

# New England Sweet Corn Pest Management Survey Results

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A survey was distributed to 754 New England growers in the fall of 2004. Dillman survey methodology was used to design and conduct the survey. The original survey and summary of results may be found at the website [www.pronewengland.org](http://www.pronewengland.org).

## New England Sweet Corn Pest Management Survey Returns

State	#Surveys Sent	#Surveys Returned	%Return	#Growing Sweet Corn	#Sweet Corn Acres
MA	261	167	64	98	2523
ME	130	94	72	56	801
NH	213	126	59	28	565
RI	42	26	62	9	395
VT	23	17	74	17	169
CT	85	46	54	6	21
<b>Total</b>	<b>754</b>	<b>476</b>	<b>63</b>	<b>215</b>	<b>4474</b>

**Question A2.** Over the past five years, what is your average annual yield of harvested sweet corn per acre? (N=183)<sup>1</sup>

Number of Growers Reporting	<b>157</b>
Percent of Growers <sup>2</sup>	<b>73%</b>
Number of Acres	<b>3544</b>
Percent of Acres	<b>79%</b>
Total Bushel bags/Year	<b>660,799</b>
Average Bushel bags/Acre	<b>186</b>

<sup>1</sup>N is used throughout the entire document and refers to the number of growers who answered the question.

<sup>2</sup>**Percent of growers** was calculated using the number growers who responded to the survey as the denominator, not the number of growers responding to a particular question. Many questions allowed multiple answers, thus percent responses may sum to more than 100%.

**Question A3.** What percentage of your sweet corn crop is sold through each of these markets? (N=213)

Markets	#Acres	%Acres
Fresh market, retail	2405	54
Fresh market, wholesale	1964	44
Processing	0.6	<1
Other*	17	<1

\*Community Supported Agriculture (CSA), Farmers' Market, and U-Pick

**Question B1.** Which of the following practices do you use? (Circle all that apply.) (N=210)

Practices	#Growers	%Growers
direct seed into bare ground	202	94
direct seeding under plastic	48	22
direct seed with row covers	46	21
transplants into bare ground	14	7
transplants with row covers	12	6
transplants in plastic	9	4

**Question B2.** Do you use a soil test to determine fertilizer needs for sweet corn in most years? (Circle your answer) (N=209)

Soil test	#Growers	%Growers
No	44	20
Annually	63	29
Every 2-3 years	85	40
Every 4-5 years	15	7
Do not use fertilizer	3	1
Other	5	2

**Question B3.** Which soil/and/or nutrient management practices do you use? (Circle all that apply) (N=209)

Practices	#Growers	%Growers
Grass cover crop (rye, oat, sudax, etc)	145	67
Pre-side dress (June) nitrate test	87	40
Manure application	65	30
Compost application	35	16
Legume cover crop (clover, vetch, etc.)	32	15
Other	35	16

**Question C1.** Please estimate your average number of pesticide applications for sweet corn used in a typical year: (N=208)

<b>Pests</b>	<b>#Average Number of Sprays</b>
Insects	<b>4.02</b>
Weeds	<b>1.15</b>
Mites	<b>0.08</b>
Disease	<b>0.135</b>

### **Insects and Mites Section**

**Question C2.** Which of these insects/mites require routine annual management, require occasional management, or are never a problem in your sweet corn fields? (N=212)

<b>Rank</b>	<b>Insect/Mite</b>	<b>Weighed Number*</b>
<b>1</b>	corn earworm	<b>772</b>
<b>2</b>	European corn borer	<b>764</b>
<b>3</b>	fall army worm	<b>492</b>
<b>4</b>	corn leaf aphid	<b>250</b>
<b>5</b>	common army worm	<b>230</b>
<b>6</b>	stalk borer	<b>182</b>
<b>7</b>	cutworms	<b>126</b>
<b>8</b>	seedcorn maggot	<b>118</b>
<b>9</b>	corn flea beetles	<b>110</b>
<b>10</b>	Japanese beetle	<b>94</b>
<b>11</b>	sap and picnic beetle	<b>88</b>
<b>12</b>	wireworms	<b>76</b>
<b>13</b>	twospotted spider mite	<b>26</b>

\*The weighed number was determined by multiplying routine annual management by 4, occasional management by 2, and never a problem by 0.

