New England Pepper Pest Management Survey Results

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A 50-question survey was distributed by University of Connecticut Cooperative Extension to New England growers in the spring of 2006. A Dillman survey methodology was used to design and conduct the survey. Percentages of growers were calculated using the number of 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 percentage responses may sum to more than 100%.

Percentages are rounded to the nearest whole number. Acreages are rounded to the nearest 0.1 acre.

Pepper Pest Management Survey Returns

State	#Surveys Returned	#Growing Peppers	#Pepper Acres
CT	42	10	1.1
MA	60	40	88.4
ME	30	20	6.5
NH	29	11	8.5
RI	45	4	32.1
VT	15	7	4.0
Total	**221**	**92**	**140.5**

Question A2. Over the past five years, what is your average annual yield of harvested peppers per acre? **(N=68)***

Number of Growers Reporting average bushel/acres	**39**
Percent of Growers	**42%**
Number of Acres	**68.7**
Percent of Acres	**49%**
Total Bushels/Year	**57,547**
Average Bushels/Acre	**565**
Number of growers (percent) reporting that they don't know yield	**27 (29%)**

***N is used throughout the entire document and refers to the number of growers who answered the question.**

Question A3. What percentage of your pepper crop is: **(N=92)**

Variety	N=	%N	Acres	Percent of Acres
Hot Peppers	71	77	13.1	**9**
Sweet Peppers	92	100	126.4	**90**
***Other**	6	7	1.0	**1**

***Cubanella**

Question A4. What percentage of your pepper crop is sold through each of these markets? **(N= 92)**

Markets	#Acres	%Acres
Fresh market, wholesale	89.3	**64**
Fresh market, retail	49.0	**35**
U-Pick/Pick Your Own	0.3	**<1**
Processing	1.5	**1**
*Other	0.4	**<1**

***CSA and Home kitchen**

Question B1. Which of the following practices do you use? (Circle all that apply.) **(N= 92)**

Practices	#Growers	%Growers
transplanted in flat mulched beds	31	**34**
transplanted into raised mulched beds	35	**38**
transplanted into unmulched ground	29	**33**
Direct seeded into unmulched ground	0	**-**
Reduced or No-till planting	0	**-**
fresh manure	4	**4**
composted manure	19	**21**
trickle irrigation	52	**56**
overhead irrigation	26	**28**
None of the above	0	**0**
*Other	7	**8**

***dust machine through cultivation, silver plastic, dried chicken manure, soy meal, row cover at transplant with wire, raised beds plastic transplant, leaf based compost, and spot fertilizer where planting.

Question B2. Do you use tissue analysis to determine fertilizer needs in most years? (Circle your answer) **(N=92)**

Soil sample	#Growers	%Growers
No soil sampling for fertility needs	22	**24**
More than 1 time each year	4	**4**
Once every year	30	**32**
Once every 2 years	32	**35**
Once every 3 years	3	**3**
General soil sampling not specific for peppers	3	**3**

Question C1. Please estimate your average number of pesticide applications for peppers used in a typical year: **(N=90)**

Pests	#Average Number of Sprays
Disease	**2.3**
Insects	**0.3**
Mites	**0.6**
Weeds	**2.1**

Insects and Mites

Question C2. Which of these insects/mites require routine annual management, require occasional management, or are never a problem on your farm? **(N= 89)**

Rank	Insect/Mite	Weighed Number*	Rank	Insect/Mite	Weighed Number*
1	European corn borer	180	**12**	Japanese/Asiatic	38
2	Aphids	128	**13**	Leafminers	36
3	Pepper maggot	110	**14**	Thrips	32
4	Colorado potato beetle	90	**15**	Plant/Stink Bugs	30
5	Corn earworms	88	**16**	Pepper weevil	26
6	Flea beetles	78	**16**	Caterpillars	26
7	Fall armyworms	58	**16**	Wireworms	26
8	Common stalk borer	50	**19**	Slugs	24
9	Hornworms	46	**20**	Beet armyworms	18
10	Black cutworms	40	**21**	Cyclamen mites	14
10	Two spotted spider mite	40	**22**	Grasshoppers	6

