



June 30, 2014

By Electronic Submission

Docket EPA-HQ-OPP-2014-0195
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460-0001

Re: Comments to Docket No. EPA-HQ-OPP-2014-0195 Regarding the Registration of Enlist Duo Containing the Choline Salt of 2,4-D and Glyphosate.

The Center for Science in the Public Interest (“CSPI”)¹ hereby submits the following comments to the Environmental Protection Agency (“EPA”) regarding the issues raised in its Docket No. EPA-HQ-OPP-2014-0195, which addresses the registration of Enlist Duo containing the choline salt of 2,4-D and glyphosate. In the proposed Registration and Section 3 label for Enlist Duo, the conditions established by EPA are a good first step toward addressing the development of resistant weeds and the prevention of drift that might harm other agricultural crops. However, to achieve the goal that Enlist Duo be used in a sustainable manner that does not result in resistant weeds or having inadvertent drift to neighbors, EPA needs to strengthen some terms in its proposed registration and label. The additional conditions suggested below will help minimize negative impacts as much as possible while allowing present and future farmers to use Enlist Duo to address weeds on their farms.

¹ CSPI is a nonprofit education and advocacy organization that focuses on improving the safety and nutritional quality of our food supply. CSPI seeks to promote health through educating the public about nutrition; it represents citizens’ interests before legislative, regulatory, and judicial bodies; and it works to ensure advances in science are used for the public good. CSPI is supported by the 900,000 member-subscribers to its Nutrition Action Healthletter and by foundation grants. CSPI receives no funding from industry or the federal government.

I. **The Proposed Registration and Section 3 Label Requirements to Prevent the Development of 2,4-D Resistant Weeds Should be Strengthened and Made More Explicit in Order to Achieve the Intended Purpose.**

If used properly, Enlist Duo and the corresponding herbicide-tolerant corn and soybean seeds (“Enlist seeds”) can be a useful tool for current and future farmers fighting weeds. EPA has set forth numerous registration conditions that will help Dow and farmers use Enlist Duo so that the development of resistant weeds can be delayed. While the Proposed Registration and Section 3 Label address the need for active herbicide resistance management, the provisions need to be strengthened if EPA is to succeed in its goal. In particular, rotating to other herbicides and limiting the number of sprays in a field need to be **mandatory** obligations. In addition, some of the herbicide selection and cultural practices that farmers are supposed to carry out for herbicide resistance management need to be more clearly articulated. EPA also needs to retain, and not hesitate to use, its power to modify or cancel the registration if resistant weeds occur. Each of those points is described in detail below.

A. **Rotation to Other Herbicides and Restrictions on the Number of Times a Farmer Can Use Enlist Duo are Essential to Preventing the Development of 2,4-D Resistant Weeds.**

While there are many factors that determine the frequency at which resistant weeds develop, “the single most important factor leading to the evolution of herbicide resistance is overreliance on a single herbicide (or group of herbicides with the same MOA) without using other weed management options” (Norsworthy et al., 2012, p. 33). In fact, there are numerous examples of weeds developing resistance when the same herbicide is used in multiple consecutive years in the same field (Norsworthy et al., 2012, p. 33). For that reason, EPA should separate out two of its herbicide resistance management practices for special treatment: (1) the rotation of Enlist Duo with non-Group 4 and non-Group 9 herbicides; and (2) the avoidance of using more than two applications of Enlist Duo in a single growing season. It is critical to achieving EPA’s goal of preventing the evolution of resistant weeds that both of those practices are carried out by all Enlist Duo farmers.

