V(A). Planned Program (Summary)

1. Name of the Planned Program

Economic Prosperity of Productive and Sustainable Food and Fiber Systems

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
<th>%1862 Extension</th>
<th>%1890 Extension</th>
<th>%1862 Research</th>
<th>%1890 Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>102</td>
<td>Soil, Plant, Water, Nutrient Relationships</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>123</td>
<td>Management and Sustainability of Forest Resources</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>205</td>
<td>Plant Management Systems</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
<td>15%</td>
<td>10%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>311</td>
<td>Animal Diseases</td>
<td>5%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
<td>5%</td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>608</td>
<td>Community Resource Planning and Development</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>801</td>
<td>Individual and Family Resource Management</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

V(C). Planned Program (Inputs)

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

<table>
<thead>
<tr>
<th>Year: 2007</th>
<th>Extension</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1862</td>
<td>1890</td>
</tr>
<tr>
<td>Plan</td>
<td>40.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Actual</td>
<td>35.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Extension</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith-Lever 3b &amp; 3c</td>
<td>Hatch</td>
</tr>
<tr>
<td>1392238</td>
<td>1866122</td>
</tr>
<tr>
<td>1890 Extension</td>
<td>Evans-Allen</td>
</tr>
<tr>
<td>499788</td>
<td>553812</td>
</tr>
<tr>
<td>1862 Matching</td>
<td>1890 Matching</td>
</tr>
<tr>
<td>1392238</td>
<td>1866122</td>
</tr>
<tr>
<td>499788</td>
<td>553812</td>
</tr>
<tr>
<td>1862 All Other</td>
<td>1890 All Other</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Report Date 12/03/2009
V(D). Planned Program (Activity)

1. Brief description of the Activity

1. IPM

Crops: Diagnostic and training publications; Research results from alternative control studies; List of the personnel at UMD that are trained in sustainable agriculture for distribution to organic and sustainable grower groups; New diagnostic abilities; New pest management programs for mid-Atlantic area and the N.E. United States.

Green industry: Short course and training seminars for industry personnel; Electronic dissemination of IPM information; Conduct field trials to evaluate low risk pesticides, biological control releases and augmentation, and alternative to chemical control methods; Conduct research on methods that reduce use of highly or moderately toxic pesticides; Pesticide safety use certification; Research in weed control strategies and disease control using bio-rational and bio-pesticides; Provide Plant Pest and Pathogen Assay and Diagnostic Facilities; Master Gardeners receive basic and advanced training; Extension faculty develop curriculum, resources and products.

2. Community Resource Development

Web sites; Fact sheets; Posters; Tours; County and regional workshops; Grant monies; New marketing ventures; New farmers’ markets; Media releases

3. Biosecurity and Animal Health

In-service training programs, educational seminars and workshops, and training kits; Three regional in-service training programs for Extension & Research faculty (50-75 people); 50 training kits will be prepared for Extension and Research faculty (50-75 people); 5-10 educational seminars will be held for producers, allied industry personnel, and government workers (200 people).

4. Alternative Crops

Short course and training seminars for industry personnel; Conduct field trials to evaluate alternative crops; Evaluations for crop varieties, IPM, fertility, other production issues; Market investigation; 3 crop tours/twilight tours per year focusing on alternative crops and enterprises; Collaborate on 2 regional production and marketing conferences (MADMC, Future Harvest’s Farming for Profit and Stewardship Conference); Develop 5 organic crop enterprise budgets; Research will be conducted in the areas of high tunnel crop production, organic and ethnic vegetable production, and pumpkin production; Maryland-developed alternative crop/enterprise information will be available on the MCE web site;

5. Pasture Management

Variety trial data annual bulletins; Financial analysis: Annual Dairy Financial Analysis of pasture farms; Fact sheets 2 revised and 3 new printed fact sheets; Website for Maryland and other researched-based bulletins, fact sheets, presentation, and information; Seminars and workshops; Pasture walks; Individual farm consultations; Two revised and three new PowerPoint presentations; Three peer reviewed journal articles.

6. Family Financial Management

Work with Financial Security for Later Life and eXtension to identify and implement statewide educational needs; Facilitate Financial Security for Later Life and eXtension to partners and audiences; Conduct train-the-trainer programs such as Maryland Saves trainings, High School Financial Planning Program; Provide capacity building opportunities such as Personal Finance Seminar for Professionals for partners, educators, and volunteers.

