Appendices

Appendix 1: Copy of the Questionnaire

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Frequencies for All Survey Questions
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CALIFORNIA SCHOOL INTEGRATED PEST MANAGEMENT (IPM) PROGRAM

2004 SURVEY OF SCHOOL DISTRICTS

GENERAL PEST MANAGEMENT PRACTICES

1 Which **one** of the following best describes how frequently your school district receives inquiries from the community concerning pest management issues? *Please check only one answer.*

- [1] Once or twice a year
- [2] 3-6 times a year
- [3] 7-12 times a year
- [4] More than 12 times a year
- [5] Don't know, do not have access to this information

2 For what type(s) of pest control does your district have contracts with pest control businesses? *Please check all appropriate boxes.*

- [1] Termite control
- [2] Food service area pest control
- [3] Perimeter pest control
- [4] Grounds pest control (for example, turf, landscape, paved areas)
- [5] Have contracts for pest control, but uncertain about the type
- [6] Don't know whether the district has contracts for pest control
- [7] Do not contract with pest control businesses

3 Has your district officially adopted (through a school board action or administrator's directive) the following policies or practices?

	Yes	No	Not sure
a. Written policy requiring the use of least-toxic pest management practices.....	1	2	3
b. Written list of pesticide products approved for use in district schools.....	1	2	3
c. Written policy requiring the monitoring of pest levels	1	2	3
d. Each school site maintains records of all pesticides used for at least four years, and makes these records available to the public.....	1	2	3
e. District or school annually provides staff and parents with written notification of expected pesticide use at their school ..	1	2	3
f. District or school maintains a list of parents wanting to be notified of specific pesticide applications.....	1	2	3
g. Warning signs are posted at least 24 hours before and 72 hours after pesticide treatment.....	1	2	3

4 Which of the following describes your district's recordkeeping and pest monitoring/detection activities? *Please check all that apply.*

- [1] Buildings are inspected for potential pest problems
- [2] Records are kept of building inspections
- [3] Pests are monitored during the course of a year
- [4] Records are kept of results of pest monitoring
- [5] Records are kept of pest sightings (for example, by teachers)
- [6] Records are kept of pest treatments used
- [7] No records are kept on pest management
- [8] No pest monitoring/detection activities

5 Has your school district adopted an IPM program?

- [1] Yes -- how many years ago? _____→ ***Go to Question 6***
- [2] No → ***Go to Question 8***
- [3] Not sure → ***Go to Question 8***

6 Do you think your district's IPM program has: *(Please check only one answer)*

- [1] Resulted in more effective pest management
- [2] Made no difference in pest management effectiveness
- [3] Resulted in less effective pest management
- [4] Uncertain/no opinion

7 Do you think your district's IPM program has: *(Please check only one answer)*

- [1] Reduced the long-term cost of pest management
- [2] Had no impact on the long-term cost of pest management
- [3] Increased the long-term costs of pest management
- [4] Uncertain/no opinion

8 What are the barriers to using IPM practices in your district? Please rate the significance of each of the following:

	Not at all significant	Somewhat significant	Very significant
a. Age and condition of school facilities.....	1	2	3
b. Poor communication within the district	1	2	3
c. Budget restrictions.....	1	2	3
d. Inadequate staff training	1	2	3
e. Understaffing	1	2	3
f. Insufficient tool/equipment inventory	1	2	3
g. Lack of technical information resources ...	1	2	3
h. Contracting problems.....	1	2	3

ANT MANAGEMENT INSIDE SCHOOL BUILDINGS

We would like to find out about all practices your school district used during the last **12 months** to manage ant problems **inside** district buildings. This includes practices used by both district personnel and contractors.

9 Did your district do anything to manage ants ***inside*** school buildings within the last 12 months?

- [1] Yes → ***Go to Question 10***
- [2] No → ***Go to Question 14***
- [3] Not sure → ***Go to Question 14***

10 Did your district use the following practices to manage ants **inside** buildings?

11 If yes, please rate the effectiveness of each practice used:

	Yes	No	Very effective	Somewhat effective	Uncertain	Somewhat ineffective	Very in-effective
a. Insecticidal spray from an aerosol can (for example, Raid®)	1	2	1	2	3	4	5
b. Exempt insecticidal spray from an aerosol can (for example, mint, citrus or other plant based oils)	1	2	1	2	3	4	5
c. Insecticides sprayed using other application method	1	2	1	2	3	4	5
d. Ant baits	1	2	1	2	3	4	5
e. Soapy water spray	1	2	1	2	3	4	5
f. Caulk in cracks to prevent entry of ants	1	2	1	2	3	4	5
g. Improved sanitation	1	2	1	2	3	4	5
h. Other (please describe below)	1	2	1	2	3	4	5

12 For each practice used, which best describes how your district decided **when** this treatment for ants was necessary?

	Not applicable, did not use	Regular time intervals	When ants are first noticed	When number of ants ex-ceeds a pre-established threshold	After a certain number of complaints	Other (please describe below)
a. Insecticidal spray from an aerosol can (for example, Raid®)	1	2	3	4	5	6
b. Exempt insecticidal spray from an aerosol can (for example, mint, citrus or other plant based oils)	1	2	3	4	5	6
c. Insecticides sprayed using other application method	1	2	3	4	5	6
d. Ant baits	1	2	3	4	5	6
e. Soapy water spray	1	2	3	4	5	6
f. Caulk in cracks to prevent entry of ants	1	2	3	4	5	6
g. Improved sanitation	1	2	3	4	5	6
h. Other	1	2	3	4	5	6

Description of other ways your district decided when to use treatment (please indicate which type of treatment you are describing):

_____

_____

13 Which **one** practice did your district use **most frequently** to manage ants **inside** school buildings? *Please check only one answer.*

- [1] Insecticidal spray from an aerosol can (for example, Raid®)
- [2] Exempt insecticidal spray from an aerosol can (for example, mint, citrus or other plant based oils)
- [3] Insecticides sprayed using other application method
- [4] Ant baits
- [5] Soapy water spray
- [6] Caulk in cracks to prevent entry of ants
- [7] Improved sanitation
- [8] Other (please specify)

_____

WEED MANAGEMENT

We would like to find out about all practices your school district used during the last **12 months** to manage weed problems. This includes practices used by both school district personnel and contractors.

14 Did your district do anything to manage weeds within the last 12 months?

- [1] Yes → ***Go to Question 15***
- [2] No → ***Go to Question 20***
- [3] Not sure → ***Go to Question 20***

15 Did your district use the following practices to manage weeds?

16 If yes, please rate the effectiveness of each practice used:

	Yes	No	Very effective	Somewhat effective	Uncertain	Somewhat ineffective	Very in-effective
a. Broadcast treatment with herbicides (for example, preemergents)	1	2	1	2	3	4	5
b. Spot treatment with herbicides (for example, Roundup®)	1	2	1	2	3	4	5
c. Use of mulches, ground covers, barrier cloth or plastic	1	2	1	2	3	4	5
d. Physical controls such as hand pulling, cultivating, mowing	1	2	1	2	3	4	5
e. Flaming	1	2	1	2	3	4	5
f. Irrigation management	1	2	1	2	3	4	5
g. Turf selection	1	2	1	2	3	4	5
h. Other (please describe below)	1	2	1	2	3	4	5

_____

17 Which best describes how your district decided **when** herbicide treatment for weeds was necessary?

	Not applicable, did not use	Regular time intervals (annually, seasonally, monthly, etc.)	When weeds are first noticed	When weed abundance exceeds a pre-established threshold	After a certain number of complaints	Other (please describe below)
a. Broadcast treatment with herbicides (for example, preemergents)	1	2	3	4	5	6
b. Spot treatment with herbicides (for example, Roundup®)	1	2	3	4	5	6

Description of other ways your district decided when to use herbicides (please indicate which type of treatment you are describing):

_____

_____

18 Which **one** practice did your district use **most frequently** to manage weeds in the following locations?

	Broadcast treatment with herb-icides (for example pre-emergents)	Spot treatment with herb-icides (for example, Roundup®)	Use of mulches, ground covers, barrier cloth or plastic	Physical controls such as hand pulling, cultivating, mowing	Flaming	Irrigation management	Turf selection	Other (please describe below)
a. Athletic fields	1	2	3	4	5	6	7	8
b. Playgrounds	1	2	3	4	5	6	7	8

Description of other practices used to manage weeds (please indicate which location you are describing):

_____

_____

19 At which **one** of the following locations does your district typically have the most trouble with weeds? *Please check only one answer.*

