

COMMENT OF:

SAVE OUR CROPS COALITION
[Docket No. APHIS-2013-0043-0007]

Wednesday, July 17, 2013

ELECTRONIC SUBMISSION

RE: Monsanto Co.; Notice of Intent to Prepare an Environmental Impact Statement for Determination of Nonregulated Status of Herbicide Resistant Soybeans and Cotton, and Notice of Virtual Public Meetings

Summary of the Comment

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.

Non-target plant damage associated with pesticide 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 non-target plant damage.

Thus, SOCC respectfully submits the following comment regarding the U.S. Department of Agriculture's (USDA) Notice of Intent to Prepare an Environmental Impact Statement for Determination of Nonregulated Status of Herbicide Resistant Soybeans and Cotton. This comment respectfully requests APHIS consider a range of possible alternatives beyond out-right denial or approval of these crops, and requests that APHIS specifically address the problem of non-target drift damage caused by the increased use of dicamba on dicamba tolerant crops.

Commenter

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, pesticide 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 pesticides may have harmful effects on non-target crops if they drift or volatilize away from their intended areas of application; however, dicamba has proven especially prone to cause damage.¹ A survey of state pesticide control officials has 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

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>

dicamba. Dicamba does not even make the list of the top 25 most commonly applied 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 non-target plant 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 in cotton-producing regions. These regions also produce substantial acreages of broadleaf crops that are sensitive to dicamba. Thus, any drift or volatilization from dicamba could be expected to have significant impacts on non-target crops grown in proximity.

Dicamba Drift Has Substantial Harmful Effects at Very Low Application Rates

Researchers at the Ohio State University Department of Horticulture and Crop Science conducted a study on the effect of simulated dicamba spray drift and volatilization on tomatoes grown for processing.⁵ Their objective was to quantify the impact of low rates of dicamba on broadleaf crops with respect to plant injury and the potential for yield losses.

Their conclusions are startling. Simulated dicamba drift and volatilization caused tomato bloom to "abort." Applications of dicamba at levels as low as 1/300th of the soybean field rate caused statistically significant losses of tomato crops. The late drift of dicamba, during bloom, caused a 17-77% reduction in marketable fruit when applied at 1/100th of the field rate. *See Figure 1, below.*

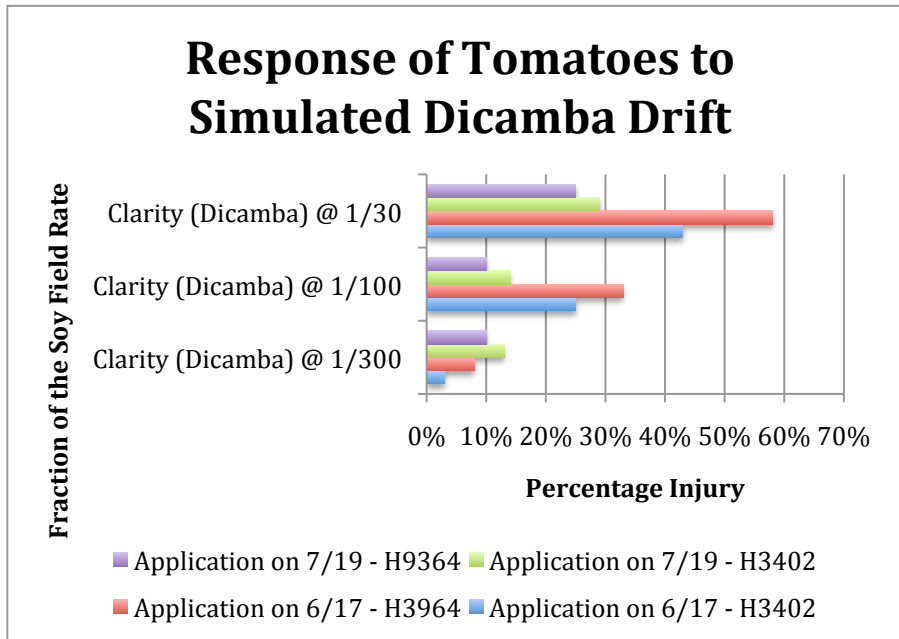
³ *Pesticides Industry Sales and Usage: 2006 and 2007 Market Estimates*, EPA (Feb. 2011) available at

http://www.epa.gov/opp00001/pestsales/07pestsales/market_estimates2007.pdf.

