

2009 University of the District of Columbia Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

As the only totally urban land-grant institution in the United States, we are both privileged and challenged. Privileged because of our uniqueness which sets us apart from our other national land-grant counterparts in a few respects: 1) we serve our nation's capital; 2) we are situated in a totally urban area; there are no rural areas nor major agricultural markets such as farming, dairy, and/or livestock; 3) we have 1862 land-grant institution status because of one of our predecessor institutions, Myrtilla Miner Academy; and 4) unlike other 1862's, we are a historically black college/university (HBCU). Our distinctiveness, however, has triggered a challenge in developing relevant research and extension programs that adequately address the critical needs of a large city environment. With each given year, the Agricultural Experiment Station and the Cooperative Extension Service must consider both challenges and opportunities, finding new and innovative ways to continuously improve research and outreach programs. This document reports the accomplishments and results for two of our programs: Human Health and Nutrition, Healthy Urban Life Style and Food Safety; and Urban Families, Youth, and Communities.

Human Health and Nutrition, Healthy Urban Life Style, and Food Safety

In fulfilling its land-grant mission, the Agricultural Experiment Station and the Cooperative Extension Service work together to solve problems related to improving the health and quality of life of the residents of the District of Columbia. In accordance with this mission, the project titled "Improving Plant Food (Fruit, Vegetable, and Whole Grain) Availability and Intake In Older Adults" was completed to determine to what extent elderly eat fruits and vegetables and also to maintain health, nutrition and functional status of older adults, by educating elderly to increase the consumption of fruits, vegetable and whole grain intake is important.

A diet meeting dietary recommendations in fruits, vegetables, a whole grain are associated with a lower incidence of hypertension, diabetes, heart disease, and some cancers. The consumption pattern of fruits, vegetables and whole grains is multifaceted and is influenced by complex behavioral, socio-economic and environmental factors. The dietary patterns are also influenced by factors such as boredom, depression, loneliness, fear, anger or frustration and other forms of stresses. Other significant life changes including death of a spouse, death of a close family member, personal injury, changes in physical activity, change in sleeping habit, and change in financial state are significant indicators of changes in eating behaviors. Research has found a link between stressful life events and poor eating habits. Additionally, diagnosis of illness together with nutritional knowledge, are significantly stronger motivations for changes in eating behaviors than nutritional knowledge alone.

To study these dietary changes related to diagnosis of illness and stress factors, the University of the District of Columbia collected Quantitative and Qualitative data and established correlations among specific behavioral constructs and measures of dietary quantities of selected nutrients. These determinations have suggested associations among identifiable behaviors and dietary choices that have allowed preliminary construction of individual profiles of nutritional risk. Profiles that reflect nutritional risk determine and inform interventions designed to modify behaviors that predict dietary deficiencies. The quality of the data was critical in developing a new model for nutrition education for the next research project.

In recent years, overweight and obesity have reached epidemic proportions in the United States. The proportion of adults who are overweight increased substantially between 1980 and 2002. By 2002, 65% of U.S. adults (20-74 yrs of age) were overweight and 31% were obese. Likewise, obesity has become the most prevalent nutritional disease of children and adolescents. Children from low socio-economic status and racial/ethnic minority groups tend to have higher rates of obesity in comparison to other groups. Among adults, obesity rates are about 28% for men regardless of racial/ethnic group membership. Adult women have higher rates of obesity than males. Obesity rates are higher among Hispanic women (39%) than White women (31%) and even higher (50%) among African-American women. It is well known that chronic disease risks increase with increasing body weight.

In participation of the multi-state project, "An Integrated Approach to Prevention of Obesity in High Risk Families," our research team develops fuzzy-set-theory-based methodologies for the measurement of behavioral differences to identify key

behaviors in childhood obesity. The identified behaviors will be used by health and nutrition professionals on this project team to develop an integrated strategy for childhood obesity prevention. In terms of education and preparing the workforce, this project train students with the cutting edge technology in data mining and provide them with research experience in a multi-institutional and multi-disciplinary team.

During the period, an Easy-Survey software system was developed that can be used for collecting research data. This system synchronizes local database and online database so that survey or other electronic records of research participants entered on individual computers can be integrated into one centralized online database. Also, developed for this project was a MyHealth Journal software system. This software system is a journal software for personal health monitoring and control. The software can be used to record body weight, amount of exercise, water intake, medicine taken, etc. A user can customize the software according to his/her own needs by adding or deleting items on the interface.

Diabetes is a group of diseases marked by high levels of blood glucose, also called blood sugar, resulting from defects in insulin production, insulin action, or both. Diabetes can lead to serious complications and premature death. The serious complications diabetes can be associated with include heart disease and stroke, high blood pressure, blindness, kidney disease, nervous system disease, amputations, dental disease, and complications of pregnancy. Diabetes was the seventh leading cause of death listed on U.S. death certificates in 2006. Overall, the risk of death among people with diabetes is about twice that of people without diabetes of a similar age (source: NIDDK, NIH).

The Station is conducting interdisciplinary research to develop a series of fuzzy-set-theory-based data mining approaches for finding genetic, environmental and behavioral factors associated with diabetes. In this period, we have developed two new approaches to identify significant genes. We tested them on real world data and compared them with currently existing approaches. Approaches are evaluated by how accurate patients can be classified as diabetic or non-diabetic based on the expression values of the identified genes. For selected datasets, we also examined the biological relevance of the result genes. It is confirmed, by the above two approaches, that our approaches are not only effective but also provide overall better performance. Manuscripts were submitted and accepted for publications. Successful development of this project will greatly help to develop strategies to prevent and control diabetes will significantly reduce the burden of diabetes on healthcare systems. And the approaches developed in this project can be applied for investigating other diseases.

The research activities of this project have also been integrated into education, through graduate level class, term project and graduate thesis project. They provide an excellent opportunity for students to solve one of the most relevant problems to the public while advancing the field of bioinformatics. When the students trained on this project graduate, they will join the workforce with their knowledge and skills of the start-of-art technology.

According to the 2009 Cancer Facts and Figures published by the American Cancer Society, the incidence of cancer in African Americans is disproportionately high compared to other racial and ethnic groups. African Americans constitute 68% of the population of the District of Columbia (DC), and not coincidentally, DC ranks sixth in the Nation with the worst cancer morbidity and mortality (<http://www.cdc.gov>). *Moreover, DC has the highest mortality rate in the Nation for breast and prostate cancers.*

The Agricultural Experiment Station is conducting research to understand the therapeutic and preventative properties of Vitamin E on breast cancer cells. In 2009, our researcher generated significant data on the mechanisms of action of gamma-Tocotrienol (a Vitamin E compound) on breast cancer cells. The experiments utilized high-throughput (a method for scientific experimentation especially used in drug discovery and relevant to the fields of biology and chemistry) state-of-the-art microarray methodology. Analysis of the microarray data revealed the modulation of various genes involved in cellular stress response and identified useful targets that can be pursued as molecular targets for developing new drugs and preventive agents for breast cancer. Direct relevance of this study is towards identifying new targets for developing drugs against breast cancer and exploring the possibility of developing Vitamin E compounds as chemopreventive and chemotherapeutic agents.

The Family and Consumer Sciences and Center for Nutrition, Diet and Health Unit of the Cooperative Extension Service operates education programs related to food, nutrition and health designed to improve consumer awareness and health sustaining behaviors among DC residents and the professionals serving them. The Unit partners with 19 lead organizations (Federal, local government, public schools, universities, community service organizations and small business concerns) and over 600 program sites.

The Supplemental Nutrition Assistance - Education Program (SNAP-Ed) provides nutrition and food safety education to SNAP recipients and eligibles to increase their awareness of healthful eating and safe food practices, to intervene early in the

lifespan of the children to enhance health outcomes and combat obesity and preventable chronic illnesses, and to help them make wise choices in selection of foods and spending food stamp dollars. The target population groups included community-based childcare centers, Head Start, and children between 8 to 10 years of age. The program impacted 193,000 contacts and 85 preschool programs throughout the District and 175 extension-trained volunteer teachers. It continues to build capacity by increasing outreach and expanding methods of delivery of the messages of Dietary Guidelines for Americans and MyPyramid.

In an effort to increase the consumption of fruits, vegetables, whole grains, low-fat milk and low-fat milk products, nutrition educators from the Center for Nutrition, Diet and Health (CNDH) develop and conduct nutrition education activities for children, parents and teachers in Washington, DC, through the Supplemental Nutrition Assistance Program-Education (SNAP-Ed). With the increase in the number of classroom nutrition education activities provided by CNDH staff, along with an increase in repeat visits to SNAP-Ed classrooms, the number of DCPS teachers requesting nutrition education activities and food demonstrations has increased significantly. At the Brightwood Education Campus, Head Start teachers have requested meetings with CNDH nutrition educators this year, to plan nutrition education activities for FY 2011. The 18 colorful, vegetable fact sheets, produced and distributed by CNDH for SNAP-Ed participants, have generated queries outside of the SNAP-Ed target population. CNDH has received numerous requests from diverse groups, including a housing collaborative, senior wellness centers, church groups, gardening programs, farmers markets and non-profits who work with underserved communities, for nutrition education assistance.

The Team Nutrition Training Grant from the DC Office of the State Superintendent of Education trains food service professionals who serve meals to children in early childhood facilities to ensure healthy, nutritious and safe meal service, planning, preparation and presentation, inclusive of the 2005 Dietary Guidelines for Americans and MyPyramid. Foodhandlers working in public school child care centers need training to ensure authorities, school officials, and families that food service is healthy, nutritious and safe for the children. The Team Nutrition Education Program provided training for 210 food service paraprofessionals to support overall healthy child care messages and strategies and improve food service delivery in DC child care facilities. The program collaborated with the Capital Area Food Bank and Mid-Atlantic Dairy Association to produce a 132-page, 10 lesson best practices manual (Team Nutrition Training guide) for training and reference. 100% of the participants passed the national food sanitation certification examination. 96% of the participants mastered all of the knowledge and skills in food handling techniques.

The DC Food Handler Certification Program Model is a research project designed to develop and demonstrate a preparatory education program for low-literacy, hard-to-reach food handlers taking national certification examination through the integration of research, education and extension activities. Objectives were: 1) Assess and document current education activities in DC to certify food service workers; 2) Examine the effectiveness of different methodologies; 3) Develop and pilot a course that will enable low-literate food handlers to prepare for the national certification exam; 4) Develop and demonstrate a research-based model approach to delivering education and training for food handlers; and 5) Disseminate information on results and implications concerning best practice.

Department of Health authorities are responsible for maintaining food sanitation in food serving establishments in the District through requirements for certification of food service workers/handlers. Food handlers and their employers are, in turn, interested in meeting these requirements in order to remain employed and in operation serving food. In the DC Food Handler Certification Program Model, 300 food handlers were prepared for and administered the national and local exams in a series of 6 five-day sessions.

The Farmers' Market Nutrition Education Program provides nutrition education at point-of-purchase for market goers. During the period, 1500 individuals were assisted at farmers' markets with consultation and information from 18 fact booklets on beets, broccoli, cabbage, carrots, cauliflower, corn, lettuce, mushrooms, onions, peppers, potatoes, rutabaga, snap beans, spinach, summer squash, sweet potatoes, tomatoes and winter squash. In addition to nutrition education, food preparation techniques and healthy recipes were provided at the markets.

