

# POISONOUS PROCESS

How the EPA's Chronic Misuse of  
'Emergency' Pesticide Exemptions  
Increases Risks to Wildlife



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## Poisonous Process: How the EPA's Chronic Misuse of 'Emergency' Pesticide Exemptions Increases Risks to Wildlife

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### EXECUTIVE SUMMARY

For years the U.S. Environmental Protection Agency has routinely issued “emergency” exemptions for the use of certain pesticides across millions of acres in the United States, in ways that are known to be harmful to wildlife and in cases where the potential harmful effects haven’t been properly investigated. These exemptions allow pesticide manufacturers to bypass the established pesticide-approval process intended to protect people, wildlife and the environment.

For this analysis the Center for Biological Diversity examined those types of exemptions for use of the bee-killing pesticide sulfoxaflor.

**Our examination of EPA records reveals a chronic misuse of emergency exemptions for this pesticide.** At least 78 emergency exceptions have been granted for sulfoxaflor over the past six years on just two crops: cotton and sorghum. The ongoing exemptions are notable because previous approval of the pesticide’s use on cotton was cancelled in 2015 due to its potential harm to pollinators; it has *never* been approved for use on sorghum, which is attractive to bees.

Our analysis also found that:

- The 78 emergency exemptions issued for sulfoxaflor since 2012 allowed its use on more than 17.5 million acres of U.S. farmland.
- Only eight of the 78 exemptions went through a public review process that allowed for comment and review by citizens and independent researchers.
- The emergency uses of the pesticide approved for cotton were in response to an insect that has been a chronic problem for at least a decade and has already developed resistance to four different classes of pesticides.
- The emergency uses on sorghum were granted in at least 18 states in response to an insect that has been a problem for the past five years.
- Fourteen states were given emergency exemptions for sulfoxaflor for at least three consecutive years for the same “emergency.”

These emergency exemptions have essentially allowed its use on millions of acres of crops where exposure to pollinators through contaminated pollen is high, for scenarios

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<sup>1</sup> The Center appreciates and acknowledges the work of Purba Mukerjee in drafting this report.

that are routine and foreseeable. In effect this facilitates widespread use of pesticides that are not eligible for approval on certain crops because of well-documented risks to the environment.

**Conclusion:** The EPA's routine misuse of these exemptions for sulfoxaflor poses significant risks to pollinators such as bees, small birds and butterflies. Our analysis also reveals a larger, systemic problem that has gone largely unrecognized at the EPA with regards to widespread application of "emergency" exemptions.

**Recommendation:** The EPA should only grant emergency exemptions for a true emergency on a temporary basis and not as a way of continually insulating growers from the normal risks of agriculture. If a pesticide cannot gain approval under the normal pesticide-approval process, then agricultural practices must change to reflect that reality.

### **Emergency Exemption Review**

More than 1 billion pounds of pesticides are used each year in the United States, the bulk of which are applied to farmland. U.S. pesticide use is regulated under the Federal Insecticide Fungicide and Rodenticide Act, or FIFRA, which gives the Environmental Protection Agency authority to approve or ban pesticides based on their effects on human and environmental health.

Sometimes emergency pest infestations arise, and farmers or state agencies request quick access to a pesticide that is not approved for a particular use. For this reason FIFRA contains an emergency exemption provision that allows the EPA to temporarily approve a pesticide based on a demonstrated emergency so that an unexpected outbreak can be contained and not spread to other areas.

But the EPA has facilitated routine abuse of the exemption provision by: 1) allowing emergency use of a pesticide for predictable situations instead of unpredictable emergencies; 2) allowing emergency use in situations that are chronic and occur over many consecutive years; 3) rarely providing for public notice and comment, and; 4) relying on the applicants as the primary — and sometimes only — source of information.

FIFRA is intended to protect the public and the environment by requiring that before any pesticide product can be sold or distributed in the United States the EPA must first register that product by granting administrative approval. The FIFRA standard for pesticide registration is that a proposed use of a product will not cause "unreasonable

adverse effects on the environment.” But Section 18 of FIFRA — the emergency exemption provision — allows use of pesticides that have not met this safety standard.

Congress intended use of Section 18 to address urgent pest conditions such as severe and unexpected insect outbreaks. But since its inception, the EPA has administered the emergency exemption program so that it functions as a shortcut, allowing pesticide manufacturers to bypass the registration process. Despite repeated findings that the agency improperly grants these exemptions for the same uses over many years, the EPA has made it easier to obtain “emergency” exemptions by “streamlining” the application process, expediting its application-review procedures and providing for indefinite renewals (without public notice) of emergency exemptions.

The EPA’s repeated authorization of emergency exemptions of the use of sulfoxaflor on cotton and sorghum demonstrates that the agency continues to act outside its Section 18 authority and contrary to congressional intent.

## **I. Section 18 Only Applies to “Emergency Conditions” for “Unexpected Pest Situations”**

Section 18 permits the EPA to “exempt any Federal or State agency from any provision of this Act if the [EPA] determines that emergency conditions exist which require such exemption.”<sup>2</sup> In the EPA’s words, the “practical meaning” of Section 18 is that a state or federal agency can “request EPA to authorize . . . a temporar[y] use [of] a pesticide that is not registered for the proposed use.”<sup>3</sup> The EPA’s approach is not consistent with the plain language of Section 18 and is outside the discretion Congress gave it to provide exemptions only in emergency conditions.

Section 18 was added to FIFRA as part of the 1971 amendments to the Act.<sup>4</sup> The House Committee Report reviewing this amendment explained that the purpose of the emergency exemption was to allow “the President [to] enable farmers and ranchers to cope with emergency conditions before they spread to other areas” by “facilitat[ing] temporary registration of restricted use of pesticides for meeting emergency outbreaks of plant or animal diseases.”<sup>5</sup> Although the legislative history is slim, there is ample

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<sup>2</sup> 7 U.S.C. § 136p (2012).

<sup>3</sup> Pesticide Regulatory Education Program, EPA, *FIFRA Section 18 Emergency Exemption Training Resource*, Module 2 at 1 (June 2013), [https://www3.epa.gov/pesticides/regulating/section18\\_training/sec18-training-modules.html](https://www3.epa.gov/pesticides/regulating/section18_training/sec18-training-modules.html) [hereinafter *EPA Section 18 Training*].

<sup>4</sup> H.R. 10729, 92nd Cong. § 18 (1971); see Federal Insecticide, Fungicide, and Rodenticide Act, Pub. L. No. 80-104, 61 Stat. 163 (1947) (original enactment of FIFRA, lacking an emergency exemption).

<sup>5</sup> H.R. Rep. No. 92-511, at 27 (1971). The amendment as originally proposed only authorized exemptions for federal agencies and not for states. H.R. Rep. 92-511, at 63. States, meanwhile, were authorized under Section 24(c) to “certify” certain registered pesticides “formulated for intrastate distribution” for uses

guidance in Congress's reports on its investigations into the EPA's implementation of the program. Congress has been concerned that "serious inconsistencies and other abuses permeated the EPA's administration of Section 18."<sup>6</sup> The most recent of these was completed in 1992 by the House Committee on Science, Space, and Technology (House Committee).<sup>7</sup>

In its 1992 report, the House Committee found that EPA was "repeatedly" granting emergency exemptions "for the same uses for many years," and the Section 18 program was being used to address "nonemergency situations of predictable pest outbreak."<sup>8</sup> The House Committee observed that these routine grants of emergency exemptions had turned Section 18 into a tool for "salvag[ing] poor business decisions instead of to control unexpected pest emergencies."<sup>9</sup>

Not only was the EPA granting emergency exemptions for the same use year after year, but the agency was not pressuring pesticide manufacturers to pursue registration. In so doing the EPA was disregarding its own regulation requiring "consideration" of a pesticide product's "reasonable progress towards registration," before granting emergency exemptions.<sup>10</sup> This "reasonable progress" requirement, the House Committee explained, is an important safeguard preventing "*de facto* registration or 'backdoor' market access."<sup>11</sup>

The House Committee was especially concerned that the EPA's abuse of Section 18 had created a registration workaround that was putting human health and the

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that were not registered, in order to "allow States the opportunity to . . . meet expeditiously and with less cost and administrative burden on the registrant the problem of registering for limited local use a pesticide needed to treat sudden pest infestation." *Id.* at 28; *see id.* at 64. After review in the Senate, the bill as amended made exemptions available to states in addition to federal agencies. S.R. Rep. 92-838 at 11, 28. The bill after Senate amendments—and the current version of FIFRA—still retained the authorization for states to certify pesticides "to meet specific local needs." *Id.* at 30; *see* 7 U.S.C. § 136v (c)(1).