2. Brief description of the target audience
1. IPM
   Crops: Crop scouts; Certified Crop Advisors; Chemical reps; Industry personnel; Extension faculty; Master Gardeners; Farmers.
   Green Industry: Arborist, landscape managers, professional ground managers, greenhouse growers, cut flower growers, homeowners, Master Gardeners; Agency personnel (MDA, MCE, USDA); Certified pesticide applicators in category III, IV, IV; Private pesticide applicators; Technicians; Undergraduate and Graduate students; General public (e.g. Master-gardeners); IPM consultants; Landscape architects; Community Gardeners; Builders and Developers; Municipalities; Federal, state & local agencies

2. Community Resource Development
   Southern MD Agricultural Development Commission; MARBIDCO; Chesapeake Fields; Garrett-Preston Rural Development Association; Rural Development Center at UMES; Local Agricultural Development Specialists; Planning and Zoning Boards; Farmers; Forest Landowners; General public. Marketing Maryland Agricultural Commodities.-Farmers; producers; growers; grain marketing clubs; farmers markets; local economic development offices; mid-Atlantic Direct Marketing Association.

   Farmers; youth; MDA; Agricultural industry; Small and Beginning farmers; Backyard livestock owners; Extension faculty.

4. Alternative Crops
   Traditional farmers, people new to agriculture community, small and part time business owners, land owners; Technicians; Undergraduate and Graduate students; General public; Landscape architects; Members of specialty production groups and associations; Markets (the direct consumer or potential buyer of alternative crops); traditional farmers; small, beginning farmers.

5. Pasture Management
   Individual landowners; agribusinesses; horse owners; dairy farmers; beef producers; sheep and goat producers; USDA conservationists.

6. Family Financial Management
   Families; volunteers; educators; high school students; community development corporations; financial institutions; State Attorney Generals Office; Department of Social Services.

V(E). Planned Program (Outputs)

1. Standard output measures

   Target for the number of persons (contacts) reached through direct and indirect contact methods

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct Contacts Adults</th>
<th>Indirect Contacts Adults</th>
<th>Direct Contacts Youth</th>
<th>Indirect Contacts Youth</th>
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<tr>
<td>Plan</td>
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<td>1600</td>
<td>750</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>54277</td>
<td>1000</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

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

   Patent Applications Submitted

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan:</td>
<td>1</td>
</tr>
<tr>
<td>2007:</td>
<td>7</td>
</tr>
</tbody>
</table>

   Patents listed
Economic Prosperity of Productive and Sustainable Food and Fiber Systems

Sling for growing strawberries in high tunnels.

Methods of Making and Using Nutritional Compostitions.

Genetically Engineered Newcastle Disease Virus as an Oncolytic Agent, and Methods of Using Same.

Genetic Polymorphisms Associated with Body Fat.

Process for Rapid Anaerobic Digestion of Biomass Using Microbes and the Production of Biofuels Therefrom.

Activation of the Ornithine-Urea Cycle in Ruminant Gut Tissues to Detoxify Ammonia and Increase Local Urea Re-Cycling to the Rumen for Microbial Protein Synthesis.

Production of Novel Castledisease Virus Strains from cDNAs and Improved Live Attenuated Newcastle Disease Vaccines.

3. Publications (Standard General Output Measure)

<table>
<thead>
<tr>
<th>Number of Peer Reviewed Publications</th>
<th>Extension</th>
<th>Research</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>2007</td>
<td>25</td>
<td>105</td>
</tr>
</tbody>
</table>

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

1. IPM: Fact sheets; short courses, field trials, curriculum, websites linked, grants awarded.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>65</td>
<td>69</td>
</tr>
</tbody>
</table>

Output #2

Output Measure

2. Community Resource Development: Publications; advisory committees, enterprises, relationships, laws, programs, curriculum

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>60</td>
<td>172</td>
</tr>
</tbody>
</table>

Output #3

Output Measure

3. Biosecurity and Animal Health: In-service training, training kits, seminars, publications, grants, presentations, websites linked.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>63</td>
<td>140</td>
</tr>
</tbody>
</table>

Output #4

Output Measure

4. Marketing Maryland Agriculture Commodities: Short courses, workshops, websites, fact sheets, grants, farmers markets, marketing plans

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>28</td>
<td>0</td>
</tr>
</tbody>
</table>

Output #5

Output Measure

5. Alternative Crops: Grants, in-service training, workshops, publications, field trials, new crops, enterprise budgets

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>32</td>
<td>35</td>
</tr>
</tbody>
</table>

Output #6

Output Measure

6. Pasture Management: Pasture walks, variety trials, in-service training, grants, publications, budgets, practices implemented, websites

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>60</td>
<td>57</td>
</tr>
</tbody>
</table>

Output #7

Output Measure

7. Family Financial Management: Workshops, seminars, publications, in-service training, volunteers, partnerships, new enterprises, grants.