Unfortunately, there is an abundance of evidence that farmers will not carry out those practices in a voluntary manner. Norsworthy et.al. (2012) states on page 34 that most herbicide resistance strategies are carried out reactively after a resistant weed population exists, instead of proactively to mitigate the evolution of resistance in the first instance. In addition, there is evidence that “using multiple herbicides with different MOAs was one of the least-adopted practices for resistance management, despite this strategy being frequently advocated by weed scientists as an effective means to reduce the risk of herbicide-resistance evolution” (Norsworthy et al., 2012, p. 34). Therefore, it is crucial that EPA **mandate** that farmers using Enlist Duo rotate to herbicides with a different mode of action and not spray Enlist Duo too often on the same field. EPA can achieve this by adopting the following language in the Section 3 label (with bold lettering included on the label for emphasis):

- “Rotate the use of this product with non-Group 4 and non-Group 9 herbicides. **Do not spray Enlist Duo on the same field three years in a row.**”
- **“Do not spray more than two applications of Enlist Duo on the same field in one year.”²**

The proposed language would unambiguously give farmers specific parameters about how often they can use Enlist Duo. It is also consistent with a recent editorial from the scientific journal *Nature* where the editors stated, “Measures for herbicide-tolerant crops might require farmers to rotate crops or herbicides every few years – a familiar restriction because many herbicides have limits on how often they can be used for environmental reasons. Such measures would be a sign that regulators and farmers alike have realized the consequences of underestimating the ability of weeds to develop resistance” (A growing problem, 2014, p. 187).

There are a number of other factors that support EPA including mandatory use restrictions on the Section 3 label. First, if Dow was deploying Enlist Duo into an environment without any herbicide-resistant weeds, the dual action of 2,4-D and glyphosate would stand a better chance of delaying resistant weed development. However, many of the weeds which Enlist Duo controls have resistance to other herbicides. In fact, 59 out of the 128 weeds (46%) that the Section 3 Label says will be controlled by Enlist Duo are already resistant to one or more herbicides (see Appendix, Table A). In addition, 13 of the 14 weed species that are resistant to glyphosate in the U.S. are listed as weeds controlled by Enlist Duo (see Appendix, Table B). So, many of the target weeds are known to be able to evolve resistance to herbicides. If they are constantly exposed to Enlist Duo without rotation to other herbicides with different modes of action, it is likely that they will develop resistance to 2,4-D relatively quickly.

The evidence to date about the use of glyphosate with glyphosate-tolerant seeds also shows that voluntary resistance management practices were not successful. Since the first introduction of a glyphosate-tolerant seed in 1996, there have been 14 weed species that have become resistant to glyphosate in the U.S. They are estimated to cover more than 60 million acres of farmland throughout the U.S. (Fraser, 2013). Those resistant weeds developed for many reasons. However, the primary reason was that farmers used glyphosate every year in the same fields without rotating to other herbicides with different modes of action. Many farmers also did not rotate the crops grown on those fields, so that glyphosate was being sprayed on the same type of weeds each year until a resistant biotype evolved.

² While the ideal restriction would be for EPA to require all Enlist farmers to rotate to a non-Enlist Duo herbicide every other year, the combination of limiting the sprays each year and rotating away from Enlist Duo every third year is probably sufficient for fields that don’t have existing glyphosate-resistant weeds. This compromise would be easier for farmers to comply with because it allows farmers more flexibility in what they plant, which herbicides they use, and what other resistance management practices to use.

When EPA approved glyphosate for use with glyphosate-resistant seeds, it did not impose any herbicide resistance management obligations on Monsanto or on farmers. It is good to see that EPA is not repeating that mistake with Enlist Duo and instead is imposing herbicide resistance management obligations. However, the experience with glyphosate shows that farmers will not carry out the most effective resistance management practices – rotating to herbicides with different modes of action and limiting the number of sprays of an herbicide – unless those practices are required.

