

2014 Ohio State University Combined Research and Extension OGF Multi-State and Integrated Activity Supplemental Forms

Status: Submitted

Date Submitted: 03/31/2015

I. Brief Summaries

- Use the 2014 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).**

All of the 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, programs 6 - 13 are OARDC-led and programs 14 -17 are OSU Extension-led.

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, bio-based 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 bio-based products, beyond traditional food and fiber markets, through the 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 that 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.

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 an important issue worldwide. To meet growing demand, food scientists and other agricultural and environmental scientists continue to make advances toward a number of food security topics. Those topics include: techniques and processes that improve the quality of food, expanding food preservation, protecting against pathogens, advance detection systems for identifying threats to food security, increasing both the quantity and quality of food stocks, and communicate the findings of this research worldwide.

Planned Program # 6: Soil, Air and Water

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 food, fiber, other associated products, and related services to society. 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, and park use.

Planned Program # 8: Plant Systems

Plant systems 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: Animal 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 will be applied worldwide.

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

The research 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 a local to an international level. Integrated activities occur in the creation of waste disposal systems, advancing recycling technologies, the 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

Integrated activities within this planned program 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 are dependent on investments in human capital. To that end, this 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.

Planned Program 14: Advancing Employment and Income Opportunities

Innovation, entrepreneurship, and an understanding of local and regional economics are keys to sustainable economic growth in Ohio. Formal and informal educational efforts involving individuals and groups of all sizes will focus on community economics, small businesses, job development, and wealth creation throughout the state. Business Retention and Expansion (BR&E) programs are designed to build capacity of local and regional partners to engage in applied research focused on understanding the economy. This program has recently been conducted in partnership with colleagues in Indiana, Florida, and New York. Also, as part of the 'Strengthening Economies Together' (SET) Initiative, collaborative efforts will engage others around BR&E programs and the SET program in the North Central and North East regions.

Planned Program 15: Enhancing Agriculture and the Environment

Ohio's diverse agricultural, horticultural, and forestry industries contribute more than \$100 billion to the state's economy every year. OSU Extension (OSUE) will assist a variety of clients with technology, marketing, and educational support. The efforts of OSUE professionals will advance Ohio's position in the global marketplace. OSUE also will work to enhance and sustain the environment and natural areas in the state, balancing economic advancement with environmental sustainability. In 2014, OSUE conducted a number of multi-state programs, including the 2014 Manure Science Review, 2014 Farm Science Review, and the Green Industry Short Course. These programs included talks, demonstrations, and field tours which provided research-based information on manure storage and application, agronomic crop production, small farm management, agricultural law, integrated pest management, food security, and a number of other topics.

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. In future years, there are several potential multi-state activities which may take place under 'Preparing Youth for Success'. There is a group of Ohio 4-H educators and other 4-H program personnel meeting in April 2015 with other similar personnel from the North Central States to coordinate efforts on 'Engaging First Generation 4-H Youth and Families' programming. Second, Ohio is the lead state with the Principal Investigator (PI) for the Commodity Carnival in the North Central states and Texas, funded through a grant from the Chicago Mercantile Exchange, to teach young people and their families about the role of agricultural commodities in their daily life. Finally, Ohio is also the lead state with the PI for the STEM programming engineering challenges, with grant funding provided by Monsanto; the "Challenge" being implemented in several states will provide programming for youth to explore the importance of water on food production, as they engineer a derrick prototype to hold a high-efficiency, electric water pump for a simulated farm.

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. Ohio Extension professionals are engaged in 4 multi-state AFRI grants with research and Extension colleagues in the North Central region. These grants include childhood obesity, food security, and food safety efforts. In addition, Ohio is co-leading a national committee on 'Dining with Diabetes' to strengthen the curriculum and evaluation of the program. Ohio is also a partner on the North Central Nutritional Education Center for Excellence that was funded beginning in the fall of 2014.

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: 2014

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) \$	7,703,121.00	11,208,168.00	11,208,168.00
This FY Target Amount \$	1,925,780.00	2,802,042.00	2,802,042.00

