Department of

Agricultural Economics and Rural Sociology

Strategic Plan 2008-2013

July 1, 2008 to June 30, 2013

Submitted to the College of Agricultural Sciences, March 2009

PENNSTATE

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Executive Summary

Considerable achievement was made under the 2005-2008 plan, as summarized below. As the four main goals remain relevant, and we will continue to place emphasis on those goals. A new goal has been added, indicating our commitment to international activities in support of the university goal to realize its potential as a global university. Our new strategic plan identifies many areas of opportunity for our research, resident education and extension education programs. These opportunities center around the CAS Strategic Initiatives. Our 2008-2013 plan describes our view of the importance of these initiatives, and our department's expected contributions over the next five years.

Strategic Challenges and Strategic Advantages

Challenges exist in the three functional areas of resident education, extension and research. The main challenge for each area is to meet increasing demand with reduced resources.

Our numbers of undergraduate majors and enrollment in our undergraduate courses continue to grow. Tenure-line faculty will not increase sufficiently to meet this growth with historic faculty teaching levels. Decisions will have to be made about how to offer these courses, either in larger sections with different methods, or with more sections, and about faculty teaching loads. Maintaining graduate course offerings will need to be considered in these decisions.

The Agribusiness Management major, in particular, has lost faculty teaching resources that will not be filled in the short run. Three classes already are taught by part-time instructors. The CED undergraduate major is growing rapidly. Teaching resources will be stretched, as two on-line courses will need to be offered in residence as enrollment grows, and another course currently is taught by a part-time instructor. Another challenge for both majors is that each was designed to offer students hands-on, interactive classroom experiences, particularly in upper division courses. If class sizes continue to increase, this goal may have to be reconsidered.

The main challenge for the AEREC and R SOC graduate programs is to grow the incoming cohorts. The primary barrier to doing this is funding for graduate assistantships. Increasing the cohort size will take a considerable increase in externally-generated funds, and a commitment by the faculty to do so. A particular challenge for the AEREC program is to grow the pool of domestic applicants. A challenge for the R SOC graduate program is to maintain the graduate offerings given the increased undergraduate teaching commitments to the CED undergraduate major.

As a new and important strategic opportunity, AERS developed the MPS in Community and Economic Development (CEDEV). Since going completely online 18 months ago, CEDEV has

grown from 10 to almost 50 students in the MPS program, with another fifty in the certificate program. Growth potential for the program—both the MPS and the postbaccalaureate certificate—seems strong. This graduate program draws upon the traditional strength in AERS in community and economic development at a time when faculty resources in this area are declining. The challenge here is increasing participation among tenure-track faculty and managing growth to maintain and enhance the quality of the course offerings and the mentoring experiences students receive.

Demand for extension education is increasing in emerging areas and remains strong in traditional areas, while faculty extension resources are declining. The faculty are well-positioned and committed to meeting emerging demands, but decisions will need to be made about areas to de-emphasize.

New research opportunities will present themselves as society confronts new challenges. Many of the greatest opportunities will be in areas demanding multidisciplinary research efforts and teams. Examples are entrepreneurship, energy, land use, sustainable agricultural technologies, water and the environment, climate change, risk management, immigration, diet and health, and international development. Our experience and expertise in each of these areas will allow us to make substantive and visible contributions to such efforts. We will need to seek out and establish research relationships with other departments and colleges at Penn State and other universities to take full advantage of these opportunities.

Mission, Core Values and Vision

Mission Statement

Our departmental mission is to create and disseminate knowledge that enhances the well being of individuals, families and communities in Pennsylvania, the nation and worldwide.

To this end, we

1. Prepare students to lead successful careers and fulfilling lives through a commitment to learning and academic achievement;
2. Conduct exemplary basic and applied economic, sociological, and interdisciplinary research;
3. Communicate with diverse stakeholders about their needs and interests;
4. Contribute to public decision making on key economic and social issues related to the food and agricultural system, environment and natural resources, and community and economic development.

Shared Values

As members of this department, we share common goals of:

- A work environment that nurtures professional and personal growth and satisfaction in our employment;
- Increasing departmental diversity, multicultural understanding, and cross-cultural competence;
- Teamwork, interdisciplinary collaboration, and cooperation;
- Respect for each other as individuals and colleagues;
- Excellence in our professional endeavors;
- Willingness to embrace change and respond to emerging issues;
- Openness in the sharing of ideas and viewpoints, and shared decision making.

We share an obligation to support our common efforts to achieve these goals. As philosophical differences are expected in a vibrant academic environment, we share a commitment to celebrate the right of each member of our department to express different perspectives and philosophies.

Each department member will actively seek to make these core principles the basis of intradepartmental personal, social and professional relationships.

Vision Statement

Our departmental vision is increased university, state, national and international visibility and recognition for excellence, relevance and impact in research, teaching, extension and outreach.

Achievements Under the 2005-2008 Plan

GOAL A. INCREASE ENROLLMENT AND ENHANCE STUDENT SUCCESS

Undergraduate Programs

A main step toward achieving this goal was the hire of a Recruiting and Internship Coordinator with Department funds. This person was hired in June, 2006.

The number of AG BM majors grew and remains strong, with the average number in the past five years 67% greater than in the previous five years (See Table 4, Appendix A). Enrollments in AG BM courses are consistently at capacity, with new sections having been added to accommodate student demand.

The new CED major attracted approximately 60 majors in its first four semesters of existence, enrollments in the introductory courses are at capacity. Enrollments in the upper division courses are increasing as the cohort moves through the program.

Strategic Actions Undertaken

1. *Undertake a set of targeted initiatives designed to enhance enrollments in agribusiness management, while improving program quality of the major.*

To achieve this, we will:

- *Develop, in collaboration with the college, a set of 'hot' recruitment materials*. A new set of recruiting materials was developed in concert with the College's new marketing effort. Web sites have been re-designed.
- *Expand efforts to recruit underrepresented students and broaden our audience.* Some progress was made, but this effort needs to be enhanced.
- *Establish a new scholarship fundraising effort with alumni, coupled with a greater involvement of alumni in the mentoring of agribusiness students.* The endowment funds for certain scholarships have increased through donations, and three new scholarships were created for future activation.

  An Affiliate Program Group (APG) of the Department of Agricultural Economics and Rural Sociology was created within the College and Penn State Alumni Associations structures. The APG has met three times per year to discuss and develop activities. Projects undertaken are (1) a collaboration with the CAS alumni-student mentoring program, and (2) an advising program between alumni and students on interviewing skills and resume writing, (3) establishment of an alumni newsletter.
- *Connect students to agribusinesses and agribusiness leaders.* This effort has begun through the APG mentoring and advising programs.
- *Undertake a thorough review of the curriculum to ensure that the new program is meeting the needs of students and industry stakeholders*. A proposal for a 2-year in-depth review of the agribusiness management curriculum - with in-depth student, stakeholder and faculty input to this process - was funded by the Schreyer Institute. This study has not been completed.

Offer new dynamic learning experiences. A Costa Rica study tour (a food and fiber system initiative, jointly with Food Science and the CAS Office of International Agricultural Programs was established and is conducted every other year. In addition, an environment-oriented study tour in Costa Rica was established in collaboration with the new CED undergraduate major, the ERM major and the CAS Office of International Agricultural Programs, also offered every other year. A collaborative program with Copenhagen Business School and a student exchange program through a FIPSE grant also were carried out. A study tour to China was conducted in May 2008, with plans to make this an every other-year activity. A new undergraduate study program with the University of Reading, UK was established, with the first student taking part in Spring 2009, and another planning to participate in Spring 2010. A videoconference-based course (Global Seminar) was established through global partnering, and is now a formal course in the CED major..

2. *Introduce and aggressively support a new undergraduate degree program in Community, Environment and Development.*

To achieve this, we will:

- *Seek approval of the CED major.* This program was formally approved in Summer 2007, and enrolled approximately 60 majors by spring 2009. A total of 6 new courses are being offered as part of this major, and all of the courses have now been taught at least once. CED course offerings are attracting full enrollments, and attracting high-quality undergraduate students to CED and the college, including an increasing number of Schreyer Honors College students.
- *Initiate a significant concerted and broad-based recruitment effort by the department and college to attract students to the new major.* This effort was undertaken, and is now part of the Department's and CAS's recruiting efforts. New recruiting materials and a web site were developed.
- *Partner with others to provide students with research and outreach experiences.* Collaboration has been established between our undergraduate programs and our faculty with ECD extension in CAS, ENRI, the Office of International Agricultural Programs and the CAS Metro Center. These efforts are on going.
- *Develop new and highly attractive and visible experiences for undergraduate students in each of the CED options*. An international environmental study experience at Earth University in Costa Rica was established and carried out in 2007, and is scheduled (and fully subscribed) for 2009. A study tour to Zamorano University in Honduras is planned for 2010.

Graduate Programs

Strategic Actions Undertaken

Community and Economic Development (CEDEV)

1. *Evaluate the success of the CEDEV program in its current form, to make a decision regarding resource allocation toward developing the professional on-line M.S., and if this is pursued, determine the future of the resident M.S. program.*

Following evaluation of enrollments and identified audience for the CEDEV program, a proposal for a totally online Master of Professional Studies (MPS) program in CEDEV was submitted to the Graduate School and approved to begin in Fall Semester 2007. Students are no longer accepted into the Master of Science degree. The result has been an increase in enrollment from fewer than 10 students in the M.S. program to 49 students accepted into the MPS between Fall 2007 and Spring 2009. Roughly 50 students have taken at least one course in the Postbaccalaureate CEDEV Certificate program since Fall 2006. Approximately 100 students currently are actively participating in the CEDEV programs.

Establishing the on-line MPS program required that four courses already available online be

updated (as they had been developed several years earlier) and the development and transition of two additional courses to the online instructional environment. The support of the College of Agricultural Sciences Instructional Design Team was essential to the transition of CEDEV from a blended program to a fully online professional Master's degree. Continued support from this unit is essential to the continued success of the CEDEV program.
A memorandum of understanding with CEDEV, CAS, World Campus and University of York in the United Kingdom was finalized for CEDEV and the Program Policy and Management online Graduate program at University of York to share elective courses. This arrangement will be implemented in Fall 2009.

A Summer Institute designed to provide the on-line students and all CEDEV alumni with further learning and networking experiences in residence at Penn State was created and first offered in Summer 2008. The annual CEDEV Summer Institute addresses new issues each year and is open to current CEDEV students, CEDEV alumni, and Economic and Community Development professionals and faculty. As more experience is gained in organizing the program, it will be opened to a broader set of community and economic development professionals.

Due to the increased interest and enrollment in CEDEV, a staff assistant was hired, using funds from the CEDEV program, to assist the graduate program coordinator, enhance communication with students in the program and those applying, enhance the web presence, support the Summer Institute and increase recruiting efforts.

Revenues generated by the CEDEV program are now sufficient to fully support needed staff and teaching personnel, and other associated expenses.

2. *Complete the revision of the AEREC curriculum and seek approval from the AERS faculty and the Graduate School.*

The AERS faculty have approved the revision plan. The next steps will be to develop one-to-three new courses, offer them as temporary 597 courses, and then draft a formal Program Proposal that can be submitted to the Graduate School and the Faculty Senate.

3. *The number and types of Rural Sociology course offerings will be assessed in the context of subject matter developments and student needs.*

This revision was completed.

4. *More aggressively recruit potential students, particularly racial and ethnic minority students, for both the AEREC and RSOC programs. We will also target domestic students in particular for AEREC, including domestic racial and ethnic minorities.*

In collaboration with the College, we successfully recruited and funded students under the Bunton-Waller program. This remains a goal in the 2008-2013 plan.

A recruiting effort targeted at undergraduate colleges in Pennsylvania is being developed, based on a program developed the graduate officer in Agricultural Economics at Michigan State University, and presented at an AE&RS seminar.

5. *Further increase the share of student funding on grants and contracts in all AERS graduate programs. Provide more support for graduate student participation in professional meetings.*

Progress was made on increased external funding for graduate students, and this remains as a major goal. Department funds were allocated to graduate students for professional meeting attendance. Maintaining and increasing this funding will depend on the budget situation.

6. *Offer teaching opportunities to improve marketability of program graduates in RSOC and AEREC.*

This was a matter of continuing discussion during the 2005-2008 plan period. Such opportunities were provided in AGBM 106, CED 152, CED 230, Global Seminar, R SOC 011, R SOC 420, AG 400 and AgEco/RSoc 134. Graduate students have TA'ed with these courses, and in some cases, served as sole instructors (after having had a TA experience with the course). Some students have had success by teaching undergraduate courses outside the department, notably in the Sociology Department. An increasing number of our graduate students are also completing the Penn State Graduate School Teaching Certificate program. Improvements in this area remain a goal.

GOAL B. ENHANCE KNOWLEDGE DISCOVERY AND TRANSLATION

Measurable Targets

- Increase extramural funding totals at a rate of 5 percent per year.
- Increase number of faculty research and extension publications.
- Develop new forums, partnerships and publication channels.
- Develop new opportunities for shared experience, travel, etc.
- Increase number of adjunct faculty appointments.

Strategies and Actions

1. *Create and promote areas of excellence (i.e., themes).*

The department engaged in several efforts to support the three main themes identified in the CAS 2005-2008 Strategic Plan – Food and Fiber System, Ecosystem, Socioeconomic System. These efforts were in all the functional areas of resident education, extension education and research.

Food and Fiber System: The CAS 2005-5008 Plan emphasized opportunities in biobased resources and renewable fuels. AE&RS activities in this area included:

Research on the consistency of biofuel policies in the EU and the US; the impact of carbon taxes and revenue recycling in PA using a CGE model; a spatially explicit corn-for-ethanol supply model; impacts of climate change on PA, including an assessment of the impacts on the energy sector, including biofuels from ag and forests; developing a CGE model for analyzing the economic impacts of climate change in PA; biodiesel from algae; comparisons of biofuels policies in the U.S., Japan and China.

Other energy-related research on private ordering and public energy innovation policy; renewable to alternative: waste coal, the Pennsylvania Alternative Energy Portfolio Standard; communities impacted by mountaintop removal; energy related impacts of Marcellus Shale gas extraction; conversion from energy and resource dependence to amenity development; energy use, carbon emissions, and technological change; the impacts of uncertain energy-related R&D on optimal policies to mitigate global carbon emissions.

Landscape change and land use, including alternative policies; options for balancing economic, social, environmental sustainability; forest systems; ecosystem service impacts; demographic change and landscapes, as examples.

Entrepreneurship, including supply and value chains, social/economic networks, youth entrepreneurship, local/regional food systems

Immigration, including new gateways, agricultural/green industry workforce, assimilation, entrepreneurship among immigrant populations

Extension education programs included education on the economics of ethanol and biodiesel production and its impact on grain prices and overall crop markets; economic, social, community, environmental and water resource impacts of natural gas extraction from the Marcellus Shale resource.

Resident education activities included teaching a course on energy economics for the EBF major in the College of Earth and Mineral Sciences; modules in undergraduate courses on climate change and energy-related policies to reduce greenhouse gas emissions; environmental impacts of energy development from a regulatory perspective; the land use planning aspects of alternative energy development; wind energy as a specific alternative energy activity with land use implications.

2. *Integrate research more thoroughly with resident and extension education.*

To achieve this, we will:

- Increase translational research by assembling and rewarding productive interdisciplinary teams of research and extension professionals.

A research and extension team carried out a Brooking Institution-funded project on "Strengthening rural Pennsylvania: An Integrated Approach to a Prosperous Commonwealth".

A research and extension team formed to carry out a broad research and educational program on the Marcellus Shale natural gas development.

- Increase undergraduate student experiences in research programs and extension/outreach activities (such as the 2006 environmental study tour in Costa Rica).

  Two undergraduate study experiences were instituted in Costa Rica for agribusiness and the environment/development majors. These experiences will occur every other year.

  Undergraduate students were included on research/extension projects through the Summer Research Opportunity Program (SROP).

- Provide opportunities for graduate students to become involved in extension/outreach activities.

  Rural Sociology graduate students assisted with survey research and case study fieldwork investigating the opportunities and barriers for farm-to-school initiatives in Pennsylvania through a Center for Rural Pennsylvania grant. They further participated in the translation of those findings within a "How-To Guidebook" targeted to Pennsylvania schools, communities and farmers and distributed by the CRP. Dual-degree students in Rural Sociology and Demography assisted with the assembly of information on demographic trends in Pennsylvania for presentation to Extension audiences.

- Increase participation in the CAS and consortia seed grant programs by developing research proposals that integrate resident and extension education into research.

Seed Grant Proposals Funded

Fiscal Year	No.
2005/06	2
2006/07	1
2007/08	3
2008/09	1

- Develop new publication outlets targeted toward key constituents, including policy makers and industry.

