

## **SUBMITTED ELECTRONICALLY**

June 22, 2012

OPP Docket  
Environmental Protection Agency Docket Center (EPA/DC)  
Mail Code: 28221T  
1200 Pennsylvania Ave. NW  
Washington, DC 20460-0001

### **Re: 1. Docket EPA–HQ–OPP–2011–0835 (corn)**

- Registration Number and File Symbol: 62719-640 and 62719-AUO: active ingredients – 2,4-D choline salt and glyphosate; proposed use – Enlist AAD-1 Corn (DAS-40278-9)
- Registration Number and File Symbol: 62719-AGO: active ingredient – 2,4-D choline salt; proposed use – Enlist AAD-1 Corn (DAS-40278-9)

### **2. Docket EPA–HQ–OPP–2012–0306 (soybeans)**

- Registration Number and File Symbol: 62719-AUU: active ingredient – 2,4-D choline salt; proposed use – Enlist AAD-12 Soybeans (DAS-68416-4)

Dear Mr. Walsh,

We are 70 physicians, nurses, public health scientists and other health professionals who together respectfully request that EPA deny Dow AgroScience's new use applications for 2,4-D choline salt and glyphosate for use on DAS-40278-9 corn, 2,4-D choline salt for use on DAS-40278-9 corn, and 2,4-D choline salt for use on DAS-68416-4 soybeans.

Widespread planting of 2,4-D GE corn is projected to substantially increase the use of 2,4-D. Experts estimate that use of this herbicide in corn may rise from 3-4 million pounds today to over 100 million pounds over the next decade; 2,4-D soybeans and cotton would boost usage still more.<sup>1</sup>

Studies in humans have reported associations between exposure to 2,4-D and non-Hodgkin's lymphoma, a cancer of the lymphocytes (white blood cells).<sup>2</sup> This finding is consistent with other studies finding that 2,4-D increases lymphocyte replication in exposed farmworkers,<sup>3</sup> and that 2,4-D formulations are cytotoxic and mutagenic.<sup>4,5</sup> For example, in human lymphocytes, 2,4-D causes chromosome breakage and aberrant cells.<sup>6</sup> In 2010, according to the National Cancer Institute, approximately 65,540 people in the United States were diagnosed with non-Hodgkin's lymphoma. The incidence of this disease in the United States has increased to about double the rate seen in the 1970s, even when adjusted for population growth and aging.<sup>7</sup> 2,4-D is likely to be responsible for a fraction of cases of non-Hodgkin's lymphoma each year, although it is difficult to quantify the exact numbers.

Many animal studies show that 2,4-D exhibits hormone-disrupting activity and also affects the function of the neurotransmitters, dopamine and serotonin.<sup>8</sup> Interference with hormones and neurotransmitters can cause serious and lasting effects during fetal and infant development, including birth defects, neurological damage and interference with reproductive function. Human studies support the results of the animal studies. Male farm sprayers exposed to 2,4-D have lower sperm counts and more spermatic abnormalities compared to men who are not exposed to this

chemical. In Minnesota, higher rates of birth defects have been observed in wheat-growing areas of the state with the highest use of 2,4-D and other herbicides of the same class.<sup>9</sup> This increase was most pronounced among infants who were conceived in the spring, the time of greatest herbicide use. A larger study in agricultural counties in Minnesota, Montana, North Dakota and South Dakota found significant increases in malformations of the circulatory and respiratory systems, especially among infants conceived in April-June in wheat-growing counties.<sup>10</sup> In the same study, infant deaths from birth defects among males were significantly elevated.

2,4-D is classified by the EPA as a hazardous air pollutant and by the State of California as a toxic air contaminant. Human exposure to 2,4-D is widespread, including among children. Studies in Iowa, North Carolina and Ohio, for example, found 2,4-D in the carpet dust of 83-98 percent of homes sampled, despite the fact that most homeowners reported that they had not used the pesticide recently.<sup>11 12</sup> These studies imply that 2,4-D is blowing in or being tracked into homes, and many studies have shown that chemicals – including 2,4-D – in house dust end up on children’s hands and in their bodies.

EPA is scheduled to begin a registration review of 2,4-D late this year or early next year, the first such review since 2,4-D was last re-registered in 2005. This review will involve consideration of the latest science on 2,4-D’s toxicity, and will also give EPA the opportunity to consider Dow’s applications in the context of strict new dioxin exposure standards issued by the Agency earlier this year as part of its ongoing analysis of dioxin toxicity. In light of the massive projected increases in 2,4-D use and exposure that the registrations would enable, it would be highly imprudent of EPA to take any action at this time.

For all of the above reasons, we ask EPA to deny Dow AgroScience’s new use applications for 2,4-D choline salt to be used with Dow’s 2,4-D resistant corn and soybeans. At the least, we urge EPA to defer any decision on Dow’s application until completion of its 2,4-D registration review.

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