



School Pesticide Monitor

A Bi-Monthly Bulletin on Pesticides and Alternatives
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Report Shows Organic Turf Programs Cost Less than Chemical Programs

A new report by the environmental health group Grassroots Environmental Education compares the relative costs of maintaining a typical high school football field using a chemical-intensive program and a natural (organic) program over a five-year period. The report, prepared for members of the New York State legislature, concludes that the annual cost of maintaining a field using natural products and techniques can be as much as 25% lower than the cost of conventional programs using chemical fertilizers and pesticides.

The report includes cost factors for fertil-

ization, aeration, over-seeding and irrigation for both programs. The conventional program includes additional costs for purchasing and applying typical herbicides and insecticides, while the natural program includes costs for compost topdressing and natural soil amendments. Costs for the natural program are slightly higher in the first two years of the comparative report, and then drop significantly in years three and beyond.

"It can take a few seasons to undo the damage caused by chemical management programs, revitalize the soil biology and let nature do its work," says the report's

principal author, Charles "Chip" Osborne, a nationally-recognized natural turf expert and Beyond Pesticides board member who serves as a consultant to many New York school districts. "But once we get the soil biology working for us, we can see some dramatic and significant cost reductions fairly quickly."

The emerging science that links exposure to turf pesticides with human health problems, including potential interference with normal brain development in children, has increased the demand for non-chemical

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Child Safe Playing Field Act Signed into Law by New York Governor

In May, the *Child Safe Playing Field Act* was signed into law by Governor Paterson of New York, marking a huge victory for children's health. The law helps to protect children by banning the use of pesticides on school playing fields and play grounds. Schools will have one year to comply with the regulations.

If the County Health Department, the Commissioner of Health, the Commissioner of Environmental Conservation or the school board deems it an emergency, the law does allow for emergency application of pesticides for infestations. Containerized nonvolatile bait stations are also permitted for insect and rodent control.

The *Child Safe Playing Field Act* requires that all schools, preschools, and day care centers both public and private to stop using pesticides on any playgrounds or playing fields. In New York and across the

country, schools currently regularly apply pesticides and "weed and feed" products (pesticides mixed with chemical fertilizers), which are linked to cancer, endocrine disruption, learning disabilities, asthma and other problems.

"The archaic practice of poisoning children's play grounds is coming to an end in New York State. We will now raise a generation of healthier, safer children because of this legislation," said Adrienne Esposito, Executive Director, Citizens' Campaign for the Environment.

"For nine years we have been working to eliminate the unnecessary use of these dangerous poisons in outdoor settings to protect our children from exposure to carcinogens, neurotoxins and other dangerous chemicals!" Announced Assemblymember Steven Englebright (D-Setauket), "The bill's passage represents a triumph of children's

health interests over the corporate interests that continue to promote unnecessary pesticide use."

Across the country, state and local governments are instituting new policies in response to citizens' demands for stricter pesticide regulations. In Massachusetts carcinogenic pesticides or products that contain EPA List 1, Inerts of Toxicological Concern can no longer be applied to school grounds, and no pesticides can be applied for purely aesthetic reasons. In Connecticut, pesticides cannot be used on day care center turf, or on school grounds for kindergarten through 8th grade. In the city of Branford, CT all of the town's playing fields, parks, and public green spaces are managed without the use of pesticides.

For a more extensive list of example please contact Beyond Pesticides.

Everyday Exposure to Pesticides Linked to ADHD in Children

Children exposed to organophosphate pesticides may have an increased risk of Attention-Deficit/Hyperactivity Disorder (ADHD), according to a new study led by a team of scientists from the University of Montreal and Harvard University.

Using data from the National Health and Nutrition Examination Survey, the study focused on 1,139 children from the general U.S. population and measured pesticide breakdown product levels in their urine. The authors conclude that exposure to organophosphate (OP) pesticides, at levels common among U.S. children, may contribute to a diagnosis of ADHD.