Unfortunately, there are economic interests for Dow and farmers using Enlist Duo that will likely prevent voluntary adoption of herbicide rotation. Dow has an economic interest in having farmers purchase Enlist Duo every year so they don't lose that customer the next year to a different herbicide and seed producer. Similarly, it is easier for farmers to keep using the same herbicide (or combination of herbicides) each year – they don't need to clean their equipment as much, they may not need to buy additional equipment, etc... As stated by Norsworthy et.al. (2012), the overarching reason why farmers do not use multiple different herbicides is that “using diverse MOAs can increase current weed-control costs.” In addition, many farmers only rent the land they farm for a certain period of time. They may not receive any long term economic benefits by keeping the land free of resistant weeds. Therefore, if EPA wants to prevent resistant weeds from developing, they need to mandate the most beneficial of those practices – herbicide rotation and restrictions on the number of sprays of Enlist Duo –so all farmers have the same obligations and no one is economically disadvantaged by the fact that their competitor is not incurring the identical resistance management costs.

B. The Existing Language on Herbicide Resistance Management in the Proposed Section 3 Label Needs to be Made More Explicit.

While the proposed language in the Section 3 label addressing “herbicide resistance management,” specifies a number of good practices to prevent the development of 2,4-D resistant weeds, much of the language is ambiguous as to what obligations farmers are required to comply with. For example, page 10 states that “proactively implementing diversified weed control strategies...is a best practice.” Nowhere does it explicitly state that farmers using Enlist Duo “must” implement a diversified weed control strategy. In addition, it states that “To aid in the prevention of developing weeds resistant to this product, use the following practices.” That language is ambiguous about whether farmers have a duty to prevent resistant weed development and whether they must use any or all of those specific practices. Instead, the label should state: “Farmers utilizing this product have a duty to carry out herbicide resistance management and must use some or all of the follow practices, including at a minimum the practices highlighted in **bold** text.”

The language in the proposed label identifying “herbicide selection” and “crop selection and cultural practices” on page 10 lists a number of practices without any emphasis on which are most important or required when Enlist Duo is used. For example, the final three items under “crop selection and cultural practices” – scouting fields, treating escapes, and calling Dow if the product does not perform – should be

mandatory for all applicators of Enlist Duo. However, the language used and their placement in a list with other practices suggests to the farmer that he/she can choose to do one, two, all, or none of the activities. Instead, the label should specify which practices are mandatory and which are practices the farmer can choose between depending on the specifics of his field. Clearly, the three items mentioned above – scouting fields, treating escapes, and calling Dow if the product does not perform – should be mandatory for all farmers.³ The language used should state that and it should be highlighted with **bold** text, which is the manner in which other mandatory obligations elsewhere in the document are identified (e.g. “**Do not aerially apply this product**”).

Several of the practices under “herbicide selection” also should be required of all Enlist Duo farmers. Instead of saying “rotate the use of this product with non-Group 4 and non-Group 9 herbicides,” the label should state: “Rotate the use of this product with non-Group 4 and non-Group 9 herbicides. **Do not spray Enlist Duo three years in a row in the same field.**” Similarly, the practice of not using Enlist Duo more than twice in the same field in a growing season should be strengthened to say: “**Do not spray more than two applications of Enlist on the same field in one season.**” This practice is critically important to preventing resistant weeds, independent of whether it is mixed with a third herbicide.

C. **EPA’s Ability to Modify the Registration and the Reporting Requirements by Dow if Resistant Weeds Develop is Essential to the Prevention and Spread of Resistant Weeds**

In the Proposed Registration document, EPA announced that it will establish registration terms that allow EPA the flexibility to modify or cancel the registration if concerns about weed resistance arise. The registration also requires Dow to establish a stewardship plan that includes visiting fields where non-performance has been reported and identifying for EPA likely instances of weed resistance on a monthly basis. CSPI supports those provisions and believes they are essential to avoiding the situation that has occurred with glyphosate and glyphosate-tolerant seeds where resistant weeds now exist on millions of acres of farmland. It is essential that Dow and EPA monitor the performance of Enlist Duo and how farmers use it. EPA needs to retain the authority to make changes to the registration, including revocation, if resistance management is not working successfully.⁴

³ On page 19 of the Proposed Registration document, EPA discusses how field scouting both before and after application are “essential.” The text also discusses the need for farmers to call Dow if non-performance is identified. Therefore, it is strange that those “practices” are not highlighted on the Label as being more important than the other listed practices. It is clear that no farmer will be able to carry out every practice listed on page 10 of the label for herbicide resistance management. If those practices are an essential part of the Dow stewardship plan, the label needs to highlight their importance.