⁴ 4 Tex. Admin. Code § 7.50 (2011); Or. Admin. R. 603-057-0301 (2012); Wash. Admin. Code 16-228-1250 (2012)

⁵ Doohan, Doug and Koch, Tim, *Effect of Simulated Dicamba and 2, 4-D Drift on Processing Tomatoes*, Ohio State University/OARDC (2010).

Figure 1.



Effect of Dicamba Tolerant Crops on Herbicide Use

The rationale presented by Monsanto for Dicamba Tolerant Soybeans and Cotton was 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..."⁶⁷ Put more simply, crops with traits that provide tolerances to both dicamba and glyphosate represent a replacement for crops tolerant to solely glyphosate, because the widespread use of glyphosate has contributed to glyphosate resistant weed populations. Dicamba uses a different mode of herbicide action. Two modes of herbicide action make it easier to manage difficult glyphosate resistant weed populations.

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 petitions project, upon peak adoption of Dicamba Tolerant Soybeans, dicamba use will approximately double its 1994 peak historical use level, or reach about 25 million pounds annually.⁸ However, it should be noted, the use of dicamba has declined precipitously from its peak 1994 level.

⁶ *Monsanto Petition for Determination of Nonregulated Status of Event MON 87708*, at 5.

⁷ *Petition for the Determination of Nonregulated Status for Dicamba and Glufosinate-Tolerant Cotton MON 88701*, Monsanto (July 2, 2012), at 5.

⁸ *Monsanto Petition for Determination of Nonregulated Status of Event MON 87708*, at 210-211.

Though SOCC has appreciated the projections provided by Monsanto, Monsanto's claims have required some parsing. The use of dicamba has declined precipitously from its peak 1994 level. Monsanto's petitions do not indicate the rate of change in dicamba use from current use levels. This omission was particularly glaring given the intensity of the rate of change. The latest figures place the amount of dicamba applied at about 2.7 million pounds annually.⁹ 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.¹⁰ Such an increase would represent a dramatic shift in the utilization of an herbicide both in terms of total pounds applied and areas in which the herbicide would be used. 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.¹¹

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

The map of Michigan, below, produced by USDA's CropScape, shows the relative proximity of corn fields to soybean fields in the Midwest.¹² The yellow pixels represent corn acreage, and the dark green pixels represent soybean acreage. Soybeans are a major agronomic broadleaf crop. See Figure 2.

The second map, below, is a close-up of a portion of Monroe County, Michigan.¹³ Growers in Monroe County cultivate fruit and vegetable crops in proximity to major agronomic crops like corn and soybeans. This 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 also a broadleaf crop. See Figure 3.

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 soybeans and tomatoes, the potential for non-target plant damage caused by drift and volatilization is great.

⁹ *Monsanto Petition for Determination of Nonregulated Status of Event MON 87708*, at 198.

¹⁰ *Monsanto Petition for Determination of Nonregulated Status of Event MON 87708*, at 223-224 and 6.

¹¹ 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>

¹² *2011 Michigan*, USDA/NASS (Apr. 14, 2012) available at: <http://nassgeodata.gmu.edu/CropScape/>

¹³ *2011 Area of Interest*, USDA/NASS (Apr. 14, 2012) available at: <http://nassgeodata.gmu.edu/CropScape/>

Figure 2.