3. *Link with other departments, colleges, institutes and consortia, agencies, and universities nationally and internationally to solve problems.*

To achieve this, we will:

- Encourage, facilitate and reward research, extension, and resident education programs that involve collaborations with other colleges and universities.

  The Global Seminar course continued to involve global partners in developed and developing countries. Faculty in the department also initiated the T-Zone initiative which is collaborative with Cornell.

- Initiate and aggressively participate in co-funded positions with the consortia and institutes at Penn State. We will remain open to hiring opportunities that present themselves, and will actively pursue those positions that fit with our identified growth areas, areas of excellence, and future strategic hiring goals.

  The department successfully competed for an Assistant Professor Agricultural and Environmental Economics position through the University/PSIEE Energy Initiative. The new hire will begin Fall 2009.

  The department successfully competed for an Assistant Professor of Rural Sociology through the Children, Youth and Families Consortium (CYFC). The new hire began Fall 2008.

  The department responded to two opportunity hires, hiring an Associate Professor of Environmental Economics and an Assistant Professor of Rural Sociology. Both began in Fall 2008.

- Establish and build upon existing partnerships with non-governmental and governmental agencies.

  A Penn State partnership with Rural Opportunities, Inc. (now Pathstone) was initiated, as part of an NIH-funded grant on farm worker populations. ROI (Pathstone) is a major provider of services to migrant and seasonal farm workers in the Northeast.

4. *Continue to broaden our funding portfolio in grants and contracts.*

To achieve this, we will:

- Increase the number of grant proposals.

GOAL C. STRENGTHEN VISIBILITY, MEANINGFUL COMMUNICATION AND MUTUAL EDUCATION WITHIN THE DEPARTMENT AND WITH CURRENT AND NEW STAKEHOLDERS

Visibility Goals

Goal I. Manage and Disseminate Information On Faculty Activities Efficiently and Strategically.

Strategies and Actions

1. *Create and maintain a unified data management system for information on faculty activities. The college-wide CASPAR information system is to come on-line in the next six months, with possible implications for this strategy.*

The *CASPAR* system was not fully implemented.

To increase internal and external visibility of the department, the *Armsby Wire* continues to be distributed; a new department web site was created with more prominent display of departmental news and awards; the department seminar series was rejuvenated and re-named the M.E. John Seminar Series, and seminars are prominently displayed on the department web page; regular submissions are made to the AAEA Exchange, the newsletter of the Agricultural and Applied Economics Association.

Goal II. Continue to Develop Strong Departmental Alumni Relations.

The annual Fall Alumni Tailgate, in conjunction with a home football game, continued to be held, with increasing attendance, reaching 150 attendees. The reception for Spring graduates continues to be held.

Strategies and Actions

- Establish a formal AERS alumni group.

  A survey of alumni was carried out to determine interest in forming an alumni group. Approximately 200 responses were obtained, with ¼ of those indicating high interest in forming such a group. The survey also asked for ratings of activities in which they would be most interested.

  An AE&RS Affiliate Program Group (APG) was formally established and held its first meeting in May 2006. The Board meets three times a year, once in conjunction with the

annual Alumni Tailgate. The Board chose a student mentoring program for its first activity, which has begun.

The Board established an annual membership dues structure to fund its activities and create a fund to support student activities. Dues are regularly received from about 40 alumni.

- Publish a regular alumni newsletter highlighting faculty and departmental activities and opportunities for alumni connections. This could be distributed electronically on a quarterly or twice-yearly basis.

  The newsletter has been established, with distribution once a year in the Spring.

- Assemble an AERS alumni directory that facilitates both our networking with alumni and alumni networking with each other.

  This directory has been compiled and is kept up to date.

- Compile and publicize a brief departmental history with the help of key alumni and senior or emeritus faculty to highlight the range and significance of AERS achievements and impacts.

  A departmental history was compiled by Emeritus Professor Milton Hallberg in 1998. No updates have been made.

Goal III. Enhance Departmental Presence and Leadership in the CAS.

An opportunity exists in the new CAS Strategic Plan's stress on systems. We can continue to develop our departmental expertise regarding social and economic systems and promote that more vigorously. We can also take leadership in promoting cross-disciplinary dialogue and initiatives in the CAS. There is a need to ensure that individuals and departments will be duly recognized and rewarded for taking on roles that might further this newly-articulated mission of the college.

Strategies and Actions

- Communicate more often and more effectively within the CAS the impacts of our research on private and public decision-making and our recognitions and honors.

- Invite key college personnel to particularly relevant department seminars, symposia, etc. Do this strategically, targeting by topic and receptivity/interest. Systematically solicit feedback.

  The department seminar series is now publicized to the college and the university.

- Be more instrumental about getting our advocates and constituents outside the college to communicate commendations for our work, when appropriate (i.e., for truly excellent, valued work).
- Organize a workshop on "Future Directions for Social Science in the College of Agricultural Sciences" featuring strong social scientists from across the college and exploring the history of social sciences at PSU-COAS and opportunities and challenges for the future.
- Develop a "White Paper on the Social Sciences" in the CAS, linked to the output of the above workshop. This could increase our own awareness of our scope and impact, and would also educate college administrators, other faculty and stakeholders.
- Take leadership on organizing multi-disciplinary workshops or symposia addressing complex problems falling within the purview of CAS. This could be organized in collaboration with the new Environmental and Natural Resources Institute (ENRI), currently housed in AERS.

Goal IV. Nurture strong links with policymakers, government officials, other external stakeholders and stakeholder prospects.

Strategies and Actions

- Provide appropriate media training on how to or who should do press releases about our work and about constructing effective impact statements.
- Develop an electronic "Department Library," where faculty could post white papers, staff papers, research briefs, press releases on policy-relevant work.
- Identify whom faculty view as their most effective policy contacts at present and where they see the most promising opportunities and greatest need for building new relationships.
- Ensure departmental recognition and rewards for those who cultivate successful policy and applied links to their work. Consider the possibility of penalties for those who neglect such opportunities.
- Develop regular press releases prepared by faculty on a rotating basis.
- Reorganizing our departmental website to better highlight recent noteworthy research findings.
- Assess value and ease of the AERS website for use by external stakeholder audiences and make necessary enhancements.
- Bring insights gleaned individually about making effective policy connections to the larger department.
- Organize a one-day workshop targeted to rural or other staffers from state legislature and highlighting recent, relevant AERS work.

GOAL D. ENHANCING DECISION-MAKING AND CLIMATE WITHIN AERS

Strategies and Actions

1. Review standing committee charges and responsibilities, and prepare updated statements for each standing committee, as needed.

2. Examine the need for a climate committee, and the responsibilities of such a committee.

   An *ad hoc* committee met several times without a conclusion on the role of such a committee.

3. Explore role of ad hoc issue groups in department committee structure and decision making.

   Ad hoc committees continue to be formed to address issues. One example is the committee to re-design the department web site.

Strategic Initiatives

The five strategic initiatives described in the College of Agricultural Sciences 2008-2013 Strategic Plan provide a wealth of opportunities for contribution by the faculty, students and staff of Agricultural Economics and Rural Sociology (AERS). Furthermore, we firmly believe that these initiatives cannot be successfully advanced over the long term without our full participation.

Social science is, in its broadest sense, the study of society. It examines how people behave and organize themselves, and how their actions affect, and are affected by, the world around them. Agricultural and natural resource systems comprise complex social, ecological and technological connections that require integrated research approaches. The complexity of agricultural and natural resource systems, and their sustainable development, place responsibilities on both the natural and the social sciences. Given current challenges in both public and private spheres, integrated perspectives are now all the more important to improve understanding of the mutual interaction between social, biological and natural sciences and the economic, social and environmental contexts in which change occurs. By considering how problems are framed, offering analysis of social values and preferences and providing understandings of complex socio-natural systems and their emerging properties, the social sciences can play a part in addressing the limits of partial disciplinary perspectives.

Traditionally, the role of social sciences in Colleges of Agriculture was viewed more as facilitating social acceptance of new products, processes or technologies. More recently, the role of the social sciences in agriculture has shifted to examine concerns about the social, economic and environmental impacts of new technologies, products and policies. This new role engages the social sciences in the creative and strategic processes of change at the outset alongside the biological and natural scientists. Effective innovation and advancement of the public good

requires more coordinated socio-technical adaptations. (Ideas based on "Socio-technical innovation for sustainable food chains: roles for social science" by Philip Lowe, Jeremy and Richard P. Lee. Trends in Food Science and Technology 19 (2008); 226-233)

In addition, the social sciences in Colleges of Agriculture have long contributed to understanding the social and economic well-being of individuals, families, communities and economies in rural areas, and the linkages between rural and urban populations and communities. The consequences of human activity for natural resources and the environment also are traditional topics of study among social scientists in Colleges of Agriculture. These core contributions of social science disciplines to Colleges of Agriculture and to understanding the well-being of rural and agricultural populations around the world will continue.

ENTREPRENEURSHIP

Establish a Center for [Green] Entrepreneurship to bring together faculty and stakeholders with entrepreneurial expertise, and be a focal point for innovative entrepreneurship training through resident education, research and extension/outreach. Goals are: to train students to be job creators, and help both faculty and extension clientele to take advantage of changing conditions; move the knowledge that we are gaining from current research strengths into technology and products that can lead to new businesses; further incorporate entrepreneurship into our resident education and extension/outreach programs; and act as a champion for applied research on competitiveness for economically and environmentally sustainable enterprises.

Background

AERS faculty are uniquely and strategically positioned to play a central role in implementing and bringing to scale the College's entrepreneurship initiative. An inventory of current faculty activities reveals that substantial efforts are already underway within the department in research, teaching and outreach. However, these efforts would be enhanced if they were better coordinated so as to deliver the greatest possible impact and to provide the greatest possible support to stakeholders, including other departments within the College. An Entrepreneurship Center within CAS will help to ensure that coordination is achieved within AERS, across the College, and with stakeholders. In brief, with the addition of relatively few resources, AERS can build capacity in this area, and it can enhance the entrepreneurial dimensions of the strategic initiatives in Energy; Food, Diet and Health; Pest Prediction and Response; and Water Quality and Quantity. **Exhibit 1** summarizes the existing and potential roles of AERS research, teaching and extension contributions to the college and to society, by areas of interventions. These contributions can be thought of as supporting entrepreneurship on two levels: direct support to potential and existing entrepreneurs, and building capacity for community support of entrepreneurs and encouraging communities themselves to become entrepreneurial in planning for the future.

Entrepreneurship has individual and collective behavioral, social, economic, and political/policy dimensions. AERS faculty bring expertise and perspective to entrepreneurship and

entrepreneurial behavior at the individual, enterprise or organizational, community, and macro (regional and nation-state) levels and linkages among these levels. While individual-level efforts and initiatives are essential, emerging research compellingly shows that entrepreneurs need supportive networks, cultures and policies in communities/regions (the entrepreneurial eco-system) in order to thrive. AERS has the capacity to contribute substantively to the understanding of entrepreneurship and entrepreneurial behavior in each of these contexts, the linkages between contexts, and the application of this knowledge and understanding in practice.

Areas in which AERS already contributes to entrepreneurship, broadly defined, range from business enterprise development and management, social and green or eco-entrepreneurship, entrepreneurship opportunities among under-represented populations, and entrepreneurship and the context for successful business development in less-developed countries. Developing leadership in local communities to create a culture supportive of local business and industry and new policy development to encourage and support entrepreneurial behavior are important elements of successful entrepreneurship to which AERS can contribute. AERS contributes substantively to understanding of entrepreneurship and the economic, social and political contexts in which entrepreneurship occurs through its teaching, research, and extension/outreach programs and initiatives.

Current Inventory of Department Activities

1. Research

AERS faculty have a long history of conducting benefit-cost analyses (financial, economic and social) on innovations emerging out of faculty laboratories and field trials carried out, for example, at the Russell Larson Research Center. These studies have included evaluations of new products, process or business innovations, and new technologies as well as (in the past) consumer acceptance of these innovations. AERS faculty also conduct research on the community and regional contexts in which entrepreneurs operate, identifying the importance of supply, processing and marketing chains, and the importance of community support or entrepreneurial climates in communities/regions. Examples of on-going research programs include:

- Globalization and competitiveness of US food firms (incl. firm level adjustments) [ERS]
- Innovative practices in pest prediction and response (see separate statement)
- Evaluation of entrepreneurial agricultural supply chains, industry clusters and local food networks, including PA WAgN (NRI-funded); using public procurement to support local/regional food system development (regional Hatch)
- Cost-benefit analysis of organic products
- (Green) Entrepreneurship research in Kenya, including eco-tourism business development and use of e-commerce
- Measuring and improving local entrepreneurial climate – understanding why some communities are more entrepreneurial than others (Kauffman-funded)

2. Extension

AERS faculty have in place important Extension efforts that help farmers, potential and current entrepreneurs and communities to take better control of their economic fortunes by becoming more entrepreneurial. These activities range from educational programs such as *Income Opportunities in Agriculture* to *Food for Profit*, *Annie's Project* and *Local Foods*, designed to strengthen local food systems by taking advantage of e-commerce and other opportunities, such as community supported agriculture. Recent research reveals the critical importance of making potential entrepreneurs in agriculture aware of how adding value to their existing products can create new business opportunities. At the same time, the extent to which local organizations and consumers purchase local products and community or regional support for building networks of suppliers of inputs and purchasers of local products can be critical for business success The *Entrepreneurial Communities* program includes a self-assessment tool for communities to identify how entrepreneur-friendly they are, and how to make changes to encourage entrepreneurial activity and a community culture supportive of entrepreneurs and local businesses. Programs such as *First Impressions* begin from a broader base, but can be used by communities specifically to examine and obtain input from 'visitors' from outside of their community as to how entrepreneurs are supported in the community. The *WAgN Leadership Training* program is specifically designed to train regional representatives to build local and regional efforts to support entrepreneurship in agriculture and related products. AERS faculty hosted a *National Youth Entrepreneurship Symposium* in 2008 which served to identify leading Extension programs in this area. Entrepreneurship provides opportunities for youth to remain in rural communities.

3. Teaching

The agribusiness management undergraduate degree program provides a backbone for training of future entrepreneurs. In essence, the degree program teaches the core principles of business that allow business-men and women to succeed. Currently, the program largely prepares students to work for corporations and other existing business, but with fairly minor changes the educational experience can increasingly be geared towards helping individuals to work for themselves and to create jobs for others. The newly created Community, Environment and Development (CED) undergraduate major prepares students to contribute to sustainable development and improvements in well-being by helping them to identify and understand the linkages between community leadership and resources, successful entrepreneurship and improved quality of life. These individuals will take careers where they lead communities and organizations to provide the types of direct assistance needed by entrepreneurs. On the graduate education side, AERS programs in Agricultural, Environmental and Regional Economics; Rural Sociology; and Community and Economic Development, will strive to recruit more students from state universities and private colleges within rural Pennsylvania (Goal A1). In addition, undergraduate entrepreneurial experience is provided by the department's undergraduate agribusiness club, NAMA, which each year develops a marketing plan for new food products from a real example provided by an existing business. This effort could be expanded to students throughout the College through the formation of an "entrepreneur club".

Collaborations

AERS faculty already have strong collaborative relationships with organizations or agencies that focus on entrepreneurship or could play important roles in improving opportunities and support for entrepreneurs and entrepreneurial communities. These include other centers and departments at Penn State, organizations in Pennsylvania and agencies of the Pennsylvania state government and relationships with national organizations and agencies beyond Pennsylvania.

Within Penn State, faculty work with The Penn State Office of Workforce and Economic Development Working Group, the Center for Economic and Community Development in AERS, Pennsylvania Ag Council of the College of Agricultural Sciences, and the SBDC at Penn State. Linkages with colleagues in the College and across the University are not enumerated here.

Examples of the organizations with which AERS faculty interact at the state level include The Governor's Advisory Council on Rural Policy, The Pennsylvania Rural Partners, Legislative Office of Research Liaison in the PA House of Representatives, The Pennsylvania Policy Forum, Regional and state workforce development boards, Center for Rural Pennsylvania, Pennsylvania Department of Economic and Community Development, Governor's Policy Office, Pennsylvania bankers, and PennAg Industries Association.

National and regional organizations with which faculty have established relationships include the Kauffman Foundation of Entrepreneurship, Chamber of Commerce, Small Business Administration, Appalachian Regional Commission, ERS USDA/NRI, Eastern Meat Packers Association, individual firms, PA Association for Sustainable Agriculture, Rodale, Vermont Women's Ag Network and Maine Women's Ag Network.

Emerging Issues and Opportunities

As noted, a broad research frontier on entrepreneurship has opened up in recent years, and is expanding at an accelerating rate as a result of the current economic crisis, and previously due to the labor-displacing effects of technological change coupled with globalization. Profound research questions arise in terms of valuing and assessing acceptability of new innovations and products, understanding the origins of entrepreneurial behavior and success, and evaluating how communities can be more supportive of individual innovative effort. These strategies essentially create public goods and values that serve to enhance community well-being, including increased spillovers into the community of university-based R&D that generates new jobs. In the case of AERS, a critical niche is that of green and natural resource-based entrepreneurship at the level of individuals, communities and regions.