- [1] Athletic fields
- [2] Playgrounds
- [3] Landscaping
- [4] Rights of way
- [5] Fence rows
- [6] Paved areas/cracks in asphalt
- [7] Other (please specify)

_____

RESPONDENT INFORMATION

20 Which of the following are you responsible for in your district? *Please check all that apply.*

- [1] Pest management and pesticide safety training
- [2] Setting pest management policies
- [3] Deciding when to apply pest management treatments
- [4] Deciding which pest management practices to use
- [5] Applying pest management treatments
- [6] Directing others to apply pest management treatments
- [7] Keeping records of all pest management treatments used
- [8] Other (please specify)

_____

21 Are you the designated IPM coordinator for your school district?

- [1] Yes → ***Go to Question 22***
- [2] No → ***Go to Question 23***

22 If you are the IPM coordinator for your school district, how long have you had this responsibility?

- [1] Less than 1 year
- [2] 1-2 years
- [3] 3-4 years
- [4] 5-10 years
- [5] More than 10 years

23 Please rate **each** of the following for the *past year* in your school district.

	Good	Fair	Poor	Not sure
a. Communication between district pest manager(s) and other district staff (teachers, administrators) on pest management issues	1	2	3	4
b. Availability of technical information on pest management in schools	1	2	3	4
c. Use of pest prevention methods	1	2	3	4
d. Use of pest monitoring methods	1	2	3	4
e. Overall reduction of exposure to pesticides	1	2	3	4
f. Training opportunities for district staff in pest management	1	2	3	4
g. Contracting procedures used for hiring outside pest control services	1	2	3	4

24 Please indicate whether you have accessed **each** of the following information resources on pest management in schools. *Please check only one box for each information resource.*

	Have accessed	Aware of but have not accessed	Not aware of
a. DPR School IPM web site	1	2	3
b. Brochures/handouts from DPR	1	2	3
c. Presentations on school IPM by DPR staff	1	2	3
d. Training workshops on school IPM	1	2	3
e. Information provided by licensed pest control business	1	2	3
f. University of California resources	1	2	3
g. Information from other web site sources	1	2	3
h. California Department of Education, School Facilities Planning Division	1	2	3

_____
Your job title (please print)

_____
Your name (optional, please print)

Do you have any other comments or suggestions?

_____
_____
_____
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Thank you for taking the time to complete our survey. If you have any questions about the survey, please feel free to contact Dr. Belinda Messenger at (916) 324-4077 or <bmessenger@cdpr.ca.gov>.

Please return your completed questionnaire in the postage paid envelope by May 14, 2004.

Appendix 2: Appendix Tables and Figures

Appendix Table 1.1 Responses to Questions 1 and 2

		Percent	*Number of cases*
1. Which one of the following best describes how frequently your school district receives inquiries from the community concerning pest management issues? Please check only one answer.	Never (write-ins)[1]	3%	*17*
	Once or twice a year	70%	*367*
	3-6 times a year	13%	*67*
	7-12 times a year	3%	*16*
	More than 12 times a year	3%	*18*
	Don't know, do not have access to this information	7%	*39*
	Total	100%	*524*
2. For what type(s) of pest control does your district have contracts with pest control businesses? Please check all appropriate boxes.[2]	Termite control	37%	*192*
	Food service area pest control	55%	*292*
	Perimeter pest control	48%	*251*
	Grounds pest control	31%	*160*
	Have contracts for pest control, but uncertain about the type	1%	*7*
	Don't know whether the district has contracts for pest control	1%	*3*
	Do not contract with pest control businesses	22%	*115*
	Total	n/a	*525*

[1] "Never" was not included as a category on the questionnaire, but was written-in by 17 respondents. It is possible that some of the nine respondents who skipped this question had never received any inquiries.

[2] These responses may slightly understate the amount of contracting that goes on. At least one respondent skipped question 2 (as well as all of page 1 and 2) but wrote in that they contract to a pest control company. Three districts indicating that they do not contract with pest control businesses reported -- sometimes in the context of answering other questions -- that they use outside pest control services on an "on-call" basis.

Appendix Table 1.2 Responses to Question 3

3. Has your district officially adopted (through a school board action or administrator's directive) the following policies or practices?[1]	Yes	No	Not sure	Total	*Number of cases*
a. Written policy requiring the use of least-toxic pest management practices	59%	25%	16%	100%	*495*
b. Written list of pesticide products approved for use in district school	67%	23%	11%	100%	*500*
c. Written policy requiring the monitoring or pest levels	31%	50%	19%	100%	*484*
d. Each school site maintain records of all pesticides used for at least four years, and makes these records available to the public	77%	13%	11%	100%	*497*
e. District or school annually provides staff and parents with written notification of expected pesticide use at their school	88%	8%	4%	100%	*512*
f. District or school maintains a list of parents to be notified of specific pesticide applications	79%	13%	8%	100%	*509*
g. Warning signs are posted at least 24 hours before and 72 hours after pesticide treatment	92%	6%	2%	100%	*513*

[1] Five of the districts that skipped question 3 entirely indicated that it wasn't applicable because they do not use any pesticides. These respondents also skipped questions 4 through 8. Another district did not answer 3b, c or d and wrote in that don't use any pesticides. It may be important to modify future questionnaires so that districts understand that the questions apply to them regardless of whether or not they use pesticides.

Appendix Table 1.3 Responses to Questions 4-7

		Percent	*Number of cases*
4. Which of the following describes your district's recordkeeping and pest monitoring/detection activities? Please check all that apply.	Buildings are inspected for potential pest problems	61%	*318*
	Records are kept of building inspections	30%	*155*
	Pests are monitored during the course of a year	55%	*287*
	Records are kept of results of pest monitoring	25%	*129*
	Records are kept of pest sightings	25%	*129*
	Records are kept of pest treatments used	88%	*459*
	No records are kept on pest management	7%	*34*
	No pest monitoring/detection activities	6%	*30*
	Total	n/a	*519*
5. Has your school district adopted an IPM program?	Yes	69%	*356*
	No	17%	*90*
	Not sure	13%	*69*
	Total	100%	*515*
If yes to question 5, how many years ago?	Less than two years ago	6%	*17*
	Two years ago	28%	*85*
	Three years ago	32%	*97*
	Four years ago	18%	*54*
	Five years ago	5%	*14*
	More than five years ago	11%	*32*
	Total	100%	*299*
6. Do you think your district's IPM program has:	Resulted in more effective pest management	49%	*176*
	Made no difference in pest management effectiveness	23%	*81*
	Resulted in less effective pest management	15%	*52*
	Uncertain/no opinion	13%	*48*
	Total	100%	*357*
7. Do you think your district's IPM program has:	Reduced the long-term cost of pest management	33%	*116*
	Had no impact on the long-term cost of pest management	24%	*87*
	Increased the long-term costs of pest management	21%	*74*
	Uncertain/no opinion	22%	*79*
	Total	100%	*356*

Appendix Table 1.4 Responses to Question 8

8. What are the barriers to using IPM practices in your district? Please rate the significance of each of the following:	Not at all significant	Somewhat significant	Very significant	Total	*Number of cases*
a. Age and condition of school facilities	45%	38%	17%	100%	*459*
b. Poor communication within the district	71%	22%	7%	100%	*454*
c. Budget restrictions	37%	39%	24%	100%	*463*
d. Inadequate staff training	50%	39%	12%	100%	*452*
e. Understaffing	34%	32%	34%	100%	*462*
f. Insufficient tool/equipment inventory	60%	30%	11%	100%	*447*
g. Lack of technical information resources	66%	26%	8%	100%	*452*
h. Contracting problems	78%	17%	5%	100%	*449*

Appendix Table 1.5 Responses to Question 9

		Percent	*Number of cases*
9. Did your district do anything to manage ants inside school buildings within the last 12 months?	Yes	81%	*429*
	No	17%	*92*
	Not sure	2%	*11*
	Total	100%	*532*

Appendix Table 1.6 Responses to Question 10 and 11

10. Did your district use the following practices to manage ants inside buildings?	Percent Yes	*Number of cases*	11. If yes, please rate the effectiveness of each practice used: Very effective	Somewhat effective	Uncertain	Somewhat ineffective	Very ineffective	Total	*Number of cases*
a. Insecticidal spray from an aerosol can	16%	*70*	44%	43%	5%	5%	3%	100%	*61*
b. Exempt insecticidal spray from an aerosol can	35%	*151*	11%	67%	7%	12%	3%	100%	*127*
c. Insecticides sprayed using other application method	32%	*135*	54%	39%	3%	2%	2%	100%	*107*
d. Ant baits	69%	*297*	29%	56%	10%	2%	3%	100%	*258*
e. Soapy water spray	45%	*193*	11%	60%	14%	13%	2%	100%	*171*
f. Caulk in cracks to prevent entry of ants	50%	*213*	33%	54%	9%	4%	1%	100%	*186*
g. Improved sanitation	80%	*345*	42%	48%	8%	2%	0%	100%	*302*
h. Other	6%	*26*	67%	24%	10%	0%	0%	100%	*21*
Total	n/a	*429*	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Appendix Table 1.7 Responses to Question 12