The DC Water Blind Taste Testing Project is a study funded by the UDC Water Resources Research Institute to gather information on consumer preferences and consumption of drinking water, specifically in relation to the District's tap water, and to make recommendations for increased consumption of water by individuals in DC. The study conducted drinking water blind taste testing to a cross-sectional sample of individuals living and/or working in DC to determine consumers' preferences for the different types of drinking water, to determine factors related to their selection of drinking water, and to develop recommendations for the increased consumption of DC tap water. After participants completed the taste test of four different types, they completed a survey which involved ranking each cup of water in order of preference. Each participant was unaware of what type of water they were choosing. The District of Columbia Water Blind Taste Testing Project was provided to 908 DC residents and workers. Individuals tested were provided with educational materials regarding drinking water.

Preliminary data showed that the outcomes met the stated objectives; however, all of the data have not been analyzed. Once the data have been completely analyzed, we plan to develop an education program for consumers. We anticipate more findings will be available for the 2011 Accomplishment Report. Reports of the study findings will allow researchers to recommend increased consumption of water.

Urban Families, Youth, and Communities

In working with the youth of the District of Columbia this past year in our 4-H and the Center for Youth Development Program, we have grown and reached more youth than ever before. We have been able to work on some identified problems in small but measurable intervals engaging our youth in the core values of the 4-H program. They have taken ownership of their clubs and are embracing the true function of the 4-H program. Issues related to giving back to the community, resolving conflict through non-violence, expressing ourselves in constructive ways, and learning about new careers have been addressed with measurable outcomes. Through newly formed leadership clubs, young people have made small steps in giving back to the community and learned new tools for resolving conflicts. We hope that 4-H leaders will lead the way for their peers to work on more positive conflict resolution solutions. This will take more time, as it has been a long standing issue with long held colloquial values; however, we see progress in our young leaders.

Five hundred (500) youth were active in our Operation Military Kids program last year. Operation Military Kids is a nationwide initiative designed to provide support to the children and youth of families that are impacted by the global war on terrorism. This includes both those children and youth served by Army installations and those children and youth who are geographically dispersed. Our program goals include educating citizens in the District of Columbia about the facts and challenges of military life in families with deployed soldiers, creating networks of people, organizations and other resources to support military children and families in the communities where they live, delivering a wide range of recreational social and educational programs for military youth living in civilian communities, acknowledging the strengths and sacrifices of military kids on the everyday home front, supporting military kids coping with the stress of knowing their deployed parents may be in harm's way, educating the public on the impact of the deployment cycle on soldiers, families, kids and the community as a whole. That community includes youth not in the military and youth in the military that have not met other youth in their neighborhoods experiencing the same concerns. Military 4-H clubs met weekly on one of our bases. The youth in the National Guard do not live on a base and their programs are scheduled. The Operation Military Kids Program is reaching larger groups of community members and we have received donations from twenty-three local companies in support of our military youth. We conducted a summer camp program serving 280 youth that included a mock deployment exercise to help young people better understand deployment. Monthly meetings were held with the OMK State Team.

Participants in the Health Rocks Program learned about the dangers of smoking and drug use as well as the importance of taking good care of their overall health. Also, the youth received information about the program offerings at five community health fairs and festivals and presentations were made at four local high schools before the end of the fiscal year. Harriett Tubman Elementary School's 4-H club was featured in the Trilogy Newspaper, a publication of the University of the District of Columbia, learning about the Health Rocks Program and putting their learning into practice.

Youth participating in the LifeSmarts Program learned about Consumer Education issues including the Environment, Technology, Legal Rights and Responsibilities and Health and Safety. Seventeen teams of five participated in the program that is presented in a game show format. Five youth and a coach will travel to the National Competition in Miami, Florida.

More grandparents are raising grandchildren now than ever before. Grandparents who step in when their own children are unable to parent represent every class and race. The challenges that grandparents have as repeat parents are quite different from the routine kinds of stress accompanying raising children. Grandparents raising grandchildren recognize the critical role they are expected to play in reinitiating the parenting of their grandchildren, and most importantly, they want to succeed. The goal of the Relative as Parents Program (RAPP) is to provide relative caregivers with support services that will allow them to develop stable and healthy families.

The program offers support groups allowing participants to receive encouragement and share news, theories and common experiences that help them cope with the responsibilities of parenting. The program provides support to grandparents in meeting critical needs, provision of emotional support, recreational activities for relative caregivers and children, respite care, family/ individual counseling, therapeutic activity, support groups, information and referral, advocacy, nutrition education, case management and meeting the "concrete" needs of the family and family conferencing. Group topics include legal issues, communicating with grandchildren, constructive discipline, financial management, emotional management, nutrition, finding resources, dealing with adult children and future plans. Below is an excerpt from

communication sent to Mrs. Rebecca Bankhead, Extension Specialist and Program Manager for 4-H and Youth Development:

"I spoke with Mr. Smith who stated that he had been with University System of the District of Columbia's (USDC's) Relatives and Parents Program (RAPP) since the beginning. He and his wife started their own group 3 to 4 years ago, however his wife fell ill and the group dismantled. He since became active in the USDC RAPP and is very pleased with the program. He has a 10 year old granddaughter. Mr. Smith appreciates the camaraderie of the members in the group. He especially appreciates making new connections and knowing that he made new friends facing similar life situations. Friends who call simply to check up on how life is treating him and his wife or to share tips and information. The RAPP support group is worth more than a million dollars to Mr. Smith. While he recognizes that each participant's case is different they share the common effort of helping one another out of love, friendship and appreciation.

Award recipient Hillary Jones shared that it was her pleasure to write an award winning essay. She stated that "Because I have the support of my great grandmother I have everything."

Through the Relatives as Parents (RAPP) Program, Grandparents Program, and Fathers Read Every Day (FRED) Program, we hosted a contest for the youth resulting in a self-expression booklet by the participants. Ten children won gift cards, took the grandparents to Pennsylvania to meet with other grandparents, and involved Fathers in weekly reading sessions at schools. Sixteen new support groups were developed around the city.

Seventy (70) fathers participated in the Fathers Reading Everyday (FRED) project with their children.

FRED is a four-week program designed to encourage fathers and father figures to read to their children on a daily basis. The program is structured so that fathers read to their children a minimum of 15 minutes a day for the first two weeks and a minimum of 30 minutes a day for the last two weeks. Fathers are presented with a participant packet that contains an introduction to the program, reading logs, tips for reading aloud to their children, and recommended book lists. They meet weekly with other program participant for conversation, snacks and encouragement. This program has been in existence for two years and six months.

According to teachers, most of the participants report that their children are reading better and more often. Mr. James Griffin, a program participant in the FRED program, wrote a letter to say that his son Jeremiah has improved his reading and skills in other subject areas as well. The father added that the program has provided him with a great way for spending quality time with his son and Jeremiah did not like reading at all before he was involved in this program. Mr. Griffin reports that he enjoyed the interactions with the other fathers that he met and was proud to be a part of fathers working on educational issues with their children.

We maintained 23 active 4-H school clubs, six community clubs and four military clubs. We held four major 4-H events in the community and began publishing our 4-H Pen Pal Newsletter.

Through the theme of wellness from an economic development prospective, the Community Resource and Economic Development (CRED) Unit focuses on providing training, education, information and service on the critical issues needed to meet the demands of a consumer based society, which would give individuals, families, communities, cities, states, and the nation, an opportunity to advance to a standard of living for Americans that is second to none in the world today. The issues of housing, employment, health, and business are keyed by the financial condition, interest, desires and life situations of Americans. Through a multi-level service approach, CRED works through five thrust areas. They are Financial Planning and Literacy, Housing and Environment, Coop & Community Economic Development, Urban Tourism and Transportation, and DC Market Maker and the CH Kirkman, Jr. Resource Library for Cooperatives.

Community Resource and Economic Development works with support groups of interested parties to expand the capacity to address these critical issues: 1) Financial Literacy: CRED works with FDIC, America Saves, Insurance, Banking and Securities Commission, and CAAB, Inc.; 2) DC Market Maker: CRED works with Operation Springs Plant, NC State University, the Rural Coalition, Gleaning, and the National Market Maker network; 3) Housing and Environment: CRED is working with the DC Department of Housing and Community Development to provide training in energy efficiency to DC residents in public and subsidized housing; 4) Co-op and Community Economic Development: CRED is working with the Coalition for Housing Justice to assist co-ops; 5) Urban Tourism: More than 650 licenses have been produced in the past; we now expect to produce a series of new venues in future periods. We will identify and publish tourist attractions, historic sites and other points of interest by neighborhoods and the 8 Wards in the City. In addition, the program will provide referrals, training, employment and business opportunities city-wide while making it ward-specific. CRED is working with the DC Department of Consumer and Regulatory Affairs.

More than 700 single individuals completed the five phase FDIC Financial Planning Program and 500 were referred to

CAAB, Inc. to participate in their Individual Development Accounts Program funded by the DC City Council, DC security, Banking and Insurance and the Community Re-investment Fund. In addition to changing their knowledge base, the individuals became banked, (established a bank account, filed income taxes, changed their economic conditions and agreed to a savings plan. The Energy efficiency and home repair program has saved each individual household on their utility bills and provided the knowledge to negotiate with contractors concerning needed repairs. Over 1,100 individuals attended the general information sessions on energy efficient tips, received free energy saving bulbs from Home Depot, Lowes and Building 84. Over 200 persons finished the home repair portion of the program and actually received a certificate identifying their ability to make these minor adjustments in their homes.

As part of a continuous improvement process across the University, a program review was conducted for all academic colleges and units, including Community Outreach and Extension Services (COES) which houses the Agricultural Experiment Station and the Cooperative Extension Service. The review team consisted of five reviewers, 2 internal and 3 external. The Committee was very impressed with what the administration, faculty, and staff of COES have accomplished, indicating that it shows the dedication to purpose, initiative, and just plain hard work. Committee comments and recommendations for program improvement for AES and CES included the following:

1. The Committee suggests that COES applied research be characterized more explicitly in future Self Study documents; and that COES consider adopting use of the term "non-degree" rather than "non-academic" in descriptions of its mission. In addition, COES should define more clearly its use of the term "scholarly impact" in light of its mandated land grant mode of operation.

2. The Committee believes that COES reporting in the Self Study needs to focus more on the outcomes of such applied research and practical activity rather than focus solely on the numbers of its "... publications, presentations at professional conferences, program fact booklets, multimedia documents, [and] books. . ." In other words, the Committee (and UDC/COES stakeholders) needs to know better whether and how COES results were used by the wide range of its constituents. This highlights the need for UDC and COES to explore, assess, adopt and report on mechanisms for communicating the nature of the outcomes (as well as the impact) of its activities.

3. Even though CES offers non-formal training, participants should gain measurable new skills as a result of the training. It is not clear whether participant 'learning' or new skills development are assessed with the Cooperative Extension Service-Workshop/Activity Survey. The program evaluator should work with CES educators to develop assessment tools geared to specific programs/workshops learning outcomes. Doing so may improve both teacher and participant success. We have begun to implement this suggestion.