To take advantage of these opportunities we propose two priority areas (or sub-centers) for the College's new entrepreneurship center. These two priority areas build on related emphases in fostering successful entrepreneurship:

- "Pennsylvania (Ag and Green) Entrepreneurial Proof of Concept" – this would help individuals to determine whether they should take their innovation to market (from the lab or the desktop to the retail shelf and everything in between). Models for this kind of center, designed to accelerate the commercialization of university and small business innovation, already exist at UC San Diego and at MIT (however, these are not targeted at green, agricultural or natural resource based products).
- 'Socioeconomic Systems and Entrepreneurial Success' emphasizes the social, economic and policy contexts that support and provide opportunities for entrepreneurship or pose barriers to successful entrepreneurial development at the local, state/region, national and global levels. Entrepreneurs in communities that are supportive of entrepreneurial activity by assisting entrepreneurs in identifying local and regional markets, local suppliers, and building networks are more likely to be successful, and these communities are likely to have a larger share of entrepreneurial activity.

These entities are envisioned to include strong teaching and outreach components that are integrated with the research mission.

The need for science-based outreach and education in this area has never been more important than it is today (the current economic crisis might have been avoided with small increases in funding to outreach involving basic individual financial and business literacy; now, many private sector entrepreneurs are pitching business opportunities of unproven if not questionable value to laid-off workers desperate for new sources of income. This creates a need for objective education so that individuals can assess what they are getting into).

Penn State, as a land grant university, is uniquely and strategically positioned help stimulate and expand sustainable development. Agriculture is now even more inextricably intertwined with the larger society and economy. The success of modern agriculture and rural communities depends on an increased emphasis on entrepreneurial endeavors that extend beyond the farm gate. If successful, these opportunities will strengthen agriculture and the surrounding communities and region.

Personnel in AERS will work with existing Natural Work Groups within Penn State Cooperative Extension to 1) work with individual entrepreneurs through educational programs and one-on-one assistance, and 2) provide research-based support and educational programs to communities to enhance the climate for entrepreneurial activity. Members of these Natural Work Groups (Economic & Community Development; Agricultural Entrepreneurship) have a history of related programming. The focus on team development in Extension is occurring at an ideal time to increase the engagement of AERS faculty and staff in these cooperative efforts. Ideally, these teams, and the affiliated personnel, will serve as the outreach arm of the Entrepreneurship Center described in the College's strategic plan.

Through relatively small changes in the undergraduate teaching programs, AERS can distinguish itself from similar programs in the country and provide undergraduates with a world-class experience that prepares them for the changing world of work in the 21st Century global entrepreneurial economy and society. In terms of new teaching opportunities, we envision

designing and offering one course dedicated to the topic of entrepreneurship in the undergraduate programs, a course in entrepreneurship in regional economic development in AEREC and a course in entrepreneurship and entrepreneurial communities in CEDEV. The potential also exists for the development of a minor in agricultural and green entrepreneurship at the undergraduate level (as part of AgBM and CED) and online as a graduate certificate as part of the online CEDEV graduate program. In addition, existing courses will incorporate components of entrepreneurship, as appropriate.

Exhibit 1: **ROLE OF AERS IN COLLEGE OF AGRICULTURAL SCIENCES ENTREPRENEURSHIP EFFORT**

Stakeholders/audiences	Research	Teaching	Extension
CAS (new products, technology & processes from across the College)	Profitability, consumer acceptance, community and environmental impact	Raise awareness among students about role of basic research in economic and social well-being (seminars, lectures, course modules)	Individual, business and community education and assessment of new products/technology and processes
CAS Students	Inclusion of students in research on entrepreneurship, risk tolerance, consumer acceptance, entrepreneurial communities and policy related to entrepreneurship	Increased information about entrepreneurship in undergraduate, graduate courses; AERS and other CAS depts.; guest lectures by entrepreneurs, practitioners & researchers	Student teams evaluating small business proposals and plans; working with communities to foster culture of entrepreneurship
Farmers and other food and fiber sector entrepreneurs	Needs assessments, new product evaluation; clusters and networks in successful operation; CSAs and local food systems, consumer acceptance	Preparing next generation of farmers and food, fiber and bioenergy entrepreneurs, and those who work with them in business, communities and government	Technical assistance for new product development, value-added; clusters and networks; CSA and local food system education and facilitation
Small Businesses	Needs assessments; formation determinants (entrepreneurial ecology); identiyfing new products, services and markets; partnering with community organizations & agencies	Preparing next generation of small business creators and owners	Technical assistance, etc., business plans, linking potential entrepreneurs with community needs, awareness of partnering opportunities
Communities & small towns	Effectiveness of direct community supports for entrepreneur success; Evaluate characteristics of most effective entrepreneurial communities and strategies to assist communities in becoming entrepreneurial	Educating current and future community leaders in government, non-profit organizations and agencies, the private sector and residents about linkages between business and communities that increase economic and social well-being	Awareness-raising of importance of entrepreneurial communities; education in support of entrepreneurial communities; how communities can partner with business through networking, producer fairs, economic analyses

WATER QUALITY AND QUANTITY

Background

Sustainable management and use of water resources remains an enormous challenge, in water rich places like Pennsylvania, as well as in dry climates. The conditions of water resources are deteriorating in many parts of the nation and elsewhere in the world. Issues of large current interest in Pennsylvania include:

- Ecosystem degradation and loss of ecosystem services caused by sediments and nutrients running off agricultural and other lands, acid mine drainage, and urban storm water.
- Threats to drinking water from endocrine disrupters.
- Pennsylvania's contributions to large scale nutrient pollution problems, most notably in the Chesapeake Bay and Gulf of Mexico.
- Failing sewer and water infrastructure.
- Water supply and quality risks associated with Marcellus Shale development.

These issues are a subset of water problems of regional, national, and global significance, for which advances in water and social science are essential to solve. And the challenges are expected to grow. A key driver is climate change, which will affect water scarcity, water quality, and the frequency and severity of floods and droughts. Another factor is the expansion of biomass energy, with significant implications for water scarcity and water quality.

Lasting solutions to contemporary and emerging water challenges will require creative, science-based, economically feasible, and socially acceptable strategies. AERS has a demonstrated capacity to contribute to the disciplinary and, as a part of multidisciplinary teams, transdisciplinary science and education needed to find these strategies.

AERS Water Research and Education Capacity

AERS faculty have long been active in research and education to enhance society's capacity to form and achieve goals for water resources management. Faculty expertise in economic modeling of individual and aggregate behaviors affecting water quantity and quality, nonmarket valuation, policy design and analysis, adoption behavior, community decision making, and law combine to provide AERS with the capacity to address a range of critical issues in water resource management. These include:

- *Predicting Water Balances and Quality*. Human pressures affecting water supplies, water demands, and water quality are highly conditioned by population, land use, land cover, economics structure, and other factors determined by the choices of people acting within

economic and social systems. Prediction of these societal choices based on scientific understanding of individual and collective choices within these systems, and resulting from policy-induced or other structural changes, is essential to predicting water balances and water quality.

- *Valuing Ecosystem Services.* Regulations and investments to manage water use, water supply, storm water, polluting emissions, or to protect or expand riparian zones or wetlands, require resources that could be used for other social purposes. This is true whether the resources are direct expenditures by state and local government agencies or costs imposed on businesses and households through regulation. Economic evaluation of the merit of alternative investments or regulations requires knowing how returns compare to the costs. Nonmarket valuation techniques developed by environmental economists to measure the economic values of environmental goods, informed by psychological and sociological understanding of environmental attitudes, and integrated ecological-economic modeling, provide the essential tools for valuing ecological services.
- *Policy Instrument Choice and Design.* A fundamental task in pursuing sustainable water management is restructuring economic incentives to align the interests and behavior of individuals and businesses with the societal goals for water resources. A major theme in economic, legal, and sociological research and education on water resources is the design and evaluation of incentive schemes (e.g., water pricing, effluent fees, payments for ecosystem services, pollution trading) to achieve these ends.
- *Adaptation and Risk Management.* Climate change in combination with other social and environmental dynamics, are increasing risks to businesses, governments, communities, and ecosystems from floods, droughts, storm surges, and other water hazards. Businesses, governments, and communities need help in identifying, evaluating, and communicating risks, and devising effective mitigation strategies.
- *Community Decision Making.* Communities can play a large role in determining the condition of their water resources. The pricing of municipal sewer and water is an example. Because water resources are strongly affected by local decisions affecting land use in watersheds, communities can also play a large role in determining the condition of their own water resources, as well as that of downstream communities through land policies. Local governmental and non-governmental entities require science-based tools and decision-making processes that enhance knowledge of ecological conditions and causes of those conditions, as well as those that will enhance collaboration and collective action across organizational and jurisdictional boundaries.
- *Water Law and Institutions.* Water use and quality are substantially mediated by laws and institutions developed to administer them. Law and management institutions must evolve to solve existing water problems, nonpoint pollution being a major example in the U.S., and to address increasing scarcity and variability associated with climate change. Yet, much remains to be learned about the optimization of legal and institutional frameworks for alternative environmental, economic, social, political, and constitutional settings.

Collaborations

AERS faculty have strong collaborative relationships with the community of researchers and educators working on water issues at Penn State, and there is a long history of collaboration on multi-disciplinary research and educational initiatives on water related topics. These collaborations go beyond Penn State to include researchers and educators at other universities, and research organizations.

AERS faculty are engaged with state and national governmental agencies working resource issues. Activities include participation in research and education initiatives, and service on advisory panels and task forces. AERS faculty also work with an array of nongovernmental organizations on water issues.

ENERGY

Long term increases in the scarcity of fossil fuels in combination with energy-related national security issues and potential catastrophic risks from fossil fuel-driven climate change have made energy policy reform a major national priority. Energy issues fall generally into new directions for traditional energy sources and alternative energy sources. Traditional sources with current or potential new activity are natural gas, in particular the development of the Marcellus Shale reserves, and coal and efforts to use coal in a less polluting manner. Alternative energy sources are bio-fuels, including ethanol from corn or other feedstocks, bio-diesel, wind, and electricity generation using manure or other waste products.

Energy is also a highly important issue in Pennsylvania:

- Pennsylvania has long been a major coal producing and consuming state. It is also the 3rd largest source of greenhouse gas emissions in the US. Aggressive carbon caps and/or taxes will affect coal production and the communities that depend on it, unless technological breakthroughs occur in carbon capture.
- Pennsylvania promises to become a large natural gas producer with the Marcellus Shale development. This could be an economic boom with widespread benefits. The gas field is in a traditionally underdeveloped part of the Commonwealth and will involve an infusion of wealth, jobs, and other economic activity. There also are significant potential economic, social and environmental disruptions, including large risks to water quantity and quality.
- Because of its proximity to major population centers, Pennsylvania also has promise as a biofuels producer, particularly if cellulosic technology becomes commercially viable. While there is much interest in the promise of biofuels, there is increasing recognition of economic, environmental, and social challenges in creating a sustainable biofuels industry.
- The Commonwealth is implementing policies to increase the renewable portfolio in energy production and consumption in the state, and will soon be implementing policy initiatives to combat greenhouse gas emissions.

AERS has demonstrated capacity to contribute to the economic, social and environmental understanding needed to develop energy policies at local, state, national, and international levels that are economically, societally, and environmentally sound. We bring an ability to identify, frame, and evaluate tradeoffs that must be addressed in the development of sustainable paths, and an understanding about how energy choices are made by people and businesses acting within economic and social systems.

Areas of capacity for research and education include:

- Energy supply and demand analysis at scales from local to national for energy and related environmental policy analysis. This capacity includes both conventional and alternative energy sources.
- Economic and social impacts of energy development.
- Social benefit cost analysis of energy production facilities, systems, and policies.
- Climate change impacts assessment
- Energy supply and conservation incentives, carbon taxes, and carbon trading.
- Financial analysis of energy facilities and systems
- Extension programming to provide education to professionals and the general public in the range of energy issues

Energy-Related Activities in the Department

Title	Faculty	Description
RESEARCH		
	Blandford	The consistency of biofuel policies in the EU and the US with WTO obligations on domestic support and with other agreements, primarily the subsidies and countervailing measures agreement.
	Shortle	The impact of carbon taxes and revenue recycling in PA using an interesting CGE model for state. Developing a spatially explicit corn for ethanol supply curve. A group of faculty from this department and others are looking at the impacts of climate change on PA for DEP. This project will include an assessment of the impacts on the energy sector, including biofuels from ag and forests. A subset of this group (Dave Abler, Rich Ready, Karen Fisher Vanden) will be developing

Title	Faculty	Description
		a CGE model for analyzing the economic impacts of climate change in PA. Energy will be prominent in that effort.
	Abler	Biodiesel from algae, and a comparison of biofuels policies in the U.S., Japan and China.
	Glenna	Private Ordering and Public Energy Innovation Policy. Examination of waste coal and the Pennsylvania Alternative Energy Portfolio Standard. The prospects for rural economic benefits from the emerging biofuel economy.
	Luloff	Impacts of mountaintop removal, the "newest" addition to the industry's capacity for extracting coal Understanding the energy related impacts on the communities and people of Marcellus Shale gas extraction Book-length manuscript on the new west -- conversion from energy and resource dependence to amenity development Part of a multi-department project on biofuels for evergreen power/mesa with PSIEE (Tom Richard, chair)
Energy Use, Carbon Emissions, and Technological Change	Fisher-Vanden	My research focuses generally on energy use, carbon emissions, and technological change. Currently two externally-funded research projects on the factors driving energy use and carbon emissions in China, the effects of technological change in China on energy use, and the impacts of energy efficiency policies in China on industrial energy use. Other research, funded by the National Science Foundation, is examining the impacts of uncertain energy-related R&D on optimal policies to mitigate global carbon emissions.
	Dunn	Camolina project with many others in the college examining the viability of this alternative oil seed for PA conditions
TEACHING		

Title	Faculty	Description
	Tuthill	Teaches a course on energy economics for the EBF major in the college of earth sciences.
	Becker	Undergraduate teaching efforts involving energy include ERM 411 which addresses the environmental impacts of energy development from a regulatory perspective. This course also addresses water access rules in general. CED 409 is a new course on Land Use Planning Law and Procedure. This course addresses the land use planning aspects of alternative energy development. A three hour session is planned on wind energy as a specific alternative energy activity with land use implications.
EXTENSION		
Ethanol Production and the Impact on Grain Prices	Moore	I will be talking about energy (ethanol) briefly at about 10 county or regional outlook sessions as part of the overall program explaining its impact on grain prices and overall markets.
Ethanol in PA and Impacts of Biofuels on Crop Markets	Dunn	Extension program regarding ethanol in Pennsylvania and impacts of biofuels on crop markets.
	Fisher-Vanden	External service activities related to energy include role as Associate Editor of the Journal of Energy Economics and appointment by the previous Secretary of Energy to serve on the U.S. Climate Change Science Program's Product Development Advisory Committee.

FOOD, DIET AND HEALTH

Expanding efforts to support a food system that improves people's quality of life is the key goal of this initiative. The heart of this initiative is a consumer orientation that addresses consumer well-being (e.g., nutritional health, food quality and safety, addressing current and emerging health policy issues related to food) and the ability of the market to meet these needs.
This consumer-focused approach is complementary to our existing efforts. Our efforts will include support for food production and processing, but will increasingly look at the upstream and downstream consequences for the environment, and at consumer health and well-being. Identification of new dietary options, including foods that are healthier, can inform producers, processors, distributors, and retailers. The net result is an increased array of choices of high-quality foods for the consumer. Food safety, long a focus in the college, will remain an important component of providing a healthful diet to consumers. There is need to guide small food processors and new food entrepreneurs about regulatory practices, nutrition labeling, marketing, workforce development, energy conservation, food safety practices, purchasing of equipment, and business development. Support for the development of a broader understanding of the food system within resident education can be achieved through cross-college seminars and online courses. Educational and research efforts, as part of the emerging University-wide health sciences initiative, will be important for us. For example, with our cooperative extension network across the state and our research capacity in the biological and social sciences, we have a unique role to play in areas such as childhood obesity and disease prevention in collaboration with other colleges, nongovernmental organizations, and appropriate government agencies. The infrastructural support of extension educators is a major asset for conducting prevention-based nutrition and health programs. To reach limited-resource audiences, the Nutrition Links program, which includes the Expanded Food and Nutrition Program and the PA Tracks program, employs community-based nutrition paraprofessionals who teach families with young children.