12. For each practice used, which best describes how your district decided when this treatment for ants was necessary?	Regular time intervals	When ants first noticed	When exceed pre-established threshold	After a certain number of complaints	Other	Total	*Number of cases*
a. Insecticidal spray from an aerosol can	1%	55%	15%	28%	1%	100%	*69*
b. Exempt insecticidal spray from an aerosol can	4%	61%	13%	20%	1%	100%	*139*
c. Insecticides sprayed using other application method	29%	23%	24%	20%	3%	100%	*121*
d. Ant baits	15%	61%	13%	10%	1%	100%	*289*
e. Soapy water spray	4%	83%	8%	4%	1%	100%	*191*
f. Caulk in cracks to prevent entry of ants	14%	64%	8%	12%	1%	100%	*203*
g. Improved sanitation	45%	43%	4%	7%	1%	100%	*321*
h. Other	14%	38%	10%	10%	29%	100%	*21*

Appendix Table 1.8 Responses to Question 13

		Percent	*Number of cases*
13. Which one practice did your district use most frequently to manage ants inside school buildings? Please check only one answer.	Insecticidal spray from an aerosol can	7%	*28*
	Exempt insecticidal spray from an aerosol can	8%	*34*
	Insecticides sprayed using other application method	12%	*49*
	Ant baits	34%	*142*
	Soapy water spray	9%	*36*
	Caulk in cracks to prevent entry of ants	2%	*9*
	Improved sanitation	19%	*81*
	Other	3%	*14*
	Checked more than one answer	6%	*25*
	Total	100%	*418*

Appendix Table 1.9 Responses to Question 14

		Percent	*Number of cases*
14. Did your district do anything to manage weeds within the last 12 months?	Yes	94%	*503*
	No	6%	*30*
	Total	100%	*533*

Appendix Table 1.10 Responses to Questions 15-16

15. Did your district use the following practices to manage weeds?	Percent Yes	*Number of cases*	16. If yes, please rate the effectiveness of each practice used:						
			Very effective	Some-what effective	Un-certain	Some-what effective	Very in-effective	Total	*Number of cases*
a. Broadcast treatment with herbicides	38%	192	59%	35%	5%	1%	1%	100%	*177*
b. Spot treatment with herbicides	82%	412	77%	23%	0%	0%	0%	100%	*389*
c. Use of mulches, ground covers, barrier cloth or plastic	55%	275	33%	60%	3%	3%	0%	100%	*265*
d. Physical controls such as hand pulling, cultivating, mowing	91%	456	33%	56%	3%	6%	2%	100%	*432*
e. Flaming	8%	38	16%	59%	8%	11%	5%	100%	*37*
f. Irrigation management	41%	206	20%	61%	14%	4%	1%	100%	*192*
g. Turf selection	20%	100	23%	62%	12%	2%	1%	100%	*93*
h. Other	3%	14	38%	63%	0%	0%	0%	100%	*8*
Total	n/a	503	n/a	n/a	n/a	n/a	n/a	n/a	*n/a*

Appendix Table 1.11 Responses to Question 17

17. Which best describes how your district decided when herbicide treatment for weeds was necessary?	a. Broadcast treatment with herbicides		b. Spot treatment with herbicides	
	Percent	*Number of cases*	Percent	*Number of cases*
Regular time intervals	71%	*129*	42%	*169*
When weeds are first noticed	12%	*21*	30%	*123*
When exceed a pre-established threshold	13%	*24*	25%	*102*
After a certain number of complaints	1%	*1*	2%	*8*
Other	3%	*6*	1%	*4*
Total	100%	*181*	100%	*406*

Appendix Table 1.12 Responses to Question 18

18. Which one practice did your district use most frequently to manage weeds in the following locations?[1]	a. Athletic fields		b. Playgrounds	
	Percent	*Number of cases*	Percent	*Number of cases*
Broadcast treatment with herbicides	14%	*65*	6%	*26*
Spot treatment with herbicides	40%	*189*	48%	*224*
Use of mulches, ground covers, barrier cloth or plastic	0%	*2*	3%	*16*
Physical controls such as hand pulling, cultivating, mowing	35%	*165*	34%	*160*
Flaming	0%	*2*	0%	*2*
Irrigation management	2%	*10*	2%	*7*
Turf selection	2%	*8*	0%	*2*
Other	2%	*8*	1%	*5*
More than one answer	5%	*26*	5%	*24*
Total	100%	*475*	100%	*466*

[1] Four of the districts that skipped Question 18a wrote in that they don't have athletic fields. Five of the districts that skipped Question 18b wrote in that they don't have playgrounds. Some of the other districts who skipped these questions but didn't indicate why may be in the same situation.

Appendix Table 1.13 Responses to Question 19

		Distribution including only one location:		Distribution including more than one location:[1]	
		Percent	*Number of cases*	Percent	*Number of cases*
19. At which one of the following locations does your district typically have the most trouble with weeds? Please check only one answer.	Athletic fields	9%	*47*	20%	*98*
	Playgrounds	3%	*16*	11%	*56*
	Landscaping	25%	*125*	41%	*204*
	Rights of way	2%	*9*	9%	*43*
	Fence rows	30%	*147*	49%	*243*
	Paved areas/cracks in asphalt	4%	*18*	18%	*88*
	Other	2%	*12*	4%	*19*
	More than one answer	25%	*124*	n/a	*n/a*
	Total	100%	*498*	n/a	*498*

[1] Because so many districts were unable to choose one location, an alternate distribution reflecting all responses is also shown.

Appendix Table 1.14 Responses to Questions 20-22

		Percent	*Number of cases*
20. Which of the following are you responsible for in your district?	Pest management and pesticide safety training	61%	*317*
	Setting pest management policies	47%	*245*
	Deciding when to apply pest management treatments	65%	*337*
	Deciding which pest management practices to use	64%	*331*
	Applying pest management treatments	32%	*165*
	Directing others to apply pest management treatments	69%	*358*
	Keeping records of all pest management treatments used	67%	*348*
	Other	3%	*15*
	Total	n/a	*517*
21. Are you the designated IPM coordinator for your school district?	Yes	84%	*439*
	No	16%	*85*
	Total	100%	*524*
22. If you are the IPM coordinator for your school district, how long have you had this responsibility?	Less than 1 year	16%	*68*
	1-2 years	34%	*150*
	3-4 years	34%	*147*
	5-10 years	9%	*39*
	More than 10 years	7%	*31*
	Total	100%	*435*

Appendix Table 1.15 Responses to Question 23

23. Please rate each of the following for the past year in your school district.	Good	Fair	Poor	Not sure	Total	*Number of cases*
a. Communication between district pest manager(s) and other district staff (teachers, administrators) on pest management issues	55%	34%	8%	3%	100%	*509*
b. Availability of technical information on pest management in schools	53%	33%	10%	4%	100%	*511*
c. Use of pest prevention methods	46%	42%	10%	2%	100%	*508*
d. Use of pest monitoring methods	33%	45%	17%	5%	100%	*502*
e. Overall reduction of exposure to pesticides	70%	25%	3%	2%	100%	*508*
f. Training opportunities for district staff in pest management	33%	40%	21%	6%	100%	*498*
g. Contracting procedures used for hiring outside pest control services*	61%	24%	5%	11%	100%	*485*

* Three districts did not answer this question and indicated that they don't have contracts.

