

**International Programs in the College of Agricultural Sciences:**

**Creating the Global Network**

**Report of the International Programs Advisory Council**

Draft  
March 2008

## **Vision Statement**

It is time to embrace the notion of globalization...of a network of alliances and collaborative partners to advance the knowledge base, seeking creative solutions to today's complex challenges related to the food and fiber system including energy, environment, health, economic and social well-being across all borders. It is time to embrace the notion of globalization...welcoming students of all backgrounds to our campus and providing them with the tools to succeed in an increasingly integrated and multicultural world. It is time to embrace the notion of globalization...to consider the special perspectives and needs of our Pennsylvania communities and develop programs that position our citizens to fully engage.

## **Mission Statement and Principles**

The work of our College will be characterized by openness and the free flow of scholars and scholarship. We believe that by collaborating with partners around the world--either at home or abroad--that we gain a tremendous advantage in terms of leveraging resources, gaining access to unique research sites, as well as becoming exposed to multicultural and indigenous knowledge perspectives as a way of improving the way forward in this increasingly complex world.

## **Strategic Considerations**

First, it is becoming increasingly clear that the globalization process is affecting the everyday lives of all of us in ways we can see, touch and feel. Today, our understanding and experience of the world is not just what we see on television, but what we see and experience in the classroom, in the research laboratory, and in the workplace. According to a variety of sources, by the year 2020 the majority of new entrants into organizations in the U.S. will be of Latin, Asian, or African descent. Already 75% of new, entry-level workers in the U.S. are minorities and/or women. Four out of every five new jobs in the United States are generated as a direct result of international trade, and U.S. companies are expected to obtain more than half of their sales earnings abroad next year.

Secondly, while expenditures for agricultural assistance have been at low ebb for the past 15 years, according to OECD statistics, the recent recognition that engaging populations of other countries in peaceful pursuits can ameliorate conflicts has stimulated discussion about increased investment in foreign aid and collaboration. Since agriculture represents the majority of the GDP of developing countries and employs a majority of people, investment in agricultural assistance in the form of research and education is a natural focus of new programs aimed at alleviating poverty. Indeed, recent private sector contributions such as the Gates Foundation investment in sub-Saharan and South Asian agriculture is a harbinger of this trend. The CAS must position itself to make major contributions in this new era of agricultural assistance.

Moreover, the philosophical basis underpinning the College's strategic decision to create a strong Office of International Programs in 2000 still ring true today:

- Challenge is Global. Despite economic prosperity and rising living standards in many parts of the world, 2 billion people suffer from malnutrition and food demand is projected to double by 2025, according to the International Food Policy Research Institute (IFPRI).

Coupled with rapid population growth and urbanization in the world's poorest countries, the food and natural resource challenges of this century are critical. *The College has an obligation to work internationally, to share expertise, and work towards a healthy global population and environment—it is the right thing to do.*

- **Markets are Global.** Exports of Pennsylvania food, agricultural, and forestry related products are more than \$1.5 billion annually, according to the Pennsylvania Department of Agriculture, with Canada as the primary export market. Other countries that are major importers of Pennsylvania products include Brazil, Germany, Indonesia, Israel, Italy, Japan, Mexico, People's Republic of China, Philippines, Russia, Saudi Arabia, South Korea, Taiwan, and the United Kingdom. *The College needs to prepare its graduates to be players in the global marketplace, involve local business and community leaders in programs, and consider growing markets for Pennsylvania products as it decides on strategic initiatives.*
- **Research is Global.** With government support for research declining around the world, it is important to collaborate to leverage increasingly scarce resources. Working internationally also gives our scientists access to the best sites, facilities, ideas, technologies and experiences. Indeed, the number of internationally co-authored papers is increasing (17% in 1981; 29% in 1995), according to a study by the RAND Corporation. *The College needs to ensure that its faculty has regular interactions with centers of excellence around the world. Disease, environmental, agricultural and food issues, and other challenges of the 21<sup>st</sup> century, know no borders!*
- **Communities are Global.** Pennsylvania, settled primarily by Germans and other Europeans in its early years, has a rich cultural heritage and a changing face. According to 2000 census data, Pennsylvania's Hispanic population has grown by 70% since 1990, and its Asian population has grown by 60%. *The College needs to make sure its faculty, graduates and extension professionals have opportunities to experience other cultures and learn other languages, particularly those that have formed the Pennsylvania of today and are shaping the Pennsylvania of the future.*

Opportunities for international programming in CAS have never been better or more needed. OIP needs to consolidate its past successes and retool to bring the office to the next level of effectiveness.