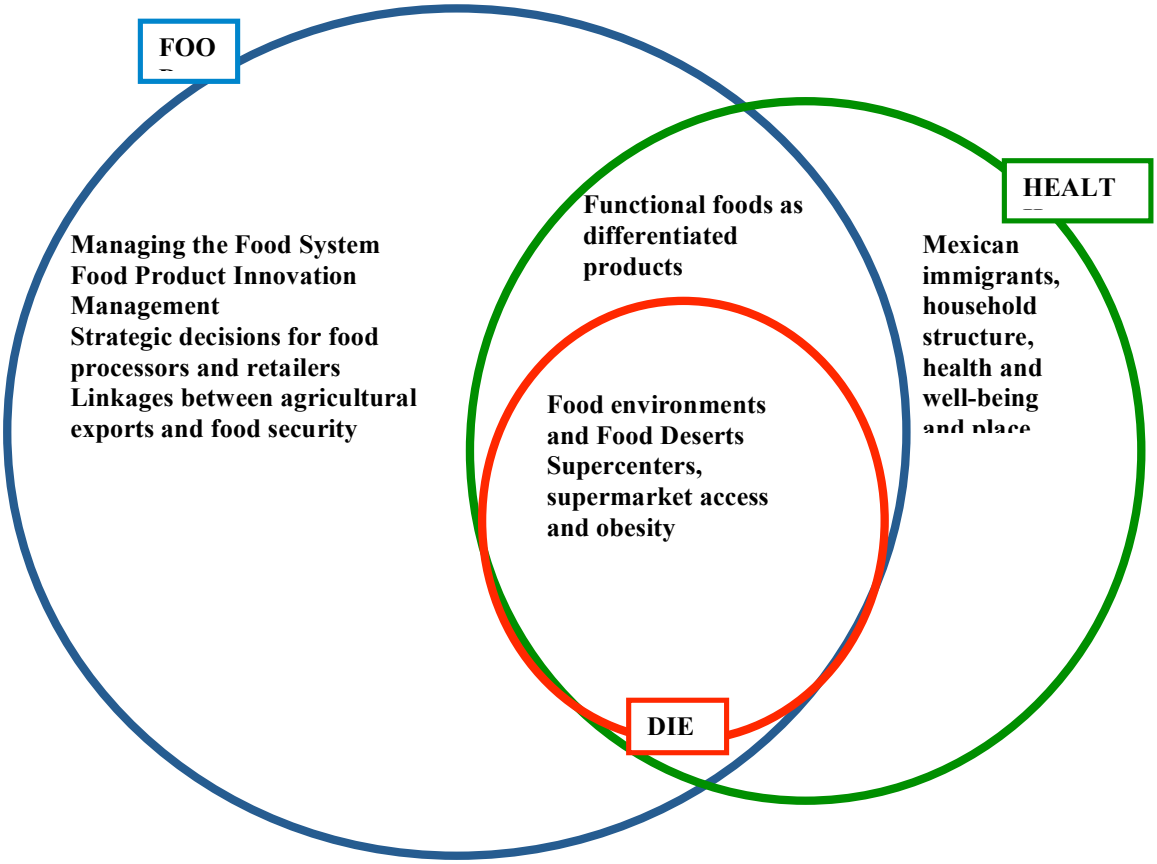
In surveying the faculty, several themes emerged. The majority of these themes focused on the food-aspects of this initiative that promote understanding of the food system and how it manages to meet consumers' needs and wants, how new food products evolve and come to the market, the strategic decision processes of food transformers (with particular reference to organic products) and investigating the nexus between agriculture exports and food security.

There are two current activities in the nexus of Food and Health. These efforts pursue the common orientation of investigating the causal link between the lack of access to fresh food products caused by "food deserts" (i.e., limited access to supermarket and/or other food outlets) and the obesity epidemic among disadvantaged individuals as well as the challenges to access food institutionally, by looking at school community and policy dynamics that are creating demand for change in school food services. There is an emerging effort that integrates the food and health themes to address the industrial organization of functional foods by considering the case of yogurt. A last effort addresses the relationship between health outcomes across migrants' destination choices.

Title	Faculty	Description
Supercenters, supermarket access and obesity	Alessandro Bonanno	This activity aims to determine whether there is a causal link between the lack of access to fresh food products caused by "food deserts" (i.e., limited access to supermarket and/or other food outlets) and the obesity epidemic among disadvantaged individuals. In particular the research developed will try to determine whether the presence of food outlets targeting less wealthy consumers (such as Wal-Mart's Supercenters) has any beneficial role in mitigating the consequences of poor food purchasing choices. **Functional Areas:** Teaching (AG BM/undergrad) & Research
Food Environments and Food Deserts	Claire Hinrichs	Food Access is the interface between consumers and distributors. Consumers have access to food at retail outlets such as supermarkets or convenience stores, restaurants, and in institutional food services, which jointly constitute the food environment. This activity addresses "food environments," both regionally in terms of identifying structural characteristics of regions with poor food access opportunities, known as "food deserts", and institutionally, in looking at school community and policy dynamics that are creating demand for change in school food services. **Functional Areas:** Research
Functional foods as differentiated products	Alessandro Bonanno	The activity analyzes the market for functional foods, using the Italian yogurt market as case study. The objectives are: 1) To assess the role of consumers' characteristics on the demand for functional foods; 2) To analyze the use of functional foods by food manufacturers to enhance profit margins and attract a wider consumers base; 3) To evaluate the dynamics of the relationship between the consumption of functional foods and health-related consumers' characteristics. **Functional Areas:** Teaching (AG BM/undergrad) & Research

Title	Faculty	Description
Managing the food system	Jim Dunn	This activity focuses on how firms manage their interactions with the other parts of the food system and to coordinate activities between agents to help firms better fulfill their role in the system. **Functional Areas:** Teaching (AG BM/undergrad), Extension & Research
Strategic decisions for food processors and retailers	Ted Jaenicke	This activity focuses on two major decision areas for processors and retailers: procurement decisions and marketing decisions. The context for this analysis is often (but not exclusively) addressing organic foods. The focus is on food as purchased by consumers, as well as procured and marketed by processors and retailers. This research focuses on a) the US food retailers regarding their procurement and marketing of organic foods; and b) analysis of consumer behavior with reference to pricing and positioning of private label (store brands), consumer behavior towards private label milk (both organic and non-organic milk), and comparison of organic and non-organic product promotional behavior by processors and retailers. **Functional Areas:** Teaching (AG BM/undergrad, AEREC/graduate) & Research
Food product innovation management	Spiro Stefanou & Barry Zoumas	This activity addresses the innovation process in new food product development that spans both entrepreneurs and mature food firms. The objectives of this activity are to communicate the fundamental principles, generalizations and theories of product development; understand the specific skills, competencies and points of view needed by product development professionals; appreciate the interdependencies of finance, formulation, marketing, packaging, process engineering, production and quality assurance in the development of food products; and understand how food company managers gain knowledge about the process for developing food products. **Functional Areas:** Teaching (AG BM/undergrad) & Research

Title	Faculty	Description
Linkages between agricultural exports and food security	Anouk Patel-Campillo	The target of this theme is to evaluate to what extent has the spread of cut flower production throughout the savanna of the Bogata (Colombia) region contributed to the displacement of food crops for local consumption threatening the availability and access of food in agro-exporting municipalities. **Functional Areas:** Research
Mexican immigrants, household structure, health and well-being and place	Mark Leach	This activity investigates the relationship between Mexican migrant household formation, child poverty and child health outcomes across migrant destination including both urban and rural differences **Functional Areas:** Research


FOO
Managing the Food System
Food Product Innovation Management
Strategic decisions for food processors and retailers
Linkages between agricultural exports and food security
Functional foods as differentiated products
Food environments and Food Deserts
Supercenters, supermarket access and obesity
DIE
HEALT
Mexican immigrants, household structure, health and well-being

PEST PREDICTION AND RESPONSE

Coordinate efforts across research, teaching, and extension to predict and respond to pests, weeds, and pathogens. Provide proactive and cost effective approaches to anticipate, isolate, and eradicate outbreaks, including potential bioterrorist threats affecting crop, livestock, and forest production. Leverage our strengths in modeling and plant disease biology.

Emerging Issues

The use of pesticides imposes various negative externalities on society, including increased water treatment costs, adverse impacts on the health of farm workers, and long-term impacts from loss of biodiversity and reduction of environmental quality. Other areas of emerging concern are impacts of climate change on the distribution of pests and invasive species, and the interactions between land use, land cover, and climate change. Taxes and levies are policy tools that can be used to balance tradeoffs between economic growth arising from production activity and negative externalities. Issues surround the ability of policy makers to implement these tools to manage pesticide use and achieve the best allocation when they seldom know the gaps between the private and public cost of pesticide use.

The department can play a major role in evaluating of the dynamics of pesticide decisions, economic sustainability, biodiversity loss, and socially optimal pesticide use. The department also can play a major role in looking at pests and invasive species in the context of broader research programs.

Current Inventory of Department Activities in this Area

Over the years, department faculty have conducted a wide range of research and outreach programs supporting production agriculture in this area. Efforts have focused on efforts to increase the efficacy of pest management programs and reduce the impact of pesticides on the environment in both conventional and organic production systems. On-going programs include:

- Reduced-risk pesticide programs for apple and peaches
- Biological control of European corn borer in sweet corn
- Area-wide mating disruption for apples and peaches
- Weed management options for organic feed and forage production
- Integrated crop management for blueberries

Department faculty and graduate students also conduct research on several topics falling under ‘protection of plant, animal and human health’ (p.13: Agricultural Sciences 2008- 2013 Strategic Plan). The projects are multidisciplinary in nature, and are social science-science collaborations. In some cases, the programs are integrative, having research, extension/outreach and teaching components. Programs include:

- Diffusion processes related to sustainable agricultural technology and malaria vector control in Africa. This program focuses on understanding diffusion processes related to

malaria vector control and sustainable agricultural technologies (low-phosphorous legumes) in Eastern Africa.

- Land use transitions and biodiversity impacts/land use transitions, agricultural fragmentation and disease control (Transitional Zone Ecosystem Initiative). Two aspects on the project are directly related to this strategic initiative: 1) research to understand the impacts of specific changes in land use (and production practices) on biodiversity and prevalence of invasive species, and 2) work to understand the interrelationships between agricultural fragmentation and disease control.
- Immigration and health**.** Department faculty affiliated with the Population Research Institute have a long history of conducting research on the immigrant workforce employed in agriculture. Part of this research involves health components, including knowledge of the spatial aspects of immigrant networks that may lead to understanding of patterns of infectious disease transmission.

Department Collaborations and Funding Support in this Area

Efforts by the Department include collaboration with units from the College of Agricultural Sciences, within Penn State (through CIDD, PRI and SSRI), and with other universities. Financial support has been derived from producer organizations, the Pennsylvania Department of Agriculture, USDA (through various programs including NRI, NAPIAP, RAMP, and SARE), other government agencies (including USAID and NIH), and various national and international NGOs.

Department Contributions to this Area in the Next Five Years

The Department is uniquely qualified to assess multiple human dimensions of current and emerging pest, weed, and pathogen problems, in the effort to identify scientifically sound, economically feasible and socially acceptable solutions. We will continue our work focusing on issues of importance to crop, livestock and timber producers, but should also, in many cases, include consideration of public, consumer and other stakeholders' preferences, values, and concerns about risk. The department can bring social science expertise to examine natural and technological hazards and disasters and a systems orientation to address the diverse pest scenarios that may become relevant in the future.

The department will continue to complement college research and extension activities in this area. Over the years, members of the department have collaborated with faculty in Entomology, Plant Pathology, Horticulture, Crop and Soil Sciences, and Agricultural and Biological Engineering on these issues. Economic evaluation is critical to assisting producers with complex decisions regarding pest management options and adoption of new pest management technologies. We will continue to provide economic and sociological evaluation of pest management options on an as-needed basis. The department also has the capacity to help the college respond to acute problems in this area (such as that required by the discovery of plum pox virus).

Unit Goals and Strategies for the 2008-13 Plan

The departmental goals established in the 2005-2008 plan remain as major goals, and the efforts begun under that plan will continue.

GOAL A: INCREASE ENROLLMENT AND ENHANCE STUDENT SUCCESS (College Goal A)

A continuing focus of the 2008-13 AERS Strategic Plan is to grow enrollments in department majors, while maintaining the quality of programs. The department is also committed to enhancing its graduate programs by seeking higher levels of extramural funding and by increasing recruiting efforts. Graduate programs will continue to be critically examined and revised, when appropriate, in order to remain aligned with student interests and employment opportunities. Strategies and actions for Goal A are summarized below.

Measurable Targets

- Increase student undergraduate and graduate program enrollments.
- Increase the numbers of students from traditionally underrepresented groups at both the undergraduate and graduate levels.
- Increase the number of graduate students on extramural funding.

Background for Undergraduate Programs

Agribusiness Management. The Agribusiness Management program is an integral part of the undergraduate offerings related to both the food and fiber system and the socioeconomic system as outlined under the 2008-2013 CAS Strategic Plan.[1] This program also is intergral to the Entrepreneurship and Food, Diet and Health initiatives in the CAS Strategic Plan. Average annual enrollment in the Agribusiness Management program increased by 67% in the last five years over the previous five-year average. It is anticipated that this growth will continue or at least stabilize over the next planning period. The department moved to offer several of the prescribed courses in the AGBM major both fall and spring semesters, a significant change from the past when course enrollments supported a single semester course offering. Growth in course enrollments reflects new majors, new AGBM minors and more students attracted to agribusiness courses from other majors. Efforts to increase enrollments are coupled with faculty concern over class sizes for a program designed for case study discussion, group team work and hands-on exercises while faculty resources are decreasing.

Community, Environment and Development (CED). **).** The CED program makes important contributions to the undergraduate offerings related to entrepreneurial communities, natural resources and the environment (e.g., water quality, natural resources, sustainable energy) and the socioeconomic system as outlined in the 2008-2013 CAS Strategic Plan. The CED program

[1] The Department also offers an Associate degree (2-year) program in Agricultural Business Management. Students in this program often eventually move into the BS program in agribusiness management.

began in Fall 2007, and by Spring 2009 had over 60 majors. It has attracted high quality students, including Schreyer Honors Scholars. The new program offers a common set of core courses in community development, regional and environmental economics, community and natural resource/environmental sociology, international development, land use and methodology and analytical techniques. Three options are offered: 1) community and economic development, 2) environmental economics and policy, and 3) international development. Options have enough flexibility to meet the needs of transfer and PSU Commonwealth Education System (CES) students.

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Strategies and Actions

1. *Undertake a set of targeted initiatives designed to enhance enrollments in agribusiness management, while improving program quality of the major.*

To achieve this, we will:

- *Continue collaboration with the college to develop new recruitment materials*. *Continue to enhance departmental web sites to appeal to potential student audiences.*
- *Expand efforts to recruit underrepresented students and broaden our audience.* This will mean greater involvement with selected high schools (especially W.B. Saul High School), and in Jr. MANRRS and MANRRS. We will also develop recruitment materials appealing to urban/suburban audiences.
- *Continue collaboration with the college fundraising efforts with alumni, to establish scholarships, coupled with a greater involvement of alumni in the mentoring of agribusiness students.* Growing the AGBM scholarship endowment is critical to remain competitive.
- *Connect students to agribusinesses and agribusiness leaders.* We will *maintain our* efforts to link students with internships and mentoring by industry leaders, particularly in Pennsylvania.
- *Engage in an ongoing review of the curriculum to ensure that the program is meeting the needs of students and industry stakeholders*.
- *Offer dynamic learning experiences.* Continue to support offerings of exciting and engaging experiences to attract new students and enhance the AGBM educational experience. Examples include: 1) Costa Rica study tours for agribusiness with Food Science and the Office of International Agricultural Programs; 2) Costa Rica study tour for environmental majors; 3) China study tour for agribusiness students; 4) University of Reading, UK, semester study abroad experience 5) development of videoconference-based courses (e.g., Global Seminar) through global partnering.

2. *Aggressively support the new undergraduate degree program in Community, Environment and Development.*

To achieve this, we will:

- *Design a significant concerted and broad-based recruitment effort by the department and college to attract students to the CED major.* A sustained strong recruitment effort is

necessary for the success of this program. Collaboration with other CAS and university environmental/conservation programs will enhance this effort.