Appendix Table 1.16 Responses to Question 24

24. Please indicate whether you have accessed each of the following information resources on pest management in schools. Please check only one box for each information resource.	Have accessed	Aware of but have not accessed	Not aware of	Total	*Number of cases*
a. DPR School IPM Web site	58%	21%	21%	100%	*503*
b. Brochures/handouts from DPR	59%	18%	22%	100%	*498*
c. Presentations on school IPM by DPR staff	29%	36%	34%	100%	*483*
d. Training workshops on school IPM	51%	30%	19%	100%	*501*
e. Information provided by licensed pest control businesses	56%	23%	20%	100%	*494*
f. University of California resources	27%	33%	40%	100%	*483*
g. Information from other Web site sources	35%	27%	37%	100%	*484*
h. California Department of Education, School Facilities Planning Division	21%	36%	42%	100%	*481*

Appendix Table 2.1 SPSS Procedure Syntax for Statistical Tests Used in Analysis

Test	Syntax for SPSS procedure used[1]
Chi-square test of independence	Crosstabs /tables insert variable name by insert variable name /statistics=chisq.
Chi-square goodness of fit	Npar test /chisquare=insert variable name /expected=insert population frequencies, in order.
Pearson's correlation	Correlations variables= insert variable names /missing=pairwise.
Analysis of variance F-test	Means /tables insert dependent variable name by insert independent variable name(s) /cells mean count stddev /statistics anova.
Linear regression	Regression /missing listwise /statistics coeff outs r anova /dependent insert dependent variable name /method=enter insert independent variable names.
Logistic regression	Logistic regression insert dependent variable name /method = enter insert independent variable names.

[1] Shaded text indicates specifications unique to the particular relationship being examined. For example, insert variable name indicates that the name of the variable should be inserted into the syntax.

Appendix Table 2.2 Number of Respondents in Job Area and Job Level Categories

	Job Level				
Job Area	Administration	Director/ Coordinator	Manager/ Supervisor	Worker	Total
Administration	70	0	0	0	70
Front office/business	0	7	16	16	39
Safety/risk management	0	10	10	1	21
Maintenance & Operations	0	166	132	58	356
Total	70	183	158	75	486

Appendix Table 3.1. Official Adoption of Policies and Practices and Effectiveness and Long-Term Cost of IPM Program by IPM Coordinator Designation

				IPM Coordinator?		
				Yes	No	p[1]
Practices officially adopted by district (required for compliance with Healthy Schools Act)		Each school site maintains records of all pesticides used for at least four years, and makes these records available to the public	Yes	78%	70%	.002
			No	14%	9%	
			Not sure	8%	21%	
			Total	100%	100%	
			Number of cases	409	81	
		District or school annually provides staff and parents with written notification of expected pesticide use at their school	Yes	90%	83%	.003
			No	8%	7%	
			Not sure	2%	10%	
			Total	100%	100%	
			Number of cases	420	84	
		District or school maintains a list of parents to be notified of specific pesticide applications	Yes	81%	74%	.147
			No	12%	13%	
			Not sure	7%	13%	
			Total	100%	100%	
			Number of cases	417	84	
		Warning signs are posted at least 24 hours before and 72 hours after pesticide treatment	Yes	93%	87%	.115
			No	5%	8%	
			Not sure	2%	5%	
			Total	100%	100%	
			Number of cases	421	84	
Policies officially adopted by district		Written policy requiring the use of least-toxic pest management practices	Yes	61%	51%	.001
			No	26%	20%	
			Not sure	13%	29%	
			Total	100%	100%	
			Number of cases	407	82	
		Written list of pesticide products approved for use in district schools	Yes	67%	64%	.001
			No	24%	14%	
			Not sure	8%	22%	
			Total	100%	100%	
			Number of cases	410	83	
		Written policy requiring the monitoring of pest levels	Yes	32%	25%	.000
			No	52%	39%	
			Not sure	16%	36%	
			Total	100%	100%	
			Number of cases	398	80	
Has district adopted IPM program?			Yes	75%	44%	.000
			No	15%	27%	
			Not sure	10%	28%	
			Total	100%	100%	
			Number of cases	426	81	
For districts that have adopted an IPM program:	Do you think your district's IPM program has:	Resulted in more effective pest management		51%	41%	.426
		Made no difference in pest management effectiveness		22%	24%	
		Resulted in less effective pest management		15%	14%	
		Uncertain/no opinion		13%	22%	
		Total		100%	100%	
		Number of cases		319	37	
	Do you think your district's IPM program has:	Reduced the long-term cost of pest-management		33%	30%	.903
		Had no impact on the long-term costs of pest management		25%	22%	
		Increased the long-term costs of pest management		20%	24%	
		Uncertain/no opinion		22%	24%	
		Total		100%	100%	
		Number of cases		319	37	

[1] Significance of chi square

Appendix Table 3.2 Logistic Regression Predicting Treatment for Ants Using Population Area and ADA

		B	S.E.	Wald	Exp(B)
Population Area	Large city	-1.918 *	.778	6.076	.147
	Mid-size city	-.821	.618	1.768	.440
	Urban fringes of large city	-.019	.486	.001	.981
	Large or small town	-.385	.568	.461	.680
	Rural, inside MSA	-.929 *	.459	4.095	.395
	Rural, outside MSA	-.943 *	.452	4.352	.389
ADA (in thousands)		.157 ***	.047	11.147	1.170
Constant		1.549 ***	.392	15.594	4.706
Model	-2 Log likelihood	417.7			
	Cox & Snell R Square	.115			
	Nagelkerke R Square	.189			
	df	7			

Appendix Table 3.3. Percent of Districts that Treated for Ants by Population Area and ADA

		ADA				
	Population area	Under 500	500-2,499	2,500-7,499	7,500 or more	Total
Percent of districts that treated for ants inside school buildings within the last 12 months	Large city	--	33%	100%	88%	82%
	Mid-size city	100%	67%	86%	93%	88%
	Urban fringes of large city	62%	81%	98%	96%	92%
	Urban fringes of mid-size city	85%	83%	91%	100%	87%
	Large or small town	67%	80%	100%	0%	82%
	Rural, inside MSA	54%	83%	100%	--	68%
	Rural, outside MSA	59%	83%	100%	--	66%
Number of cases	Large city	0	3	2	17	22
	Mid-size city	1	6	14	30	51
	Urban fringes of large city	13	27	64	81	185
	Urban fringes of mid-size city	13	23	23	3	62
	Large or small town	6	20	11	1	38
	Rural, inside MSA	41	29	4	0	74
	Rural, outside MSA	58	24	1	0	83

Appendix Table 3.4 Correlation Coefficients for Components of Healthy School Act Compliance Scale

		Each school site maintains records of all pesticides used for at least four years, and makes these records available to the public	District or school annually provides staff and parents with written notification of expected pesticide use at their school	District or school maintains a list of parents wanting to be notified of specific pesticide applications	Warning signs are posted at least 24 hours before and 72 hours after pesticide treatment
Each school site maintains records of all pesticides used for at least four years, and makes these records available to the public	Pearson Correlation	1.000	.421	.349	.308
	Significance (2-tailed)	n/a	.000	.000	.000
	N	497	492	491	493
District or school annually provides staff and parents with written notification of expected pesticide use at their school	Pearson Correlation	.421	1.000	.566	.510
	Significance (2-tailed)	.000	n/a	.000	.000
	N	492	512	507	509
District or school maintains a list of parents wanting to be notified of specific pesticide applications	Pearson Correlation	.349	.566	1.000	.428
	Significance (2-tailed)	.000	.000	n/a	.000
	N	491	507	509	506
Warning signs are posted at least 24 hours before and 72 hours after pesticide treatment	Pearson Correlation	.308	.510	.428	1.000
	Significance (2-tailed)	.000	.000	.000	n/a
	N	493	509	506	513
Healthy Schools Act compliance scale	Pearson Correlation	.734	.803	.786	.685
	Significance (2-tailed)	.000	.000	.000	.000
	N	487	487	487	487

Appendix Table 3.5 Correlation Coefficients for Components of IPM Program Scale

			Adopted written policy requiring:		Monitoring:		Records are kept of:			
			Use of least-toxic practices	Monitoring of pest levels	Buildings are inspected for potential pest problems	Pests are monitored during the course of a year	Building inspections	Results of pest monitoring	Pest sightings	Pest treatments used
Adopted written policy requiring:	Use of least-toxic practices	Pearson Correlation	1.000	.440	.149	.204	.225	.220	.194	.160
		Significance (2-tailed)	n/a	.000	.001	.000	.000	.000	.000	.000
		N	495	478	486	486	486	486	486	486
	Monitoring of pest levels	Pearson Correlation	.440	1.000	.196	.241	.265	.326	.273	.185
		Significance (2-tailed)	.000	n/a	.000	.000	.000	.000	.000	.000
		N	478	484	476	476	476	476	476	476
Monitoring:	Buildings are inspected for potential pest problems	Pearson Correlation	.149	.196	1.000	.248	.519	.357	.174	.121
		Significance (2-tailed)	.001	.000	n/a	.000	.000	.000	.000	.006
		N	486	476	519	519	519	519	519	519
	Pests are monitored during the course of a year	Pearson Correlation	.204	.241	.248	1.000	.333	.517	.221	.075
		Significance (2-tailed)	.000	.000	.000	n/a	.000	.000	.000	.088
		N	486	476	519	519	519	519	519	519
Records are kept of:	Building inspections	Pearson Correlation	.225	.265	.519	.333	1.000	.618	.355	.131
		Significance (2-tailed)	.000	.000	.000	.000	n/a	.000	.000	.003
		N	486	476	519	519	519	519	519	519
	Results of pest monitoring	Pearson Correlation	.220	.326	.357	.517	.618	1.000	.412	.166
		Significance (2-tailed)	.000	.000	.000	.000	.000	n/a	.000	.000
		N	486	476	519	519	519	519	519	519
	Pest sightings	Pearson Correlation	.194	.273	.174	.221	.355	.412	1.000	.138
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	n/a	.002
		N	486	476	519	519	519	519	519	519
	Pest treatments used	Pearson Correlation	.160	.185	.121	.075	.131	.166	.138	1.000
		Significance (2-tailed)	.000	.000	.006	.088	.003	.000	.002	n/a
		N	486	476	519	519	519	519	519	519
IPM program scale		Pearson Correlation	.562	.612	.585	.609	.731	.754	.570	.352
		Significance (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
		N	470	470	470	470	470	470	470	470

