



NATURAL RESOURCES DEFENSE COUNCIL
THE EARTH'S BEST DEFENSE

August 18, 2014

**COMMENTS FROM THE NATURAL RESOURCES DEFENSE COUNCIL
ON THE AGRICULTURAL WORKER PROTECTION STANDARD REVISIONS;
PROPOSED RULE**

Docket ID # EPA-HQ-OPP-2011-0184

<http://www.epa.gov/agriculture/twor.html>

These comments are being submitted on behalf of the Natural Resources Defense Council (NRDC). NRDC uses law, science, and the support of more than 1.4 million members and on-line activists nationwide to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for people and all living things. NRDC has no direct or indirect financial or fiduciary interest in the use or sale of any agrochemicals.

These comments are supported by the following environmental health and justice organizations:

Alaska Community Action on Toxics (Pamela Miller)
Alliance of Nurses for Healthy Environments (Katie Huffling)
Beyond Toxics (Lisa Arkin)
Breast Cancer Fund (Nancy Buermeyer)
Center for Effective Government (Ronald White, MST)
Center for Environmental Health (Caroline Cox, PhD)
Center For Food Safety (Andrew Kimbrell)
Center for Media and Democracy/The Progressive (Lisa Graves)
Citizens' Environmental Coalition (Barbara Warren, RN, MS)
Clean and Healthy Indiana (Lin Kaatz Chary, PhD, MPH)
Clean Water Action (Andrew Fellows)
Comite Dialogo Ambiental, Inc (Ruth Santiago)
Concerned Citizens for Clean Air (Maxine Centala)
Empire State Consumer Project, Inc. (Judy Braiman)
Green America (Alisa Gravitz)
Greenpeace (Rick Hind)
Healthy Child Healthy World (Alexandra Zissu)
Institute for a Sustainable Future (Jamie Harvie)
Maryland LCV (Ramon Palencia-Calvo)
Maryland Pesticide Network (Ruth Berlin)
Physicians for Social Responsibility (Kathy Attar)
SafeMinds (Eric Uram)
Science and Environmental Health Network (Ted Schettler, MD, MPH)
Sciencecorps (Kathy Burns, PhD)
TEDX, The Endocrine Disruption Exchange (Lynn Caroll, PhD)
The Rachel Carson Council, Inc. (Robert Musil, PhD, MPH)

NRDC has a long history of supporting farmworkers in reducing their health risks from pesticides. In 1998, NRDC published *Trouble on the Farm: Growing Up With Pesticides in Agricultural Communities*¹ and in 2004, NRDC published *Hidden Danger: Environmental Health Threats in the Latino Community*,² which discuss pesticide-associated risks to farmworkers and their children. These reports reference scientific data showing that farmworkers and their children living on and near farms may have substantially increased exposure to pesticides over other populations, and deserve stronger protections.

Exposure to pesticides is one of the daily realities in the lives of the 2.5 million farmworkers in the U.S. today. In one alarming group of case reports in 2007 regarding farmworker women in North Carolina and Florida, three women gave birth to children with severe birth defects.³ All of these women had been exposed to a similar variety of agriculture chemicals. The Palm Post reported, "The case of Ag-Mart is not unusual: In Florida, where more pesticides are used per acre than in any other state, growers are rarely fined when they break the rules. According to state records reviewed by The Post, between 1993 and 2003 Florida inspectors found 4,609 violations of pesticide regulations, but only 7.6 percent resulted in fines."⁴ Failure to protect these populations with a stronger Worker Protection Standard is unforgivable.

We commend the EPA for moving forward in proposing stronger pesticide safety regulations to protect farmworkers and requiring record-keeping to facilitate enforcement.⁵ However, farmworker advocates fought over a decade for these revisions to the Worker Protection Standard for Agriculture Pesticides (WPS), and while they are an improvement, they do not go far enough. Since farmworkers will likely have to live with these revisions for another decade-plus, EPA needs to make them as strong as possible now!

