



Marketing and
Regulatory
Programs

Donald J. MacKenzie, Executive Director, IICI
Donald Danforth Plant Science Center
975 North Warson Road
St. Louis, MO 63132

Animal Plant
Health Inspection
Service

RSR number 22-013-01rsr

Biotechnology
Regulatory
Services

RE: Regulatory Status Review of teff developed using genetic engineering for reduced plant height conferring resistance to lodging

Dear Dr. MacKenzie:

4700 River Road
Riverdale
MD 20737

Thank you for your letter dated January 12, 2022, requesting a Regulatory Status Review (RSR) for teff developed using genetic engineering (modified teff). In your letter, you described that the teff was modified to impart reduced plant height via a loss-of-function mutation of *dwarfing1* (*DW1*) gene which encodes a protein involved in signaling of the plant hormone brassinosteroid, a loss-of-function mutation of *dwarfing3* (*DW3*) gene which encodes an auxin efflux transport protein, and a loss-of-function mutation of *semidwarf1* (*SD1*) gene which encodes an enzyme involved in the biosynthetic pathway of the plant hormone gibberellin.

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, 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 teff to determine whether it is subject to the regulations in 7 CFR part 340. Specifically, APHIS reviewed the modified teff to determine whether there is a plausible pathway by which the teff, or any sexually compatible relatives in the United States and its territories, would pose an increased plant pest risk relative to the plant pest risk posed by an appropriate teff comparator. Based on information you provided, publicly available resources, and APHIS’ familiarity with teff and knowledge of the trait, phenotype, and mechanism of action, APHIS considered the (1) biology of nonmodified teff 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 teff, or any of its sexually compatible relatives, would pose an increased plant pest risk relative to comparator teff plants. APHIS has determined your teff 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 teff 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 teff 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 teff, 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.

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 Juarez', with a large, stylized initial 'B' and 'J'.

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

Date: March 31, 2023