4. COES has in the past year produced a lengthy and applicable set of publications. These publications and presentations have been very focused on the served community and COES is to be commended for them. The University of the District of Columbia is experiencing a redirection in focus. The current administration has placed increased emphasis on journal publications. The recommendation is to increase the emphasis on academic journals publications which will serve to provide a transition to the role of the new College of Agriculture, Urban Sustainability, and Environmental Sciences (CAUSES).

5. COES should be involved with every high school and junior high school in the District. Local students are only sporadically aware of the nutritional aspects of the green revolution. COES has an excellent opportunity to expand its ongoing focus on education to include the benefits of locally grown environmentally friendly products, preparation of these products in wholesome nutrition manners and in the recognition of the impact of environmental pollution on their individual well being.

As we are committed to our land-grant mission, continuous improvement is a valued strategy that must be given due consideration and acted upon accordingly. Thus, AES and CES administrators will work with extension agents and specialists, researchers, and staff to ensure that we are providing quality research and extension programs and activities that enhance the quality of life for our stakeholders. We will focus on sharpening our evaluation and assessments of programs to develop impactful reports that accurately reflect the efforts, successes, and impacts of our land grant units.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	28.9	0.0	1.7	0.0
Actual	40.3	0.0	1.9	0.0

II. Merit Review Process**1. The Merit Review Process that was Employed for this year**

- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Other (USDA Review and Approval)

2. Brief Explanation

The merit review and/or peer review process completed this year follows:

Peer Review Process: Agricultural Experiment Station

(1) The Panel members were recruited from internal academic units in a number of disciplines to include Biological and Environmental Sciences, the School of Engineering, Urban Studies and the Department of Mathematics; other internal research units; and the AES/CES advisory board.

(2) Panel members are expected to:

- (a) Have broad knowledge in their areas of expertise;
- (b) Have a history of peer reviewed funding or the equivalent scientific experience; and
- (c) Be leaders in their fields.

(3) Members of the Panel usually serve as ad hoc members.

(4) Establish Criteria includes:

- (a) Significance of the research.
- (b) Scientific approach, including preliminary data and appropriateness of experimental design.

(c) Feasibility of the proposed studies including the expertise of the PI and collaborators and the environment available for conducting the studies.

(d) Innovation

(e) Relevance to the mission of the Agricultural Experiment Station

(5) A proposal may be disapproved if the Panel determines that the proposed studies are unethical or irrelevant.

(a) Proposals that are disapproved may not be resubmitted if the Panel deems that modifications can be made to strengthen the document.

USDA Proposal Approval and Required Reports

Proposals for Hatch projects are submitted to USDA, NIFA for review and final approval. As required by NIFA, progress reports are submitted on an annual basis.

Agricultural Experiment Station Requirements for Researchers

Researchers are required to submit monthly reports to the Office of the Dean, delineating their activities and any challenges or issues for each given month. AES requires researchers to hire/train undergraduate or graduate students. These students present papers at conferences and participate in undergraduate and graduate research seminars. Researchers are required to present their findings to stakeholders annually at the AES Research Seminar. Additionally, researchers are required to submit information documents that are then produced and distributed to the public. These documents inform stakeholders of the need for each research project and the expected impact for the residents of the District of Columbia.

Publication Review Process

All outreach publications such as fact sheets, newsletters, brochures, etc. must follow the standard review protocol established by the Dean of Community Outreach and Extension Service and the University Communications and Marketing Department. An internal review by a peer and the Cooperative Extension Grant Writer must be completed, then the document is submitted to the COES Marketing Specialist for further review for content and branding. The Marketing Specialist submits the document to the Dean for approval and then forwards it to the University's Communications and Marketing Department.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Targeted invitation to traditional stakeholder groups
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of selected individuals from the general public

Brief explanation.

Stakeholders were encouraged through the delivery of new information and engagement. We implemented efforts that informed our internal and external community of who we are, what we do, and, most importantly, why we do it. We made stakeholders aware that we are here to serve them. In doing so, we stressed how important it is that we get their feedback. We indicated that stakeholder input helps us to better serve them. Activities held to deliver information, interact with stakeholders, and obtain stakeholder input included the following:

1) Quality of Life Day (family day event at park/recreation center) - participants received demos, literature, hands-on, one-on-one talks with researchers and extension agents and specialists, and completed stakeholder input surveys.

2) AES/CES Urban Agricultural Fair (students, teachers, parents) - day long activity at Muirkirk Research Farm in Beltsville, Maryland for elementary and middle school students, teachers and parents. Activities included lectures, demonstrations, fun and interesting games, and literature distribution. Stakeholder input surveys as well as evaluation forms were distributed to teachers, parents, and students to obtain relevant stakeholder input. Exhibits included health, nutrition, water quality, urban gardening, sustainable communities, environmental show and tell, 4-H, and others.

3) AES Urban Gardener's Workshop - participants learned sustainable agricultural practices and were asked to participate in a stakeholder input survey. Attendees also had open group discussions as well as one-on-one talks with researchers and specialists.

4) University Student Stakeholder Sessions - University student groups visited the farm and benefited from presentations, demonstrations, group discussions, and one-on-one conversations with presenters. Stakeholder input surveys were distributed and collected.

5) Participation in General Community Events to promote health, urban gardening, and nutrition - Activities include literature distribution, demonstrations, and hands-on experiences. Surveys are distributed and collected to

obtain stakeholder input.

6) On campus - surveys are conducted to obtain stakeholder input from students who are DC residents.

7) Farmer's Market - The Agricultural Experiment Station and the Cooperative Extension Service hosted a Farmer's Market on campus on Saturdays during the months of June, July, August, September, October and November. Residents were able to purchase fresh fruits and vegetables, jewelry, art, baked goods, and seafood. Literature on nutrition was distributed as well as urban gardening information. The Dean, Associate Deans, Agents and Specialists were available to discuss AES and CES research and outreach efforts with city residents and vendors. Further, stakeholder input was obtained from surveys.

8) SNAP-Ed stakeholders included the child care facilities with the DC Department of Parks and Recreation, the Public Schools and private child care facilities from which were drawn new and previously participating sites. Focus groups of parents and teachers were conducted at seven sites during the year to gauge interest, program effectiveness and suggestions for improvement. The DC Department of Health and the Income Maintenance Administration are major stakeholders and were engaged in planning, monitoring and review of the program.

9) Food Handler Certification Model and Team Nutrition Education worked with preschool centers, United Planning Organization, the DC Department of Parks and Recreation, the Conference for Food Protection and the Office of the State Superintendent of Education to recruit, register, train, examine, and grant certificates to participants.

10) The Farmers' Market Nutrition Education Program formed a network with the DC Growers to identify markets and to make presentations at local farmers' markets.

11) Resident Group Sessions - Neighboring residents near campus met with AES and CES Administrators and staff to discuss research, programs and activities, share their views and insights, and discuss ways that they could assist with the Farmer's Market.

12) Dialogue with internal and external groups to share information, ascertain interests, and determine viability of partnering for projects, programs, or activities.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Use Surveys

Brief explanation.

The Agricultural Experiment Station and Cooperative Extension Service have, together and apart, considered the significance of appropriately identifying stakeholders and interacting with these individuals and groups as a means to extract valuable information that will allow us to shape our programs to effectively address critical issues for the District's citizenry. We have identified stakeholders to include:

Internal Stakeholders:

- Board of Trustees
- Administration (President, Provost, Vice Presidents, Deans, Chairs, Directors and their cabinets)
- Faculty
- Students
- Staff
- Alumni
- Advisory Boards

External Stakeholders:

- Residents of the District of Columbia
- City Government
- Community Partners (public and private)
- DC Public Schools
- Charter and Private Schools
- Local Businesses
- Faith-Based Community

The AES/CES Advisory Board meets quarterly with us to hear about our efforts, challenges and successes and they offer advice accordingly.

Internal focus groups are held to address various issues; our participation provides an opportunity to hear about what is going on, what is needed, and to determine how AES and CES may be able to better assist.

External focus groups are held on issues ranging from nutrition to health to environmental concerns, including urban gardening. Our participation affords us an opportunity to share information, develop partnerships, and to ascertain the needs of our stakeholders.

Surveys are used to obtain stakeholder input from University students and residents of the District of Columbia.

The Center for Nutrition, Diet and Health continues to draw upon stakeholders from over 600 partnering organizations in the District of Columbia.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with invited selected individuals from the general public

Brief explanation.

Methods for collecting stakeholder input included survey distribution and collection at community events, the urban agricultural fair, workshops, Quality of Life Day event, and University Classes. Also, via interviews, meetings, workshops, seminars, discussions, and participation in focus groups. Each of these activities allowed us to share information as well as to obtain information from our stakeholders about issues that concern them.

Activities included the following:

1) Quality of Life Day (family day event at park/recreation center) - participants received demos, literature, hands-on, one-on-one talks with researchers and extension agents and specialists, and completed stakeholder input surveys.

2) AES/CES Urban Agricultural Fair (students, teachers, parents) - day long activity at Muirkirk Research Farm in Beltsville, Maryland for elementary and middle school students, teachers and parents. Activities included lectures, demonstrations, fun and interesting games and literature distribution. Stakeholder input surveys as well as evaluation forms were distributed to teachers, parents, and students to obtain relevant stakeholder input. Exhibits included health, nutrition, water quality, urban gardening, sustainable communities, environmental show and tell, 4-H, and others.

3) AES Urban Gardener's Workshop - participants learned sustainable agricultural practices and were asked to participate in a stakeholder input survey. Attendees also had open group discussions as well as one-on-one talks with researchers and specialists.

4) University Student Stakeholder Sessions - University student groups visited the farm and benefited from presentations, demonstrations, group discussions, and one-on-one conversations with presenters. Stakeholder input surveys are distributed and collected.

5) Participation in General Community Events to promote health, urban gardening, and nutrition - Activities include literature distribution, demonstrations, and hands-on experiences. Surveys are distributed and collected to obtain stakeholder input.

6) On campus - surveys are conducted to obtain stakeholder input from students who are DC residents.

7) Farmer's Market - The Agricultural Experiment Station and the Cooperative Extension Service hosted a Farmer's Market on campus on Saturdays during the months of June, July, August, September, and October. Residents were able to purchase fresh fruits and vegetables, jewelry, art, baked goods, and seafood. Literature on nutrition was distributed as well as urban gardening information. The Dean, Associate Deans, Agents and Specialists were available to discuss AES and CES research and outreach efforts with city residents and vendors.

8) Resident Group Sessions - Neighboring residents near campus met with AES and CES Administrators and staff to discuss our programs and activities, share their views and insights, and discuss ways that they could help with the Farmer's Market.

9) Dialogue with internal and external groups to share information, ascertain interests, and determine viability of partnering for projects, programs, or activities.

10) AES Research Seminar - Research projects were presented to internal and external stakeholders. Questions and discussions followed. Surveys were distributed and collected to obtain stakeholder input.

11) The AES/CES Advisory Board meets quarterly with us to hear about our efforts, challenges and successes and they offer advice accordingly.