### **Success to date**

Since the Office of International Programs was created in 2000, the College has experienced dynamic growth in all key areas of the academy:

#### Research

Total grant and contract income for international programs since 2000 is currently at \$11.8 million, with \$1.3 million still pending. (Appendix 1.)

The overall success rate for awards through the Office of International Programs is 56%, compared to 36% for international proposals submitted through the departments.

Of the total grant income for international programs, \$7,758,768 was awarded for work in Central and Eastern Europe for a 79% rate of success; \$1,034,982 was for Latin America (a 28% success rate) and the Middle East (mostly BARD with Israel) was third at 21%, followed by Asia and Africa at a 10% success rate each. The bulk of the funding was for work in the plant sciences, followed by community and economic development, and food and nutrition. (Appendix 2.)

### Teaching

The number of students who are including an international experience as part of their undergraduate career has increased from 0.5% in 1999 to 11% in 2006/2007. In the past five years, the College has sent 500 students on embedded short term programs, 110 on semester programs, 50 on summer programs and 25 on international internships. The top destinations are: Western Europe (345); Latin America (190); Oceania (82); Central/Eastern Europe (58); Canada (34); Middle East (16); Africa (10) and Asia (10). (Appendix 3.)

After revitalizing the curriculum for the INTAG minor, enrollment is at an all-time high (23 enrolled in 2005/2006).

In 2005, we opened the Study Abroad Lounge on the first floor in Agricultural Administration building. The Lounge offers students and their parents a highly visible space to learn about the emphasis on study abroad in the College.

We have successfully partnered with the Development Office to raise and steward close to \$450,000 for study abroad in the College.

### Extension/Outreach

In 2006, the Office of International Programs led the planning and delivery of the nation's first-ever comprehensive workshop series of internationalization and multiculturalism for extension. The workshop was offered at 4 sites around Pennsylvania with 225 extension educators and staff attending. The planning committee received two diversity awards for the program.

In 2005, the Office launched the Latino Agricultural Resource Center. The Center has offered support in the development and delivery of Spanish language materials for the dairy and landscape contracting industries, as well as in the areas of food safety, pesticide handling, and 4-H.

### **A Program for the Future**

Since 2000, the Office has worked to raise the visibility of international programming in the College, facilitate the development of international research projects, and increase student participation in international activities. Going forward we will adopt a new business model that

maintains the successful activities of the last seven years, but also builds on the growing international reputation of our College by increasing our efforts to aggressively pursue international opportunities in conjunction with and on behalf of the faculty. This business model puts the Office as the center of activity in the College with the Director of International Programs as the Chief Collaboration Officer (CCO) for the College as it builds its global network. The Office will be a relatively small, executive office with a focused set of priorities. It will be responsible for:

- **Initiating.** Through its extensive network, the Office is able to keep abreast of developments and keep faculty and staff apprised of emerging international opportunities.
- **Promoting.** The Office encourages faculty and staff to become engaged in the internationalization effort by providing funds and other administrative support. The Office regularly provides consultations with faculty and staff to provide advice on program approaches.
- **Advocating.** The Office advocates among its stakeholders, including Penn State leadership, state and federal government entities, industry, and potential donors to better understand the value of internationalization and the return on investment.
- **Facilitating.** The Office provides a great deal of logistical support for project development, including reviewing and partnering on grant proposal development, travel and visa advice, fiscal management and specialized budget advice, medical and safety information, as well as housing needs.
- **Coordinating.** The Office coordinates complex international partnerships and agreements to support integrated program development of our research, teaching, and extension missions and provides linkages across the units of the College, the PSU university campus, the nation, and the world.

For a full list of support offered by the office, see Appendix 4.

