What's Wrong with our Schools Now? Pesticides!(?)

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Section I

"Pesticide-use ban advocated for kids' spots", read the headline in the Wisconsin State Journal last October 23. Environmental groups in Wisconsin want pesticide use banned, beginning in and around schools. Other groups have similar goals, including the State Medical Society of Wisconsin and the Wisconsin Parent Teacher Association (PTA). The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) began responding to these concerns in 1997 by obtaining a grant from the federal EPA to fund a survey to assess the extent of pesticide use in Wisconsin schools.

Surveys were mailed to the approximately 3,000 primary and secondary schools in Wisconsin during April 1998. Approximately 30% of the schools and/or districts, both public and private, returned survey results. The findings? 90% of the responding public schools reported using pesticides indoors. Seventy-one percent of the public school respondents used pesticides outdoors, primarily for weed control. Percentages of private schools reporting pesticide use were somewhat lower than public schools. The survey contained other vital information: identification of pesticide applicators (over half the applications were made by professional pest control operators, or PCOs), types of pesticides used (insecticides indoors included ant traps; outdoors the pesticides were mostly herbicides—glyphosate, 2,4-D, dicamba, MCPP, and prometron), notification practices for school staff and the public, and which schools had a pesticide use policy. Most of the schools did not have a pesticide use policy (85%) although over 50% did have a person responsible for deciding pest control measures.

If you read many newspapers during the summer you're aware the survey results were supposed to be kept confidential, according to the agreement between DATCP and the schools. The confidentiality agreement unraveled when the Environmental Decade group sued DATCP for release of the information to the general public and the rest, as they say, "is history".

Good intentions on both sides of the issue, perhaps, but where does it go from here? During the summer, DATCP organized a committee composed of school officials and staff, a PTA representative, a toxicologist, an oncologist, parents, green industry professionals and PCOs, DATCP personnel, and UW-extension employees. A large committee, but one that so far has worked fairly well towards a common goal: developing and implementing assistance for schools to develop pesticide use policies to help ensure the safety of school children and environmental protection. The grand plan now is for a project to proceed in three phases: 1) Development and distribution of a school IPM manual, 2) Initiation of a pilot program to institute pesticide use policies in several selected schools, and 3) Broadening the program to include a multitude of schools/school districts throughout the state. The project will cost approximately $80,000. DATCP has agreed to fund phases 1 and 2 and to at least partially fund phase 3. The three of us from UW-extension currently serving on the committee (Karen Delahaut (IPM), Phil Pelletteri (Entomology), and myself (Horticulture)) will be largely responsible for completing the three phases, DATCP having successfully completed the survey portion of the project.

During November 1998 we drafted the integrated pest

management manual. The manual will be revised following review from the committee members. Publication and distribution is expected this spring. From spring through fall of 1999, the three of us from UW, with assistance from DATCP, will be providing education and training assistance to five schools in Wisconsin as we conduct the pilot program phase of the project. Schools will be selected which represent upper and lower income schools, public and private, in both rural and urban areas: likely sites will be Eau Claire, Madison, Stevens Point, the Fox River Valley, and the Milwaukee area. Only schools which use pesticides will be targeted. During autumn 1999 we will evaluate our pilot program and adjust our approach accordingly. Beginning winter/spring of 2000 we will provide outreach assistance to at least 25 schools and/or school districts. Each school will receive at least three visits, each visit lasting a minimum of eight hours. The manual will be available to all schools, regardless of whether they participated in the survey and/or training. Please let me know if you have a particular school or district which you would like to see on the list and I will submit it for consideration.

Section II

The national PTA supports integrated pest management (IPM) strategies for schools for two primary reasons: 1) Elimination of health risks from potential pesticide exposure and 2) Cost-savings due to reduced pesticide usage. Good goals, but it's often difficult for persons inexperienced in pest management to appreciate the requirements of a practical IPM program. In my mind, a cooperative effort among a good toxicologist, several medical experts (oncologist, endocrinologist, etc.), a child behavior expert, and a pesticide use specialist would be required to fully determine the potential health risks of pesticide use in and around schools. As far as cost-savings are concerned, I think many outside advocates of IPM don't fully understand the components of an IPM program.