⁴ The restriction that Enlist Duo can only be used in six states also provides EPA with the opportunity to modify the registration conditions when additional states are added. In addition, if resistance management is not working as envisioned and changes are not effective, EPA should not add other states to the registration. (See Section V of this comment).

II. **EPA’s Proposed Registration and Section 3 Label Need to Specify Special Use Conditions for Farms that Already Have One of the Six Glyphosate-Resistant Weeds that is also a Weed Species Controlled by Enlist Duo.**

The proposed Section 3 label for Enlist Duo identifies both annual and perennial weeds that are controlled by Enlist Duo. Of that list of approximately 128 weed species, six of those weeds – horseweed, kochia, palmer pigweed, common ragweed, giant ragweed, and waterhemp – have glyphosate-resistant varieties in one or more of the six states where Enlist Duo will be allowed under the proposed registration (see Appendix, Table C). If farmers who have fields with those glyphosate-resistant weeds spray Enlist Duo on that field, those weeds effectively will have been sprayed with only one herbicide with a single mode of action (as opposed to all other weeds in that field which would have received two herbicides with two different modes of action).

The EPA Benefits analysis for Enlist Duo acknowledges that situations where farmers have glyphosate-resistant weeds need proactive resistance management.

Where there are weeds that are resistant to one of these herbicides, these weeds will be controlled by a single herbicide. In this situation for example, glyphosate resistant weeds will be controlled by a single active ingredient 2,4-D. The use of a single effective herbicide to control weeds will increase selection pressure for weeds resistant to that herbicide, therefore it is important that resistance management be practiced proactively (EPA Memorandum, 2014, p. 8).

Similarly, as stated by Norsworthy et.al. (2012) on page 40, “Herbicide mixtures are effective at delaying resistance only when the mixture components target, and are effective on, the same weed species.” Those six glyphosate-resistant weeds will have a much greater likelihood of developing a 2,4-D resistant biotype. If that happens, it would eliminate both herbicides in Enlist Duo from being effective to that farmer and to any neighboring fields where those weed seeds might grow in subsequent years.

The EPA proposed registration and Section 3 label needs to specifically address that situation with special herbicide resistance management obligations if it wants to effectively manage the overall prevention of 2,4-D resistant weeds. For farmers who have a glyphosate-resistant weed on their farm that can be controlled by 2,4-D, they **should not be allowed to use Enlist Duo two years in a row in the same field and must instead rotate to a non-Group 4 and non-Group 9 herbicide in the second year.** They also should be required to rotate the crop grown in that field each year. In addition, those farmers should establish an integrated weed management plan that incorporates other weed control practices, such as mechanical cultivation, cover crops, and scouting for weed escapes. Dow should be required to annually survey a representative number of this subset of Enlist Duo farmers to ensure they are meeting the additional herbicide resistance management obligations. Dow’s oversight should include visiting some farms with glyphosate-resistant weeds to review pesticide use documentation and to observe field conditions. Fields with populations of glyphosate-resistant weeds that are controlled

by 2,4-D need additional herbicide resistance management obligations if EPA is to protect the usefulness of 2,4-D for farmers now and in the future.

III. To Ensure that Enlist Duo Does not Drift Toward Sensitive Crops, the Label Should Not Allow Applications When Wind Speeds are Greater than 10 Miles per Hour and Should More Explicitly Restrict Spraying When Conditions Favor a Temperature Inversion.