*****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= 82)**

#Growers	%Growers	Practices used to manage insect and mite pests
62	**67**	Elimination of plant material from previous season as source of overwintered pests
60	**65**	Field monitoring of pest and beneficial populations
55	**60**	Weed management practices to minimize insect/mite pest risk
32	**35**	Fertilization practices to minimize insect/mite pest risk
15	**16**	Trapping for monitoring or direct control
7	**8**	Use degree-day or other pest models to time applications
7	**8**	Perimeter crop trapping
5	**5**	Crop rotation
4	**4**	Release predatory mites and insects

The following individual insect and mites pests are listed according to the number of growers who used pesticides to manage the pest in 2005. The survey listed several pesticides and some practices. Growers were able to write in additional pesticides and practices.

European Corn Borer (N=91)

	Number	Percent
Acres Treated	113.8	**81**
Growers	50	**54**

Pesticide[1]	#Growers	%Growers	#Acres	%Acres	Excellent	Good	Poor
Ambush 2E, 25W	8	9	25.6	**18**	6	2	0
Asana XL2	8	9	12.6	**9**	5	3	0
Baythroid 2E	2	2	31.3	**22**	0	2	0
Dipel 2X	10	11	9.3	**7**	3	7	0
Entrust	6	7	4.1	**3**	5	1	0
Intrepid 2F	2	2	1.5	**1**	0	2	0
Lannate LV, SP	14	15	67.7	**48**	6	8	0
Malathion	1	1	<0.1	**<1**			
Mustang	1	1	0.1	**<1**	1	0	0
Orthene 75SP, 97	5	5	43.3	**31**	3	2	0
Pounce 3.2EC, 25WC	10	11	15.7	**11**	6	4	0
Sevin 50W,80S,XLR	6	7	14.3	**10**	1	5	0
SpinTor 2SC	14	15	23.0	**16**	10	4	0
Warrior	2	2	3.0	**2**	1	1	0

Capture 2EC and Confirm 2F were not used by growers

[1]See Appendix A (page 18) for Brand names and active ingredients

Aphids (N=88)

	Number	Percent
Acres Treated	90.5	**64**
Growers	33	**36**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Admire 2F	5	5	4.3	**3**	4	1	0
BotaniGard ES 22WP	1	1	0.1	**<1**	0	1	0
Dimethoate 4EC	1	1	2.5	**2**	0	1	0
Fulfill	2	2	2.3	**2**	1	1	0
Horticultural Oil	1	1	<0.1	**<1**	0	0	1
Knack	1	1	0.1	**<1**	0	1	0
Lannate L	7	8	50.3	**39**	4	3	0
Malathion 5EC,8EC,50W,25W	3	3	2.4	**2**	3	0	0
M-Pede	1	1	1.0	**<1**	0	1	0
Orthene 75S	7	8	60.5	**43**	2	5	0
Provado	5	5	12.1	**9**	4	1	0
Thiodan 3EC, 50W	7	8	18.9	**13**	2	4	1
Vydate L	1	1	5.0	**4**	0	1	0

Assail 70WP, Azatin XL, Diazinon AG500, Metasystox-R, Mycotrol ES, and Neemix 4.5 were not used by growers.

Pepper Maggot (N=89)

	Number	Percent
Acres Treated	88.1	**63**
Growers	25	**27**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Asana	2	2	6.0	**4**	1	1	0
Dimethoate 4EC	4	4	13.0	**9**	1	3	0
Malathion 5EC, 8EC, 50W, 25W	6	7	9.3	**7**	4	2	0
Thiodan 3EC, 50W	10	11	66.4	**47**	3	7	0
Other Strategies							
Trap crop	1	1	0.2	**<1**	-	-	-

Warrior, Dipel, Orthene, Entrust, Sevin, and Lannate were all used by at least one grower but on less than 1% of the pepper acreage. Mustang was not used by growers.