12) Internal focus groups are held to address various issues; our participation provides an opportunity to hear about what is going on, what is needed, and to determine how AES and CES may be able to better assist.

13) External focus groups are held on issues ranging from nutrition to health to environmental concerns, including urban gardening. Our participation affords us an opportunity to share information, develop partnerships, and to ascertain the needs of our stakeholders.

3. A statement of how the input will be considered

- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- To Set Priorities

Brief explanation.

Input from stakeholders is shared with appropriate administrators, staff, and the advisory board. This data is used to determine continuous improvement efforts directed at addressing new issues and broadening or redirecting current research and extension program design and activities. Stakeholder input serves as the fine tuner to what we do in research and outreach, ensuring that we are adequately contributing to the quality of life for residents of our capital city.

Brief Explanation of what you learned from your Stakeholders

Our stakeholders have several priorities; however, the top three priorities are health, nutrition, and youth violence, respectively. Residents have indicated their interest in organic vegetable gardens and herb gardens. Additionally, they have expressed interest in attending listening sessions in their communities at neighborhood libraries and schools. Though some have a general knowledge and understanding of sustainable agriculture, they would like recommendations on the varieties of crops that can be successfully grown in the Washington Metropolitan area. Residents are also interested in having their soil sampled and desire simple methods to control pests in their

gardens. Also, we learned that stakeholders feel that environmental conservation is a relative activity for students in DC Public schools. And there was interest in having their children participate in relevant activities during the summer months. Stakeholders are interested in touring the farm and participating in harvesting activities. Lastly, residents have indicated that they enjoy the AES/CES Farmer's Market on campus during the summer and fall seasons. A neighborhood advisory group is being formed so that the residents may have involvement in plans/preparation for the market.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1120278	0	769337	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	795132	0	254755	0
Actual Matching	795132	0	368069	0
Actual All Other	2093643	0	0	0
Total Actual Expended	3683907	0	622824	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from				
Carryover	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Natural Resources and the Environment
2	Urban Plants Production and Protection
3	Human Health and Nutrition, Healthy Urban Life Style, and Food Safety
4	Urban Families, Youth, and Communities

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Natural Resources and the Environment

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships				
111	Conservation and Efficient Use of Water				
112	Watershed Protection and Management				
124	Urban Forestry				
141	Air Resource Protection and Management				
806	Youth Development				
Total					

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	3.0	0.0
Actual	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

We are not reporting on this program.

2. Brief description of the target audience

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	20000	25000	10000	25000
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	2	2	
Actual	2	2	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of articles published
Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of fact sheets published
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Number of newsletter published
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Number of workshops, demonstrations and technical assistance implemented.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Number of research projects completed
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Number of soil, air and water samples test results
Not reporting on this Output for this Annual Report

Output #7

Output Measure

- Number of informational materials distributed
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Number of conference presentations
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of program participants that will become more environmentally aware due to new knowledge from informational materials provided and workshop presentations
2	Percent of program participants that will implement new environmental skills to improve natural resources and the environment
3	Percent of soil, air, and water samples meeting EPA standards after implementation of research project.

Outcome #1

1. Outcome Measures

Percent of program participants that will become more environmentally aware due to new knowledge from informational materials provided and workshop presentations

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Percent of program participants that will implement new environmental skills to improve natural resources and the environment

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Percent of soil, air, and water samples meeting EPA standards after implementation of research project.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Urban Plants Production and Protection

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships				
205	Plant Management Systems				
216	Integrated Pest Management Systems				
721	Insects and Other Pests Affecting Humans				
806	Youth Development				
Total					

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	3.0	0.0
Actual	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	1890 Matching	1862 Matching	1890 Matching
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	1890 All Other	1862 All Other	1890 All Other
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

We are not reporting on this program.

2. Brief description of the target audience

V(E). Planned Program (Outputs)**1. Standard output measures**

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	25000	35000	10000	15000
Actual	0	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)**Patent Applications Submitted**

Year: 2009

Plan: 0

Actual: {No Data Entered}

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)**Number of Peer Reviewed Publications**

2009	Extension	Research	Total
Plan	2	2	
Actual	2	2	0

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- Number of articles published
Not reporting on this Output for this Annual Report

Output #2**Output Measure**

- Number of fact sheets published
Not reporting on this Output for this Annual Report

Output #3**Output Measure**

- Number of Newsletters published
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Number of workshops, demonstrations and technical assistance implemented.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- Number of research projects completed
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Number of soil, plant and water samples test results
Not reporting on this Output for this Annual Report

Output #7

Output Measure

- Number of informational materials distributed
Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Number of conference presentations
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of program participants that will adapt new knowledge of urban gardening from informational materials provided and workshop presentations
2	Percent increase in urban gardens using some compost material as a soil amendment
3	Percent of workshop and training participants that will become certified Pesticide applicator
4	Percent of soil, plant and water sample results within acceptable crop production range

Outcome #1

1. Outcome Measures

Percent of program participants that will adapt new knowledge of urban gardening from informational materials provided and workshop presentations

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Percent increase in urban gardens using some compost material as a soil amendment

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Percent of workshop and training participants that will become certified Pesticide applicator

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Percent of soil, plant and water sample results within acceptable crop production range

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)**Program # 3****1. Name of the Planned Program**

Human Health and Nutrition, Healthy Urban Life Style, and Food Safety

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	30%		30%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%		0%	
723	Hazards to Human Health and Safety	0%		20%	
724	Healthy Lifestyle	60%		0%	
901	Program and Project Design, and Statistics	0%		30%	
903	Communication, Education, and Information Delivery	0%		20%	
Total		100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	10.4	0.0	1.9	0.0
Actual	9.3	0.0	1.9	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
255175	0	254755	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
255175	0	368069	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1631374	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Improving Plant Food (Fruit, Vegetable and Whole Grain) Availability and Intake in Older Adults

A survey instrument was designed, field tested, validated, and administered via an interview protocol to determine: to

what extent adults eat quantities of fruits, vegetables, and whole grains as recommended by USDA guidelines; the level of nutritional knowledge of older adults and their particular knowledge related to health benefits of fruits, vegetables, and whole grains; how nutritional knowledge and diagnosis of illness in older adults affect food choices and eating behaviors; and how food choices and eating behaviors in older adults are affected by significant life changes other than diagnosis of illness. A literature review was completed that will inform the design of additional quantitative studies to determine how survey results can be used as reliable predictors of nutritional risk in the elderly.

Interventions are being developed and validated with the Cooperative Extension Service that: improve identification of whole grain foods Increase awareness of the benefits of fruits, vegetables, and whole grains, and encourage eating these foods at levels recommended by USDA; provide acceptable recipes and cooking techniques; provide nutritional support to older adults who have experienced specific emotional events and/or crises.

An Integrated Approach to Prevention of Obesity in High Risk Families

Developed Easy-Survey software system. This system can be used for collecting research data. This system synchronizes local databases and online databases so that surveys or other electronic records of research participants entered on individual computers can be integrated into one centralized online database.

Developed MyHealth Journal software system. This software system is a journal software for personal health monitoring and control. The software can be used to record body weight, amount of exercise, water intake, medicine taken, etc. A user can also customize the software according to his/her own needs by adding or deleting items on the interface. A secure online database is implemented which will help users back up their information and access it from everywhere which provides better protection of the data. This software system can be integrated with the Easy-Survey Software System for collecting information for obesity and nutrition research.

Developing Fuzzy-set-theory-based Data Mining Methodologies for Diabetes Data Analysis

FM-test and CM-test were further developed and integrated with genetic algorithms to identify significant genes. It was confirmed that our approaches are not only effective but provide overall better performance. Manuscripts were submitted and accepted for publications. To evaluate the results of CM-GA and FM-GA, experiments were conducted on real-world datasets. Results were compared with CM-test, FM-test, t-test and t-GA. The list of genes produced by CM-GA and FM-GA have the highest overall classification accuracy among all these methods. For selected datasets, we also examined the biological relevance of the result genes. We selected top 10 differentially regulated genes from the result of applying our approach to lung cancer data and searched published literature to validate their relevance in tumor growth and development. Overall, the validation of top ranking molecules based on published literature suggest that CM-GA and FM-GA are efficient and superior methods for identifying significantly modulated genes in target gene expression datasets. We also **developed new collaboration with Tuskegee University** to investigate approaches to further develop X-test family. This effort has generated a manuscript that has been submitted to an international journal. It is currently under review.

The Nutrient Modulation of P53-ATF Signaling in Breast Cancer

The project made significant progress in the last year. In this phase of the study, the PI **generated significant data on the mechanisms of action of gamma-Tocotrienol (a Vitamin E compound) on breast cancer cells.** The experiments utilized high-throughput state of the art microarray methodology. Analysis of the microarray data revealed the modulation of various genes involved in cellular stress response and identified useful targets that can be pursued as molecular targets for developing new drugs and preventive agents for breast cancer. Direct relevance of this proposal is towards identifying new targets for developing drugs against breast cancer and exploring the possibility of developing Vitamin E compounds as chemopreventive and chemotherapeutic agents. The results were disseminated in the form of research seminar sponsored by UDC AES at UDC and poster presentations at national meetings. A manuscript is currently being developed to publish the findings in a refereed journal.

The Supplemental Nutrition Assistance Program-Education (SNAP-Ed)

The target population groups included community-based childcare centers, Head Start, and children between 8 to 10 years of age. **The program impacted 193,000 contacts and 85 preschool programs throughout the District and 175 extension-trained volunteer teachers.** It continues to build capacity by increasing outreach and expanding methods of delivery of the messages of Dietary Guidelines for Americans and MyPyramid.

In an effort to increase the consumption of fruits, vegetables, whole grains, low-fat milk and low-fat milk products, **nutrition educators from the Center for Nutrition, Diet and Health (CNDH) developed and conducted nutrition education activities for children, parents and teachers in Washington, DC,** through the Supplemental Nutrition Assistance Program-Education (SNAP-Ed). With the increase in the number of classroom nutrition education activities provided by CNDH staff, along with an increase in repeat visits to SNAP-Ed classrooms, the number of DCPS teachers requesting nutrition education activities and food demonstrations has increased significantly. At the Brightwood Education Campus, Head Start teachers have requested meetings with CNDH nutrition educators this year, to plan nutrition education activities for FY 2011. The **18 colorful, vegetable fact sheets, produced and distributed by CNDH for SNAP-Ed participants,** have generated queries outside of the SNAP-Ed target population. CNDH has received numerous requests from diverse groups, including a housing collaborative, senior wellness centers, church groups, gardening programs, farmers markets and non-profits who work with underserved communities, for nutrition education assistance.

The DC Food Handler Certification Program

The **Team Nutrition Education Program provided training for 210 food service paraprofessionals** to support overall healthy child care messages and strategies and improve food service delivery in DC child care facilities. The program collaborated with the Capital Area Food Bank and Mid-Atlantic Dairy Association to produce a 132-page, 10 lesson best practices manual (Team Nutrition Training guide) for training and reference. 100% of the participants passed the national food sanitation certification examination. 96% of the participants mastered all of the knowledge and skills in food handling techniques.