**Question D1.** Which of the following practices do you use to manage insects and/or mite pests? (Circle all that apply.) (N=209)

#Growers	%Growers	Practices used to manage insect and mite pests
53	25	pheromone trap for European corn borer
69	32	pheromone trap for corn ear worm
43	20	pheromone trap for fall army worm
174	81	field scouting for worms or feeding damage
5	2	field scouting for other insect pests
22	10	field scouting for beneficials
128	60	read state or regional pest alerts
17	8	none

The following insect and mites pests (pages 4-10) are listed according to the number of growers who used pesticides to manage the pest in 2003. The survey listed several pesticides and some practices. Growers were able to write in additional pesticides and practices.

**Corn earworm**      Number    Percent  
(N=210)  
Acres Treated      **3617**      **81**  
Growers              **183**      **85**

Pesticide <sup>3</sup>	#Growers	%Growers	#Acres	%Acres	Excellent	Good	Poor
Warrior	103	48	2689	<b>60</b>	75	25	1
Lannate SP	82	38	2156	<b>48</b>	48	30	2
Larvin 3.2	36	17	707	<b>16</b>	20	12	4
Asana XL	19	9	632	<b>14</b>	9	10	0
Ambush	27	13	462	<b>10</b>	8	16	3
Baythroid 2	8	4	316	<b>7</b>	3	5	0
Spintor 2SC	7	3	192	<b>4</b>	4	2	1
Sevin	11	5	78	<b>2</b>	2	6	2
Dipel DF or ES	8	4	56	<b>1</b>	2	4	2
Pounce	3	1	46	<b>1</b>	2	1	0
Golden Natural Spray Oil	3	1	26	<b>1</b>	1	1	1
Entrust	7	3	23	<b>1</b>	4	2	1
Permethrin	1	<1	20	<b>&lt;1</b>	1	0	0
Pheromone traps	1	<1	15	<b>&lt;1</b>	1	0	0
Zealater with DiPel	2	1	5	<b>&lt;1</b>	2	0	0

<sup>3</sup>See Appendix A (page 22) for Brand names and active ingredients

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Lannate	1	<1	4	<1	1	0	0
Lannate	1	<1	4	<1	1	0	0
Capture 2EC	1	<1	1.5	<1	0	1	0
Thuricide	1	<1	0.6	<1	0	0	0
Generic soybean oil	1	<1	0.6	<1	0	0	0
Bullseye	1	<1	0.6	<1	0	0	0
Pyronyl	1	<1	0.5	<1	0	1	0
Handpick	1	<1	0.1	<1	1	0	0
Mustang	0						
XenTari	0						
Crop rotation	1	<1	1	<1	0	1	0
Lady bugs	1	<1	2	<1	0	0	0

**European corn borer (N=213)**      Number    Percent  
 Acres Treated                      **3459**        **77**  
 Growers                                **183**         **85**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Warrior	95	44	2284	<b>51</b>	71	23	1
Lannate SP	87	40	2177	<b>49</b>	52	33	2
Larvin 3.2	39	18	829	<b>19</b>	21	15	3
Ambush	35	16	660	<b>15</b>	13	19	3
Asana XL	19	9	563	<b>13</b>	9	9	1
Spintor 2SC	18	8	456	<b>10</b>	12	5	1
Baythroid 2	11	5	416	<b>9</b>	5	5	1
Mustang	1	<1	153	<b>3</b>	0	0	0
Dipel DF or ES	16	7	131	<b>3</b>	5	8	1
Sevin	10	5	109	<b>2</b>	3	5	2
Pounce	7	3	72	<b>2</b>	4	3	0
Lorsban	1	<1	65	<b>1</b>	1	0	0
Intrepid 2F	2	1	23	<b>1</b>	1	0	1
Entrust	6	3	22	<b>1</b>	4	2	6
Permethrin	1	<1	20	<1	1	0	0
Xentari	1	<1	4.5	<1	1	0	0
Lannate	1	<1	4	<1	1	0	0
Capture 2EC	1	<1	1.5	<1	0	1	0
Thuricide (Bt Kurstaki)	1	<1	0.6	<1	0	0	0
Avaunt	0						
Rotation	1	<1	22	<b>1</b>	0	1	0
Ladybugs	1	<1	2	<1	0	0	1

