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SENATE  
S. No. 1870

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Introduced by Senator Miriam Defensor Santiago

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#### EXPLANATORY NOTE

*Monocrotophos* is an organophosphorus (OP) insecticide, developed by Ciba-Geigy (now Novartis) and first registered in 1965. In 1992, the total sales of this widely-used pesticide were at roughly 3% of all insecticide products.<sup>1</sup> This pesticide is primarily used to control cotton pests, but it is also employed on citrus, olives, rice, maize, sorghum, sugar cane, sugar beet, peanuts, potatoes, soya beans, vegetables, ornamentals and tobacco.<sup>2</sup>

The World Health Organization (WHO) described it as a nerve poison banned by many countries because of its highly acute toxicity.<sup>3</sup> *Monocrotophos* is classified by WHO as highly hazardous, and has been responsible for deaths resulting from accidental or intentional exposure. It is very toxic orally and also by inhalation or absorption through the skin. Early symptoms of poisoning may include excessive sweating, headache, weakness, giddiness, nausea, vomiting, hypersalivation, abdominal cramps, diarrhea, blurred vision, and slurred speech. Inhalation or skin contact may increase the susceptibility to the pesticide without showing immediate symptoms.<sup>4</sup>

The European Union has classified *monocrotophos* as dangerous to the environment.<sup>5</sup> All applications of *monocrotophos* were discontinued in the United States 1988. Before its withdrawal, *monocrotophos* was a Restricted Use Pesticide (RUP).<sup>6</sup>

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<sup>1</sup> Ciba, *Monocrotophos*: Information for participants at the fifth FAO/UNEP joint meeting on PIC, Rome, October 1992.

<sup>2</sup> <http://www.pan-uk.org/pestnews/Actives/monocrot.htm>

<sup>3</sup> <http://www.reuters.com/article/2013/07/22/india-poisoning-monocrotophos-idUSL6N0FS13020130722>

<sup>4</sup> Watterson, *Pesticide Users Health and Safety Handbook: An International guide*, Gower Technical, Aldershot, UK, 1988.

<sup>5</sup> FAO/UNEP PIC Decision Guidance Document on *Monocrotophos*, June 1997.

<sup>6</sup> Extension Toxicology Network, Cornell University, <http://pmep.cce.cornell.edu/profiles/extoxnet/metiram-propoxur/monocrotophos-ext.html>

Many incidents in developing countries have been linked to *monocrotophos*. This highly toxic pesticide killed 23 children in a village school providing free lunches under a government-sponsored program in India.<sup>7</sup> In Brazil, *monocrotophos* caused 107 of 412 reported incidents analyzed in 1990, and the toxicology center and health clinics also noted 1,650 incidents involving *monocrotophos* between 1982 and 1991. In Paraguay, in a region where *monocrotophos* is one of the most commonly used active ingredients, there have been numerous cases of pesticide poisoning. *Monocrotophos* was identified as the cause of paralysis in children in cotton-growing areas by the Ministry of Public Health and Welfare which found that two to three weeks of frequent exposure caused paralysis in children and acute poisoning in adults.<sup>8</sup> In a cotton-growing region in Egypt, the health of 14 farmers who used *monocrotophos* was compared with a control group from the same region. In the area where *monocrotophos* is widely used, 61% of those surveyed showed symptoms of chronic pesticide poisoning.<sup>9</sup> In the Cordillera region here in the Philippines, *monocrotophos* was one of the pesticides widely used by farmers in a survey that found all farmers suffered some adverse health effects.<sup>10</sup> In observations in Indonesia of 906 spray operations of 214 farmers commonly using *monocrotophos* over a three-month period, researchers found a significant increase—from two to fifty-fold—in the symptoms of pesticide toxicity during the spraying period. Out of all of these spray operations, 21% brought on three or more neuro-behavioural and intestinal signs of poisoning.<sup>11</sup>

In 1990, the Fertilizer and Pesticide Authority issued Circular No. 01, which included a severe restriction on *monocrotophos* for use only in bean fly control. A six-month phase-out period also took effect from 29 September 1993.<sup>12</sup> At present, a reading of the banned and regulated pesticides from the Fertilizer and Pesticide Authority website<sup>13</sup> will show that *monocrotophos* is not included in the list. There are also numerous reports which reached the

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<sup>7</sup> <http://www.abs-cbnnews.com/global-filipino/world/08/03/13/poison-pill-indias-search-cheap-food>

<sup>8</sup> Dinham, B., *The Pesticide Hazard: A global health and environmental audit*, Zed Books, London and New Jersey, 1993, pp120-121.