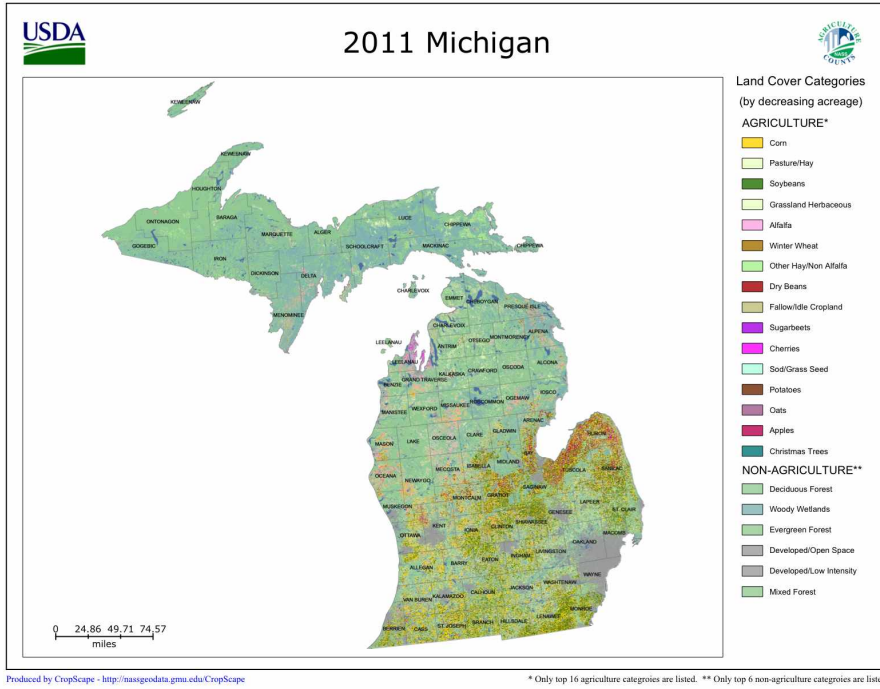
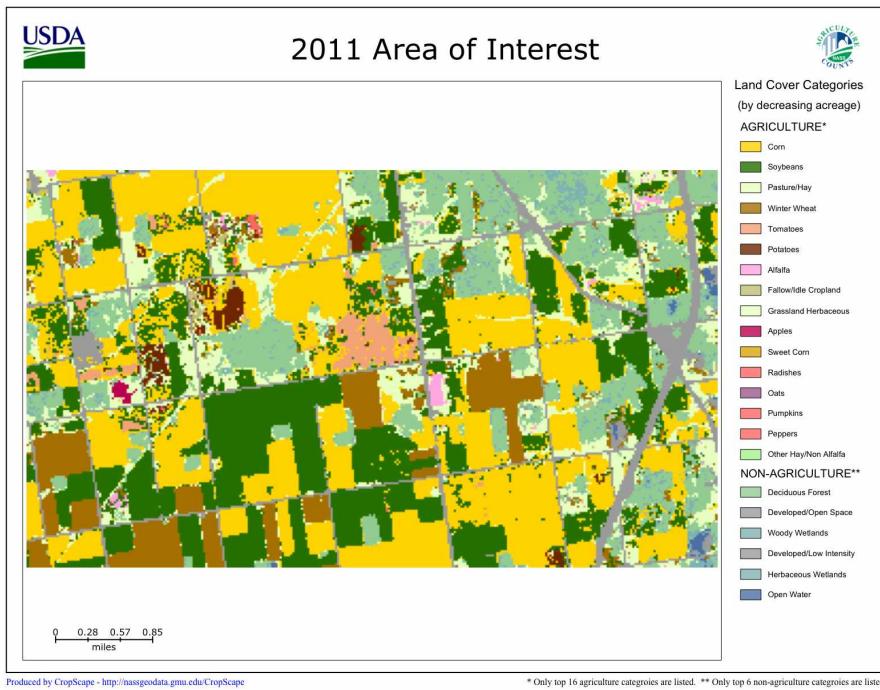


Figure 3.