**Fall armyworm (N=210)**      Number    Percent  
 Acres Treated                    **1673**      **37**  
 Growers                              **128**        **60**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Warrior	73	34	1118	<b>25</b>	48	22	3
Lannate SP	62	29	908	<b>20</b>	35	23	4
Larvin 3.2	26	12	223	<b>5</b>	9	16	1
Asana XL	13	6	191	<b>4</b>	4	8	1
Baythroid 2	8	4	179	<b>4</b>	3	4	0
Ambush	19	9	150	<b>3</b>	8	10	0
Mustang	1	<1	68	<b>2</b>	0	0	0
Spintor 2SC	5	2	38	<b>1</b>	4	1	0
Pounce	2	1	38	<b>1</b>	1	1	0
Dipel DF or ES	4	2	20	<b>&lt;1</b>	1	2	1
Permethrin	1	<1	15	<b>&lt;1</b>	1	0	0
Sevin	3	1	6	<b>&lt;1</b>	0	2	0
Capture 2EC	1	<1	1.5	<b>&lt;1</b>	0	1	0
Entrust	0						
XenTari	0						
Avaunt	0						

**Corn leaf aphid (N=209)**      Number    Percent  
 Acres Treated                    **1313**      **29**  
 Growers                              **62**        **29**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Lannate SP	43	20	897	<b>20</b>	29	12	1
Warrior	30	14	586	<b>13</b>	11	13	5
M-Pede	1		170	<b>4</b>	0	0	0
Thionex 50W	2	1	16	<b>&lt;1</b>	2	0	0
Lannate	1		9	<b>&lt;1</b>	0	1	0
Capture 2EC	0						

<sup>3</sup>See Appendix A (page 22) for Brand names and active ingredients

**Seedcorn maggot**      Number    Percent  
**(N=207)**  
Acres Treated            **1269**      **28**  
Growers                    **49**        **23**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Gaucho 600	27	13	759	<b>17</b>	16	11	0
Lorsban 4E	13	6	623	<b>14</b>	10	3	0
Treated seed	6	3	147	<b>3</b>	0	2	0
Force 3G	1		100	<b>2</b>	1	0	0
Cruiser 5FS	6	3	70	<b>2</b>	3	3	0
Diazinon	4	2	16	<b>&lt;1</b>	3	1	0
Counter 15G	1		7.5	<b>&lt;1</b>	0	1	0
Kernal guard	1		5.2	<b>&lt;1</b>	1	0	0
Fortress 5G	0						
Capture 2EC	0						
Thimet 20G	0						
Plant later	1		1	<b>&lt;1</b>	0	0	0

**Stalk borer (N=215)**      Number    Percent  
Acres Treated            **515**      **12**  
Growers                    **33**        **15**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Warrior	21	10	402	<b>9</b>	13	6	1
Ambush	8	4	183	<b>4</b>	3	4	1
Baythroid 2	1	<1	100	<b>2</b>	0	0	1
Sevin	2	1	16	<b>&lt;1</b>	0	1	0
Lannate	1	<1	10	<b>&lt;1</b>	1	0	0
Larvin	1	<1	10	<b>&lt;1</b>	1	0	0
Pounce	1	<1	3	<b>&lt;1</b>	1	0	0
Asana XL	1	<1	1	<b>&lt;1</b>	1	0	0
Capture 2EC	0						

<sup>3</sup>See Appendix A (page 22) for Brand names and active ingredients

**Cutworms (N=207)**      Number    Percent  
 Acres Treated      **508**      **11**  
 Growers              **15**      **7**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Lorsban 4E	6	3	386	<b>9</b>	3	2	0
Warrior	4	2	72	<b>2</b>	2	2	0
Sevin XLR Plus	3	1	38	<b>&lt;1</b>	2	0	1
Asana XL	1		12	<b>&lt;1</b>	1	0	0
Ambush	0						
Baythroid 2	0						
Capture 2EC	0						
Mustang	0						

