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ECONOMIC RESEARCH SERVICE

Statement of Dr. Mary Bohman, Administrator

Before the Subcommittee on Agriculture, Rural Development,

Food and Drug Administration, and Related Agencies

Mr. Chairman and members of the Subcommittee, I appreciate this opportunity to present the Economic Research Service (ERS) budget recommendations for fiscal year (FY) 2014.

The mission of ERS is to inform and enhance public and private decision making on a broad range of economic and policy issues related to agriculture, food, the environment, and rural development. ERS is a trusted, go-to resource for objective information, data, and unique economic and social science analysis on these topics. The ERS program anticipates the needs of decision makers by applying economic and social science research to address important emerging issues of the day. Our research touches the obesity epidemic, child nutrition, drought impacts, trade talks, the family farm, food deserts, climate change, and rural population loss.

The key decision makers served by ERS's research program and products are those who routinely make or influence public policy and program decisions. ERS shapes its program to serve the needs of this clientele, which includes White House and USDA policy officials and program administrators/managers; the U.S. Congress; other Federal agencies and State and local government officials; and domestic and international agricultural, environmental, consumer, and other public organizations, including farm and industry groups interested in public policy issues.

Among the specific areas of research and data development that support our mission are global agricultural market conditions, trade negotiations, agribusiness concentration, farm business and household income, farm and retail food prices, foodborne illnesses, food labeling, nutrition, food assistance programs, agrichemical usage, livestock waste management, conservation, genetic diversity, technology transfer, and rural employment.

The President's FY 2014 budget request for ERS's research programs is $78.5 million. The budget request funds ERS' core programs and supports a new program enhancement, *Research Innovations for Improving Policy Effectiveness*, which is related to key Administration priorities. Our proposed budget supports agricultural research investments that are critical to long-term economic growth and job creation.

Funding is requested to continue ERS's highest priority core programs. They include the following: Research exploring how investments in rural people, businesses, and communities affect the capacity of rural economies to prosper in the new and changing global marketplace; Research on economic issues related to developing natural resource policies and programs that respond to the need to protect the environment and the challenges of climate change while enhancing agricultural competitiveness; Research and market outlook on production agriculture, domestic and international markets, trade, and Federal farm policies to understand the U.S. food and agriculture sector's performance in the context of increasingly globalized markets; and Research to evaluate the Nation's food and nutrition assistance programs, to study the relationships among the factors that influence food choices and health outcomes, including obesity, and to enhance methodologies for valuing societal benefits associated with reducing food safety risks.

Investment in effective delivery of our work products is a high priority. We continue to improve how our customers can access our information. For example, we increased the effectiveness of our website this year by improving its underlying architecture, its organization structure, and its search functions. The new architecture has made us more agile and flexible in our ability to post timely, relevant research and data. We also converted our research–rich flagship magazine, *Amber Waves*, to an all-electronic publication and made it available on mobile devices.

ERS research that informs programs and policies eventually touches the individual American citizens who breathe the air, drink the water, live and work in rural towns, and plan their diets and food budgets. Our research, moreover, touches those who depend on school lunches, on SNAP, and on Federal and State rural development programs. Among others, it benefits small farms as well as small rural businesses, as they are affected by policies and programs.

Addressing the Needs of Decision Makers

The agency's research program both anticipates and responds to decision makers' information needs through direct analyses and the development of analytic methods and supporting data. In FY 2012 ERS completed a strategic planning process to define core research priorities, establish communications priorities to raise visibility, and develop a civil rights strategy.

ERS conducts research on specific topics to assess the socio-economic consequences of public policies, regulations, and programs. These studies build on the Agency's analytic methods, data resources, and highly skilled staff. Recent examples of research conducted at the request of our customers include analysis of farm programs, the farm and rural economy, and food access.

ERS has expanded a previous congressionally-mandated study of food deserts—areas with limited access to affordable and nutritious food—by mapping areas across the country where low-income residents do not have easy access to a grocery store. In 2012, ERS published new research showing that low-income census tracts with low access to supermarkets tend to have smaller populations, higher rates of abandoned or vacant homes, and residents who have lower levels of education, lower incomes, and higher unemployment. In 2013, ERS launched the *Food Access Research Atlas*, which presents a spatial overview of food access indicators for low-income and other census tracts using different measures of supermarket accessibility and vehicle ownership. Industry can use the Atlas to identify underserved communities for new store locations, and health and nutrition researchers can use it to investigate the impact of food access and the food environment on food choices and health outcomes.