One additional change to the amendment after Senate review: It authorized emergency exemptions by EPA action, rather than by executive orders of the president, as originally proposed in the House bill. *Compare* H.R. Rep. 92-511 at 27, *with* S.R. Rep. 92-838 at 11, 28.

<sup>6</sup> S. Comm. on Environment, Comm. on Science, Space, and Technology, 102nd Cong., *Section 18 (Emergency Exemptions) to the Federal Insecticide, Fungicide, and Rodenticide Act*, at 1 (Oct. 1992) [hereinafter *1992 Investigation*].

<sup>7</sup> *1992 Investigation*. During the course of the House Committee's investigation, the Congressional Government Accounting Office (GAO) released a study finding that, at the time, EPA was "continu[ing] to grant exemptions for the same use for several years or in nonemergency situations of predictable pest outbreaks." *Id.* at 11.

<sup>8</sup> *Id.* at 2, 11.

<sup>9</sup> *Id.* at 15.

<sup>10</sup> *Id.* at 11-12; *see* 40 C.F.R. § 166.25(b)(2)(ii) (2016).

<sup>11</sup> *1992 Investigation* at 7.

environment at risk.<sup>12</sup> The EPA was granting emergency exemptions for products without having “thoroughly examined the cumulative effects to human health or the environment from such use.”<sup>13</sup> This is because Section 18 applications require “significantly less complete and less rigorous data and analyses.”<sup>14</sup> The House Committee discovered that many pesticides receiving repeated exemptions were “indefinitely stalled” in the Section 3 registration process “because of concerns of carcinogenicity or mutagenicity.”<sup>15</sup> “[B]y liberally and repetitively granting exemptions to potentially carcinogenic substances, little incentive is provided to encourage companies to invest in the development of newer safer pesticides or alternative agricultural practices.”<sup>16</sup>

To rein in this abuse of the Section 18 program, the Committee recommended that the EPA adopt a rule categorically excluding grants of emergency exemptions for any “chronic or repetitive requests” made beyond a fixed length of time, such as a period of three or four years.<sup>17</sup> The EPA has not done so. Instead, in 2006, the agency created a streamlined process for granting repeat exemptions called “re-certification,”<sup>18</sup> discussed below.

In sum, the 1992 House Committee investigation makes exceedingly clear that Congress intended Section 18 to be applied sparingly, for limited periods of time, and to address “unexpected pest situations.”

## **II. EPA Implementation of Section 18**

### **A. Emergency Conditions**

For the EPA to grant a Section 18 exemption, it must make a threshold finding that an “emergency condition” exists. FIFRA regulations state that emergency conditions must be “urgent, non-routine situation[s]” and that there must be no “economically or environmentally feasible alternatives” that can provide adequate control of the pest situation.<sup>19</sup>

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<sup>12</sup> *Id.* at 1, 18.

<sup>13</sup> *1992 Investigation* at 12. *But c.f.* 40 C.F.R. § 166.25(b)(1)(ii) (requiring that EPA determine that pesticide use under exemption “will not cause unreasonable adverse effects on the environment”).

<sup>14</sup> *1992 Investigation* at 16.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 3.

<sup>17</sup> *1992 Investigation* at 12, 19.

<sup>18</sup> See 40 C.F.R. § 166.20(b)(5).

<sup>19</sup> 40 C.F.R. § 166.3.

## 1. Urgent and Non-routine Situations

The EPA defines an emergency condition as an “urgent, non-routine situation that requires use of a pesticide(s).”<sup>20</sup> EPA clarified: “The phrase ‘urgent, non-routine situation’ has been used to emphasize that the situation must be other than an ordinary one. . . . A chronic or continually occurring problem does not represent an ‘urgent, non-routine situation.’”<sup>21</sup> The EPA’s training materials provide that emergency conditions are “new” circumstances “in which the status quo has changed in an unusual way that was unforeseen.”<sup>22</sup> The EPA warns that Section 18 exemptions should not be used to address predictable conditions or offer “revenue enhancement” to compensate for “decisions made with knowledge of the risks of agriculture.”<sup>23</sup> FIFRA regulations also provide that “in no case” should exemptions granted to avert risk of significant economic loss last for longer than one year.<sup>24</sup>

In application, however, the EPA treats long persisting conditions as “emergency” conditions. For example, the EPA’s Section 18 training materials list “loss of a pesticide,” either due to pest resistance or “because of regulatory action” such as cancellation of registration, as conditions that commonly warrant emergency exemptions.<sup>25</sup> The EPA notes that emergency exemptions could be repeatedly granted for several consecutive years, because some “events usually continue into subsequent years and represent a *permanent* change to the system.”<sup>26</sup> Examples of such continuing events, according to the EPA, are “pest resistance, the cancellation of a pesticide, or restrictions on a pesticide’s use.”<sup>27</sup> The EPA adds that “it is likely that the emergency will continue until a permanent solution, such as registration of an effective pesticide, is found.”<sup>28</sup>

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<sup>20</sup> *Id.*

<sup>21</sup> 50 Fed. Reg. 13,944, 13,946 (Apr. 8, 1985); see 51 Fed. Reg. 1,896, 1,896 (Jan. 15, 1986) (finalizing rule and reaffirming choice to exclude “chronic or continually occurring problem[s]” from the definition of an emergency condition).

<sup>22</sup> *EPA Section 18 Training*, Module 2 at 1-2.

<sup>23</sup> *Id.* at 4.

<sup>24</sup> See 40 C.F.R. § 166.28(a).

<sup>25</sup> *EPA Section 18 Training*, Module 2 at 3; Module 1 at 1.

<sup>26</sup> *Id.* Module 7 at 1 (emphasis added).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

## 2. Economically or Environmentally Feasible Alternatives

The EPA must also find there is a lack of economically or environmentally feasible alternatives for addressing the pest situation.<sup>29</sup> The report from the 1992 House Committee investigation found that the “EPA follows no criteria to identify whether an ‘alternative’ substance to the requested Section 18 chemical may be ‘effective.’”<sup>30</sup> The EPA has not promulgated any hard criteria to define “economically or environmentally feasible alternative practices.”<sup>31</sup> Instead it seems to continue its practice of “rel[ying] on whatever bare information is submitted in applications” and routinely granting these exemptions.<sup>32</sup> The agency’s current Section 18 guidance document merely recommends that applicants support “claims of ineffectiveness” with “field data *when possible*,” and if supporting data is not available “statements from qualified experts” may suffice.<sup>33</sup>

### B. “Specific” Exemptions

There are four different types of emergency exemptions defined in EPA regulations.<sup>34</sup> The most common are “specific” exemptions, which are granted to avert either a “significant economic loss” or a “significant risk” to wildlife resources or the environment.<sup>35</sup> The EPA notes that the “typical” specific exemption request is made based on a claim of “significant economic loss.”<sup>36</sup> Specific exemptions are eligible for re-certification, a process that “streamline[s] the application process and enables “quicker determinations by EPA” on applications requesting the same use and to address the same conditions as an exemption granted in the prior year.”<sup>37</sup>

#### 1. Significant Economic Loss

FIFRA regulations offer two approaches for showing significant economic loss. One is an output-based approach, while the other is a discretionary catch-all that permits the EPA to find there was a significant economic loss when the output-based approach “would not adequately describe the expected loss.”<sup>38</sup> Under the output-based approach,

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<sup>29</sup> 40 C.F.R. § 166.3.

<sup>30</sup> 1992 *Investigation* at 13.

