

Joint Glyphosate Task Force Comments to the Public Docket for:

- A. Glyphosate: Proposed Registration Review Decision Case number 0178**
- B. Memorandum 'Response to Public Comments on the Preliminary Ecological Risk Assessment for Glyphosate.' DP Barcode: 448022. Dated November 21, 2018**

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INTRODUCTION AND SUMMARY

The Joint Glyphosate Task Force (JGTF) supports continued registration of glyphosate. Glyphosate was first introduced in 1974, and since then, glyphosate-based products have become the most widely adopted herbicides in the world. Glyphosate based products are used by farmers, land managers and gardeners to safely and effectively control the unwanted vegetation. This worldwide adoption is due to glyphosate's ability to control a broad spectrum of weeds, many economic and environmental benefits and its strong safety profile.

Glyphosate has more than a 40-year history of safe use and it is supported by one of the most extensive human health, safety and environmental databases ever compiled for a pesticide product.

Glyphosate works by inhibiting an enzyme essential for plant growth. In the environment, glyphosate binds tightly to soil, degrades over time and does not accumulate in the food chain. It has low toxicity to humans and non-plant wildlife, over both short- and long- term exposures. It is not a reproductive toxicant, nor an endocrine disruptor. There is no evidence of neurotoxicity or immunotoxicity.

The JGTF agrees with the EPA's conclusions in the Proposed Interim Decision that "EPA continues to find that there are no risks to public health when glyphosate is used in accordance with its current label and that glyphosate is not a carcinogen. The agency's scientific findings on human health risk are consistent with the conclusions of science reviews by many other countries and other federal agencies."

Continued access to glyphosate is essential to farmers in the U.S., as a non-selective, broad-spectrum herbicide and as an integral part of the glyphosate-tolerant cropping system. It is a critical component in maintaining economic and environmental sustainability in agriculture. Adoption of glyphosate-tolerant cropping systems is associated with an increased adoptability of conservation tillage, resulting in a number of benefits: reduced soil erosion, improved soil and water quality and lower carbon dioxide emissions.

This document, presents comments made by the Joint Glyphosate Task Force (JGTF) on the following documents, uploaded to EPA's public docket number: EPA-HQ-OPP-2009-0361, at www.regulations.gov on the 3rd May, 2019:

- A. 'Glyphosate - Proposed Interim Registration Review Decision Case Number 0178'. Dated April 2019
- B. Memorandum 'Response to Public Comments on the Preliminary Ecological Risk Assessment for Glyphosate.' DP Barcode: 448022. Dated November 21, 2018

A. Comments on ‘Glyphosate: Proposed Interim Registration Review Decision’

COMMENT NUMBER A1	
Document ID	‘Glyphosate – Proposed Interim Registration Review Decision’
Page / Part	11 / Concerning the ‘Comments About the Monarch Butterfly’
<p>The JGTF acknowledges and appreciates the Agencies response on Monarch Butterfly conservation and Its importance for the agency. The Agencies’ commentary indicates that it is not known to what extent pesticides in general may play in the decline of the monarch butterfly populations, identifying that ‘the threats to Monarch butterfly populations are multi-pronged and include loss of breeding habitat, loss of overwintering habitat in Mexico, changes in weather patterns (including winter storms), disease, and other factors.’</p> <p>The Agency further identifies that a holistic approach is needed for monarch conservation and that such an approach should consider herbicides in general as well as other factors that may play a role in the monarch decline, adding that it is important to balance weed management needs with Monarch conservation needs – citing EPAs 2015 publication ‘Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly. ‘(available in docket EPA-HQ-OPP-2015-0389).</p> <p>The JGTF would also like to highlight the very important role that farmers and local conservation groups play in the conservation of monarch butterflies and other pollinating species;</p> <ul style="list-style-type: none"> • Farmers and landowners are uniquely situated to be part of the solution as monarch conservation can co-exist with productive crop and animal/livestock agriculture. • An increase in milkweed and nectar plants appropriately placed and managed in rural areas can benefit monarchs without inhibiting crop production. • Non-crop areas on the farm such conservation lands/buffers, ditches and roadsides offer opportunities for monarch habitat. • By maintaining or providing high-quality habitat for monarch butterflies, farmers benefit by increasing the diversity of pollinators in the area, providing resources for other beneficial species like honey bees, native bees and birds, and improving soil health and water quality. <p>By applying good agricultural practices and by using the appropriate spray drift mitigation approaches as proposed in Appendix B of the proposed interim decision document (April 2019), off-target drift that may encounter monarch butterfly breeding or foraging habitat should be avoidable.</p>	