Discussion

APHIS Has Broad Statutory and Regulatory Authority to Prevent the Introduction of Plant Pests within the US

The Plant Protection Act provides that the Secretary of the Department of Agriculture (USDA) may issue regulations “to prevent the introduction of plant pests into the United States or the dissemination of plant pests within the United States.”¹⁴ The Secretary has delegated that authority to the Animal and Plant Health Inspection Service (APHIS), a division of the USDA.¹⁵

APHIS has promulgated regulations governing “the introduction of organisms and products altered or produced through genetic engineering that are plant pests or are believed to be plant pests.”¹⁶ Under these regulations, certain genetically engineered plants are presumed to be “plant pests”—and thus “regulated articles” under the Plant Protection Act—until APHIS determines otherwise.¹⁷ “Plant pest” is broadly defined, in part, as “. . . any infectious agent or substances which can *directly or indirectly* injure or cause disease or damage in or to any plants or parts thereof, or any processed, manufactured or other products of plants” (emphasis added).¹⁸ Monsanto has petitioned APHIS for a determination that the regulated articles, Dicamba Tolerant Soybeans and Dicamba Tolerant Cotton, do not present a plant pest risk and therefore should not be subject to the applicable plant pest regulations.¹⁹

A petition for non-regulated status is required to describe, “...(K)nown and potential differences from the unmodified recipient organism that would substantiate that the regulated article is unlikely to pose a greater plant pest risk than the unmodified organism from which it was derived.” Such a description should include, in the relevant part, “...effects of the regulated article on nontarget organisms, (and) indirect plant pest effects on other agricultural products...”²⁰

Thus, Congress granted APHIS broad statutory authority to regulate plant pests, and APHIS chose to define “plant pest” broadly to include indirect causes of injury or damage to all plants and to require petitioners to disclose indirect plant pest effects on other agricultural products within their petitions.

The *Coordinated Framework for the Regulation of Biotechnology* (Coordinated Framework), the key federal policy directive for ensuring the safety of

¹⁴ 7 U.S.C. §§7701, 7711(a)

¹⁵ 7 C.F.R. §340.1

¹⁶ 7 C.F.R. §340.0(a)(2) and n. 1

¹⁷ 7 C.F.R. §§340.1, 340.2, 340.6

¹⁸ 7 C.F.R. §340.1

¹⁹ 7 C.F.R. §340.6

²⁰ 7 C.F.R. §340.6(c)

biotechnology research and products, describes existing statutes working in conjunction to form a comprehensive federal regulatory scheme.²¹ The reason existing statutes were considered suitable to deal comprehensively with advances in the dynamic field of biotechnology was the flexibility of the existing statutory framework. USDA, in a policy statement dated Dec. 31, 1984, noted the Plant Pest Act, later amended by the Plant Protection Act, was intended as “gap-filling” legislation for the purpose of “protecting American agriculture from invasion by plant pests and diseases, which are new to or not theretofore known to be widely prevalent within and throughout the United States.”²²

Congress and APHIS may not have anticipated herbicide drift and volatilization as plant pests in 1957, when the Plant Pest Act was enacted, or even in 2000, when the Plant Protection Act was enacted, but the legislation on its face, and as interpreted in light of the *Coordinated Framework*, clearly invites a liberal interpretation to address new and evolving threats.

USDA Has the Authority to Consider Alternatives Other than a Grant or a Denial of the Petition

The *Notice of Intent to Prepare an Environmental Impact Statement for Determination of Nonregulated Status of Herbicide Resistant Soybeans and Cotton* indicates that APHIS is currently only considering four policy alternatives: 1) Take no action, 2) approval for the soybean petition and denial of the cotton petition, 3) approval of the cotton petition and denial of the soybean petition, and 4) approval of both the soybean and cotton petitions.²³ Because the “heart” of the National Environmental Policy Act (NEPA) environmental impact statement (EIS) is the consideration of alternatives, SOCC believes that sole consideration of this limited universe of alternatives would fail to account for authority granted to APHIS by regulation, and the policy objectives of NEPA.²⁴