Appendix Table 3.6 Distribution of Scores on Ant Management Scale

Score	Number of cases	Percent	Cumulative percent
0	2	.5%	.5%
2	1	.2%	.7%
10	4	.9%	1.6%
13	1	.2%	1.9%
20	2	.5%	2.3%
22	1	.2%	2.6%
23	1	.2%	2.8%
25	3	.7%	3.5%
27	1	.2%	3.7%
29	1	.2%	4.0%
30	1	.2%	4.2%
32	1	.2%	4.4%
35	6	1.4%	5.8%
36	1	.2%	6.1%
38	1	.2%	6.3%
40	3	.7%	7.0%
42	2	.5%	7.5%
43	2	.5%	7.9%
44	1	.2%	8.2%
45	2	.5%	8.6%
47	3	.7%	9.3%
48	1	.2%	9.6%
50	18	4.2%	13.8%
52	4	.9%	14.7%
53	3	.7%	15.4%
55	13	3.0%	18.4%
56	1	.2%	18.6%
57	2	.5%	19.1%
58	1	.2%	19.3%
59	2	.5%	19.8%
60	10	2.3%	22.1%
62	2	.5%	22.6%
63	9	2.1%	24.7%
64	1	.2%	24.9%
65	8	1.9%	26.8%
66	1	.2%	27.0%
67	1	.2%	27.3%
68	3	.7%	28.0%
70	3	.7%	28.7%
72	3	.7%	29.4%
73	3	.7%	30.1%
74	5	1.2%	31.2%
75	2	.5%	31.7%
76	1	.2%	31.9%
77	2	.5%	32.4%
78	4	.9%	33.3%
79	2	.5%	33.8%
80	7	1.6%	35.4%
82	2	.5%	35.9%
83	4	.9%	36.8%
84	3	.7%	37.5%
85	10	2.3%	39.9%

Appendix Table 3.6 (continued) Distribution of Scores on Ant Management Scale

Score	Number of cases	Percent	Cumulative percent
86	1	.2%	40.1%
87	6	1.4%	41.5%
88	6	1.4%	42.9%
89	1	.2%	43.1%
90	17	4.0%	47.1%
91	1	.2%	47.3%
92	6	1.4%	48.7%
93	10	2.3%	51.0%
94	3	.7%	51.7%
95	12	2.8%	54.5%
96	1	.2%	54.8%
97	7	1.6%	56.4%
98	11	2.6%	59.0%
99	3	.7%	59.7%
100	10	2.3%	62.0%
102	7	1.6%	63.6%
103	8	1.9%	65.5%
104	2	.5%	66.0%
105	9	2.1%	68.1%
107	1	.2%	68.3%
108	9	2.1%	70.4%
110	6	1.4%	71.8%
112	7	1.6%	73.4%
113	15	3.5%	76.9%
114	1	.2%	77.2%
115	10	2.3%	79.5%
117	5	1.2%	80.7%
118	7	1.6%	82.3%
120	12	2.8%	85.1%
121	1	.2%	85.3%
122	2	.5%	85.8%
123	6	1.4%	87.2%
125	7	1.6%	88.8%
126	1	.2%	89.0%
127	7	1.6%	90.7%
128	11	2.6%	93.2%
130	6	1.4%	94.6%
132	1	.2%	94.9%
133	5	1.2%	96.0%
135	2	.5%	96.5%
137	1	.2%	96.7%
138	7	1.6%	98.4%
140	3	.7%	99.1%
143	2	.5%	99.5%
145	1	.2%	99.8%
148	1	.2%	100.0%
Total	429	100.0%	n/a

Appendix Table 3.7 Distribution of Scores on Weed Management Scale

Score	Number of cases	Percent	Cumulative percent
0	5	1.0%	1.0%
5	6	1.2%	2.2%
10	8	1.6%	3.8%
15	5	1.0%	4.8%
20	7	1.4%	6.2%
25	18	3.6%	9.7%
27	1	.2%	9.9%
29	2	.4%	10.3%
30	8	1.6%	11.9%
35	28	5.6%	17.5%
40	23	4.6%	22.1%
42	1	.2%	22.3%
44	1	.2%	22.5%
45	21	4.2%	26.6%
49	6	1.2%	27.8%
50	19	3.8%	31.6%
54	2	.4%	32.0%
55	36	7.2%	39.2%
59	1	.2%	39.4%
60	31	6.2%	45.5%
65	22	4.4%	49.9%
67	4	.8%	50.7%
70	19	3.8%	54.5%
74	1	.2%	54.7%
75	21	4.2%	58.8%
79	3	.6%	59.4%
80	22	4.4%	63.8%
84	4	.8%	64.6%
85	15	3.0%	67.6%
87	1	.2%	67.8%
90	23	4.6%	72.4%
92	1	.2%	72.6%
95	37	7.4%	79.9%
100	18	3.6%	83.5%
104	1	.2%	83.7%
105	16	3.2%	86.9%
110	24	4.8%	91.7%
115	6	1.2%	92.8%
119	1	.2%	93.0%
120	7	1.4%	94.4%
125	10	2.0%	96.4%
129	1	.2%	96.6%
130	3	.6%	97.2%
134	1	.2%	97.4%
135	6	1.2%	98.6%
140	3	.6%	99.2%
145	2	.4%	99.6%
150	1	.2%	99.8%
155	1	.2%	100.0%
Total	503	100.0%	n/a

Appendix Table 3.8 Mean Scores on IPM Scales by IPM Coordinator Designation

	IPM Coordinator?				
	Mean		Number of cases		
	Yes	No	Yes	No	*p**
Healthy Schools Act Scale	34.0	31.6	399	81	.064
IPM Program Scale	19.8	17.0	385	79	.040
Ant Management Scale	89.7	85.7	356	67	.326
Weed Management Scale	70.4	64.1	417	77	.112

* Significance of ANOVA F-test.

Appendix Table 4.1 District Characteristics by Region

		Region								
		North Coastal	Sierra	North Central	Bay Area	Central Valley	Central Coastal	LA/Sur-rounding Area	South Eastern	Total
Population area	Large city	0%	0%	10%	8%	2%	0%	8%	0%	4%
	Urban fringes of large city	0%	19%	15%	64%	9%	11%	67%	56%	36%
	Mid-size city	0%	4%	12%	13%	17%	11%	8%	8%	10%
	Urban fringes of mid-size city	0%	6%	15%	0%	32%	39%	7%	0%	12%
	Large or small town	27%	15%	15%	0%	4%	0%	0%	13%	7%
	Rural, inside MSA	0%	12%	10%	14%	32%	25%	9%	10%	15%
	Rural, outside MSA	73%	44%	24%	0%	4%	14%	0%	13%	16%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*41*	*68*	*41*	*76*	*102*	*28*	*119*	*52*	*527*
District type	Elementary	61%	71%	54%	53%	61%	57%	40%	31%	53%
	High School	7%	10%	12%	12%	8%	0%	12%	8%	9%
	Unified	32%	19%	34%	36%	31%	43%	48%	62%	38%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*41*	*68*	*41*	*76*	*102*	*28*	*119*	*52*	*527*
Number of schools in district	2	41%	25%	24%	14%	24%	43%	6%	8%	19%
	3-4	22%	22%	10%	13%	23%	4%	7%	15%	15%
	5-9	22%	32%	39%	33%	30%	36%	21%	25%	29%
	10-19	15%	21%	15%	24%	14%	18%	35%	25%	22%
	20 or more	0%	0%	12%	16%	10%	0%	31%	27%	15%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*41*	*68*	*41*	*76*	*102*	*28*	*119*	*52*	*527*
	Mean	5	6	10	13	9	6	24	14	13
ADA	Under 500	61%	40%	32%	20%	27%	43%	8%	17%	26%
	500-2,499	32%	40%	34%	24%	33%	32%	8%	15%	25%
	2,500 thru 7,499	7%	19%	12%	24%	24%	14%	34%	29%	23%
	7,500 or more	0%	1%	22%	33%	16%	11%	50%	38%	25%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*41*	*68*	*41*	*76*	*102*	*28*	*119*	*52*	*527*
	Mean	843	1,548	4,519	7,084	4,992	2,137	19,512	9,682	8,079
Cost per ADA	Under $6,300	7%	21%	27%	20%	43%	7%	28%	37%	27%
	$6,300-$6,699	5%	18%	24%	22%	23%	21%	41%	25%	25%
	$6,700-$7,399	32%	24%	27%	24%	22%	39%	18%	15%	23%
	$7,400 or more	56%	38%	22%	34%	13%	32%	13%	23%	25%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*41*	*68*	*41*	*76*	*102*	*28*	*119*	*52*	*527*
	Mean	$8,603	$7,563	$7,207	$7,667	$6,656	$7,964	$6,739	$7,259	$7,261