<table>
<thead>
<tr>
<th>Year</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>48</td>
<td>118</td>
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</table>
### V(G). State Defined Outcomes

<table>
<thead>
<tr>
<th>O No.</th>
<th>Outcome Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. IPM: Number of: IPM scouts and producers that can identify threshold level; pest management programs; implementing research based recommendations; certification in Pesticide Safety; field trials.</td>
</tr>
<tr>
<td>2</td>
<td>2. Community Resource Development: Number of: business people, advisory groups, development agencies, rural leaders interested in developing ANR businesses and having access to knowledge.</td>
</tr>
<tr>
<td>3</td>
<td>3. Bio-security and Animal Health: Number of: educational seminars held for producers, allied industry personnel and government workers; training kits developed and distributed.</td>
</tr>
<tr>
<td>4</td>
<td>4. Marketing Maryland Agricultural Commodities: Number of: farm markets established; marketing plans developed; new cooperatives formed.</td>
</tr>
<tr>
<td>5</td>
<td>5. Alternative Crops: Number of: farmers showing an increased knowledge of alternative crops and enterprises; alternative crops being implemented; new businesses established.</td>
</tr>
<tr>
<td>6</td>
<td>6. Pasture Management: Number of: farmers adopting best management practices and increasing profitability; new variety trials; NRCS and SWCD personnel trained.</td>
</tr>
<tr>
<td>7</td>
<td>7. Family Financial Management: Number of: volunteers trained; new partnerships developed; new enterprises; people improving financial security.</td>
</tr>
<tr>
<td>8</td>
<td>Western Maryland Pasture-Based Meat Goat Performance Test: Number of programs, field trials and consultations.</td>
</tr>
</tbody>
</table>
1. Outcome Measures
   1. IPM: Number of IPM scouts and producers that can identify threshold level; pest management programs; implementing research based recommendations; certification in Pesticide Safety; field trails.

2. Associated Institution Types
   • 1862 Extension

3a. Outcome Type:
   Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3000</td>
<td>1436</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The greenhouse industry in Maryland is one of the fastest growing sections of the horticulture field. We have seen an increase of over 10 per cent over the last 2 years in the number of new greenhouse operations open in the state. Growers have expressed a strong need for current information on insect, disease and fertility problems with greenhouse crops.

What has been done

We developed a weekly IPM electronic IPM report that weekly goes out to 185 Maryland growers and growers from several east coast states. Growers activity participate providing input each week on what disease and insects problems are occur in their greenhouses. We publish diagnostic pictures and suggest IPM methods of control. The currently operating electronic IPM Alert System is based on integrating stakeholder participation using e-mail, electronic pictures, and the web to rapidly transfer information on pest activity and IPM information. This system provides an electronic means for sharing immediate alerts on insect and disease outbreaks, near real-time, precise lifecycle information, forecast, and other timely information between growers, IPM scouts, Extension professionals and researchers. Here is the breakdown of which states have growers receiving the electronic IPM report:

- Delaware 3
- Pennsylvania 76
- West Virginia - 1
- Virginia 5
- DC 2
- New Jersey 4
- New York 4
- Vermont 2
- Connecticut 2
- Maine 2
- New Hampshire 2
- Rhode Island 2

Results
An electronic survey was conducted in December of 2007 of all of the participants in the IPM Alert program. Here are some of the questions and impacts:

Questions and responses
1. Do the greenhouse reports help you to effectively identify pest insects, diseases, and or major weeds? 26 responded very much or much.
2. Do the greenhouse reports help you to diagnose plant problems? 25 responded very much or much importance.
3. As a result of the greenhouse reports are you selecting pesticides that are less toxic (ex. Caution vs. Warning or Danger label products)? 10 responded moderately modifying. 6 responded very much importance.
4. As a result of the greenhouse reports are you more likely to use alternative control measures (such as oils, soaps, bio-rationals, biologicals, or cultural practices) compared to conventional pesticides? 3 responded moderately modified, 10 responded very much modified.
5. Are the color photos helping you recognize plant damaging insects and diseases and major weeds? 26 responded much or very much important.
6. Do the weekly greenhouse reports help you when selecting materials to use for pest control? 12 responded much to very much, 7 reported moderately important.
7. If you are using the greenhouse reports in some special way let us know.

Responses
They help us to keep alert for problems other growers are currently experiencing. There may be issues we do not normally see and would not normally look specifically for. It is a constant learning tool that we really appreciate!

I photocopy and distribute to staff impacted by a certain report.

Plant clinic
Pass it through the newspaper.