<sup>31</sup> See 40 C.F.R. § 166.7.

<sup>32</sup> See *id.* at 15.

<sup>33</sup> *EPA Section 18 Training*, Module 4 at 5-6.

<sup>34</sup> 40 C.F.R. § 166.2.

<sup>35</sup> *Id.*

<sup>36</sup> *EPA Section 18 Training*, Module 3 at 1.

<sup>37</sup> 71 Fed. Reg. 4,495, 4,502 (Jan. 27, 2006).

<sup>38</sup> See 40 C.F.R. § 166.3; see also *EPA Section 18 Training*, Module 3 at 1.



an applicant can show significant economic loss by demonstrating any of the following: “(i) Yield loss greater than or equal to 20%; (ii) Economic loss, including revenue losses and cost increases, greater than or equal to 20% of gross revenues; [or] (iii) Economic loss, including revenue losses and cost increases greater than or equal to 50% of net revenues.”<sup>39</sup>

Alternatively, under the discretionary approach, the EPA may make a determination of significant economic loss when a pest situation might impact “long-term financial viability” of growing operations.<sup>40</sup> The EPA explains that these are situations such as damage to buildings or other infrastructure like irrigation systems or capital assets like trees or vines.<sup>41</sup> The discretionary approach to significant economic loss is broad; for example, it encompasses reduction in “aesthetic value of an urban landscape” or “attractive[ness]” of “recreational activities.”<sup>42</sup> As a rough rule, the EPA considers this second option appropriate for assessing longer term impacts, while the output-based approach is more appropriate for short-term economic impacts.<sup>43</sup>

The EPA calls this output-based framework a “tiered approach,” because the three different loss metrics defined in the regulation serve as “[s]uccessive screening levels.”<sup>44</sup> Starting with Tier 1, or yield loss of 20% or more, “[e]ach additional tier requires more data and involves more analysis.”<sup>45</sup> Next is intermediate Tier 2, gross revenue loss of 20% or more, and last is Tier 3, net revenue loss of 50% or more, which is the most difficult to prove and requires the most data.<sup>46</sup> The EPA explains, “[i]f the pest situation does not appear likely to result in a significant economic loss based on the first tier analysis, it might qualify based on further analysis in succeeding tiers.”<sup>47</sup> The EPA clarifies that in analyzing significant economic loss, “*the comparison . . . between the typical or ‘routine’ situation and the ‘non-routine’ situation . . . is not with or without [use of] the requested chemical.*”<sup>48</sup>

Under the tiered framework, as currently applied by the EPA, there are at least two ways in which Section 18 applicants can present data and facts to skew in favor of a

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<sup>39</sup> 40 C.F.R. § 166.3.

<sup>40</sup> *Id.*

<sup>41</sup> *EPA Section 18 Training*, Module 3 at 1.

<sup>42</sup> *Id.* at 2.

<sup>43</sup> *Id.* at 3.

<sup>44</sup> 71 Fed. Reg. at 4,504.

<sup>45</sup> See *id.*; 40 C.F.R. § 166.3.

<sup>46</sup> See 71 Fed. Reg. at 4,504; 40 C.F.R. § 166.3.

<sup>47</sup> See 71 Fed. Reg. at 4,504.

<sup>48</sup> *EPA Section 18 Training*, Module 3 at 2 (emphasis in original).

finding of significant economic loss. First, the Section 18 training materials reveal that the EPA does not have any standardized formulas for calculating the output metrics, which means that Section 18 applicants can cherry-pick data — indeed the EPA encourages applicants to do so — to inflate reported yields anticipated in the absence of emergency conditions. The tiered approach works by comparing the anticipated yield or revenue under the emergency pest conditions and the yield or revenue in the absence of these conditions, or under non-emergency circumstances. In order to calculate the non-emergency outputs, the EPA recommends that Section 18 applicants use an average of outputs from “several years of data, say three to five.”<sup>49</sup> The EPA does not standardize or set any minimum span of years from which data must be used to establish the non-emergency output baseline. Instead each Section 18 application can calculate non-emergency outputs using data from whatever span of years best suits its application. In fact, the output data need not even be from consecutive years; the EPA recommends that in calculating the non-emergency output, applicants exclude outputs from years that the applicant determines “would not be representative of typical conditions,” such as a year in which there was “an untimely freeze.”<sup>50</sup>

The second apparent way in which the EPA applies the tiered approach to favor a finding of significant economic loss is that it considers the higher cost of currently available registered pesticides in determining that there is a pest emergency situation. Specifically, this would occur in Tier 3 screening, which involves examining anticipated gross revenue minus “operating costs”; operating costs include the cost of registered pesticides.<sup>51</sup> Thus, the higher price of registered pesticide products can be used to demonstrate increased costs that warrant an emergency unregistered use.<sup>52</sup>

The EPA’s assertions during the rulemaking process for the tiered approach indicate that it intended to create an analytical framework that disregards natural market fluctuations in analysis of significant economic loss. Prior to the adoption of the tiered approach, the EPA’s significant economic loss analysis involved examining yields and revenues from the five years immediately preceding the Section 18 request.<sup>53</sup> But in

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<sup>49</sup> *Id.* at 6.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 3.

<sup>52</sup> In its 1992 investigation, the GAO expressed concern that “EPA frequently decides that the affordability of an unregistered product versus the higher cost of using a registered alternative pesticide [is] sufficient to show ‘significant economic loss.’” See *1992 Investigation* at 11-12.

<sup>53</sup> EPA would examine “whether the expected reduction in profitability exceeds what would be expected as a result of normal fluctuations over a number of years”—five years specifically. 51 Fed. Reg. at 1,903; 69 Fed. Reg. 53,866, 53,871 (Sept. 3, 2004). If the revenues anticipated under the emergency conditions were less than the lowest revenue recorded in the previous five years, EPA would conclude there was a risk of significant economic loss. 69 Fed. Reg. at 53,871.

2006, citing the need for a “less burdensome methodology” for demonstrating significant economic loss, the EPA adopted the tiered approach.<sup>54</sup> The agency explained that the “burden” of demonstrating significant economic loss was lower under the tiered approach because “the analysis focuses on the current year rather than historical data.”<sup>55</sup> The old approach, focused on historical data, was purportedly an inadequate yardstick with which to determine significance of economic loss because profit variations over several years “often reflect[] market forces entirely unrelated to pest pressure.”<sup>56</sup>

Thus the EPA seems to favor significant economic loss determinations that disregard natural market fluctuations and “historical data.” It explained that the tiered approach was adopted to “streamline the data and analytical requirements for emergency exemption requests, and allow for potentially quicker decisions by EPA.”<sup>57</sup> As it is currently applied, the tiered approach facilitates very “quick” decisions indeed, because it allows — even encourages — inflated economic loss values, achieved by accounting for higher costs of registered pesticides and permitting applicants to cherry-pick data.

In sum, the EPA’s approach to significant economic loss analysis seems to be propelled by a goal of insulating growers from normal risks of agriculture and enhancing agricultural revenues.

## **2. Re-certification**

The re-certification process modifies the Section 18 application process by reducing the burden of showing to the EPA that an emergency condition exists if the EPA granted a specific exemption for that same situation in the year prior.<sup>58</sup> More specifically, a re-certification application “rel[ies] on previously submitted information,” including the “discussion of the events which brought about the emergency condition,” and “data and other information” showing, *inter alia*, “anticipated significant economic loss.”<sup>59</sup>

The EPA promulgated regulations adding re-certification to its Section 18 program, citing goals of “sav[ing] applicants time and effort in gathering data and preparing their submissions” and “sav[ing] [EPA] time and resources by not having to annually repeat each administrative step of its review of the documents supporting the exemption

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<sup>54</sup> 69 Fed. Reg. at 53,871.

<sup>55</sup> 71 Fed. Reg. at 4,505.

<sup>56</sup> 69 Fed. Reg. at 53,872; see 71 Fed. Reg. at 4,505 (reiterating this rationale in the final rule).

<sup>57</sup> 71 Fed. Reg. at 4,505.

