

American Sugarbeet Growers Association

1156 15th Street, N.W.
Washington, D. C. 20005

September 9, 2015

Dr. Ralph J. Cicerone
Chairman
National Academy of Sciences
500 Fifth St., N.W.
Washington, D.C. 20001

[Via Messenger and Email \(GECrops@nas.edu\)](mailto:GECrops@nas.edu)

Dr. Fred Gould
Chairman
National Research Council Committee on Genetically Engineered Crops
500 Fifth Street, N.W.
Washington, D.C. 20001

Re: National Research Council Committee on Genetically Engineered Crops

Dear Drs. Cicerone and Gould:

The National Research Council Committee on Genetically Engineered Crops is to be commended for its timely and thorough review of Genetically Engineered (GE) crops. We believe that your comprehensive examination of the facts will provide additional insights and knowledge about the technology and enhance consumer confidence in the GE crops we produce and the food we consume.

Additionally, the significant environmental benefits provide long-term sustainability in the production of the global food supply. Weed management has been one of the biggest challenges that threaten the future of the beet sugar industry.

We deeply appreciate this opportunity to submit our collective views and experiences in the development and commercialization of H7-1 Roundup Ready® glyphosate tolerant sugarbeets.

Who we are: The American Sugarbeet Growers Association is a federation of all sugarbeet grower organizations and farmer-owned beet sugar cooperatives in the United States. The signatories of this submission include the Association President and Executive Vice President, and the Chairmen of the Board of all of the farmer-owned processing cooperatives.

We represent thousands of progressive family farmers who annually raise approximately 1.2 million acres of sugarbeets in 11 states. We are extremely efficient compared to our global competitors, who often have lower labor and environmental standards. Our family farmers cooperatively own all of the nation's 22 sugarbeet processing factories, and together we grow 56% of all the sugar produced in the United States. As a result of our commitment and hard

work, the beet sugar industry creates approximately 100,000 good jobs in rural America and contributes \$10,600,000,000 to the U.S. economy. More importantly, for more than a century, our industry has produced an essential ingredient in our food supply, and it continues to provide for the food security of our nation.

Our farmers also grow other major commodities and numerous specialty crops. We thoughtfully and respectfully provide the following experiences and perspectives of using the GE technology for the past eight years on nine million acres of sugarbeets.

Adopting GE Technology: The sugarbeet is, in fact, one of the best-suited plants for the use of biotechnology for the multiple reasons covered in this submission. The accumulation of these benefits is why GE glyphosate tolerant sugarbeets had the fastest adoption rate of any biotech trait of any commodity in the history of biotechnology. Once our producers had experienced the success of GE in their soybean and corn varieties, we aggressively led the process to adopt the technology in sugarbeets. The 2015 U.S. sugarbeet crop is 100 percent Roundup Ready® and the only crop to make a complete transition to the use of GE technology.

This attached submission will document seven key issue areas summarized below:

Issue 1: Consumer Food and Feed Safety: The sugar from the genetically engineered sugarbeet is, at the molecular level, the same as that produced from conventional sugarbeet and sugar cane or organic sugar cane. Both the sugar and molasses extracted from glyphosate tolerant sugarbeets are approved in all major foreign markets (Canada, Mexico, EU, Russia, Japan, China, South Korea, Singapore, Philippines, Australia, New Zealand and Colombia).

The plant tissue, or pulp, from H7-1 Roundup Ready® sugarbeets is highly desired and valuable cattle feed sold in the U.S. and is readily accepted in Europe and Japan. Analysis of the biochemical composition and nutritional value of the leaves and roots of GE sugarbeets have shown no differences between conventional and glyphosate tolerant sugarbeets.

Lastly, all tests of the new protein encoded by the glyphosate tolerant gene (which is removed from the sugar and molasses during processing), have proven its safety at levels well beyond expected levels of consumption.

Issue 2: Environmental Benefits: Glyphosate resistant sugarbeets provide 25 identifiable environmental benefits that include fewer and safer herbicides, improved soil and water quality and conservation, increased plant health, sequestration of greenhouse gases, less fuel consumption, and fewer emissions.

Issue 3: Coexistence: The 1.2 million acres of annual commercial sugarbeet production rarely produce pollen, and there is therefore a minimal risk of cross-pollination with other commercial *Beta* crops. Sugarbeet seed production has a 75-year record of safe coexistence with other *Beta* seed crop production, due to effective seed grower stewardship.