Fall Armyworms and/or Beet Armyworms (N=85)

	Number	Percent
Acres Treated	63.9	**45**
Growers	14	**15**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Asana XL	6	7	18.6	**13**	3	3	0
Dipel	2	2	1.0	**<1**	0	1	0
Entrust	2	2	2.3	**2**	1	1	0
Kryocide	1	1	1.3	**<1**	1	0	0
Lannate LV, SP	9	10	53.6	**38**	4	5	0
Sevin 50W, 80S XLR Plus	3	3	2.3	**2**	1	1	0
SpinTor 2SC	2	2	9.3	**7**	1	1	0

Baythroid 2E, Confirm 2F, Crymax, and Javelin were not used by growers.

Mites (N=86)

	Number	Percent
Acres Treated	67.1	**48**
Growers	9	**10**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Agri-Mek 0.15 EC	5	5	27.1	**19**	5	0	0
Horticultural Oil	1	1	1.0	**<1**	1	0	0
Kelthane MF	1	1	5.0	**4**	0	1	0
M-Pede	1	1	1.0	**<1**	0	1	0
Warrior	2	2	38.0	**27**	1	1	0

Capture 2EC and Microthiol Special were not used by growers**.**

Black Cutworm (N=87)

	Number	Percent
Acres Treated	14.8	**11**
Growers	8	**8**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Diazinon	1	1	5.0	**4**	0	1	0
Lannate LV, SP	1	1	0.1	**<1**	0	1	0
Mustang	1	1	0.1	**<1**	1	0	0
Sevin 50W, 80SXLR Plus	3	3	0.5	**<1**	3	0	0
Warrior	2	2	9.0	**6**	2	0	0

Ambush 2E, Ambush 25W, Confirm 2F, Pounce 3.2EC, and Pounce 25WC were not used by growers.

Leafminers (N=88)

	Number	Percent
Acres Treated	16.3	**12**
Growers	6	**7**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Agri-Mek 0.15EC	1	1	0.1	**<1**	1	0	0
Ambush 2E, 25W	2	2	0.3	**<1**	1	1	0
Entrust	1	1	1.0	**<1**	0	1	0
Pounce	2	2	7.0	**5**	1	1	0
PyGanic	1	1	1.0	**<1**	0	1	0
SpinTor 2SC	1	1	8.0	**6**	1	0	0

Baythroid 2EC, Dimethoate 4EC, Horticultural Oil, Trigard, Vydate L, and Warrior were not used by growers.

Whiteflies (N=90)

	Number	Percent
Acres Treated	38.1	**27**
Growers	4	**4**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Fulfill	1	1	30.0	**21**	0	1	0
Provado	3	3	8.1	**6**	2	1	0

Actara, Admire 2F, Assail 70WP, Azatin XL, BotaniGard ES 22WP, Knack, M-Pede, Mycotrol ES, Neemix 4.5, Platinum were not used by growers.

Diseases

Question C4. Which of these diseases require routine annual management, require occasional management, or are never a problem on your farm? (Please circle your answers) **(N= 87)**

Rank	Disease	Weighed Number*	Rank	Disease	Weighed Number*
1	Bacterial leaf spot	114	**9**	Cercospora leaf spot	28
2	Phytophthora	98	**11**	Tomato spotted Virus	26
3	Bacterial soft spot	52	**11**	Tobacco Mosaic Virus	26
4	Anthracnose	40	**13**	Potato Virus	16
5	Cucumber Mosaic Virus	36	**14**	Tobacco Etch Virus	14
5	Pythium	36	**14**	Stubby Root Nematodes	14
7	Rhizoctonia	30	**16**	Northern Root Knot Nematodes	12
7	Sclerotinia	30	**16**	Lesion Nematodes	12
9	Alternaria	28	**18**	Alfalfa Mosaic Virus	8