The Farmers' Market Nutrition Education Program

The program **provided nutrition education at point-of-purchase for market goers.** Recipes and information on nutritional quality of foods sold at the markets were provided. Approximately, 1500 District residents received information about the health benefits and dietary requirements of fresh fruits and vegetables and are enabled to make healthier and more informed food choices. Also, these residents received information about food safety and food preparation including various options for tasty yet nutritious recipes.

The DC Water Blind Taste Testing Project

Water blind taste testing was conducted to a cross-sectional sample of individuals living and/or working in DC, 908 participants, to determine consumers' preferences for the different types of drinking water, to determine factors related to their selection of drinking water, and to develop recommendations for the increased consumption of DC tap water. After participants completed the taste test of four different types, they completed a survey which involved ranking each cup of water in order of preference. Each participant was unaware of what type of water they were choosing.

2. Brief description of the target audience

The target audience for research includes: elderly citizens of the District of Columbia; researchers in bioinformatics study and diabetes study; breast cancer patients; and researchers in obesity study and data mining.

The target audience for extension projects include: children, youth, adults, public schools, universities, community service organizations, small businesses, daycare centers, food service workers, and farmer's markets.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	1600	250	7400	0
Actual	5174	6000	8700	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	1	
Actual	20	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Assessment of nutritional risk is measured by a validated survey and a seven day food diary, both of which collect quantitative data; and a cognitive interview protocol that collects qualitative data. Additionally, curriculum will be developed for various workshops, nutrition related activities, cooking demonstrations, train the trainer programs, health fairs, community participation, field trips and seminars. Fact sheets, newsletters and brochures will be developed and disseminated.

Year	Target	Actual
2009	1	1

Output #2

Output Measure

- Number of subjects who are exposed to information about good nutrition in the process of their participation.

Year	Target	Actual
2009	75	100

Output #3

Output Measure

- Development of new or improvement of existing tools for measuring the effectiveness of the interventions targeted to childhood overweight in low income families.

Year	Target	Actual
2009	1	1

Output #4

Output Measure

- Identification of objective, physiological-based measures that correspond to target behaviors (bio-behavioral markers) for use later as measures of intervention progress and success or means for tailoring interventions in ways that will be most effective for specific groups and subgroups.
Not reporting on this Output for this Annual Report

Output #5

Output Measure

- The methodology Fuzzy-Inferenced Decisionmaking (FIND) for gene microarray data analysis will be developed and tested on both synthetic and real data.

Year	Target	Actual
2009	0	1

Output #6

Output Measure

- Eight Workshops for teachers in the Ag in the Classroom Project
Not reporting on this Output for this Annual Report

Output #7

Output Measure

- Curriculum developed for various workshops, fact sheets for nutrition education for teachers.

Year	Target	Actual
2009	10	19

Output #8

Output Measure

- Train the Trainer Food Stamp Educational Workshops: 2 hours a week by teacher volunteers; FFNews; Creative Curriculum; Color Me Healthy; Tickle Your Appetite; 5 A Day; DCPS Nutrition Curriculums; and Development of Food Safety and Dietary Quality Lessons

Year	Target	Actual
2009	12	25

Output #9

Output Measure

- IRB Committee; Development of Instruments; Training on Instruments; Recruitment of project participants; Selected interventions; Review of data Data analysis; Report development - 250 Overweight and Obese individuals 150 Non Overweight and Obese individuals from the same environment Parents of participants.
Not reporting on this Output for this Annual Report

Output #10

Output Measure

- Asthma education for District residents: how to improve the quality of indoor air; Newsletters; Fact Sheets, and home audits will be provided to Districts residents.

Not reporting on this Output for this Annual Report

Output #11

Output Measure

- Number of residents who are aware of the CES Asthma Project.

Not reporting on this Output for this Annual Report

Output #12

Output Measure

- Number of residents participating in CES Asthma Project activities in their homes.

Not reporting on this Output for this Annual Report

Output #13

Output Measure

- Number of residents who are able to identify issues in their homes related to asthma as a result of the CES Asthma project.

Not reporting on this Output for this Annual Report

Output #14

Output Measure

- Classroom instruction/workshops (20 clock hours) on Food Handler Certification Regulations to include DC Code Examination, National Examination or Serve Safe National Examination, and Practice Examinations

Year	Target	Actual
2009	300	300

Output #15

Output Measure

- Drinking water blind taste testing of residents and workers to determine factors related to selection of drinking water and encourage drinking local tap water.

Year	Target	Actual
2009	{No Data Entered}	908

Output #16

Output Measure

- Train food service professionals in child care settings to support healthy child care messages and strategies and improve food service delivery. Develop a user-friendly training manual for easy reference.

Year	Target	Actual
2009	{No Data Entered}	210

Output #17

Output Measure

- Nutrition education at point-of-purchase for market goers. Market goers learn information about foods purchased, preparation methods, recipes, and nutrition exercises designed to facilitate self-learning.

Year	Target	Actual
2009	{No Data Entered}	1500

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of participants who exercise and experience slow weight loss and better glycemic controls.
2	Advances in the study of obesity, particularly an understanding of various inputs and interactions of family and child, SES, nutrition, physiology and behavior, will result from this work, opening doors of opportunity for development of effective solutions to reverse trends in childhood obesity.
3	Identification of the genes to be associated with diabetes
4	Contribute to the development of strategies to prevent and control of diabetes
5	Development of methods that can be applied for prognosis of many other diseases
6	Percentage of student participants who have increased knowledge as to where and how food is grown.
7	Percentage of students and teachers in grades Pre-K with increased agriculture literacy.
8	Number of teachers who have increased their awareness, knowledge, and understanding of agriculture, nutrition, and food gardening.
9	Percentage of participants with increased knowledge of the Food Guide Pyramid and Dietary Guidelines for Americans.
10	Percentage of participants with increased knowledge of nutrition of various fruits and vegetables
11	Percentage of parent participants who make better food choices (fruits/vegetables).
12	Percentage of decrease in the risk factors food borne illness.
13	Number of participants gaining awareness, knowledge and skills in Food Handling techniques.
14	Number of participants scoring a required minimum of 70% on post test and national examination.
15	Percentage of participants who improved eating habits.
16	Percentage of decrease in the incidences of obesity in the District of Columbia
17	Number of participants gaining awareness, knowledge, and skills in nutrition and agriculture.
18	Number of residents who have applied knowledge to alleviate vermin in their homes.

19	Number of residents who have made changes, i.e. elimination of secondhand smoke, removal of mold and/or mildew, and/or sanitation measures, in their homes as a result of information received from participating in the CES Asthma Project.
20	Number of residents and/or workers participating in the water taste testing survey.
21	Number of market goers who receive point of purchase nutrition education to increase consumer awareness of healthier food choices, food safety, quality, and usage.

Outcome #1

1. Outcome Measures

Number of participants who exercise and experience slow weight loss and better glycemic controls.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Advances in the study of obesity, particularly an understanding of various inputs and interactions of family and child, SES, nutrition, physiology and behavior, will result from this work, opening doors of opportunity for development of effective solutions to reverse trends in childhood obesity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a national health concern as overweight and obesity have reached epidemic proportions in the United States. Overweight and obese children are likely to remain overweight and obese as adults and develop chronic diseases at younger ages. Stakeholders, individuals, the scientific community, educators, and health providers are concerned with combating these serious conditions that may lead to chronic diseases that can result in disability and/or death.

What has been done

Developed Easy-Survey software system that can be used for collecting research data. This system synchronizes local databases and online databases so that surveys or other electronic records of research participants entered on individual computers can be integrated into one centralized online database. Developed MyHealth Journal software system. This software system is a journal software for personal health monitoring and control.

Results

The MyHealth software can be used to record body weight, amount of exercise, water intake, medicine taken etc. A user can customize the MyHealth Journal software according to his/her own needs by adding or deleting items on the interface. A secure online database is implemented which will help users back up their information and access it from everywhere which provides better protection of the data. This software system can be integrated with the Easy-Survey software system for collecting information for obesity and nutrition research.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #3**1. Outcome Measures**

Identification of the genes to be associated with diabetes

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	0	1

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Diabetes was the seventh leading cause of death listed on U.S. death certificates in 2006. Researchers are collaborating to develop innovative and advanced methods for the prediction of diabetes outcomes using gene expression data. Successful development of this research will greatly help the understanding of diabetes disease and the development of strategies to prevent and control diabetes, which in turn, will significantly reduce the burden of diabetes on healthcare systems.

What has been done

In this period, we have further developed our FM-test and CM-test and integrated with genetic algorithms to identify significant genes. We tested the FM-GA and CM-GA approaches on real world data and compared them with currently existing approaches.

Results

Two new approaches were developed to identify significant genes. The approaches were tested on real world data and compared with currently existing approaches. Approaches are evaluated by how accurate patients can be classified as diabetic or non-diabetic based on the expression values of the identified genes. For selected datasets, we also examined the biological relevance of the result genes. It is confirmed, by the above two approaches, that our approaches are not only effective but also provide overall better performance.

4. Associated Knowledge Areas

KA Code	Knowledge Area
901	Program and Project Design, and Statistics

Outcome #4

1. Outcome Measures

Contribute to the development of strategies to prevent and control of diabetes

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Development of methods that can be applied for prognosis of many other diseases

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Percentage of student participants who have increased knowledge as to where and how food is grown.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Percentage of students and teachers in grades Pre-K with increased agriculture literacy.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	90	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Department of Health and Income Maintenance Administration is tasked with ensuring that families receiving supplemental nutrition assistance such as food stamps are knowledgeable of healthy eating, food safety measures, and wise spending of food stamp dollars. Public schools and child care facilities under the Early Childhood Education Administration are interested in ensuring that preschool children and their parents are introduced early in the children's life cycle to healthy eating, food safety and physical activity to prevent and control obesity and other chronic diseases.

What has been done

The SNAP-Ed Program was implemented in 85 preschool sites to address dietary quality and food safety through education. Families were assisted to adopt healthier lifestyles in accordance with Dietary Guidelines for Americans and MyPyramid-Steps to a Healthier You. Classroom teachers (174) were trained to implement a 48-lesson curriculum to improve each child's ability to choose healthier foods, safely handle food, properly prepare and store foods and increase physical activity for health. Messages were shared with parents.

Results

100% of the children were able to correctly identify food colors in the coloring contest in the Health Kidz Corner of the Bi-monthly newsletter. The children were able to identify at least one new fruit and vegetable by color which they were not able to do prior to the exercise. The identification of healthy food items is the first step in improving healthy eating. 100% of the children reported more fruits and vegetables are being used by the household. The children reported parents are purchasing the new fruits and vegetables introduced in the classrooms and are trying the new recipes. From the data received, at least one additional serving of fruit and vegetables are served and consumed. 80% of teachers enthusiastically agree that SNAP-Ed activities constitute an excellent intervention for preschool children and families.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #8

1. Outcome Measures

Number of teachers who have increased their awareness, knowledge, and understanding of agriculture, nutrition, and food gardening.

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Percentage of participants with increased knowledge of the Food Guide Pyramid and Dietary Guidelines for Americans.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Health and school officials, city officials, obesity prevention and control advocates, service agencies and programs, teachers, food handlers, parents and children are all concerned with the messages on dietary quality and food safety contained in the Food guide Pyramid-Steps to a Healthier You and Dietary Guidelines for Americans. They are designed to improve the ability to select healthy foods, safely handle food, and properly prepare and store food.