The US uses about 1.1 billion pounds of pesticides each year, representing more than one-fifth of the annual global use of 5.2 billion pounds.⁶ Pesticides are designed to harm or kill insects, plants, and other living things and are released over our land, water, and food crops, exposing wildlife and people to them. Despite the safeguards, however, weaknesses, loopholes, and flaws undermine the legal requirements, their implementation, and their enforcement and oversight, leaving farmworkers, wildlife, and the environment at risk.⁷ Given their persistent exposure to harmful pesticides, it is not surprising that farmworkers and their families experience acute pesticide illness or injury and chronic health problems as a result of these toxic exposures.

We respectfully submit the following comments on the proposed changes. Improving the protections, training and information available to workers will reduce human illness and protect wildlife and the environment. Improving farmworker health and safety will protect these vulnerable workers from needless suffering and injury and have far-reaching benefits by reducing healthcare costs and strains on our public health care system.

Training and related record-keeping should be improved. We applaud the Agency's efforts to improve the frequency and quality of pesticide safety trainings, as well as to institute record-keeping of when these trainings take place. We strongly support annual safety trainings. These are much needed changes.

Training on preventing take-home exposures is particularly important. Pesticide residues on a worker's hair, skin and clothing directly impact the health and well-being of young children in the home. Children

are more vulnerable to the impacts of pesticide exposure, particularly during critical windows of development.^{8 9} For these reasons the American Academy of Pediatrics has issued a public policy statement on the health risks faced by children from pesticide exposures, and the need to reduce exposures to children.^{10 11} The children of farmworkers are at greater risk than the general population for pesticide-related cancer from *in utero* and early life pesticide exposures through their parents.^{12 13 14 15 16 17 18} These scientific data together provide evidence that EPA actions to protect adult farmworkers will also protect their families by reducing risks posed to fetuses, infants, and young children from parental or direct occupational exposure to pesticides.

We also appreciate that the Agency has proposed to reduce the ‘grace period’ before full WPS training is required, but this revision does not go far enough. EPA has proposed shortening the grace period to 2 days. No ‘grace period’ of any duration should be permitted. An uninformed farmworker is not equipped to do her or his job without putting themselves, their fellow workers, or their families at undue risk. The risks posed by allowing untrained workers to handle toxic chemicals, even for two days, is not tolerated in any other industry that involves exposure to hazardous chemicals. Workers must be adequately trained before they begin work.

The current requirement for central posting should not be eliminated but should be enhanced. Farmworkers need ready access to basic information about the pesticides being used at their worksites. Posting information about recent pesticide applications in a central location is one of the most effective ways for workers to protect themselves from pesticide exposures. While there are limitations to this method, it should not be eliminated. Many farmworkers work in greenhouses, nurseries, and ferneries, where a central posting location is common and is viewed by the workers. The expectation that workers can obtain this information from their employers “upon request” is unreasonable and unrealistic. Farmworkers should not be expected to question their bosses in order to obtain information about pesticide applications that may endanger their health. Rather than eliminate this protection, EPA should retain the central posting requirement and in addition require training that provides specific information on the names and effects of the pesticides to which the workers will likely be exposed.

Children should not work as pesticide applicators. We applaud the Agency for making the common-sense decision to institute a minimum age requirement for hired pesticide handlers and early-entry workers. However, the proposed age of 16 still falls far short. Children under 18 years of age should not be handling pesticides. EPA should not allow children to perform this high exposure work because they are still developing, and high levels of exposure to pesticides could have life-long health effects. Moreover, accidental spills, splashes, drift and improper mixing and handling are more likely with young people with less maturity and experience. Other federal rules on child labor set the minimum age for high-hazard work at 18, and several states prohibit minors under 18 from handling pesticides. This should be a national standard for children in agriculture.