I often use the information in the reports as part of the GMPRO weekly e-mail newsletter to make growers aware of insect/disease problems other growers are having.

Useful for teaching

Try to train employees in identification of pests and the damage they can cause.

Tech support for customers

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
<td>Plant Management Systems</td>
</tr>
<tr>
<td>216</td>
<td>Integrated Pest Management Systems</td>
</tr>
</tbody>
</table>

Outcome #2

1. Outcome Measures

2. Community Resource Development: Number of: business people, advisory groups, development agencies, rural leaders interested in developing ANR businesses and having access to knowledge.

2. Associated Institution Types

*1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>750</td>
<td>1572</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Rural Maryland is rapidly changing with increase pressure for development and a major influx of new residents. Maryland AGNR businesses are under pressure to diversify and explore alternative income options to assist their businesses become more competitive and profitable.

Local land use ordinances, at times create a barrier to new and innovative business ventures for the AGNR community. Research and educational programs need to be developed to assist local policy makers make wise land use decisions that will assist AGNR businesses become more profitable in the future.

**Note-The Marketing measures are consolidated into this measure for this year.**

What has been done

Maryland Cooperative Extension has expanded its role in this area, by hiring a new AGNR Marketing Specialist and creating the 'Framework' for a new center entitled, Maryland Rural Economic Development Center. This center pulls upon existing extension and University resources to provide assistance in business and market plan development along with intergenerational transfer of assests (Estate Planning). In the future, functions will expand into policy related analysis and community resource development topics such as leadership development for local communities.

For now, The Maryland Cooperative Extension Marketing Program supports for farm, food and forestry enterprises through professional assistance in marketing and business development plans and programs. The Regional Extension Specialist for Agriculture and Natural Resource (AGNR) Marketing is charged with enhancing the economic prosperity of producers and businesses by encouraging entrepreneurship, developing new AGNR value-added enterprises, and identifying markets, with a focus on local markets, including but not limited to: Farmers markets, farm stores, road side stands, pick-your-own, local produce sections of big box stores, consumer supported agriculture, restaurant sales, internet sales, small retail stores and home deliveries.

The Regional Extension Specialist for AGNR: Maryland Cooperative Extension Marketing services a state-wide audience of agricultural and natural resources based entrepreneurs ranging from 'new farmers' to the needs of maturing agricultural businesses. This Specialist also provides one-on-one client assistance as well as seminars and networking opportunities designed to enhance the economic viability of all Maryland agriculture and natural resources-based enterprises.

The Marketing Specialist will seek to develop strong working relationships with other county agriculture economic development specialist, the Department of Business and Economic Development (DBED), the Maryland & Resource Based Industry Corporation (MARBIDCO), the Maryland Department of Agriculture (MDA), and USDA-Rural Development.

Results
As a result of the establishment of the MD Rural Economic Development Center, several new programs have been developed:

1) Curbside Consulting

This program provides one-on-one consultation for business development and market planning in an open-discussion, non-threatening situation. People are often hesitant to discuss their business ideas or ask questions about business development in front of a crowd. This program facilitate their business assessment and resulting follow-up support by allowing them to explore their ideas with a business and marketing development specialist.

This program is delivered by a variety of outlets:

1. Clients calling the Specialist with questions or to request information
2. One day a month, determined by the county educator, with sign-up times within a county for scheduled meetings with interested clients. This county visit might also include a group marketing presentation and educational program.
3. The use of the Centra system to deliver consultation and support to counties that organize a sign-up day and schedule the consultation and/or marketing presentation electronically. Virtual office hours.

The Specialist has already provided one-on-one consultation on business assessment, business plan development, and marketing.

Phone support 4 clients 3 counties
Farm visits 5 clients 3 counties
Assistance to Agents 7 Agents 7 counties

Also provided one-on-one consultation and follow-up with three clients for the Maryland Agriculture and Resource-based Industries Development Corporation (MARBIDCO).

As a result, one specialty meat business has launched their initial marketing program. Another specialty foods producer has secured a line of credit to begin marketing their product.

Provided assistance in developing, writing and submitting two SARE Farmer-Grower grants for grant for $10,000 each.

Participated in two agricultural economic development project- (1) Baltimore County Future of Agriculture and Policy Initiative and (2) Frederick County Dairy farmers initiative with Dairy Maid Processor to bottle local brand of milk.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>608</td>
<td>Community Resource Planning and Development</td>
</tr>
<tr>
<td>604</td>
<td>Marketing and Distribution Practices</td>
</tr>
<tr>
<td>602</td>
<td>Business Management, Finance, and Taxation</td>
</tr>
<tr>
<td>123</td>
<td>Management and Sustainability of Forest Resources</td>
</tr>
</tbody>
</table>

Outcome #3

1. Outcome Measures

3. Bio-security and Animal Health: Number of: educational seminars held for producers, allied industry personnel and government workers; training kits developed and distributed.

