

**Senate Committee On Environment and Natural Resources**  
**Testimony in Support of Senate Bill 892**  
**March 22<sup>nd</sup>, 2017**

I want to thank Chairman Michael Dembrow, Vice-chair Alan Olsen, and fellow members of the Senate Committee on the Environment and Natural Resources Herman Baertschiger Jr., Floyd Prozanski, and my own senator Arnie Roblan, for the opportunity to submit testimony in full support of Senate Bill 892.

My name is Janét Moore. I have an agricultural science degree and background. I currently live and work in Coos Bay as the produce manager of Coos Head Food Co-op. I buy produce from organic farmers all over Oregon and locally where I live. Organic farmers are highly concerned about herbicide **Drift** contaminating their crops, water source, and soil. Our customers are highly concerned about avoiding toxins, many of them chose to eat organic food only after suffering an illness. I am also the volunteer co-director of the local non-profit Coast Range Forest Watch, who advocate for sustainable forestry practices.

Providing the public with prior notification of spray events is very important, so that people are able to take precautions and protect the health of their family, pets, and livestock. Records of pesticide application need to be kept so that chemical trespass events can be tracked and monitored. Please support SB 892, it entails these very sensible and modest reforms.

The Southern Oregon Coast is heavily sprayed with herbicides as part of industrial logging. Coos County where I live is the most sprayed county in Oregon per square mile. ODF data from 2004-2014<sup>1</sup>:

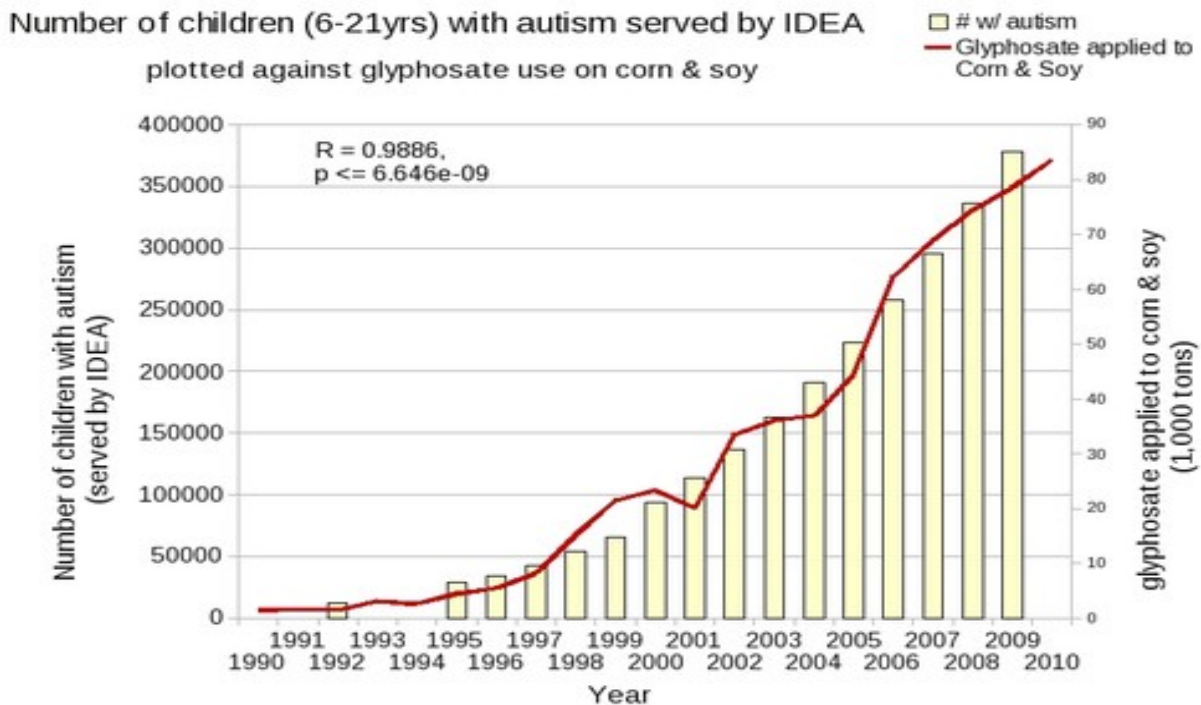
Most sprayed counties	Spray events 2004-2014	Size of county	Spray events per square mile
Douglas	13,018	5,134 mi <sup>2</sup>	2.5
<b>Coos</b>	<b>9,827</b>	<b>1,806 mi<sup>2</sup></b>	<b>5.4</b>
Lane	9,229	4,722 mi <sup>2</sup>	1.9
Linn	2,887	2,309 mi <sup>2</sup>	1.3
Washington	2,513	726 mi <sup>2</sup>	3.5
Tillamook	2,114	1,133 mi <sup>2</sup>	1.9
Clatsop	2,078	1,085 mi <sup>2</sup>	1.9
Clackamas	2,036	1,883 mi <sup>2</sup>	1.1
Curry	2,028	1,989 mi <sup>2</sup>	1.0
Benton	1,878	679 mi <sup>2</sup>	2.8
Yamhill	1,663	718 mi <sup>2</sup>	2.3
Lincoln	1,561	1,194 mi <sup>2</sup>	1.3