<sup>9</sup> Amr, M. et. al. 'Neurological effects of pesticides', study by the Industrial Medicine and Occupational Diseases Faculty of Medicine, Cairo University, reported in *Pesticides News* 30, December 1995.

<sup>10</sup> Cheng, Dr. Charles L., Medical Director, Baguio Filipino-Chinese General Hospital, Baguio city, Philippines 'Pesticides and Hazardous Effects on the Benguet Vegetable Farmers, 1993, (In Dinham, 1995 pp 76-7. Op. cit. 8.)

<sup>11</sup> Hirschhorn, Norbert, 'Study of the Occupational Health of Indonesian Farmers who Spray Pesticides, the Indonesian National IPM Program', FAO (UTF/INS/067/INS), Jakarta, August 1993.

<sup>12</sup> *Pesticides News* No.38, December 1997, p20-21.

<sup>13</sup> <http://fpa.da.gov.ph/>

author that *monocrotophos* is still widely used in our country. The low cost and ready availability of this pesticide do not outweigh the potential harm that it can cause to our farmers and to the consuming public. This bill seeks to ban the use and importation of *monocrotophos* to ensure that this highly toxic pesticide will not victimize anyone in our country.

*Miriam Defensor Santiago*  
MIRIAM DEFENSOR SANTIAGO  
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Introduced by Senator Miriam Defensor Santiago

1 AN ACT  
2 BANNING THE MANUFACTURE, IMPORTATION, STORAGE, DISTRIBUTION, SALE,  
3 USE, AND DISPOSAL OF MONOCROTOPHOS

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

4 SECTION 1. *Short Title.* – This Act shall be known as the “Monocrotophos Prohibition  
5 Act of 2013.”

6 SECTION 2. *Declaration of Policies.* – It is hereby declared a policy of the State to  
7 protect, secure and safeguard the citizenry from the danger and harmful effects of toxic  
8 insecticides and pesticides for their physical and mental well-being; and, in the end, pursue a  
9 vigorous campaign against the manufacture, importation, distribution, and sale of pesticides and  
10 insecticides containing the harmful substance monocrotophos and finally provide for its  
11 complete prohibition.

12 SECTION 3. *Definition.* – As used in this Act, “monocrotophos” shall refer to an  
13 organophosphate insecticide or pesticide with the formula  $C_7H_{14}NO_5P$  also known by its  
14 chemical name Dimethyl (E)-1-methyl-2-(methylcarbamoyl)vinyl phosphate (IUPAC).

15 SECTION 4. *Prohibition.* - The manufacture, importation, distribution, sale, storage, use,  
16 and/or disposal of monocrotophos are hereby declared prohibited.

17 For this purpose, the Fertilizer and Pesticide Authority shall regularly inspect pesticides,  
18 whether imported or locally-manufactured, to ensure that they are free from monocrotophos.

1        SECTION 5. *Penalties.* - Any person who manufactures, imports, distributes, sells, uses,  
2 or disposes of pesticides found containing monocrotophos, shall be penalized by imprisonment  
3 of less than one (1) year nor more than five (5) years and/or fine of not less than Fifty Thousand  
4 pesos (P50,000.00) nor more than Five Hundred Thousand pesos (P500,000.00), at the discretion  
5 of the court: *Provided,* That if the violator is a corporation, firm, partnership, or association, the  
6 penalty shall be imposed upon the president or the manager or any officer thereof who knows or  
7 ought to have known the commission of the offense.

8        SECTION 6. *Implementing Rules and Regulations.* - The Secretary of Agriculture shall  
9 adopt rules and regulations to implement the provisions of this Act within ninety (90) days from  
10 its date of effectivity.

11        SECTION 7. *Separability Clause.* - If any provision or part thereof is held invalid or  
12 unconstitutional, the remainder of the Act or the provision not otherwise affected shall remain  
13 valid and subsisting.

14        SECTION 8. *Repealing Clause.* - Any law, presidential decree or issuance, executive  
15 order, letter of instruction, administrative order, rule or regulation contrary to or inconsistent  
16 with this Act is hereby repealed, modified, or amended accordingly.

17        SECTION 9. *Effectivity Clause.* - This Act shall take effect fifteen (15) days after its  
18 publication in at least two (2) newspapers of general circulation.

Adopted,