\$1-10	>10	Total 2007	% of region
Connecticut	10.338	43.675	29.5		
response: 10.9	x				
state: 5.5	x	x	x		
total	620	240	162	1,022	22%
Maine	6.012	14.500	0		
response: 5.4	x				
state: 5.4	x	x			
total	175	78	0	253	5%
Massachusetts	18.342	19.750	25.000		
response: 11.9	x	x			
state: 5.5	x	x	x		
total	1,200	1,293	138	2,631	57%
New Hampshire	3.938	17.750	0		
response: 8.2	x				
state: 5.5	x	x			
total	178	98	0	276	6%
Rhode Island	4.162	18.500	0		
response: 11.0	x				
state: 5.5	x	x			
total	252	102	0	354	8%
Vermont	3.013	10.750	0		
response: 3.7	x				
state: 5.4	x	x			
total	60	59	0	119	2%
Region total	2,485 (53%)	1,870 (40%)	300 (7%)	4,655	

Based on previous survey knowledge of this industry, several decades of knowledge of this regional industry members, and scatter plot of returns by category, the assumption was made that those categories under \$1million should be expanded as shown. Those over \$1million appeared skewed to a higher response rate, so were only expanded by the state (those surveyed) factor. Even though the assumption was that all those surveyed over \$1million responded (except for Massachusetts which appeared equivalent to other categories), this is likely not the case. With no way to determine the true population and so response expansion factor, which should likely exist but be lower than the response multiplier for each state, and with a low number of survey returns, a conservative approach was taken in extrapolation. The results for these high income categories in reality therefore will likely be higher. Also as noted under the database discussion for Table 1, many smaller and newer firms appeared not to be included, which would in reality increase the overall income figures in the lower categories. For these reasons, *state income figures in reality are likely higher than shown.*

Table 4. Plant sales (\$million) based on survey results and state incomes (Table 3).

State	total	own	pre	finished	production
Connecticut					
percent of income	57	31	42	27	
total sales	583	181	245	157	426
firms selling, %	89	31	43	84	
Maine					
percent	40	47	28	25	
totals	101	47	28	25	75
firms selling, %	83	58	63	79	
Massachusetts					
percent	49	22	27	51	
totals	1,289	284	348	657	632
firms selling, %	74	30	32	93	
New Hampshire					
percent	53	49	31	20	
totals	146	72	45	29	117
firms selling, %	84	48	57	81	
Rhode Island					
percent	82	57	8	35	
totals	290	165	23	102	188
firms selling, %	75	50	50	75	
Vermont					
percent	28	35	33	32	
totals	33	12	11	10	23
firms selling, %	84	56	56	75	
Region total					
percent	52	40	28	32	
totals	2,442				1,461 (60%)
firms selling, %	82	46	50	81	

Table 5. Issues of importance, (top three rank-percent citing).

Issue	CT	ME	MA	NH	RI	VT	Region
Water management	12	14	22	3-20	31	16	19
Immigration, labor	3-42	3-21	3-36	3-20	3-38	3-42	3-33
Invasive plants	12	10	10	0	6	5	7
Energy costs	1-86	1-93	1-80	1-84	2-69	1-95	1-86
Pesticide use	23	7	27	3-20	19	0	16
Health care costs	2-74	2-59	2-74	2-80	1-75	2-89	2-75
Other	26	66	27	64	31	26	40

Table 6. Estimated acres and uses.

	Acres occupied	In Use, %	Preserved, %
CT	46,700	78	3
ME	17,200	53	36
MA	90,500	62	40
NH	24,900	32	36
RI	30,600	59	21
VT	11,500	68	19
region	221,400	59	26

Table 7. Types of business by category, percent of firms.

Type	CT	ME	MA	NH	RI	VT	Region
Landscape and tree services	67	76	78	72	56	68	69
Retail	49	66	48	56	63	58	57
Wholesale	39	48	28	40	50	42	42
Other	14	10	16	24	19	26	18

Table 8. Types of business by firm, percent of firms.

Type	CT	ME	MA	NH	RI	VT	Region
one	49	38	48	48	50	53	48
two	44	34	46	36	31	26	36
three	7	28	6	16	19	21	16

Table 9. Income change 2004-2007, percent of firms.

	CT	ME	MA	NH	RI	VT	Region
increase	54	60	50	48	69	53	56
decrease	23	16	24	30	12	12	19
stay same	23	24	26	22	19	35	25
average increase per firm	17	25	31	17	23	35	25
number firms increased	1,800	600	2,600	530	540	290	6,360

Table 10. Tax changes 2004-2007, percent of firms.

	CT	ME	MA	NH	RI	VT	Region
increase	61	61	43	36	69	69	57
decrease	12	13	13	9	8	6	10
stay the same	27	26	44	55	23	25	33
average increase per firm	19	32	18	39	32	40	30
estimated taxes 07, \$million	150	21	225	17	26	8	445

Table 11. Estimated (est.) employees by category, and needed.

	CT	ME	MA	NH	RI	VT	Region
full time, %	51	40	63	43	51	56	51
part time, %	10	8	18	21	14	12	14
seasonal, %	39	52	19	36	35	32	35
est. employees, #	48,000	12,000	68,000	12,000	11,000	5,000	156,000
est. full time, #	24,000	4,800	43,000	5,000	5,600	2,800	85,200
est. needed, %	12	11	20	9	36	28	19
est. needed, #	5,800	1,300	14,000	1,100	4,000	1,400	27,600
est. full time needed, %	7	2	11	3	16	11	8
est. full time needed, #	3,300	240	7,500	360	1,800	550	13,750

Table 12. Payroll changes 2004-2007 (%), and estimated (est.) totals.

	CT	ME	MA	NH	RI	VT	Region
increase, % of firms	56	68	46	53	73	47	57
increase, avg. % per firm	15	15	40	23	40	34	28
decrease, % of firms	22	20	26	30	7	18	21
decrease, avg. % per firm	28	28	35	26	28	35	30
stay the same, % of firms	22	12	28	17	20	35	22
est. total, \$million	490	110	1,030	140	150	50	1,970
percent of state income	48	43	39	46	42	41	43