Responding to the Nation's priority to support veterans, reservists, and military families, ERS and USDA partnered with the Military Family Research Institute at Purdue University to convene the "Veterans, Reservists, and Military Families (VRMF) Data and Research Workshop." This workshop brought together federal data working groups, government researchers, and their academic collaborators to improve the common understanding of critical demographic and socioeconomic trends affecting the VRFM population, identify key data and research gaps, and begin to develop strategies to address them. To inform decision making on issues concerning

rural veterans, ERS added county-level economic and demographic data on veterans to the online data tool, *Atlas of Small Town and Rural America.*

The previous examples illustrate how ERS deploys its research expertise to address specific policy needs. Our research program also anticipates the information needs of decision makers by providing innovative economic and social science research on important issues of the day. The examples that follow document how customers and stakeholders use ERS analysis and data to make decisions.

Investment in Agricultural Research and Development

Meeting growing global demand for food, fiber, and biofuel requires robust investment in agricultural research and development (R&D) from both public and private sectors. In 2012, two ERS reports and an article in *Science* magazine examined global R&D spending by private industry in seven agricultural input sectors, food manufacturing, and biofuel, and described the changing structure of these industries. The private sector performed 53 percent of total food and agricultural research in the U.S.; over the long term privately funded R&D has grown faster than publicly funded R&D. Public sector funders and performers of R&D play a largely complementary role by emphasizing social returns in the selection of research topics and valuing rapid and widespread disclosure of new knowledge. Findings from these reports and the underlying research contributed to the recent report to the President on agricultural research from the President's Council of Advisors on Science and Technology.

Monitoring Farm Sector Financial Health

ERS has a leading role in monitoring the financial health of the farm sector, including the performance of farm businesses and the well-being of farm households. These core statistical indicators provide guidance to policymakers, lenders, commodity organizations, farmers, and others interested in the financial status of the farm economy. ERS's farm income statistics also inform the computation of agriculture's contribution to the gross domestic product for the U.S. economy. The two main measures of farm sector income are currently expected to be close to record highs in 2013. Net farm income is forecast to be $128.2 billion, which would be nearly 14 percent higher than its 2012 forecast. Adjusting for inflation, this would be the highest net

farm income since 1973. Net cash income, forecast at $123.5 billion, would be down nearly 9 percent from 2012, but still high by historical standards.

Impacts of the 2012 Drought

In the summer of 2012, the U.S. experienced one of the most severe and extensive droughts in 25 years. ERS staff rapidly compiled information on the impacts of the ongoing drought on food prices and consumers, farms, and the crop and livestock sectors. The initial version of the web page, "U.S. Drought 2012: Farm and Food Impacts," was continuously updated to reflect changing conditions. Information from the ERS Drought Page supports Departmental decision making on responses to the drought, and was extensively cited in news media, providing a wideaudience with the latest ERS economic information.

Measuring the price of healthy food

A common explanation for the poor quality of American diets is that healthier foods are more expensive than less healthy foods. A 2012 ERS study compared prices of food using different measures of price based on food energy ($/calorie), edible weight ($/100 edible grams), and the price of an average portion ($/average portion). Using nationally representative data sources, the study shows that healthy foods cost less than unhealthy foods when measured by the price based on edible weight and portion size, but not when based on calories. This analysis has been used to support decision making for USDA food assistance and nutrition programs, and findings from the report have been widely cited, helping to educate the public about the affordability of healthier food choices.

Adaptation of U.S. Agriculture to a Changing Climate

ERS research assesses the ability of farmers to adapt to changes in local weather, resource conditions, and price signals by adjusting crops, rotations, and production practices. A 2012 ERS study of the effects of increases in average temperatures worldwide suggests that, while impacts are highly sensitive to uncertain climate projections, farmers have the ability to adapt to changes in local weather, resource conditions, and price signals by adjusting crops, rotations, and production practices. Such adaptation, using existing crop production technologies, can partially

mitigate the impacts of climate change on national agricultural markets. Ongoing research expands the analysis to incorporate water availability.