- *Partner with others to provide students with research and outreach experiences.* Continue partnering with ENRI, the Center for Community and Economic Development, Community Development Extension educators and faculty, and the Office of International Agricultural Programs. Explore possible partnerships with the Colleges of Engineering, Earth and Mineral Sciences, and Health and Human Development, as well as with other units in CAS. Grow partnerships with the Metro Center, Earth and Mineral Sciences and Health and Human Development, as well as with other units in CAS. Explore opportunities with PRI, and the new Entrepreneurship Center in CAS, if established.
- *Continue exploring and developing new and highly attractive and visible experiences for undergraduate students in each of the CED options*. Examples include development of a rich set of experiential learning opportunities in Pennsylvania and in regional and international contexts; continue offering international opportunities such as the study tours in Costa Rica and China, a possible joint program with EMS in Peru, further development of a Honduras study experience (including internships); initiation of a strong set of undergraduate research opportunities; offering of dynamic introductory courses that strongly attract high-quality undergraduate students to CED and the college. Further, consideration should be given to the offering of a dynamic introductory demography course that would appeal to students in the CAS and outside.
- *Expand efforts to recruit underrepresented students and broaden our audience.* This will mean greater involvement with selected high schools (especially W.B. Saul High School), and in Jr. MANRRS and MANRRS. We will also develop recruitment materials appealing to urban/suburban audiences. The CED major is expected to be particularly appealing to urban/suburban students.
- *Collaborate with the college fundraising efforts with alumni, to establish scholarships, coupled with a greater involvement of alumni in the mentoring of community, environment and development students.* Beginning and growing the CED scholarship endowment is critical to remaining competitive.
- *Connect students to community, environment and development organizations and leaders.* We will *maintain our* efforts to link students with internships and mentoring by leaders in this field, particularly in Pennsylvania.

Background for Graduate Programs: Major Decisions and the Critical Need for Extramural Funding

Community and Economic Development On-line Program. Since CEDEV became a fully on-line MPS program in Fall 2007, enrollments have increase from 10 to 49, with a similar number taking courses in the Postbaccalaureate Certificate program. Courses are filling to the extent that more sections have been added. The increased student numbers have generated sufficient revenue to cover all costs, including hiring instructors to teach the additional sections and a staff person to follow up on and process applications, track enrollments and engage in recruiting. The goals are to maintain a trajectory of growth that can be sustained by the available resources, and to grow participation in the Summer Institute. The Summer Institute currently is marketed to

CEDEV students and alumni and Extension and Community Development educators at Penn State.

Agricultural, Environmental and Regional Economics. The Graduate Program in Agricultural, Environmental and Regional Economics is undergoing a revision to offer a program of higher quality that is attractive to a more diverse population of domestic and international students. The new program will offer an integrated core curriculum in applied theory and quantitative methods. Students also will continue to be offered a broad set of field courses in environmental and resource economics, international and regional development, and agribusiness economics. The set of field courses will be revised to reflect current developments in the subject matter areas, better meet student needs, and consistently attract students. Major goals of the new program are to better align the program with the interests and employment needs of the diverse student population, and to increase both total enrollment and that of domestic students.

Rural Sociology. The Graduate Program in Rural Sociology has identified several issues to be addressed as a result of the Graduate School review of graduate programs. Priorities identified for the 2005-08 planning cycle include providing teaching opportunities for graduate students; more active recruiting, especially of racial and ethnic minorities; increasing the already fairly large share of students funded on grants and contracts; and continuing to provide support for graduate student participation in professional meetings.

Strategies and Actions

1. Continue to support the growth of the CEDEV program and CEDEV Summer Institute. Reaching nontraditional students from across the US and around the world significantly extends the visibility and reach of CAS and Penn State.

2. *Complete the revision of the AEREC curriculum and seek approval from the Graduate School.*

3. *More aggressively recruit students, particularly racial and ethnic minority students, for both the AEREC and RSOC programs. We will also target domestic students in particular for AEREC, including domestic racial and ethnic minorities.*

4. *Aggressively increase the share of student funding on grants and contracts in all AERS graduate programs. Continue to provide support for graduate student participation in professional meetings, as resources permit.*

5. *Offer teaching opportunities to improve marketability of program graduates in RSOC and AEREC.*

GOAL B: ENHANCE KNOWLEDGE DISCOVERY AND TRANSLATION (College Goal B)

The Department of Agricultural Economics and Rural Sociology remains committed to fulfilling its land-grant mission. Accordingly, we mobilize our creative and intellectual resources to identify and address the emerging and pressing issues important to the Commonwealth, the nation and the world. Special emphasis is placed on conducting interdisciplinary, fundamental research to address complex problems. Our department goal to enhance knowledge discovery and translation supports the CAS strategic initiatives and Goal B.

Background

For AERS to thrive and prosper, we must effectively compete for resources. We can expect the college, university and others to invest in the department only if we are perceived as providing a "high payoff." Indeed, both the CAS and University Strategic Plans emphasize the strategic reallocation of resources to areas of high payoff. Our future success will largely be determined by the extent to which we can achieve outcomes valued by the college and university.

The department will support and promote the college strategic initiatives. In these high priority research and educational areas we strive to be recognized as a state, national and international leader. Given our department's areas of expertise, the strategic initiatives will serve as focal points of our collective research and translational activities.

Full participation in the strategic initiatives will help us compete for resources by organizing activities and allocating departmental resources strategically to help the department achieve excellence on high-priority targets related to knowledge discovery and translation, including:

- Attracting additional undergraduate majors, and preparing our students for success
- Strengthening the reputation of our graduate programs
- Increasing the level of extramural funding
- Enhancing the quality of our research portfolio
- Increasing publication rates and quality of outlets
- Integrating resident and extension education, research, and service
- Documenting and enhancing the impacts of our research
- Increasing visibility at the local, state, national and international levels.
- Increase extramural funding totals to increase graduate student support
- Increase number of faculty research and extension publications.
- Develop new forums, partnerships and publication channels to increase the public impact of our work.
- Develop new opportunities for shared experience, travel, etc.

Strategies and Actions

1. *Support and help develop the five CAS strategic initiatives.*

Our success depends on our being responsive to evolving demands for research and education. The college strategic initiatives provide a framework for achieving excellence and leadership in areas deemed departmental and college priorities. Individual faculty could be members of one or more initiatives, or members of none, at any specific time, depending on scientific research and educational payoff. An important criterion is that there is potential for significant impacts on policy, society and the research community. These initiatives should offer opportunities for integration of resident and extension teaching, research and service.

Participation in the initiatives will be based on faculty expertise and consistency with the core strengths of the department.

Faculty who participate in the initiatives would be expected to work collaboratively for the common good, including:

- Identify emerging issues and opportunities
- Establish and enhance relationships with appropriate audiences, including individuals, industry, and government
- Monitor funding opportunities and prepare and submit collaborative proposals for extramural funding to support research and educational programs (both extension and resident education)
- Integrate research and education initiatives
- Recruit students into graduate and undergraduate programs

Expected benefits of successful participation in college initiatives include:

- Improved cooperation and collaboration between faculty, staff and students across disciplines and functions within the department, college and university.
- New multi-disciplinary research directions and capacity with the potential to attract greater external funding from government and other external sponsors.
- New multi-disciplinary educational initiatives with the capacity to attract students and external funding available for innovative training (e.g., NSF's IGERT program).
- An expanded extension clientele base within the state.
- Increased responsiveness of outreach programs to the needs of stakeholders.
- Documented impact of research activities.
- Innovative multi-disciplinary outreach initiatives and contributions to problem-solving in the state, region, nation and the world.
- Improved visibility and stature of AERS programs within the college, university and state, nationally and internationally, and with external research sponsors.
- Enhanced standing of the department among peers.

2. Integrate research more thoroughly with resident and extension education.

To achieve this, we will:

- Increase translational research by participating in interdisciplinary teams of research and extension professionals, particularly to pursue grant opportunities.

- Increase undergraduate student experiences in research programs and extension/outreach activities (such as the 2006 environmental study tour in Costa Rica).
- Provide opportunities for graduate students to become involved in extension/outreach activities.
- Increase participation in the CAS and consortia seed grant programs by developing proposals that integrate research, resident and/or extension education.

3. *Link with other departments, colleges, institutes and consortia, agencies, and universities nationally and internationally to solve problems.*

To achieve this, we will:

- Encourage, facilitate and reward research, extension, and resident education programs that involve collaborations with other departments, colleges and universities.
- Initiate and aggressively participate in co-funded positions with the consortia and institutes at Penn State. We will remain open to hiring and "courtesy" opportunities that present themselves, and will actively pursue those positions that fit with our identified growth areas, areas of excellence, and future strategic hiring goals.
- Establish and build upon existing partnerships with non-governmental and governmental agencies.

4. *Continue to broaden our funding portfolio in grants and contracts.*

To achieve this, we will:

- Increase the number of grant proposals.

GOAL C. STRENGTHEN VISIBILITY, MEANINGFUL COMMUNICATION AND MUTUAL EDUCATION WITHIN THE DEPARTMENT AND WITH CURRENT AND NEW STAKEHOLDERS
(College Goal C)

Relationship and Constituency Building: A Responsibility for All Department Members

Four concrete goals are outlined for increasing the visibility of the department and for engaging our stakeholders to a greater extent than in the past. An overarching theme linking all areas is *the vital importance of relationship and constituency building.* Our "visibility" as a department can no longer be taken for granted. To be visible in ways that support our departmental goals and interests requires active attention on all our parts to relationships with our various constituencies. Our constituencies are multiple. Students, undergraduate and graduate, are central. Department alumni, college and university administration, as well as more external stakeholder groups, are also important.

As a department, we need to continue to work to identify our stakeholders (and their interests) and listen to their positions, enthusiasms, and their established and emerging concerns.

Relationship building to advance our department must be approached more deliberately and in an integrated fashion. It must never compromise our integrity as scientific researchers, educators and extension practitioners.

Many AERS faculty have had considerable success building relationships to support and develop their own professional activities and those of their colleagues. It is incumbent on all of us to supplement these valuable "me" efforts with greater attention to "we" efforts. This will require that members of the department become more informed about initiatives conducted throughout AERS and perceive a responsibility to share relevant information and foster appropriate linkages with AERS constituencies. The commonalities in our perspectives and activities should be reinforced. The differences must also be respected and supported.

Visibility Goals

Goal I. Manage and disseminate information on faculty activities efficiently and strategically.

Background. A key element in enhancing the visibility of the work of AERS is the timely supply of information on activities, achievements and competencies of faculty to stakeholders at the local, state, national and international levels. [2] The provision of such information is important to keep the college administration and faculty in other departments abreast of our work, to help disseminate the results of our work to those individuals or groups in the state (and more broadly) who can benefit from it, and to keep professional colleagues at other institutions informed about what we do. There are also important internal needs for this information, for example, to maintain communication among faculty on activities and interests. Finally, faculty members have individual professional needs relating to this information.

Strategies and Actions

1. *Continue to enhance and keep up to date the new department web site and the specific program web sites.*

Goal II. Continue to develop strong departmental alumni relations.

Background. Work on departmental alumni relations has intensified over the last several years, including establishing a separate group within the broader CAS alumni organization. This work remains important on a number of levels. Alumni hire our students, they refer prospective students to us, they become extension clients, and they make the case for our work to the college and the university, to name only a few of their many contributions.

The department has become more active in establishing a cadre of interested alums who are willing to return to campus for an annual event, such as the Fall Alumni Tailgate and football game. There have also been efforts to establish advisory committees for some AERS academic programs, and alumni are often included. We continue the traditions such as the AERS faculty-

[2] For brevity we refer to "faculty" throughout, but the issues discussed apply to others (e.g., extension associates).

student volleyball challenge and the graduation reception. Given the centrality of active and supportive alumni to a strong department these efforts must continue. Providing excellent experiences for students when they are here provides a firm foundation for developing productive alumni relations.

Strategies and Actions

- Continue to publish a regular alumni newsletter highlighting faculty and departmental activities and opportunities for alumni connections.
- Maintain and update the AERS alumni directory that facilitates both our networking with alumni and alumni networking with each other.
- Update the existing departmental history with the help of key alumni and senior or emeritus faculty to highlight the range and significance of AERS achievements and impacts.

Goal III. Enhance departmental presence and leadership in the CAS.

Background. Because Penn State University is a large, complex institution, it can be challenging to highlight our academic programs in a crowded field. If AERS is to be more successful in such an environment, at the least, we must develop a strong and coherent "message" and get it before more people on campus. Marketing and promotion of research, teaching and extension programs in the department is a responsibility that each of us must accept.

Because college administrators tend to be from production, natural and technical science disciplines, many have limited understanding of the social sciences. Therefore, we need to increase college understanding of and appreciation for the social sciences. This involves conveying the solidity and legitimacy of our research and underscoring its connections to the new CAS Strategic Plan and also to the land-grant mission.

The new CAS Strategic Plan presents considerable opportunity to support and be integrally involved in the strategic initiatives, while continuing to develop our departmental expertise regarding social and economic systems and promote them more vigorously. The involvement in the CAS initiatives will allow us to take leadership in promoting cross-disciplinary dialogue and initiatives in the CAS. There is a need to ensure that individuals and departments will be duly recognized and rewarded for taking on roles that might further this newly-articulated mission of the college.

Strategies and Actions

- Communicate more often and more effectively within the CAS the impacts of our research on private and public decision-making and our recognitions and honors.
- Invite key college and university personnel to particularly relevant department seminars, symposia, etc. Do this strategically, targeting by topic and receptivity/interest.

Systematically solicit feedback. Encourage departmental faculty participation in seminars and workshops organized by other programs, to enhance dialogue between social science and science.
- Be more instrumental about getting our advocates and constituents outside the college to communicate commendations for our work, when appropriate (i.e., for truly excellent, valued work).

Take leadership on organizing multi-disciplinary workshops or symposia addressing complex problems falling within the purview of CAS. This could be organized in collaboration with the Environmental and Natural Resources Institute (ENRI).

Goal IV. Nurture strong links with policymakers, government officials, other external stakeholders and stakeholder prospects.

Strategies and Actions:

- Work more closely with Ag. Communications to develop material for press releases to enhance the impact of our work.
- Identify whom faculty view as their most effective policy contacts at present and where they see the most promising opportunities and greatest need for building new relationships.
- Ensure departmental recognition and rewards for those who cultivate successful policy and applied links to their work
- Develop regular press releases prepared by faculty on a rotating basis.
- Assess value and ease of the AERS website for use by external stakeholder audiences and make necessary enhancements.

GOAL D: ENHANCING DECISION-MAKING AND CLIMATE WITHIN AERS

As a matter of principle, AERS decision-making processes should support and encourage experimentation, adaptation, guarantee transparency and inclusiveness, and contribute positively to both the professional performance and social climate of the unit.

Under this goal we will continue a focus on strengthening the department's strategic decision-making effectiveness and its climate, a related issue. Achieving consensus within and across the dynamic societal and organizational environments of the department regarding how we approach and make decisions is essential for ensuring our individual and collective success. Our shared values, organizational structures, and decision processes are central to departmental decision-making. Successful implementation of these three elements will ensure respect for all, flexibility to respond and adapt to change, transparency, inclusiveness, and equity in decision-making.

Shared Values

Any organization's core values create a philosophical perspective and cultural context within which individual and organizational activities and decision-making occur. A widely shared consensus on core values can assist all departmental individuals and groups in optimizing success and effectiveness, despite differences of view and resource constraints. The converse is also true. It is important for AERS faculty and staff to articulate a set of widely-shared core values to guide departmental governance and decision-making. These values would reflect a commitment by faculty, staff, and students of AERS to do their best to ensure a climate conducive to positive and productive professional and social relationships. This commitment would be reflected in each member of AERS taking responsibility for ensuring that their decisions and those of the department reflect these widely-shared values. Starting points for identifying and clarifying AERS core values are statements of values in previous department strategic plans and the current CAS Strategic Plan.

Organizational Structures

Given the certainty of changes in societal, disciplinary, and institutional contexts, the departmental organizational structures, in all dimensions, must be fluid and continually evolve, including the use of "ad hoc" groups around issues of common interest. A fundamental principle of future effectiveness and success is commitment to organizational innovation and, when appropriate, willingness to change. The current committee structure and process appears, in general, to be functional and viable. However, both committee structure and process could be strengthened by considerably more openness with respect to the conduct and content of committee business. It would also be helpful to prepare an updated statement of purpose for each committee. The notion of viewing climate as being the responsibility of all of the department's committees, faculty, staff, and students is a necessity.

Strategies and Actions

1. Review standing committee charges and responsibilities, and prepare updated statements for each standing committee, as needed.

***Decision-Making Processes*.** The issue of who is involved in influencing and making what decisions raises important concerns about how to strengthen AERS processes so as to "lead and manage as a system," a goal noted in the CAS Strategic Plan. Which of these matters is the purview of the faculty, which matters the purview of the staff, and which the purview of the department head? Further, what are the appropriate roles for students in AERS decision-making, given that much of the work of the department is conducted with and for students? A similar question should be asked about fixed-term employees, such as extension associates and instructors.