2. Associated Institution Types

* 1862 Extension
* 1890 Research
3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>75</td>
<td>109</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Recent events, including terrorist attacks and natural disasters (tornados), have heightened awareness of the need for effective emergency prevention, management and recovery strategies. Maryland Cooperative Extension is recognized by Emergency Management, and other, agencies as an organization with capabilities that are needed in this effort. Extension has access to diagnostic lab capacity and personnel to identify potential threats, local agricultural experts in the field and the ability to assist youth and families in the aftermath of disaster. Funding is becoming available for projects that address these issues.
Poultry production accounts for approximately 70% of the total economic value of agriculture in the Delmarva area. A disease outbreak such as Avian Influenza (AI) or exotic Newcastle disease in Delmarva's poultry would economically impact poultry growers and processors, and in the case of H5 or H7 AI, would present potential human health risks. In addition to commercial poultry production, there are a large number small non-commercial flocks raised in Maryland. Unlike commercial poultry growers, these individuals do not have access to biosecurity education programs that are provided by the poultry companies to their contract growers. A poor biosecurity program by these small flock producers could potentially place all Maryland poultry farms at risk for a disease outbreak.

What has been done
Program Activities: One of the key roles of the Center for Agrosecurity and Emergency Management is to bring together faculty, staff and partners in a collaborative environment to work together on issues including biosecurity, all-hazards emergency preparedness, mitigation, response and recovery for the agricultural community and the community as a whole. Outreach, education and communication are some of the most challenging aspects of emergency management and are areas in which Cooperative Extension excels. Funding is available to make this work possible, but our organization must have the contacts and relationships required to access them. The Center has helped to create an environment for Extension to demonstrate it's capacity and create, as well as compete for, new resources.

Results
The Center worked with the Governor's Office of Homeland Security in the previous Administration and competed with other agencies to obtain 100,000 dollars in law enforcement funding for agricultural outreach. The Department of Agriculture has decided to use these funds for other purposes, but they would not have been available for agriculture without the work of the Center.

A Poultry subcommittee of the Disaster Focus Team has come together to work on several projects. --They obtained 15,000 dollars in Enhancement funds from the College to begin an eXtension Community of Practice on Avian Influenza. These funds have been leveraged to obtain 16,500 dollars in funding and 10,000 dollars in in-kind support from the Extension Disaster Education Network (EDEN) to continue this work. Sustainable funding for the project, in collaboration with eXtension, will be sought in the coming year. --The group assisted the new Poultry Specialist in obtaining a 52,150 dollars CSREES Special Needs Grant to work on a Small Flock Biosecurity Education project and will be assisting her in carrying out this work. Small flocks have been identified as a serious threat, that could harbor disease that could affect the commercial industry. --Collaboration with the Center (and the Poultry subcommittee) enabled South Dakota State University to obtain 57,000 dollars in CSREES funding for an EDEN Avian Influenza Preparedness and Response System project. Maryland is a partner and is contributing to this project.

The Center collaborated with Penn State to obtain 25,000 dollars in CSREES grant funding to co-sponsor the EDEN Animal Agrosecurity Conference, to explore in role of Extension and other agencies in emergency management. --At the Conference the Center Co-Coordinator floated the concept of working together as a Northeast region on a grant projects and discussed developing Continuity of Operations educational materials and workbooks for agricultural producers. Penn State collaborated with Maryland, New Jersey, New York and Vermont and received 74,917 dollars in CSREES Special Needs Funding to develop the Ready Ag Disaster and Defense Preparedness Project. Maryland will be contributing to the Core program and will develop the Poultry section (in collaboration with the Poultry subcommittee).

The Center for Agrosecurity and Emergency Management was instrumental in obtaining 340,567 dollars in grant funding and 10,000 dollars in in-kind services for Agrosecurity work for the state of Maryland and beyond. MCE has also developed a Biosecurity Educational Program for Small Poultry Flock Owners. Some impacts have already been accomplished, while others will be accomplished in early 2008.

* A grant to support this program was funded by USDA CSREES.
* A minimum of 3 regional workshops for approximately 100-150 small flock producers, poultry and non-poultry extension professionals and volunteers will be conducted.
* A biosecurity/flock health and management fact sheet and manual will be distributed in conjunction with regional workshops.
* A biosecurity resource website targeted toward the issues of small flock owners will be designed.
* A portion of this program can be implemented into the eXtension Community of Practice for Avian Influenza.

