PETITION OF:

SAVE OUR CROPS COALITION

Lisa Jackson, Administrator U.S. Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N. W. Washington, DC 20460

Jim Jones, Assistant Administrator U.S. Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N. W. Washington, DC 20460

Via Registered Mail, Return Receipt Requested this 18th day of December, 2012,

RE: Petition to Establish Dicamba Pesticide Tolerances for Crops Grown in Proximity to the Dicamba Tolerant Cropping System

Summary of the Petition

The **Save Our Crops Coalition (SOCC)** is a grassroots coalition of farm interests organized for the specific purpose of preventing injury to non-target crops from exposure to 2,4-D and dicamba. SOCC does not oppose advances in plant technology, particularly genetic modification, but does oppose actions that would result in substantial injury to non-target crops and to the habitats necessary for their pollinators.

Herbicide spray drift and volatilization is a major concern for specialty crop growers and processors. Credible estimates project significant increases in the amount of dicamba that will be applied upon the introduction of dicamba tolerant crops. Dicamba, because of its potential to drift and volatilize, has proven to be one of America's most dangerous herbicides for drift damage.

SOCC respectfully submits the following petition requesting the Administrator of the Environmental Protection Agency (EPA), upon her own initiative, establish pesticide tolerances for several crops grown in proximity to the dicamba tolerant cropping system, pursuant to the Administrative Procedures Act §551 *et seq*.

Petitioner

SOCC represents nearly every segment of American agriculture, from growers to processors, both conventional and organic. All SOCC growers cultivate specialty crops, but they also cultivate significant acreages of major agronomic crops, like corn and soybeans. SOCC is over 2,000 growers strong, including grower organizations such as the Indiana Vegetable Growers Association and the Ohio

Produce Growers and Marketers Association, and is supported by major processors like Red Gold.

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Factual Background

Drift and Volatilization

Due to the potential for crop injury, herbicide spray drift and volatilization from agronomic crops is a major concern for specialty crop growers and processors. Spray drift is the airborne movement of pesticide spray particles to a non-target site. Spraying during windy conditions or using nozzles or pressures that result in the creation of fine spray particles increase the risk of spray drift. Volatilization is the airborne movement of pesticide vapor to a non-target site. Volatilization occurs when a pesticide is applied to a target site, subsequently evaporates, and moves off-target. The calm windless conditions that minimize drift, ironically, only increase the potential for volatilization.

All herbicides may have harmful effects on non-target crops if they drift or volatize away from their intended areas of application; however, dicamba has proven especially prone to cause damage.¹ A survey of state pesticide control officials listed dicamba as the pesticide third most commonly involved in drift incidents for two years in a row.² This incidence of drift damage far outpaces the relative use of dicamba. Dicamba does not even make the list of the top 25 most commonly applied

¹ Sciumbaro, Audie S., et al. *Determining Exposure to Auxin-Like Herbicides. I. Quantifying Injury to Cotton and Soybean*, Weed Technology, Vol. 18, 1125-1134 (2004).

² 2005 Pesticide Drift Enforcement Survey Report, Association of American Pesticide Control Officials (2005), available at http://aapco.ceris.purdue.edu/doc/surveys/DriftEnforce05Rpt.html

pesticide active ingredients.³ Drift concerns have led some states to enact safeguards, such as requiring the use of lower volatility formulations, restrictions on application timing, and even bans on use.⁴ Thus, SOCC regards dicamba as one of America's most dangerous herbicides for drift damage.

Dicamba tolerant crops heighten the drift and volatilization concerns associated with dicamba. The introduction of dicamba tolerant crops is anticipated to increase the use of dicamba, especially in corn and soybean producing regions. These regions also produce substantial acreages of broadleaf crops that are sensitive to dicamba. Therefore, any drift or volatilization from dicamba could be expected to have significant impacts on non-target crops grown in proximity.