### **Flexible Approaches**

The Office will focus on opportunities for integrated partnerships combining research, teaching, and service opportunities. While it is recognized that the College's internationalization effort has benefited from the previous strategy of focusing on flagship programs in Central/Eastern Europe and Latin America/Caribbean, the current recommendation does not include such a "flagship" approach. Instead, the office should be flexible and focus on opportunities for integrated partnerships worldwide that combine research, teaching, and service opportunities. Key opportunity areas should be discussed and developed annually during a priority setting exercise that engages IPAC and select faculty, staff, extension educators, and administrators, as well as external stakeholders. Discussions will occur every May in time to influence the fiscal year budget decisions—the first such discussions will take place in May 2008 to review the current "flagship" programs and consider other/additional program priorities in line with the College's new strategic plan and areas of emphasis. Likely areas of emphasis for 2008/2009 include:

- 1) **China Initiative**—According to discussions of the China working group and reflected in the attached strategic plan for engagement with China, the College should focus

resources on China's top three agricultural universities, with a particular emphasis on plant sciences and agribusiness. (Appendix 5.)

- 2) Overseas Study Programs for Extension, particularly in Latin America—According to a 2007/2008 survey of PSU Cooperative Extension, the largest percentage of educators is interested in the Americas (23%), up 4% from 2002. The next most requested areas were Western Europe (20%) and Central/Eastern Europe (18%), a decrease of 3% and 5%, respectively. Of those surveyed, 75% were interested in a study tour in Latin America and of the half who were interested in language training, 94% were interested in Spanish. (Appendix 6);
- 3) Promoting Semester-Long Programs for Students—Although this year saw a record number of students studying abroad for a semester (11), the number is still low. The Office should work with individual programs to develop key destinations for semester study that integrate with the department's curriculum. (See attached Study Abroad Strategy at Appendix 7.);
- 4) Graduate Program Development—Graduate students in the College have asked the Office to work with faculty to develop more internationally relevant curriculum. A team has drafted a new dual-title degree program in International Agriculture and Development that should be implemented.
- 5) Communication and Marketing Strategy for the Office of International Programs. The Office should boost its visibility by engaging the new Communications and Marketing unit in the College for coordinated and updated and package of materials and outreach plan.

## **A New Organizing Model**

In order to transition to this new business model, IPAC suggests a re-organization of the current staffing structure. Because there will no longer be a focus on “flagship” areas, these two fixed-term positions (Latin America/Caribbean and Central/Eastern Europe) will not be renewed past their current end date. To reflect the new, more dynamic approach, the recommended office will include the following standing positions:

- 1) Director—focused on communications and outreach, visibility/promotional activities, engaging stakeholders, priority setting/strategic planning, fundraising;
- 2) Assistant Director—focused on program facilitation and implementation and interactions with faculty points of contact (POCs) for regional and scientific expertise, per below. It is expected that this person will extensively travel to help faculty negotiate project parameters and seek out new partnerships. (NOTE: should have academic credentials for further curriculum work and semester program development);
- 3) Program Assistant—in support of Director, strategic projects, visitor coordination and project budgets (partially supported by external grants)
- 4) Student Programs Coordinator—consults with students, provides logistic support to faculty for program development
- 5) Administrative Assistant—office support/management

In addition, to promote a truly integrative approach, the Office will develop key points of contact throughout the College to build leadership for the global network within units outside the Office

of International Programs. This allows the office to tap into regional, country, or scientific expertise as needed and improves understanding, involvement, and commitment to developing the College's global network for the future.

### **Creative Program Support**

Operating Budget--\$26,000/year

These funds would be used to support normal operating expenses of a five person office, including staff development and staff travel.

Study Tours (for undergraduate, graduate, and extension programs)--\$20,000/year

Half of these funds would be used as matching funds to support faculty applying for the University mini-grant program to support the development and implementation of undergraduate study tours. 25% would be dedicated to the development of a graduate program and 25% would be dedicated to the development of an extension program.

Tag Along Fund--\$20,000/year

This fund has been one of the most popular funds in the College. Over the past three years, \$45,000 has been awarded to 40 participants, leveraging \$90,000-\$135,000 in other funds. (See Appendix 8.)

