

**Agriculture  
January 2009  
Proposal Submissions**

<b>Principal Investigator</b>	<b>Sponsor</b>	<b>Title</b>	<b>Department</b>	<b>Total Amount Requested</b>	
Barton, Christopher	Department of the Interior	Water Quality and Biological Response to Headwater Stream Restoration on an Eastern Kentucky Surface Mine	Forestry	\$0	
Bruening, William	KY Soybean Promotion Board	Performance of Soybean Varieties in Kentucky	Plant & Soil Sciences	\$50,000	
Castillo, Manuel	KY Science and Technology Co Inc	Development of an Optical Backscatter Sensor for Determining Thermal Denaturation of Whey Proteins During Milk Processing	Biosystems & Ag Eng	\$0	
Chambers, Orlando	Metabolix Inc	Industrial Product Field Test	Ky Tobacco Research & Dev Center	\$9,973	
Coyne, Mark	Department of the Interior	Bioenergy Crops to Improve Soil Quality in Reclaimed Mine Soils of Eastern Kentucky and West Virginia	Plant & Soil Sciences	\$0	
Cromwell, Gary	National Pork Board	Methods of Restoring Carcass Firmness and Other Post-Harvest Traits in Finishing Pigs Fed a High Level of Distillers Dried Grains with Solubles (DDGS)	Animal and Food Sciences	\$70,116	
DeBolt, Seth	National Science Foundation	The Role of UDP-Glucose Sterol Glycosyltransferases in Higher Plants	Horticulture	\$459,384	
DeBolt, Seth	KY Science and Technology Co Inc	KSEF R&D Excellence: Optimizing the Molecular Architecture of Cellulose for Bioenergy	Horticulture	\$92,383	
DeBolt, Seth	National Science Foundation	From small molecule to gene: using chemical genetics to understand cell wall sensing and advance molecular resources	Horticulture	\$494,134	
Durham, Richard	University of Nebraska	eXtension Consumer Horticulture Certified Cop Leadership Funds 2009	Horticulture	\$0	
Ghabrial, Said	KY Science and Technology Co Inc	KSEF R&D Excellence: Use of a Novel Virus-Based Vector for Expression of Foreign Proteins in Soybean	Plant Pathology	\$99,917	
Hanley, Carol	Environmental Protection Agency	Neighborhood-Based Watershed Action Program	Tracy Farmer Cntr for the Environment	\$19,578	
Harmon, David	Hills Pet Nutrition Inc	Nutrient Utilization in the Dog 2009-1010	Animal and Food Sciences	\$1,406,163	
Harwood, James	KY Science and Technology Co Inc	KSEF R&D Excellence: Impact of Predator Biodiversity on Pest-Suppression in Kentucky Wheat: A Denaturing Gradient Gel Electrophoresis Approach	Entomology	\$99,993	
Hennig, Bernhard	National Institute of Environmental Health Sciences	Nutrition and Superfund Chemical Toxicity	Animal and Food Sciences	\$10,849,753	

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Hershman, Donald	KY Soybean Promotion Board	2009 Kentucky Soybean Rust Monitoring and Early Warning Systems	Plant Pathology	\$31,246	
Houtz, Robert	National Science Foundation	Chloroplast-Localized Co- and Post-Translational Processing Enzymes	Horticulture	\$816,953	
Hu, Wuyang	National Oceanic and Atmospheric Administration	Analysis of Current Market Demand for Ahi Poke and Consumer Trend Analysis	Agr Economics	\$19,809	
Hunt, Arthur	National Science Foundation	Dissecting the Arabidopsis CPSF30 Protein	Plant & Soil Sciences	\$0	
Hunt, Arthur	KY Science and Technology Co Inc	Polyadenylation of Stored mRNAs During Seed Germination	Plant & Soil Sciences	\$0	
Jackson, Vanessa		An Integrated Collaborative Model for Capacity Building in International Economic and Entrepreneurship Development between U.S. and African Institutions	Merchandising, Apparel & Textiles	\$50,000	
Johnson, Douglas	Cooperative State Research Education and Extension	An Integrated Pest Management Program for Kentucky	Entomology	\$195,799	
Jones, Richard	KY Department of Agriculture	Ginseng Monitoring and Research Project	Horticulture	\$10,000	
Kachroo, Aardra	KY Science and Technology Co Inc	KSEF R&D Excellence: Generating Biosensors for Monitoring the Real-Time Flux of Glycerol-3-Phosphate During Host-Pathogen Interactions	Plant Pathology	\$50,702	
Kachroo, Aardra	National Science Foundation	Identifying and Characterizing Components of the Soybean Mosaic Virus Effector-Triggered Immunity in Soybean	Plant Pathology	\$368,812	
Lhotka, John	Department of the Interior	Effect of Grading Technique and Forest Thinning on Productivity of High-Value Tree Species in Reforested Surface Mine Lands	Forestry	\$0	
Lindemann, Merlin	National Pork Board	The Influence of Crowding Stress During the Nursery Period on First and Second Parity Reproductive Performance	Animal and Food Sciences	\$129,602	
Maiti, Indu	KY Science and Technology Co Inc	KSEF R&D Excellence: Designing and Testing High-Level Expression Vectors	Ky Tobacco Research & Dev Center	\$99,338	
McCulley, Rebecca	Yale University	Collaborative Research: Understanding the Potential for Thermal Adaptation to Drive Spatial and Temporal Variation in Heterotrophic Soil Respiration Rates	Plant & Soil Sciences	\$0	
McLeod, Kyle	Hills Pet Nutrition Inc	Essential Amino Acid and Fatty Acid Studies in Cats 2009-2010	Animal and Food Sciences	\$491,972	
McNeill, Samuel	Ohio State University	Incidence and Spread of Insects from Bucket Elevator Leg Boots	Biosystems & Ag Eng	\$48,000	