APHIS regulations provide that, “The Administration shall... furnish a response to each petitioner... The response will either: (i) Approve the petition in whole or in part; or (ii) deny the petition.”²⁵ Thus, the plain language of the regulation indicates the drafters anticipated an instance where limited alternatives, outright denial, and outright approval would be insufficient, and gave APHIS the authority to grant a

²¹ *Coordinated Framework for Regulation of Biotechnology*, 51 Fed. Reg. 123, (June 26, 1986) available at: http://www1.usgs.gov/usbiotechreg/read_file.nbii at 1.

²² *Final Policy Statement for Research and Regulation of Biotechnology Processes and Products*, 49 Fed. Reg. 50897-50904 (Dec, 31, 1984) available at http://www1.usgs.gov/usbiotechreg/read_file.nbii at 108.

²³ *Monsanto Co.; Notice of Intent to Prepare an Environmental Impact Statement for Determination of Nonregulated Status of Herbicide Resistant Soybeans and Cotton, and Notice of Virtual Public Meetings*, 78 Fed. Reg. 28796, 28797 (May 16, 2013) available at: <http://www.gpo.gov/fdsys/pkg/FR-2013-05-16/pdf/2013-11580.pdf>

²⁴ 7 U.S.C. §136a(c)(5)(D), 40 C.F.R. §1500.1(c)

²⁵ 7 C.F.R. 340.6(d)(3)

petition “in whole or in part.”²⁶ APHIS should exercise its broad authority to regulate “substances which can directly or indirectly injure or cause disease or damage in or to any plants or parts thereof,” and consider a broader range of alternatives to outright approval or denial.²⁷

It would also run counter to the purposes of NEPA for APHIS to unnecessarily create a false choice between two competing policy goals where reasonable alternatives exist to address both. Above, SOCC described the potential for widespread environmental impacts; however, it also recognizes that stemming the tide of glyphosate resistant weeds populations is a competing and worthy policy goal. Yet, the mere fact that two competing policy goals exist should not suggest that the only reasonable alternatives are outright denial and outright approval, even if these alternatives would best achieve one goal at the expense of the other. SOCC believes a reasonable alternative exists that could achieve both objectives without unnecessarily burdening the one or the other.

The Coordinated Framework assured Americans that the regulatory authority of EPA, FDA and USDA is sufficiently broad and flexible that an adequate regulatory system is in place to address any legitimate issues that may arise. SOCC understands this to mean that, even though three regulatory agencies were tasked with the authority to regulate biotechnology, each agency should work together to ensure that issues with biotechnology products are responsibly resolved, and issues that might elude the authority of APHIS, but do directly concern it, are not left unresolved. We suggest that APHIS and EPA work together to find solutions that protect against non-target drift damage caused by the increased use of dicamba on dicamba tolerant crops.

Because SOCC cannot be certain that EPA will adequately evaluate the potential for environmental harms, at this time, SOCC requests that APHIS withhold a grant of the petition until such time as effective measures are in place to protect against non-target plant damage, whether imposed by it, or in conjunction with other agencies.

SOCC-Dow Agreement as a Model to Achieve Similar Policy Objectives

As proof these competing goals can both be satisfactorily addressed, on September 11, 2012, SOCC and Dow AgroSciences (Dow) reached an agreement that roughly achieved the same policy objectives. SOCC submitted amendments to its petitions and comments to USDA and EPA in light of the commitments made by Dow, listed below.

The commitments made by Dow represent substantial measures to mitigate the non-target plant damage impacts of herbicide spray drift and volatilization associated with 2,4-D tolerant crops. In the view of SOCC, the concerns of its

²⁶ Id.

²⁷ 7 C.F.R. §340.1

membership regarding non-target drift damage were responsibly dealt with in its agreement with Dow.

