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The Crop Science Society of America (CSSA) is a prominent international scientific society dedicated to the conservation and wise use of natural resources to produce food, feed and fiber crops while maintaining and improving the environment. Within this mission, CSSA supports education and research in all aspects of crop production, including the application of biotechnology. In the wake of growing public engagement in food production and the introduction of local, state, and national initiatives to require the labeling of genetically modified (GM) foods, CSSA has developed the following position statement.

Researchers and farmers utilize GM technology to address society's growing global food production, security, and safety needs.

Plant breeding has been used throughout human history to increase desirable traits in plants and animals. With the advent of modern DNA technology, including GM technology, plant breeding has advanced to produce crop varieties with pest, disease and drought resistance that have increased yield and input efficiency for farms of all sizes. Productivity in GM crops has delivered gains that are, in some cases, 5-24% higher than conventional varieties¹. GM technology has also been used to enhance the nutritional content of certain crops. Pro-Vitamin A enhanced rice, high carotene mustard seed oil, Pro-Vitamin A enhanced cassava, even edible vaccines – are just a few of the enhanced crop varieties in development.

In addition to increasing crop yield and nutritional content, GM crops have had considerable positive impacts on the environment. The adoption of GM crops with weed or pest resistance have resulted in reduced pesticide spraying and reduced release of greenhouse gas emissions from agriculture². Herbicide tolerant crops have facilitated the continued expansion of conservation tillage, especially no-till cultivation systems, saving nearly one billion tons of soil from erosion each year³. In the face of increasingly limited resources, GM technology represents an important tool to improve resource management, increase crop productivity and ultimately help feed a rapidly growing population.

Genetically modified crops are the result of increasing knowledge about plant genetics and are safe for consumption.

Since the initial development of GM crops, scientists have rigorously studied the effects of the technology and the crops in which it has been used. Over 25 years of research on more than 40 different crop varieties indicate that GM crops are, in fact, as safe as non-GM crops⁴. Hundreds of independent studies have shown that there are no safety or health differences between GM crops and those modified by traditional breeding techniques⁵. Claims that the potential risks of GM crops are unknown are also inaccurate. In fact, because of the strict regulations of GM foods by governments worldwide, GM crops are among the most well-studied and tested items in our food supply.

Dozens of acclaimed scientific and health organizations, including the American Association for the Advancement of Science, the World Health Organization, the American Medical Association, and the European Commission, have all conducted similar reviews of the current research and have come to the same conclusion: foods from GM crops are safe for consumption and do not present any health risks.

Federal regulatory oversight of agricultural biotechnology and labeling of the resultant products should be evidence-based and risk-appropriate, while fostering innovation.

Current FDA labeling practices require product labeling when the absence of information would pose a special health or environmental risk⁶. Since the research overwhelmingly indicates there are no significant health or environmental risks associated with GM crops, we find there is no basis for requiring a label. In light of the current FDA labeling practices, labeling products as containing GM ingredients would serve only to falsely alarm and potentially mislead consumers.

Proponents of GM labeling claim that labeling will lead to greater consumer awareness and choice. Consumers who wish to avoid GM foods already have several options. FDA guidance already allows for voluntary labeling of GM or non-GM food. Products labeled “organic” are produced without the use of genetically engineered ingredients. Additionally, there are third parties that certify products are produced without GM ingredients such as the “Non-GMO Project Verified” seal.

CSSA strongly supports continued research and rigorous testing of the effects and impacts of GM technology and believes that requiring labeling of foods with GM crops would not only undermine consumer confidence, but also reduce the availability of these valuable tools, limiting the environmental, nutritional and public health benefits they can bring to humanity.

¹ Brookes, G., Yu, T.H., Tokgoz, S., & Elobeid, A. 2010. The production and price impact of biotech corn, canola, and soybean crops. *AgBioForum*, 13(1): 25-52. <http://www.agbioforum.org/v13n1/v13n1a03-brookes.pdf>

² Brookes, G., & Barfoot, P. 2013. The global income and production effects of genetically modified (GM) crops 1996–2011. *GM Crops and Food: Biotechnology in Agriculture and the Food Chain*. 4: 74-83. <https://www.landesbioscience.com/journals/gmcrops/2013GMC0001R.pdf>

³ Fawcett, R., & Towery, D. 2002. *Conservation tillage and plant biotechnology: how new technologies can improve the environment by reducing the need to plow*. Conservation Tillage Information Center, West Lafayette, Indiana. <http://ctic.purdue.edu/CTIC/BiotechPaper.pdf>

⁴ http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf

⁵ Nicolai, A., Manzo, A., Veronesi, F. & Rosellini, D. 2013. An overview of the last 10 years of genetically engineered crop safety research. *Critical Reviews in Biotechnology*. Early online: 1-12.

⁶ FDA Labeling Guidance

<http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm059098.htm>