


New tool to help schools calculate the costs of IPM

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Project objectives

- Identify and index the most important pests and IPM tactics most likely to be used in schools, based on literature and interviews with pest management experts, contractors and suppliers
- Assess cost structures, sizes of typical school IPM programs
- Develop an IPM checklist and spreadsheet-based calculator that can be used to develop IPM budgets and educate facility managers





focus group session 2003

- Pest Control Operator Group (5)
 - Experienced servicing schools
 - Large and small companies
- School facilities Managers (9)
 - IPM Coordinators
 - Large and medium districts





Key variables used

- I_p = Pest risk for pest p
- R_f = Contribution of feature f to pest risk
- A_p = Regional abundance of pest p





The screenshot shows a survey form with two sections. Section I asks for school information and pest frequency. Section II asks about exterior garbage areas and dumpster seals. The form includes input fields for name, address, city, state, zip, phone, and frequency, along with radio buttons for 'Often', 'Not Applicable', 'Early', and 'Sometimes'.

School IPM Cost Calculator




- Software is designed to:
 - assess the risk of infestation for a school campus
 - educate the coordinator about budgeting for IPM
 - Suggest priority facility improvements and provide breakdown of costs
 - Forecast change in infestation risk level under different budget scenarios



Current Risk of Infestation Level Estimate


Given the information you have provided, the current risk level of pest infestation in the school under analysis is shown below.



-----> ******* Moderately High Risk ******* <-----


High Risk
Moderate Risk
Moderately Low Risk
Low Risk

This level of risk of pest infestation may be lowered by correcting some of the problem areas identified through this analysis. Selecting the "Make Suggestions" button below will yield a list of suggestions that may be made to lower the risk level.



Suggested Repair and Behavioral Changes


IPM BUDGET-Portland Arts & Technology High School						
ITEM	QUANTITY	UNIT COST	TOTAL COST	LIFE	YEARLY COST	Rank of Importance
ROUTINE MAINTENANCE						
Exterior Garbage Areas			100			2
Exterior Building Preening						
Paint/Seal/Repair on Exterior Doors	5.1	1.90	4.95	5	0.99	2
Paint/Seal/Repair on Exterior Windows	3.1	0.75	2.33	1	2.33	2
Seal/Check Exterior Windows	10.4	0.30	3.12	1	3.12	2
Remove Obstructions from or Install Screens on Exterior Ventilation Intakes	5	2.00	10.00	5	2.00	1
Exterior Landscaping Plants						
Plant Trees		300.00		1	300.00	1
Plant Perennials		200.00		1	200.00	1
Kitchen Areas						
Other Interior Areas						
Total Interior Costs	6	0.25	1.50	5	0.30	1
Total Routine Maintenance Costs			1704.95			\$69.94
MAJOR IMPROVEMENTS						
Exterior Garbage Areas						
New Containers at Least 50% Over Building	3	\$150	450	10	150	1



Sample scenario

Information that can be used in budget discussions:


Current risk level:	Moderately High
Current IPM Program cost is:	\$300,000/yr.
Estimated cost of repairs and trainings:	\$25,000
The new IPM Program cost is:	\$285,000/yr.
Risk of infestation after improvements:	Moderately Low



Pests surveyed


- 18 key pests included
- potential for health or economic impact of each pest rated
- each feature of school given an inherent risk for each pest
- pest risk calculated for each area of school

Pests Surveyed	Importance
Mice	5
Rats	5
Pigeons	4
German Cockroaches	5
Other Cockroaches	3
Fire Ants	4
Other Ants	3
Venomous Crawling Insects	5
Nonvenomous Crawling Insects	1
Honey Bees	5
Wasps	4
House Flies	4
Mosquitoes	4
Fruit Flies	3
Drain/Phorid Flies	3
Other Vertebrates	5
Termites	5
Mold	5



Research methodology

- Visit 3 schools per state
 - have IPM coordinator fill out preliminary campus assessment sheet
 - train in use and purposes of the calculator
 - conduct site assessment and score campus for pest risk
 - interview IPMC and key budget administrator

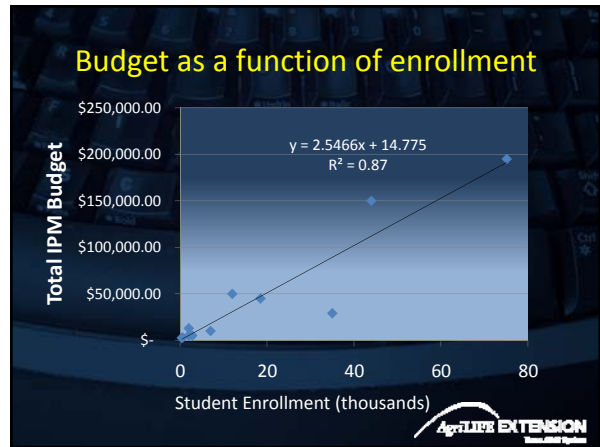
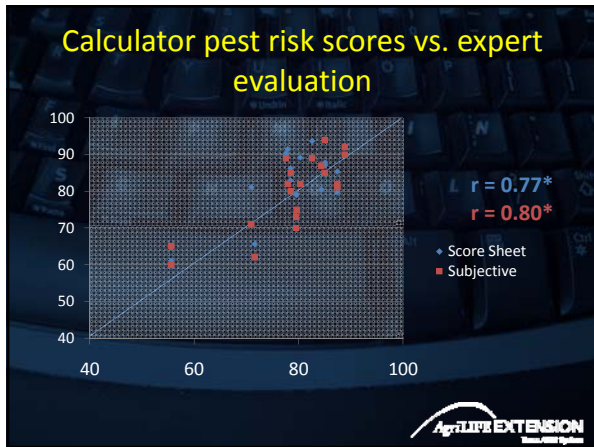




Schools assessed to date

- Maine (5)
- Alabama (3)
- Florida (4)
- Texas (3)
- California (4)

Fudd Graham, Alabama



Planning pest control budgets

- Nine completed interviews with budget administrators
 - 5 described themselves as “mostly familiar” with IPM
 - 4 defined IPM as pest control without “chemicals” (except organic pesticides)
- Budget process for IPM not very scientific
 - only 3 districts used data from work order system to make budget decisions
 - only 3 districts used any spreadsheet forecasting tools to make budget decisions
 - 8/9 thought data from a budget calculator would be “useful” or “somewhat useful”

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Conclusions

- IPM budgeting is fragmented over different budget categories (salaries, equipment, supplies)
 - contractor
 - pest control
 - landscape maintenance
 - sports field maintenance
 - grounds maintenance
- When asked about pest control budget, most managers talk about cost of contractors or pesticides only

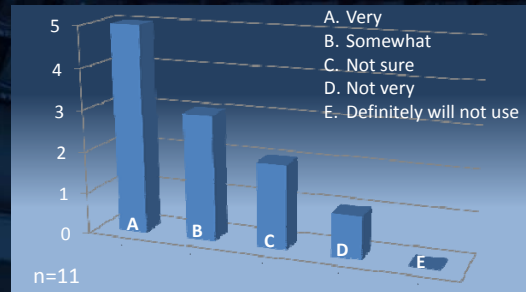
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Conclusions

- IPM budgets based principally on “tradition” rather than need-based criteria
- Average per student cost of pest management is approximately \$2.55 (conservative)
- The IPM cost calculator is scheduled to go online and collect data this summer
- Followup visits and training scheduled for 2008



Likely to use? (IPM Coordinators)



Questions?