These commitments fell into four general categories – a.) Application factor requirements (1 and 2); b.) Assistance in investigating claims (3); c.) Requirements for applicator recordkeeping (4 and 5); and d.) Preventing the use of generic high-volatility solutions on tolerant crops (6 and 7).

Dow committed to the following:

1. Dow requested amendment of its pending herbicide label submitted to EPA to include the following language under a new “Susceptible Plants” heading within the “Spray Drift Management” section on the label for 2,4-D choline salt herbicides authorized for use in 2, 4-D tolerant crops (additions emphasized):

*Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Avoid contact of herbicide with foliage, green stems, exposed non-woody roots of crops, desirable plants and trees because severe injury or destruction may result. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. **Before making an application, please refer to your state’s sensitive crop registry (if available) to identify any commercial specialty or certified organic crops that may be located nearby.***

Commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes are particularly sensitive to drift from this product. Do not apply when wind direction favors off-target movement onto these crops.

2. In order to clarify the setback distance chart with respect to the “Susceptible Plants” heading, which does not specify safe setback distances for such crops, Dow requested the following language under the “Drift Setbacks from Sensitive Areas” heading within the “Spray Drift Management” section of the 2,4-D choline salt label (additions emphasized):

*Allow setbacks (buffer zones) upwind of sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, and sensitive non-target crops **other than those listed above**) according to the following table.*

3. Dow committed to assist in the investigation, diagnosis and resolution of alleged non-target claims.
4. Dow committed to include terms within its Technology Use Agreements for 2,4-D tolerant crops that require growers and applicators to keep accurate

- records of the locations where 2,4-D tolerant crops are planted and where authorized herbicides containing 2,4-D choline salt are applied, and to retain invoices for all seed and herbicide purchases.
5. Dow committed to include language in its Product Use Guide for authorized herbicides containing 2,4-D choline salt that recommends applicators keep accurate spray records, including application location, timing, and wind speed.
 6. Dow committed to utilize an independent third party to collect seed and pesticide sales data that will help identify applicators that use non-choline salt forms of 2,4-D (generic 2,4-D) in contravention of present generic 2,4-D label requirements and the Technology Use Agreement.
 7. Dow committed to price its technology (both its seeds and its herbicide) competitively to maximize the use of 2,4-D choline salt (and disincentivize the use of non-choline salt formulations of 2,4-D) on 2,4-D tolerant crops

“Environmental Issues for Consideration” Does Not Squarely Address SOCC Concerns

Although Question 7 of “Environmental Issues for Consideration” does touch upon a few of the concerns of SOCC, it does not squarely address the problem of non-target drift and volatilization damage caused by the use of dicamba on dicamba tolerant crops.²⁸ SOCC requests that APHIS expand the scope of its EIS inquiry to address non-target drift damage impacts cause by the use of dicamba on dicamba tolerant crops, especially in sensitive areas.

The National Environmental Policy Act (NEPA) requires federal agencies “to the fullest extent possible” prepare an environmental impact statement (EIS) for “every recommendation or report on proposals for legislation and other major Federal action significantly affecting the quality of the human environment.”²⁹ An agency need not complete an EIS for a particular proposal if it finds, on the basis of a shorter “environmental assessment” (EA), that the proposed action will not have a significant impact on the environment.³⁰

Upon consideration, APHIS would find the adverse environmental effect of dicamba spray drift and volatilization to significantly affect the quality of the human environment. Therefore, an environmental assessment is insufficient, and APHIS should prepare an environmental impact statement that specifically addresses non-target dicamba drift and volatilization damage caused by the increased use of dicamba on dicamba tolerant crops.

²⁸ *Monsanto Co.; Notice of Intent to Prepare an Environmental Impact Statement for Determination of Nonregulated Status of Herbicide Resistant Soybeans and Cotton, and Notice of Virtual Public Meetings*, at 28797.