### 4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>311</td>
<td>Animal Diseases</td>
</tr>
</tbody>
</table>

### Outcome #4

#### 1. Outcome Measures

4. Marketing Maryland Agricultural Commodities: Number of: farm markets established; marketing plans developed; new cooperatives formed.

#### 2. Associated Institution Types

• 1862 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>600</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 3c. Qualitative Outcome or Impact Statement
Economic Prosperity of Productive and Sustainable Food and Fiber Systems

**Issue (Who cares and Why)**

***Note, this measure is consolidated into the CRD program as noted in earlier part of report***

What has been done

**Results**

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>608</td>
<td>Community Resource Planning and Development</td>
</tr>
</tbody>
</table>

**Outcome #5**

1. **Outcome Measures**

   5. Alternative Crops: Number of: farmers showing an increased knowledge of alternative crops and enterprises; alternative crops being implemented; new businesses established.

2. **Associated Institution Types**

   • 1862 Extension
   • 1890 Research

3a. **Outcome Type:**

   Change in Knowledge Outcome Measure

3b. **Quantitative Outcome**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>300</td>
<td>857</td>
</tr>
</tbody>
</table>

3c. **Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The majority of farms in St. Mary's County County, Maryland are considered small farms, with the average farm size of 62 acres and gross income of $33,906.00. The majority of these farmers relied on tobacco as their chief source of income. In the year 2000, the state of Maryland initiated a tobacco buyout program which resulted in 86% of eligible Maryland producers exiting the tobacco industry. In addition, the general population base has increased by 37% in the last 15 years. The rural landscape is irrevocably changing, leaving new, beginning and transitioning small farmers searching for enterprises to sustain their small farms. Due to the increased demand for locally produced wine and wine grapes in Maryland, transitioning farmers expressed interest in raising grapes; however numerous questions arose as to the feasibility of the crop including growing techniques, profitability, risk assessment, labor requirements, and cash flow projections. An extension program was created to educate small farmers regarding the potential for grape production. A research vineyard was established to evaluate varieties and as a teaching tool. Numerous education events were conducted including twilight tours, workshops, on-farm demonstrations and individual site consultations. The extension program collaborated with the regional Agricultural Development Commission to develop a matching grant program for purchase of grape vines. Over 600 new or transitioning small farmers received information on grape growing. A grape growing association has been formed and 29 operators participated in the grape grant program with 12 new vineyards planted or planned for 2007-08. When asked to evaluate the overall quality of a 1 day Beginning Grower Workshop attended by 85 small farmers on a scale of 1-10 (1=not worth my time, 10-excellent meeting), participants responded with an average rating of 9.33. In addition, 98.3% of the respondents indicated a 4 or 5 rating using a 1-5 Likert scale when asked to rate the specific topics presented. Comments reported included 'the entire program was extremely helpful and educational,' and, 'growing grapes is a very intensive process and involves many issues that I didn't even think of.'

What has been done
A wine grape research vineyard was established at the Upper Marlboro Experiment Station. The vineyard was comprised of 27 varieties. A volunteer vineyard team consisting of interested area producers, extension educators and specialists, and other interested organizations was formed to aid the care and management of the vineyard. The research vineyard also served as an excellent teaching and outreach tool as volunteers became involved in viticultural practices in the vineyard.

A joint collaboration was formed with the Southern Maryland Agricultural Commission to offer a matching grant program for purchase of vines. Extension developed a set of criterion for evaluation of each applicant, evaluated each applicant, conducted site visits, organized the vine order and provided the educational training component. The program helped to initiate and continues to support a regional Southern Maryland Grape Growers and Winery Association. This association works to promote the grape and wine industry in the region and serves as a networking and teaching opportunity.

Hosted and taught educational activities:
Twilight Tour (3), 1 day Beginning Grape Growers Workshop, Farm Walking Tours (5), 2 vineyard tours for policy makers,
Field visits and individual on-site consultations, and local/regional conferences.

Teaching Methods:
Numerous teaching methods were employed including conferences, workshops, twilight tours, demonstration tours, individual consultations, and field visits. New growers first received a 'getting started' list of with suggested references and literature to review. New growers were invited to participate in the work at the research vineyard as part of the volunteer vineyard team, where they received hands-on training and experience for the amount and type of worked involved. Program offerings are advertised through newsletters, newspapers, flyers and an email list.

Farm walking tours of new area vineyards enabled growers to discuss issues regarding grape growing and to view techniques and varieties being used by other growers. New growers also received a site visit if requested to determine their site suitability.

