

Questions and Answers: Draft Environmental Impact Statement for GE Corn and Soybeans

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) has issued a Draft Environmental Impact Statement (DEIS) for public review and comment that evaluates the potential environmental impacts of its regulatory decision regarding one corn and two soybean varieties genetically engineered (GE) by Dow AgroSciences. These varieties have been engineered to be resistant to multiple herbicides, including 2,4-dichlorophenoxyacetic acid, or 2,4-D.

The DEIS will be available for a 45-day public review and comment period. APHIS will host a virtual public meeting on the DEIS to receive comments. APHIS will consider all public comments submitted during the comment period before finalizing the DEIS and then making its final decision regarding the regulatory status of these crops.

Q. What is 2,4-D herbicide?

A. 2,4-D herbicide is registered by the U.S. Environmental Protection Agency (EPA) for pre-plant and post-emergent application on corn and pre-plant application on soybean. It is also registered to control broadleaf weeds on a variety of field, fruit, and vegetable crops and for use on turf, lawns, rights-of-way, aquatic sites, forestry sites. Additionally, 2,4-D is registered as a plant growth regulator in citrus. Residents and professional applicators may use 2,4-D on home lawns. 2,4-D is one of the most widely used herbicides to control weeds.

Q. Is 2,4-D herbicide safe?

A. EPA's regulatory standard for the registration of herbicides is that when used in accordance with EPA-approved labeling, they provide reasonable certainty of no harm to human health and no unreasonable

adverse effects on the environment. In 2005, EPA completed its re-analysis of all currently approved uses of 2,4-D as part of its re-evaluation of all registered pesticides. EPA is currently conducting risk assessments of the proposed new uses of 2,4-D to determine the proper use of the herbicide.

Q. Is 2,4-D the same thing as "Agent Orange" defoliant?

A. No. "Agent Orange" was a mixture of herbicides 2,4,5-T and 2,4-D, kerosene and diesel fuel. Agent Orange contained high levels of dioxin, a contaminant found in 2,4,5-T that causes cancer and other health concerns in people. EPA cancelled all use of 2,4,5-T in 1985 because of these risks. By contrast, EPA has approved the use of 2,4-D and considers it safe when used according to the EPA-approved labeling.

Q. Why have these new GE plants resistant to 2,4-D been developed?

A. These GE varieties of soybeans and corn have been developed to provide farmers with new tools to manage weeds that have developed resistance to other herbicides.

Q. Why does APHIS regulate the development of new GE plants?

A. Under the Plant Protection Act (PPA), APHIS regulates the importation, interstate movement, and field testing of new genetically engineered plants to protect plant health. APHIS approves a petition for non-regulated status only after it has determined that a GE plant does not pose a plant pest risk, *i.e.*, it does not injure agricultural crops or other plants or plant products. APHIS works in partnership with the U.S. Food and Drug Administration and the U.S. Environmental Protection Agency to ensure that the development, testing, and use of the products of biotechnology occur in a manner that is safe for plant and animal health, human health, and the environment.

Q. How does APHIS define plant pest risk?

A. The PPA, and APHIS' regulations, define plant pests as organisms, such as insects, bacteria, or fungi, that can directly or indirectly cause disease in plants, or otherwise injure or damage plants or plant products. APHIS regulates newly developed GE plants because a plant pest (for example, a

plant pathogenic bacterium) was most likely used in the engineering of the plants. When requested by a developer to deregulate a GE plant, APHIS' plant pest risk assessment examines whether the GE plant has any plant pest characteristics that may pose a plant pest risk. If APHIS finds that the GE plant poses no plant pest risk, pursuant to its PPA regulations governing GE organisms, it must deregulate the GE plant.

Q. Why has APHIS prepared this draft EIS?

A. Dow AgroSciences, the developer of these new GE plants, filed a petition with APHIS and requested that APHIS determine whether or not those GE plants can be granted non-regulated status so that they can be planted and processed without regulatory oversight by APHIS. To make a decision on that request, APHIS must first determine if the GE products pose a plant pest risk to agricultural crops or other plants in the United States. In addition, pursuant to the National Environmental Policy Act (NEPA), APHIS usually prepares an Environmental Assessment (EA) that analyzes the potential impacts to the human environment from APHIS's regulatory decision. In the course of preparing its EA, as well as analyzing public comments received in response, APHIS determined that developing a more rigorous Environmental Impact Statement (EIS) would be the appropriate NEPA document for its analysis of the potential environmental impacts of its regulatory decision. This analysis is provided in the DEIS issued by APHIS today.