I talked to the Engineering Manager and a technician of the Coos Bay- North Bend Water Board. They confirmed that testing for herbicides such as glyphosate and atrazine in our drinking water only occurs every 2 years and that these tests are not coordinated with spray events. My Water Board is not monitoring spray activity in the Coos Watershed. They did however express an interest in learning more and possibly starting to schedule tests to coincide with spray events. No one knows if herbicides are entering our drinking water, because adequate testing is not occurring. My hope is that with the passage of SB 892 agencies will be able to easily monitor spray activity and track events of chemical trespass.

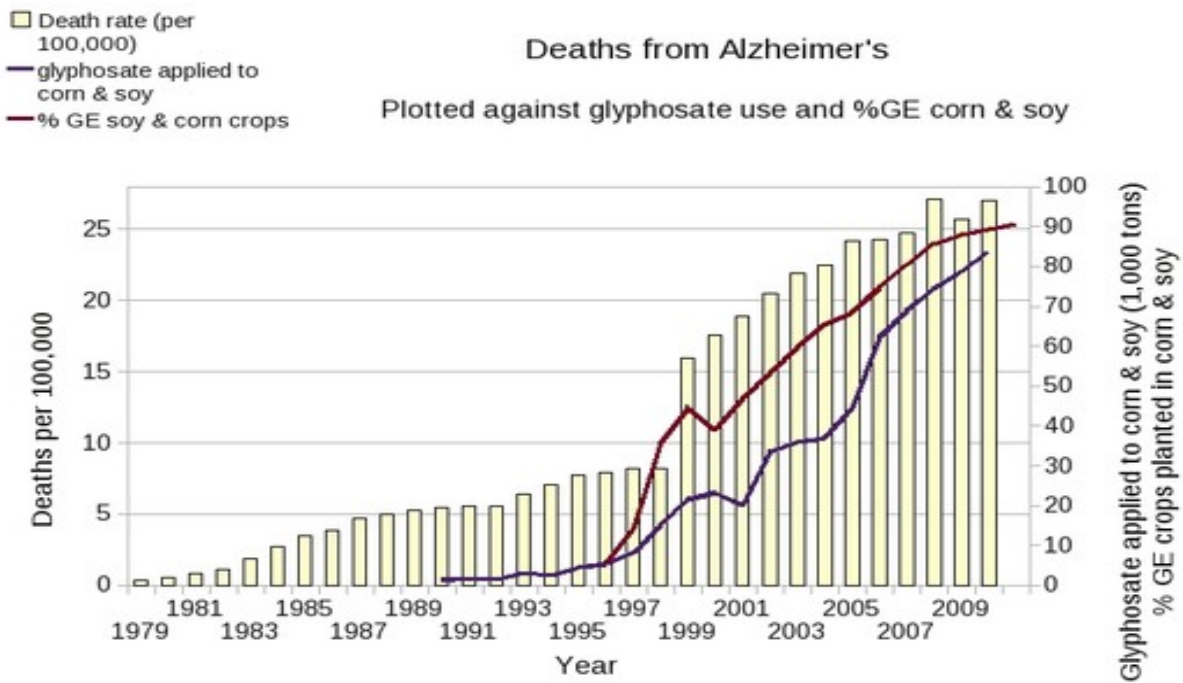
Most people don't realize how dangerous herbicides really are. Let's look at the most widely used herbicide glyphosate, the active ingredient in Roundup. Atrazine and 2,4-D are other herbicides used in forestry also known to be very harmful.

