

2013 Ohio State University Combined Research and Extension OGF Multi-State and Integrated Activity Supplemental Forms

Status: Submitted

Date Submitted: 03/28/2014

I. Brief Summaries

- Use the 2013 Plan of Work in place of submitting a separate brief summaries document.

{NO DATA ENTERED}

- Separate Brief Summaries document (brief description of the multi-state and integrated program activities).**

The Ohio Agricultural Research and Development Center (OARDC) and Ohio State University Extension Service (OSU Extension) have worked throughout 2013 to accomplish the land-grant mission of The Ohio State University and meet stakeholder demands while supporting federal, state, and local agendas. OARDC and OSU Extension leverage federal base funding provided through NIFA to conduct both basic and applied research, and to manage a comprehensive statewide Extension effort in program research, development, delivery, and evaluation. Federal, state, and local resources are combined with extramural funds, and with in-kind and volunteer support, to make the Ohio program truly stakeholder-based. OARDC and OSU Extension have multiple integrated programs, both formal and informal. OSU Extension utilizes all of OARDC applied research in carrying out their comprehensive statewide program but in many cases these are informal arrangements among research and Extension personnel rather than formal assigned personnel structures.

All of **Ohio Agricultural Research and Development Center's** (OARDC) thirteen NIFA Planned Programs are formally integrated with OSU Extension providing impacts for societal well-being. Programs 1 - 5 are jointly led with OSU Extension and 6 - 13 are OARDC - led. Summaries of the thirteen programs follow:

Planned Program # 1: Climate Change

Climate change impacts each of the Planned Programs within the research - extension portfolio. Climate change threatens sustainable ecosystems. Achievements within all Planned Programs are dependent to a greater or lesser extent upon stable functioning ecosystems. The understanding the current and potential impacts of climate change are basic for delivering to society a secure supply of food, fiber, other associated products and services. These are addressed in this integrated program.

Planned Program # 2: Sustainable Energy

The United States is highly dependent on crude oil imports to supplement its domestic sources for the creation of energy and other petroleum-based products. Greater energy and economic independence are now national concerns. Due to the rising costs of crude oil and the eventuality of declining supplies of crude oil, biobased substitutes for petroleum based energy and other products are in demand, as are other forms of sustainable energy. OARDC and OSU Extension, and multiple partners, are exploring new opportunities for adding value to biobased products, beyond traditional food and fiber markets, through commercialization of new products in the form of sustainable energy and advanced materials.

Planned Program # 3: Childhood Obesity

Obesity is a concern from both the perspective of society and from a research-Extension perspective. The food plants and animals we grow, process, and provide for consumption have human

health issues associated with them. This Planned Program is focused on reducing threats to human health from obesity. While the program is not large, it is of importance to both the research and extension portfolios, and is funded by both OARDC and OSU Extension in two colleges.

Planned Program # 4: Food Safety

Food safety is a major concern locally, nationally, and throughout the world. OARDC and OSU Extension lead programs that advance science and knowledge of food preservation and how to protect against pathogens. Due to the complexity of food systems, a robust research and extension program is required to meet societal needs for a safe food supply. Out of this integrated research and extension program comes science-based findings and communication strategies to inform national and global food safety programs.

Planned Program # 5: Global Food Security and Hunger

Global food security is a high priority worldwide. To meet growing demand, food scientists and other agricultural and environmental scientists continue to make advances in techniques and processes that improve the quality of food, expand food preservation, protect against pathogens, advance detection systems for identifying threats to food security, increase functionality and increase both the quantity and quality of food stocks, as well as

communicate these findings worldwide. Thus impacts from this program contribute to a greater of less extent in feeding the world.

Planned Program # 6: Soil, Water, and Air Systems

Soil, air, and water systems science, in combination with natural resource programs, are central to advancing impacts in all Planned Programs. The understanding of interactions among soil, water, and air resources provide a basis for delivering to society food, fiber, other associated products, and related services. Integrated activities also inform mitigation of environmental impacts from agricultural and natural resource industries.

Planned Program # 7: Natural Resources and Environmental Systems

The natural resources and environmental systems program focuses on managing and sustaining natural resources for the citizens of Ohio, the nation and the world. Integrated activities result in a sustainable flow of food, fiber, and environmental services, as well as positive economic impacts and social services from natural resource - based dependent activities such as tourism, hunting, fishing, bird-watching, park use, and similar.