Q. Has APHIS evaluated the plant pest risk of these GE crops?

A. Yes. APHIS has been reviewing these new products carefully and thoroughly for the last several years. Its preliminary plant pest risk assessment for these GE plants, prepared under the Plant Protection Act's authority and APHIS's regulations for GE plants and plant products, finds that the three GE plants do not pose a plant pest risk to agricultural crops or other plants in the United States.

Q. How does preparing an EIS assist APHIS in its decision-making?

A. By preparing a DEIS, APHIS evaluates any potential environmental impacts before making a final decision regarding the regulatory status of these new GE plants.

Q. What issues are analyzed in the draft EIS?

A. APHIS's DEIS examines the potential impacts of the deregulation of these GE corn and soybeans, including those related to biological and natural resources as well as socioeconomics.

Q. What alternatives did APHIS consider in the EIS?

A. APHIS considered four alternatives in the DEIS: keeping the GE corn and soybean plants under the PPA regulations; deregulating the GE corn plant only; deregulating the two GE soybean plants only; or deregulating both the GE corn and soybean plants.

Q. Does the draft EIS examine the potential for weeds to become resistant to 2,4-D?

A. Yes. The draft EIS analyzes the potential for development of herbicide-resistant weeds. While APHIS found that the wider use of these GE varieties and herbicides would help growers manage glyphosate-resistant weeds, the wider use would also likely result in an increased chance of the development of weeds resistant to 2,4-D. However, APHIS's analysis found that growers can implement diversified weed management practices to mitigate this impact.

Q. What is APHIS's preferred alternative in the draft EIS?

A. APHIS's preferred alternative is to deregulate all three GE plants. APHIS prefers this alternative based on its authority under the Plant Protection Act to determine whether a GE plant poses a plant pest risk. In addition, the preferred alternative was selected based on APHIS' preliminary plant pest risk assessment that the GE corn and soybean plants do not pose a plant pest risk to agricultural crops or other plants in the United States.

Q. Does NEPA give APHIS additional regulatory authority?

A. No, NEPA does not provide APHIS with any additional regulatory authority to address those potential environmental impacts beyond that provided by the Plant Protection Act. The Plant Protection Act authorizes APHIS to determine whether GE plants pose a plant pest risk to crops or other plants.

Q. Is this APHIS's final regulatory decision regarding these new GE plants?

A. No. The DEIS will be available for public review and comment for 45 days from the date of publication by the Environmental Protection Agency (EPA) in the Federal Register. APHIS encourages public input on its DEIS and will host a virtual public meeting to receive comments on it. APHIS will then carefully consider all public comments submitted during the comment period before finalizing the DEIS and then making its final decision regarding the regulatory status of these GE plants.

Q. How will APHIS reach its final regulatory decision?

A. APHIS will issue a final EIS along with a Record of Decision for the final EIS. It will also finalize its plant pest risk assessment. Should the final plant pest risk assessment conclude, as did the preliminary one, that these new GE plants do not pose a plant pest risk to agricultural crops or other plants in the United States, APHIS would deregulate them, that is, determine that those GE plants should have non-regulated status.

Q. Is EPA also reviewing these new GE plants?

A. No. EPA has no direct role in regulating GE plants with herbicide resistance traits. However, EPA does regulate herbicides used on those GE crops under the Federal Insecticide, Fungicide and Rodenticide Act and the herbicide residues in food under the Federal Food, Drug and Cosmetic Act. That is the reason why EPA is currently conducting risk assessments of the proposed new uses of 2,4-D on these crops to determine the proper use of the herbicide. EPA's analysis includes a thorough review of any potential human health and environmental risks associated with the application of 2,4-D to the GE corn and soybean plants, such as additional use of the herbicide and potential off-site movement of 2,4-D to other crops or areas. EPA will make available its proposed regulatory decision in the coming months for public review and comment. After consideration of public comments, EPA will then make its final regulatory decision in coordination with APHIS's final regulatory decision regarding these plants.

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