



Marketing and  
Regulatory  
Programs

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Animal Plant  
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Service

RSR number 22-199-01rsr

Biotechnology  
Regulatory  
Services

**RE: Regulatory Status Review of wheat developed using genetic engineering for: - (1) Expression of the *HaHB4* (*Helianthus annuus HomeoBox 4*) protein transcription factor that regulates genes involved in developmental responses of plants to desiccation, and (2) *bar/PAT* (phosphinothricin N-acetyltransferase) that confers resistance to glufosinate by catalyzing the conversion of L-phosphinothricin (L-PPT) to a non-phytotoxic form (N-acetylphosphinothricin).**

4700 River Road  
Riverdale  
MD 20737

Dear Dr. Miranda:

Thank you for your letter dated Dec 05, 2022, requesting a Regulatory Status Review (RSR) for wheat developed using genetic engineering (modified wheat). In your letter, you described that the wheat was modified to impart:- (1) increased drought tolerance, and (2) resistance to glufosinate via:- (1) expression of the *HaHB4* (*Helianthus annuus HomeoBox 4*) protein transcription factor that regulates genes involved in developmental responses of plants to desiccation, and (2) *bar/PAT* (*phosphinothricin N-acetyltransferase*) that confers resistance to glufosinate by catalyzing the conversion of L-phosphinothricin (L-PPT) to a non-phytotoxic form (N-acetylphosphinothricin), respectively.

The Plant Protection Act of 2000 (7 U.S.C. §§ 7701 et seq.) provides USDA authority to oversee the detection, control, eradication, suppression, prevention, or retardation of the spread of plant pests to protect agriculture, the environment, and the economy of the United States. USDA, through the Animal and Plant Health Inspection Service (APHIS), regulates the “Movement of Organisms Modified or Produced through Genetic Engineering” as described in 7 CFR part 340.

Consistent with 7 CFR 340.4, APHIS reviewed your modified wheat to determine whether it is subject to the regulations in 7 CFR part 340. Specifically, APHIS reviewed the modified wheat to determine whether there is a plausible pathway by which the wheat would pose an increased plant pest risk relative to the plant pest risk posed by an appropriate wheat comparator. Based on information you provided, publicly available resources, and APHIS’ familiarity with wheat and knowledge of the trait, phenotype, and mechanism of action, APHIS considered the (1) biology of nonmodified wheat and its sexually compatible relatives; (2) the trait and mechanism-of-action of the modification; and (3) the effect of the trait and mechanism-of-action on the (a) distribution, density, or development of the plant and its sexually compatible relatives, (b) production, creation, or enhancement of a plant pest or a reservoir for a plant pest, (c) harm to non-target organisms beneficial to agriculture, and (d) weedy impacts of the plant. APHIS did not identify any plausible pathway by which your modified wheat would pose an increased plant pest risk relative to comparator wheat plants. APHIS has determined your wheat is unlikely to pose an increased plant pest risk relative to its comparators. Once APHIS determines that a plant product is unlikely to pose an increased plant pest risk relative to its comparator, and, thus, is not a plant pest or a plant that requires regulation because it is capable of introducing or disseminating a plant pest, APHIS has no authority to regulate it under 7 CFR part 340. Accordingly, your wheat is not subject to the regulations under 7 CFR part 340. APHIS’ determination that this modified plant is not subject to the regulations extends to any progeny of the modified plant that is derived from crosses with other non-modified plants or other modified plants that are also not subject to the regulations in 7 CFR part 340.

Please be advised that APHIS’ decision applies to the wheat developed using genetic engineering exactly as described in your letter. If at any time you become aware of any information that may affect our review of your modified wheat, including, for example, new information that shows the trait, phenotype, or mechanism of action is different than described in your letter, you must contact APHIS for further review of the plant at [RSRrequests@usda.gov](mailto:RSRrequests@usda.gov).

Please be advised that your plant product, while not regulated under 7 CFR part 340, may be subject to APHIS Plant Protection and Quarantine (PPQ) permit and/or quarantine requirements. For further information, you may contact the PPQ general number for such inquiries at 877-770-5990. Your plant product may also be subject to other regulatory authorities such as the U.S. Environmental Protection Agency (EPA) or the Food and Drug Administration (FDA). Please contact EPA and FDA to enquire about the regulatory status of your product.

Sincerely,

A handwritten signature in black ink, appearing to read 'BJ', with a large, stylized flourish extending to the right.

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Bernadette Juarez  
APHIS Deputy Administrator  
Biotechnology Regulatory Services  
Animal and Plant Health Inspection Service  
U.S. Department of Agriculture

August 27, 2024