Question E1. Which of the following practices do you use to manage diseases? (Circle all that apply.) **N=90**

#Growers	%Growers	Practices used to manage diseases
67	**73**	Weed management practices to minimize disease risk
67	**73**	Use disease resistant varieties
49	**53**	Elimination of overwintered inoculum sources such as leaves or other plant materials from previous season
47	**51**	Avoid any highly susceptible plant varieties
39	**42**	Fertilization practices to minimize disease risk
33	**36**	Plant spacing or pruning to open canopies and promote air circulation
25	**27**	Spring/Summer monitoring of disease infection periods
22	**24**	Pruning out infected tissues, scouting to remove infected plants as symptoms appear
9	**10**	Pre-season assessment of disease inoculum levels and/or infection risk
7	**8**	Crop rotation
5	**5**	Thinning to promote air circulation
1	**1**	Compost manure

Bacterial spot (N=88)

	Number	Percent
Acres Treated	85.1	**61**
Growers	24	**26**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Basicop	3	3.3	18.3	**13**	3	0	0
Champ	2	2.2	1.1	**<1**	2	0	0
Kocide 4.5F	17	18.5	81.0	**58**	7	8	1
Manex	7	7.6	42.2	**30**	4	2	1
Other Strategies							
Disease resistant varieties	17	18.5	55.6	**40**	5	11	0
Hot water treatment for seeds	2	2.2	3.3	**2**	0	2	0

Agri-Mycin 17, Agri-Strep, and Chlorine were not used by growers.

Phytophthora Crown Rot and Blight (N=89)

	Number	Percent
Acres Treated	69.7	**50**
Growers	20	**22**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Acrobat	1	1.1	1.0	**<1**	0	1	0
Manex	6	6.5	47.6	**34**	1	2	3
Oxidate	1	1.1	0.1	**<1**	0	1	0
Phospet	1	1.1	0.1	**<1**	0	0	0
Ridomil Gold EC	9	9.8	42.7	**30**	2	6	1
Ridomil Gold Copper	7	7.6	50.3	**36**	1	3	3
Tanos	2	2.2	3.3	**2**	0	1	1
Vapam	1	1.1	2.0	**1**	0	1	0
Other Strategies							
Raised bed	1	1.1	1.0	**<1**	0	1	0
Resistant varieties	4	4.3	6.6	**5**	2	1	1

Viruses
(Cucumber, Tobacco, Tomato, and Tomato Spotted Wilt Mosaic Viruses)
(N=87)

	Number	Percent
Acres Treated	5	**4**
Growers	2	**2**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Champion	1	1	1	**<1**	1	0	0
Zerotol	1	1	4	**3**	1	0	0
Amarcarb	1	1	1	**<1**	1	0	0
Other Strategies							
Pull plants that had symptoms	1	1	3	**2**	0	0	0

Chlorine was not used by growers.

Weed Management

Question C5. Which of these pests require routine annual management, require occasional management, or are never a problem on your farm? (Please circle your answers) **(N=90)**

Rank	**Weeds**	Annual Mgmt	Weighed Number
1	Annual broadleaf weeds	72	302
2	Annual grasses	59	262
3	Perennial broadleaf weeds	32	168
4	Perennial grasses	29	160

Question F1. Which of the following weed management practices did you use for peppers? (Please circle the practices used and their effectiveness: excellent, good, poor.) **(N=92)**

