

**Agriculture
April 2014
Proposal Submissions**

Principal Investigator	Department	Sponsor	Title	Total Amount Requested
Abbott, Albert	Forestry	Washington State University	ABR-PG Standards and CyberInfrastructure That Enable "Big-Data" Driven Discovery For Tree Crop Research	\$317,246
Abbott, Albert	Forestry	National Institute of Food and Agriculture	Identification, characterization and transgene testing of gene candidates conferring resistance to Phytophthora cinnamomi in chestnut.	\$496,880
Abbott, Albert	Forestry	National Institute of Food and Agriculture	Abiotic stress response and adaptive phenology in fruit and forest trees	\$490,818
Archbold, Douglas	Horticulture	National Institute of Food and Agriculture	Ribitol Metabolism and Role in Maize and Tomato	\$352,029
Balasuriya, Udeni	Veterinary Science	National Institute of Food and Agriculture	Development of Genetically Defined Synthetis Genomic Vaccine (SGV) for Equine Herpesvirus-1	\$499,990
Batte, Marvin	Agr Economics	National Institute of Food and Agriculture	Farmer Entry, Retirement, Business Transfer and Food Security: Issues of financial sustainability for small and mid-sized farms	\$498,980
Bewley, Jeffrey	Animal and Food Sciences	National Institute of Food and Agriculture	Monitoring Sleep in Dairy Cattle with a Non-Invasive Monitoring System Toward Evaluation of Housing System Impact on Immune Function and General Health.	\$499,993
Boatright, William	Animal and Food Sciences	National Institute of Food and Agriculture	Redox Cycling and Free Radical Production in Commercial Infant Formulas	\$348,077
Boatright, William	Animal and Food Sciences	Dairy Research Institute	Redox Cycling Reactions in Whey Protein Infant formulas	\$99,975
Bridges, Phillip	Animal and Food Sciences	National Institute of Food and Agriculture	Selenium form-dependent regulation of testis function	\$466,908
Bullock, Kevin	Animal and Food Sciences	Texas A&M Research Foundation	Integrated Program for Reducing Bovine Respiratory Disease Complex in beef and Dairy Cattle	\$101,176
Chambers, Thomas	Veterinary Science	National Institute of Food and Agriculture	Inhibition of Type-1 Interferon Response by Equine Herpesvirus-1	\$490,214
Coyne, Mark	Plant & Soil Sciences	Natural Resources Conservation Service	Quantifying the N Benefit of Cover Crop Use	\$75,000
D'Angelo, Elisa	RCTF-1-Plant Sciences-Agronomy	National Science Foundation	Dimensions: Collaborative Research: Mississippi Metagenome Project	\$70,398

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Dvorak, Joseph	Biosystems & Ag Eng	National Institute of Food and Agriculture	Enabling robot and human worker collaboration in agricultural fields	\$499,676
Fehr, Robert	Biosystems & Ag Eng	KY Department for Public Health	CES Radon Outreach Program	\$7,620
Geneve, Robert	Horticulture	University of Florida	Development of Online Interactive Innovations and Higher Order Thinking Exercises and for Plant Propagation Courses Worldwide	\$61,500
Hanley, Carol	Center for the Environment	Lexington Fayette Urban County Government	Shiloh Baptist Church Community Gardens	\$2,480
Harper, Carl	Entomology	Slow the Spread Foundation	Monitor Gypsy Moth Populations for Slow the Spread Program	\$44,000
Harwood, James	Entomology	University of Georgia	Evaluation of soybean field border management on immigration of insect pests and arthropod predator abundance	\$5,916
Hildebrand, David	Plant & Soil Sciences	National Institute of Food and Agriculture	High palmitoleic soybean oil	\$479,195
Horohov, David	Veterinary Science	National Institute of Food and Agriculture	Transcriptomic and genomic characterization of the mechanism responsible for foal resistance to Rhodococcus equi	\$449,612
Kachroo, Aardra	Plant Pathology	Clemson University	Establishing a permanent feeding site: Reniform nematode co-option of host plant genes	\$67,745
Kachroo, Pradeep	Plant Pathology	National Institute of Food and Agriculture	Understanding how plant growth and development interfaces with plant stress	\$499,864
Kachroo, Pradeep	Plant Pathology	National Institute of Food and Agriculture	Understanding the role of double-stranded RNA-binding proteins in plant defense	\$499,979
Karathanasis, Anastasios	Plant & Soil Sciences	KY Department for Public Health	Soil Morphology	\$40,000
Kurzynske, Janet	Dietetics and Human Nutrition	National Institute of Food and Agriculture	The YMCA, UK and KSU: Yes (Youth Engagement and Support) Jefferson County!	\$663,000
Lawson, Sara	Plant & Soil Sciences	Bayer CropScience GmbH	Bayer Soybean	\$10,000
Lee, Brad	Plant & Soil Sciences	Natural Resources Conservation Service	Phosphorus runoff potential in major row crop soils of Kentucky	\$74,999