**Corn flea beetle**      Number    Percent  
**(N=209)**  
 Acres Treated      **468**      **10**  
 Growers              **24**      **11**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Lannate SP	13	6	356	<b>8</b>	5	7	0
Warrior	9	4	62	<b>1</b>	6	2	0
Thimet 20G	1	<1	36	<b>1</b>	0	1	0
Ambush	1	<1	30	<b>1</b>	0	1	0
Gaucho 600	3	1	29	<b>1</b>	2	1	0
Cruiser 5FS	2	1	28	<b>1</b>	1	1	0
Sevin XLR Plus	3	1	21	<b>&lt;1</b>	2	1	0
Asana XL	0						
Baythroid 2	0						
Capture 2EC	0						
Counter 15G	0						
Mustang	0						

<sup>3</sup>See Appendix A (page 22) for Brand names and active ingredients

**Sap and Picnic  
beetles (N=206)**

Number Percent

Acres Treated **366** **8**  
Growers **18** **8**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Lannate SP	9	4	177	<b>4</b>	4	3	2
Baythroid	1		136	<b>3</b>	0	0	0
Warrior	11	5	119	<b>3</b>	5	6	0
Asana XL	1		3.5	<b>&lt;1</b>	1	0	0
Capture 2EC	0						
Malathion 57EC	0						
Mustang	0						
Sevin XLR Plus	0						

**Wireworms (N=207)**

Number Percent

Acres Treated **195** **4**  
Growers **10** **5**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Cruiser 5FS	3	1	73	<b>2</b>	1	2	0
Gaucho	1	<1	7.5	<b>&lt;1</b>	0	1	0
Counter 15G	1	<1	7.5	<b>&lt;1</b>	1	0	0
Kernal guard	1	<1	5.2	<b>&lt;1</b>	1	0	0
Diazinon	1	<1	0.5	<b>&lt;1</b>	1	0	0
Treated seed	4	2	116	<b>3</b>	0	1	0
Capture 2EC	0						
Force 3G	0						
Mocap 10G	0						
Thimet 20G	0						

<sup>3</sup>See Appendix A (page 22) for Brand names and active ingredients

**Japanese beetle**      Number    Percent  
**(N=207)**  
 Acres Treated      **91**      **2**  
 Growers              **14**      **7**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Warrior	7	3	71	<b>2</b>	4	3	0
Sevin XLR Plus	4	2	17	< <b>1</b>	0	4	0
Lannate	2	1	7.5	< <b>1</b>	2	0	0
Ambush	1	<1	0.9	< <b>1</b>	0	0	0
Handpick	1	<1	2	< <b>1</b>	0	1	0
Capture 2EC	0						
Mustang	0						

**Twospotted spider**      Number    Percent  
**mite (N=205)**  
 Acres Treated      **15**      <**1**  
 Growers              **1**      <**1**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Capture 2EC	1	<1	15	< <b>1</b>	0	1	0
Metasystox-R	0						

<sup>3</sup>See Appendix A (page 22) for Brand names and active ingredients

## Disease Section

**Question C3.** Which of these diseases require routine annual management, require occasional management, or are never a problem in your sweet corn fields? (Please circle your answers) (N=205)

Rank	Disease	Weighed Number
1	Common smut	170
2	Rust	160
3	Seed decay	136
4	Stewart's wilt	88
5	Maize dwarf mosaic virus	54

**Question E1.** Which of the following practices do you use to manage diseases in sweet corn? (Circle all that apply.) (N=192)

#Growers	%Growers	Practices used to manage diseases
124	58	crop rotation
120	56	fungicide-treated seed
105	49	disease tolerant varieties
15	7	application of fungicides
5	2	other

<b>Rust (N=205)</b>	Number	Percent
Acres Treated	311	7
Growers	10	5

Pesticide <sup>3</sup>	#Growers	%Growers	#Acres	%Acres	Excellent	Good	Poor
Manzate	4	2	261	6	0	4	0
Dithane	1		250	6	0	1	0
Maneb	1		250	6	0	1	0
Bravo Ultrex 82 WDG	5	2	19	<1	2	1	2
Gaicho	1		10	<1	0	0	0
Penncozeb	1		4	<1	0	1	0
Tilt	0						
Tolerant variety	1		25	<1	1	0	0