A report of the American Federation of Teachers points out that statistics on child and youth agriculture labor are hard to come by because no studies have been done to consistently collect these data.¹⁹ However, the Government Accountability Office (GAO) estimated in 1998 that 300,000 youths aged 15-17 worked in agriculture,²⁰ and the National Agriculture Statistics Service (NASS) released a report estimating over 431,000 youths aged 12-17 were hired in agriculture in 1998. Children account for about 20% of farm fatalities. According to the GAO more than 100,000 under-aged teens and children are injured on farms each year. While the acute and long-term health impacts from working with pesticides are hard to document, we know that these children are exposed to cancer-causing and other harmful pesticides during the course of their work.

Protect workers from drifting pesticides. Pesticide exposure from drift of sprays which are applied in nearby fields is one of the leading causes of poisoning of farmworkers. A sprayer's error, wind, and volatilization are factors that make it difficult to confine pesticide sprays to targeted crops. EPA proposes to modestly improve drift protection by restricting entry into fields immediately adjacent to treated areas, but only on the same farm and only during the application. This safeguard should extend to workers in harm's way who work at a neighboring establishment and during the day after application when pesticide is volatilizing off the field.

Improve safeguards for pesticide handlers. Farmworkers who mix, load or apply pesticides, especially those who perform these high hazard tasks under the supervision of certified applicators, need extra protections from pesticide exposure. We support the improvements proposed in the WPS revisions and suggest further safeguards.

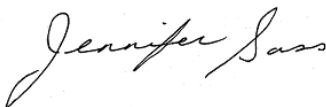
Respirator safety: We support the Agency's proposal to implement OSHA-equivalent standards on medical evaluation, fit testing, and training for pesticide handlers who apply pesticides that require the use of some respirators. However, as currently written, this provision excludes dust and mist filtering masks. This exclusion will result in inadequate protection for many pesticide handlers, since a majority of pesticides labels require handlers to wear dust/mist filtering respirators. Medical evaluation, fit-testing and training should be required for all respirators.

Medical monitoring: Medical monitoring is an important protective measure for pesticide handlers that can indicate when workers are over-exposed to neurotoxic pesticides on the job. OSHA requires medical monitoring for workers who handle a wide range of toxic substances and this safeguard should be included in the WPS. Longstanding medical monitoring programs in California and Washington State have proven track records in reducing exposure to, and illnesses from, highly neurotoxic pesticides. It should be required nationally.

Use of closed mixing and loading systems: The WPS should require the use of closed systems when handling highly-toxic categories of pesticides. A closed system is an engineering control designed for mixing and loading pesticides while reducing the handler's exposure due to spills, splashes and blowing. Closed systems are already used extensively in California. They should be required nationally.

A stronger WPS is needed to strengthen protections for farmworkers and reduce the risk of immediate and long-term illness to farmworkers and their families and improve protections for wildlife and the environment. We urge you to include these safeguards in the final regulations and to implement the revised WPS as soon as possible thereafter. Thank you very much for the opportunity to submit these comments.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer B. Sass". The signature is written in black ink on a white background.