Another issue that should be explored by the faculty is whether following a model of majority vote by the whole faculty is the best governance model in all instances. This approach may discourage experimentation and increase alienation among individuals and groups with strong interests in particular issues. Is majority voting by the whole the best decision making approach or are there alternatives which may work better in some situations? Do other options exist that

would enable us to draw constructive comments from the whole yet accommodate strongly held interests? A third issue is ensuring that decisions, however derived, are made openly with appropriate consultation. It is also important that clear and transparent mechanisms are in place for monitoring performance and ensuring accountability within a given time frame, once a decision is made to support a particular initiative.

GOAL E: ENHANCE INTERNATIONAL OPPORTUNITIES FOR FACULTY AND STUDENTS

A goal of Penn State University is to realize its potential as a global university. Our department is well-positioned to support this goal with our current and planned activities.

- The department participates in memorandums of understanding (MOUs) with the University of Guanajuato, Mexico; The National Agrarian University – La Molina, Peru; the China Agricultural University; and the Universities of Reading and York, UK. We will be receptive to new opportunities as they arise, but will examine them carefully for their fit with our strengths; for their advantages for our programs, faculty and students; and our ability to maintain the relationship.
- The department plans to continue its participation in international extension education. Faculty currently help develop extension systems and programs in Eastern Europe, Russia and the Former Soviet States, and provide farm and financial management education in Costa Rica and Puerto Rico.
- The department will explore further opportunities for study abroad and for international visiting scholars, to the extent that they fit with our programs and we can maintain them.

  We currently offer the following study abroad programs:

  Agribusiness study tour in Costa Rica every other year
  Environmental study tour in Costa Rica every other year
  Agribusiness study tour in China (first conducted May 2008, with plans to continue)
  Semester abroad in Reading University, UK
  Course sharing agreement with the University of York, UK, for CEDEV students

  The department is active in hosting international visiting scholars, and plans to continue this practice as space and faculty resources permit. Department faculty have hosted a constant stream of scholars from other countries. Over the last five years 20 scholars from 12 different countries have been in residence in the department.

  In addition, the department hosts a group of young faculty members from countries in Eastern Europe, Russia, and the Former Soviet States, under the U.S. Department of Agriculture's Foreign Exchange Program (FEP).

Department faculty also regularly host international Cochrane Fellows scholars.
* The department has been very active in infusing international content into our curriculum. Our department offers courses at the undergraduate and graduate levels that focus on both intercultural and international learning. These courses carry the US and IL designations that allow undergraduate students to fulfill the university multicultural course requirements, and are required courses in the department's undergraduate majors, as well as majors in other departments. These courses are:

Introduction to Rural Sociology (R SOC 011)
Introduction to International Agriculture (INT AG 100)
Development Issues in the Global Context (CED 230)
Global Agribusiness (AG BM 338)
Global Seminar (CED 410)
Women in Developing Countries (CED/R SOC/WMNST 420)
International and Community and Economic Development (CED 425)
International Development, Renewable Resources and the Environment (CED/AG EC 450)

At the graduate level, international-focused courses are:

International Rural Social Change (R SOC 517)
Population and Development (R SOC 525)
Children and Youth in Developing Countries (R SOC 597B)
International Economic Development and Agriculture (AEREC 550)
Rural Labor and Labor Markets (AEREC 597A)

GOAL F: PARTICIPATION IN EXTENSION NATURAL WORKING GROUPS

Natural Working Group

Economic and Community Development

State-wide leadership for this effort will be provided by Timothy Kelsey, in his role as State Program Leader. Kathryn Brasier also will be part of this group.

Marcellus Shale Education

Leadership in this effort is being shared by Timothy Kelsey and Theodore Alter. Other team members are: Charles Abdalla, John Becker, Kathryn Brasier, Jeffrey Bridger, Jill Findeis, Leland Glenna, Stephan Goetz, Clare Hinrichs, Al Luloff, Diane McLaughlin, Rachel Perry, James Shortle, William Shuffstall, Walter Whitmer. Several of these do not have extension appointments, but are providing research for the effort.

Dairy Systems

James Dunn will provide limited education in dairy marketing.

Water Resources

Leadership for program teams will be provided by Charles Abdalla.

Land Resources

Program team members will be Charles Abdalla, Kathryn Brasier, Jill Findeis, Stephan Goetz, Allen Klaiber, Richard Ready, James Shortle. Several of these do not have extension appointments, but are providing research for the effort.

Renewable and Alternative Energy

We do not have specific extension resources devoted to this area, but several faculty are available if needs arise to provide education and research.

Horticulture

Program team member will be Jayson Harper

Farm Financial Management

State-wide leadership will be provided by Jeffrey Hyde

Program team leader for FSA will be Greg Hanson

Value-added Initiative

State-wide leadership will be provided by Jeffrey Hyde.

GOAL G: ASSESSMENT OF STUDENT LEARNING OUTCOMES

Agribusiness Management Major

The purpose of the Agricultural Business Management major is to develop the knowledge, skills and professional responsibilities of undergraduate students to be managers in the diverse and extensive global food system, and contribute to its long-term economic sustainability. The curriculum is designed to provide a graduated three-tiered approach to understanding the agribusiness management decision environment. Level I introduces the content knowledge encompassing the principles of agribusiness management, the economics of the food system, and problem solving skills valued in agribusiness decision making. Level II builds upon this foundation by extending the content knowledge base to address consumer issues, globalization, policy, strategic and financial decision making, and market mechanisms at work in the food system. Level III serves a capstone role by focusing on integrating the content knowledge acquired to broaden the scope of the student's understanding of agribusiness management and how it fits into the larger food system.

Program Competencies:

Provide students with:

- Proficiency in communication (writing, oral presentations, technical presentations);
- Problems solving skills;
- Opportunities to develop team work and research

The level II and Level III courses will use case studies more extensively as a mechanism to reinforce the course material. The real-world perspective of cases offers an opportunity for students to acquire a set of experiences from experts in the context of an agribusiness management decision challenge.

The program integrates the use of computational skills throughout the three levels of course work. Starting with the Level I course on agribusiness problem solving, students are introduced to computational problem solving, including use of EXCEL software, and then increasingly develop their skills in computational approaches to agribusiness management decisions. The instruction and elaboration on the use of spreadsheets will continue into the level II courses.

The program creates a collection of courses integrating content knowledge. This feature in the proposed curriculum focuses on broadening the student’s perspective within the subject area by

using concepts learned to address industry-related problems holistically, and broadening the student's perspective outside the subject area by understanding the roles of other agents in the food system (such as food technology and engineering, policy makers, nutritional concerns).

AG EC 308W: Strategic Decision Making in Agribusiness

This course is designed to analyze a wide array of strategic decision making among agribusiness firms and other economic agents in a market environment characterized by imperfect information and market power. In each of the four parts of the class, students will investigate how many firms' business decision can be deconstructed or translated into relatively simple games where one firm plays against a rival or against nature, or where an employee plays against an employer.

The course content will feature industry applications and eight to ten case studies of individual companies. The class is designed to (i) improve students' critical thinking skills, (ii) improve their writing skills, and (iii) provide a realistic picture of the wide array of different decisions facing agribusiness professionals.

Learning Objectives:

Students will:

- Classify practical agribusiness problems by the type of available information – full, incomplete, imperfect – and by the nature of market power in an industry.
- Construct and analyze game trees and other representative models of strategic decisions facing businesses and employees
- Solve strategic business problems using economic models based on game theory, game-based rules of analysis, and other economic principles.
- Write and re-write business-style memos and reports that communicate or summarize a business decision, plan, or solution that is supported by economic analysis.

Writing:

The emphasis on writing is designed to demonstrate that the clear communication of innovative and thoughtful ideas is as important as the ideas themselves. Students will be reminded that the writing process develops through several iterations. The writing process continues with written and re-written drafts, peer reviews, revisions bsed on the peer review, instructor comments, and revisions based on these comments – that stress this iterative process.

AG EC 440: Food Product Innovation Management

A problem-based interdisciplinary capstone learning experiences designed to enhance career skills (critical thinking, decision making, team work, communication) in the context of industry's approach to developing and marketing new and improved food products. The course provides the

short-run benefits associated with broadening the scope of students' understanding of their own major fields and providing them with insight into how their fields fit into the broader food product development process. The long-run benefits of the course include providing students with practical experience in collaborative decision processes as they work within an interdisciplinary team. Rather than a purely academic presentation, knowledge of the food product development process is presented in context as students take the multiple and essential perspectives involved in food science and economics and business marketing. Students develop important skills necessary to be a contributing member of a working team, improve oral and written communication skills, and analyze ill-defined problems and develop the strategies necessary to resolve them.

Learning Objectives:

Students will

- comprehend the fundamental principles, generalizations and theories of product development;
- understand the specific skills, competencies and points of view needed by product development professionals;
- understand the interdependencies of finance, formulation, marketing, packaging, process engineering, production, quality assurance, etc. in the development of food products;
- understand how food company managers gain knowledge about the process for developing food products;
- develop the skills necessary to be a contributing member of a team;
- enhance oral and written communication skills;
- analyze ill-defined problems and develop strategies to resolve them.

AG EC 460: Managing the Food System

This course is designed to teach Agricultural Business Management majors to better understand the skills necessary for a firm to manage their interactions with other parts of the food system and to coordinate activities between agents to help the firm fulfill its role in the system. It will build on previous course work in the major.

Case studies will help students to understand the interrelationship in the food system and how to use these to obtain the desired objectives. This course will be firmly tied to the real world problems and their potential solutions.

Learning Objectives:

Students will:

- **Understand how the food system responds to changing conditions**

- **Understand how prices are used to regulate the system**
- Understand how grades and standards make price information more valuable
- Understand how forward contracts can be used to manage risk
- Understand how firms can manage their part of the food system so that it works well within the system.

Community, Environment and Development Major

The major goal of the Community, Environment and Development (CED) major is to develop the knowledge and skills of students to enable them to assist people, their communities, and institutions effectively understand, respond to and ultimately shape economic and social changes, including those posing risks to the environment. The CED major focuses on the fields of community and economic development, environment and natural resources, and the critically important interactions between these fields, both locally and globally. Foundation (Level I) courses introduce key concepts in economics and sociology, and examine how these disciplines contribute to the basic content knowledge of community and economic development and environmental economics and sociology. Level II coursework extends the content knowledge mastered in Level I to address the interrelationships between environment and natural resources and community and economic development. Coursework in Methods, Quantification and Communication is required, including Geographical Information Systems and Geographical Information Analysis, statistics and survey research methods. Finally, students select among three Options (fields of study): 1) Community and Economic Development, 2) Environmental Economics and Policy, and 3) International Development. It is expected that some students completing the program will choose to attend graduate school or law school, while others will select employment following graduation.

CED 410: The Global Seminar

The Global Seminar course will help students gain an understanding of the implications of global change in a world of limited natural resources. The course will help students to understand the difficulties that society faces in balancing the environment with human needs; appreciate the challenge of balancing competing needs at different levels (individuals, communities, organizations, governments); understand trade-offs and the role of policy; and explore and critically assess avenues for effectively dealing with global issues. Students participating in the Global Seminar have the opportunity of direct interaction with students from other universities and academic institutions who may have different perspectives on these issues. To allow this interaction, the Global Seminar is offered jointly with other universities from across the world, with students engaging in global videoconferences, virtual classroom discussions and group work with student peers at other universities. Case studies are used, with critical assessment of important global issues related to development and environment, with a particular focus on food production and natural resources. Issues of long-term sustainability are explored to gain a better understanding of the implications of alternative choices. The course is offered in collaboration

with Cornell University, with students using Cornell's Blackboard system. The course is intended to strengthen linkages for students with other universities for study and research.

Learning Objectives:

Students will:

- Demonstrate that they have learned the concept of sustainability in a global context
- Demonstrate an understanding of the complexity of significant global issues that require a balance of competing interests
- Show that they are able to work collaboratively with international student peers with potentially different viewpoints on major global issues and approaches to these issues
- Demonstrate through exams and written assignments a knowledge of the scientific basis and socioeconomic context of a set of major global issues related to natural resources and human livelihoods.
- Demonstrate through exams and written assignments a knowledge of alternative policy approaches to important issues related to environment and development

CED 475: CED Integrated Capstone Experience

This course is designed to encourage students to reflect, integrate and apply the knowledge that they have learned in previous coursework for the CED major. The course is built on discussion and exercises that require integration. Like the CED program more generally, this course relies on case studies to help students apply the skills that they have learned to actual cases that challenge communities and regions in developed and developing areas of the world. The CED program is also designed to include experiential-learning exercises throughout the program; this course engages students in a *significant* in-depth experience or project that will vary year-by-year. The experience could be in the United States or in another country. The project will be hands-on and action-oriented.
Evaluation is based on assessment of active participation in class discussions, papers that provide critical assessments of the case studies assigned to the class, and a final project conducted in the field, either in the U.S. or internationally.

Learning Objectives:

Students will:

- Show their ability to critically assess actual problems in the field;
- Demonstrate a high level of understanding of the application of theory to the real world;
- Demonstrate their ability to apply appropriate methods to real-world issues;
- Show that they are capable of integrating knowledge across the areas of community, environment and development

GOAL H: IMPLEMENTATION OF COST SAVINGS, COST AVOIDANCE, AND REVENUE GENERATION

Cost Savings and Cost Avoidance

Department Management

AERS completed the conversion of most of its phone systems to VOIP technology during the 2005-2006 fiscal year. TNS also reduced the long distance rates charged to university phones. Use of personally-owned cellular phones also has grown. The combinations of these two changes dramatically reduced the cost to AERS for long distance charges. The telecommunications cost paid for departmental operations have declined from $19,182 in FY 2004/2005 o $12,483 in FY2007/2008.

Information Technology Management. Information Technology staff had already been reduced prior to 2005 from a high of 7.0 FTE as part of earlier voluntary and involuntary reductions. There are currently 3.0 FTE committed fully to information technology support and 0.5 FTE committed to information technology matters as well as departmental administrative support. One of the staff committed fully to information technology support is supported on AERS discretionary funds.

Efficiencies were realized in the support of information technology through centralized management and standardization. Automated and centralized management was deployed in the areas of security updates, virus detection and protection, software deployment and other services. In the graduate student computing lab, software metering is now used to allow management of software licenses for expensive statistical and modeling software. One especially important area where centralized management is provided is scheduled backup to an offsite location; this process is automated and runs each night to copy information used by each user using a University service that is extremely cost effective. Additionally, replication software is used to maintain duplicate copies of files on backup servers so that server failures cannot interrupt work. These services result in a minimum of downtime, even for hard disk failures on individual computers; files are readily available to restore to a new disk so that the interruption is short-lived.

The IBIS forms creation has been distributed to those staff assistants who directly support faculty, eliminating the need to do all of the forms processing in the Department office. The backlog of documents requiring Department office attention was eliminated. The benefit from this change was that more staff were trained in the creation of IBIS forms, improving their skill set and providing more backup resources for that work. Recently, additional benefit was realized with the implementation of ERS in our college; because of the earlier training, staff supporting faculty were quickly able to understand the changes and begin entering forms. Given the very extensive increase in workload directly attributable to the use of the ERS system, support for the new reporting requirements would not have been possible without the earlier training and implementation.

Staff Support. Prior to 2005 there were six staff assistants providing direct support for faculty. Following each of four retirements, an evaluation was conducted to determine whether the staff support level could be reduced without compromising the appropriate support for faculty. As a result of those evaluations, two positions have been eliminated and half of one other person is allocated to support of graduate programs.

As staff positions become open, the needs for the positions will be assessed.

Graduate Student Information. A team was formed to investigate AERS needs related to graduate student information. Multiple people and offices in the Department need to use the same information related to the academic and financial records for graduate students. AERS staff manage assistantship offers as well as report and track the academic records of graduate students. Several faculty and staff had some of the information but no one had all of the graduate student information; duplication of files existed and people didn't know the roles of others. The team recommended that the Department create a database for graduate information, noting that faculty and staff would benefit from using the same data source and all could work more efficiently. A side benefit of the team effort was that participants developed a better understanding of all of the departmental processes.
AERS began using the STEPS database in Spring, 2006 for decisions related to assistantship stipends and Grants-in-Aid and management of graduate student funding. Graduate Program Coordinators use the reports to support graduate committee decisions. AERS staff can monitor the department funds commitments much easier than in the past; rather than compiling information from multiple sources, a single keystroke produces a report showing the detail funds commitments.

Revenue Generation

The needs for contributions to staff support by the institutes within the department will be assessed.

Further possibilities for increased cost recovery from extension programs will be examined.

GOAL I: CONTRIBUTIONS TO THE SEVEN CHALLENGES IN THE UNIVERSITY FRAMEWORK TO FOSTER DIVERSITY

Challenge One: "Developing a Shared and Inclusive Understanding of Diversity"

> The department and its faculty engage in a range of activities to foster understanding of diversity. These include:
>
> Developing and implementing Memorandums of Understanding (MOUs) with universities in other countries to provide exchange opportunities for faculty and students. Active current MOUs are with the University of Guanajuato, Mexico;
> the National Agrarian University – La Molina, Peru; the China Agricultural University.