## Weed Management Section

**Question C4.** Which of these weeds require routine annual management, require occasional management, or are never a problem on your sweet corn fields? (Please circle your answers) (N=209)

Rank	Weeds	Annual Mgmt	Weighed Number
1	Annual broadleaf weeds	190	780
2	Annual grasses	168	712
3	Perennial broadleaf weeds	121	588
4	Perennial grasses	113	568

**Question F1.** Which if the following weed management practices did you use for sweet corn? (Please circle the practices used and their effectiveness: excellent, good, poor.) (N=193)

Practices	#Growers	%Growers	Excellent	Good	Poor
Mechanical cultivation	148	69	28	106	6
Hand pulling	57	27	23	26	5
Hoeing	42	20	16	23	2
Banded herbicide application (over the row only)	34	16	15	17	1
Spot treatment	31	14	13	18	0
Shielded application (between rows)	14	7	4	10	0
No-till or zone-till	3	1	1	1	1
<b>Other Practices</b>					
Complete Field Spray	19	9	5	12	1
Broadcast spray	17	8	5	9	0
Preemergence Application	7	3	1	6	0

**Stale Bed  
Application (N=203)**

Acres Treated	<b>174</b>	<b>4</b>
Growers	<b>24</b>	<b>11</b>

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Roundup 4S	17	8	122	<b>3</b>	11	4	1
Gramoxone Max 3S	2	1	24	<1	1	1	0
Bicep II	1		15	<1	0	1	0
Bicep	1		10	<1	0	1	0
Aatrex	1		15	<1	0	0	0
Scythe 4.2	0						
Flaming	1		12	<1	0	1	0
Mechanical	2	1	3.4	<1	0	0	0

**Preemergence Soil Applied Annual Grass and  
Broadleaf Herbicides (N=203)**

Acres Treated	<b>4026</b>	<b>90</b>
Growers	<b>162</b>	<b>75</b>

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Aatrex 4L	80	37	2524	<b>56</b>	31	45	3
Dual Magnum	76	35	2119	<b>47</b>	35	36	4
Bicep Magnum	50	23	1267	<b>28</b>	17	32	1
Prowl H20	49	23	1196	<b>27</b>	16	29	2
Lasso 4EC	24	11	2119	<b>25</b>	7	16	0
Bicep Lite Magnum	27	13	493	<b>11</b>	12	13	2
Eradicane 6E	7	3	349	<b>8</b>	3	4	0
Sutan+ 6.7E	8	4	340	<b>8</b>	2	4	1
Princep 80WP	18	8	281	<b>6</b>	4	14	0
Frontier 6.0	3	1	87	<b>2</b>	1	2	0
Laddox	6	3	176	<b>4</b>	1	3	0
Sutazine 6ME	0						

<sup>3</sup>See Appendix A for Brand names and active ingredients

**Postemergence Applied Annual Grass and Broadleaf Herbicides (N=202)**

Acres Treated                      **1539**                      **34**  
 Growers                                      **99**                                      **46**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Basagran 4E	51	24	1038	<b>23</b>	20	29	2
Aatrex 4L	46	21	952	<b>21</b>	18	25	1
Permit 57 WDG	29	13	480	<b>11</b>	11	18	0
Amine 4	10	5	192	<b>4</b>	5	5	0
Dual Magnum	4	2	71	<b>2</b>	3	1	0
Crop Oil	1		70	<b>2</b>	0	0	0
Bicep	2	1	29	<b>&lt;1</b>	0	2	0
Laddox	2	1	29	<b>&lt;1</b>	1	0	0
Lorox 50DF	2	1	13	<b>&lt;1</b>	1	1	0
Microtech	1		4	<b>&lt;1</b>	0	1	0
Scythe 4.2	0						
Evik 80W	0						

**Perennial Weeds (N=197)**

Acres Treated                      **504**                      **11**  
 Growers                                      **69**                                      **32**