<sup>58</sup> 40 C.F.R. § 166.20(b)(5); 71 Fed. Reg. at 4,504 (noting that “[r]e-certification only alters the process for an emergency finding”).

<sup>59</sup> 40 C.F.R. § 166.20(b)(5).

requests.”<sup>60</sup> Re-certification surely does save the EPA time and resources, especially because the EPA streamlines this already-abbreviated process by making re-certification determinations before applicants even make such requests. When the agency issues a decision on a specific exemption application, it simultaneously “make[s] an initial assessment regarding potential eligibility for a streamlined re-certification application the following year, in the event that the applicant reapplies the next year.”<sup>61</sup> And the EPA shares this initial assessment with the Section 18 applicant: “EPA will advise the successful applicant that, should it reapply the following year, they appear eligible to use a re-certification application.”<sup>62</sup> The re-certification process was directed to certain uses that the EPA predicted are likely to persist beyond the year-long limit intended for specific exemptions,<sup>63</sup> for example pesticide resistance to a registered product or when a previously registered product “becomes permanently unavailable,” presumably referring to situations in which a product does not survive re-registration review.<sup>64</sup>

Certain uses are not eligible for re-certification. These include specific exemptions granted for use of a new chemical or for a use that has been previously registered but is now suspended<sup>65</sup> or cancelled.<sup>66</sup> Notably, all uses that are ineligible for re-certification require public notice when an exemption is granted. In other words, there is no public notice requirement when the EPA grants a specific exemption that is eligible for re-certification, and re-certification itself does not require public notice. This means that there can ongoing unregistered uses of pesticides for years without any public notice.

Re-certification without public notice is especially troubling when coupled with the fact that “[t]here is no established limit on the number of years an exemption is eligible for recertification.”<sup>67</sup> The original re-certification process, as proposed by the EPA, limited re-certification to three years.<sup>68</sup> However, in finalizing the rule, the agency was persuaded by comments that re-certification should not be time limited, and it made

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<sup>60</sup> 71 Fed. Reg. at 4,504.

<sup>61</sup> *Id.* at 4,503.

<sup>62</sup> *Id.*

<sup>63</sup> See 40 C.F.R. § 166.28(a).

<sup>64</sup> See 71 Fed. Reg. at 4,503. As a point of contrast, EPA cites the following situations as those that would not be eligible for re-certification: “temporary supply problem of a registered product, an isolated weather event, or a sporadic pest outbreak.” 71 Fed. Reg. at 4,503. These suddenly arising and temporary situations seem to align more with congressional intention behind the Section 18 program.

<sup>65</sup> 7 U.S.C. § 136d(c).

<sup>66</sup> 40 C.F.R. § 166.20(b)(5)(iv); 7 U.S.C. § 136d(b).

<sup>67</sup> *EPA Section 18 Training*, Module 7 at 4.

<sup>68</sup> See 69 Fed. Reg. 53,866, 53,871 (Sept. 3, 2004).



streamlined re-certification available indefinitely.<sup>69</sup> It reasoned that “[a]ny specific limit to the number of years of eligibility [for re-certification] would be arbitrary.”<sup>70</sup>

But a three-year cutoff is hardly arbitrary in the context of the Section 18 regulatory scheme. The longest duration for any emergency exemption, set forth in the Section 18 regulations, is “in no case for longer than 3 years.”<sup>71</sup> And a three-year limit makes sense, because during the 1992 House Committee investigation of the Section 18 program, the EPA explained that “[i]t generally takes three years to conduct a chronic toxicity test on a chemical.”<sup>72</sup> Accordingly, Section 18 regulations presume that three years is the approximate time required to complete an application for unconditional registration.<sup>73</sup> Finally, both the House Committee and the GAO, concerned about repeat exemptions granting backdoor access to the pesticide market, “strongly recommended” that the EPA “adopt a firm rule flatly excluding from the definition of an ‘emergency’ chronic or repetitive requests that continue for over *three* or four years.”<sup>74</sup>

Thus, a three-year limit on re-certification is not arbitrary within the context of the EPA’s administration of the Section 18 program, and by declining to cap the number of years re-certification is available, the EPA created a workaround for the one-year limit on specific exemptions.<sup>75</sup> This establishes a system in which pesticides that are “indefinitely stalled” in the registration review process — perhaps due to lack of toxicological data or concerns about carcinogenicity — can be sold and distributed freely without any incentive to make progress towards registration.<sup>76</sup> Re-certification seems to offer the same market access as unconditional registration, but the former offers manufacturers the added benefits of lower application cost (due to less rigorous data requirements) and less public scrutiny.

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<sup>69</sup> 71 Fed. Reg. at 4,497-98.

<sup>70</sup> *Id.* at 4,497.

<sup>71</sup> 40 C.F.R. § 166.28(b) (setting duration for quarantine exemptions).

<sup>72</sup> 1992 *Investigation* at 16.

<sup>73</sup> See 40 C.F.R. § 166.25(b)(2)(ii) (“It shall be presumed that if a complete application for registration for registration of a use, which has been under a specific . . . exemption for any 3 previous years, . . . has not been submitted, reasonable progress towards registration has not been made.”).

<sup>74</sup> 1992 *Investigation* at 12, 19 (emphasis added).

<sup>75</sup> 40 C.F.R. § 166.28(a).

<sup>76</sup> See 1992 *Investigation* at 16.

### III. Sulfoxaflor

#### A. Sulfoxaflor Registration

Sulfoxaflor is an insecticide used to control sap-feeding insects like aphids, which are rapidly becoming resistant to neonicotinoids — currently “the mainstay for [insect] control in a wide range of crops.”<sup>77</sup> Sulfoxaflor and neonicotinoids share the same mode of action, targeting the same receptor in insects’ central nervous system.<sup>78</sup> But sulfoxaflor’s structure-activity relationship is distinct from that of neonicotinoids; this means that the piece of the sulfoxaflor molecule that most closely correlates with its biological activity is chemically different from that of neonicotinoids.<sup>79</sup> Growers are increasingly relying on sulfoxaflor to control neonicotinoid-resistant insects.<sup>80</sup>

In 2010 Dow Agrosciences applied to the EPA for registration of three pesticide products containing sulfoxaflor, which was a new active ingredient at the time.<sup>81</sup> Dow applied for uses on several crops, one of which was cotton. Determining that data in Dow’s application raised toxicity concerns for bees, the EPA concluded that additional studies and data on impacts on bees were necessary before it could grant unconditional registration and proposed to conditionally register sulfoxaflor in January 2013.<sup>82</sup> Then, a few months later and apparently without receiving any additional data or studies from Dow, the EPA unconditionally registered sulfoxaflor in May 2013.<sup>83</sup> Several commercial beekeepers and beekeeping organizations, concerned that the EPA had registered sulfoxaflor after concluding that it was “very highly toxic” to bees, challenged the approval in court.<sup>84</sup> The Ninth Circuit vacated the original sulfoxaflor registration, effective November 2015.<sup>85</sup>

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<sup>77</sup> Thomas C. Sparks, et al. *Sulfoxaflor and the Sulfoximine Insecticides: Chemistry, Mode of Action and Basis for Efficacy on Resistant Insects*, 107 PESTICIDE BIOCHEM. & PHYSIOLOGY 1, 1 (2013).

<sup>78</sup> *Id.*

<sup>79</sup> See Sparks, et al. at 2-3.

<sup>80</sup> See Christopher Longhurst, et al., *Cross-Resistance Relationships of the Sulfoximine Insecticide Sulfoxaflor with Neonicotinoids and Other Insecticides in the Whiteflies Bemisia tabaci and Trialeurodes vaporariorum*, 69 PEST MANAGEMENT SCIENCE 809, 809 (2013).

<sup>81</sup> 75 Fed. Reg. 80,490, 80,491-93 (Dec. 22, 2010).

<sup>82</sup> EPA Docket # EPA-HQ-OPP-2010-0889-0031 (posted Jan. 14, 2013) found at regulations.gov.

<sup>83</sup> EPA Docket # EPA-HQ-OPP-2010-0889-0396 (posted May 6, 2013) found at regulations.gov.