²⁹ 42 U.S.C. §4332(2)(C)

³⁰ 40 C.F.R. §1501.4(2)(B)

Standard for Preparation of an EIS: “Substantial Question” of “Significant Effect”

The US District Court for the Northern District of California, in *Geertson Seed Farms v. Johanns*, required APHIS to prepare an EIS in the context of a petition for nonregulated status for a glyphosate tolerant alfalfa product developed by Monsanto, because substantial questions were raised as to whether the action would have a significant effect on the environment.³¹ In *Geertson Seed Farms*, the District Court noted the standard for “substantial question” is relatively low, “To prevail on a claim that (APHIS) violated its statutory duty to prepare an EIS, a plaintiff need not show that significant effects will in fact occur. It is enough for the plaintiff to *raise substantial questions* whether a project *may* have a significant effect on the environment” (emphasis added).³² In that action the District Court found APHIS had not adequately considered two “substantial” questions raised by the plaintiffs, one, possible gene transmission to nongenetically engineered alfalfa, and, two, the possible development of glyphosate resistant “superweeds.”³³

Dicamba Spray Drift Raises a “Substantial Question,” therefore APHIS Should Prepare an EIS

Upon consideration, APHIS would find dicamba spray drift and volatilization raise substantial questions whether a grant of the petition may have a significant effect on the environment. Therefore, APHIS should prepare an EIS addressing the significant impacts associated with non-target drift damage caused by the increased use of dicamba on dicamba tolerant crops.

NEPA requires federal agencies to prepare an EIS for “every recommendation or report on proposals for legislation and other major Federal action significantly affecting the quality of the human environment.”³⁴ “In determining whether a federal action requires an EIS because it significantly affects the quality of the human environment an agency must consider what ‘significantly’ means.”³⁵ As the implementing regulations state, a “significant” action has two components: context and intensity.³⁶ “Context refers to the setting in which the proposed action takes place.”³⁷ “Intensity means the ‘severity of the impact.’”³⁸

The setting of the proposed action is the area in proximity to the U.S. soybean acreage in production. Monsanto’s own projections indicate the potential for dicamba-treated tolerant soybean acreage to represent 40% of all U.S. soybean acres in production, or approximately 30 million soybean acres. This would represent a more than 249% increase in the total acreage treated by dicamba, and a

³¹ *Geertson Seed Farms v. Johanns*, 2007 WL 518624 (N.D. Cal. 2007).

³² *Geertson Seed Farms*, at *4.

³³ *Geertson Seed Farms*, at *12.

³⁴ 42 U.S.C. §4332(2)(C)

³⁵ *Ocean Advocates v. U.S. Army Corps of Engineers*, 402 F.3d 846, 863 (9th Cir. 2005).

³⁶ 40 C.F.R. §1508.27

³⁷ 40 C.F.R. §1508.27(a)

³⁸ 40 C.F.R. §1508.27(b)

5660% increase in soybean acreage treated.³⁹ Therefore, the environmental impacts of this action would affect a “significant” area. Given the drift and volatility potential of dicamba, the setting of this action might include areas miles away.

The “context” factor also requires consideration of a proposed action’s effect in contexts beyond the absolute acreage affected, such as that of the “society as a whole (human, national), the affected region, the affected interests, and the locality.”⁴⁰ Because major agronomic crops, like soybeans, are grown in proximity to broadleaf crops throughout the Midwest and other areas, the impacts on specialty crops in the those areas would be especially severe. It is reasonable to anticipate significant impacts in multiple contexts, including the acrimony that would develop among neighboring growers in the many communities that rely upon grower and processor income, and among growers and homeowners where home gardens and horticulture are adversely affected by non-target damage.

Dicamba drift and volatilization, even at extremely low levels, has the potential to cause drastic crop damage significantly effecting crop yields. At application levels as low as 1/300th of the expected soybean field rate, dicamba causes statistically significant yield losses. The late drift of dicamba, during bloom, caused a 17-77% reduction in the marketable fruit when applied at 1/100th of the field rate. Given the sensitivity of broadleaf crops, the proximity of broadleaf crops to Dicamba Tolerant Soybean acreage, and the high relative volatility of dicamba, the impacts are likely to be “severe.”