COMMENT NUMBER A2	
Document ID	‘Glyphosate – Proposed Interim Registration Review Decision’
Page / Part	28 - 29 / Concerning the Risk Summary for ‘Terrestrial plants’
<p>The JGTF considers the use of qualitative endpoints (e.g. phytotoxicity based on leaf discolouration) as not being relevant for risk characterisation purposes as they cannot be linked quantitatively to the growth and survival endpoints, as they lack a relative scale. Quantitative data such as dry weight or shoot length are considered more relevant to risk assessment.</p> <p>The JGTF do support the drift mitigation approaches as defined in Appendix B of the PID. This position is further supported by AgDrift modelling –where it may be demonstrated using realistic AgDrift v2.1.1, input parameters, such as the appropriate spray boom height and use of at least fine or coarser spray nozzle droplet sizes, off-target drift from the application area should be avoided.</p> <p>On page 29 of the proposed Interim Decision document, in Table 3, the results of a spray drift assessment for terrestrial plants considering for both aerial and ground application of glyphosate at various application rates is presented. The distances from the edge of the applied area considering vegetative vigour endpoints determined for milkweed and cucumber, were modelled using AgDrift v2.1.1. For the ground spray boom method of application, a high boom height was used in conjunction with very fine to fine droplet size. These are the default input parameters used in AgDrift v2.1.1 and as such are highly conservative and do not reflect application methods typically used by growers / applicators. For example, based on a low boom height and using a fine or</p>	

coarser spray droplet size, distances from the edge of the application area, are substantial reduced - especially when considering the milkweed endpoint.

COMMENT NUMBER A3	
Document ID	'Glyphosate – Proposed Interim Registration Review Decision'
Page / Part	44 / Appendix B: Proposed Labeling Changes for Glyphosate Products – Rotational Crop Information
<p>The JGTF realizes the need for Glyphosate end-use product labels to contain language that guards against its use as a preemergence herbicide on crops that are not included on the product label. To that end, the Agency proposes the following language to be added to all end-use product labels: “Treated fields may be rotated to a labeled crop at any time. For treated fields being rotated to a non-labeled crop, application must be made a minimum of 30 days prior to planting.”</p> <p>The concepts of “treated fields” and “crop rotation restrictions” are more applicable to residual herbicides that are applied to the soil, remain active in the soil and can be taken up by the plant roots from the soil. In these cases, the fields are indeed “treated” and crop rotation restrictions can be months or even years after application. With Glyphosate, a foliar contact herbicide with no residual soil activity, the Agency’s proposed language does not provide the most accurate information with respect to how the product is used.</p> <p>With the objective of providing the end-user with the most informative directions for use possible, the JGTF proposes that the Agency consider the following language that restricts the use of Glyphosate on crops not included on the label to be the standard for all product labels: “This product may be applied during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergence to annual and perennial crops listed on this label, except where specifically limited. For any crop <u>not</u> listed on this label, application must be made a minimum of 30 days prior to planting.”</p>	

B. Comments on Memorandum ‘Response to Public Comments on the Preliminary Ecological Risk Assessment for Glyphosate.’ DP Barcode: 448022. Dated November 21, 2018

COMMENT NUMBER B1	
Document ID	Responses to Public Comments on the Preliminary Ecological Risk Assessment for Glyphosate (DP Barcode:448022)
Page / Part	All
The JGTF acknowledges and appreciates the EPAs thorough review of the JGTF commenting on the Preliminary Ecological Risk Assessment.	

COMMENT NUMBER B2	
Document ID	Responses to Public Comments on the Preliminary Ecological Risk Assessment for Glyphosate (DP Barcode:448022)
Page / Part	4 / 5. Glyphosate Fate Parameters and Aquatic and Terrestrial Exposure Monitoring.
<p>The JGTF acknowledges EPAs responses made on the various editorial comments that were highlighted by the JGTF during commenting on the Preliminary Ecological Risk Assessment document. The JGTF does however, consider it relevant for the sake of accuracy to correct typographical errors that were physical / chemical parameters specific to glyphosate;</p> <ul style="list-style-type: none"> - The correct glyphosate molecular weight of 169.08g/mole, monoammonium salt of glyphosate molecular weight = 186.08. Therefore, the acid equivalence ratio value should be 0.91. - The vapour pressure, Pa = 1.3×10^{-5} (25°C) - The Henry 's Law constant, Pa m³ mol⁻¹ = 2.1×10^{-7} <p>A further typographical comment in the Preliminary Ecological Risk Assessment, is highlighted in the following; ‘In the Preliminary Ecological Risk Assessment, in the last sentence of the 3rd paragraph on page 40, it appears that the word ‘not’ has been omitted from the sentence. This refers to the NOAEC achieved in the daphnia chronic study by Cuhra et al., 2013 and states the following; ‘<i>Given the variability in the offspring growth, the NOAEC for fecundity was used in the assessment.</i>’ The NOAEC endpoint referenced in the paragraph, does not appear in Table 18 on pages 46 and 47 of the document, which summaries the aquatic endpoints used quantitatively in the risk assessment. It is assumed that the sentence should read ‘<i>Given the variability in the offspring growth, the NOAEC for fecundity was not used in the assessment</i>’</p>	

COMMENT NUMBER B3	
Document ID	Responses to Public Comments on the Preliminary Ecological Risk Assessment for Glyphosate (DP Barcode:448022)
Page / Part	6 / 6b. Glyphosate Fate Parameters and Aquatic and Terrestrial Exposure Monitoring.
<p>Whilst acknowledging the agencies commentary on the similarity of the cucumber phytotoxicity endpoint to other submitted terrestrial plant toxicity data, and studies in the open literature, the JGTF consider the use of qualitative endpoints such as phytotoxicity as not being relevant when calculating risk quotients as these are qualitative and cannot be linked quantitatively to growth or survival endpoints. Quantitative data such as dry weight or length are considered to be more relevant to the risk assessment.</p>	