<sup>84</sup> *Pollinator Stewardship Council v. EPA*, 806 F.3d 520, 522, 527-28 (9th Cir. 2015).

<sup>85</sup> *Id.* at 528.

In October 2016 the EPA issued a new unconditional registration.<sup>86</sup> This decision — like the 2013 unconditional registration — was not a product of evaluating any new or additional data supplementing Dow’s initial submission. But the EPA explained that it did not need further studies on sulfoxaflor’s toxicity to bees because the new registration limited the crops and timing of sulfoxaflor uses “resulting . . . in essentially no exposure to bees.”<sup>87</sup> Dow had amended its application, purportedly to reduce risks to pollinators, by limiting sulfoxaflor application to only post-bloom uses for crops that are attractive to bees.<sup>88</sup> Crops that are indeterminate bloomers, such as cotton, were not included in the amended proposed registration.<sup>89</sup>

## **B. Emergency Exemptions for Use of Sulfoxaflor on Cotton and Sorghum**

As of November 30, 2017, the EPA had issued at least 78 Section 18 specific exemptions for use of sulfoxaflor (Appendix A).<sup>90</sup> Every single one of these granted exemptions were for uses either on cotton, which was retracted from Dow’s 2015 amended registration application, or on sorghum, which was never included in the registration application at all. The few publicly available Section 18 applications for sulfoxaflor indicate that the most common (possibly only) basis for requesting a specific exemption is the risk of significant economic loss. These applications also reveal that states are claiming anticipated economic losses by comparing yields and revenues expected with, and without, use of this pesticide, rather than comparing yields and revenues with, and without, the “pest emergency” required by the Section 18 regulations. And despite its own regulations, the EPA is granting these requests, thereby permitting unregistered uses of sulfoxaflor for the purpose of revenue enhancement.

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<sup>86</sup> Office of Pesticide Programs, EPA, *Registration of Sulfoxaflor for Use on Agricultural Crops, Ornamentals, and Turf* (Oct. 14, 2016) [hereinafter *Sulfoxaflor Reg.*].

<sup>87</sup> *Id.* at 3-4.

<sup>88</sup> *Id.* at 2, 4.

<sup>89</sup> *Id.* at 2-3.

<sup>90</sup> See appended spreadsheet downloaded from EPA’s Section 18 Emergency Exemption Database, <https://www.epa.gov/pesticide-registration/emergency-exemption-database> (last visited Nov. 30, 2017). Note that at least four emergency exemptions reported in the Federal Register do not appear in the EPA’s Section 18 Emergency Exemption Database. See 81 Fed. Reg. 90,836 (Dec. 15, 2016) (Use on cotton in AR to control tarnished plant bug June 7 to Oct. 31, 2016); 77 Fed. Reg. 66,834 (Nov. 7, 2012) (Use on cotton in AR and LA to control tarnished plant bug June 1 to Sept. 30, 2012); 82 Fed. Reg. 14,715 (March 22, 2017) (Use on sorghum in MS to control sugarcane aphid May 1 to Oct. 31, 2017. See also 82 Fed. Reg. 31,056 (July 5, 2017); 80 Fed. Reg. 76,481 (Dec. 9, 2015); 80 Fed. Reg. 60,669 (Oct. 7, 2015); 80 Fed. Reg. 26,555 (May 8, 2015); 80 Fed. Reg. 6,515 (Feb. 5, 2015); 79 Fed. Reg. 57,081 (Sept. 24, 2014); 82 Fed. Reg. 56,821 (Nov. 30, 2017); 81 Fed. Reg. 4,623 (Jan. 27, 2016); 81 Fed. Reg. 27,129 (May 5, 2016); 76 Fed. Reg. 33,276 (June 8, 2011).

## 1. Cotton

Although Dow amended its sulfoxaflor registration application to exclude cotton, the EPA granted specific exemptions for this use to at least six states in 2016 and in at least 10 states in 2017. All of these exemptions are directed to controlling tarnished plant bug, *Lygus lineolaris*.<sup>91</sup> Five of the applications for use in 2017 were submitted before cotton was even planted.<sup>92</sup> There are presently only seven publicly available applications requesting use of sulfoxaflor on cotton: four requests in 2012 for use on 1.4 million acres and three requests made in 2016 for use on 826,250 acres.<sup>93</sup> These indicate that in Section 18 applications seeking use of sulfoxaflor on cotton (1) the underlying “emergency” condition is a pest problem that has been around for at least a decade; (2) the claims of “significant economic loss” are based on comparing yields and revenues with and without the use of sulfoxaflor; and (3) despite its demonstrated toxicity to bees, sulfoxaflor has become a cornerstone of many states’ cotton pest-management programs.

The three 2016 publicly available Section 18 applications use the same boilerplate language to characterize the “pest emergency” warranting use of sulfoxaflor on cotton.<sup>94</sup> They state that the pest problem, “economic damage from tarnished plant bugs,” is one that cotton growers in these states have been actively battling since the mid-1990s.<sup>95</sup> In response growers turned to chemical control for tarnished plant bugs, “relying heavily” on neonicotinoids, along with organophosphates, pyrethroids and carbamates; tarnished plant bugs predictably developed resistance to all of these pesticides. This resistance to other insecticide classes is the “pest emergency” for which states are requesting use of sulfoxaflor, and all three applications cite to the same 2007 study to support the insecticide resistance claim. So these robust tarnished plant bug populations, resistant to neonicotinoids, pyrethroids, organophosphates and carbamates, are a problem that cotton growers have been actively combatting since at

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<sup>91</sup> These exemptions are not eligible for re-certification because registration was cancelled “[p]ursuant to section 6 of FIFRA,” after the Ninth Circuit vacated EPA’s first unconditional registration. See Office of Pesticide Programs, EPA, *Sulfoxaflor – Final Cancellation Order*, at 5 (Nov. 12, 2015); 40 C.F.R. § 166.20(b)(5)(iv); § 166.24(a)(4).

<sup>92</sup> See Appendix A.

<sup>93</sup> 77 Fed. Reg. 66,834 (Nov. 7, 2012) and 81 Fed. Reg. 27,129 (May 5, 2016).

<sup>94</sup> Tennessee Dep’t of Agriculture, *Section 18 Application – Sulfoxaflor (Transform WG Insecticide) Tennessee Cotton*, at 29-30 (April 4, 2016) [hereinafter *TN App.*]; Arkansas State Plant Board, *Section 18 Application – Sulfoxaflor (Transform TM) Arkansas Cotton*, at 24-25 (March 1, 2016) [hereinafter *AR App.*]; Mississippi Dep’t of Agriculture & Commerce, *Request for Section 18 Emergency Use of Sulfoxaflor (Transform WG Insecticide) to Control Tarnished Plant Bug*, at 27-28 (March 1, 2016) [hereinafter *MS App.*].

<sup>95</sup> *TN App.* at 29-30; *AR App.* at 24-25; *MS App.* at 27-28.



least 2007, or possibly earlier. It does not meet the EPA's definition of a "non-routine"<sup>96</sup> situation, "in which the status quo has changed in an unusual way that was unforeseen."<sup>97</sup>

The 2016 Section 18 applications nevertheless frame the tarnished plant bug problem as one that is new and unforeseen because of the anticipated loss of sulfoxaflor, which the states claim "would result in the collapse of the existing pest management system for Mid-South cotton."<sup>98</sup> Arkansas, Mississippi and Tennessee explained that growers "have come to rely on [sulfoxaflor] since 2012 when Transform [EPA Reg. No. 62719-625] was first introduced as a Section 18 [sic]."<sup>99</sup> In fact, Tennessee explained, "Transform has become one of the foundation products" of the states' management of tarnished plant bug on cotton.<sup>100</sup> Loss of the use of sulfoxaflor, these states claimed, would "result in a collapse of the existing pest management system for cotton growth in the Mid-South."<sup>101</sup>

These Section 18 applications also reveal that states' claims for specific exemptions for sulfoxaflor on cotton are based on risk of significant economic loss due to unavailability of the use of sulfoxaflor. The applications compare yields and revenues from years in which sulfoxaflor was available to cotton growers with yields and revenues from years in which sulfoxaflor was not available.<sup>102</sup> In fact, both Arkansas's and Mississippi's applications describe the "emergency period" as "Pre Transform" and the "non-emergency period" as "Post Transform."<sup>103</sup> This directly contradicts the EPA's warning that when demonstrating significant economic loss, "*the comparison . . . between the typical or 'routine' situation and the 'non-routine' situation . . . is not with or without [use of] the requested chemical.*"<sup>104</sup> Regardless, the EPA granted emergency exemptions to Mississippi, Tennessee, and Arkansas (and likely other states) on precisely this basis.<sup>105</sup>

These Section 18 exemptions to maintain yields and revenues possible only through unregistered use of sulfoxaflor shows that the EPA and states are using this program to

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<sup>96</sup> 40 C.F.R. § 166.3.

