

To: State of Connecticut Environmental Committee  
From: Michael Wallace, CGCS Town of Simsbury  
Re: SB443

I wish to express my concern with Senate Bill 443. This bill looks to expand the ban on pesticides to grades 9-12, park lands and town greens. I oppose this bill for the following reasons. First and foremost the current ban on K-8 has had a deleterious effect on the grounds of those facilities. To maintain the grounds requires a huge increase in manual labor and expense to the municipality. Fields are turning into crabgrass and clover patches which attract bees which can be very harmful to those allergic to their sting. Expanding this will only drive up cost to Towns and lower property values.

Second the out right ban placed on all products in the same category sound good but do not take into account the massive amounts of information and toxicological data that are available by experts. While the environmental committee as well as the school committee and public health committee are all well meaning the unorganized piece meal approach to this issue is incorrect and falls short of serving the entire population of the State. I would suggest a more comprehensive approach be taken such as the State of Maine has taken where they have put together expertise to evaluate chemicals and developed a comprehensive list of chemicals of concern which falls under their Public Health Department. Connecticut should consider doing the same and stop this piece meal approach which is a huge waste of time and money and not very effective.

Third there are ways to mitigate the risks when dealing with a school. One is to simply not apply products when students are present. One analogy that might be used is pesticides are much like paint. When you paint a wall if you come in contact with it prior to the paint drying you now have paint on you. Once the paint has dried it is no longer transferred to you. Pesticides when applied in a spray solution are similar in that if you enter the area prior to the product drying you can indeed get some transfer. However, once the product has dried it is no longer readily transferable. Dermal testing is done by the EPA and the products are rated for there effects in the very worse case. Professionally trained applicators understand this and can apply products at times when the public is not present.

We have the ability to address the issues if we simply develop scientifically based criteria for rating products and then allowing those that meet that criterion to be used by a trained professional in controlling pests. To ban everything is an over simplification of the issue and just based on emotion not science. I for one would rather use science.

Forth we as humans all fear what we don't understand and wish to keep our children as safe as possible. That is a noble goal and we all want a safer world but we also must face the fact that there is no such thing as a completely safe world. I pass on the following information for your consideration and simply wish to show how we as humans with limited knowledge and expertise can make decisions that are irrational although well intentioned.

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In order to make reasonable and rational decisions on the toxicology of any particular product we need to understand some basic concepts.

First we need to accept that anything can be toxic. *It is the improper use of a substance that causes the danger.* In toxicology it is accepted that there is a relationship between the size of a test subject and the dose of any product that may cause harm. Science has long used a term called lethal dose that kills fifty percent of a test population (usually rats). This number is known as the LD50 of the product. The number is given in milligrams per kilogram (mg/kg). It is important to note that the testing involves 100% pure product and the lower the LD50 number the more toxic the product is. We also need to consider exposure to the product and possible routes in which a person could be exposed. There is dermal exposure which is the product coming in contact with the skin, inhalation exposure is the breathing in of the product and there is oral exposure which is ingestion of the product. If the product is being used and applied properly there should be no danger to the public.

Just to review we are testing 100 % pure product and the **lower** the number the **more toxic** the product is. There are very few if any products that are used with 100% active ingredients. In the real world the active ingredient of a product is usually mixed in a solution or in some cases applied to a carrier for application. The people who are in the greatest danger are the people that do the mixing, loading and application of the products. They are the individuals that are exposed to the concentrated product. Only the people that produce the products would have a greater potential for exposure. Wouldn't it make sense that if there was a risk it would show up in these individuals at an alarming rate?

There are also different types of exposure. One can have an acute exposure which is a one time occurrence in which the level of exposure to the product is fairly high. An example of this type of incident would be some sort of spill where either concentrated product comes in contact with a person or a mechanical malfunction where product escapes and one is exposed. The second type of exposure is called chronic exposure which occurs over a long period of time which can be either of high concentration or low concentration. An example of a high concentration chronic exposure would be an employee working at a manufacturing plant producing pesticides.

So the question one would ask is given all of the information available what should one use as a guide? What is safe? Is there a source or scale one might consider using to make prudent decisions that are based in fact and not it might, it could, it may and all the other statements that are used to make decisions emotionally and not scientifically.