Planned Program # 8: Plants Systems

Plant systems programs are a substantial component of Ohio's food, fiber, and agricultural industry, providing jobs, value - added products, and a healthy supply of raw and manufactured products worldwide. Integrated activities occur in the areas of plant genetics, product quality during pre -harvest, plant management systems, plant biology, insects / mites / other arthropods that are plant pest, pathogens and nematodes, weed science, and integrated pest management. Integrated activities in this program are critical to informing the Global Food Security and Hunger Planned Program.

Planned Program # 9: Animals Systems

Food animals are central to food security worldwide. The food animal industry in Ohio is a key contributor to the food, agricultural, and environmental economy. Integrated activities occur in the areas of animal physiology, animal health and diseases, systems for improved animal management including reproductive performance, improved animal products before harvesting, and animal genetics. Knowledge generated from this integrated animal systems program can be found worldwide.

Planned Program # 10: Food, Agricultural, and Biological Engineering Systems

The research and extension activities of those working in this program underpin the work of all

academic units and research and extension field programs within the college having impact from local to the international arena. Integrated activities occur in the areas of creation of waste disposal systems, advancing recycling technologies, creation of new-engineered systems including food processing, energy, and environment. The program also addresses improvements in structures and facilities, and in physical and mechanical infrastructure for the food, agricultural and environmental science enterprise, and in environmental mitigation and remediation.

Planned Program # 11: Agricultural, Environmental, and Development Economics

This program is central to supporting OARDC and OSU Extension's range of Planned Programs and in meeting the needs of our stakeholders. Integrated activities occur in the areas of community resource planning, marketing and distribution for food and other agricultural products, labor markets, public policy, economic value of food safety, social and economic impacts of business decisions, environmental economics, agricultural policy, contracting, and benefit-cost analysis within food, agricultural, and environmental economic sectors. Work within this program ensures that the total value chain is considered.

(in PLAN) Planned Program: Economics and Social Dimensions

The broad goals of this program are to generate knowledge and disseminate impartial information through the application of social, economic, educational, and business principles to the challenges of agriculture, the food system, the environment, and economic development.

Planned Program # 12: Human Health

Agricultural production (both plant and animal), their residues, renewable natural resources, and the related manufacturing processes and products, all have human health and safety risks associated with them. Integrated activities in this program occur in the areas of food related health issues, farm safety, and family/community health and safety issues.

Planned Program # 13: Human and Community Resource Development

Agriculture and natural resources industries in Ohio, annually contributing 98 billion dollars to the state economy, are dependent on investments in human capital. To that end, a Human and Community Resource Development Planned Program collectively guides outcome-based research and associated extension efforts in the areas of population centers growth and decline and implications thereof, social implications of structural changes in agriculture including sociological perspectives of the rural urban interface, sociological as well as technological changes that are affecting society individually and collectively, including issues related to county government, education, human and community development, and to the well-being of families.

Ohio State University Extension (OSUE) connects with people in all stages of life, from young children to older adults. OSUE works with families and children, farmers and business owners, community leaders and elected officials to build better lives, better businesses, and better communities to make Ohio great. OSU Extension delivers targeted, relevant, research-backed information and programs to meet the needs of Ohioans at a local level and address emerging issues. Ohio State University Extension's educational programming originates from disciplinary expertise in youth development, agriculture and natural resources, community development, and family and consumer sciences. This content expertise provides the academic foundation for a variety of programs and is combined in an interdisciplinary way to impact some of the more complex issues facing Ohioans. Extension's interdisciplinary efforts are currently focused around Advancing Employment and Income Opportunities, Enhancing Agriculture and the Environment, Preparing Youth for Success, and Strengthening Families and Communities. These focus areas guide the alignment of OSU Extension resources and provide the framework for reporting the impact of programming efforts. Multi-state and Integrated activities took place in all four interdisciplinary impact areas (with program specifics and outcomes/impacts reported in the NIFA 2013 Report of Activities)

including:

Planned Program 14: Advancing Employment and Income Opportunities

Innovation and entrepreneurship will drive Ohio's move to the knowledge economy. OSU Extension is uniquely positioned to help. Extension's economic, small business, and job development programs are tailored to local community needs in every county, whether metropolitan, rural, or a combination. OSUE job readiness training improves the skill level of potential employees and works with communities to attract new businesses and encourage retention and expansion among current employers. OSUE enhances communities and neighborhoods by partnering with businesses, current and emerging community leaders, and elected and appointed officials. OSUE informs residents, leaders, and entrepreneurs regarding local development issues and increase the knowledge base for individual and community decisions.