What has been done

From its inception, the SNAP-Ed Program in the Center for Nutrition, Diet and Health has expanded from 40 to 85 participant agencies, 46 to 174 extension-trained volunteers, and 350 to 179,345 contacts. A video series on fitness and nutrition was developed. The program issued two bi-monthly newsletters for parents, teachers and children. The program published and distributed 18 vegetable fact booklets. A series of focus groups were conducted with parents and teachers.

Results

90% of parents who participated in the focus groups reported increased knowledge of the importance of good nutrition, i.e. increasing daily consumption of fruits and vegetables, choosing healthy snacks, and selecting either low fat or fat free milk. The focus of the program was on healthy eating, USDA nutritional guidelines, and the importance of increasing physical activity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #10

1. Outcome Measures

Percentage of participants with increased knowledge of nutrition of various fruits and vegetables

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	85

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Messages related to dietary quality and food safety from the Food Guide Pyramid and Dietary Guidelines for Americans are essential to limited resource families. Health and School officials, DC Council members, child-serving agencies, classroom teachers, community residents, foodhandlers, parents, and families are all concerned with good nutrition and food safety to ensure healthy lifestyles for maximum physical and mental performance and prevention and/or control of illnesses associated with malnutrition.

What has been done

The SNAP-Ed Program-Education offered classroom nutrition and food safety education to over 3,000 preschool children and families, working with 174 teachers in 85 child care sites throughout the District of Columbia. Increasing consumption of fruits and vegetables was a major emphasis in the curriculum. A series of 18 fact booklets and a bi-monthly newsletter increased the level of social marketing to parents. Children participated in a coloring contest featuring vegetables.

Results

80% of the children increased their knowledge on the importance of fruits and vegetables in their diet, eating more fruits and vegetables, healthier snacks, and choosing reduced fat milk more often over less healthy beverages. The program taught the FNS/USDA core messages: more fruits and vegetables, whole grains, low or fat free milk, and increased physical activity. All measures have not been analyzed. However, we are putting measures in place to capture similar data and will include the findings in the 2011 Accomplishment Report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #11

1. Outcome Measures

Percentage of parent participants who make better food choices (fruits/vegetables).

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Percentage of decrease in the risk factors food borne illness.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Number of participants gaining awareness, knowledge and skills in Food Handling techniques.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Foodhandlers working in public school child care centers need training to ensure authorities, school officials, and families that food service is healthy, nutritious and safe for the children.

What has been done

The Team Nutrition Education Program provided training for 210 food service paraprofessionals to support overall healthy child care messages and strategies and improve food service delivery in DC child care facilities. The program collaborated with the Capital Area Food Bank and Mid-Atlantic Dairy Association to produce a 132-page, 10 lesson best practices manual (Team Nutrition Training guide) for training and reference.

Results

100% of the participants passed the national food sanitation certification examination. 96% of the participants mastered all of the knowledge and skills in food handling techniques. Approximately, 750 individuals were trained. Classroom instructions were conducted - 20 clock hours divided into three to five sessions; tests included pretest, post test, and DC Code examination test in order to measure knowledge; and the national examination. All of the individuals need the certification to continue their current job or gain employment. New measures (economic benefit data) will be reported in the 2011 Accomplishment Report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #14

1. Outcome Measures

Number of participants scoring a required minimum of 70% on post test and national examination.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	365	300

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Department of Health authorities are responsible for maintaining food sanitation in food serving establishments in the District through requirements for certification of food service workers/handlers. Food handlers and their employers are, in turn, interested in meeting these requirements in order to remain employed and in operation serving food.

What has been done

In the DC Food Handler Certification Program Model, 300 food handlers were prepared for and administered the national and local exams in a series of 6 five-day sessions.

Results

Mean percentages of test scores on the national exam for 877 participants increased from 81.1% in 2006 to 96% in 2009. The required passing score is 70%. Pass rates in this test model are higher than the national average.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #15

1. Outcome Measures

Percentage of participants who improved eating habits.

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

Percentage of decrease in the incidences of obesity in the District of Columbia

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

Number of participants gaining awareness, knowledge, and skills in nutrition and agriculture.

Not Reporting on this Outcome Measure

Outcome #18

1. Outcome Measures

Number of residents who have applied knowledge to alleviate vermin in their homes.

Not Reporting on this Outcome Measure

Outcome #19

1. Outcome Measures

Number of residents who have made changes, i.e. elimination of secondhand smoke, removal of mold and/or mildew, and/or sanitation measures, in their homes as a result of information received from participating in the CES Asthma Project.

Not Reporting on this Outcome Measure

Outcome #20

1. Outcome Measures

Number of residents and/or workers participating in the water taste testing survey.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	908

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The US Environmental Protection Agency and Centers for Disease Control are responsible for ensuring safe drinking water. The DC Department of the Environment and citizen groups such as Science in the Public Interest attempt to keep water safe for consumption for all consumers. Unsanitary water can lead to foodborne illnesses and death, if not controlled.

What has been done

908 participants completed the blind taste test of 4 different types of water and completed a survey which involved ranking each sample in order of preference due to the influence of the local media on drinking tap water in the District. The objectives were: 1) to conduct drinking water blind taste testing to a cross-sectional sample of individuals who live in the District of Columbia; 2) to determine consumers' preference for the different types of water; 3) to determine the types of drinking water being consumed; 4) to determine factors related to the selection of drinking water; and 5) to develop recommendations for the increased consumption of District of Columbia tap water.

Results

As a result of the DC Water Blind Taste Testing Project, 908 DC residents have increased their knowledge about the types of drinking water available to them and were able to taste the water. Most participants preferred spring water and the least preferred was mineral water. Additionally, residents are more knowledgeable of the dietary recommendations for water consumption. As 50% of the participants did not meet dietary recommendations, their participation in this program may lead to a change in behavior (increase in water consumption). Participants completed the blind taste test of four different types of water and completed a survey which involved ranking each sample in order of preference due to the influence of the local media on drinking tap water in the District. More findings will be available in the 2011 Accomplishment Report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #21

1. Outcome Measures

Number of market goers who receive point of purchase nutrition education to increase consumer awareness of healthier food choices, food safety, quality, and usage.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	1500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Consumers are challenged with rising prices that force more careful use of food dollars, concern about the safety of produce, and ways to eat healthier and tastier foods.

What has been done

In the Farmers' Market Nutrition Education Program, 1500 individuals were assisted at farmers' markets with consultation and information from 18 fact booklets on beets, broccoli, cabbage, carrots, cauliflower, corn, lettuce, mushrooms, onions, peppers, potatoes, rutabaga, snap beans, spinach, summer squash, sweet potatoes, tomatoes and winter squash. In addition to nutrition education, food preparation techniques and healthy recipes

were provided at the markets.

Results

As a result of the Farmer's Nutrition Education Program, 1500 District residents are more knowledgeable about the health benefits and dietary requirements of fresh fruits and vegetables and are enabled to make healthier and more informed food choices. Additionally, these residents are more knowledgeable about food safety and food preparation including various options for tasty yet nutritious recipes. As residents continue to frequent these markets, it is evident that many individuals and families are including more fresh fruits and vegetables in their diets. Residents return to the market and report their increase in fruits and vegetables as a result of the nutrition education received at the market. An instrument will be developed to collect information from residents who used the Farmer's Markets in an attempt to measure knowledge and reported changes in attitudes and behavior.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Other (Discussed in explanation below.)

Brief Explanation

Developing Fuzzy-set-theory-based Data Mining Methodologies for Diabetes Data Analysis

Our researchers are working to contribute to the development of strategies to prevent and control of diabetes as well as the development of methods that can be applied for prognosis of many other diseases. These goals require more time to produce efforts. A Book Chapter: FM-GA and CM-GA for Gene Microarray Analysis, Advances in Computational Biology, is scheduled to be published in Spring 2010.

Ag in the Classroom

Our Ag in the Classroom Extension Agent retired and has not been replaced. It is expected that this vacancy will be filled in 2010.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Case Study
- Other (Comparison of individuals and group participants before and after interventions.)

Evaluation Results

- 1) Pre and Post tests of knowledge gained showed that participants had improved in their knowledge of nutrition.
- 2) Focus groups conducted with parents and teachers enabled improvements in program design.

3) Likert scale evaluation of teacher confidence and preparation regarding curriculum items and program objectives enabled understanding for program changes.

4) National foodhandler certification exams showed improvement among participants affirming the program model.

Key Items of Evaluation

1) Foodhandler certification exam scores were consistently above the national average.

2) The Likert scale model is a state-of-the-art instrument based on shared information from USDA youth programs.

3) Promotion of focus group activity was accomplished through a bi-monthly e-newsletter (SNAP-Ed Connector) to assist in eliciting cooperation while keeping teachers, staff, and families on the same page.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Urban Families, Youth, and Communities

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
602	Business Management, Finance, and Taxation	5%		0%	
801	Individual and Family Resource Management	5%		0%	
802	Human Development and Family Well-Being	20%		0%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	20%		0%	
806	Youth Development	50%		0%	
Total		100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	11.5	0.0	1.0	0.0
Actual	20.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
539957	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
539957	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
462269	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

4-H and Youth Development

1) MC Terrell Elementary School, **4-H Lovely Ladies Leadership Club**, met four times monthly. Some of the program areas and activities included: What is 4-H?, How to Hold an Election, member interest, and becoming a peer pressure free

leader. The Club boasted 64 African American female youth and is located in ward 8, an area needing strong leaders to combat serious socio-economic issues.

2) Miner Elementary School in ward 6 with 9 African American males held regular meetings surrounding literacy with Fathers. Agent Jaime Brown met with Fathers and their children through the **Fathers Reading Every Day (FRED) Program** to help emphasize the importance of reading to children and letting them see you read as a Father and leader of the family.

3) 4-H at Shaed Elementary School, Ward 5, 7th grade girls met 4 times monthly. Activities centered around different **leadership issues** beginning with conflict resolution and progressing to drug and alcohol prevention.

4) **Leadership 4-H Clubs** at Hospitality High School in ward 4: Included seniors and 4-H Freshmen who were very instrumental in planning the upcoming leadership conference and they have volunteered with younger 4-Hers.

5) Miner Elementary School **4-H Leadership Club**: Held 2 meetings monthly. 10 African American youth, 4 boys and 6 girls, made up the clubs. Their activities focused around conflict resolution, learning parliamentary procedures, the importance of the voting process, and planning a voter's registration drive. They also began working on non-violent change materials donated to the 4-H program.

6) Woodworking Projects: One **wood working club** continued at Bolling Air Force Base under the supervision of the volunteer leader for the beginning of the fiscal year.

7) **Language Program**, Spanish: Curriculum has been ordered and programs are being implemented by our new 4-H agent, Diego Lahaye.