Glyphosate, kills plants through disruption of a metabolic pathway called the shikimate pathway, which starves the plant of key nutrients. It was supposed to be safe for animals and humans whose cells do not have this metabolic pathway. However, we now know that our gut bacteria, which are necessary for the synthesis of many nutrients, *do* contain the shikimate pathway. Our bodies actually contain 10 times more bacterial cells than our own human cells, we need them to live, and they all have the shikimate pathway. Decades of research by Dr. Stephanie Seneff of MIT and others has mounted. They show how interference with Cytochrome P450 enzymes acts synergistically with disruption of the biosynthesis of aromatic amino acids by gut bacteria, as well as impairment in serum sulfate transport. Additionally glyphosate preferentially harms our beneficial bacteria, allowing harmful bacteria to proliferate. The consequences are most of the diseases and conditions associated with a Western diet, which include gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer's disease<sup>1</sup>. Glyphosate is also known to cause liver damage at ultra low environmentally relevant levels<sup>2</sup> and is responsible for the four-fold increase in Celiac disease in the U.S. the past 50 years<sup>3</sup>. The World Health Organization has classified glyphosate as probably carcinogenic.

The use of this herbicide has dramatically increased since the late 1990's since the increase in food crops (largely corn and soy) and cotton genetically modified to resist glyphosate (Round-up Ready). The herbicide can be applied right on top of the growing food plants resulting in high amounts of herbicide residue concentrating in the body of the plant. Wheat is often ripened by applying round-up to the growing crop as well. Simply comparing the amount of glyphosate used on corn and soy crops with common diseases reveals we are a nation probably experiencing disease spikes because of toxins in our food system:



IDEA is the Individuals with Disabilities Act. Autism data: USDE, Crop data: USDA



Alzheimer's data: CDC, Crop data: USDA

People can choose to eat and grow their own organic food, but we cannot control aerial herbicide spraying in our headwaters and the timberlands we live adjacent to. Drift is always possible with any pesticide application. The least the state can do is to provide advanced notice to adjacent landowners free of charge

Pesticide applicators are already required to complete a Daily Chemical Application Record Form in compliance with Oregon Departments of Forestry (ODF) and Agriculture (ODA), and the U.S. Department of Agriculture (USDA); and to retain those records for 3 years. It only makes sense that those records be submitted to and kept by a public agency for the public to access.

Please contact me if you have any questions. Thank you for your time.

**Janét Moore**

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3. Mesnage R, Renney G, Séralini G, Ward M. & Antoniou M. Multiomics reveal non-alcoholic fatty liver disease in rats following chronic exposure to an ultra-low dose of Roundup herbicide. *Scientific Reports* 7, Article number: 39328, 2017. [www.nature.com/articles/srep39328](http://www.nature.com/articles/srep39328)
4. Samsel A, Seneff S. Glyphosate, pathways to modern diseases II: Celiac sprue and gluten intolerance. *Interdisciplinary Toxicology*. 2013 Dec; 6(4): 159–184. [www.ncbi.nlm.nih.gov/pmc/articles/PMC3945755/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3945755/)