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**The Senate Education, Health, and Environmental Affairs Committee
In support of SB 330: Pesticides – Use of Chlorpyrifos – Prohibition**

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My name is Amy Liebman and I am the Director of Environmental and Occupational Health at Migrant Clinicians Network and I am based in Salisbury, MD. I am writing on behalf of Farmworker Justice and the Migrant Clinicians Network. Farmworker Justice seeks to empower farmworkers to improve their living and working conditions, including their occupational health. MCN is dedicated to migration health and provides extensive training and technical assistance to clinicians across the country serving farmworkers and rural communities. Both are national non-profit organizations with a long history of working to protect the health and working conditions of those who harvest our nation's food. We support farming practices that provide for a safe work environment and seek to decrease the exposure of farmworkers and their families to toxic chemicals. Farmworkers play an important role in our nation's agricultural success and we should do all we can to ensure adequate safeguards for their health.

We urge you to support SB 330 to ban chlorpyrifos use in Maryland. Please consider the impact of this chemical on the health of Marylanders, particularly those who are most vulnerable and most exposed. Farmworkers and their families are routinely exposed to high levels of pesticides in the fields where they work and in the communities where they live. Pesticide exposure causes farmworkers to suffer more chemical-related injuries and illnesses than any other workforce in the nation. They are historically one of the most economically disadvantaged labor groups in the country, working in an industry known for long days, hazardous work, and low wages. The vast majority of these workers have no health insurance, and limited access to health care, making them particularly vulnerable to environmental and occupational health hazards.

Chlorpyrifos poses a significant risk to farmworkers. In its most recent Human Health Risk Assessment for chlorpyrifos, EPA found that there are no safe levels of the pesticide in food or water, that unsafe exposures to farmworkers continues to occur on average 18 days after applications (despite worker re-entry times no longer than 5 days) and that workers who mix and

apply chlorpyrifos are exposed to unsafe levels even when using protective gear and engineering controls.¹

In 2000, the EPA banned the use of chlorpyrifos in residential settings because of emerging evidence that it posed unacceptable neurodevelopmental risks to young children. But the agency allowed continued use of the pesticide in agriculture, resulting in exposure to the children of farmworkers and other rural residents. In the 20 years since, this double standard has exposed a generation of farmworkers and their children through airborne drift, water contamination, and even the residues on their parents' work clothes.

I will not review the extensive epidemiologic research that confirms serious, permanent neurodevelopmental effects of very low doses of chlorpyrifos exposure in utero or during childhood, which others describe in detail. My point is that farmworkers and their families in Maryland cannot be adequately protected from these outcomes unless there is a ban on the use of chlorpyrifos.

Chlorpyrifos is absorbed through the skin, through the lungs, and through the gut. Farmworkers in Maryland are exposed when they mix or apply the chemical, when they work near an area where chlorpyrifos spraying takes place and are contaminated by drift, or when they enter a field that has previously been sprayed and has residual chemical exposure. Farmworkers exposed at work transport pesticides on their work clothing, shoes, hair and skin into family vehicles and their homes. And farmworker families, particularly those living in labor camps or in substandard dwellings near the fields where they work, experience these exposures essentially around the clock. In Maryland, chlorpyrifos is used for corn, soybeans, vegetables and fruit.

The most immediate concern is for the pregnant farmworker. It is not possible to reduce the level of exposure below the threshold for damaging the fetus. Personal protective equipment is not 100% effective and contributes to the workers' heat burden, which itself can be dangerous. Similarly, field sanitation provisions for handwashing are simply not adequate to reduce the levels of exposure below those known to cause harm. The water provided to workers to prevent heat illness is yet another source of contamination at these low levels.

Farmworkers experience chronic and acute exposure to chlorpyrifos. In 2014, Raynor and others published a report of 371 migrant farmworkers in North Carolina who were found to have levels of urinary chlorpyrifos metabolites (among other pesticides) that were an order of magnitude greater than those found in the US population as a whole.² In the past two years, MCN has

¹ US Environmental Protection Agency. Chlorpyrifos: Revised Human Health Risk Assessment for Registration Review at 36-7. Health Effects Division, Office of Pesticide Programs at 36-7 (November 3, 2016). <https://www.epa.gov/ingredients-used-pesticide-products/revised-human-health-risk-assessment-chlorpyrifos>

² Raymer JH, Studabaker WB, Gardner M, Talton J, Quandt SA, Chen H, Michael LC, McCombs M, Arcury TA. Pesticide exposures to migrant farmworkers in Eastern NC: detection of metabolites in farmworker urine associated

helped physicians and other healthcare providers respond to two acute worker poisoning outbreaks from chlorpyrifos. Poisoned workers suffered from dizziness, nausea, vomiting and they are being monitored for the long-term effects from these incidents. The majority of the workers in both outbreaks were not even working directly with chlorpyrifos. Unbeknownst to the workers in both outbreaks, chlorpyrifos had been sprayed on a nearby field and drifted onto the workers, causing acute poisonings. It's important to make clear that no amount of use of this pesticide is safe. Even a "judicious," one time use of chlorpyrifos in a specific season will expose farmworkers and others living nearby to harm, as traces of chlorpyrifos will drift onto their yards and playgrounds and leach into their drinking water.

Let's all be aware that chlorpyrifos does not discriminate between farmworker families and farmer families when it comes to exposure routes, and family impact may not be limited to children. A 2017 paper published from the Agricultural Health Study has identified a borderline but statistically significant increased risk for pre-menopausal breast cancer among women who reported using chlorpyrifos, consistent with its known effects as an endocrine disrupting chemical.³

Farmworker Justice and MCN urge the committee to issue a favorable report on SB 330 that is critically needed to protect Maryland's farmer and farmworker families.

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with housing violations and camp characteristics. Am J Ind Med. 2014 Mar;57(3):323-37. doi: 10.1002/ajim.22284. Epub 2013 Nov 25.

³ Engel LS, Werder E, Satagopan J, Blair A, Hoppin JA, Koutros S, Lerro CC, Sandler DP, Alavanja MC, Beane Freeman LE. Insecticide Use and Breast Cancer Risk among Farmers' Wives in the Agricultural Health Study. Environ Health Perspect. 2017 Sep 6;125(9):097002. doi: 10.1289/EHP1295.