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Oral testimony of Rachel Poor on behalf of the
American Society of Agronomy, Crop Science Society of America, and
Soil Science Society of America
regarding the National Science Foundation budget for Fiscal Year 2011.
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Subcommittee on Commerce, Justice, and Related Agencies

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Good afternoon. The American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America appreciate the opportunity to testify in support of the National Science Foundation here, today. Many of our member scientists' fundamental research depends on grants from NSF's Biology, Geosciences, and Education and Human Resources Directorates. For this reason, we fully support the Administration's request for $7.424 billion dollars for FY 2011, a roughly 6% increase.

While we understand that Congress faces tough economic choices, we find that funding for basic science research is crucial to America's continued economic and intellectual prominence and pays high dividends. Basic science research has produced many exceptional technologies and tools. For example, an NSF grant funded the physics research that led to Magnetic Resonance Imaging (MRI) and Nuclear Magnetic Resonance Spectroscopy (NMR), technologies that have transformed medicine. In the discipline of soil science, NMR is used to characterize organic matter in environmental samples, a critical diagnostic for evaluating and understanding global carbon cycles and climate change. Basic research funded by the National Science Foundation has led to advances with applications in agriculture, environmental protection, manufacturing, and national defense.

American universities are still among the most respected in the world, but American students are falling behind in science and math compared to those in other developed countries. University budgets are extremely tight, forcing university researchers to look elsewhere for funding. Many of our best and brightest students are deterred from pursuing advanced science degrees because business, law, and medicine promise more lucrative careers. As a result, the agronomic, crops, and soil sciences, in particular, have suffered. Many of our members depend heavily on

federal funding for their research, which has led to increased crop yields, reduced environmental impacts, and new sources of fuel. As other funding has dried up, research grants funded by the NSF have become increasingly competitive.

As an example, today we are hosting a member from the University of California, Merced, a soil scientist in town for an NSF poster session. He has four different grants from the NSF, totaling about $1.3 million dollars. One of his projects that he is working on currently addresses the problem of waste from the dairy industry in California's Central Valley, which has many large dairy operations, and, in some counties, more cows than people. Each dairy cow produces 60 gallons of waste a day, and this waste has many nutrients that poison the groundwater, causing algae blooms and other toxic effects. His research is focusing on ways to turn this dairy waste into biochar, which is a lightweight substance that can be easily transported to other areas in need of fertilizer, and possibly also used as a fuel source.

We hope that you will continue to strongly support funding for NSF and especially the BIO, GEO, and EHR Directorates. Thank you again for providing the Agronomy, Crop, and Soil Science Societies the opportunity to testify before the House Appropriations Subcommittee on Commerce, Justice, and Science Today.