The NEPA regulations also note several additional factors to be considered within the “intensity” analysis. The two factors analyzed below are especially pertinent to dicamba tolerant crops --

1. “The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.”⁴¹

Approval of Dicamba Tolerant Soybeans or Cotton might establish a precedent for the approval of other dicamba tolerant crops. Any failure to assess the risks associated with Dicamba Tolerant Soybeans or Cotton may establish a precedent for future dicamba tolerant crop deregulation petitions. Although there are not currently any other dicamba tolerant crops within the APHIS petition queue, Monsanto’s product pipeline anticipates dicamba tolerant corn, cotton, and canola.⁴²

³⁹ *Monsanto Petition for Determination of Nonregulated Status of Event MON 87708*, at 223-224.

⁴⁰ 40 C.F.R. §1508.27(a)

⁴¹ 40 C.F.R. §1508.27(b)(6)

⁴² *Research and Development Pipeline: farming innovation*, Monsanto (2012) available at: <http://www.monsanto.com/products/Documents/pipeline-flash/pdfs/TechPipelineALL.pdf>

BASF, Monsanto's partner in developing dicamba tolerant cropping systems, has stated it expects commercialization of dicamba tolerant canola crops following the approval of Dicamba Tolerant Soybeans and Cotton.⁴³ Before APHIS approves Dicamba Tolerant Soybeans or Cotton, APHIS must consider whether this action represents a decision in principle about the future consideration of other dicamba tolerant crops. APHIS should inquire about and consider the future plans of Monsanto and BASF regarding this new crop trait.

2. "A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial."⁴⁴

If APHIS considers spray drift and volatilization impacts but determines on balance that the environmental effect is positive, and therefore does not anticipate adverse effects within its conclusion, this level of consideration is insufficient. If spray drift and volatility impacts are significant effects, the regulations require APHIS consider and explain them within an EIS.

Upon consideration of the "context" factor, APHIS would find the proposed action to be "significant" in multiple contexts. Upon consideration of the "intensity" factor, APHIS would find the proposed action to have "severe" impacts. Thus, upon consideration of the "context" and "intensity" factors, APHIS would find the proposed action raises substantial questions about whether it may have a significant effect on the environment. Therefore, APHIS should prepare an EIS addressing dicamba spray drift and volatilization impacts associated with Dicamba Tolerant Soybeans and Cotton.

Conclusion

The implementing regulations for the National Environmental Policy Act (NEPA) state their purpose is to "insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken," but ultimately "it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork . . . but to foster excellent action."⁴⁵ The implementing regulations further state the "[EIS] shall provide full and fair discussion of significant environmental impact and shall inform decision makers and the public of reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment."⁴⁶

⁴³ *Petitions for Nonregulated Status Granted or Pending*, APHIS (Jan. 26, 2012) available at: http://www.aphis.usda.gov/biotechnology/not_reg.html; *BASF presents research on new herbicide at annual Southern Weed Science Society meeting*, BASF (Jan. 24, 2012), available at:

<http://www.basf.com/group/corporate/en/news-and-media-relations/news-releases/news-releases-usa/P-12-017>

⁴⁴ 40 C.F.R. §1508.27(b)(1)

⁴⁵ 40 C.F.R. §§1500.1, 1500.2

⁴⁶ 40 C.F.R. §1502.1

The interests of the public and APHIS are best served by an informed decision making process. To insure that decision makers and the public are informed of reasonable alternatives to the proposed action and APHIS makes the best possible decision, SOCC respectfully requests APHIS consider a range of possible alternatives beyond out-right denial or approval of the petitions, and specifically address the problem of non-target drift damage caused by the increased use of dicamba on dicamba tolerant crops.

Respectfully submitted,

_____/s/_____

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