8) **Gardening Projects**: Through our partnership with the Jr. Master Gardeners Program and other schools, garden clubs have been formed and a special cooking class has developed with Chef Jim at Roosevelt Senior High School. Teens are participated in the Culinary Arts Program with hopes of defining that career. A special school project was conducted on Arbor Day at Webb Elementary School by the 4-H staff and the forestry department about trees and how we use the earth for food. Youth at District of Columbia National Guard hosted the annual 4-H Base Beautification project. Seventy-nine (79) youth participated. With the supervision of a licensed Landscape professional, they learned the difference between annuals and perennials and about arranging plants in gardens. Several schools planted youth gardens in their school yards.

9) **Computer Labs**: Using the Mobil technology labs supplied by the Operation Military Kids grant, military youth learned to use the Microsoft Word Suite and created Bookmarks, special cards, calendars, and many other self-expression materials to share with their parents. Individual technology clubs continued to work with computers, mapping findings from GPS technology tools.

10) **Nutrition Program**: During the 4-H summer camp programs, youth learned about Health and Nutrition for five weeks. Food demonstrations were presented by the Center for Nutrition, Diet and Health to help youth understand the importance of eating right and staying active. During Women's Health Month, Jennifer Brown of the Center for Nutrition, Diet and Health, made a presentation to 4-H clubs that allowed them to taste healthy snacks. During a skill-a-thon, youth learned to make healthy microwave pizzas.

11) **Water Quality and GIS Technology**: Water quality education programs were offered in some schools and through the Operation Military Kids Program.

12) **Fact Sheets**: 12 Fact sheets were developed and distributed for the 4-H program.

13) **Newsletters**: Two (2) 4-H Pen Pal Newsletters were issued for the 4-H program.

14) **Financial Literacy Sessions/Workshops**: Financial literacy programs were offered by Extension Agent Rodney Gill to the youth in our military programs.

15) **Leadership Development Meetings**: Youth leaders from 4-H Leadership clubs assisted in hosting the 4-H summer camp activities and Military Boots On, Boots Off Program Training, a program designed to help military youth understand the deployment issues their parents face and events working with younger 4-Hers. 4-H Leadership clubs have been formed in high risk schools and youth under the direction of Extension Agent Jaime Brown have planned a leadership conference hosting 400 youth in Ward 7 for 2010.

Community Resources and Economic Development

Activities included the following:

- 1) High School Financial Planning Program
- 2) Videotape series with Co-op Information
- 3) Co-op Groups
- 4) Demonstrations for Home Repair
- 5) Community Business entry-level training

Highlights:

- Held **70 Financial Literacy sessions/workshops** for 911 DC residents; put out 2,481 pieces of literature; collected 777 surveys; and issued 10 certificates based upon the FDIC Money Smart Series
- Held **10 High School Financial Planning sessions** for 237 youth
- **Updated the CH Kirkman, Jr. Resource Library for Cooperatives** by adding an 8 tape series on cooperatives and a hard copy series on Rules, Rights and Responsibilities of co-op member, and managers
- **Developed a marketing co-op** to advance the business of Mid-Atlantic Farmers through DC Market Maker (DCMM).
- **Held 43 certificate sessions and 46 mini information and recruitment sessions** for 1,753 persons; received 216 surveys and distributed 93 certificates for those completing the four part basic series in Basic Home Repair and Energy Tips; Combined the areas of Taxicab Training and Professional Business Development with Small Businesses and low to moderate income tax preparation and counseling; provided referrals for loan and certification assistance; provided information for 427 training, counseling and information sessions for 11,505; and prepared 30 sets of personal and small business taxes.

2. Brief description of the target audience

4-H and Youth Development

The target audience consisted of youth, seniors, other adults, and military families.

Adults: Adult volunteers have worked with us to provide training and supervision to our youth.

Seniors: Seniors have participated in the Relatives as Partners Program (RAPP), networking with other states including a trip to Pennsylvania to meet with other Relatives working on Federal changes and participating in the March on Washington for RAPP rights. The children participated in a 4-H Essay Contest that involved expressing how they felt about being raised by someone other than their parent. 10 winning essays received 100.00 gift cards. All of the Essays were published with their drawings in a 4-H booklet and every child received a 4-H book bag full of goodies.

Military Personnel: Through the Operation Military Kids Program, we hosted a summer camp program for 280 youth, held events during the spring break for youth and presented military fun days activities for families.

College students: College students participated in our summer camp programs and worked as volunteer leaders in special areas of interest.

Ex-offenders: The 4-H unit hosted a summit for 50 representatives of an organization of ex-offenders whose mission is to help ex-offenders and gang members stay out of trouble and to plan strategies to help ex-offenders and their families. We also worked on initiatives to help youth get out of gangs without dying.

Center for Resources and Economic Development

The target audience for CRED is DC residents. Within this population, CRED focuses its services for youth, adults, college students, low to moderate income residents and small, new start, and home based businesses.

The target audience included:

- 1) Low to moderate income residents

- 2) First-time buyers
- 3) Low income homeowners
- 4) Small, new start, home based businesses

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	33935	0	6500	0
Actual	43932	130000	27984	70000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	14	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Youth will receive pre and post testing and regular tutoring to improve their reading skills.
 Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Curriculum developed for various parenting workshops, seminars, support groups, fact sheets, and newsletters.

Year	Target	Actual
2009	5	24

Output #3

Output Measure

- Number of participants in parenting workshops.

Year	Target	Actual
2009	2000	4808

Output #4**Output Measure**

- Number of parenting support groups formed.

Year	Target	Actual
2009	10	16

Output #5**Output Measure**

- Percentage increase in the number of parenting support groups.

Year	Target	Actual
2009	40	65

Output #6**Output Measure**

- Conduct a minimum of 48 sessions in the area of financial literacy.

Year	Target	Actual
2009	48	70

Output #7**Output Measure**

- Conduct 10 sessions per year for junior and senior high schools in the District of Columbia on financial planning.

Year	Target	Actual
2009	10	10

Output #8**Output Measure**

- Number of individuals in co-ops and subsidized housing trained on roles, rights, and responsibilities of co-op members, managers, and directors.

Year	Target	Actual
2009	500	1279

Output #9**Output Measure**

- Develop newsletter and/or fact sheets for District residents so they can perform basic/advanced repairs in and around their home.

Year	Target	Actual
2009	2	5

Output #10**Output Measure**

- Conduct hands-on workshops for District residents in basic and advanced home repair.

Year	Target	Actual
2009	50	46

Output #11**Output Measure**

- Increase in the number of 4-H clubs throughout the city.

Year	Target	Actual
2009	10	23

Output #12**Output Measure**

- Hold a minimum of 20 co-op training sessions for co-op members and individuals in subsidized housing.

Year	Target	Actual
2009	20	10

Output #13**Output Measure**

- Develop a videotape series, webpage and links to provide continuous scheduled training and information on co-op housing issues.
Not reporting on this Output for this Annual Report

Output #14**Output Measure**

- Youth will receive training in the areas of sewing, computer technology, and geospatial technology.

Year	Target	Actual
2009	400	760

Output #15**Output Measure**

- Youth will receive leadership development training through conferences and special programs.

Year	Target	Actual
2009	300	550

Output #16**Output Measure**

- Tutors will receive training to both assess and treat reading disabilities.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of children who have increased their knowledge of the essential elements of team work through participation in 4-H club activities.
2	Number of children who have learned about importance of responsibility through participation in 4-H activities.
3	Number of DC Reads participants who have experienced greater success in school.
4	Percentage of students who have increased their reading skills.
5	Number of parenting workshop participants who have used their knowledge of support services available to apply for assistance in an effort to meet some of their parenting needs.
6	Number of parenting workshop participants who have gained knowledge in basic child care.
7	Number of participants increasing their income tax refunds through tax planning.
8	Number of DC residents who participated in a Financial Literacy workshop who are now or have purchased homes with some form of financial assistance.
9	Number of participants who have changed their attitudes about co-op housing ownership in the District of Columbia.
10	Number of participants able to make repairs as well as communicate with contractors in a professional manner.
11	Number of District residents participating in workshops offered on home maintenance and repair who have reduced the cost of repairs to their home by \$25.00 or more.
12	Number of small business participants who changed their minds about developing and maintaining a successful business in the District of Columbia.
13	Percentage of businesses participating in the program that experienced a positive impact.
14	Number of youth passing test to become certified in Hair Braiding.
15	Number of Youth volunteering for community service projects/activities, i.e. DC Reads tutoring and neighborhood cleanup/beautification efforts.

Outcome #1**1. Outcome Measures**

Number of children who have increased their knowledge of the essential elements of team work through participation in 4-H club activities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	500	20000

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Youth need to learn to work with peers in a non combative matter. They also need to practice giving back to the community.

What has been done

Fourteen events were implemented during the program year. Monthly meetings were held with the OMK state team with twelve regular attendees from the community. Seventy youth participated in our week long spring break activities. During the week we taught youth about the deployment cycle using videos and interactive activities. Thirty youth participated in two different soccer clinics that focused on 4-H health and fitness and the Health Rocks program about drug prevention during the week. One hundred and eighty youth participated in the "Boots On Boots Off" training which is a mock deployment activity for the youth that allows them to experience the process their parents follow in the deployment cycle. One hundred and eighty youth participated in the summer camp program.

Results

70% of youth participants, both military and non-military youth, increased their knowledge about compromise, respect for the view of others and loyalty to your group. 54% of the military and non-military youth report becoming more sensitive to the needs of others. 78% of older military youth saw themselves as leaders and enjoyed the process of working with younger youth they did not know. 100% of our Non-military youth reported that they had never thought about the concerns military youth have when their parents are away at war. After participating in the program, 80% of the non-military youth report being interested in working with the Operation Military Kids Program after the training.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
806	Youth Development

Outcome #2**1. Outcome Measures**

Number of children who have learned about importance of responsibility through participation in 4-H activities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	400	240

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Youth will become the future leaders of our world. It is imperative that they learn how to become responsible citizens. Social responsibility, as it relates to care of the environment or environmental stewardship, is an issue of concern for all residents of planet earth and for generations to come.

What has been done

80 students at Webb Elementary School, grades 4th and 5th, participated in a 4-H science activity. The goals of the activity were to: 1) educate youth through experiential activities about the importance of recycling and preserving the earth; 2) empower the youth to take responsibility for the environment; 3) empower youth to understand their ability to create change; 4) help children enjoy learning about Science all around them; and 5) engage children and teachers in 4-H activities to form 4-H science clubs. 4-H agents worked with teachers and visited the classroom to provide interactive activities about recycling. On Arbor Day, the 4-H team hosted a field day recycling activity.

Results

80 participants at Webb Elementary School, along with other youth from various schools at the Agricultural Fair in Beltsville, Maryland, were quizzed to see what they learned. The Webb Elementary School students showed a higher outcome in retaining the information. Agents quizzed the children with outdoor activities in a field day format to see what they had learned. 68% of the youth answered questions in a manner that reflected their mastery of the subject matter at Webb Elementary. 75% of the children retained the information after the second program. 80% of the children report they will take responsibility for and take better care of the environment in the future. We are developing measures to further capture relevant data and will include findings in the 2011 Accomplishment Report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3

1. Outcome Measures

Number of DC Reads participants who have experienced greater success in school.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Percentage of students who have increased their reading skills.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of parenting workshop participants who have used their knowledge of support services available to apply for assistance in an effort to meet some of their parenting needs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Relatives are raising children in their families without support from the biological parents. They need to understand custody issues, programs that can help them in managing their finances, how to navigate through changes in the school system and about a host of other resources that they can use to help them raise the children they are in charge of raising.