Special Seed Funds for Annual Program Priorities--\$50,000/year (and graduate assistantship)

These funds would be administered in support of the annual program priorities established annually in consultation with IPAC. A graduate assistantship position would be dedicated to the program priority area on a bi-annual basis.

INTAG and INTAD Support--\$20,000/year (and graduate assistantship)

These funds would support the undergraduate and graduate curriculum in International Agriculture. The funds would be housed in the Office of International Programs and used in consultation with the faculty program advisor(s) to support the promotion and development of the programs, as well as assist in the funding of travel required by the program(s). The graduate assistantship would be dedicated to the administrative issues required for program implementation.

Special Promotional Fund for 2008/2009 and 2009/2010--\$5,000/year for marketing material development in partnership with the new communications and marketing unit in the College.

### **Indicators of Success**

- a. Number of new opportunities for undergraduates
- b. Number of undergraduate students studying abroad
- c. Number of graduate students studying or researching abroad
- d. Number of international students
- e. Number of alumni engaged and supporting international programs
- f. Number of PSU Cooperative Extension with international experience

- g. Number of students enrolling in the INTAG minor
- h. Number of students enrolling in the INTAD dual-title degree program
- i. Amount of outside funding raised
- j. Positive change in promotion and tenure of faculty with significant international experience
- k. Number of faculty with international experience
- l. Number of courses with international content
- m. Number of website hits



## Appendix 1: External Funding Activities

External Funding Activities (As recorded in the Proposals and Awards database housed in the College's office of Grants and Contracts)

FY	Principal Investigator: Office of International Programs (OIP)		CAS Units with International Activities	
	# of Proposals and \$Amount Submitted	# of Awards and \$ Amount	# of Proposals Submitted and \$ Amount	# of Awards and \$ Amount
7/00-6/01	9 - \$1,453,075	8 - \$1,353,727	3 - \$524,000	1 - \$150,000
7/01-6/02	8 - \$377,598	3 - \$107,756	9 - \$1,361,447	3 - \$306,574
7/02-6/03	12 - \$1,081,831	8 - \$687,426	19 - \$2,962,380	4 - \$256,820
7/03-6/04	18 - \$1,897,908	6 - \$309,250	9 - \$6,447,733	6 - \$5,923,688**
7/04-6/05	16 - \$1,788,644	11 - \$929,697	25 - \$13,260,021	9 - \$817,348
7/05-6/06	10 - \$1,418,632	6 - \$465,552	4 - \$197,523	3 - \$59,800
7/06-6/07	8 - \$408,445	6 - \$183,654	2 - \$2,503,369	1 - \$12,387
7/07-12/07	7 - \$1,322,511	2 - \$82,178 3* - \$630,058	4 - \$1,422,033	0 - \$0 3* - \$649,906
<b>TOTAL</b>	<b>88 - \$9,748,644</b>	<b>50 - \$4,118,240</b> <b>53* - \$4,749,298</b>	<b>75 - \$28,678,506</b>	<b>27 - \$7,606,617</b> <b>30* - 8,256,523</b>

