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SUBMITTED ELECTRONICALLY

Sid Abel
Biotechnology Regulatory Services
4700 River Road
USDA, APHIS
Riverdale, MD 20737

Re: DEIS on Dow AgroScience Petitions for Determinations of Non-Regulated Status for 2, 4-D-Resistant Corn and Soybean Varieties

The Environmental Working Group, the nation's leading environmental health organization, submits the following comments on the Draft Environmental Impact Statement on Dow AgroSciences' petition to deregulate corn and soybean varieties for 2, 4-D resistant crops.

EWG strongly opposes efforts to expand the use of 2, 4-D, marketed as Enlist, which has been linked to health problems including lymphoma, endocrine disruption and reproductive problems. Consumers are already routinely exposed to unsafe levels of 2, 4-D through lawn care products, and the deregulation of 2, 4-D resistant corn and soybean would greatly expand the use of this herbicide to more than 170 millions pounds per year over the next decade. USDA concedes that approval of 2,4-D resistant corn and soybeans could increase agricultural use of 2, 4-D by as much as 600 percent. Simply deregulating 2, 4-D resistant corn could increase the use of 2, 4-D on corn by more than 100 million pounds over the next five years.ⁱ

USDA has failed to consider the cumulative effects of 2, 4-D on human health, including the impact on farmers, farm workers and other rural residents. In particular, farmers suffer from higher rates of certain cancers, such as non-Hodgkin lymphoma (NHL),ⁱⁱ a cancer of the lymph nodes. Numerous studies have found that farmers who use 2, 4-D are more likely to contract non-Hodgkin lymphoma,ⁱⁱⁱ leading some countries to ban the use of this controversial herbicide.^{iv} Other studies have found that 2, 4-D disrupts the human endocrine system, which can cause serious and lasting effects during fetal and infant development, including birth defects, neurological damage and interference with reproductive functions.^v

Because 2, 4-D is a volatile herbicide that is prone to drift during application, deregulation of 2, 4-D-resistant corn and soybeans would pose significant economic threats to neighboring farms, including organic and conventional fruit and vegetable farms, by damaging broadleaf plants at extremely low levels.^{vi} Surveys demonstrate that current 2, 4-D drift is already responsible for more episodes of crop injury than any other pesticide.^{vii} Although deregulation of 2, 4-D corn and soybeans will greatly increase the economic harm posed by 2, 4-D, USDA failed to properly assess these consequences and to consider the benefits of alternatives to deregulation of 2, 4-D, such as expanded use of integrated weed management strategies that include crop rotation, cover crops, judicious use of crop tillage and targeted herbicide applications.

Perhaps most troubling is USDA's failure to recognize and address the "chemical treadmill" created by the dramatic expansion of herbicide-tolerant crops. As weeds have become more resistant to glyphosate, farmers have been forced to turn to more powerful herbicides such as 2, 4-D^{viii} – a trend that benefits companies such as Dow at the expense of farmers, human health

and the environment. Although Dow contends that 2, 4-D will help alleviate the “superweed” problem created by extensive use of glyphosate, a recent study by weed scientists found that Enlist will actually trigger the growth of still more resistant weeds.^{ix}

EWG is grateful for the opportunity to submit these comments on the Draft Environmental Impact Statement on Dow AgroSciences’ petition to deregulate corn and soybean varieties for 2, 4-D resistant crops. EWG urges USDA **to deny** Dow AgroSciences’ petition to deregulate 2, 4-D-resistant corn and soybean varieties.

ⁱ <http://www.enveurope.com/content/24/1/24>

ⁱⁱ Jacobs, M. & Clapp, D. (2008). “Agriculture and Cancer: A Need for Action,” http://www.sustainableproduction.org/downloads/AgricultureandCancer_001.pdf

iii Zahm, SH & Blair, A (1992). "Pesticides and non-Hodgkin's lymphoma," *Cancer Research* 52: 5485s-5488s.

http://cancerres.aacrjournals.org/content/52/19_Supplement/5485s.long; Zahm, SH, Weisenburger, DD, Babbitt, PA, Saal, RC, Vaught, JB, Cantor, KP, Blair, A (1990). "A case-control study of non-Hodgkin's lymphoma and the herbicide 2,4-dichlorophenoxyacetic acid (2,4-D) in eastern Nebraska," *Epidemiology* 1(5): 349-56.
<http://www.ncbi.nlm.nih.gov/pubmed/2078610>

iv Boyd, DR (2006). "The food we eat: an international comparison of pesticide regulations," David Suzuki Foundation, 2006.

<http://www.davidsuzuki.org/publications/downloads/2006/DSF-HEHC-Food1.pdf>

v Garry VF, Schreinemachers D, Harkins ME, et al (1996). "Pesticide applicers, biocides, and birth defects in rural Minnesota," *Environ Health Perspect* 104:394-399.

vi Breeze, V.G. & West, C.J. (1987). "Effects of 2,4-D butyl vapor on the growth of six crop species," *Ann. Appl. Biol.* 111: 185-91

vii AAPCO (1999 & 2005). "1999/2005 Pesticide Drift Enforcement Survey," Association of American Pesticide Control Officials, at <http://aapco.ceris.purdue.edu/html/survey.htm>. Survey periods 1996-1998 and 2002-2004, respectively.

viii International Survey of Herbicide-Resistant Weeds, last visited 4/18/12.

<http://www.weedscience.org/Summary/UspeciesMOA.asp?lstMOAID=12&FmHRACGroup=Go>.

ix Mortensen et al (2012), op. cit.; Kruger, G.R. et al (2008). "Response and Survival of Rosette-Stage Horseweed (*Conyza canadensis*) after Exposure to 2,4-D," *Weed Science* 56: 748-752; Kruger, G.R. et al (2010). "Growth and Seed Production of Horseweed (*Conyza canadensis*) Populations after Exposure to Postemergence 2,4-D," *Weed Science* 58: 413-419.