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Lensing, Janet	Entomology	Animal and Plant Health Inspection Service	Imported Fire Ant Survey	\$3,758
MacLeod, James	Veterinary Science	University of Louisville	An Improved Reference and Infrastructure Support for the Domestic Horse Genome	\$45,267
McNeill, Sam	Biosystems & Ag Eng	Oklahoma State University	Alliance for Food Security Through Reduction of Postharvest Loss and Food Waste	\$68,694
Mondal, Shankar	Veterinary Science	National Institute of Food and Agriculture	Characterization of the modular determinants of virulence, tissue tropism, and pathogenic phenotype of infectious bronchitis virus (IBV)	\$393,880
Montross, Michael	Biosystems & Ag Eng	National Institute of Food and Agriculture	Development of a sensor system to spatially quantify moisture migration and mold development in baled biomass to aid in the development of an effective storage environment	\$499,947
Nagy, Peter	RCTF-1-Plant Sciences-PlantPath	National Institute of Food and Agriculture	Cyclophins as broad-spectrum cell-intrinsic restriction factors against plant viruses	\$500,000
Naugle, Lottie	Small Business Development Center SBDC	Defense Logistics Agency	Kentucky Procurement and Technical Assistance Program	\$249,244
Nielsen, Martin	Veterinary Science	University of Massachusetts	Bt crystal proteins and combinations as potent, next-generation anthelmintics	\$162,516
Palli, Subba	Entomology	National Institute of Food and Agriculture	Molecular mechanisms of spider mite-plant interactions	\$498,533
Perry, Sharyn	RCTF-1-Plant Sciences-Agronomy	National Institute of Food and Agriculture	Gene regulation controlled by the MADS-factors GmAGL15 and GmAGL18 during Glycine max embryogenesis.	\$500,000
Pescatore, Anthony	Animal and Food Sciences	National Institute of Food and Agriculture	Economic Evaluation and Product Quality of Alternative Processing Systems	\$499,675
Pescatore, Anthony	Animal and Food Sciences	University of Connecticut	Practical and environment-friendly strategies for improving food safety and shelf-life of organic poultry products	\$15,000
Reed, Michael	International Programs	National Institute of Food and Agriculture	Integrative Education to Bridge Geographic and Disciplinary Boundaries in Agricultural Biotechnology	\$149,819
Rieske-Kinney, Lynne	Entomology	Eastern KY University	A long-term evaluation of the interacting effects of fire and White-Nose Syndrome on endangered bats	\$55,914
Rieske-Kinney, Lynne	Entomology	Northern Nut Growers Association	Semiochemicals offer hope for managing the granulate ambrosiabeetle, an invasive pest of chestnut	\$6,924