Practices	**#Growers**	**%Growers**	**Excellent**	**Good**	**Poor**
Mechanical cultivation	73	**79**	32	38	2
Hand pulling	72	**78**	43	28	0
Plastic mulching	66	**72**	52	13	1
Hoeing	61	**66**	37	23	0
Shielded application (between rows)	20	**22**	13	6	1
Mulching (straw, hay, or other organic material)	9	**10**	5	3	1
Banded herbicide application (over the row only)	7	**8**	1	5	1
Spot Treatment	7	**8**	2	4	1
No-till or zone-till	3	**3**	1	0	2
Banded herbicide between plastic	2	**2**	2	0	0
Other Practices					
Banded herbicide between plastic	2	**2**	2	0	0
Mechanical weed control between plastic	1	**1**	0	0	0
Mowing between rows	1	**1**	0	1	0
Late season cover crop overseeding	1	**1**	0	1	0
Rotation using cover crops	1	**1**	0	1	0

Stale Seedbed (N=89)

	Number	Percent
Acres Treated	**26.4**	**19**
Growers	**11**	**12**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Gramoxone Extra 2.5WS	2	2	0.8	**1**	1	1	0
Poast 1.5E	1	1	3.0	**2**	0	1	0
Roundup Ultra	4	4	6.3	**5**	3	1	0
Command	1	1	0.5	**<1**	0	1	0
Other Strategies							
Mechanical cultivation	1	1	14.0	**10**	0	0	0
stale bedded in 2004	1	1	1.0	**<1**	0	0	0

Scythe was not used by growers.

Pre-emergence herbicide (N=90)

	Number	Percent
Acres Treated	93.4	**66**
Growers	27	**29**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Command 4EC	3	3	44.5	**32**	0	3	0
Devrinol 50-DF, 2E	17	18	81.8	**58**	5	11	1
Dual	1	1	6.0	**4**	1	0	0
Prefar 4E	2	2	35.0	**25**	0	1	1
Sandea	3	3	8.0	**6**	2	1	0
Treflan 4E	10	11	43.1	**31**	1	8	1

Post-emergence herbicide (N=80)

	Number	Percent
Acres Treated	**15.8**	**11**
Growers	**10**	**11**

Pesticide[1]	**#Growers**	**%Growers**	**#Acres**	**%Acres**	**Excellent**	**Good**	**Poor**
Devrinol	1	1	1.3	**<1**	0	1	0
Dual 8E	2	2	6.5	**5**	0	2	0
Dual Magnum 7.62 E	3	3	4	**3**	0	3	0
Gramoxone	1	1	0.8	**<1**	1	0	0
Poast	1	1	1	**<1**	1	0	0
Scythe	1	1	0.3	**<1**	1	0	0
Select	1	1	2	**1**	0	1	0

Vertebrate Pests

Question C5. Which of these pests require routine annual management, require occasional management, or are never a problem on your farm? (Please circle your answers) **(N- 87)**

Rank	**Vertebrate**	**Annual Mgmt**	**Occasional Mgmt**	**Weighed Number**
1	Deer	23	21	134
2	Woodchuck	8	11	54
3	Raccoons	3	4	20
4	Skunks	1	3	10
5	Birds	2	1	10
6	Groundhogs	1	1	6
7	Turkeys	1	1	6
8	Voles, Chipmunks, Flying squirrel, Coyote	1	-	4
9	Mice	-	2	4
10	Rabbit, porcupine	-	1	2

Question G1. Vertebrate Pests and Strategies (Please list vertebrate, list strategies used and circle their effectiveness) **(N=21)**

Pest and Strategy	#Growers	Excellent	Good	Poor
Deer				
electric fence	**6**	1	5	-
fence	**4**	2	2	-
shoot	**4**	2	2	-
dog	**2**	-	1	-
reflector	**1**	-	1	-
Woodchuck				
smoke bomb	**4**	1	2	1
flooding	**1**		1	
dog	**1**		1	
fence	**1**			1
reflector	**1**		1	
electric fence	**1**		1	
Groundhogs: shoot	**1**	1		

Pepper Pest Management Decision Making

Question H1. What kinds of pest monitoring do you use for insect or mite pest management decisions? (Please circle the answer that fits best) **(N=86)**