Effect of Dicamba Tolerant Crops on Herbicide Use

The widespread use of glyphosate has contributed to the glyphosate resistant weed populations. The rationale presented by Monsanto for MON-87708-9 Soybeans, or dicamba tolerant soybeans, is that they would provide another weed management tool for farmers, because they would offer, "... an option to delay or prevent further resistance to glyphosate and other critically important soybean herbicides, in particular, herbicides in the ALS and PPO class of chemistry..." Thus, in an effort to prevent further resistance to the glyphosate mode of herbicide action, Monsanto and BASF have developed the dicamba tolerant cropping system. Dicamba differs in its mode of herbicide action from that of glyphosate. A tolerance to differing modes of herbicide action complements glyphosate tolerance by providing two methods to kill difficult weeds.⁶

The desirability of genetically modified crops with a tolerance to herbicides other than glyphosate is anticipated to greatly increase the use of dicamba tolerant crops and dicamba. Monsanto's own petition to USDA for non-regulated status of MON-87708-9 Soybeans projects, upon peak adoption, dicamba use will approximately double it's 1994 peak historical use level, or reach about 25 million pounds annually. However, what Monsanto's petition does not make explicit is the rate of change from current use levels. The latest figures place the amount of dicamba

³ Pesticides Industry Sales and Usage: 2006 and 2007 Market Estimates, EPA (Feb. 2011) available at

http://www.epa.gov/opp00001/pestsales/07pestsales/market_estimates2007.pdf. 4 4 Tex. Admin. Code \S 7.50 (2011); Or. Admin. R. 603-057-0301 (2012); Wash. Admin. Code 16-228-1250 (2012)

⁵ Monsanto Petition for Determination of Nonregulated Status of Event MON 87708, at 5.

⁶ *Plant Pest Risk Assessment for DAS-40278-9 Corn*, APHIS (Dec. 27, 2011), *available at* http://www.aphis.usda.gov/brs/aphisdocs/09_23301p_dpra.pdf at 2-3.

⁷ Monsanto Petition for Determination of Nonregulated Status of Event MON 87708, at 210-211.

applied at about 2.7 million pounds annually. 8 Monsanto's projected use pattern would represent an approximately 925% increase in pounds applied over current levels, an almost 250% increase in the total acreage treated, and a 5660% increase in soybean acreage treated. 9 Such an increase would represent a dramatic shift in the utilization of an herbicide both in total pounds applied and in total acreage treated. Even the increase in the use of glyphosate upon the introduction glyphosate tolerant crops, an increase of almost 600% in pounds applied, would be eclipsed by this shift in use. 10

Proximity of Agronomic Crop Acreage to Broadleaf Crop Acreage in the Midwest

The map, below, produced by USDA's CropScape, is a close-up of a portion of Monroe County, Michigan. Growers in Monroe County cultivate fruit and vegetable crops in proximity to major agronomic crops like soybeans. This proximity is representative of the Midwest generally. The large grey-pink portion in the middle of the map is a tomato field surrounded by corn and soybean fields. Tomatoes are a broadleaf crop. See Figure 2.

As noted above, dicamba has substantial harmful effects on unmodified broadleaf crops even at very low applications rates, and because dicamba tolerant crops will be grown in such close proximity to unmodified broadleaf crops, like tomatoes, the potential for drift damage is great.

⁸ Monsanto Petition for Determination of Nonregulated Status of Event MON 87708, at 198.

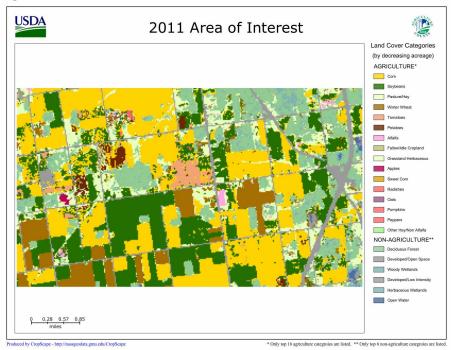
⁹ Monsanto Petition for Determination of Nonregulated Status of Event MON 87708, at 223-224.

¹⁰ Gianessi, L. P. and N. Reigner, *Pesticide Use in U.S. Crop Production: 2002 with Comparison to 1992 and 1997*, (2006) *available at*:

http://www.croplifefoundation.org/Documents/PUD/NPUD%202002/Fung%20&%20Herb%202002%20Data%20Report.pdf

¹¹ 2011 Area of Interest, USDA/NASS (Apr. 14, 2012) available at: http://nassgeodata.gmu.edu/CropScape/

Figure 2.