In the proposed registration and Section 3 label, EPA and Dow have included a number of important use conditions that will reduce the likelihood that Enlist Duo will drift from a farmer's property and impact nearby crops. Those include the prohibition on applying the product aerially, the droplet and groundboom application requirements, the 30-foot buffer to protect sensitive areas, and the restriction against spraying when the wind is in the direction of susceptible plants (tomatoes and other fruiting vegetables, cucurbits, and grapes). However, the restriction that Enlist Duo cannot be sprayed at wind speeds greater than 15 mph is not sufficiently protective. Instead, the label should restrict using Enlist Duo if wind speeds exceed 10 mph.⁵ Several Purdue extension specialists in Botany, Plant Pathology, and Horticulture stated in a November 2012 publication that, to be protective of neighboring fields wind restrictions should be 10 mph, not 15 mph. They also noted that Monsanto is proposing to restrict use of its new formulation of Dicamba in conjunction with Dicamba-tolerant crops to wind speeds that are less than 10 mph. (Johnson et al., 2012).

The proposed Section 3 label does state that applications should not be made in areas where there are temperature inversions (see Proposed Registration Label, p. 11). However, that restriction is not highlighted in the same manner (with bold text) as other restrictions, such as using aerial spraying or spraying when the wind direction favors farms with tomatoes, grapes, or cucurbits. This restriction is critical to spray drift management and should be highlighted in the label language in order to ensure farmers are aware of this restriction and comply with it on their farms.

IV. EPA Needs to Work with USDA and Dow to Ensure that Farmers Planting 2,4-D Tolerant Corn and Soybean Seeds can Only Use Enlist Duo and Not Other Formulations of 2,4-D.

⁵ It is unclear in the record how EPA decided that spraying at wind speeds up to 15 mph would not result in drift that might harm neighboring farms. If EPA decides to allow wind speeds of 15 mph, it needs to support that decision with scientific evidence that proves that standard is protective. In fact, a publication by EPA scientists used a maximum speed of 9 mph when mapping areas in the U.S. where spray drift would harm non-target plants (Pfleeger, et al., 2006). Similarly the AgDrift model, which EPA uses to address drift impacts, uses 10 mph as its default value (ENSR International, 2005). Finally, Felsot et al. (2011) published an exhausted review of technologies and practices that can be used to mitigate drift. In many of the studies cited in that review, wind speeds never went above 9.5 mph. Therefore, it seems as if 10 mph should be the maximum wind speed, not 15 mph as proposed by EPA.

While the EPA registration and proposed Section 3 label for Enlist Duo do not allow for other formulations of 2,4-D to be used with Enlist seeds, ensuring that condition is met by farmers will require a coordinated effort by Dow, EPA, and USDA. EPA needs to get a commitment from Dow to price Enlist Duo competitively so that farmers will not have an economic incentive to purchase other forms of 2,4-D. EPA also needs to make sure farmers keep records of the 2,4-D formulation used, which will deter use of 2,4-D formulations not authorized for use with Enlist seeds. EPA should also work with USDA as they determine whether Dow's Enlist corn and soybean seeds engineered to be tolerant to 2,4-D should be granted "nonregulated status" and insist that USDA include a condition that those seeds only be used with Enlist Duo. Only with a coordinated and sustained effort will this important condition be carried out by farmers throughout the country.⁶

CSPI supports the condition in the proposed registration that requires Dow to monitor the use of Enlist Duo with Enlist seeds. If this survey is done properly, it will provide useful information to EPA and Dow about whether this important condition is being met. However, this survey needs to be done by an independent entity that is not linked to Dow, which will help ensure that farmers provide truthful and accurate responses. In addition, the entity carrying out the survey should have the ability to spot-check farmers' pesticide records to ensure the answers given in the survey match the purchasing and application records.

V. EPA Should Not Add Additional States to the Enlist Duo Label Until There is Sufficient Data to Show that Farmers' Use of Enlist Duo has not Resulted in 2,4-D-Resistant Weeds or Drift that has an Economic Impact on Neighboring Lands.