#Growers	%Growers	Pest Monitoring Practices
3	**3**	No monitoring, spraying made on preplanned calendar basis
36	**39**	Informal observations influence decisions, but no special field visits for pest observations
47	**51**	Field visits made for purpose of pest observations, but not following a standard procedure and threshold
5	**5**	Sampling according to standard procedures or traps, and comparing observations to pest threshold
8	**9**	Use of pest forecast and tracking models and equipment to determine need or adjust timing for sampling or control measures

Question H2. What kinds of pest monitoring do you use for disease management decisions? (Please circle the answer that fits best) **(N=89)**

#Growers	%Growers	Pest Monitoring Practices
0	**0**	No monitoring, spraying made on preplanned calendar basis
44	**48**	Informal observations influence decisions, but no special field visits for pest observations
49	**53**	Field visits made for purpose of pest observations, but not following a standard procedure and threshold
9	**10**	Infection period duration or intensity estimated, leaf or fruit sampling for symptoms.
2	**2**	Detailed infection period tracking and sampling, and/or use of disease models

Question H3. Please select the option that best describes your use if monitoring for weed management **(N=88)**

#Growers	%Growers	Pest Monitoring Practices
15	**16**	Treatment made on calendar basis
66	**72**	Decisions based on informal observations, but no formal weed scouting or weed mapping
11	**12**	Weed scouting records or weed map used for at least some plantings

Question H4. Who collects pest monitoring information for your farm? **(N=88)**

#Growers	%Growers	Who monitors for pests?
76	**83**	You (Grower)
12	**13**	Private IPM scout/consultant
16	**17**	Farm employee or family member
2	**2**	Extension and/or University employee
5	**5**	No one
0	**0**	Other

Question H5. How would you describe your crop production practices? (please circle your answer) **(N=86)**

Crop Production	#Growers	%Growers
Pesticide by calendar date or crop growth stage	16	**17**
IPM	47	**51**
Organic	24	**26**

Question H6. How important are these factors to you when choosing pesticides for use on your farm? (Please circle your answers) **(N=85)**

Factors for choosing Pesticides	Rank	Score	Very	Somewhat	Not
Applicator hazard (toxicity to humans)(protective equipment)	**1**	272	60	16	2
Effectiveness against pest compared to alternative products	**2**	258	58	13	3
Customer relations (food safety concerns)	**3**	256	56	16	6
Potential nontarget and environmental impacts	**4**	240	48	24	2
Impact on beneficial species (parasites, predators, pollinators)	**5**	232	45	26	1
Label restrictions (reentry and preharvest intervals)	**6**	244	52	18	5
Cost per treatment	**7**	170	25	35	11
Size or type of packaging	**8**	136	15	38	21
Storage requirements	**9**	122	16	29	27
Formulation (liquid vs dry, water soluable bags) Conventional liquid or dry concentrate vs. measured doses (tip and pour, tablets or water soluble packets)	**10**	96	12	24	36

Question H7. How often (frequently, occasionally, never) do you use the following weather information in making your pest management decisions? (please circle an answer for each item**) (N=85)**

Weather Information	**Rank**	**Score**	**Frequently**	**Occasionally**	**Never**
Forecasts for timing of next rain	**1**	294	70	7	6
Wind speed forecast	**2**	246	57	9	12
Rainfall accumulation (for effect on spray residues)	**3**	214	45	17	14
Humidity and/or leaf wetness hours	**4**	178	34	21	20
Temperatures or degree day models	**5**	148	27	20	30

Question H8. How important are these sources of information in making your pest management decisions? **(**please circle your answers) **(N=86)**

Information Sources	**Rank**	**Score**	**Very**	**Somewhat**	**Not**
New England Vegetable Management Guide	**1**	262	59	13	6
Off-season educational meetings	**2**	252	52	22	6
University/Extension staff	**3**	230	46	23	5
Newsletters	**3**	230	43	29	5
Other growers	**5**	194	34	29	11
Twilight meetings, field days	**6**	164	29	24	17
Suppliers/dealers	**7**	156	20	38	15
Trade publications	**8**	140	11	48	17
Northeast Pepper IPM Manual	**9**	110	18	19	23
Websites	**10**	108	9	36	23
Other: Crop consultants (2 growers)	**-**	8	2	-	-
Other: MOFGA (2 growers)	**-**	6	1	1	-