Many publications already exist on IPM for schools and other areas. The authors usually have good intentions but have seldom if ever been responsible for managing pests in actual situations. Many of the authors claim they are "environmentalists"; I would argue many of us in turf management, from golf course superintendents to landscapers, are also environmentalistsówe like plants and nature and want a safe environment for our children. Most of the IPM manuals tend to emphasize "biological" controls: borax for ground ivy control, beer for slug con-

trol in gardens, bacteria for insect and disease management, and lately corn gluten meal for control of any and all weeds. Many of these "solutions" are only partially effective at best: even when corn gluten meal levels build up sufficiently in the soil to control weeds on a pre-emergent basis, it is effective only on a limited number of weeds. With a few notable exceptions (crabgrass and dandelion), most of the weeds controlled are not even problems in managed turf in Wisconsin (bermudagrass, smartweed, pigweed, lambsquarter, etc.). Other suggestions I have heard are "Why not just pull the weeds by hand?", "Use weed whackers", and, for weeds in parking lots, "Just repave the parking lots regularly" (but what is the environmental cost, especially in terms of clean water and air, for production and use of the asphalt?). My question – Why don't turf managers write the IPM manuals?

The content of the manual we have written for the school IPM project is approximately 60% devoted to turf management, 10% for ornamentals, 10% for "varmints", 15% for indoor insect pests, and 5% for "other" areas (weed control in parking lots, natural "prairie" areas, etc.). It is different than most IPM manuals I have seen because it emphasizes basic plant care over chemical or biological pest control measures. Most of us know that if we maintain a dense turf with a good root system then weed, insect and disease problems will be negligible on lawns and athletic fields. Yet one of the greatest problems I have sensed in the committee is the unwillingness and the lack of school funding to provide the three primary cultural practices for turf: regular mowing, fertilizing, and irrigation. For many situations, aerification is needed to manage thatch and alleviate compaction which otherwise would increase weed and insect problems. Topdressing is needed on athletic fields to maintain the crown and surface uniformity. Yet even after discussing turf management in the committee, there is reluctance and a general acknowledgement that schools will not regularly mow, fertilize and irrigate the turf. If these things are not done, no amount of scouting, monitoring, corn gluten meal or Bt are going to save the turf. Proper cultural practices are the core of IPM programs, yet the decision-makers are not prepared to spend the money on the front end: instead, money is spent for chemicals or biological controls and back-end negotiations with parents and environmental organizations. I doubt an IPM approach will offer substantial financial savings: mowing, fertilizing, scouting, monitoring, and the hiring of an educated turf manager all cost money, yet these are the items that will really allow us to reduce conventional pesticide usage, not reliance on foo-foo dust and snake oils. The real savings truly may come in decreased reliance on pesticides if proper cultural practices are funded.

We are still fighting ignorance on the part of the public responsible for controlling many of the management deci-

sions. I have a letter on my desk from the parks director of Menasha asking for my response to a document an alderman received from the Lake Michigan group of the League of Women Voters. The document discusses ways to eliminate pesticide use in turf areas. One of the statements professes the importance of thatch to provide healthy turf and the detrimental effects thatch management practices have on the overall health of the turf! According to the document, mechanical aerification should be avoided because it "unneccesarily destroys grass plants and roots"and "reaches only the upper few inches of soil". True, grass plants and roots may be cut by aerification tines, but most gardeners and houseplant enthusiasts know the benefits of cutting roots of pot-bound plants will improve root and foliage. True, aerification only reaches the upper few inches of soil, but compaction and turf root growth are generally limited to the upper few inches of soil. Empirical evidence and research have shown for years that aerification improves turf quality by providing increased water infiltration and improved turfgrass root growth, improving turf health, which allows the turf to outcompete weeds such as knotweed and diminishes the effect of insect and disease events. Who's writing this stuff? No one claimed authorship of the four page document which was fraught with misconceptions and half-truths. It did boast some drawings of forest and garden flowers (wild petunias, blue iris) and a large-print sidebar of a quote from Aldo Leopold óI am still trying to figure out how these relate to sound turf management practices. Some municipalities in Wisconsin have banned the use of chemical fertilizers for use on turf because it ostensibly results in significant environmental problems as the nitrates and phosphates leach and run-off into water supplies. Anyone who is familiar with Dr. Kussow's research on nutrient fate and runoff from turf knows that proper fertilization actually increases turf density and decreases nutrient run-off problems. Other researchers in the U.S. have obtained similar results.

One of the ways all of us can make a difference is to be heard. Submit letters to the editor of your local newspaper. Be prepared to discuss pesticide and fertilizer use on turf when a news crew shows up at your golf course because its being targeted as a "polluter". Attend town and city meetings regarding pesticide and fertilizer use for turf. Too often we lose out on legislation, like the recent failure to substantially change posting requirements in the Ag 29 fiasco because we were too busy being "professional". Be heard! The world is run by those who SHOW UP!