“Previous studies have shown that exposure to some organophosphate compounds cause hyperactivity and cognitive deficits in animals,” says lead author Maryse F. Bouchard, a professor at the University of Montreal Department of Environmental and Occupational Health and scientist at the Sainte-Justine Hospital Research Center. “Our study found that exposure to organophosphates in developing children might have effects on neural systems and could contribute to ADHD behaviors, such as inattention, hyperactivity, and impulsivity.”

Another author of the study, Marc Weisskopf, PhD, ScD, told Reuters, “What this paper specifically highlights is that this may be true even at low concentrations.”

For children with a 10-fold increase in the concentration of the most common dialkyl phosphate metabolites (an indicator of organophosphate exposure), the odds of ADHD increases by more than half. And for the most common breakdown product, called dimethyl triphosphate, the odds of ADHD almost doubled in kids with above-average levels compared to those without detectable levels.

Because the research links ADHD with pesticide breakdown products in urine, exposure can only be traced to OP pesticide exposure, either on food or in the home, not a specific pesticide. Garry Hamlin of Dow AgroSciences, which manufactures chlorpyrifos, an OP pesticide widely found as a residue in food because of its widespread use in chemical-intensive agriculture, was quick to say, “The results reported in the paper don’t establish any association specific to our product...”

Environmentalists point to this study, as well as Mr. Hamlin’s reaction, as examples of what is wrong with the approach we take to toxic chemicals, especially pesticide regulation, in the U.S. Risk assessment calculations under the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA) and the *Food Quality Protection Act* (FQPA) – the federal pesticide registration and tolerance laws, respectively – evaluate harm based on false realities about daily toxic exposure and individual sensitivities. Risk management decisions under these

laws assume the benefits of toxic pesticide products to society or to various sectors of users, then make a determination that the risks are “reasonable.”

Even under FQPA, which has been touted for its health-based standard, there is an inherent assumption that if a pesticide meets a highly questionable “acceptable” risk threshold, it has value or benefit. This is the practice even though there are typically less or non-toxic methods or products available. Pesticides, like the OPs linked to ADHD in the current study, are completely unnecessary given organic alternatives in agriculture and residential integrated pest management techniques, which do not rely on toxic chemicals.

The study, “Attention-Deficit/Hyperactivity Disorder and Urinary Metabolites of Organophosphate Pesticides,” was published May 17, 2010 in the online version of the journal *Pediatrics*. The research was supported by the Canadian Institutes for Health Research and the National Institute of Environmental Health Sciences.

Reduce children’s risk by eliminating toxic pesticides in homes and at schools. Federal legislation, the School Environment Protection Act of 2009 (SEPA) has been introduced into Congress to help protect school children from pesticides used both indoors and on all school grounds nationwide. For more information please contact Beyond Pesticides.

Organic Program Is Less Costly

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turf management solutions for schools, and has spurred lawmakers in Albany to consider legislation to ban the use of chemical pesticides on school grounds. One obstacle commonly cited by chemical management proponents is the purported higher cost of a natural turf program.

“The natural turf industry has come a long way in the past few years with a new generation of products and technologies that have reduced costs and improved

outcomes,” says Doug Wood, Associate Director of Grassroots and the report’s co-author. “We felt it was time to put an end to this myth that parents and school officials need to choose between children’s health and increased maintenance costs. Now the choice for organics is clear.”

Bolstering the cause for proponents of natural turf care, a new environmental survey of schools in suburban Westchester County reveals that 88% of the school systems in the county currently maintain their grounds without pesticides. This year on Long Island, 31 school districts joined together in a cooperative bid for

natural turf maintenance services.

“We’ve all known the dangers of pesticides for a long time, but until now, there hasn’t been a clear choice for schools facing economic challenges,” says Assemblyman Steve Englebright, co-sponsor of the legislation. “Now, thanks to cutting-edge technology and good old-fashioned biology, we can accomplish both goals at the same time. This is great news for schools across the state.”

For more information on how to manage your lawns without toxic pesticides, see www.pesticidefreelawns.org.