

Recommendations
Economic Sustainability Issue Group
March 31, 2008

CAPITALIZING ON OPPORTUNITIES IN THE FACE OF CHANGE

The Northeast region is undergoing wide-ranging change, driven by forces influencing economic sustainability of farms and forests. The face of change reflects trends where local foods have prominence, farms are valued for supplying food but also landscapes, bio-energy creates new options for income, and ‘niche’, ‘green’ and ‘local’ provide expanded opportunities for agribusiness and forest resource entrepreneurs. Examples of trends shaping Pennsylvania and the region’s future include:

- the force of globalization
- urbanization and out-migration from the East’s urban corridors
- shifts in energy production and greater bio-energy awareness
- new waves of immigration and new ethnic cultures
- an aging landowner population and an unprecedented intergenerational transfer of assets
- growth in numbers of ‘discerning consumers’ focused on food quality, human health, and environmental impacts of human activity

We are a region in transition. The CAS can be a leader, or a follower by default, in this transformation. The Economic Sustainability Issue Group strongly recommends that in this next round of Strategic Planning, the CAS undertake strategic investments *to position the College as a leader of the transition.*

To achieve this goal, the Economic Sustainability Issue Group recommends investment in three initiatives over the next cycle. The interrelated initiatives represent a cluster effort designed to support sustainable systems that are economically and ecologically sound. The Economic Sustainability Issue Group stresses that we view Pennsylvania’s producers as a continuum – from large operations to medium-sized to small to very small. Each plays an important role in Pennsylvania’s economic development, and each will benefit from the investment.

The Economic Sustainability Issue Team recommends the following three initiatives for strategic implementation:

INITIATIVE 1. CENTER FOR INNOVATIVE ENTREPRENEURSHIP *or* CENTER FOR GREEN ENTREPRENEURSHIP

INITIATIVE 2. IMPROVING ACCESS TO HIGH QUALITY FOOD

INITIATIVE 3. TRANSITIONS TO SUSTAINABLE FARMS, FORESTS, COMMUNITIES

The interrelated initiatives can be positioned under the proposed Center, or organized as separate units supporting the larger CAS Economic Sustainability effort.

The strategy will require multidisciplinary teaming of science and social science, targeted partnering to exploit external strengths, and contributions by each CAS mission. First, world-class research by integrated research teams is needed to 1) understand dynamic processes and critical linkages between and among systems – e.g., food and forest resource, socio-economic, demographic-health, and ecosystems, and 2) develop transferable technologies, and particularly those geared to small and medium-sized operations. Second, well-supported extension/outreach is required to 1) build strong participatory networks and 2) advance technology/infrastructure transfer programs focused on sustainable systems. Third, dynamic resident education programs are needed to help students become well trained for a future that will challenge them to think in new ways.

INITIATIVE 1. CENTER FOR INNOVATIVE ENTREPRENEURSHIP *or* CENTER FOR GREEN ENTREPRENEURSHIP

We propose that the College designate and support a *Center for Innovative Entrepreneurship* (CIE) or *Center for Green Entrepreneurship* (CGE).¹ The Center is proposed as a named Center within the CAS. The Center will focus on new and emerging opportunities for entrepreneurs in the agricultural and forest resource industries including start-up entrepreneurs. Examples of emerging opportunities include, but are not limited to: fresh marketing to urban markets, bio-mass fuels, organic and natural, certified wood products, and technology-driven improvements in agricultural efficiency that foster sustainability. The Center would serve to bring together faculty and stakeholders with entrepreneurial expertise, and be a focal point for innovative entrepreneurship training to benefit undergraduate majors from multiple CAS departments. All sizes of operations are expected to be served by the Center.

Potential Partners: Smeal College, (e.g. Farrell Center for Corporate Innovation and Entrepreneurship); Commonwealth of Pennsylvania; PSIEE; CAS entities such as ENRI, Biomass Energy Center, Dairy Alliance, Northeast Regional Center for Rural Development, Goddard Chair in Forestry and Natural Resources, Metro Research and Outreach Center (MROC), multiple CAS departments; College of Arts and Architecture; Ben Franklin Technology Partners; PSU Management Development Programs and Services (Outreach); NGO, industry and entrepreneur partners.

Action Items:

- Provide courses in (general) entrepreneurship and green entrepreneurship focusing on the needs of CAS undergraduate students. Develop minors in entrepreneurship and environmental entrepreneurship. Incorporate Entrepreneur Mentors explicitly in programs.
- Sponsor major annual event titled ‘The Management Forum’.
- Encourage entrepreneurship (e.g. start-up enterprises) in such cutting-edge areas as clean energy, biomass, nanotechnology, etc. where Penn State may be at the cutting edge in the science, but has fewer resources from which to foster commercialization of the new technologies.
- Develop capabilities of entrepreneurs to take advantage of trends toward and demand for locally-grown and ‘green’ products, clean energy from biomass, etc. Act as a champion for applied research on competitiveness for environmentally sustainable enterprises.
- Incorporate international dimensions of natural resource/environmental entrepreneurship into the Center. CAS could become known as a leading provider of outreach instruction and materials for managers seeking to initiate/grow natural resource-based enterprises. Consider a two-pronged approach: 1) Center faculty training of natural resource/environmental entrepreneurs, and 2) Center faculty and staff assisting PA entrepreneurs seeking to find foreign markets for their products. Consider offering courses in green entrepreneurship in collaboration with the new PSU School for International Affairs.
- Develop training materials in other languages for agricultural entrepreneurs and employees. Include PSU CAMP (farm worker) undergraduate students in the Center’s entrepreneurship training programs.
- Develop a ‘Labor for Competitiveness’ program to better support 1) PA entrepreneurs facing labor shortages and 2) Pennsylvania’s diverse population of workers.
- Promote youth entrepreneurship.
- Investigate potential for an on-line certificate or professional Master’s program in Environmental Entrepreneurship; a certificate program in Veterinary Technology.
- Seek external funding to support the CIE.