Policies to Mitigate Population Loss in Rural Counties

People who return to the rural communities where they were raised (return migrants) are critically important to the hundreds of areas experiencing persistent population loss through outmigration. Rather than pursuing efforts to help these communities retain high school graduates, it is becoming increasingly clear that encouraging return migration may be a more fruitful policy strategy. ERS research showed that family-based motivations were listed first by the migrants themselves as the primary trigger for returning home, with only a handful of cases that could be described as motivated primarily by employment decisions or place ties. The ability to move back to a rural place most often hinged on securing employment; career constraints and limited employment options were critical barriers in many choices not to return.

Support for "Feed the Future"

ERS participates in activities that support the Administration's Feed the Future global hunger and food security initiative. As part of its ongoing research program, ERS publishes an annual global *Food Security Assessment*, which includes all the Feed the Future countries. ERS conducts analysis of agricultural productivity and the factors that determine it in key developing and transition countries. ERS is collaborating with other U.S. government agencies and local partners to support Feed the Future activities in specific countries through assessment of market information systems and assistance to improve local capacity to collect and analyze better information. This activity also supports plans to strengthen agricultural statistics under the United Nations Statistical Commission's Global Strategy to Improve Agriculture and Rural Statistics.

Examples of Studies Requesting Funding in 2014

The priority research initiative that ERS proposes for FY 2014 is:

$2,500,000 for Research Innovations to Improve Policy Effectiveness: ERS proposes to adopt two innovative research strategies to address information gaps that hinder policy effectiveness. The first strategy is *behavioral economics* that helps policy makers understand why people behave and choose as they do. Many policies and programs are more costly and less effective

than intended because people do not behave the way we expect. Program participation is low, resources are not spent the way they were anticipated, and sometimes unintended consequences or outcomes arise due to actual consumer responses to implemented policies. Behavioral economics provides a research methodology and new insightful lessons to better understand human behavior that in turn leads to the potential for more effective policies.

ERS has successfully applied lessons from behavioral economics to improve the design of school cafeterias with the aim of increasing sales of healthy foods. Through this initiative, this research would be expanded to test how practical, inexpensive changes in the school environment, such as altering item placement to highlight healthy foods and priming via taste tests healthy options, can encourage students to make healthier food choices. Another application will support the design of conservation programs and environmental markets and identify designs for low-cost incentives to encourage (or "nudge" in behavioral economics terms) farmers to select more cost effective options.

The second strategy is *statistical uses of administrative data* or records collected by program agencies, program administration, or enforcement. Analysis of administrative data, either alone or in combination with survey data, can provide evidence-based findings to improve program effectiveness. Combining survey and administrative data can answer questions that neither type of data can answer alone. For example, administrative data may not allow researchers to understand why owners of environmentally sensitive plots of land are not enrolled in conservation programs because the data usually only includes program participants and not individuals who did not choose to or were not selected to participate. Survey data includes information from both participants and non-participants, but may not have detailed information about the program payments or conditions. Linking the two types of data could capture the relationship between the environmental characteristics of land, land owners, and program features.

The initiative develops ERS' capacity to use, link, and apply administrative data for research and evidence-based policy analysis in several areas. Linking farm survey data with farm program and conservation data will improve understanding of the characteristics of farms that participate,

the types of practices they adopt, the potential overlap across programs, and the financial outcomes. Using foodborne illness outbreak investigative data to measure the effectiveness of traceability requirements in the Food Safety Modernization Act (FSMA) will test whether traceability leads to reductions in foodborne illnesses. Linking state-level administrative data from the Supplemental Nutrition Assistance Program (SNAP) and other safety net programs such as unemployment insurance can illuminate options for improved coordination of services.

ERS intends to look beyond the immediate horizon to conduct anticipatory research, the findings of which will be available when a topic "heats up." ERS sets priorities by consulting stakeholders and focusing on research that capitalizes on the strengths of an intramural research agency. These strengths include: Access to unique or confidential data sources; Research or data that provides a national perspective or framework; Research that requires large and sustained investment; and Research that directly serves the U.S. Government's or USDA's long-term national goals that are not likely to be well known, understood, or valued in academia. Looking forward, drivers of job creation in rural America, issues arising from debate and deliberation on the farm bill, and the impact of globalization on U.S. agriculture motivate new and ongoing research programs that will deliver research findings in 2014 and beyond.