\*Proposals still pending

\*\*Includes Defense Threat Reduction Agency (DTRA) award of over \$5,700,000

**OIP: 56% proposals awarded, 42% requested funding awarded**

**CAS: 36% proposals awarded, 26% requested funding awarded**

## Appendix 2: Awards by Geographic Area

		Africa	Asia	Central & Eastern Europe	Western Europe	Middle East	Latin America	Other	Totals
7/00-6/01	OIP	\$0	\$485,270	\$454,891	\$0	\$0	\$413,566	\$0	\$1,353,727
	CAS	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$150,000
7/01-6/02	OIP	\$0	\$0	\$94,381	\$0	\$0	\$13,375	\$0	\$107,756
	CAS	\$0	\$0	\$251,574	\$0	\$230,000	\$0	\$0	\$481,574
7/02-6/03	OIP	\$124,988	\$0	\$355,663	\$204,000	\$2,775	\$0	\$0	\$687,426
	CAS	\$0	\$0	\$77,467	\$29,353	\$150,000	\$0	\$0	\$256,820
7/03-6/04	OIP	\$0	\$30,000	\$230,108	\$0	\$19,142	\$30,000	\$0	\$309,250
	CAS	\$5,500	\$12,251	\$5,905,937	\$0	\$0	\$0	\$0	\$5,923,688
7/04-6/05	OIP	\$452,532	\$18,175	\$210,252	\$0	\$0	\$248,738	\$0	\$929,697
	CAS	\$6,540	\$689,142	\$40,423	\$0	\$0	\$81,243	\$0	\$817,348
7/05-6/06	OIP	\$0	\$210,526	\$16,766	\$0	\$0	\$238,260	\$0	\$465,552
	CAS	\$20,000	\$0	\$0	\$30,000	\$0	\$9,800	\$0	\$59,800
7/06-6/07	OIP	\$62,348	\$0	\$121,306	\$0	\$0	\$0	\$0	\$183,654
	CAS	\$0	\$12,387	\$0	\$0	\$0	\$0	\$0	\$12,387
7/07-12/07	OIP	\$82,178	\$0	\$0	\$0	\$0	\$0	\$0	\$82,178
	CAS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Totals</b>		<b>\$754,086</b>	<b>\$1,457,751</b>	<b>\$7,758,768</b>	<b>\$263,353</b>	<b>\$551,917</b>	<b>\$1,034,982</b>	<b>\$0</b>	<b>\$11,820,857</b>
<b>% of Proposals Funded</b>		<b>10.00%</b>	<b>10.00%</b>	<b>79.00%</b>	<b>14.00%</b>	<b>21.00%</b>	<b>28.00%</b>	<b>0.00%</b>	<b>30.00%</b>

Note: OIP = Lead PI in Office of International Programs  
CAS = Lead PI in department within College of Agricultural Sciences

**Appendix 2 (Con't.): Awards by Theme**

		<b>Plant Sciences</b>	<b>Energy</b>	<b>Food and Nutrition</b>	<b>Community and Economic Dev't/Capacity Building</b>	<b>Other</b>	<b>Totals</b>
<b>7/00-6/01</b>	OIP	\$887,235	\$0	\$0	\$44,619	\$421,873	<b>\$1,353,727</b>
	CAS	\$150,000	\$0	\$0	\$0	\$0	<b>\$150,000</b>
<b>7/01-6/02</b>	OIP	\$0	\$0	\$13,375	\$94,381	\$0	<b>\$107,756</b>
	CAS	\$217,363	\$0	\$230,000	\$34,211	\$0	<b>\$481,574</b>
<b>7/02-6/03</b>	OIP	\$211,380	\$0	\$124,988	\$351,058	\$0	<b>\$687,426</b>
	CAS	\$179,353	\$0	\$0	\$77,467	\$0	<b>\$256,820</b>
<b>7/03-6/04</b>	OIP	\$60,000	\$0	\$0	\$249,250	\$0	<b>\$309,250</b>
	CAS	\$0	\$0	\$17,751	\$195,172	\$5,710,765	<b>\$5,923,688</b>
<b>7/04-6/05</b>	OIP	\$221,362	\$0	\$13,585	\$694,750	\$0	<b>\$929,697</b>
	CAS	\$404,750	\$0	\$81,243	\$34,423	\$296,932	<b>\$817,348</b>
<b>7/05-6/06</b>	OIP	\$448,786	\$0	\$0	\$16,766	\$0	<b>\$465,552</b>
	CAS	\$39,800	\$0	\$0	\$20,000	\$0	<b>\$59,800</b>
<b>7/06-6/07</b>	OIP	\$0	\$0	\$0	\$183,654	\$0	<b>\$183,654</b>
	CAS	\$0	\$0	\$0	\$12,387	\$0	<b>\$12,387</b>
<b>7/07-12/07</b>	OIP	\$0	\$0	\$0	\$82,178	\$0	<b>\$82,178</b>
	CAS	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>Totals</b>		<b>\$2,820,029</b>	<b>\$0</b>	<b>\$480,942</b>	<b>\$2,090,316</b>	<b>\$6,429,570</b>	<b>\$11,820,857</b>