Jennifer B. Sass, Ph.D.
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- ¹ Trouble on the Farm: Growing up with pesticides in agricultural communities. G. Solomon. Report of the Natural Resources Defense Council. 1998. Available at <http://www.nrdc.org/health/kids/farm/farminx.asp>
- ² Hidden Danger: Environmental health threats in the latino community. A. Quintero and M. Quirindongo. A report of the Natural Resources Defense Council. 2004. Available at <http://www.nrdc.org/health/effects/latino/english/contents.asp>
- ³ Calvert GM, Alarcon WA, Chelminski A, Crowley MS, Barrett R, Correa A, Higgins S, Leon HL, Correia J, Becker A, Allen RH, Evans E. 2007 Case report: Three farmworkers who gave birth to infants with birth defects closely grouped in time and place —Florida and North Carolina, 2004-2005. *Environmental Health Perspectives*; 115:787-791.
- ⁴ See stories by John Lantigua, Palm Beach Post. 2005. For example, see story posted at: <http://www.organicconsumers.org/OFGU/birthdefects031405.cfm>
- ⁵ <http://www.epa.gov/agriculture/twor.html>
- ⁶ [EPA report on Pesticides Industry Sales and Usage](#) – 2006 and 2007 Market Estimates. 2011
- ⁷ http://switchboard.nrdc.org/blogs/jsass/whats_wrong_with_our_nations_a.html
- ⁸ Bouchard MF, Chevrier J, Harley KG, Kogut K, Vedar M, Calderon N, Trujillo C, Johnson C, Bradman A, Barr DB, Eskenazi B. Prenatal exposure to organophosphate pesticides and IQ in 7-year-old children. *Environ Health Perspect*. 2011 Aug;119(8):1189-95.
- ⁹ Rauh V, Arunajadai S, Horton M, Perera F, Hoepner L, Barr DB, Whyatt R. Seven-year neurodevelopmental scores and prenatal exposure to chlorpyrifos, a common agricultural pesticide. *Environ Health Perspect*. 2011 Aug;119(8):1196-201..
- ¹⁰ <http://pediatrics.aappublications.org/content/130/6/e1757.full>
- ¹¹ <http://www.aap.org/en-us/about-the-aap/aap-press-room/Pages/AAP-Makes-Recommendations-to-Reduce-Children's-Exposure-to-Pesticides.aspx>
- ¹² Wigle DT, Turner MC, Krewski D. 2009 A systematic review and meta-analysis of childhood leukemia and parental occupational pesticide exposure. *Environmental Health Perspectives*. Oct. 117 (10): 1505-13
- ¹³ Turner MC, Wigle DT, Krewski D. Residential pesticides and childhood leukemia: a systematic review and meta-analysis. *Environ Health Perspect*. 2010 Jan;118(1):33-41.
- ¹⁴ Flower KB, Hoppin JA, Lynch CF, Blair A, Knott C, Shore DL, Sandler D. 2004 Cancer risk and parental pesticide application in children of agricultural health study participants. *Environmental Health Perspectives*. April; 112(5) 631-5
- ¹⁵ Baltazar MT, Dinis-Oliveira RJ, de Lourdes Bastos M, Tsatsakis AM, Duarte JA, Carvalho F. Pesticides exposure as etiological factors of Parkinson's disease and other neurodegenerative diseases-A mechanistic approach. *Toxicol Lett*. 2014 Feb 3.
- ¹⁶ Roberts JR, Karr CJ; Council On Environmental Health. Pesticide exposure in children. *Pediatrics*. 2012 Dec;130(6):e1765-88. doi: 10.1542/peds.2012-2758. Epub 2012 Nov 26. Erratum in: *Pediatrics*. 2013 May;131(5):1013-4.
- ¹⁷ London L, Beseler C, Bouchard MF, Bellinger DC, Colosio C, Grandjean P, Harari R, Kootbodien T, Kromhout H, Little F, Meijster T, Moretto A, Rohlman DS, Stallones L. Neurobehavioral and neurodevelopmental effects of pesticide exposures. *Neurotoxicology*. 2012 Aug;33(4):887-96.
- ¹⁸ Flower KB, Hoppin JA, Lynch CF, Blair A, Knott C, Shore DL, Sandler D. 2004 Cancer risk and parental pesticide application in children of agricultural health study participants. *Environmental Health Perspectives*. April; 112(5) 631-5
- ¹⁹ In Our Own Backyard: The hidden problem of child farmworkers in America. Report of the American Federation of Teachers. Available at: <http://208.106.244.178/pdfs/Part%201D-Children%20in%20the%20Fields.pdf>
- ²⁰ GAO. Child Labor in Agriculture: Changes needed to better protect health and educational Opportunities. 1998. <http://www.gao.gov/archive/1998/he98193.pdf>