Planned Program 15: Enhancing Agriculture and the Environment

Ohio's diverse agricultural, horticultural, and forestry industries contribute more than \$82 billion to the state's economy every year. OSU Extension assists with technology, marketing, and educational support advancing Ohio's position in the global marketplace. OSU Extension also works to enhance and sustain the environment and natural areas in the state, balancing economic advancement with environmental sustainability. OSUE works with farmers to strengthen their businesses, adopt new technology, and improve efficiency while protecting the environment. OSUE helps to grow Ohio's important green industry by creating jobs, improving workforce skills, and enriching the knowledge of professionals in turfgrass management, landscaping, and nursery companies. Using OSUE as a resource, homeowners enhance the value of their homes and communities, and OSUE trains Master Gardener volunteers to apply and share research-based yard and garden information. OSUE protects Ohio's natural environment by working with landowners in managing woodlands and preserving streams and other water resources, such as Lake Erie.

Planned Program 16: Preparing Youth for Success

As Ohio's economy continues the shift from an industrial to a knowledge base, its young people and volunteers supporting them need advanced skills to be successful. OSU Extension, through 4-H and other youth focused efforts, provides resources and support for volunteers who deliver programs focused on critical issues affecting youth. Educational programs foster a practical understanding and application of science, technology, engineering, math and other life skills that will lead to a more prepared young person pursuing a post-secondary education or entering the workforce. The Ohio 4-H Youth Development program is part of a community of young people across America who learn about leadership, citizenship, and life skills. More than 300,000 Ohio youth, aged 5 to 19, experienced hands-on learning in this OSU Extension effort through clubs, camps, and after-school programs in urban, suburban, and rural communities statewide.

Planned Program 17: Strengthening Families and Communities

Key to sustaining and building Ohio's high standard of living is the health and economic strength of families and communities. OSU Extension teaches people how to apply practical information to their daily lives in order to make informed choices about everything from finances to healthy living to community issues. Educators and specialists teach nutrition, food safety, and other life choice skills to help Ohioans live healthy lives. OSUE works to help build strong families by offering programs and information to all Ohioans on childcare, parenting, family life, adult development and aging, and balancing life, jobs, and families. OSUE also teaches people to manage money and prepare for retirement.

U.S. Department of Agriculture
National Institute of Food and Agriculture
Supplement to the Annual Report of Accomplishments and Results
Actual Expenditures of Federal Funding for Multistate Extension and Integrated Activities
(OMB 0524-0036)
Fiscal Year: 2013

Institution: Ohio State University

State: Ohio

NIFA-REPT Final	Integrated Activities (Hatch)	Multistate Extension Activities (Smith-Lever)	Integrated Activities (Smith-Lever)
Established target %	25.00	25.00	25.00
This FY Allocation (from 1088) \$	6,863,049.00	9,958,590.00	9,958,590.00
This FY Target Amount \$	1,715,762.00	2,489,648.00	2,489,648.00

Title of Planned Program Activity	Integrated Activities (Hatch)	Multistate Extension Activities (Smith-Lever)	Integrated Activities (Smith-Lever)
Climate Change \$	45,060.00	36,815.00	60,359.00
Sustainable Energy \$	112,604.00	190,024.00	91,910.00
Childhood Obesity \$	0.00	67,953.00	31,775.00
Food Safety \$	24,108.00	38,224.00	17,873.00
Global Food Security and Hunger \$	180,854.00	257,704.00	422,515.00
Soil, Air and Water (OARDC Led) \$	96,246.00	0.00	0.00
Natural Resources and Environmental Systems (OARDC Led) \$	9,494.00	0.00	0.00
Plants Systems (OARDC Led) \$	958,297.00	0.00	0.00
Animals Systems (OARDC Led) \$	234,328.00	0.00	0.00
Food, Agricultural, and Biological Engineering Systems (OARDC Led) \$	96,824.00	0.00	0.00
Agricultural, Environmental, and Development Economics (OARDC Led) \$	259,103.00	0.00	0.00
Human Health (OARDC Led) \$	20,638.00	0.00	0.00
Human and Community Resource Development (OARDC Led) \$	98,904.00	0.00	0.00

Title of Planned Program Activity	Integrated Activities (Hatch)	Multistate Extension Activities (Smith-Lever)	Integrated Activities (Smith-Lever)
Advancing Employment and Income Opportunities (Extension) \$	0.00	574,822.00	278,029.00
Enhancing Agriculture and the Environment (Extension) \$	0.00	1,067,630.00	1,750,421.00
Preparing Youth for Success (Extension) \$	0.00	355,100.00	157,393.00
Strengthening Families & Communities (Extension) \$	0.00	197,065.00	92,147.00
Total \$	2,136,460.00	2,785,337.00	2,902,422.00
Carryover \$	0.00	0.00	0.00

Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays represented here accurately reflect allowable expenditures of Federal funds only in satisfying AREERA requirements.