Department faculty host a constant stream of scholars from other countries. Over the last five years 20 scholars from 12 different countries have been in residence in the department.

In addition, the department annually hosts a group of young faculty members from countries in Eastern Europe, Russia, and the Former Soviet States, under the U.S. Department of Agriculture's Foreign Exchange Program (FEP), and international Cochrane Fellows scholars.

Faculty also are active in taking international sabbaticals. In recent years sabbaticals have been taken in Australia, Costa Rica, Greece, Ireland, The Netherlands, New Zealand, Peru, and the United Kingdom. Department faculty also work in a variety of international contexts, and encourage graduate student collaboration on international issues.

Faculty actively participate in the diversity efforts of our professional organizations. Examples are the Committee on the Opportunities and Status of Blacks in Agricultural Economics (COSBAE) and the Committee on Women in Agricultural Economics (CWAE).

Challenge Two: "Creating a Welcoming Campus Climate"

As listed in our department's Mission statements, we share common goals of:

* Increasing departmental diversity, multicultural understanding, and cross-cultural competence; and
* Respect for each other as individuals and colleagues.

All our official external communications, including the department web page, publications and position announcements, include the university's nondiscrimination statement.

Challenge Three: "Recruiting and Retaining a Diverse Student Body"

We collaborate with the college's Office of Multicultural Programs to recruit and retain undergraduate and graduate students from underrepresented groups. We actively participate in college recruiting from Saul High School in Philadelphia.

We nominate graduate students for the Bunton-Waller fellowships, and regularly receive this funding for students. Department assistantship resources are committed to supplement the fellowships.

We participate in the Summer Research Opportunity Program (SROP) to bring students from underrepresented groups to the department for summer internships.

Challenge Four: "Recruiting and Retaining a Diverse Workforce"

The department's faculty recruiting efforts focus on identifying, recruiting and interviewing women and minorities. These efforts will continue at a high level. In two faculty searches in 2008, offers were made to women, although we were unsuccessful in hiring them. Two other women faculty were hired in 2008, one from an underrepresented group.

Challenge Five: "Developing a Curriculum That Fosters Intercultural and International Competencies"

Our department offers courses at the undergraduate and graduate levels that focus on both intercultural and international learning. These courses carry the US and IL designations that allow undergraduate students to fulfill the university multicultural course requirements, and are required courses in the department's undergraduate majors, as well as majors in other departments. These courses are:

Introduction to Rural Sociology (R SOC 011)
Introduction to International Agriculture (INT AG 100)
Development Issues in the Global Context (CED 230)
Global Agribusiness (AG BM 338)
Global Seminar (CED 410)
Women in Developing Countries (CED/R SOC/WMNST 420)
International and Community and Economic Development (CED 425)
International Development, Renewable Resources and the Environment (CED/AG EC 450)

At the graduate level, international-focused courses are:

International Rural Social Change (R SOC 517)
Population and Development (R SOC 525)
Children and Youth in Developing Countries (R SOC 597B)
International Economic Development and Agriculture (AEREC 550)
Rural Labor and Labor Markets (AEREC 597A)

The department also has developed, sponsored and implemented international programs for students. These include:

Agribusiness study experience in Costa Rica every other year
Environmental study experience in Costa Rica every other year
Study experience in China (first conducted May 2008, with plans to continue)
Semester abroad in Reading University, UK

Visits to Panamerican Agricultural School, Zamorano, Honduras to set up summer programs for our students and internships at PSU for their students

Challenge Six: "Diversifying University Leadership and Management"
Challenge Seven: "Coordinating Organizational Change to Support Our Diversity Goals"

KEY PERFORMANCE INDICATORS

See Appendix A

DEPARTMENT PRIORITIES FOR 2008-2013

I. Strategic Initiatives

The department intends to focus efforts on the college Strategic Initiatives in our research, resident education and extension programs.

- Provide leadership for college teams to develop the initiatives in Entrepreneurship, Water Quality and Quantity, and Energy, and actively participate in the Food, Diet and Health, and the Pest Prediction and Response initiatives.
- Continue to support and enhance a statewide extension team that focuses on value added enterprises in agriculture.
- Include units on entrepreneurship in courses in both undergraduate majors, and explore, with other units in the college, the creation of a specific course on entrepreneurship to serve undergraduates in the CAS.
- Increase efforts in energy-related research, resident teaching and extension. This will be accomplished with a new faculty member co-funded through the university energy initiative, who will develop a new course and research program on the impacts of biomass energy development.
- Expand our research portfolio, and include large grants from the NSF, NIH and DOE.

II. Resident Education Program

Maintaining the quality and growing the numbers in our resident education programs are fundamental to the department's success.

- A top department priority is to fill a vacant research-teaching position in the department's flagship Agribusiness Management program. We lack the resources to offer the full complement of courses, particularly in financial management (AG BM 407 and 408). The position will contribute to the broad agribusiness research and teaching program, including support of the entrepreneurship initiative.
- To address growing demand, the department would like to fill a position in regional economics and rural development. The position could be formulated as either a research/teaching or research/extension, and would also support the strategic initiative in Entrepreneurship.
- A teaching-research position in Rural Sociology is needed to address student demand in the sociology of natural resources. Since the resignation of a faculty member, the department does not have the expertise to offer needed courses nor supervise graduate research in this subject matter.
- An additional tenure-track Rural Sociology faculty position in community and community development is needed to contribute to meet increased and growing teaching demands in the CED undergraduate major and the MPS in CEDEV, and to ensure the continued high quality of essential courses and student mentoring in the nationally recognized graduate program in Rural Sociology. This position could be targeted to

emphasize research in community development combined with entrepreneurship and entrepreneurial communities, sustainable energy development, water quality and quantity or food, diet and health.

III. Extension Programs

Faculty extension resources have decreased, and we will be stretched to continue to offer programs in all the areas we now cover -- Agriculture and Natural Resources and the Environment, Community Development, Farm and Firm Management, Agricultural and Dairy Marketing, Rural Social Change, Families and Children.

- For the foreseeable future, dairy marketing will be de-emphasized, due to the loss of the faculty member with extension and research in this area.
- To address the above vacancy, the department would like to fill a position in Dairy Marketing with expertise Econometrics. This position could also support both the AG BM undergrad and the AEREC grad program, where relevant courses are currently vacant or covered by an instructor. Furthermore, this position could also support the strategic initiative in entrepreneurship.
- Future faculty resources will not be added to the families and children area.
- Filling an extension/research faculty position in economic development remains a department priority.

Appendix A

Table 1. Number of Tenured and Tenure-Track Faculty and Their Effort Allocation

Fiscal years	Tenured and Tenure-Track Faculty	Teaching	Research	Extension	External Administrator
1997/98	36	10.90	14.97	10.13	
1998/99	35	10.78	14.63	9.59	
1999/00	33	10.70	13.16	9.14	
2000/01	36	10.69	15.42	9.89	
2001/02	36	11.11	16.16	8.73	
2002/03	36	11.28	15.27	9.45	
2003/04	34	9.27	15.31	9.42	
2004/05	35	9.56	15.57	9.87	
2005/06	35	9.18	15.28	9.69	.85
2006/07	33	9.44	14.10	8.36	1.10
2007/08	31	9.43	12.21	8.26	1.10
2008/09	34	10.29	14.06	7.65	2.00

Note: excludes unit leader

Table 2. Number of Fixed-Term Faculty and Their Effort Allocation

Fiscal years	Fixed-Term Faculty	Teaching	Research	Extension
1997/98	6	1.00	2.48	2.52
1998/99	5	1.00	1.96	2.04
1999/00	3	1.00	1.00	1.00
2000/01	5	2.55	1.45	1.00
2001/02	6	3.20	1.80	1.00
2002/03	4	2.70	1.30	0.00
2003/04	3	2.20	0.80	0.00
2004/05	3	2.20	0.80	0.00
2005/06	3	2.30	0.70	0.00
2006/07	2	1.30	0.70	0.00
2007/08	2	1.35	0.65	0.00
2008/09	2	1.35	0.65	0.00

Table 3. Number of Staff

Fiscal years	Core staff	Program staff
1997/98	17	15
1998/99	17	12
1999/00	18	19
2000/01	18	20
2001/02	17	17
2002/03	17	17
2003/04	14	16
2004/05	12	14
2005/06	14	16
2006/07	15	13
2007/08	15	16
2008/09	15	16

Note: program staff are primarily on fixed-term appointments

Fiscal years are July 1 – June 30.
All faculty and staff data are for positions filled or committed as of July 1 of the year indicated.

Table 4. Student Enrollments and Total Credit Hours Generated

Fiscal Years	AGBM	2 AGB	ERRE	CED	AEREC	R SOC	CEDev	Total Credit Hours
1997/98	67	15	40		40	24		4,905
1998/99	70	5	29		39	24		4,964
1999/00	56	7	29		43	22		4,398
2000/01	61	7	19		40	22		4,368
2001/02	74	8	19		42	23	8	4,202
2002/03	84	13	13		40	21	9	4,123
2003/04	98	8	16		39	25	7	4,312
2004/05	122	4	18		37	23	15	4,617
2005/06	132	6	18		52	29	13	5,050
2006/07	114	10	19		44	32	20	4,674
2007/08	125	9	24	8	48	38	18	5,259
2008/09	131	1	8	49	45	32	30	

Note: enrollment figures for 1997/98 include students enrolled at University Park and other Penn State campuses. Data for the remaining years are UP students.

Table 5. Research Publications and Presentations

Calendar year	Refereed Journal Articles	Non-Refereed Journal Articles	In-House Publications	Books and Book Chapters	Abstracts	Papers Presented at Professional Meetings
1998	64	17	21	22	14	100
1999	51	15	15	27	23	75
2000	61	28	21	26	16	102
2001	61	34	49	27	8	105
2002	69	28	30	45	20	90
2003	47	15	31	36	14	121
2004	62	23	40	29	9	111
2005	43	22	59	36	4	127
2006	68	30	48	25	2	114
2007	65	8	61	24	3	90

Note: a new reporting system was introduced in 1998, comparable data for 1997 are not available.

Table 6. Extension Publications and Training Sessions

Calendar Year	Bulletins, Fact Sheets and Circulars	Video Tapes, Slides, Websites etc.	In-Service Training Sessions	Extension Presentations
1998	99	17	9	229
1999	31	12	19	284
2000	65	72	21	275
2001	67	24	19	271
2002	63	63	92	211
2003	88	57	28	144
2004	41	53	26	176
2005	32	66	11	153
2006	43	52	21	218
2007	32	39	39	151

Note: a new reporting system was introduced in 1998, comparable data for 1997 are not available.

Table 7. External Funding Generated

Fiscal	Extension		Teaching		Research		Interdisciplinary[1]	
Years	No.	$ 000	No.	$000	No.	$000	No.	$000
1997/98	27	1,922	1	80	33	2,485	32	2,196
1998/99	23	1,807	1	72	42	2,919	43	3,349
1999/00	19	2,601	1	30	40	1,940	37	2,290
2000/01	15	1,833	1	100	19	1,283	18	1,671
2001/02	15	1,910	1	83	31	1,779	27	2,157
2002/03	16	659	0	0	9	1,315	23	6,658
2003/04	14	1,543	0	0	22	3,061	25	4,506
2004/05	17	1,463	1	48	13	998	22	2,751
2005/06	15	2,172	1	80	22	1,450	29	3,243
2006/07	10	1,530	1	87	25	2,198	55	9,985
2007/08	18	1,539	1	28	23	2,692		

[1] Projects involving co-investigators from disciplines other than economics or sociology. This information is not available for fiscal years after 2005/06.

Table 8. Summary of Award Participation by Fiscal Year

	Research		Outreach		Instruction		Total	
Fiscal Year	No.	$000	No.	$000	No.	$000	No.	$000
2001/02	31	2,073	11	1,480	1	79	43	3,632
2002/03	33	3,139	13	1,371			46	4,510
2003/04	34	3,488	17	2,731			51	6,219
2004/05	26	2,288	17	1,493	2	68	45	3,849
2005/06	38	2,449	15	1,526	1	80	54	4,055
2006/07	25	2,198	10	1,530	1	87	36	3,815
2007/08	23	2,692	18	1,539	1	28	42	4,259

Table 9. Summary of Proposal Participation by Fiscal Year

	Research		Outreach		Instruction		Total	
Fiscal Year	No.	$000	No.	Amount	No.	Amount	No.	Amount
2001/02	52	7,640	21	1,979	2	179	75	9,798
2002/03	46	4,661	19	2,260	2	149	67	7,070
2003/04	40	8,990	29	2,745	4	582	73	12,317
2004/05	54	6,899	24	2,895	3	474	81	10,268
2005/06	43	5,918	13	1,913	1	87	57	7,918
2006/07	41	7,306	26	2,286	3	156	70	9,748
2007/08	43	6,615	11	1,361			54	7,976

Table 10. Teaching: Performance Indicators

	Per Faculty Teaching FTE[1]			Average teaching evaluation scores (SRTEs)[2]					
				Course Quality			Instructor Quality		
Fiscal Years	Under-Graduate Majors	Total Students	Credit Hours	UG	GR AERE C	GR RSOC	UG	GR AERE C	GR RSOC
1997/98	11.2	17.1	450	5.49			5.60		
1998/99	9.6	15.5	460	5.78			5.90		
1999/00	8.6	14.7	411	5.72			6.00		
2000/01	8.1	13.9	409	5.47			5.72		
2001/02	9.1	15.7	378	5.17	5.80		5.38	6.09	
2002/03	9.8	16.0	366	5.14	5.68		5.36	5.93	
2003/04	13.2	20.8	465	5.20	6.01		5.50	6.27	
2004/05	15.1	22.9	483	5.26	5.65	6.15	5.51	6.01	6.40
2005[3]	17.0	27.2	550	5.28	5.46	6.02	5.54	5.85	6.30
2006	15.1	25.3	495	5.29	5.66	5.82	5.54	5.95	6.05
2007	17.6	28.6	558	5.17	5.91	6.10	5.32	6.16	6.46

[1] Tenure-track faculty.
[2] Scores based on student evaluations; maximum score = 7.
[3]Changed records to calendar year basis.

Table 11. Research Performance Indicators

Calendar Years	Per Faculty Research FTE[1]			
	Refereed Journal Articles	Total Publications	Presentations at Professional Meetings	External funding ($000)
1998	4.4	9.4	6.8	184.7
1999	3.9	10.0	5.7	184.6
2000	4.0	9.9	6.6	104.5
2001	3.8	11.1	6.5	110.1
2002	4.5	12.6	5.9	86.1
2003	3.1	9.3	7.9	199.9
2004	4.0	11.8	11.8	64.1
2005	2.8	10.7	8.3	94.9
2006	4.8	12.3	8.1	155.9
2007	5.3	13.2	7.4	220.5

[1] Tenure-track faculty.

Table 12. Extension Performance Indicators

Calendar Years	Per Faculty Extension FTE[1]			
	Publications[2]	In Service Trainings for County Agents	Presentations at Extension Meetings	External funding ($000)
1998	12.1	0.9	23.9	194.4
1999	4.7	2.1	31.1	241.1
2000	13.9	2.1	27.8	224.2
2001	10.4	2.2	31.0	218.8
2002	13.3	9.7	22.3	69.7
2003	15.4	3.0	15.3	163.8
2004	9.5	2.6	17.8	148.2
2005	3.3	1.1	15.8	224.1
2006	5.1	2.5	26.1	183.0
2007	3.9	4.7	18.3	186.3

[1] Tenure-track faculty.
[2] Print and other media.

Table 13. Faculty and Student Honors and Awards (number)

Calendar Years	Faculty					Students[2]
	Teaching	Research	Extension	Professional[1]	Total	
1998	1	3	1	3	8	2
1999	0	2	3	1	6	2
2000	1	4	7	0	12	3
2001	1	2	5	1	9	3
2002	3	2	5	3	13	2
2003	7	3	3	5	18	5
2004	1	16	1	7	25	6
2005	1	2	3	12	18	1
2006	3	1	2	8	14	3
2007	6	2	3	6	17	3

[1] Professional awards, not associated with any of the three functional areas.
[2] Generally awards for research.