Results
The Extension program resulted on over 600 new or potential small growers receiving information regarding this new crop. Attendees not only received information but also hands-on training that is essential to beginning a vineyard. The matching grant program attracted 28 applicants over 2 years, of which 15 were approved. 12 of the 15 chose to plant vines. Many of the program participants were able to more effectively evaluate the work and dedication required to grow grapes after attending the MCE programs and decided against planting new vineyards. The growers were able to select appropriate varieties and rootstocks with the Extension assistance. The research vineyard provided essential information to grower's on which variety to select (or not select) and growing techniques to use. The program also was successful in dispelling any 'romanticized' notion of grape growing and ensured new growers understood the labor requirements and financial risks involved. As a result of workshops and on-farm tours, local policy makers are more informed of the needs of new grape growers and have dedicated $500,000.00 in funds for the development of a new local winery cooperative.

Impact Statement:
The Beginning grape growing program resulted in 26 acres of new grape production in the region, with interest in more in future years. Over 600 new or potential growers received information on grape production through a variety of formal and non-formal teaching methods. New growers have the information need to start a vineyard including for variety selection, vineyard establishment, and pest management. The Southern Maryland Grape Growers and Winery Association is actively meeting and is in the process of creating a winery cooperative for members.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
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</thead>
<tbody>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
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<tr>
<td>123</td>
<td>Management and Sustainability of Forest Resources</td>
</tr>
</tbody>
</table>

Outcome #6

1. Outcome Measures

6. Pasture Management: Number of: farmers adopting best management practices and increasing profitability; new variety trails; NRCS and SWCD personnel trained.

2. Associated Institution Types

*1862 Extension
3a. Outcome Type:  
Change in Action Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1500</td>
<td>1223</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**

Nearly one third of the state's milk supply is from Washington County in addition we rank third in beef cattle and sixth in sheep. Our producers strive to produce a high-quality product in an ever increasing competitive market. Urban sprawl leads to high land values placing added pressures for a decreasing farmland base, increase traffic on county roads, and increased scrutiny on environmental issues such as water and air quality. To compete with the large farms being constructed in the mid-west and west, our farmers must become efficient in other ways - reduced labor cost, reduced feed cost and increased revenues from value-added products

**What has been done**

Organized and taught three county dairy and livestock pasture walks. Cooperated with S. Fultz to establish a MD Pasture Walk schedule to distribute to Educators in MD, WV and PA and as well as post on county website.
Organized and taught six management workshops where forage/pasture management was the sole topic or an integrated topic. Utilized results of applied research and farm demonstrations to prepare teaching materials for seminars, pasture walks, farm consultations, newsletter articles, and personal column.

Continued work on the cool season perennial grass, annual ryegrass, and Italian ryegrass variety plots that were established September 2006 at WMREC to compare yields, persistence, sward density, disease resistance and potential livestock preferences of grass species and varieties

**Results**

Eighty dairy and livestock producers from the Tri-State area participated in pasture walks through which they learned improved management techniques for selecting and implementing alternatives in forage production and feed management systems. Two farms have entered into the grant funded program to convert a total of 120 acres of crop land into pasture. Each farm was provided with seeding recommendations and both have planted their acreage and anticipate pasturing it in the spring of 2008. I have consulted with each in reference to paddock layout and will continue to do so as the management system evolves. I will also work with each producer to host a pasture walk in 2008 in order to extend our efforts.

In addition fourteen small and part-time farmers learned new pasture management techniques through an onsite pasture management workshop at the WMREC grass variety plots. Evaluations indicated an increase in knowledge of identifying different grass species. I also have made three farm consultation visit as a result of attending the seminar. These resulted in producers renovating their pastures which will provide additional forage and reduce impact on the environment by mitigating run off.

Additionally, seventy-six small and part-time farmers from four states learned new forage/pasture management techniques as a part of five small ruminant workshops. Evaluations indicated an increase in knowledge of integrating pasture management into their feeding programs.

Finally, fourteen operations requested on site visits where their pastures were evaluated and recommendations for improvement made. Upon follow up, all producers indicated renovating their pastures based on the outcome of the site visit.

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
<td>Plant Management Systems</td>
</tr>
<tr>
<td>102</td>
<td>Soil, Plant, Water, Nutrient Relationships</td>
</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
</tbody>
</table>

Outcome #7

1. Outcome Measures
7. Family Financial Management: Number of: volunteers trained; new partnerships developed; new enterprises; people improving financial security.