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Sama, Michael	Biosystems & Ag Eng	National Institute of Food and Agriculture	Assessing the performance of mixing and aeration strategies for composting bedding/manure in a compost bedded dairy pack barn	\$317,082
Scharl, Christopher	Plant Pathology	New Mexico State University	Role of Polyketide Synthases in Pathogenicity and Swainsonine Production	\$170,021
Scharl, Christopher	Plant Pathology	National Institute of Food and Agriculture	Molecular Genetics of Seed Transmissibility of Epichloe sp. Endophytes In Tall Fescue	\$499,997
Sharkey, Michael	Entomology	University of Georgia	Investigating the potential of wasp venom to increase the sustainability of biofuel production	\$10,989
Slack, Charles	Plant & Soil Sciences	Monsanto Co	RoundupXtend Systems Recommendations	\$11,200
Slack, Charles	Plant & Soil Sciences	Syngenta Crop Protection	MGI herbicide-tolerant soybeans: Evaluation of mesotrione-based weed management programs.	\$12,500
Smalle, Jan	Plant & Soil Sciences	National Institute of Food and Agriculture	Flavonoid Isolation From Intact Plants: A Nanoparticle-Based Approach	\$499,055
Smalle, Jan	Plant & Soil Sciences	National Institute of Food and Agriculture	Microtubule-dependent salt stress tolerance	\$149,727
Smith, Samuel	Plant & Soil Sciences	Mississippi State University	Breeding North American native grasses for precocious germination with emphasis on eastern gamagrass	\$41,999
Stowe, Christina	Agr Economics	Zoetis LLC	Economic Considerations of Aggressively Treating the Influenza Virus in Equines	\$57,344
Suman,Surendranath	Animal and Food Sciences	National Institute of Food and Agriculture	Proteome changes in American dry-cured ham	\$149,999
Tanaka, Keiko	Community & Leadership Devel	Kansas State University	Impacts of Value-Based Supply Chains on Small and Medium Sized Farms	\$74,211
Townsend, Lee	Entomology	KY Department of Agriculture	2015-2016 Private Pesticide Applicator	\$55,000
Vaillancourt, Lisa	Plant Pathology	University of Vermont	Interactions Between Insects Fungi and Plants: An Innovative Model System for Ecologically Based Management	\$158,074
Vaillancourt, Lisa	Plant Pathology	National Institute of Food and Agriculture	Molecular Mechanisms of Host Specificity in Closely Related Fungal Pathogens of Maize and Sorghum	\$495,386

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Van Sanford, David	Plant & Soil Sciences	National Institute of Food and Agriculture	Recovering Rare Transgressive Segregants Through Genomic Selection in a Single Cross Wheat Population	\$498,573
Vincent, Stacy	Community & Leadership Devel	National Institute of Occupational Safety and Health	CROPS	\$82,592
Vincent, Stacy	Community & Leadership Devel	KY Department of Education	Experiential Education in Welding Mechanization	\$3,000
Webb, Bruce	Entomology	ParaTechs Corp	SBIR Phase 1:A novel biological method to suppress insecticide resistance in transgenic plants	\$46,871
Wendroth, Ole	Plant & Soil Sciences	Kentucky Soybean Promotion Board	Irrigating the Soil to Maximize the Crop - An Approach for Soybean	\$40,131
Wendroth, Ole	Plant & Soil Sciences	Kentucky Corn Growers Association	Irrigating the Soil to Maximize the Crop - An Approach for Corn to Efficient and Environmentally Sustainable Irrigation Water Management in Kentucky	\$80,263
Wesley, Scarlett	Merchandising, Apparel & Textiles	National Institute of Food and Agriculture	Creating a Reciprocal Relationship between Rural/Urban Businesses, Educators and Students: Core Course Development Utilizing Soft Skills and Experiential Learning Environments	\$300,000
Williams, Mark	Horticulture	Iowa State University	Reinventing Sustainable Protection Systems for Cucurbit Production	\$188,000
Xiong, Youling	Animal and Food Sciences	National Institute of Food and Agriculture	Technology and mechanism of pH-shifting to enhance legume protein functionality and oxidative stability	\$499,809
Zhou, Xuguo	Entomology	National Institute of Food and Agriculture	Transcriptomic dissection of invasive-invasive interactions between the two whitefly sibling species	\$150,000
Zhu, Hongyan	Plant & Soil Sciences	National Institute of Food and Agriculture	Genetic control of pod dehiscence in soybeans and comparative genetic analysis with other legumes	\$500,000
Zhu, Hongyan	Plant & Soil Sciences	National Institute of Food and Agriculture	Improving symbiotic nitrogen fixation through restriction of nodulation by low efficient rhizobial strains	\$500,000