EPA's current registration for Enlist Duo limits its use to six states – Illinois, Indiana, Iowa, Ohio, South Dakota, and Wisconsin – because it has only completed endangered species analysis for those states.⁷ CSPI supports the limited release of Enlist Duo because it provides an opportunity for EPA and Dow to obtain data on the effectiveness of its product's use restrictions before releasing the product on a larger scale to additional farmers in other states. In particular, before EPA adds additional states to the label, it should determine whether the resistance management obligations of both farmers and Dow are working effectively to prevent development of 2,4-D resistant weeds. EPA should also require the collection of data to determine if the drift and volatility restrictions are adequately preventing damage to neighboring lands. Only when

⁶ EPA's registration documents do state that a contractual agreement between Dow and purchasers of Enlist Seeds will require those farmers to only use Enlist Duo on those seeds. EPA should acknowledge this arrangement in its Registration document and make it a condition of approving Enlist Duo.

⁷ While EPA is only registering Enlist Duo for six states, the proposed USDA decision to grant "nonregulated" status to Enlist seeds has no such geographic limitation. If farmers in states other than the six where Enlist Duo will be sold obtain Enlist seeds, they will likely use older formulations of 2,4-D and not be under obligation to follow the conditions set forth in the Enlist Duo label. EPA, USDA and Dow need to work together to make sure Enlist seeds are only sold and can only be planted in states where Enlist Duo is authorized.

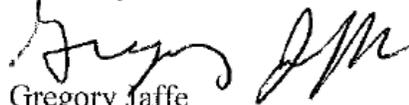
EPA determines that Dow and farmers are implementing the conditions of the registration regarding herbicide resistance and spray drift management and those conditions are effectively preventing those problems from arising should EPA proceed to add additional states to the Enlist Duo label.⁸

Conclusion

The Proposed Registration and Section 3 Label are a good first step in addressing a more sustainable use of Enlist Duo with Enlist seeds. EPA has included a number of conditions designed to help manage and prevent the development of herbicide-resistant weeds as well as eliminate damage due to drift. However, the obligations imposed on Dow and users of Enlist Duo need to be strengthened and made clearer if EPA's goals are to be achieved. If EPA adopts the changes suggested by CSPI in this letter, the Proposed Registration and Section 3 Label will more likely lead to a sustainable cropping system that both current and future farmers can use to grow their crops.

If EPA would like more information about the issues raised in these comments, I would be happy to meet with you at your convenience.

Sincerely,



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⁸ Before EPA adds additional states to the Enlist Duo label, it should provide to the public all information supporting that request from Dow, EPA's analysis of that information, and EPA's proposed decision. The public should be allowed 30 days to comment on the released information and provide any additional information that might provide EPA will additional evidence on: (1) whether Dow and Enlist Duo farmers are carrying out the herbicide resistance and spray drift management obligations, and (2) whether those label restrictions are preventing 2,4-D resistant weeds and damage from drift on neighboring lands.

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Appendix: Analysis of Resistant Weeds that are controlled by Enlist Duo
 June, 2014

This data was collected from the International Survey of Herbicide Resistant Weeds at <http://www.weedscience.org/>

| Table A. Weeds controlled by Enlist Duo that are already resistant to other herbicides (59 out of 128 total Enlist Duo-controlled weeds listed, 46%) |
|---|
| Ammannia, purple (also known as redstem) |
| Barnyardgrass |
| Bindweed, field |
| Bluegrass, annual |
| Brome, downy |
| Brome, Japanese |
| Buttercup, tall* |
| Cheat |
| Chickweed (Stellaria media) |
| Cocklebur |
| Crabgrass, large* |
| Fall Panicum |
| Falseflax, smallseed |
| Field Pennycress |
| Fleabane, hairy |
| Foxtail, bristly |
| Foxtail, giant |
| Foxtail, green |
| Foxtail, yellow |
| Goosegrass |
| Grain sorghum (milo) |
| Groundsel, common |
| Horseweed |
| Itchgrass |
| Jimsonweed |
| Johnsongrass |
| Junglerice |
| Knotweed, prostrate* |
| Kochia |
| Lambsquarters |
| Mayweed |
| Mustard, wild |
| Nightshade, black |
| Pigweed, redroot |
| Pigweed, Palmer |
| Pigweed, smooth |