Appendix Table 4.2 District Characteristics by Population Area

		Population Area							Total
		Large city	Urban fringes of large city	Mid-size city	Urban fringes of mid-size city	Large or small town	Rural, inside MSA	Rural, outside MSA	
District type	Elementary	45%	40%	40%	52%	47%	78%	69%	53%
	High School	9%	12%	17%	5%	26%	0%	5%	9%
	Unified	45%	49%	42%	44%	26%	22%	26%	38%
	Total	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*22*	*189*	*52*	*62*	*38*	*79*	*85*	*527*
Number of schools in district	2	5%	4%	2%	15%	13%	49%	47%	19%
	3-4	0%	6%	10%	19%	24%	28%	21%	15%
	5-9	14%	33%	15%	45%	34%	18%	26%	29%
	10-19	27%	32%	38%	19%	29%	5%	6%	22%
	20 or more	55%	25%	35%	2%	0%	0%	0%	15%
	Total	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*22*	*189*	*52*	*62*	*38*	*79*	*85*	*527*
	Mean	74	15	19	7	7	4	4	13
ADA	Under 500	0%	7%	2%	21%	16%	58%	69%	26%
	500-2,499	14%	14%	12%	37%	53%	37%	29%	25%
	2,500-7,499	9%	35%	29%	37%	29%	5%	1%	23%
	7,500 or more	77%	44%	58%	5%	3%	0%	0%	25%
	Total	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*22*	*189*	*52*	*62*	*38*	*79*	*85*	*527*
	Mean	63,146	9,834	12,663	2,733	2,252	734	453	8,079
Cost per ADA	Under $6,300	9%	31%	29%	32%	24%	33%	12%	27%
	$6,300-$6,699	32%	38%	35%	18%	16%	15%	7%	25%
	$6,700-$7,399	41%	17%	27%	27%	37%	20%	22%	23%
	$7,400 or more	18%	14%	10%	23%	24%	32%	59%	25%
	Total	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	*22*	*189*	*52*	*62*	*38*	*79*	*85*	*527*
	Mean	$6,917	$6,865	$6,684	$7,373	$6,842	$7,191	$8,754	$7,261

Appendix Table 4.3 District Characteristics by District Type, ADA and Cost per ADA

		District Type			ADA				Cost per ADA			
		Elemen-tary	High School	Unified	Under 500	500-2,499	2,500-7,499	7,500 or more	Under $6,300	$6,300-$6,699	$6,700-$7,399	$7,400 or more
Number of schools in district	2	36%	0%	1%	66%	8%	0%	0%	17%	7%	17%	37%
	3-4	23%	16%	4%	22%	36%	0%	0%	18%	8%	14%	19%
	5-9	23%	50%	31%	12%	48%	54%	3%	29%	23%	37%	26%
	10-19	13%	24%	35%	0%	8%	46%	39%	20%	36%	21%	13%
	20 or more	4%	10%	31%	0%	0%	0%	58%	16%	26%	12%	5%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Number of cases	277	50	200	138	133	122	134	141	132	121	133
	Mean	6	10	23	3	5	10	33	11	15	12	14
ADA	Under 500	41%	6%	11%	--	--	--	--	15%	8%	20%	62%
	500-2,499	30%	30%	17%	--	--	--	--	28%	17%	33%	23%
	2,500 thru 7,499	20%	28%	26%	--	--	--	--	28%	31%	26%	8%
	7,500 or more	9%	36%	46%	--	--	--	--	28%	43%	21%	8%
	Total	100%	100%	100%	--	--	--	--	100%	100%	100%	100%
	Number of cases	277	50	200	--	--	--	--	141	132	121	133
	Mean	2,603	8,112	15,655	--	--	--	--	6,729	9,419	7,497	8,712
Cost per ADA	Under $6,300	31%	6%	27%	15%	30%	33%	30%	--	--	--	--
	$6,300-$6,699	22%	26%	30%	8%	17%	34%	43%	--	--	--	--
	$6,700-$7,399	23%	36%	20%	17%	30%	25%	19%	--	--	--	--
	$7,400 or more	25%	32%	25%	59%	23%	8%	8%	--	--	--	--
	Total	100%	100%	100%	100%	100%	100%	100%	--	--	--	--
	Number of cases	277	50	200	138	133	122	134	--	--	--	--
	Mean	7,267	7,424	7,212	8,771	6,983	6,604	6,579	--	--	--	--

Appendix Table 4.4 Logistic Regression Predicting Attendance at 2002/2003 DPR IPM Training

		B	S.E.	Wald	Exp(B)
Region	North Coastal	-.901	.660	1.861	.406
	Sierra	-.918	.538	2.910	.399
	North Central	-.076	.487	.024	.927
	Bay Area	.260	.362	.517	1.297
	Central Valley	-19.750	3,927	.000	.000
	Central Coast	-19.606	7,592	.000	.000
	South Eastern	-1.917 *	.759	6.385	.147
ADA (in thousands)		.030 *	.011	7.068	1.031
Constant		-1.664	.283	34.682	.189
Model	-2 Log likelihood	313.23			
	Cox & Snell R Square	.129			
	Nagelkerke R Square	.248			
	df	8			

Appendix Table 4.5 Logistic Regression Predicting Pest Management Responsibilities (N=471)

		Pest management and pesticide safety training			Setting pest management policies			Deciding when to apply pest management treatments			Deciding which pest management practices to use			Applying pest management treatments			Directing others to apply pest management treatments			Keeping records of all pest management treatments used			Other responsibilities		
		B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
IPM Coordinator		.998***	.284	2.712	1.091***	.314	2.977	.823**	.281	2.278	.755**	.279	2.127	.599	.336	1.820	.466	.286	1.593	.793**	.274	2.210	.109	.704	1.116
Job Category	Administration	-.175	.305	.839	.994**	.327	2.701	-.889**	.304	.411	-.694*	.313	.499	-.805*	.372	.447	-.337	.348	.714	-.493	.308	.611	-17.738	4,873.622	.000
	Front office/business	-1.311***	.408	.270	-.909*	.415	.403	-1.410***	.399	.244	-1.715***	.407	.180	-.902	.517	.406	-1.144**	.400	.318	.055	.417	1.056	1.657*	.686	5.244
	Safety/risk management	.844	.583	2.327	.213	.467	1.237	-1.203**	.466	.300	-1.556***	.474	.211	-1.508*	.761	.221	-1.852***	.479	.157	-.215	.494	.807	-17.747	8,568.683	.000
	M & O Manager/Supervisor	.296	.260	1.344	-.409	.240	.665	-.047	.266	.954	-.543*	.263	.581	.152	.252	1.164	-.380	.287	.684	-.238	.259	.788	-1.400	1.103	.247
	M & O Worker	-.780*	.327	.459	-1.092**	.354	.336	.051	.357	1.052	-.307	.351	.736	1.563***	.343	4.774	-1.435***	.342	.238	-.425	.336	.653	.929	.703	2.533
Constant		-.221	.311	.801	-.835*	.336	.434	.267	.313	1.306	.496	.315	1.642	-1.350***	.361	.259	1.059***	.330	2.884	.263	.307	1.301	-3.556***	.802	.029
Model	-2 Log likelihood	581.628			602.407			572.762			575.199			539.106			532.289			584.079			114.073		
	Cox & Snell R Square	.092			.109			.078			.078			.102			.077			.028			.039		
	Nagelkerke R Square	.125			.145			.108			.108			.143			.109			.040			.161		
	df	6			6			6			6			6			6			6			6		