Appendix B

1998 HONORS AND AWARDS		
Faculty Name		**Award Received**
Epp, Don	G	Distinguished Member Award, Northeastern Agricultural and Resource Economics Association
Ford, Stephen	R	Certificate of Excellence for Publication, American Society of Agronomy
	R	Northeast Regional Research Award for Excellence, Regional Research Committee
Harper, Jay	E	Extension Award from Penn State Chapter, Gamma Sigma Delta
Sachs, Carolyn	R	Identities and Community in Rural Areas, Rural Sociological Society, Research Innovation Award
Smith, Steve	G	Fulbright Grantee, Peru
Stefanou, Spiro	T	Award Recipient, Provost's Collaborative & Curricular Innovations Special Recognition Program
Willits, Bunny	G	Distinguished Rural Sociologist, Rural Sociological Society
R=3 T=1 E=1 G=3		
Student Name		**Award Received**
Yin Mo	R	Award of Merit for Outstanding Masters thesis, NAREA
Pei-Shan Liao	R	RSS Graduate Student Paper Award
R=2		

1999 HONORS AND AWARDS		
Faculty Name		**Award Received**
Harper, Jay	E	Certificate of Appreciation from USDA for work in the NAPIA Program
Kelsey, Tim	E	3rd Place in Narrative Division of the Broadcast Education Association Juried Faculty 1999 Competition
Sachs, Carolyn	G	Distinguished Alumni Award, Department of Sociology, University of Kentucky
Shortle, Jim	R	1999 Research Award of Merit, Penn State Chapter of Gamma Sigma Delta
Smith, Steve	R	Fulbright Scholarship and Sabbatical Leave
Van Horn, Jim	E	University Faculty Outreach Award
R=2 T=0 E=3 G=1		
Student Name		**Award Received**
Chen, Yu-Hua	R	Jesse Bernard Award for best dissertation proposal in feminist theory from the National Council on Family Relations
Theodori, Gene	R	1999 RSS Graduate Student Paper Award
R=2		

2000 HONORS AND AWARDS

Faculty Name		Award Received
Abdalla, Charlie	E	Outstanding Public Issues Education Program, Farm Foundation
Findeis, Jill	T	Milton S. Eisenhower Award for Distinguished Teaching
Frechette, Darren	R	Outstanding Journal Article, American Agricultural Economics Association
Hanson, Greg	E	Distinguished Service Award, Center for Farm Financial Management, University of Minnesota
Harper, Jay	E	Award for Excellence, Northeast Regional Association of State Agricultural Experiment Station Directors
Hyde, Jeff	R	Best Journal Article Reviewer, Soil and Water Conservation Society
James, Jenni	R	Outstanding Published Research, Western Agricultural Economics Association
Kelsey, Tim	E	Distinguished Extension Program, American Agricultural Economics Association
	E	Outstanding Public Issues Education Program, National Public Policy Education Committee & Farm Foundation
Luloff, Al	R	Merit and Excellence in Natural Resource Sociology, Natural Resources Research Group Award
Van Horn, Jim	E	University Faculty Outreach Award
Weaver, Rob	E	American Agricultural Economics Association Annual Award for Outstanding Extension Program

R=4 T=1 E=7 G=0

Student Name		Award Received
Wang, Qiuyan	R	NAREA Award of Merit for her thesis
Ortega-Sanchez, Ismael	R	Prestigious U.N. Internship
Heberling, M	R	Place 3rd in the 2000 Graduate Research Exhibition

R=3

2001 HONORS AND AWARDS

Faculty Name		Award Received
Abdalla, Charlie	E	Outstanding Public Issues Education Program, Farm Foundation
Bailey, Ken	R	Journal Article of the Year Award, 2001, Northeastern Agricultural and Resource Economics Association
Harper, Jay	E	Award for Excellence, Northeast Regional Association of State Agricultural Experiment Station Directors (Plum Pox)
	E	Award for Excellence, Northeast Regional Association of State Agricultural Extension Directors (Plum Pox)
	E	USDA, CSREES, Certificate of Appreciation
	E	USDA, Group Award for Excellence
Jensen, Leif	T	2001 Award for Excellence in Instruction, The Rural Sociological Society
Stedman, Rich	R	Rural Sociological Society Innovation Award (co-received with Tom Beckley)
Willits, Fern	G	University Distinguished Professor

R=2 T=1 E=5 G=1

Student Name		Award Received
Oluwole, Tokunbo	R	NAREA Award of Merit for thesis in 2001
Brinch, Brian	R	NAREA Award for Merit for thesis in 2001
Hobbs, Melissa	R	Rural Sociological Society Dissertation Research Award
R=3		

2002 HONORS AND AWARDS

Faculty Name		Award Received
Beierlein, James	T	Nominated by Department for AAEA 10+ years Undergraduate Teaching Award
Epp, Donald		2002 Excellence in Academic Advising Award
Findeis, Jill	T	Outstanding Teacher of America Award
Findeis, Jill	T	Nominated for 2003 AAEA Outstanding Graduate Teaching Award, 10+ years
Harper, Jayson	E	Vice President's Award for Innovation, PSU Outreach
Harper, Jayson	E	USDA, CSREES, Certificate of Appreciation, July 2002, NE-501
Harper, Jayson	E	USDA, Group Award for Excellence, July 2002, NE-501
Harper, Jayson	E	USDA, Certificate of Appreciation, October, 2002, for contributions to 3rd National Small Farm Conference
James, Jennifer	R	2002 Award for Ourstanding Published Research, Western Agricultural Economics Association
Luloff, Al	G	Plaque honoring service in Community Development Society as the Editor of its journal, 1997-2002
Shortle, James	G	President-elect, NorthEast Ag & Resource Economics Association
Stokes, C. Shannon		Visiting Scientist Award at the Food and Agricultural Organization of the United Nations
Stokes, Jeff	R	Global Fund award to support international travel to present paper at IFORS triennial conference
Van Horn, James	E	State Coordinator, CFLE Certification Process
Willits, Fern	G	University Distinguished Professor of Rural Sociology
R=2 T=3 E=5 G=3		

Student Name		Award Received
Brennan, Mark	R	Rural Sociological Society Dissertation Award
Slack, Tim	R	Rural Sociological Society Dissertation Award
R=2		

Staff Name		Award Received
Alters, Rose Ann		2002 Ella Reagle Staff Assistant Award

2003 HONORS AND AWARDS

Faculty Name		**Award Received**
Alter, Ted	E	Visionary Leadership Award, Alpha Omicron Chapter, Epsilon Sigma Phi, National Honorary Extension Fraternity
Beierlein, James	T	AAEA Undergraduate Distinguished Teaching Award
Beierlein, James	T	PSU College of Ag Science Academy of Teaching Excellence
Findeis, Jill	T	Thesis Advisor for Schultz Award
Frechette, Darren	R	Roy C. Buck Award for best refereed journal article on social or human sciences by untenured, tenure-track faculty
Hyde, Jeff	T	Thesis Advisor for Outstanding Master's Thesis Award
Hyman, Drew		2003 Barash Award for Human Service
Jensen, Leif	T	2003 Graduate Faculty Teaching Award
Jensen, Leif		Director, Population Research Institute (until 6/30/06)
Luloff, Al	G	Japanese Society for the Promotion of Science Fellowship
McLaughlin, Diane	T	Named to "Community of Teaching Excellence" in the CAS
McLaughlin, Diane	G	ESCOP/ACOP Leadership Development Program, selected as college rep to national leadership program
Moore, Lou	E	FEP Distinguished Service Award by USDA ICO
Shortle, James	G	University Distinguished Professor of Agricultural & Environmental Economics
Stedman, Rich	R	College International Programs Global Fund Award to collaborate with federal researchers at Canadian Forest Service
Stefanou, Spiro	T	Thesis Advisor for Torries Price for Outstanding Graduate Research 2003
Shields, Martin	G	Distinguished Service, Mid-Continent Reg Science Association
Stokes, C.S.	R	Named to Honorary Editorial Borad of a new journal "Applied Population and Policy"
Van Horn, James	E	2002 Program Award, second place - team National Extension Assoc of Family and Consumer Services
Zoumas, Barry	G	Elected President of International Life Sciences Institute (ILSI), Washington, D.C.
R=3 T=7 E=3 G=5		

Student Name		**Award Received**
Engel, Phoebe	R	Outstanding Master's Thesis Award, NorthEast Agricultural & Resource Economics Association, 2003
Nankhuni, Flora	R	Gerald T. Gentry Award for Excellence in Grad Research, Gamma Sigma Delta
Nankhuni, Flora	R	Schultz Award, International Association of Agricultural Economists
Nankhuni, Flora		Placed third in the 18th Annual Graduate Exhibition
Slack, Tim		2003 Alumni Association Dissertation Award
Tuncelli, Ozgur	G	Commission for Women, Achieving Women Award, Grad Student
Tuncelli, Ozgur	G	Graduate Student Service Award
R=3 G=2		

Staff Name		**Award Received**
Roth, Sarah		Vice President's Award for Innovation "Pathfinder Award." Member of the Dairy Farm Resource Planning Guide Team, lead by Dr. Lisa Holden

2004 HONORS AND AWARDS		
Faculty Name		**Award Received**
Abler, David	R	Research Award, Penn State Chapter of Gamma Sigma Delta
Becker, John	G	Fulbright Senior Specialist Grant
Beierlein, James	T	Exemplar Teacher, USDA
Frechette, Darren	R	Associate Editor, AJAE
Goetz, Stephan	R	Research Affiliate, Rural Policy Research Institute's Rural Poverty Research Center, 2004-present
Goetz, Stephan	R	Fellow, Rural Development Research Consortium, University of California, Berkeley, 2003-2005
Hyde, Jeff	R	Roy C Buck Award, best peer-reviewed journal article in the social sciences, CAS
Jensen, Leif	R	Invited Member, Research Council, Rural Poverty Research Center, RUPRI, University of Missouri
Jensen, Leif		Gamma Sigma Delta Teaching Award
Luloff, Al	G	Japanese Society for the Promotion of Science Fellowship
Luloff, Al	G	Community Development Achievement Award, Community Development Society
Luloff, Al	G	Elected Adjunct Professor of Forestry, Department of Forestry, Wildlife, and Fisheriens, University of Tennessee
McLaughlin, Diane	R	Research Affiliate, Rural Policy Research Institute's Rural Poverty Research Center
Ready, Rich	R	Associate Editor, AJAE
Ready, Rich	R	Editorial Board, Land Economics
Sachs, Carolyn	G	Commision for Women, Achieving Women Award
Sachs, Carolyn	G	President-elect, Rural Sociological Society
Stedman, Rich	R	Roy C Buck Award, best peer-reviewed journal article in the social sciences, CAS, 2004
Stedman, Rich	R	Editorial Board, Rural Sociology Society
Stedman, Rich	R	Editorial Board, AgBioForum
Stefanou, Spiro	G	Senior Marie Curie Foundation Fellowship, University of Crete
Stefanou, Spiro	R	Editorial Board, Agricultural Economics Review
Stefanou, Spiro	R	Editorial Board, European Review of Agricultural Economics
Stefanou, Spiro	R	Editorial Board, AgBioForum
Stefanou, Spiro	R	Editorial Board, Journal of Productivity Analysis
Department	E	AAEA Extension WebSite Award
Student Name		**Award Received**
Flint, Courtney	R	Best PhD Student Paper, International Symposium on Society and Natural Resources
Khatun, Mahmuda	R	Selected as Population Policy Fellow by Population Reference Bureau
Kipp, Jennison	R	Society for Risk Analysis (SRA) Travel Award, based on competitive review
Kipp, Jennison	R	Second Place Award, 2004 College Research Exhibition
Ryan, Andrea	T	Graduate Assistant Outstanding Teaching Award
Sambisa, William	R	Selected as Population Policy Fellow by Population Reference Bureau
Staff Name		**Award Received**
Confer, Sue		Ella Reagle Staff Assistant Award
Dodd, Alyssa		CAS Staff Laureate Ambassador Award

Dodd, Alyssa		Penn State Cooperative Extension Director's "Spirit Award for Outstanding State Specialist"
IT Group		AAEA Annual Meeting, department won award for Outstanding Departmental Extension Website

2005 HONORS AND AWARDS		
Faculty Name		**Award Received**
Abler, David	P	NAREA Outstanding Article of 2004 Award
Stedman, Richard		2004 Roy C. Buck award for his outstanding publication in social sciences
McLaughlin, Diane		Howard B. Palmer Faculty Mentoring Award.
Jensen, Leif		2005 Excellence in Research Award from the Rural Sociological Society.
James, Jenni		College award for professional development project–leadership workshop
Ready, Rich		College award for professional development project–professional collaborations on natural eco-systems
Ready, Rich		2005 Roy C. Buck Award
Stedman, Rich		College awards for professional development project, professional collaborations on social and ecological systems
Abdalla, Charles		Outstanding Public Issues Education Program Award from the Farm Foundation, National Public Policy Education Committee for his program "What the Public Values About Farmland."
Smith, Stephen		2005 Distinguished Member Award from the Northeast Agricultural and Resource Economics Association
Findeis, Jill	P	AAEA Graduate Teaching Award
Brasier, Kathy		2005 Vice President for Outreach Award for Learning and Community
Findeis, Jill		2005 Vice President for Outreach Award for Learning and Community
Sachs, Carolyn		2005 Vice President for Outreach Award for Learning and Community
Student Name		**Award Received**
Ryan, Andrea		Commission for Women, Achieving Women Award, Graduate Student
Staff Name		**Award Received**
Moist, Linda		2005 Vice President for Outreach Award for Learning and Community
Stone, Ann		2005 Vice President for Outreach Award for Learning and Community
Trauger, Amy		2005 Vice President for Outreach Award for Learning and Community

2006 HONORS AND AWARDS		
Faculty Name		**Award Received**
Abdalla, Charles		University Outreach Award
Abdalla, Charles		Mid-Atlantic Regional Water Quality Program's "Rapid Response" Award
Beierlein, James	T	Alumni Teaching Fellow
Blandford, David	P	NAREA Outstanding Journal Article
Jaenicke, Ted	R	Roy C. Buck Award
Jaenicke, Ted	T	Community of Teching Excellence Award
Hinrichs, Clare		ESRC - SSRS Visiting Fellowship, University of Newcastle, UK
Stefanou, Spiro		Fellow of the American Agricultural Economics Association (AAEA's highest honor)
Stokes, C. Shannon	P	Distinguished Rural Sociologist Award
Stokes, C. Shannon		University Graduate Faculty Teaching Award
Student Name		**Award Received**
Clark, Jonathon		2006 College of Agricultural Sciences graduate research award
Lenihan, Martin		Alumni Association Dissertation Award
Shrestha, Sundar		2006 College of Agricultural Sciences graduate research award
Staff Name		**Award Received**
Better Kid Care Program		Cooperative Extension & Outreach Director's Team Award
Gervinski, Barb		Ella Reagle Staff Assistant Award
Kline, Linda		University Staff Support Award

2007 HONORS AND AWARDS		
Faculty Name		**Award Received**
Abdalla, Charles		Regional Teamwork Award, Mid-Atlantic Regional Water Program
Saacke Blunk, Kristen		Regional Teamwork Award, Mid-Atlantic Regional Water Program
Bailey, Kenneth	**P**	President's Volunteer Service Award, CNFA and President's Council on Service & Civic Participation
Blandford, David	**P**	Outstanding Paper Award, Sato Prize 2007
Brasier, Kathy	**E**	Outstanding Exhibit at 2007 Spring Statewide In-Service
Demeke, Bayou		NACTA Teaching Award of Merit
Findeis, Jill		University Distinguished Professor of Agricultural Economics and Demography
Findeis, Jill		Harbaugh Scholar
Glenna, Leland	**R**	Roy C. Buck Award
Hyde, Jeff	**P**	Northeast Regional Education Technology Team Award
Hyde, Jeff	**P**	National Education Technology Team Award
Luloff, A.E.	**P**	Rural Sociological Society Excellence in Instruction
Luloff, A.E.	**R**	Gamma Sigma Delta Research Award
Stokes, Jeff	**T**	Community of Teaching Excellence Award
Shortle, Jim	**P**	Northeast Association of Agricultural and Resource Economists 2007 Distinguished Service Award

Student Name		**Award Received**
Lawton, Jennifer		AAEA Outstanding Masters Thesis Award
Lawton, Jennifer		NAREA Outstanding Masters Thesis Award
Wang, Li		AAEA Outstanding Doctoral Dissertation Award
Staff Name		**Award Received**
Frumento, Claudio		College Staff Laureate Customer Service Award

2008 HONORS AND AWARDS		
Faculty Name		**Award Received**
Dunn, James		Community of Teaching Excellence Award
Luloff, A.E.		Black Award for Excellence in Research
McLaughlin, Diane		Graduate Program Chair Leadership Award
Stefanou, Spiro		Graduate Faculty Teaching Award
Student Name		**Award Received**
Staff Name		**Award Received**
Hawbaker, Donna		Ella Reagle Staff Assistant Award

2009 HONORS AND AWARDS		
Faculty Name		**Award Received**
Beierlein, Jim Jaenicke, Ted Sachs, Carolyn		Barash Award for Human Services Gamma Sigma Delta Faculty Award for Outstanding Teaching Spirit of Internationailzation Awards
Student Name		**Award Received**
Fortunato, Michael		Howard F. Martin Graduate Assistant Outstanding Teaching Award
Staff Name		**Award Received**