Note: OIP = Lead PI in Office of International Programs  
CAS = Lead PI in department within College of Agricultural Sciences

### Appendix 3: Undergraduate Study Abroad 1999-2002

	1999			2000			2001			2002		
	Semester	StudyTour	Other	Semester	StudyTour	Other	Semester	StudyTour	Other	Semester	StudyTour	Other
Russia	9						2			2		
Mongolia			1									
S. Africa		8										
Ireland		27					2			2		
Germany					14	1					14	
Ukraine					8			4			3	
Mexico						1						
Puerto Rico								7				
Peru								1				
France								23	1			1
Italy								4		1		
Netherlands								19	1			
Belgium								19				
Australia							4			1		
Costa Rica									2			
Honduras									1			
Scotland									1	1		
Greece									1			
Argentina											47	
Denmark											10	
Brazil											1	
Jamaica											1	
Panama												1
England										1		
Vietnam												
Switzerland												
Belize												
New Zealand												
Ghana												
Austria												
Spain												
Sri Lanka												
Canada												
India												
Kazakhstan												
Haiti												
Japan												
Malawi												
Turkey												
Jordan												
<b>TOTALS</b>	<b>9</b>	<b>35</b>	<b>1</b>	<b>0</b>	<b>22</b>	<b>2</b>	<b>8</b>	<b>77</b>	<b>7</b>	<b>8</b>	<b>76</b>	<b>2</b>

**Appendix 3 (Con't.): Undergraduate Study Abroad 2003-2007**

	2003			2004			2005			2006			2007		
	Semester	StudyTour	Other	Semester	StudyTour	Other	Semester	StudyTour	Other	Semester	StudyTour	Other	Semester	StudyTour	Other
Russia	6			3			3		3	5			1		
Mongolia															
S. Africa															1
Ireland	1				6				1				1		
Germany								23				2		16	
Ukraine	2							6							
Mexico									1			1		12	
Puerto Rico											10				
Peru											5				
France			2					9			12			9	
Italy		17						9	2			5	2	14	1
Netherlands								9	1						
Belgium														9	2
Australia	5			3			3			7		1	1		
Costa Rica		2					1	18			1	1		29	
Honduras															
Scotland			1									1			
Greece															
Argentina															
Denmark				1								2			
Brazil														8	
Jamaica															
Panama															
England				1	14					1		1			
Vietnam															
Switzerland		17													
Belize		15			10						12				
New Zealand	4			3		1			1	1				47	
Ghana															
Austria						1			1					1	
Spain				2						1					
Sri Lanka										4	34				
Canada								34							
India									2						
Kazakhstan									1						
Haiti									1						
Japan										2					
Malawi															1
Turkey															8
Jordan															8
<b>TOTALS</b>	<b>18</b>	<b>51</b>	<b>3</b>	<b>13</b>	<b>30</b>	<b>2</b>	<b>7</b>	<b>109</b>	<b>14</b>	<b>21</b>	<b>74</b>	<b>14</b>	<b>5</b>	<b>145</b>	<b>21</b>

## **Appendix 4: Program Support Offerings**

The Office of International Programs offers support in many aspects of program development for students, faculty, extension, and visitors. The Office has worked hard to develop an extensive skill and knowledge base and is able to offer assistance in the following:

### ***Students***

- Assist in development and administration of agriculturally based student study abroad programs
  - o Long term programs (1+ year)
  - o Semester long programs
  - o Summer programs
  - o Short term and Spring Break programs
- Administer endowment-funded travel award programs
  - o Young Fund
  - o Settlemyer Fund
  - o GOTCHA Fund
- Assist students in finding/setting up international internships
- Assist graduate students in locating funding sources for international research

### ***Faculty***

- Locate and disseminate grant opportunities for international teaching, research, and/or extension.
- Encourage collaborations outside of the College
- Assist in proposal development for grant opportunities
- Assist in budget development for grant opportunities
- Provide ongoing project support
  - o Financial management
  - o Logistics management
- Administer internal competitive funding programs
  - o Study Tour Fund
  - o Tag Along Fund
  - o Global Travel Fund
- Assist with travel arrangements
- Assist with visa procurement
  - o Through Penn State process and/or TraiNet process
- Seek housing for visiting scholars and students
- Advise faculty/students in preparation for international travel
  - o Country-specific information
  - o University forms
  - o Medical precautions and insurance
  - o Vaccinations