Reference category is Maintenance & Operations Director/Coordinator

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Appendix Table 4.6 Pest Management Responsibilities by IPM Coordinator Designation

	Is respondent the designated IPM coordinator for their school district?		
	Yes	No	p^1
Pest management and pesticide safety training	67%	34%	.000
Setting pest management policies	52%	26%	.000
Deciding when to apply pest management treatments	69%	45%	.000
Deciding which pest management practices to use	68%	43%	.000
Applying pest management treatments	33%	25%	.153
Directing others to apply pest management treatments	72%	56%	.006
Keeping records of all pest management treatments used	71%	48%	.000
Number of cases	*432*	*80*	

[1] Significance of chi square

Appendix Table 4.7 Pest Management Responsibilities by Job Area/Level and IPM Coordinator Designation

		Job Category						
Pest Management Responsibilities	Designated IPM Coordinator?	Admin-istration	Front office business	Safety/ risk manage-ment	M&O Director/ Coor-dinator	M&O Manager/ Super-visor	M&O Worker	Total
Pest management and pesticide safety training	Yes	66%	38%	85%	69%	73%	50%	67%
	No	33%	17%	50%	36%	65%	27%	38%
Setting pest management policies	Yes	73%	38%	65%	56%	47%	33%	53%
	No	75%	8%	0%	36%	18%	7%	26%
Deciding when to apply pest management treatments	Yes	52%	42%	45%	75%	73%	83%	69%
	No	50%	25%	50%	55%	59%	40%	46%
Deciding which pest management practices to use	Yes	59%	42%	45%	78%	65%	83%	68%
	No	67%	17%	0%	64%	65%	27%	46%
Applying pest management treatments	Yes	18%	17%	10%	31%	35%	75%	33%
	No	8%	8%	0%	36%	29%	40%	25%
Directing others to apply pest management treatments	Yes	75%	63%	45%	82%	74%	58%	73%
	No	75%	42%	0%	82%	76%	27%	58%
Keeping records of all pest management treatments used	Yes	68%	67%	75%	75%	67%	65%	70%
	No	25%	75%	0%	45%	65%	47%	51%
Other responsibilities	Yes	0%	8%	0%	3%	1%	10%	3%
	No	0%	25%	0%	0%	0%	0%	4%
Number of cases	Yes	*56*	*24*	*20*	*152*	*113*	*40*	*405*
	No	*12*	*12*	*2*	*11*	*17*	*15*	*69*

Appendix Table 4.8 Logistic Regression Predicting Job Category and IPM Coordinator Designation

		Job Category																		IPM Coordinator		
		Administration			Front office/business			Safety/Risk Management			M & O Director/Coordinator			M & O Manager/Supervisor			M&O Worker					
		B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Population Area	Large city	-17.027	5987	.000	-.939	1.256	.391	1.716	1.681	5.560	.899	.615	2.458	-.988	.954	.372	-.091	.870	.913	.510	.895	1.665
	Urban fringes of large city	.977	.666	2.657	-1.120	.693	.326	1.702	1.248	5.484	-.499	.391	.607	.788	.434	2.199	-.640	.623	.527	.046	.475	1.047
	Mid-size city	-.726	1.188	.484	-1.011	.940	.364	2.023	1.250	7.558	-.007	.420	.993	.208	.468	1.232	-.069	.669	.934	-.101	.522	.904
	Large or small town	.221	.858	1.248	-19.259	6433	.000	1.559	1.397	4.752	.128	.515	1.136	.306	.572	1.358	-.179	.744	.836	.668	.699	1.950
	Rural, inside MSA	.991	.578	2.694	.262	.627	1.300	-16.525	4430	.000	-.612	.398	.542	-.907	.499	.404	-.294	.627	.745	-.128	.463	.880
	Rural, outside MSA	.106	.714	1.111	-.308	.741	.735	.097	1.470	1.102	-.295	.485	.745	-.232	.550	.793	.452	.640	1.571	-.252	.531	.777
Region	North Coastal	1.404	.790	4.073	-.397	.923	.672	.052	1.331	1.054	-.996	.589	.369	-.634	.657	.530	.419	.759	1.520	-.738	.647	.478
	Sierra	-.572	.695	.564	-.108	.689	.897	1.083	.831	2.955	-.745	.443	.475	.232	.441	1.261	.876	.615	2.400	-.851	.494	.427
	North Central	-.118	.797	.889	-.037	.772	.964	.431	.922	1.539	-.160	.439	.852	-1.394*	.666	.248	1.295*	.604	3.650	-.641	.554	.527
	Bay Area	.431	.598	1.538	-.063	.604	.939	-.788	.861	.455	-.090	.326	.914	-.679	.361	.507	.999	.523	2.714	-.249	.460	.780
	Central Valley	.141	.586	1.152	-1.144	.696	.319	-.847	1.175	.429	.063	.352	1.066	.270	.392	1.310	-.466	.670	.627	-.459	.456	.632
	Central Coastal	-.012	.729	.988	-.887	.875	.412	1.511	1.054	4.530	-.362	.512	.696	-.042	.562	.959	.620	.731	1.859	-.683	.598	.505
	South Eastern	-.894	.899	.409	.760	.602	2.137	.330	.719	1.391	-.170	.380	.844	-.074	.386	.929	-.174	.744	.840	-.354	.500	.702
Type	High School	-1.885	1.076	.152	-1.093	1.058	.335	1.568*	.730	4.795	.444	.345	1.559	.280	.370	1.323	-.189	.541	.828	.643	.565	1.902
	Unified	-.944*	.428	.389	-.057	.396	.945	1.333*	.617	3.793	.268	.225	1.308	.297	.243	1.345	-.044	.337	.957	-.148	.271	.862
ADA (in thousands)		-.446**	.140	.001	-.004.	.017	.996	.000	.005	1.000	-.001	.003	.999	.002	.003	1.002	-.001	.008	.999	.000	.006	1.000
Cost per ADA (in thousands)		-.055	.075	.469	.131	.071	1.140	.150	.118	1.161	-.068	.064	.934	-.041	.069	.960	-.071	.085	.931	.070	.074	1.073
Constant		-.748	.989	.473	-2.572**	.898	.076	-6.493**	1.672	.002	.151	.629	1.163	-.949	.687	.387	-1.723	.923	.179	1.569*	.746	4.803
Model	-2 Log likelihood	282.241			241.503			151.659			593.606			516.104			326.511			449.463		
	Cox & Snell R Square	.216			.060			.055			.059			.098			.049			.025		
	Nagelkerke R Square	.385			.139			.178			.082			.142			.096			.042		
	df	17			17			17			17			17			17			17		

Reference categories: urban fringes of mid-size city; LA/surrounding area; and elementary school district.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Appendix Table 4.9 Respondent Job Category, District Type and ADA

District type	ADA	Job Category						Total
		Admin-istration	Front office/ business	Safety /risk man-agement	M&O Director/ Coordinator	M&O Manager/ Supervisor	M&O Worker	
Elementary	Under 500	41	16	1	12	12	19	101
	500-2,499	16	4	1	27	17	7	72
	2,500-7,499	3	3	1	28	15	3	53
	7,500 or more	0	0	1	8	10	4	23
	Subtotal	60	23	4	75	54	33	249
High School	Under 500	0	0	0	1	0	2	3
	500-2,499	1	0	0	6	7	0	14
	2,500-7,499	0	1	0	9	3	1	14
	7,500 or more	0	0	5	5	6	2	18
	Subtotal	1	1	5	21	16	5	49
Unified	Under 500	2	5	1	7	2	5	22
	500-2,499	4	4	1	12	8	3	32
	2,500-7,499	3	4	4	27	6	3	47
	7,500 or more	0	2	7	24	45	8	86
	Subtotal	9	15	13	70	61	19	187
Total	Under 500	43	21	2	20	14	26	126
	500-2,499	21	8	2	45	32	10	118
	2,500-7,499	6	8	5	64	24	7	114
	7,500 or more	0	2	13	37	61	14	127
	Total	70	39	22	166	131	57	485

Appendix Table 4.10 Correlation Coefficients between District Population Area, Number of Schools in District, ADA, Average Cost per ADA, and Region