<b>Pesticide<sup>3</sup></b>	<b>#Growers</b>	<b>%Growers</b>	<b>#Acres</b>	<b>%Acres</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
Roundup 4S	59	27	483	<b>11</b>	40	15	2
Basagran	3	1	33	<b>1</b>	0	3	0
Laddox	1		30	<b>&lt;1</b>	0	1	0
Credit	2	1	24	<b>&lt;1</b>	1	0	0
Permit	2		16	<b>&lt;1</b>	0	2	0
2,4-D	4	2	7	<b>&lt;1</b>	0	2	2
Dual Magnum	1		0.6	<b>&lt;1</b>	1	0	0
Aatrex 4L	1		0.8	<b>&lt;1</b>	0	1	0
Hand pulling	1		12	<b>&lt;1</b>	1	0	0

<sup>3</sup>See Appendix A for Brand names and active ingredients

## Vertebrate Pest Management Section

**Question C4.** Which of these vertebrate pests require routine annual management, require occasional management, or are never a problem in your sweet corn fields? (Please circle your answers) (N=205)

Rank	Vertebrate	Annual Mgmt	Weighed Number
1	Birds	102	558
2	Raccoons	87	514
3	Deer	54	352
4	Porcupine	9	48
5	Skunks	4	38
6	Coyote	4	34
7	Turkeys	4	24
8	Bears	5	28
9	Squirrels	5	20
10	Geese	3	12
11	Possums	1	8
12	Beaver	1	8

**Question G1.** Which strategies do you use to manage birds? (Please circle the strategies that you use and their effectiveness: excellent, good, poor.) (N=146)

Strategy	#Growers	%Growers	Excellent	Good	Poor
Scare-eye balloons	66	31	5	40	19
Chop and leave debris after harvest	38	18	2	25	11
Recorded distress call devices	28	13	4	12	12
Cannons	25	12	2	15	7
Shell crackers	20	9	2	10	8
Shooting	14	6	6	3	4
Avitrol bait	11	5	2	4	5
Hanging bird carcass	3	1	2	1	0
Dogs	1		0	1	0
Fake owl	1		0	1	0
Scarecrow	1		0	1	0
Netting	2	1	2	0	0
Treated seed	1		1	0	0

**Question G2.** Which strategies do you use to manage deer? (Please circle the strategies that you use and their effectiveness: excellent, good, poor.) (N=124)

Strategy	#Growers	%Growers	Excellent	Good	Poor
hunting/shooting	58	27	12	25	19
electric fence	29	13	13	12	1
dogs	16	7	6	5	5
Deer Away	8	4	0	2	6
Hinder	6	3	0	4	2
fence (non electric)	5	2	2	1	2
none	16	7			
not a problem	7	3			

**Question G3.** Which strategies do you use to manage raccoons? (Please circle the strategies that you use and their effectiveness: excellent, good, poor.) (N=152)

Strategy	#Growers	%Growers	Excellent	Good	Poor
trapping	90	42	23	50	16
dogs	37	17	14	18	4
electric fence	35	16	10	13	11
hunting/shooting	7	3	2	2	1
plant trap crop at edge	3	1	0	1	1

**Question G4.** Other Vertebrate Pests and Strategies (Please list vertebrate, list strategies used and circle their effectiveness) (N=67)

<b>Pest and Strategy</b>	<b>#Growers</b>	<b>Excellent</b>	<b>Good</b>	<b>Poor</b>
<b>Skunks</b>	<b>13</b>			
trap	9	1	6	1
electric fence	1	0	1	0
hunting/shooting	1	1	0	0
avoid planting near tree line	1	0	1	0
<b>Bears</b>	<b>16</b>			
hunting/shooting	4	2	1	1
dogs	3	1	2	0
radio	3	0	2	1
electric fence	2	2	0	0
coyote alarm from USDA	2	0	0	2
none	3	0	0	1
<b>Squirrel</b>	<b>8</b>			
trap	3	0	2	1
dogs	1	0	0	1
electric netting	1	0	1	0
sharing	1	0	1	0
<b>Porcupine</b>	<b>15</b>			
trap	6	2	3	0
<b>hunting/shooting</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>0</b>
plant more	1	0	0	1
<b>Woodchuck</b>	<b>7</b>			
hunting/shooting	4	3	1	0
coyote	2	2	0	0
trap	1	0	1	0
Smoke bombs	1	0	1	0
<b>Coyotes</b>	<b>16</b>			
trap	2	2	0	0
electric fence	1	0	0	0
chase out	1	0	1	0
hunting/shooting	1	0	0	1
dog repellent	1	0	0	1
None	6			

