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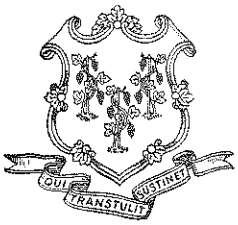

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SENATOR DONALD E. WILLIAMS, JR.
Twenty-ninth District
President Pro Tempore

Testimony before the Public Health Committee
Senator Donald E. Williams, Jr.

In Support of *H.B. 5330, AAC The Application of Pesticides at Parks, Playgrounds, Athletic Fields and Municipal Greens*
March 14, 2014

Good Morning Senator Gerratana, Representative Johnson and distinguished members of the Public Health Committee. I am here today to support H.B. 5330, An Act Concerning The Application of Pesticides at Parks, Playgrounds, Athletic Fields and Municipal Greens, and to bring to your attention a related issue of significant concern to the public health and our state's parks, playgrounds and other green spaces.

Let me begin by expressing my support for the underlying bill. Connecticut set an example for the rest of the country when we adopted a ban on the use of pesticides on the grounds of our elementary and middle schools. Scientific studies have concluded what may seem obvious—exposure to pesticides is harmful to children's health, and it makes sense to limit the use of these poisons in additional public spaces.

I would like to draw your attention specifically to the chemical glyphosate, more commonly known by its trade name "Roundup." As an herbicide, it falls under the existing school pesticide ban under CGS Sec. 10-231a, and for good reason. Studies have shown a link between glyphosate and serious health problems, including: DNA damage, premature births and miscarriages, birth defects, multiple types of cancer, and disruption of neurological development in children.

The U.S. Environmental Protection Agency has reported that glyphosate is the most commonly used herbicide in U.S. agriculture, and the second most commonly used weed killer for home and garden. Glyphosate ends up in the air we breathe and the water we drink. A 2011 study by the U.S. Geological Survey Office examined air and water samples taken from two states over a two-year period. It found glyphosate present in every water sample examined in Mississippi, and in most of the air samples taken.

A new product will soon be marketed in Connecticut—unless we take action—that will dramatically increase the amount of glyphosate sprayed on soil and introduced into the air, streams and rivers of Connecticut. Genetically modified and engineered (GMO) grass seed is

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slated for field testing this spring and summer; introduction of this product could begin as early as next year.

I respectfully request that the Public Health Committee consider adding language to HB 5330 that would ban genetically modified grass seed and other genetically modified annual and perennial plants and landscaping plants in Connecticut.

As I have already said, glyphosate itself poses health risks. Even worse are the long-term environmental consequences to our state's environment and the Long Island Sound. Any chemical you spray on the land will affect the chemistry and biology of the land, and the runoff will affect the watercourses and water quality of the state.

Some may claim that increasing the use of glyphosate is not so bad, given that it is not as toxic as other herbicides such as 2,4-D. I would suggest that is the wrong way to look at environmental stewardship, and the wrong way to create a legacy for our children and future generations. What makes the prospect of GMO grass seed and landscape plants so damaging is that it opens the door to a massive increase in the proliferation of toxic chemicals in our environment. Those who are concerned about the quality of our air, our water, of the viability of aquatic life in Long Island Sound, need to be concerned about the prospect of a quantum leap in the amount of toxic herbicides that will be poured into Connecticut's soil and waters. The issue is not just glyphosate—a major corporation is now moving forward with GMO agriculture products that will be resistant to the stronger and more poisonous 2,4-D, which will cause even more damage to our environment. The Wall Street Journal that, "some of the old pesticides—in particular, those called 2,4-D and dicamba—have a history of posing more risks for the environment than the chemical in Roundup. That's partly because they have more of a tendency to drift on the wind onto neighboring farms or wild vegetation."

The GMO plants that will survive heavy spraying with 2,4-D are being engineered because Roundup-ready plants and the use of glyphosate have created super weeds—weeds that are resistant to glyphosate. This is similar to the overuse of antibiotics—initially, everything is killed; over time, however, resistance builds and effectiveness disappears. The GMO products that promised less use of herbicides have actually resulted in much greater use, and as resistance builds the GMOs require the use of even more powerful and toxic herbicides.

When it comes to lawns, I know from personal experience that simply cutting my lawn at a higher setting and using occasional low-strength organic fertilizer is the best way to go in terms of weed control and protecting lawns against drought and scorching. Introducing genetically modified seed and large quantities of toxic chemicals is guaranteed to have multiple adverse and unintended consequences. The recent collapse of the honeybee and monarch butterfly populations has been linked to increased use of herbicides and pesticides. The dramatic decrease in the lobster population in the Long Island Sound has been linked to pesticide runoff. Last year Governor Dannel Malloy signed a bill banning the use of the pesticides methoprene and resmethrin in coastal areas due to their toxicity to fish, lobsters, and other aquatic life. Glyphosate can retain its toxic qualities in water for between 12 and 90 days.