Linkages between rural community wealth and health care provision: The research, based on a survey to be conducted in FY 2013, will help improve understanding of the roles that rural communities play in recruiting and retaining health care providers and the impacts this has on rural economic development. Understanding such roles and impacts informs policy initiatives to address inadequacies in rural health care services and promote rural development.

An assessment of the extent to which USDA conservation programs provide "additional" environmental benefits (i.e., benefits that would not have been realized in the absence of incentives): This research provides evidence on alternative program rules that could be applied to conservation programs or to environmental markets to increase program performance by encouraging farmers to adopt additional practices.

Economics of the Chesapeake Bay Total Maximum Daily Load (TMDL) Limits for Nutrients: EPA has established limits for nutrient discharges from point and nonpoint sources to the Chesapeake Bay. Agriculture is the largest single source of nutrients. This study assesses the cost of achieving a better nutrient balance within the watershed. Estimates of the cost of implementing nutrient management on cropland through policy instruments such as regulation, financial assistance for practice adoption, and pay-for-performance will be developed. Potential benefits of interstate point/nonpoint trading will also be evaluated. Research results can be used by the Environmental Protection Agency and state governments to lower the social and private costs of policies to improve water quality in Chesapeake Bay.

Agricultural export restrictions: The research will examine both the motives and market consequences (for trade volumes and prices) of these restrictions for major commodities and countries. It will also examine alternative policies to export bans, quotas, and taxes that are less market-distorting, as well as how regional trade agreements can constrain the use of these and other trade controls. Findings will provide U.S. trade negotiators with strategies to improve the potential for new agreements to expand markets for U.S. agricultural products.

Assess the cost effectiveness of crop insurance: Federal crop insurance is becoming the largest farm safety net program. However, budgetary pressures have led to calls for reductions in federal subsidies to crop insurance. ERS will examine the relationship between crop insurance subsidies and crop insurance participation and insurance coverage levels by type of farm and location. Research results will inform policy makers regarding potential impacts to program participation with varying levels of premium assistance.

The relationship between extended futures market trading hours and price volatility surrounding important news releases: The research will help to increase understanding of how recently expanded Chicago Board of Trade trading hours for grains, oilseeds and ethanol affect volatility and price discovery in these markets, and the implications (if any) for timing of USDA news releases. This work will help to ensure that new information released by USDA is incorporated into markets in an orderly and efficient manner, and could therefore have important implications

for the broad community of commodity market participants that rely on the *World Agricultural Supply and Demand Estimates* (WASDE) and other USDA reports to gauge market conditions.

Food purchase choices of low-income households: This research will use data from the National Food Acquisition and Purchase Survey (FoodAPS) that ERS conducted in 2012 with previous financial support from the Food and Nutrition Service (FNS). FoodAPS is designed to capture household information and food acquisition data from a nationally representative sample of 5,000 households. ERS will receive the data in FY 2013 and use the information to study: how the Supplemental Nutrition Assistance Program (SNAP) influences food purchases and food security; the influence of food access on food choice and dietary quality; the response of food purchases to changes in income and prices; the influence of dietary knowledge on purchase patterns and food choice; the relationship between food acquisition patterns and levels of food security; and differences in food acquisition patterns for SNAP households and low-income households not participating in SNAP.

Factors that influence the success of the Healthy, Hunger-Free Kids Act of 2010 (HHFK): ERS will continue to support research on the nutritional requirements for school meals from the HHFK that seek to improve children's diets and health, but also present problems of acceptance and raise concerns about cost. Research in this area will draw on behavioral economics, existing data, and a pilot study in Washington, D.C. schools.

Estimating Food Attributable Fractions of Foodborne Illness from Time Series Data: Reliable measures of the role of different foods in foodborne illness caused by specific pathogens are critical to government's and industry's ability to target food safety interventions effectively. USDA, FDA, and CDC have all identified a need to develop more reliable methods to estimate this relationship. This study will pioneer use of time series data on food consumption and foodborne illness to estimate the relative contributions of specific foods to illnesses caused by major foodborne pathogens.

Mr. Chairman, this concludes my statement of ERS's budget recommendations for FY 2014. I will be happy to answer any questions that the Subcommittee may have.