<sup>97</sup> *EPA Section 18 Training*, Module 2 at 1-2.

<sup>98</sup> *AR App.* at 35; *MS App.* at 28.

<sup>99</sup> *MS App.* at 28.

<sup>100</sup> *TN App.* at 31.

<sup>101</sup> *TN App.* at 30; *AR App.* at 25; *MS App.* at 28.

<sup>102</sup> *AR App.* 26-28; *MS App.* at 29-30; *TN App.* at 31-32.

<sup>103</sup> *AR App.* at 26; *MS App.* at 29.

<sup>104</sup> *EPA Section 18 Training*, Module 3 at 2 (emphasis in original).

<sup>105</sup> 81 Fed. Reg. 90,838 (Dec. 15, 2016).

“salvage poor business decisions”<sup>106</sup> and offer “revenue enhancement” to compensate for “decisions made with knowledge of the risks of agriculture.”<sup>107</sup> Indeed, Tennessee’s application explained that until sulfoxaflor was available to cotton growers, they were “facing an economic crisis . . . because control costs and yield loss ha[d] nearly tripled in the last decade” and “poor commodity prices” were “[e]xacerbating” the economic risks.<sup>108</sup> But “since Transform has become available for use in cotton, producers have benefitted greatly both in terms of revenue and increased yield protection.”<sup>109</sup> Similarly, Arkansas’s application notes that “since Transform has become available for use in cotton, Arkansas producers have benefitted greatly both in terms of gross revenue and increased yield protection.”<sup>110</sup>

In sum, the EPA is routinely authorizing use of sulfoxaflor to insulate cotton growers from the normal risks of agriculture, even though the agency presently lacks data to adequately understand, and accordingly mitigate, the toxicity of sulfoxaflor to bees.<sup>111</sup> The data deficiencies on impacts to bees are precisely the reason cotton is not a registered use of sulfoxaflor. Despite this, states are able to utilize Section 18 to maintain continuing availability of this unregistered use of sulfoxaflor, which cotton growers now consider “foundation[al]” to pest control on cotton.<sup>112</sup>

## 2. Sorghum

Use on sorghum is directed to controlling sugarcane aphids, *Melanaphis sacchari*. In the fall of 2013, “huge populations” of sugarcane aphids were discovered in Texas and reportedly spread to 10 states.<sup>113</sup> Dow did not include sorghum among the uses requested in its sulfoxaflor registration application, but today, this use is widespread — authorized in at least 18 states, many by repeat emergency exemptions. There is no public record, in the Federal Register or otherwise, disclosing the total sorghum acreage covered by sulfoxaflor emergency exemptions, but in 2016 Texas’s specific exemption alone applied to 3 million acres of sorghum and in 2017 jumped to 5.5 million acres.<sup>114</sup>

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<sup>106</sup> 1992 *Investigation* at 15.

<sup>107</sup> *EPA Section 18 Training*, Module 2 at 4.

<sup>108</sup> *TN App.* at 30.

<sup>109</sup> *Id.* at 30, 31.

<sup>110</sup> *AR App.* at 28.

<sup>111</sup> *See Pollinator Stewardship Council*, 806 F.3d at 531-32.

<sup>112</sup> *See TN App.* at 31.

<sup>113</sup> Texas Department of Agriculture, *Section 18 Emergency Specific Exemption: Transform WG Insecticide Sulfoxaflor*, EPA Reg. No. 62719-625, *For the Control of the Sugarcane Aphid, Melanaphis Sacchari*, in *Sorghum in Texas*, at 16 (2016) [hereinafter *TX App.*]

<sup>114</sup> *TX App.* at 4 and 82 Fed. Reg. 56,821 (Nov. 30, 2017).

Texas's 2016 application is, at present, the only publicly available Section 18 application requesting this use. The information in this application reveals that, like in the case of cotton, states and growers are relying on Section 18 use of sulfoxaflor for revenue enhancement and to salvage poor business decisions. Texas's application claims risk of significant economic loss for sorghum growers due to the rise of the sugarcane aphid. But it appears that even before the sugarcane aphid infestation in 2013, sorghum cultivation was a risky venture with razor-thin (if any) profit margins. Texas reported average yields and sorghum prices from before the aphid problem, in 2010, 2011 and 2012, and sorghum netted losses for all three of those years.<sup>115</sup> Texas's application offers no point of comparison with yield data from years in which the purported sugarcane aphid emergency arose or was ongoing; the application contains no sorghum yield or revenue data from 2013 through the present. Instead, to demonstrate significant economic loss at Tier 1, Texas offers only the following naked assertion: "Dr. Michael Brewer, Texas A&M AgriLife Research Specialist in Corpus Christi, has reported losses ranging [sic] from 25-75% along the Gulf Coast."<sup>116</sup> This unsubstantiated assertion was sufficient for Texas to gain an emergency exemption for use of sulfoxaflor on sorghum.

Offering sorghum growers revenue enhancement for their risky investment by widespread Section 18 sulfoxaflor exemptions puts bees at risk.<sup>117</sup> The U.S. Department of Agriculture's 2015 Bee Pollinator Attractive Crops List identified sorghum as a crop that is attractive to honey bees and solitary bees.<sup>118</sup> The Ninth Circuit vacated the EPA's initial registration of sulfoxaflor because, despite its conclusion that sulfoxaflor triggered risk concerns for bees, the EPA failed to require further studies and data to fully evaluate the risk.<sup>119</sup> Nevertheless, the EPA re-registered sulfoxaflor using

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<sup>115</sup> Texas's application states:

the avg yield of grain sorghum in Texas in 2010, 2011 and 2012 was 70, 49 and 59 bu/acre, respectively, for a 3-year avg of approximately 59 bu/acre (56 lb/bu for grain sorghum) which is about 3300 lb/acre. The avg price for grain sorghum in Texas in 2010, 2011 and 2012 was approximately \$7.26, \$10.40 and \$11.20/cwt. The current price for grain sorghum is about \$7.50/cwt.

*TX App.* at 18. These figures correspond to the following monetary yields for 2010, 2011 and 2012, respectively: \$284/acre, \$285/acre and \$370/acre. Texas also reports "cost of production for grain sorghum is approximately \$325-375 per acre." *Id.* This means that sorghum growers netted losses in 2010 and 2011, and likely in 2012, but Texas characterizes these as a "slim profit margin" that would be "devastat[ed]" by "unexpected and uncontrolled pest infestations, like the sugarcane aphid." *Id.*

<sup>116</sup> *TX App.* at 17.

<sup>117</sup> EPA asserts that it is controlling risk to pollinators by issuing Section 18 labels that "preclude[] application of sulfoxaflor three days before bloom or before seed set" for sorghum, since "bees are typically only present when plants are in bloom." EPA response to TX, at 2.

<sup>118</sup> USDA, *Attractiveness of Agricultural Crops to Pollinating Bees for the Collection of Nectar and/or Pollen*, at 19 (2015).

