

**Written Testimony of  
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Chair, Research and Business Development Action Team  
National Corn Growers Association  
April 2, 2009**

**Before the  
Commerce, Justice, Science, and Related Agencies Appropriations  
Subcommittee**

**Regarding  
Fiscal Year 2010 Appropriations Priorities**

Mr. Chairman, members of the subcommittee, thank you for the opportunity to testify today on Fiscal Year 2010 appropriations priorities. I am Pam Johnson, from Floyd, IA, and I operate a grain and livestock farm in partnership with my husband and two sons. I am also the Chair of the Research and Business Development Action Team for the National Corn Growers Association.

The National Corn Growers Association (NCGA) is a national organization founded in 1957 and represents more than 36,000 members in 48 states, 47 affiliated state organizations and more than 300,000 corn farmers who contribute to state check-off programs for the purpose of creating new opportunities and markets for corn growers.

NCGA's top priority in the FY2010 Science, State, Justice and Commerce appropriations bill is maintaining funding and focus of the \$101.22 million for the National Science Foundation (NSF) Plant Genome Research Initiative (initiative). The initiative is supported by the Interagency Working Group on Plant Genomes under the auspices of the National Science and Technology Council within the Office of Science and Technology Policy. We urge that this budget remain intact. For the first 10 years of this initiative we were doing basic research. We have now reached a place where we can use the important information we have gained to make real world applications and innovative technological advances to improve plants and expand their uses to meet societal needs.

In 1997, NCGA spearheaded the effort on legislation that authorized major plant genome research, which resulted in the Plant Genome Research Initiative. Obtaining genome sequence information frequently leads to breakthroughs in the study of a particular organism. The goal of the initiative is to understand the structure and function of plant genes in species of economic importance at all levels, the initiative has led to an unprecedented increase in our understanding

of the genomics and genetics of plants. The initiative also changed the way research is conducted in plant biology and helped to attract a new generation of scientists to the plant sciences field at U.S. colleges and universities.

Bringing agriculturally important plant species into the genomic age is an important goal. Initial major accomplishments included the completion of the model laboratory plant *Arabidopsis* and rice genome sequences. Completion of these genomes demonstrated that genomic sequence was the most comprehensive way toward gene discovery - a first step toward identifying the role of each gene. Building upon lessons learned sequencing smaller plant genomes, sequencing the corn genome became feasible.

In 2005, NSF, the United States Department of Agriculture (USDA) and the Department of Energy (DOE) awarded \$29.5 million to sequence the corn genome. NSF selected a consortium of four research institutions to sequence the maize genome: The University of Arizona, Washington University in St. Louis, Iowa State University in Ames and Cold Spring Harbor Laboratory in Cold Spring Harbor, New York. The goal of the Maize Genome Sequencing Project is to unravel the DNA sequence of the maize plant, to identify the genes and to determine their position on the chromosomes, and ultimately create a path to crop improvement. The corn genome sequence will, in turn, help in the eventual completion of other major crop genome sequences. Corn will also serve as a model system to aid in elucidating clues to improve the growth and development of other related grass crops, such as wheat, sorghum, millet and barley. Importantly, access to all of this information is shared through GenBank, Gramine, MaizeGDB and other public repositories for genome-sequence data.

A complete corn genome sequence and the application of its information will provide a wide range of benefits. Both the public and private sectors will be able to expedite their breeding programs and increase their knowledge of corn's important agronomic traits. Corn growers will be able to plant varieties of corn that are better suited to market and environmental needs, such as pest resistant traits, lower nitrogen and water needs, and higher yields – all increasing sustainability. Quality researchers will continue to be attracted to the field of plant genomics and genetics. Consumers will also benefit from more abundant and sustainable food, feed and fuel supplies. Improvements aim at increasing yield and enhancing nutritional value to achieve cheap, plentiful and safe food products that will directly benefit consumers. Corn is also an important material for many industrial purposes and products including rubber, plastics, fuel and clothing. Corn is a model system for studying complex genomic structure, organization and function, and its high quality genetic map will serve as the foundation for studies that will lead to improved biomass and bioenergy resources from corn and related plant species.

With focused funding, we will be much closer to achieving the goal of this initiative – understanding the structure and function of all economically significant plant genes and transferring this science from the laboratory to the field. The corn industry, including the academic research community, grain handlers, growers, and seed companies supported the corn genome sequencing project, and will continue to support a program that maintains its focus on discovering the functionality of genes in economically important plant species.

Maintaining and improving upon the resources available for crop systems is now more important than ever, as agriculture tries to meet the demands of consumers worldwide by providing a safe and secure supply of resources for human and animal nutrition, fiber, bioenergy, and industrial feeds. Continued strong governmental support of basic agricultural research is essential to ensure that the innovation pipeline remains robust. NCGA requests that this subcommittee include in the FY2010 Science, State, Justice and Commerce appropriations bill language that secures the \$101.22 million PGR budget to be applied exclusively to species of economic importance, keeping in line with the original intent of the program.

Thank you again Mr. Chairman for allowing NCGA to testify.