Issue 4: Seed Concentration: The sugarbeet seed market is highly competitive between six separate companies. The technology provider licenses the technology to each of the companies, and has no ownership in any of them.

Issue 5: Trade: The U.S. is the second-largest importer of sugar in the world and is dependent on these imports for approximately 30 percent of consumer needs. While we typically do not export sugar, beet sugar is often contained in sugar-containing products that are exported around the world.

Issue 6: Farmer efficiency: In addition to significant environmental benefits, there are many benefits that increase farmer efficiency. These include the elimination of hand labor for weeding, safer herbicides for worker handling, fewer herbicide applications, less fuel used, fewer man hours, better water management, less equipment, and healthier plants and higher yields. We fully realize that many factors play into annual yield results. However, during the eight years (2008-2015) of planting Roundup Ready® sugarbeets, yields have increased 19 percent over the average yield produced by conventional seed in the 8 years (2000-2007) prior to broad commercialization of Roundup Ready® sugarbeets. Yields since 1910 have increased by 200 percent.

Issue 7: Weed Resistance: Before our growers receive GE seed, they have and must continue to understand the importance of taking the appropriate agronomic steps to prevent weed resistance to any type of pesticide. We will continue to take appropriate steps each year to address this issue.

For additional information on each of the issues discussed in this document, we refer you to the 968-page Environmental Impact Statement prepared by USDA's Animal and Plant Health Inspection Service, which is posted at http://www.aphis.usda.gov/brs/aphisdocs/03_32301p_feis_std.pdf

Thank you for your consideration of the broad experience with this technology by thousands of farmers over the past eight years, as detailed in the attached report. We stand ready to answer any questions that you or the committee may have. Please direct them to Luther Markwart, as noted below.

Respectfully submitted,

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Worland, Wyoming
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American Sugarbeet Growers Association
Washington, DC

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Michigan Sugar Company
Bay City, Michigan

Richard McKamey
Farmer
Worland, Wyoming
Chairman of the Board
Wyoming Sugar Company, LLC
Worland, Wyoming

Attachments:

- 1) U.S. Beet Sugar Industry Submission to the National Academy of Sciences National Research Council Committee on Genetically Engineered Crops
- 2) "Nucleic acid and protein elimination during the sugar manufacturing process of conventional and transgenic sugar beets." Institute of Industrial Genetics, University of Stuttgart, Stuttgart, Germany

CC:**Administration:**

The Honorable Thomas Vilsack, Secretary, U.S. Department of Agriculture
 The Honorable Michael Scuse, Under Secretary, Farm and Foreign Agricultural Services (USDA)
 The Honorable Edward Avalos, Under Secretary, Marketing and Regulatory Programs (USDA)
 The Honorable Kevin Shea, Administrator, Animal and Plant Health Inspection Service (USDA)
 The Honorable Michael Firko, Administrator, Biotechnology Regulatory Services (USDA)
 The Honorable Gina McCarthy, Administrator, Environmental Protection Agency
 The Honorable James Jones, Assistant Administrator of Chemical Safety and Pollution Prevention (EPA)
 The Honorable Jack Housenger, Director, Office of Pesticide Programs (EPA)
 The Honorable Margaret Ann Hamburg, M.D., Commissioner, Food and Drug Administration
 The Honorable Stephen Ostroff, M.D., Chief Scientist, Food and Drug Administration
 The Honorable Director John Holdren, Office of Science and Technology Policy (White House)

Senate:

Agriculture Committee Members
 Committee on Commerce, Science and Transportation
 The Honorable John Thune, Chairman
 The Honorable Bill Nelson, Ranking Member
 Committee on Health, Education, Labor and Pensions
 The Honorable Lamar Alexander, Chairman
 The Honorable Patty Murray, Ranking Member
 Sweetener Caucus Members (Beet States)

House:

Agriculture Committee Members
 Committee on Science, Space and Technology
 The Honorable Lamar Smith, Chairman
 The Honorable Eddie Bernice Johnson, Ranking Member
 Committee on Energy and Commerce
 The Honorable Fred Upton, Chairman
 The Honorable Frank Pallone, Jr., Ranking Member
 Health Subcommittee
 The Honorable Joe Pitts, Chairman
 The Honorable Gene Green, Ranking Member
 Sugar Caucus Members (Beet States)