<sup>119</sup> *Pollinator Stewardship Council*, 806 F.3d at 531-32.

the initial data submission — without demanding or reviewing any additional studies or data on impacts to pollinators — because Dow had amended its application to “reduce/eliminate exposure to pollinators.”<sup>120</sup> At the time of the amended application, sulfoxaflor was already being widely used on sorghum; so Dow’s decision not to include sorghum in its amended application is notable, indicating that sorghum would be one of the crops that would trigger need for further study because triggered the EPA’s risk concerns for pollinators. This means that use of sulfoxaflor on sorghum exposes bees to risks<sup>121</sup> that have not been adequately reviewed by the EPA.

## Conclusion

The EPA’s administration of sulfoxaflor under Section 18 reveals that this provision is effectively utilized as a workaround for FIFRA registration. As demonstrated in the case of sulfoxaflor emergency exemptions for use on cotton and sorghum, Section 18 facilitates widespread use of pesticides that are not eligible for registration because of possible risks to human health and the environment. Repeated Section 18 authorizations create dependency on unregistered pesticide uses by authorizing these for several years on end. Once that dependency arises, states can make a case that growers need continuing use of the unregistered pesticide because it is an essential component of that state’s growers’ pest management program. And without the unregistered use, states claim a risk of significant economic loss that rises to the level of an emergency condition. This is contrary to congressional purpose for Section 18, which was supposed to be a temporary fix to address unanticipated, urgent and short-lived pest situations. Instead, Section 18 has become a mechanism for protecting growers’ profit margins while placing human health and the environment at risk.

Cover photo of bumblebee from Pixabay

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<sup>120</sup> *Sulfoxaflor Reg.* at 2-3.

<sup>121</sup> To reduce risks to pollinators, Dow eliminated indeterminate blooming crops like cotton and strawberry from its registration application, *Sulfoxaflor Reg.* at 2-3, but sorghum is a determinate crop. Pummy Kumary, et al. *Sorghum*, BROADENING THE GENETIC BASE OF GRAIN CEREALS, at 177, Mohar Singh & Sandeep Kumar Eds., 2016.



## Appendix A -- Emergency Exemptions for Sulfoxaflor

Applicant	Site	Pest	Status	Received Date	Response Date	Expire Date	Approved Acreage	Fed Reg Notice
Alabama	Cotton	Tarnished Plant Bugs	Issued	2/2/2017	3/6/2017	10/31/2017	75,000	A
Alabama	Sorghum	Sugarcane Aphid	Issued	2/2/2017	2/23/2017	10/31/2017	45,000	A
Alabama	Cotton	Tarnished Plant Bugs	Issued	4/20/2016	6/7/2016	10/31/2016	unknown	C
Alabama	Sorghum	Sugarcane Aphid	Issued	3/28/2016	5/5/2016	4/8/2017	unknown	C
Alabama	Sorghum	Sugarcane Aphid	Issued	2/2/2015	2/26/2015	11/30/2015	unknown	F
Arizona	Sorghum	Sugarcane Aphid	Issued	4/26/2017	5/1/2017	11/30/2017	26,000	J
Arizona	Cotton	Tarnished Plant Bugs	Issued	4/21/2017	5/4/2017	10/31/2017	150,000	J
Arizona	Cotton	Tarnished Plant Bug	Issued	4/7/2017	4/21/2017	10/31/2017	unknown	
Arizona	Sorghum	Sugarcane Aphid	Issued	9/16/2016	9/22/2016	4/8/2017	unknown	C
Arizona	Alfalfa	Blue Aphid	Withdrawn	3/18/2015	7/16/2015	-	N/A	
Arkansas	Sorghum	Sugarcane Aphid	Issued	3/2/2017	3/16/2017	9/15/2017	50,000	A
Arkansas	Cotton	Tarnished Plant Bugs	Issued	2/27/2017	3/16/2017	10/31/2017	420,000	A, J
Arkansas	Sorghum	Sugarcane Aphid	Issued	4/8/2016	5/5/2016	4/8/2017	unknown	C
Arkansas	Cotton	Tarnished Plant Bug	Issued*	-	6/7/2016	10/31/2016	320,000	C, L
Arkansas	Sorghum	Sugarcane Aphid	Issued	1/8/2015	2/26/2015	10/31/2015	unknown	F
Arkansas	Sorghum	Sugarcane Aphid	Issued	7/1/2014	7/2/2014	10/31/2014	unknown	G
Arkansas	Cotton	Tarnished Plant Bug	Issued*	-	6/1/2012	9/30/2012	387,000	I, M
Arkansas	Cotton	Tarnished Plant Bug	Withdrawn	1/18/2011	7/21/2011	-	N/A	
Colorado	Sorghum	Sugarcane Aphid	Issued	3/14/2017	4/3/2017	11/30/2017	500,000	J
Colorado	Sorghum	Sugarcane Aphid	Issued	7/5/2016	7/11/2016	4/8/2017	unknown	C
Florida	Sorghum	Sugarcane Aphid	Issued	9/18/2014	9/24/2014	12/31/2014	unknown	G
Georgia	Sorghum	Sugarcane Aphid	Issued	1/30/2017	5/1/2017	11/30/2017	50,000	J
Georgia	Sorghum	Sugarcane Aphid	Issued	3/3/2016	5/5/2016	4/8/2017	unknown	C
Georgia	Sorghum	Sugarcane Aphid	Issued	1/26/2015	2/26/2015	11/30/2015	unknown	F
Georgia	Sorghum	Sugarcane Aphid	Issued	9/4/2014	9/11/2014	11/30/2014	unknown	G
Idaho	Alfalfa Seed	Lygus Bug	Withdrawn	3/18/2016	6/16/2016	-	N/A	
Idaho	Alfalfa Seed	Lygus Bug	Withdrawn	4/17/2015	5/21/2015	-	N/A	
Illinois	Sorghum	Sugarcane Aphid	Issued	7/18/2016	7/19/2016	4/8/2017	unknown	C
Illinois	Sorghum	Sugarcane Aphid	Withdrawn	9/10/2015	10/29/2015	-	N/A	
Kansas	Sorghum	Sugarcane Aphid	Issued	3/20/2017	4/3/2017	11/30/2017	2,850,000	J
Kansas	Sorghum	Sugarcane Aphid	Issued	4/12/2016	5/5/2016	4/8/2017	unknown	C
Kansas	Sorghum	Sugarcane Aphid	Issued	3/26/2015	3/31/2015	11/30/2015	unknown	F
Kentucky	Sorghum	Sugarcane Aphid	Issued	6/22/2016	7/19/2016	4/8/2017	unknown	C
Kentucky	Sorghum	Sugarcane Aphid	Issued	8/4/2015	8/10/2015	11/30/2015	unknown	D
Louisiana	Cotton	Tarnished Plant Bugs	Issued	1/27/2017	3/6/2017	10/31/2017	175,000	A
Louisiana	Sorghum	Sugarcane Aphid	Issued	1/27/2017	2/17/2017	11/30/2017	180,000	A
Louisiana	Cotton	Tarnished Plant Bugs	Issued	4/20/2016	6/7/2016	10/31/2016	unknown	C
Louisiana	Sorghum	Sugarcane Aphid	Issued	1/15/2016	5/5/2016	4/8/2017	unknown	C
Louisiana	Sorghum	Sugarcane Aphid	Issued	2/9/2015	3/12/2015	10/31/2015	unknown	F
Louisiana	Sugarcane	Sugarcane Aphid	Withdrawn	7/28/2014	10/1/2014	-	N/A	
Louisiana	Sorghum	Sugarcane Aphid	Issued	3/18/2014	4/30/2014	10/31/2014	unknown	H
Louisiana	Cotton	Tarnished Plant Bugs	Issued*	-	6/1/2012	9/30/2012	230,000	I, M
Louisiana	Cotton	Tarnished Plant Bugs	Withdrawn	2/17/2011	7/25/2011	-	N/A	