Director(s):

Keith Smith
Steven Slack

Date Submitted: 03/28/2014

**U.S. Department of Agriculture
National Institute of Food and Agriculture
Supplement to the 5-Year Plan of Work
Multistate Extension Activities and Integrated Activities
(OMB 0524-0036)**

Institution: Ohio State University

State: Ohio

1. Integrated Activities (Hatch Act Funds)

Estimated Costs

Title of Planned Program Activity	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Animals Systems (OARDC Led) \$	234,000.00	234,000.00	234,000.00	234,000.00	234,000.00
Childhood Obesity \$	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
Climate Change \$	45,000.00	45,000.00	45,000.00	45,000.00	45,000.00
Economics and Social Dimensions (OARDC Led) \$	358,000.00	358,000.00	358,000.00	358,000.00	358,000.00
Food Safety \$	24,000.00	24,000.00	24,000.00	24,000.00	24,000.00
Food, Agricultural, and Biological Engineering Systems (OARDC Led) \$	97,000.00	97,000.00	97,000.00	97,000.00	97,000.00
Global Food Security and Hunger \$	181,000.00	181,000.00	181,000.00	181,000.00	181,000.00
Human Health (OARDC Led) \$	21,000.00	21,000.00	21,000.00	21,000.00	21,000.00
Natural Resources and Environmental Systems (OARDC Led) \$	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
Plants Systems (OARDC Led) \$	958,000.00	958,000.00	958,000.00	958,000.00	958,000.00
Soil, Air and Water (OARDC Led) \$	96,000.00	96,000.00	96,000.00	96,000.00	96,000.00
Sustainable Energy \$	113,000.00	113,000.00	113,000.00	113,000.00	113,000.00
Total \$	2,147,000.00	2,147,000.00	2,147,000.00	2,147,000.00	2,147,000.00

2. Multistate Extension Activities (Smith-Lever Act Funds)

Estimated Costs

Title of Planned Program Activity	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Advancing Employment and Income Opportunities (Extension) \$	91,048.40	91,048.40	91,048.40	91,048.40	91,048.40

Estimated Costs

Title of Planned Program Activity	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Childhood Obesity \$	120,394.58	120,394.58	120,394.58	120,394.58	120,394.58
Climate Change \$	22,573.98	22,573.98	22,573.98	22,573.98	22,573.98
Enhancing Agriculture and the Environment (Extension) \$	654,645.50	654,645.50	654,645.50	654,645.50	654,645.50
Food Safety \$	67,721.95	67,721.95	67,721.95	67,721.95	67,721.95
Global Food Security and Hunger \$	158,017.89	158,017.89	158,017.89	158,017.89	158,017.89
Preparing Youth for Success (Extension) \$	1,200,183.50	1,200,183.50	1,200,183.50	1,200,183.50	1,200,183.50
Strengthening Families and Communities (Extension) \$	349,144.28	349,144.28	349,144.28	349,144.28	349,144.28
Sustainable Energy \$	30,098.65	30,098.65	30,098.65	30,098.65	30,098.65
Total \$	2,693,828.73	2,693,828.73	2,693,828.73	2,693,828.73	2,693,828.73

3. Integrated Activities (Smith-Lever Act Funds)**Estimated Costs**

Title of Planned Program Activity	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Advancing Employment and Income Opportunities (Extension) \$	91,048.40	91,048.40	91,048.40	91,048.40	91,048.40
Childhood Obesity \$	120,394.58	120,394.58	120,394.58	120,394.58	120,394.58
Climate Change \$	22,573.98	22,573.98	22,573.98	22,573.98	22,573.98
Enhancing Agriculture and the Environment (Extension) \$	654,645.50	654,645.50	654,645.50	654,645.50	654,645.50
Food Safety \$	67,721.95	67,721.95	67,721.95	67,721.95	67,721.95
Global Food Security and Hunger \$	158,017.89	158,017.89	158,017.89	158,017.89	158,017.89
Preparing Youth for Success (Extension) \$	1,200,183.50	1,200,183.50	1,200,183.50	1,200,183.50	1,200,183.50
Strengthening Families & Communities (Extension) \$	349,144.28	349,144.28	349,144.28	349,144.28	349,144.28
Sustainable Energy \$	30,098.65	30,098.65	30,098.65	30,098.65	30,098.65
Total \$	2,693,828.73	2,693,828.73	2,693,828.73	2,693,828.73	2,693,828.73

Director(s):

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