## Pest Management Decision Making Section

**Question H1.** Who does insect trapping or field scouting on your farm (Please circle all that apply) (N=206)

#Growers	%Growers	Who monitors for pests?
146	68	Grower
35	16	Farm employee
24	11	Private IPM scout/consultant
24	11	University/Extension scout
28	13	No one
2	1	Other: University/Extension scout

**Question H2.** How important are these factors to you when choosing pesticides for use on your farm? (Please circle your answers) (N=203)

Factors for choosing Pesticides	Rank	Score*	Important		
			Very	Somewhat	Not
Effectiveness against pest compared to alternative products	1	670	159	17	2
Applicator hazard (toxicity to humans)	2	646	141	41	4
Customer relations (food safety concerns)	3	566	113	57	8
Label restrictions (reentry and preharvest intervals, protective equipment)	4	522	102	57	11
Impact on beneficials (parasites, predators, pollinators)	5	516	92	74	7
Other potential nontarget and environmental impacts	6	492	90	66	9
Cost per treatment	7	482	77	87	10
Formulations (liquid vs dry, water soluble bags)	8	366	50	83	28
Storage requirements	9	336	42	84	32
Size or type of packaging	10	334	43	81	38

\*The score was determined by multiplying very important by 4, somewhat important by 2, and not important by 0.

**Question H3.** How often (frequently, occasionally, never) do you use the following weather information in making your pest management decisions? (please circle your answers) (N=205)

Weather Information	Rank	Frequently	Occasionally	Never
Forecasts for next rain	1	183	11	10
Wind speed forecast	2	152	25	14
Rainfall total (for effect on spray residues)	3	108	47	24
Temperatures (for degree day models)	4	73	60	45

**Question H4.** If weather information was readily available, would you use it for? (please circle your answers) (N=203)

Weather Information	Yes	No
Forecasts for next rain	193	8
Wind speed forecast	170	13
Rainfall total (for effect on spray residues)	144	29
Temperatures (for degree day models)	142	33

**Question H5.** How often do you use the following personal protective equipment and protective clothing when mixing and/or applying pesticides (please circle your answer) (N=198)

Personal Protective Equipment	#Growers	%Growers	Always	Occasionally	Never	Not Applicable
Long pants	189	88	175	10	1	3
Long-sleeved shirt	189	88	134	50	2	3
Gloves	189	88	122	58	6	3
Respirator	177	82	82	62	29	4
Nitrile gloves	160	74	68	43	41	8
Goggles	175	81	56	72	42	4
Boots (chemical resistant)	178	83	54	63	57	4
Latex gloves	161	75	36	44	71	10
Chemical resistant suit	169	78	34	61	68	6
Face shield	164	76	30	49	80	5
Cotton gloves	151	70	5	16	121	9

**Question H6.** Which of the following pesticide application equipment do you use for sweet corn? (please circle all that apply.) (N=199)

#Growers	%Growers	Pesticide application equipment
<b>106</b>	<b>49</b>	Boom sprayer without drop nozzles
<b>81</b>	<b>38</b>	Air blast sprayer
<b>51</b>	<b>24</b>	Boom spray with drop nozzles
<b>38</b>	<b>18</b>	Back pack sprayer
<b>11</b>	<b>5</b>	Zea-later (or other oil applicator)
<b>3</b>	<b>1</b>	Shielded sprayer
<b>2</b>	<b>1</b>	Air assisted sprayer
<b>12</b>	<b>6</b>	Other

**Question H7.** How important are these sources of information in making your pest management decisions? (please circle your answers) (N=203)