Let me describe a few products to illustrate a point. Product number one has been shown in California Prop. 65 to be a developmental toxin and a reproductive hazard. It can cause eye, skin and respiratory irritation, may be irritating to the mucous membrane and upper

respiratory tract and prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. It should also be noted that the toxicological properties of this compound have not been fully evaluated. The oral LD 50 of this product in rats can be as low as 200 mg/kg. This product is readily available to the public and requires no special training to use. Would this be a product we should consider banning from using in and around children and schools?

Product two has an oral LD 50 of greater than 5,000 mg/kg (remember the higher the number the less toxic the product), can cause some moderate eye irritation, has been shown to be practically non-toxic if dermal contact is made, if inhaled it is also listed as practically non-toxic, chronic effects/carcinogenicity are extremely low as well as toxicity to reproduction/fertility. It is also available to the public and requires no special training to use. Would this be a product we should ban using around schools and children?

Product three can be fatal in concentrations of 90 milliliter/kilogram, it is well documented that 3,533 people a year die from the use of this product and 700 or so are children under the age of fourteen. It is the second highest killer of children second only to motor vehicles. Should this be allowed any where near a school?

I list the three products above to illustrate how difficult it can be to tell products from one another on a safety/toxicological basis given a limited understanding of all the information. The material safety data sheets (MSDS) for the first two products can be found by simply going to Google and typing in MSDS and the product, one then refers to the toxicology section of the form to see what the dangers are or are not. Product number one is **aspirin**. Product number two is a nonselective herbicide (**round up**). Number three is water and the number of people who drown a year per the Center for Disease Control, Home & Recreation Safety figures. Water can be toxic to humans if too much is ingested in a short period of time. A woman died while participating in a contest for a radio station in the recent past in California. That being said I do not think we are going to ban water, pools or aspirin anytime soon. So we need to develop a method for making prudent decisions.

The United States Department of Environmental Protection (DEP) requires extensive testing of products prior to coming to market. They require a MSDS sheet be developed for each product which involves extensive testing for the potential to cause birth defects, cancer and other potential risks. Only after passing that standard is a product then allowed to be labeled with the information for the proper use of the product. The test procedures and the results are performed to accepted scientific protocols by teams of individuals that have far greater knowledge in the field of toxicology than any one person and especially the lay person. This is then reviewed by each state which then allows the product to come to market. The point is there are protocols that do set certain criteria

which would allow for a conversation about what products could and could not be used in and around schools safely.

For informational purposes I have compiled a small list of products with a chart of there LD 50 numbers which you might review and notice where certain products fall. We need to use common sense, facts, look at the big picture and deal with this issue once and for all and stop this piece meal uncoordinated approach to this issue.

I wish to thank the committee for their time and it is my sincere hope that SB 443 is not passed and that a more comprehensive scientific approach can be found to protect everyone from chemicals of concern. Recognizing that just because a product is labeled a pesticide does not make it a threat.

Michael Wallace

Graduated from the University of Massachusetts, Stockbridge School with a degree in Turf Grass Science.

Worked as a Supervisor for the Town of West Hartford on parks, cemetery, school and golf grounds providing guidance for eleven years.

Currently works for the Town of Simsbury where he developed the school's IPM program, assists in parks field maintenance and oversees Simsbury Farms Golf Course.

Holds a Connecticut DEEP Custom Grounds Supervisory License S-1106 for the last twenty-five plus years.

Past President of the Connecticut Association of Golf Course Superintendents

Past President of the eighteen thousand member Golf Course Superintendents Association of America

Served on a Committee for DEEP in the past

A Certified Golf Course Superintendent for over thirty years

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Product	Use	LD50 Oral	LD50 Dermal
Caffeine	Pain Relieve	192 mg/kg	1,500 mg/kg
Aspirin		200 mg/kg	
Table Salt		300 mg/kg	
2, 4 D	Herbicide	375 mg/kg	>5,000 mg/kg
Proxol	Insecticide	450 mg/kg	
Ibuprofen	Pain Relieve	636 mg/kg	
Acetaminophen	Pain Relieve	1,944 mg/kg	
Glyphosate	Herbicide	4,320 mg/kg	
Epson Salt		5,000 mg/kg	5,000 mg/kg
Dimension	Herbicide	>5,000 mg/kg	>5,000 mg/kg
Acelepryn	Insecticide	>5,000 mg/kg	>5,000 mg/kg
Vitamen C	ascorbic acid	11,900 mg/kg	
Sugar	sucrose	29,700 mg/kg	
Water	90ml/kg		A 150 pound person would have to drink 1.5 gallons of water to reach this level