Applicant	Site	Pest	Status	Received Date	Response Date	Expire Date	Approved Acreage	Fed Reg Notice
Louisiana	Cotton	Tarnished Plant Bugs	Withdrawn	2/17/2011	7/25/2011	-	N/A	
Minnesota	Soybean	Soybean Aphid	Withdrawn	4/6/2017	5/9/2017	-	N/A	
Mississippi	Cotton	Tarnished Plant Bugs	Issued	4/20/2017	4/21/2017	10/31/2017	337,500	B
Mississippi	Cotton	Tarnished Plant Bug	Issued	11/21/2016	12/23/2016	10/31/2017	750,000	J
Mississippi	Sorghum	Sugarcane Aphid	Issued*	-	5/1/2017	10/31/2017	115,000	B
Mississippi	Cotton	Tarnished Plant Bugs	Issued	3/10/2016	6/7/2016	10/31/2016	337,500	C, L
Mississippi	Sorghum	Sugarcane Aphid	Issued	3/3/2016	5/5/2016	4/8/2017	unknown	C
Mississippi	Sorghum	Sugarcane Aphid	Issued	12/29/2014	2/26/2015	10/31/2015	unknown	F
Mississippi	Sorghum	Sugarcane Aphid	Issued	5/28/2014	6/12/2014	10/31/2014	unknown	H
Mississippi	Cotton	Tarnished Plant Bugs	Issued	2/3/2012	6/1/2012	9/30/2012	467,500	I, M
Mississippi	Cotton	Tarnished Plant Bugs	Withdrawn	12/15/2010	7/25/2011	-	N/A	
Missouri	Sorghum	Sugarcane Aphid	Issued	4/12/2017	4/20/2017	11/30/2017	85,000	J
Missouri	Cotton	Tarnished Plant Bugs	Issued	4/12/2017	4/21/2017	10/31/2017	241,500	J
Missouri	Cotton	Tarnished Plant Bugs	Issued	5/16/2016	6/7/2016	10/31/2016	unknown	C
Missouri	Sorghum	Sugarcane Aphid	Issued	5/6/2016	5/11/2016	4/8/2017	unknown	C
Missouri	Sorghum	Sugarcane Aphid	Issued	3/13/2015	3/27/2015	10/31/2015	unknown	F
Missouri	Sorghum	Sugarcane Aphid	Issued	9/5/2014	9/11/2014	11/30/2014	unknown	G
Nebraska	Sorghum	Sugarcane Aphid	Issued	5/26/2016	6/2/2016	4/8/2017	unknown	C
New Mexico	Sorghum	Sugarcane Aphid	Issued	4/24/2017	5/5/2017	11/30/2017	140,000	J
New Mexico	Pecans	Black Pecan Aphid	Withdrawn	6/24/2016	9/21/2016	-	N/A	
New Mexico	Sorghum	Sugarcane Aphid	Issued	6/24/2016	6/28/2016	4/8/2017	unknown	C
New Mexico	Sorghum	Sugarcane Aphid	Issued	8/28/2015	8/28/2015	11/30/2015	unknown	D
North Carolina	Sorghum	Sugarcane Aphid	Issued	4/20/2017	5/5/2017	11/30/2017	50,000	J
North Carolina	Sorghum	Sugarcane Aphid	Issued	4/14/2016	5/5/2016	4/8/2017	unknown	C
North Carolina	Sorghum	Sugarcane Aphid	Issued	7/13/2015	7/16/2015	11/30/2015	unknown	D
Oklahoma	Sorghum	Sugarcane Aphid	Issued	3/14/2017	4/3/2017	11/30/2017	300,000	J
Oklahoma	Sorghum	Sugarcane Aphid	Issued	2/22/2016	5/5/2016	4/8/2017	unknown	C
Oklahoma	Sorghum	Sugarcane Aphid	Issued	3/17/2015	3/27/2015	10/31/2015	unknown	F
Oklahoma	Sorghum	Sugarcane Aphid	Issued	4/16/2014	4/30/2014	10/31/2014	unknown	H
South Carolina	Sorghum	Sugarcane Aphid	Issued	3/1/2017	4/3/2017	11/30/2017	19,600	J
South Carolina	Sorghum	Sugarcane Aphid	Issued	4/21/2016	5/25/2016	4/8/2017	unknown	C
South Carolina	Sorghum	Sugarcane Aphid	Issued	3/4/2015	3/27/2015	11/30/2015	unknown	F
Tennessee	Cotton	Tarnished Plant Bugs	Issued	2/16/2017	4/13/2017	9/30/2017	240,000	J
Tennessee	Sorghum	Sugarcane Aphid	Issued	4/18/2016	5/5/2016	4/8/2017	unknown	C
Tennessee	Cotton	Tarnished Plant Bugs	Issued	4/4/2016	6/7/2016	10/31/2016	168,750	C, L
Tennessee	Sorghum	Sugarcane Aphid	Issued	4/13/2015	6/8/2015	11/30/2015	unknown	E
Tennessee	Sorghum	Sugarcane Aphid	Issued	8/11/2014	8/18/2014	10/31/2014	unknown	G
Tennessee	Cotton	Tarnished Plant Bug	Issued	5/1/2012	6/1/2012	9/30/2012	325,000	I, M
Tennessee	Cotton	Tarnished Plant Bug	Withdrawn	12/27/2010	6/15/2011	-	N/A	
Texas	Cotton	Tarnished Plant Bugs	Issued	5/10/2017	5/12/2017	10/31/2017	5,500,000	J
Texas	Cotton	Tarnished Plant Bugs	Issued	4/20/2017	5/1/2017	10/31/2017	unknown	
Texas	Citrus Trees	Asian Citrus Psyllid	Pending	4/4/2017	-	-	N/A	
Texas	Sorghum	Sugarcane Aphid	Issued	1/17/2017	2/7/2017	11/30/2017	3,000,000	A, K
Texas	Sorghum	Sugarcane Aphid	Issued	12/7/2015	4/8/2016	4/8/2017	unknown	C
Texas	Sorghum	Sugarcane Aphid	Issued	11/20/2014	2/26/2015	10/31/2015	unknown	F

Applicant	Site	Pest	Status	Received Date	Response Date	Expire Date	Approved Acreage	Fed Reg Notice
Texas	Sorghum	Sugarcane Aphid	Issued	1/21/2014	4/24/2014	10/31/2014	unknown	H
Virginia	Sorghum	Sugarcane Aphid	Issued	3/23/2017	4/3/2017	11/30/2017	16,591	J
Virginia	Sorghum	Sugarcane Aphid	Issued	5/10/2016	5/16/2016	4/8/2017	unknown	C
Virginia	Sorghum	Sugarcane Aphid	Withdrawn	9/3/2015	10/28/2015	-	N/A	
Washington	Alfalfa Seed	Lygus Bugs	Withdrawn	4/27/2016	6/16/2016	-	N/A	
Wyoming	Alfalfa Seed	Lygus Bug	Withdrawn	5/24/2016	6/15/2016	-	N/A	

17,551,941

\*

emergency exemptions that are not listed in the Section 18 Emergency Exemption Database

#### Fed Reg Notice

A	82 Fed. Reg. 31,056 (July 5, 2017)	<a href="#">link</a>
B	82 Fed. Reg. 14,715 (March 22, 2017)	<a href="#">link</a>
C	81 Fed. Reg. 90,836 (Dec. 15, 2016)	<a href="#">link</a>
D	80 Fed. Reg. 76,481 (Dec. 9, 2015)	<a href="#">link</a>
E	80 Fed. Reg. 60,669 (Oct. 7, 2015)	<a href="#">link</a>
F	80 Fed. Reg. 26,555 (May 8, 2015)	<a href="#">link</a>
G	80 Fed. Reg. 6,515 (Feb. 5, 2015)	<a href="#">link</a>
H	79 Fed. Reg. 57,081 (Sept. 24, 2014)	<a href="#">link</a>
I	77 Fed. Reg. 66,834 (Nov. 7, 2012)	<a href="#">link</a>
J	82 Fed. Reg. 56,821 (Nov. 30, 2017)	<a href="#">link</a>
K	81 Fed. Reg. 4,623 (Jan. 27, 2016)	<a href="#">link</a>
L	81 Fed. Reg. 27,129 (May 5, 2016)	<a href="#">link</a>
M	76 Fed. Reg. 33,276 (June 8, 2011)	<a href="#">link</a>