| |
|-------------------------------------|
| Prickly lettuce |
| Purslane |
| Ragweed, common |
| Ragweed, giant |
| Red Rice |
| Russian thistle |
| Ryegrass, Italian* |
| Ryegrass, rigid* |
| Shattercane (same as grain sorghum) |
| Shepherd's-purse |
| Smartweed, ladythumb |
| Smartweed, Pennsylvania |
| Smartweed, swamp |
| Sowthistle, annual |
| Spanishneedles |
| Sunflower |
| Teaweed |
| Thistle, Canada |
| Velvetleaf |
| Virginia pepperweed |
| Waterhemp, tall* |
| Wild oats |
| Witchgrass |

*Slightly different weed listed online than listed in the "Controlled Weeds Table" (i.e., "Ryegrass, rigid" in online database v. "Ryegrass" in table)

| Table B. Weeds controlled by Enlist Duo that are already resistant to glyphosate (14 out of 128 total, 11%; 13 in the U.S. out of 128 total, 10%) 13 in the U.S. out of 14 total resistant weeds in the U.S, 93%. – Enlist Duo does not control 14th weed, spiny amaranth (spiny pigweed) |
|--|
| Bluegrass, annual (U.S.) |
| Fleabane, hairy (Australia, Brazil, Colombia, Greece, Israel, Portugal, South Africa, Spain, U.S.) |
| Goosegrass (Argentina, Bolivia, China, Colombia, Costa Rica, Malaysia, U.S.) |
| Horseweed (Brazil, Canada, China, Czech Republic, Greece, Italy, Poland, Portugal, Spain, U.S.) |
| Johnsongrass (Argentina, U.S.) |
| Junglerice (Argentina, Australia, U.S.) |
| Kochia (Canada, U.S.) |
| Pigweed, Palmer (U.S.) |
| Ragweed, common (Canada, U.S.) |
| Ragweed, giant (Canada, U.S.) |
| Ryegrass, Italian* (Argentina, Brazil, Chile, Italy, Japan, New Zealand, Spain, U.S.) |
| Ryegrass, rigid* (Australia, France, Israel, Italy, South Africa, Spain, U.S.) |
| Sowthistle, annual (Australia) |
| Waterhemp, tall* (U.S.) |

*Slightly different weed listed online than listed in the "Controlled Weeds Table" (i.e., "Ryegrass, rigid" in online database v. "Ryegrass" in table)

Table C. Weeds controlled by Enlist Duo that are already resistant to glyphosate in corn or soybeans in IL, IN, IA, OH, SD, or WI (6 total)

| Weed | Locations | | | | | |
|-----------------|---|--------------|--|--|--------------|--------------|
| | Illinois | Indiana | Iowa | Ohio | South Dakota | Wisconsin |
| Horseweed | soy | soy | corn and soy | soy [multiple resistance w/2 sites] | corn and soy | soy |
| Kochia | - | - | - | - | corn and soy | - |
| Pigweed, Palmer | corn and soy [multiple resistance w/2 sites] | corn and soy | - | cropland | - | - |
| Ragweed, common | - | soy | - | soy [multiple resistance w/2 sites] | corn and soy | - |
| Ragweed, giant | - | soy | corn and soy | soy [multiple resistance w/2 sites] | - | corn and soy |
| Waterhemp, tall | corn and soy [multiple resistance w/4 sites] | soy | corn and soy [multiple resistance w/ 4 sites] | cropland | corn and soy | - |