		Region							
		North Coastal	Sierra	North Central	Bay Area	Central Valley	Central Coast	LA/Surrounding Area	South Eastern
Population area	Large city	-.061	-.080	.081	.076	-.054	-.049	.114 **	-.069
	Mid-size city	-.096 *	-.070	.023	.045	.112 **	.007	-.027	-.024
	Urban fringes of large city	-.217 ***	-.134 **	-.129 **	.245 ***	-.276 ***	-.124 **	.353 ***	.137 **
	Urban fringes of mid-size city	-.106 *	-.070	.026	-.150 ***	.313 ***	.202 ***	-.085	-.121 **
	Large or small town	.220 ***	.112 **	.083	-.114 **	-.062	-.066	-.151 ***	.080
	Rural, inside MSA	-.122 **	-.035	-.043	-.006	.238 ***	.066	-.087 *	-.050
	Rural, outside MSA	.450 ***	.293 ***	.065	-.180 ***	-.163 ***	-.012	-.237 ***	-.024
District type	Elementary	.049	.139 ***	.006	.001	.081	.022	-.132 **	-.144 ***
	High School	-.022	.011	.027	.033	-.027	-.077	.042	-.020
	Joint	-.045	-.151 ***	-.015	-.011	-.077	.001	.127 **	.160 ***
Number of schools in district		-.065	-.073	-.073	.000	-.049	-.045	.176 ***	.011
ADA		-.062	-.075	-.075	-.012	-.045	-.042	.183 ***	.016
Average cost per ADA		.204 ***	.061	.061	.087 *	-.155 ***	.087 *	-.147 **	.000

N = 527, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Appendix Table 4.11 Correlation Coefficients between District Population Area, District Type, Number of Schools in District, ADA and Average Cost per ADA

		District type			Number of schools in district	ADA	Average Cost per ADA
		Elementary	High School	Joint			
Population area	Large city	-.030	-.003	.032	.363 ***	.342 ***	-.038
	Mid-size city	-.081	.088 *	.058	.058	.045	-.100 *
	Urban fringes of large city	-.193 ***	.055	.188 ***	.042	.039	-.155 ***
	Urban fringes of mid-size city	-.007	-.058	.025	-.061	-.058	.021
	Large or small town	-.029	.160 ***	-.019	-.046	-.048	-.061
	Rural, inside MSA	.218 ***	-.136 **	-.189 ***	-.109 *	-.092 *	-.015
	Rural, outside MSA	.148 ***	-.072	-.135 **	-.108 *	-.099 *	.342 ***
District type	Elementary	--	--	--	-.208 ***	-.171 ***	.003
	High School	--	--	--	-.027	.000	.028
	Joint	--	--	--	.229 ***	.182 ***	-.012
Number of schools in district		--	--	--	--	.989 ***	-.055
ADA		--	--	--	--	--	-.052

N = 527, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Appendix Table 4.12 Correlation Coefficients between Respondent Characteristics

		Job Category						Number of cases
		Admin-istration	Front office/ business	Safety/ risk man-agement	M & O Director/ Coordinator	M & O Manager/ Supervisor	M & O Worker	
IPM Coordinator		-.026	-.156 ***	.037	.158 ***	.036	-.146 **	483
Pest Management Responsibilities	Pest management and pesticide safety training	-.012	-.179 ***	.088	.061	.110 *	-.139 **	478
	Setting pest management policies	.197 ***	-.125 **	.046	.083	-.071	-.167 ***	478
	Deciding when to apply pest management treatments	-.113 *	-.183 ***	-.091 *	.129 **	.074	.043	478
	Deciding which pest management practices to use	-.036	-.198 ***	-.111 *	.178 ***	-.002	.017	478
	Applying pest management treatments	-.137 **	-.112 *	-.106 *	.005	.029	.265 ***	478
	Directing others to apply pest management treatments	.038	-.092 *	-.146 **	.169 ***	.040	-.175 ***	478
	Keeping records of all pest management treatments used	-.057	.001	.004	.090	-.012	-.057	478

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Appendix Table 4.13 Correlation Coefficients between District Characteristics and Respondent IPM Coordinator Status and Job Category

		IPM Coordinator	Admin-istration	Front office/ business	Safety/ risk man-agement	M & O Director/ Coordinator	M & O Manager/ Supervisor	M & O Worker
Population area	Large city	.042	-.085	-.023	.005	.135 **	-.079	.021
	Mid-size city	-.008	-.118 **	-.049	.058	.075	.012	.005
	Urban fringes of large city	.053	-.130 **	-.068	.060	-.026	.211 ***	-.092 *
	Urban fringes of mid-size city	-.013	-.057	.012	-.048	.066	-.002	-.012
	Large or small town	.045	-.008	-.085	.049	.022	.000	.016
	Rural, inside MSA	-.025	.261 ***	.113 *	-.090 *	-.065	-.147 **	-.024
	Rural, outside MSA	-.082	.119 **	.085	-.037	-.113 *	-.103 *	.130 **
Region	North Coastal	-.028	.213 ***	.001	-.025	-.093 *	-.087	.040
	Sierra	-.065	-.027	.029	.040	-.096 *	.015	.099 *
	North Central	-.015	-.024	.005	.016	.034	-.116 *	.121 **
	Bay Area	.036	.052	-.001	-.038	.004	-.055	.039
	Central Valley	-.019	.050	-.061	-.077	.078	.015	-.089
	Central Coastal	-.032	.028	-.006	.034	-.024	-.026	.023
	LA/Surrounding area	.077	-.131 **	-.021	.019	.051	.123 **	-.097 *
	South Eastern	.009	-.101 *	.074	.056	-.002	.053	-.061
District type	Elementary	-.028	.282 ***	.045	-.145 **	-.089	-.123 **	.048
	High School	.074	-.118 **	-.074	.091 *	.061	.043	-.016
	Unified	-.016	-.217 ***	-.001	.092 *	.054	.100 *	-.039
Number of schools in district		.020	-.103 *	-.042	.029	.057	.054	-.030
ADA		.026	-.087	-.033	.031	.053	.039	-.029
Cost per ADA		.015	.089	.151 ***	.022	-.091 *	-.095 *	.028
Attended 2002/2003 DPR IPM training workshop		.019	-.101 *	-.065	.008	-.033	.110 *	.057
Number of cases		518	485	485	485	485	485	485

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Appendix Table 4.14 Correlation Coefficients between District Characteristics and Respondent Pest Management Responsibilities

		Pest management and pesticide safety training	Setting pest management policies	Deciding when to apply pest management treatments	Deciding which pest management practices to use	Applying pest management treatments	Directing others to apply pest management treatments	Keeping records of all pest management treatments used
Population area	Large city	.048	.049	.014	.019	.020	.035	.085
	Mid-size city	.021	.023	-.057	-.062	-.004	-.036	-.020
	Urban fringes of large city	.182 ***	.049	.038	.023	-.032	.112 *	.033
	Urban fringes of mid-size city	-.077	.006	.034	.006	.003	.011	-.037
	Large or small town	-.007	-.031	.036	.027	-.002	-.024	.021
	Rural, inside MSA	-.018	.020	-.024	.021	.005	.030	-.011
	Rural, outside MSA	-.196 ***	-.116 **	-.046	-.036	.029	-.162 ***	-.047
Region	North Coastal	-.121 **	-.009	-.064	-.025	.019	-.046	-.016
	Sierra	-.051	-.091 *	-.006	.051	.020	-.109 *	-.052
	North Central	-.028	-.009	-.016	-.057	-.029	-.029	-.016
	Bay Area	.043	.092 *	.038	.013	.025	.069	.004
	Central Valley	.006	.064	.076	.015	.083	.062	.041
	Central Coastal	-.075	-.040	.033	.002	-.017	-.009	-.017
	LA/Surrounding area	.117 **	.027	-.006	.026	.014	.048	.083
	South Eastern	.021	-.082	-.084	-.062	-.158 ***	-.036	-.076
District type	Elementary	-.139 **	-.058	.040	.057	.156 ***	-.023	.059
	High School	.066	.102 *	.030	.052	-.038	.056	-.001
	Unified	.103 *	-.002	-.060	-.090 *	-.137 **	-.010	-.060
Number of schools in district		.095 *	-.002	.031	.025	-.052	.054	.044
ADA		.088 *	-.010	.029	.026	-.044	.048	.043
Cost per ADA		-.143 **	-.017	-.020	-.031	.050	-.082	-.079
Attended 2002/2003 DPR IPM training workshop		.141 **	.024	.030	.026	-.019	.072	.023
Number of cases		511	511	511	511	511	511	511

* $p \leq .05$, ** $p .\leq .01$, *** $p \leq .001$