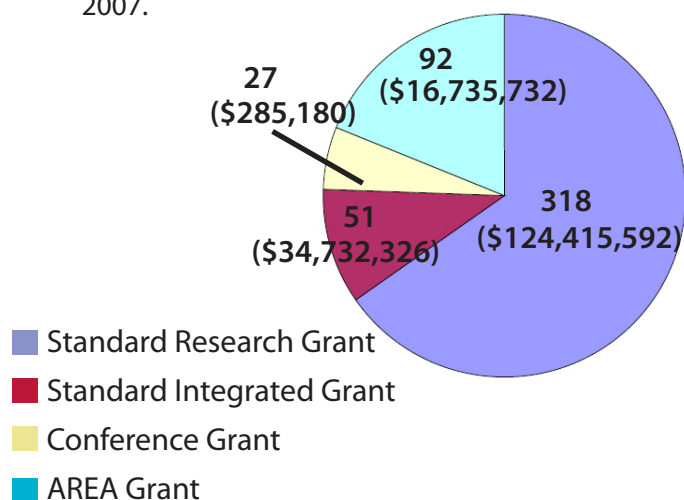


CSREES NATIONAL RESEARCH INITIATIVE 2007 ANNUAL REPORT - EXECUTIVE SUMMARY

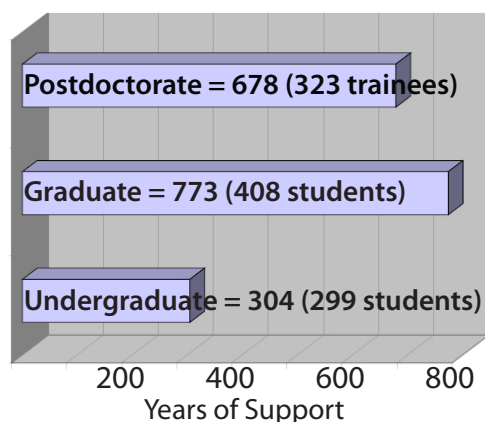
The National Research Initiative (NRI) was established in 1991 to support the mission of CSREES and the USDA to advance agriculture, the environment, human health and well-being, and rural communities. This report summarizes fiscal year 2007 in which the NRI funded 451 meritorious projects totalling \$164,372,877. The NRI offers 26 programs that range from animal science, plant science, human health and well-being, food safety, and agroecosystems. The projects funded support innovative efforts of universities, organizations, and community groups throughout the nation.

The NRI administers four types of grants: standard research grants, standard integrated research, education, and extension grants, coordinated agricultural projects (CAP), and agriculture research enhancement awards (AREA).

The number of awards made (and dollars allocated) for each grant type in fiscal year 2007.



In fiscal year 2007, a total of 1877 proposals were submitted to the NRI and evaluated through the competitive review process. More than 439 scientists contributed their time and expertise to the NRI proposal evaluation process. On average, a standard research project received approximately \$391,244



Student years of support (and number of students supported) from projects funded through the NRI in fiscal year 2007 to train and prepare scientists to solve agricultural needs in the future.

for 2.8 years¹, while a standard integrated project received approximately \$681,026 for 3.5 years². To continue to advance agriculture and remain competitive in the international market, it is imperative that every effort be made today to prepare tomorrow's workforce including researchers, educators, and policy makers. Grants provided through the NRI contributed to the preparation of the next generation of agriculture problem solvers by funding 1030 students for 1755 years of support in fiscal year 2007.

Every year the NRI has two opportunities to honor highly successful, motivated, and innovative scientists who received NRI funds. Dr. Jorge Dubcovsky of the University of California, Davis was awarded the 2007 Discovery Award for his project entitled *Wheat Applied Genomics - Coordinated Agricultural Project*. Dr. Dubcovsky was funded through the Plant Genome program. In October 2007, Dr. Sarah Brooks of Texas A&M University received the 2006 President's Early Career Award for Scientists and Engineers for her project entitled *Physical and Chemical Properties of Particulate Matter Emissions from Large Animal Feed Lot*. Dr. Brooks received funding through the Air Quality program.

¹ Excluding Research Career Enhancement Awards, Equipment Grants, Seed Grants, Conference Grants, continuing increments, and supplements.

² Excluding Bridge Grants, Conference Grants, continuing increments, and supplements.

The report provides a summary of over 20 projects funded through the NRI in fiscal year 2007 regionally distributed throughout the United States. The NRI touches essentially every state and territory in the nation. These are just a few examples of NRI funded projects.

Alabama A&M University
Promoting Value-added Enterprises among Small and Medium-Sized Farms in Alabama

Cornell University
Early Resumption of Postpartum Ovarian Cyclicality in Dairy Cows

Iowa State University
Emergence and Fitness Mechanisms of Fluoroquinolone Resistant *Campylobacter* in Poultry

Kansas State University
Develop a Fire and Smoke Management Program to Minimize Impact of Prescribed Rangeland Burning in the Central Plains

North Carolina State University
Functional Genomic Analysis of the Interactions between *Saccharomyces* and *Lactobacilli* during Biomass Ethanol Fermentation

Ohio State University
Responding to Emerald Ash Borer Impacts on Forest Structure and Invasive Plant Colonization

Pennsylvania State University
Global *Phytophthora* Network (GPN): A Cyber Infrastructure Linking Data, e-Tools, and Human Capital to Support the Monitoring and Management of *Phytophthora*

Purdue University, West Lafayette
Functional Foods Containing Novel Carbohydrates for Energy Balance and Improved Health

Texas A&M University
Effects of Biofuels Technology Development and Fossil Energy Extraction Conditions on World Agricultural Markets and Trade

University of Arizona
Efficacy of Vegetables to Reduce Oxidant Stress and Inflammation in At-Risk Overweight Women: A Dose-Response Study

University of California
Conifer Translational Genomics Network (CTGN) Coordinated Agricultural Project

University of Chicago
Identifying Molecular and Physiological Pathways that Regulate Root System Architecture in *Arabidopsis* and Crop Plants

University of Hawaii
Modulation by Gonadal Steroid Hormones of the Effects of Growth Hormone, Prolactin and Somatotropin on Somatic Growth and Reproduction

University of Maryland
Role of a FLC-like MADS Box Gene in Poplar Vegetative Bud Development and Dormancy

University of Massachusetts, Dartmouth
Trout Humoral Immunity: Examining the Role of Antibody Secreting Cell Diversity Following Vaccination and Infection

University of Minnesota
Potential Public Health and Food Safety Impacts Associated with Use of Antibiotic Growth Promoters
University of Tennessee
Development of an Integrated Forage/Biofuels Management System

Utah State University
Genomics to Increase Aflatoxin Resistance in Turkeys for the Mid-South

Virginia Polytechnic Institute and State University
Phytophthora sojae: A High Quality Reference Sequence for the Oomycetes

Washington State University
Soil Ecosystem Changes in Carbon and Nitrogen Budgets Induced by Shifts to Biofuels Production

NRI Impacts

Projects funded by the NRI in previous years are producing important results that are having a profound impact on the nation. The Annual Report highlights a selection of projects that have led to improved food safety, increased food nutrition and crop security, and expanded on healthy eating habits to a greater audience. The NRI is grateful to all participants in the review, processing, and completion of projects that benefit the nation.