I bring this to your attention because we are at a critical juncture. It is not often that we can so clearly see two pathways ahead. The question is whether we will have the vision and foresight to choose the right path, and recognize that the time to act is now. We can ban GMO grass seed and landscaping plants now, before their introduction, and stop the guaranteed environmental destruction that will occur over the next five to ten years and beyond. If we do not take action, next year literally could be too late.

For these reasons and the other reasons in my additional testimony below, I urge the committee to amend this important legislation in the manner I have described. Thank you for your time and support.

(Additional testimony):
Genetic engineering of plant resistance to glyphosate is a practice already well-established in commercial agriculture. "Roundup Ready" crops account for at least 90 percent of the soybeans and 70 percent of the corn and cotton grown in the United States. With so much glyphosate being sprayed on so many weeds, it was only a matter of time before the weeds began to evolve a resistance to the chemical, and this is exactly what has occurred.

A recent report by the U.S. Department of Agriculture (USDA) on genetically engineered crops states that, "Glyphosate resistance is currently documented in 14 U.S. weed species (Heap, 2012), and the potential exists for much more acreage to be affected (Frisvold et al., 2009; Shaw et al., 2011)."

The report continues:

> Because no new major herbicide chemistry has been made commercially available in the last 20 years, and because few new ones are expected to be available soon (Harker et al., 2012), many plant scientists believe that slowing the rate of glyphosate resistance and the spread of glyphosate-resistant (GR) weeds are among the most important problems facing U.S. crop producers (NRC, 2010, 2012).

Glyphosate-resistant weeds are now present among soybean, cotton and corn crops (all of which exist in "Roundup ready" varieties) in at least 22 states and also in other countries. The New York Time describes one such mutated weed, pigweed, which, "can grow three inches a day and reach seven feet or more, choking out crops; it is so sturdy that it can damage harvesting equipment."

Introduction of large amounts of glyphosate to American lawns is sure to cause lawn weeds to evolve a resistance to the chemical just as has occurred in commercial agriculture. Agricultural biotechnology expert Douglas Gurian-Sherman of the Union of Concerned Scientists warns that, "The more a chemical is used consistently, the more likely that somebody's weeds will become resistant. That's standard, agreed-upon science. The way that Roundup is used because of transgenic crops exacerbates that problem."

As glyphosate loses its effectiveness, the alternatives are even less attractive. Recall how the USDA report warns, "no new major herbicide chemistry has been made commercially available

in the last 20 years." The alternatives are older chemicals, widely regarded as even more toxic. Companies like Monsanto are already working on new GMO plants that would be resistant to the older chemicals. I would argue that rather than solving the weed-resistance problem, the GMO grass seed approach would compound it.

We should also be concerned about the ease with which GMO grass seed could spread into the wild. Before experimenting with Kentucky bluegrass, Scotts Miracle-Gro first attempted to genetically modify another grass species known as bentgrass, and was fined $500,000 in 2007 by the federal government for failing to contain the grass in approved test fields, despite considerable efforts to do so.

Not only can GMO grass plants and their seeds spread into the wild, but their genetically modified genes may also be cross-bred with other, similar species. Wired Magazine interviewed plant geneticist Norman Ellstrand of the University of California, Riverside, on this subject, who said, "I don't know what other bluegrass species it's cross-compatible with, but I can say with 98 percent certainty that it's cross-compatible with some. If this plant grows and flowers at the same time as other bluegrass, they'll flourish. You'll have a new incidence of herbicide resistance getting into the wild."

As resistance to glyphosate spreads further into the wild and into additional species, the effectiveness of glyphosate will further erode, leading to additional environmental consequences and a greater reliance on more toxic pesticides.

Unlike the GMO bentgrass described above, the new GMO Kentucky bluegrass is not subject to federal regulation of any kind, due to a technicality in federal law exempting certain methods of genetic modification from oversight. Scotts Miracle-Gro CEO Jim Hagedorn has spoken publicly about the company's GMO bluegrass, stating that, "I think we will see limited commercial activity the following year (2015), and I think, if all goes well, much more (activity) in the consumer market in 2016."

As a perennial plant, grass spreads much more readily than annual plants, which must be re-planted every year. Common GMO crops like corn are annual plants, which help make them easier to contain in designated areas. Genetically modified perennial plants therefore merit a higher level of regulation and oversight. We must also be mindful of emerging trends in genetic modification of other plants. In cooperation with Monsanto Corporation, Scotts Miracle-Gro has also explored the genetic modification of flowers for glyphosate resistance. Our response to the imminent availability of GMO grass seed should not be limited to grass seed only.

Once corporations establish significant market share in the sale of GMO seeds they typically raise the price significantly— the price of GMO soybean and corn seeds grew by about 50 percent in real terms (adjusted for inflation) between 2001 and 2010.