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Meyer, Alphonse	Kerr Center for Sustainable Agriculture Inc	Kentucky 2009 SARE Model State Plan	Agr Economics	\$0	
Nosarzewski, Marta	National Science Foundation	Novel Role of Sorbitol Dehydrogenase in Plant Stress Tolerance	Horticulture	\$365,084	
Obrycki, John	Department of Agriculture	Biological Control of the Hemlock Woolly Adelgid	Entomology	\$4,334	
Osborne, Ashley	Texas A&M University	Regional Collaboration to Protect Drinking Water Resources	Plant & Soil Sciences	\$5,184	
Perry, Sharyn	National Science Foundation	Transcriptional Regulatory Networks Controlling Higher Plant Embryogenesis	RCTF-1-Plant Sciences-Agronomy	\$0	
Schardl, Christopher	KY Science and Technology Co Inc	KSEF R&D Excellence: Development and deployment of a non-toxic endophyte in tall fescue for forage	Plant Pathology	\$98,663	
Seebold, Kenneth	KY Science and Technology Co Inc	KSEF R&D Excellence: Investigating the Role of the Cuticle in Resistance to Foliar Plant Pathogens	Plant Pathology	\$99,971	
Seebold, Kenneth	University of Florida	IR-4 Fungicide Performance Trials	Plant Pathology	\$4,500	
Smalle, Jan	National Science Foundation	Molecular Genetic Analysis of a Novel Feedback Inhibition Mechanism in the Cytokinin Response Pathway	Plant & Soil Sciences	\$493,599	
Stombaugh, Timothy	Department of Education	Food and Energy Production: Internationalized Agricultural and Engineering Programs	Biosystems & Ag Eng	\$239,967	
Suman, Surendranath	Department of Agriculture	Kentucky-South Africa Partnership on Goat Meat Production	Animal and Food Sciences	\$149,777	
Tanaka, Keiko	Cooperative State Research Education and Extension	Cross-Cultural Perspectives on Sustainability: Sustainable Agriculture and Food in Asia and Beyond	Community & Leadership Devel	\$0	
Tang, Guiliang	National Science Foundation	Machinery for a Nicked siRNA Programmed Highly Asymmetric RISC in Gene Silencing	Plant & Soil Sciences	\$567,041	
Tang, Guiliang	National Science Foundation	Role of Plant miRNA Duplex Structure in Gene Silencing	Plant & Soil Sciences	\$567,041	
White, Jennifer	KY Science and Technology Co Inc	KSEF R&D Excellence: Molecular Characterization of the Microbial Community of Invasive Arthropods	Entomology	\$0	
Witt, William	KY Transportation Cabinet	Management of Troublesome Weeds in Highway Rights-of-Way	Plant & Soil Sciences	\$178,099	

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Yuan, Ling	KY Science and Technology Co Inc	KSEF R&D Excellence: Creation of Hyperactive DNA Transposases by Direct Evolution	Plant & Soil Sciences	\$98,938	
Zhou, Xuguo	KY Science and Technology Co Inc	KSEF R&D Excellence: Microencapsulation of Double Stranded RNA: A Lethal Combination for Subterranean Termites	Entomology	\$0	
Zhu, Hongyan	National Science Foundation	TRMS: Translation Research from Medicagto Truncatula to Medicago Sativa (Alfalfa): Functional and Comparative Analysis of RCT1-Mediated Innate Immunity in Medicago	Plant & Soil Sciences	\$0	