Discussion

Statutory and Regulatory Background

The Food Drug and Cosmetics Act (FFDCA) prohibits shipment in interstate commerce of "adulterated food." A food is considered adulterated "if it bears or contains a pesticide chemical residue that is "unsafe." A pesticide is "unsafe" unless (1) EPA has established a tolerance for the pesticide on a particular commodity or in a particular food, and the pesticide residue is within that tolerance, or (2) with respect to a particular commodity or processed food, EPA has exempted the pesticide from the requirement for a tolerance. Therefore, before agriculture commodities containing pesticide residues can be sold or distributed, EPA must adopt a "tolerance," a permissible level of residue, or an exemption.

The establishment of a tolerance usually begins with the filing of a petition.¹⁶ Petitions must contain supporting data and information including a proposed tolerance and arguments supporting the petition. Although "any person" may petition to establish a tolerance, a petition requires supporting data and information

¹² 21 U.S.C. §331

¹³ 21 U.S.C. §342(a)(2)(B)

¹⁴ 21 U.S.C. §346a(a)(1)

¹⁵ 21 U.S.C. §§346a, 346a(c)(2)(A)

¹⁶ 21 U.S.C. §346a(d)(1)

that is perhaps only readily available to registrants.¹⁷ The Administrator of EPA may, however, upon her own initiative, establish a tolerance for a pesticide chemical residue.¹⁸

The safety standard for tolerances is "a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposure and other exposures for which there is reliable information." ¹⁹ The FFDCA requires EPA consider nine factors within its analysis. ²⁰ These factors strictly concern the safety of the proposed tolerance.

Monsanto and BASF have submitted applications to register new uses for pesticide products containing the currently registered active ingredient, dicamba, and EPA has noticed receipt of these applications.²¹ Monsanto has applied to register dicamba for use on dicamba tolerant soybeans.²² BASF has applied to register dicamba for use on dicamba tolerant soybeans and conventional crops.²³

Request to Establish Tolerances to Mitigate Harm to Growers

Because dicamba is prone to drift and volatilize, SOCC believes the introduction of dicamba tolerant crops and attendant increase in dicamba use would result in more dicamba residues on crops grown in proximity to the dicamba tolerant cropping system.²⁴ Given the sensitivity modern testing techniques, it also becomes increasingly likely that trace residues would be found on crops grown in proximity. Presently, many crops grown in proximity have no tolerance or exemption for dicamba residues.²⁵ Because a commodity containing residues without a tolerance or an exemption is prohibited from passing in interstate commerce, SOCC is concerned that, without an exemption or tolerance, trace residues would be likely to occur and render crops unmarketable, even if they are safe. Therefore, SOCC requests that EPA establish tolerances for dicamba residues for grapes, and for all crops listed within Federal Crop Group 8 (fruiting vegetables) and Group 9 (cucurbit vegetables). SOCC submits that establishment of such tolerances should be a prerequisite to decision on proposed new uses of dicamba.

¹⁷ 21 U.S.C. §346a(d)(1); 40 C.F.R. §180.7

¹⁸ 21 U.S.C. §346a(e)(1)(A); 40 C.F.R. §180.29

¹⁹ 21 U.S.C. §346a(b)(2)(A)(ii)

²⁰ 21 U.S.C. §346a(b)(2)(D)(i-ix)

²¹ Pesticide Products; Receipt of Applications to Register New Uses, EPA, 77 Fed. Reg. 50686 (Aug. 22, 2012), available at: http://www.gpo.gov/fdsys/pkg/FR-2012-08-22/pdf/2012-20666.pdf

²² *Id*, at 50687.

²³ *Id*, at 50688.

²⁴ 2005 Pesticide Drift Enforcement Survey Report, Association of American Pesticide Control Officials (2005), available at

http://aapco.ceris.purdue.edu/doc/surveys/DriftEnforce05Rpt.html ²⁵ 40 C.F.R. §180.227

A complete list of crops for which SOCC requests the establishment tolerances is reproduced below:²⁶