What has been done

Sixteen new workshops involving issues such as custody, home repair, talking with the teacher about your child, making time for yourself and creating financial stability, setting rules, relaxation techniques, modeling appropriate social skills, the family communication process, effective praise, remembering stages and ages, improving school performance, including children in decision making, setting firm limits, and handling disrespect were presented through the RAPP program. Children were engaged in 4-H clubs and contest allowing them to express themselves positively.

Results

Relatives report more cooperation from the children and a few children report positive change in the guardians. Measures will be developed to better assess change in action outcomes. This data will be reported in the 2011 Accomplishment Report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #6

1. Outcome Measures

Number of parenting workshop participants who have gained knowledge in basic child care.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Number of participants increasing their income tax refunds through tax planning.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	500	109

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Income taxes are the basis of support for the American way of life. Any and all persons receiving income in any form above a certain amount for their filing status must file taxes or be subject to criminal prosecution.

What has been done

Through our Financial Planning Program, CRED held seminars in tax tips for seniors and some disadvantaged groups (returning prisoners, veterans). CRED offered 10 two hour tips sessions for 109 persons. Of these individuals, we counseled and/or prepared taxes for 34 persons. To participate, individuals were required to bring a copy of their previous year's tax returns. The purpose of the Financial Literacy Program is to develop economically self-sufficient citizens in these challenging financial times.

Results

31% or 34 of the 109 served improved their financial position by receiving a larger tax refund and developing a future tax strategy. Keys to the refund structure for this group are that most persons receiving counseling or tax preparation are able to receive the EITC and the CIT. The average refund was \$487.00. Those receiving EITC and CIT received approximately \$1,500. The average increase in those receiving a refund was approximately

\$300. Thus, the range of refunds was \$300 to \$1500. Longitudinal data will be collected, assessed and reported in future Accomplishment Reports.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #8

1. Outcome Measures

Number of DC residents who participated in a Financial Literacy workshop who are now or have purchased homes with some form of financial assistance.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The downturn in the economy has made it almost impossible for the very low income and low to moderate income individuals to use government programs to purchase homes. The DC Housing Production Fund was awarded \$100 Million additional dollars to support this effort.

What has been done

The Financial Planning Program is a collaboration with American Saves, Capital One, the Unbanked Program, and the Federal Deposit Insurance Corporation. During this period, 777 individuals completed the five phase FDIC Financial Planning Program. CRED held 72 two hour sessions. Two types of sessions were held - High School Financial Planning and Adult Financial Planning. The subject areas included understanding credit, debt management, predatory lending, being banked, budgeting, and financial planning.

Results

Of the 777 individuals, 500 (64%) demonstrated a change in their knowledge base given an increase on each item tested (via survey) and the development of a monthly budget. A change in condition resulted from establishing a bank account, having income tax returns prepared (some for the first time and receiving as an average \$300.00 to \$1500.00), and more on their returns from the Earned Income Tax Credit and Child Tax Credit (ETIC and CTC). Due to limited funding, only 10 of the 500 referred were able to participate in the Individual Development Account Program with Capital Area Asset Builders, Inc. (CAAB, Inc.) None of the 10 purchased a home during the reporting period; however, these individuals have put themselves in a position to use the District's Low Income Assistance Program to purchase new Subsidized Housing being built in the city. Each of the 10 individuals is now saving or has already saved \$3,000.00 dollars. Broader measures will be included to provide relevant data for future reporting.

4. Associated Knowledge Areas

KA Code **Knowledge Area**
 801 Individual and Family Resource Management

Outcome #9

1. Outcome Measures

Number of participants who have changed their attitudes about co-op housing ownership in the District of Columbia.

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Number of participants able to make repairs as well as communicate with contractors in a professional manner.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	250	93

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The issues of global warming have forced the world to consider energy conservation and energy alternatives as a way of life. The economic plight of Americans of all walks of life have been affected by the energy debate.

What has been done

1,100 individuals received energy tips through basic home repair and energy conservation training sessions. 46 - four hour mini sessions were held. 96 persons completed the certificate program (44 - four part training sessions were held). Energy bills were reviewed over a two month period and an energy audit was done as part of the program.

Results

As a result of the home repair and energy conservation training sessions, 294 (26%) program participants reported (general survey during and following the sessions) that the training had been helpful and they have reduced their energy expenses by \$50.00 per month. The 96 individuals completing the certificate program, mostly seniors, disadvantaged, and/or disabled and already on some type of energy discount plan, had an average utility bill of \$450.00 per month. Over a three month period, the average savings we identified was approximately 5% or \$22.50 (annualized at \$25,920 for 96 participants).

Also, the 96 individuals receiving certificates identify their ability to make minor adjustments in their homes. 10 individuals were able to keep contractors from taking advantage of them. Overall, this program effort saved an average \$2,000.00 each for a total of \$20,000.00.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #11

1. Outcome Measures

Number of District residents participating in workshops offered on home maintenance and repair who have reduced the cost of repairs to their home by \$25.00 or more.

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Number of small business participants who changed their minds about developing and maintaining a successful business in the District of Columbia.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	684

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Small businesses in the United States are listed as the backbone of the American economy. These businesses produce 80% of all new jobs and bring most new innovation to the American economy. Each government stimulus package presented includes a provision to support small business development.

What has been done

During this reporting period, CRED revived, with consent of the DC Taxicab Commission, the Pre-License and Review Courses for Taxicabs in the District. Approximately 684 individuals received assistance in developing a taxicab business in the District of Columbia. The Taxicab program by law requires each a 60 hour training program of instruction based on DC Law and a 4 hour refresher seminar.

Results

659 or 96% of trainees passed the taxicab exam which allowed them to make a minimum of \$150.00 per day as taxicab or limosine drivers as stated by the Taxicab Commission. Thus, the assistance provided significantly increased the number of potential small business owners. The taxicab business is lucrative in the District because it is the Nation's Capital and the 3rd ranked tourist attraction in the US.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #13

1. Outcome Measures

Percentage of businesses participating in the program that experienced a positive impact.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	10

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The percentage of successful new small businesses is usually less than 10% in the first 3 years. The concept behind the CRED Community Economic Development Program is to serve as a small business incubator.

What has been done

During this period, due to the financial meltdown, the SBA Smart Loan Program collapsed. Credit became restricted and loans were only being made to qualified borrowers. To counter this problem, CRED joined forces with the Washington Area Investment Fund (WAIF), a directly funded Small Business Investment Corporation. On a quarterly, WAIF offers, through the Marshall Heights Development Corporation, a business development course, five (5) - two (2) hour series which included setting up your business (What type is best for you), Tax Planning, Human Resources, your business plan and getting certified. Community Resource and Economic Development (CRED) packaged participants' information and prepared their delinquent taxes before referring them the Washington Area Community Investment Fund for financial support in the form of a loan or development of a strategic partnership plan. Quarterly, CRED offered two sessions setting up your business and tax planning. The basic direction of the training or information sharing had to do with finding ways to help these businesses.

Results

Within the reporting period, 10 (30%) of the 34 participating small businesses made progress from their first year. Of the 10 businesses that made some progress, most was accomplished through self-funding. The new stricter loan requirement and new certification standards kept these businesses from completing the loan process during this fiscal period. We will track their tax returns and certification process. Surveys of their needs and opinions about the usefulness of the sessions were taken. Relevant data will be analyzed and reported in the 2011 Accomplishment Report.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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Outcome #14

1. Outcome Measures

Number of youth passing test to become certified in Hair Braiding.

Not Reporting on this Outcome Measure

Outcome #15

1. Outcome Measures

Number of Youth volunteering for community service projects/activities, i.e. DC Reads tutoring and neighborhood cleanup/beautification efforts.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Other (Described in the explanation below.)

Brief Explanation

4H and Youth Development

1) The employee that assisted in implementing the 4-H Braiding Program left the University; unfortunately, she was unable to fit the program activities into her schedule to continue the program. This was a program without external funding. We will need to obtain additional funds to hire a new person to work with our youth.

2) Our efforts to support the youth in giving back to the community will involve a process of changing long held views and will take more time. We have made a positive start.

Scientist Years

Currently, there are no research projects under this program.

Community Resource and Economic Development

The faltering economy is the number one external factor affecting service delivery. The down turn in the economy has had a severe impact on the area of economic development. Competing Public programs have been curtailed, such as the development of affordable housing, a reduction in training, testing and licensing for workforce development, and private sector support for services for disadvantaged groups and youth.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)

- Time series (multiple points before and after program)

Evaluation Results

4 H and Youth Development

1) We have collected surveys, letters of support for our programs and held monthly meetings with our OMK State Team, a group of adult stakeholders, to review our progress. We have made some program adjustments to improve program delivery.

2) For both of our summer camp programs, we have received very positive reviews and letters from parents. The youth in the 4-H programs are becoming more aware of the options available to them in 4-H and we have greater participation in our school programs. We are making positive impacts with conflict resolution in the schools but we are just developing better means of measuring that success.

3) Youth reported enjoying the field trips away from the college as being their favorite experience with 4-H during the year. Secondly, they reported enjoying the topics they selected to learn about and third, they enjoyed making new friends and getting to know people better from their communities.

4) Military youth liked knowing others who are going through the same experiences they are confronted with daily. They liked making new friends and they enjoyed field trips as well.

Community Resource and Economic Development

CRED distributed and collected over 1,008 survey forms from stakeholders and participants, relative to programs in financial literacy, direct marketing through technology, basic home repair and energy tips and urban tourism. Both the ratings and comments were positive (3.4 and 3.6 respectively on a 4 point scale) about the usefulness of the programs content, presentation strategy, and follow up assistance. In addition, CRED programs recorded 762 certificates. These demonstrated both increased information and a change in knowledge and condition. In community economic development (The Taxicab Training Program) 659 individuals passed a proficiency exam and were able to operate taxicabs and limousines in the District of Columbia. Ten (10) participants completed the 10 part FDIC Money Smart Program, that qualified them to join the Capital Area Asset Building Corporation (CAAB), Inc. Individual Development Account Savings Program. Their savings are matched up to \$3,000.00 for the purpose of paying for education, starting a business or buying a home. (Due to the downturn in the economy, none of the 10 was able to purchase a home with government assistance) The 93 certificates distributed for basic home repair and energy efficiency were awarded to those who completed a five part series, which included monitoring their energy cost. Our energy efficiency monitor research showed that 100% participants reduced their cost by \$25.00 per month at a minimum. (Plan \$150.00 per month) DCMarket Maker, our web based resource that connects farmers, producers, distributors, food retailers and consumers has escalated to 68,121 hits for a six month period. This is a clear indication of the usefulness of our on/point marketing technology to review and secure markets for local farm fresh products.

Key Items of Evaluation

4H and Youth Development

1) More funding is needed to implement the DC Reads Program and illiteracy is a problem in the District of Columbia.

2) More space is needed for outdoor activities for youth from the District of Columbia.

3) More marketing is needed in the community about the 4-H program.