Title of Planned Program Activity	Integrated Activities (Hatch)	Multistate Extension Activities (Smith-Lever)	Integrated Activities (Smith-Lever)
Climate Change \$	54,699.00	41,062.12	74,852.38
Sustainable Energy \$	86,021.00	282,233.84	149,209.60
Childhood Obesity \$	0.00	37,792.84	25,486.42
Food Safety \$	65,811.00	41,572.13	28,035.06
Global Food Security and Hunger \$	133,389.00	287,434.88	523,966.70
Soil, Air and Water (OARDC Led) \$	116,049.00	0.00	0.00
Natural Resources and Environmental Systems (OARDC Led) \$	9,684.00	0.00	0.00
Plants Systems (OARDC Led) \$	1,005,963.00	0.00	0.00
Animals Systems (OARDC Led) \$	399,814.00	0.00	0.00
Food, Agricultural, and Biological Engineering Systems (OARDC Led) \$	73,136.00	0.00	0.00
Agricultural, Environmental, and Development Economics (OARDC Led) \$	243,491.00	0.00	0.00
Human Health (OARDC Led) \$	47,951.00	0.00	0.00
Human and Community Resource Development (OARDC Led) \$	89,675.00	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	423,350.75	223,814.40
Enhancing Agriculture and the Environment (Extension) \$	0.00	1,360,525.00	2,480,109.00
Preparing Youth for Success (Extension) \$	0.00	311,755.00	128,975.00
Strengthening Families & Communities (Extension) \$	0.00	279,667.03	188,599.52
Total \$	2,325,683.00	3,065,393.59	3,823,048.08
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: 03/31/2015

**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 2016	FY 2017	FY 2018	FY 2019	FY 2020
Global Food Security and Hunger \$	135,000.00	135,000.00	135,000.00	135,000.00	135,000.00
Animals Systems (OARDC Led) \$	400,000.00	400,000.00	400,000.00	400,000.00	400,000.00
Childhood Obesity \$	0.00	0.00	0.00	0.00	0.00
Climate Change \$	55,000.00	55,000.00	55,000.00	55,000.00	55,000.00
Economics and Social Dimensions (OARDC Led) \$	335,000.00	335,000.00	335,000.00	335,000.00	335,000.00
Food Safety \$	65,000.00	65,000.00	65,000.00	65,000.00	65,000.00
Food, Agricultural, and Biological Engineering Systems (OARDC Led) \$	75,000.00	75,000.00	75,000.00	75,000.00	75,000.00
Human Health (OARDC Led) \$	50,000.00	50,000.00	50,000.00	50,000.00	50,000.00
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) \$	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Soil, Air and Water (OARDC Led) \$	115,000.00	115,000.00	115,000.00	115,000.00	115,000.00
Sustainable Energy \$	85,000.00	85,000.00	85,000.00	85,000.00	85,000.00
Total \$	2,325,000.00	2,325,000.00	2,325,000.00	2,325,000.00	2,325,000.00

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

Estimated Costs

Title of Planned Program Activity	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Advancing Employment and Income Opportunities (Extension) \$	386,980.20	386,980.20	386,980.20	386,980.20	386,980.20

Estimated Costs

Title of Planned Program Activity	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Childhood Obesity \$	34,546.01	34,546.01	34,546.01	34,546.01	34,546.01
Climate Change \$	37,534.43	37,534.43	37,534.43	37,534.43	37,534.43
Enhancing Agriculture and the Environment (Extension) \$	1,243,640.80	1,243,640.80	1,243,640.80	1,243,640.80	1,243,640.80
Food Safety \$	38,000.62	38,000.62	38,000.62	38,000.62	38,000.62
Global Food Security and Hunger \$	262,741.00	262,741.00	262,741.00	262,741.00	262,741.00
Preparing Youth for Success (Extension) \$	284,971.75	284,971.75	284,971.75	284,971.75	284,971.75
Strengthening Families and Communities (Extension) \$	255,640.52	255,640.52	255,640.52	255,640.52	255,640.52
Sustainable Energy \$	257,986.80	257,986.80	257,986.80	257,986.80	257,986.80
Total \$	2,802,042.13	2,802,042.13	2,802,042.13	2,802,042.13	2,802,042.13

3. Integrated Activities (Smith-Lever Act Funds)

Estimated Costs

Title of Planned Program Activity	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Advancing Employment and Income Opportunities (Extension) \$	386,980.20	386,980.20	386,980.20	386,980.20	386,980.20
Childhood Obesity \$	34,546.01	34,546.01	34,546.01	34,546.01	34,546.01
Climate Change \$	37,534.43	37,534.43	37,534.43	37,534.43	37,534.43
Enhancing Agriculture and the Environment (Extension) \$	1,243,640.80	1,243,640.80	1,243,640.80	1,243,640.80	1,243,640.80
Food Safety \$	38,000.62	38,000.62	38,000.62	38,000.62	38,000.62
Global Food Security and Hunger \$	262,741.00	262,741.00	262,741.00	262,741.00	262,741.00
Preparing Youth for Success (Extension) \$	284,971.75	284,971.75	284,971.75	284,971.75	284,971.75
Strengthening Families and Communities (Extension) \$	255,640.52	255,640.52	255,640.52	255,640.52	255,640.52
Sustainable Energy \$	257,986.80	257,986.80	257,986.80	257,986.80	257,986.80
Total \$	2,802,042.13	2,802,042.13	2,802,042.13	2,802,042.13	2,802,042.13

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