Question H9. Would you use irrigation scheduling guidance based on observed and forecast weather if it were available? **(N=89)**

Would Use Irrigation Information	**Yes**	**No**	**Not Sure**
Number of growers	**43**	20	26
Percent of growers	**47**	22	28

Question H10. Do you know about the PRONewEgland.org website **(N=89)**

Know about PRONewEngland.org	**Yes**	**No**
Number of growers	**16**	73
Percent of growers	**17**	79

If yes, have you visited the website? (N=16)	**Yes**	**No**
Number of growers	**13**	3

If visited, would you visit it again? (N=12)	**Yes**	**No**
Number of growers	**10**	**2**

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Appendix A: Pesticide Product Brand Names and Active Ingredients

Brand Names	Active Ingredient	Brand Names	Active Ingredient
Acrobat	dimethomorph	Kocide 4.5	cupric hydroxide
Actara	thiamethoxam	Kryocide	cryolite
Admire 2F	imidacloprid	Lannate LV, SP	methomyl
Agri-Mek 0.15EC	abamectin	Malathion 5EC, 8EC, 50W,25W	malathion
Agri-Mycin 17	streptomycin	Manex	maneb
Agri-Strep	streptomycin	Metasystox-R	oxydemeton-methyl
Ambush E or 25W	permethrin	Microthiol Special	sulfur
Armicarb 100	potassium bicarbonate	M-Pede	fatty acids (insecticidal soap)
Asana XL2	esfenvalerate	Mustang	zeta-cypermethrin
Assail 70WP	acetamiprid	Mycotrol ES	Beauveria bassiana
Azatin XL	azadirachtin	Neemix 4.5	azadirachtin
Basicop	basic copper sulfate	Orthene 75SP, 97	acephate
Baythroid 2E	cyfluthrin	OxiDate	hydrogen dioxide
BotaniGard ES 22WP	Beauveria bassiana	Platinum	thiamethoxam
Capture 2EC	bifenthrin	Poast 1.5E	sethoxydim
Champ	copper hydroxide	Pounce 3.2EC or 25WP	permethrin
Champion WP	copper hydroxide	Prefar 4E	bensulide
Chlorine	Ag Chlor 310	Provado	imidacloprid
Command 4EC	clomazone	PyGanic EC	pyrethrins
Confirm 2F	tenufenozide	Ridomil Gold EC	mefenoxam
Crymax	B.t. kurstaki	Ridomil Gold Copper	mefenoxam
Devrinol 50DF, 2E	napropamide	Roundup Ultra	glyphosate
Diazinon AG500, AG600, 50W	diazinon	Sandea	halosulfuron-methyl
Dimethoate 4EC	dimethoate	Scythe	pelargonic acid
Dipel 2X	Bacillus thuringiensis	Select 2EC	clethodim
Dual 8E	metolachlor	Sevin 50W, 80S. XLR Plus 4F	carbaryl
Dual Magnum 7.62E	s-metolachlor	Spintor 2SC	spinosad
Entrust	spinosad	Tanos	famoxoaone, cymoxanil
Fulfill	pymetrozine	Thiodan 3EC, 50W	endosulfan
Gramoxone Extra L	paraquat	Treflan 4E	trifluralin
Horticultural oil		Trigard	azadirachtin
Intrepid 2F	methoxyfenoxide	Vapam	metam sodium
Javelin	B.t. kurstaki	Vydate L	oxamyl
Kelthane MF	dicofol	Warrior	lambda-cyhalothrin
Knack	pyriproxyfen	ZeroTol	hydrogen dioxide