¹ The Committee recommends that the name of the proposed Center be decided upon in consultation with an external marketing firm. Names suggested by members of the Issue Group included: Center for Green Entrepreneurship, Center for Agricultural and Forest Resources Entrepreneurship, Center for Entrepreneurial Innovation, Center for Environmental Entrepreneurship, among others.

INITIATIVE 2. IMPROVING ACCESS TO HIGH QUALITY FOOD

We propose that the CAS designate and develop a major strategic initiative in *Improving Access to High Quality Food*. Our farms and forest enterprises are in a position to gain from trends toward pursuit of healthier lifestyles by producing food and other products that cater specifically to these markets. There also is growing interest in regional agriculture as a basis to improve food security. This initiative supports PA entrepreneurs but also benefits Pennsylvania's consumers, roughly 75% of which live in urban Pennsylvania. The proposed initiative stresses the development of strong partnerships with the health community, science-based research across Penn State, a range of NGOs, and the Pennsylvania Department of Agriculture (PDA).

Potential Partners: Hershey Medical, Huck Institutes for the Life Sciences, College of Health and Human Development, Smeal College, NGOs (e.g., Rodale, PASA), Metro Research and Outreach Center, Social Science Research Institute/Population Research Institute (SSRI/PRI), Pennsylvania Department of Agriculture, multiple departments in CAS.

Action Items:

- Conduct interdisciplinary research addressing specific health-related and environment-related issues of concern to the public that are associated with food and forest production and distribution methods.
- Initiate 'Honest Talk on Food', a radio talk series or major seminar series providing the latest science on farming systems, food and health.
- Conduct research on consumer access to healthy foods in PA and across the Northeast region, differentiating by income and place, to support efforts to reduce 'food deserts' in the region. Investigate key relationships between food-health-disease-demography.
- Expand efforts to critically assess the impacts of US farm policy on PA and Northeast production of healthy foods, including but not limited to fresh, locally-grown, etc.
- Investigate funding to conduct research on regional food security under emergency scenarios.
- Develop flagship marketing program for PA entrepreneurs including development of systems for enhanced marketing of fresh, locally grown, organic, value-added, branded. Explore collaboration with the Metro Research and Outreach Center to develop well-functioning supply chains to better link PA food producers to urban consumers.
- Provide state-of-the-art market trend analyses to help producers capitalize on growth in ethnic populations and demand for ethnic foods, increased demand for niche foods, etc.
- Seek funding from NIH, NRI, foundations to support work. Capitalize on new NIH focus on science-social science linkages.

INITIATIVE 3. TRANSITIONS TO SUSTAINABLE FARMS, FORESTS, COMMUNITIES

We propose that a major inter-college initiative be developed to better understand determinants and impacts of farm and forest land use transitions in Pennsylvania and the Northeast, to guide communities in their decision-making to attain a higher quality-of-life, and to develop economically and ecologically sustainable improvements in technology and infrastructure to improve farm and forest resilience and sustainability. Strong opportunities exist to secure external funding for inter-college and/or multi-institution integrated team research efforts, particularly multidisciplinary efforts.

Potential Partners: College of Earth and Mineral Sciences, College of Engineering, PSIEE/ENRI, SSRI/Population Research Institute, Northeast Regional Center for Rural Development, Department of Landscape Architecture, Ecology Program, Demography Program, NSF LTER centers in region, NGOs, University of Pennsylvania (Vet), Cornell University (ALS), Commonwealth of Pennsylvania, and multiple CAS departments.

Action Items:

- Conduct multidisciplinary and multi-college/institution research on the changing structure of food and forest production and land use in the region, investigating coupled systems affecting food and forest production, energy, human health, and ecosystem impacts. Seek funding from NSF, NRI and NIH to fund effort. Logical collaborators include faculty from CAS, Eberly Science/Huck, Earth and Mineral Sciences, Population Research Institute, Landscape Architecture, Engineering, and PSIEE.
- Involve graduate students in cutting-edge training to couple systems and assess dynamics of change. Initiate a seminar series that engages graduate students from different disciplinary perspectives in understanding approaches to complex systems.
- Provide the public with readily accessible information on the changing structure of agriculture and forests in the region. Provide state-of-the-art information on land use change and land-environment stewardship impacts as related to agriculture and forestry in PA. Lead effort to improve coordination of geospatial capacity across Penn State.
- Tie effort above to bio-fuel production and other potential opportunities for income generation, employment generation and economic development in PA and region. Provide readily-accessible information to local communities and the public more broadly.
- Conduct research to investigate local and regional resource (food, energy) security under alternative emergency scenarios.
- Investigate implications for community economic development of identifying and building on concepts of local ‘foodsheds’ and ‘woodsheds’ in PA and the Northeast region.
- Provide strong support to local communities in Pennsylvania to facilitate their decision-making. Provide training and tools to help communities envision their futures.
- Expand development and transfer of appropriate infrastructure to support small and medium-sized enterprises (SMEs) (e.g. mobile animal processing unit; development of approaches to support SME needs for cost-effective veterinary services and skills).
- Expand development and transfer of appropriate technology and delivery methods, including those specifically geared to SMEs.