Information Sources	Rank	Score*	Important		
			Very	Somewhat	Not
New England Vegetable Management Guide	<b>1</b>	<b>638</b>	<b>141</b>	<b>37</b>	<b>7</b>
Extension newsletters and/or pest alerts	<b>2</b>	<b>636</b>	<b>137</b>	<b>44</b>	<b>6</b>
Off season educational meetings	<b>3</b>	<b>540</b>	<b>100</b>	<b>70</b>	<b>6</b>
University/Extension staff	<b>4</b>	<b>526</b>	<b>103</b>	<b>57</b>	<b>9</b>
Other growers	<b>5</b>	<b>476</b>	<b>81</b>	<b>76</b>	<b>16</b>
Suppliers/dealers	<b>6</b>	<b>442</b>	<b>73</b>	<b>75</b>	<b>19</b>
Twilight meetings	<b>7</b>	<b>336</b>	<b>48</b>	<b>72</b>	<b>36</b>
Trade publications	<b>8</b>	<b>332</b>	<b>32</b>	<b>102</b>	<b>27</b>
Web sites	<b>9</b>	<b>250</b>	<b>25</b>	<b>75</b>	<b>57</b>
Other: Crop consultants	<b>10</b>	<b>24</b>	<b>6</b>	<b>0</b>	<b>0</b>

\*The score was determined by multiplying very important by 4, somewhat important by 2, and not important by 0.

**Question H9.** How would you describe your crop production practices? (please circle your answer) (N=197)

<b>Crop Production</b>	<b>#Growers</b>	<b>%Growers</b>
Conventional	<b>105</b>	<b>49</b>
IPM	<b>95</b>	<b>44</b>
Organic	<b>32</b>	<b>15</b>
Other	<b>9</b>	<b>4</b>

**Special thanks to the hundreds of growers who supported this project.**

**Also to the members of the New England Pest Management Network team including, Glen Koehler and James Dill-University of Maine, Candace Bartholomew-University of Connecticut, Alan Eaton-University of New Hampshire, Margaret Siligato-University of Rhode Island, Ann Hazelrigg and Sarah Kingsley-Richards-University of Vermont, and Ruth Hazzard, William Coli, Amanda Duphily, and Patricia Vittum-University of Massachusetts.**

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**Funding provided by the USDA Northeast Pest Management Center.**

## Appendix A: Pesticide Product Brand Names and Active Ingredients

Pesticide	Active Ingredient
Aatrex 4L	atrazine
Ambush	permethrin
Amine 4	2,4-D amine
Asana XL	esfenvalerate
Avaunt	indoxacarb
Basagran 4E	betazon
Baythroid 2	cyfluthrin
Bicep Magnum	metolachlor and atrazine
Bicep Lite Magnum	metolachlor and atrazine
Bravo Ultrex 82 WDG	chlorothalonil
Capture 2EC	bifenthrin
Counter 15G	terbufos
Credit	glyphosate
Cruiser 5FS	thiamethoxam
Dipel DF or ES	Bacillus thuringiensis kurstaki
Dithane	mancozeb
Dual Magnum	metolachlor
Entrust	spinosad
Eradicane 6E	EPTC and safener
Evik 80W	ametryn
Force 3G	tefluthrin
Fortress 5G	chlorethoxy fos
Frontier 6.0	dimethenamid
Gaicho 600	imidacloprid
Golden Natural Spray Oil	soybean oil
Gramoxone Max 3S	paraquat
Intrepid 2F	methoxyfenoxide
Laddox	bentazon and atrazine

Pesticide	Active Ingredient
Lannate SP	methomyl
Larvin 3.2	thiodicarb
Lasso 4EC	alachlor
Lorox 50DF	linuron
Lorsban 4E	chlorpyrifos
Maneb	maneb
Manzate	mancozeb
Metasystox-R	oxydemeton-methyl
Microtech	alachlor
Mocap 10G	ethoprop
M-Pede	potassium salts of fatty acids
Mustang	zeta-cypermethrin
Penncozeb	mancozeb
Permit 57 WDG	halosulfuron
Pounce	permethrin
Princep 80WP	simazine
Prowl H20	pendimethalin
Roundup 4S	glyphosate
Scythe 4.2	pelargonic acid
Sevin XLR Plus	carbaryl
Spintor 2SC	spinosad
Sutan+ 6.7E	butylate
Sutazine 6ME	alachlor and atrazine
Thimet 20G	phorate
Thionex 50w	endosulfan
Tilt	propiconazole
Warrior	lambda-cyhalothrin
Xentari	Bacillus thuringiensis aizawai