- Grape (Vitis spp.)
- Eggplant (Solanum melongena)
- Groundcherry (Physalis spp.)
- Pepino (Solanum muricatum)
- Pepper (Capsicum spp.) (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper)
- Tomatillo (Physalis ixocarpa)
- Tomato (Lycopersicon esculentum)
- Chayote (fruit) (Sechium edule)
- Chinese waxgourd (Chinese preserving melon) (Benincasa hispida)
- Citron melon (Citrullus lanatus var. citroides)
- Cucumber (Cucumis sativus)
- Gherkin (Cucumis anguria)
- Gourd, edible (Lagenaria spp.) (includes hyotan, cucuzza); (Luffa acutangula, L. cylindrica) (includes hechima, Chinese okra)
- Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber)
- Muskmelon (hybrids and/or cultivars of Cucumis melo) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon)
- Pumpkin (Cucurbita spp.)
- Squash, summer (Cucurbita pepo var. melopepo) (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini)
- Squash, winter (Cucurbita maxima; C. moschata) (includes butternut squash, calabaza, hubbard squash); (C. mixta; C. pepo) (includes acorn squash, spaghetti squash)
- Watermelon (includes hybrids and/or varieties of Citrullus lanatus)

Unfortunately, SOCC does not have access to the supporting data and information required for a petition to establish tolerances, and, thus, cannot propose specific tolerance levels and cannot submit a petition to establish tolerances. SOCC must therefore request that the Administrator establish tolerances for dicamba residues upon her own initiative. SOCC requests that the Administrator make a determination about the safety of these particular tolerances according to only the Agency's best scientific judgment.

Food safety is of paramount concern to the growers and processors that make up the membership of SOCC. SOCC requests EPA establish tolerances only where it determines aggregate dietary exposure to trace residues of dicamba is safe. SOCC is pleased to note that EPA has indicated that, "For dicamba, aggregate risk for food,

²⁶ 21 U.S.C. §346a(e)(1)(A); 40 C.F.R. §180.29; 40 C.F.R. 180.41

drinking water, and residential exposures are below the Agency's level of concern for acute, short term, and chronic exposure."²⁷ SOCC processors have also put in place substantial measures to remove pesticide residues from their crops. As a matter of routine, SOCC processors and their growers develop and implement pesticide application programs that are intended, to the fullest extent practicable, to avoid the presence of residues in food crops. Further, SOCC processors adhere to Good Manufacturing Practices that are intended to minimize the presence of pesticide residues.

SOCC believes the introduction of dicamba tolerant crops will result in more dicamba residues on crops grown in proximity to the dicamba tolerant cropping system.²⁸ Because a commodity containing residues without a tolerance or an exemption is prohibited from passing in interstate commerce, SOCC is concerned that, without an exemption or tolerance, trace residues will render many crops unmarketable. Therefore, in order to mitigate the potential harm caused by dicamba spray drift and volatilization, SOCC requests that the Administrator establish tolerances for dicamba residues on the crops listed above prior to consideration of registration of new uses of dicamba.²⁹

Conclusion

On September 11, 2012, SOCC announced the successful conclusion of discussions with Dow AgroSciences (Dow) regarding its 2,4-D tolerant cropping system. SOCC was satisfied that Dow had adopted effective measures to protect against drift damage associated with the introduction of 2,4-D tolerant crops. SOCC remains similarly hopeful that discussions will also commence with Monsanto and BASF, and will ultimately reach a mutually beneficial conclusion.

Notwithstanding these hopes, Monsanto and BASF have, so far, failed to adopt effective measures, similar to Dow, to prevent spray drift and volatilization. This failure not only presents the risk of non-target plant damage, but also of crop losses due to adulteration by dicamba residues.

SOCC has asked that EPA withhold registration of new uses of dicamba on dicamba tolerant crops until effective measures are in place to protect against non-target plant damage. SOCC now asks EPA to place another condition upon its approval of new uses of dicamba. In order to mitigate the harm caused by the lack of measures to prevent dicamba drift damage, SOCC requests that the Administrator establish

 ²⁷ Reregistration Eligibility Decision for Dicamba and Associated Salts, EPA (June 8, 2006), available at: http://www.epa.gov/oppsrrd1/REDs/dicamba_red.pdf
²⁸ 2005 Pesticide Drift Enforcement Survey Report, Association of American Pesticide Control Officials (2005), available at

http://aapco.ceris.purdue.edu/doc/surveys/DriftEnforce05Rpt.html ²⁹ 21 U.S.C. §346a(e)(1)(A); 40 C.F.R. §180.29

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tolerances for dicamba residues on the crops listed above prior to consideration o
registration of new uses for dicamba. ³⁰

Respectfully submitted,

____/s/____

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³⁰ 21 U.S.C. §346a(e)(1)(A); 40 C.F.R. §180.29