2. Associated Institution Types
   • 1862 Extension
   • 1890 Extension

3a. Outcome Type:
    Change in Action Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
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<tbody>
<tr>
<td>2007</td>
<td>400</td>
<td>748</td>
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</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Many individuals and families in the United States are experiencing financial challenges. Evidence includes low financial literacy, consumer indebtedness such as high credit card debts ($9,312 in 2004), negative savings rate (-0.5% in 2005), low financial assets (only 23% of households have 3 months of household income for emergency funds), inappropriate health insurance coverage (40 millions are uninsured), insufficient retirement preparation, and high bankruptcy filings (1.2 to 2.1 millions in the past 5 years).

What has been done

In 2007, The Maryland Saves 'Roll in the Dough' Saving Campaign, which ran from February 25 through March 10 to promote saving habits with a lucky drawing for participating savers, announced its results today. More than 190 locations and branches of the eight local financial institutions across Maryland participated in the campaign. Eight Maryland financial institutions including 1st Mariner Bank, Aberdeen Proving Ground Federal Credit Union, BB&T, The Columbia Bank, The Harbor Bank of Maryland, M&T Bank and Municipal Employees Credit Union joined together to promote the 'Roll in the Dough' program.

Results

Total number of participants: 748; Total number of people joining Maryland Saves during he campaign: 334; Total number of new saving-type account opened: 176; Total amount saved (added deposit): $2,075,449.45

4. Associated Knowledge Areas

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>801</td>
<td>Individual and Family Resource Management</td>
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</tbody>
</table>

Outcome #8

1. Outcome Measures
   Western Maryland Pasture-Based Meat Goat Performance Test: Number of programs, field trails and consultations.

2. Associated Institution Types
   • 1862 Extension

3a. Outcome Type:
   Change in Knowledge Outcome Measure

3b. Quantitative Outcome

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantitative Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>(No Data Entered)</td>
<td>384</td>
</tr>
</tbody>
</table>

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Genetic improvement is vital to the success of any agricultural industry, yet the meat goat industry lags behind other animal industries in the use of performance data and other genetic technologies. A central performance test is where animals from different herds are brought to one central location where performance is recorded. The rationale is that observed differences are more likely due to genetic differences, which will be passed onto offspring, rather than environmental differences, which will not be passed onto offspring. The goal of a central performance test is to identify genetic differences among animals.

**What has been done**

Each year, up to 50 male goats are consigned to the Western Maryland Meat Goat Pasture-Based Performance Test. While on the test, the goats are evaluated for growth performance, carcass merit, and parasite resistance. The FAMACHA system is used to monitor and control internal parasites in the goats. The top performing goats are sold via private treaty.

**Results**

The Western Maryland Pasture-Based Meat Goat Performance Test is only one of three pastured-based performance tests for small ruminants in the U.S. It is one of three tests sanctioned by the American Kiko Goat Association, which emphasizes performance to its members. As a result of the Maryland test, a pasture-based meat goat test was started by Oklahoma State University in 2007. Each year, 35-50 goats complete the test. Consigners have represented 7 states. The FAMACHA system has proven to be an effective method for monitoring and controlling internal parasites in goats. The results of the test are shared at scientific meetings.

4. **Associated Knowledge Areas**

<table>
<thead>
<tr>
<th>KA Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
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</tr>
<tr>
<td>601</td>
<td>Economics of Agricultural Production and Farm Management</td>
</tr>
<tr>
<td>311</td>
<td>Animal Diseases</td>
</tr>
</tbody>
</table>

V(H). Planned Program (External Factors)

**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Urban sprawl)

**Brief Explanation**

Most goals were met or exceeded. However, due to the newly established MD Rural Economic Development Center within MCE, it was decided to consolidate the CRD and Marketing reporting functions within this annual report.

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

1. **Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Other (Listening sessions)

**Evaluation Results**
MCE is in the process of hiring a new evaluation specialist to assist in evaluating overall program impacts statewide. For now, individual program impacts are captured via evaluations during programs or as follow-up to program events. Basically pre and post tests and 1-2 year follow-up surveys to measure behavioral changes.

Family Financial Management:

The annual Personal Finance Seminar took place over a 3-day period in May 2007 for over 100 financial professionals. An end-of-seminar evaluation was conducted at the end of training. Participants found the training was worth attending (N=4.93) on a Likert scale of 5= yes, very much; 1= no, not at all. All respondents (100%) felt that the training dealt with important needs for them personally, 100% for them professionally, and 100% for their clientele. Most of participants (88%) responded that they would personally use the information from training and 83% responded that they will use the information to make changes in the way to counsel and educate their customers/clients. Behavioral changes include set financial goals, develop a net worth statement, develop a budget, organize records, reduce debt, increase savings, improve insurance coverage, and others.

Key Items of Evaluation