### ***Extension***

- Assist in development and administration of workshops (local or abroad)

#### **Appendix 4 (Con't.): Program Support Offerings**

- Creation/translation of educational materials for non-English speakers
- Contacts with private sector
- Assist with finding volunteer opportunities
- Assist with funding for internationally-focused activities

#### ***Visitors***

- Assist faculty who wish to host short and long term visitors
  - o Required forms
  - o Housing
  - o Insurance
  - o Visa procurement
    - Through Penn State process and/or TraiNet process
- Provide networking opportunities for faculty and visitor interactions
- Assist in identifying translator if necessary

## **Appendix 5: China Initiative**

### **Engagement with China: A Strategy for Penn State's College of Agricultural Sciences**

China's booming economy and growing impact on world financial, trade and environmental issues is a well-recognized feature of the 21<sup>st</sup> century. Moreover, the U.S. and Chinese economies are by the day more inextricably linked. Whether it is the country's astonishing growth rate (China has grown by an average of 9.6% rate per annum for the last quarter of a century), trade and financial market concerns (the U.S. and China share the world's largest trade imbalance), or the rate at which China continues to burn coal (a new coal-fired power plant goes on line every 10 days in China), the impact of what is happening in China is rippling throughout the U.S. and the world.

The College of Agricultural Sciences at Penn State is in an excellent position to consider strategic investments and partnerships with the top academic institutions of this growing giant. Thanks to years of work dating back to the early 1900s in South China and current work of our College's top faculty, we have an opportunity and an obligation to try to influence the course of China's future and to reap benefits for citizens of both countries.

This paper describes the issues and the opportunities and sets out a course for a strategic approach to build our programs, enrich our student opportunities, and integrate our academic linkages to create new scientific collaborations in support of a sustainable future.

#### **Economic Ties that Bind**

According to the World Bank, China will be one of the world's largest economies by 2050. Already, China has become one of the world's leading destinations for foreign direct investment (FDI). FDI into China increased from US\$44.2 billion in 1997 to US\$52.7 billion in 2002, putting China's share of total FDI in the developing world at 32.5 percent, and its share of total FDI in Asia at 55.5 percent. More than 200 American conglomerates, which are among the best companies evaluated by "Fortune", have invested in China in recent years. U.S. direct investments are distributed over 26 provinces, municipalities, and autonomous regions in China. The investments cover a wide range of industries and sectors including automobiles, pharmaceuticals, petrochemicals, chemicals, textiles, machinery, electronics, telecommunications, light industry, food, agriculture, tourism, real estate, and financial services.

China's share of world exports has also increased from 1% to almost 6% between 1980 and 2003 with exports at close to \$110 billion in January 2008. China's imports have grown by close to 30% in just the last two years to total \$90.17 billion in January 2008. China's monthly trade surplus surpassed expectations in January to hit \$19.5, a 23 per cent year-on-year increase. Over the past ten years, trade volume between China and the United States has more than tripled with implications for the bilateral relationship. China is the fourth largest trading partner of the United States after Canada, Japan, and Mexico. The United States is China's second largest trading partner. However, the relationship is one of the most imbalanced in the world—the U.S.



growing trade deficit is now over \$728 billion dollars and China accounts for more than 26%. (See Appendix 1 for more detail on the trade trends.)

Moreover, because the U.S. has a low savings rate, it relies on foreign capital inflows from countries with high savings rates to help promote growth and to fund the federal budget deficit. China has become the world's largest and growing holder of foreign exchange reserves (FER), which totaled \$1.4 trillion as of September 2007. China has invested a large share of its FER in U.S. securities, which, as of June 2006, totaled \$699 billion, making China the 2nd largest foreign holder of U.S. securities (after Japan). Some U.S. policymakers and economists have expressed concern that China's large US holdings makes the U.S economy vulnerable especially if China uses them as leverage against U.S. policies it opposes. If China cut its dollar holdings there is potential that long term yields on US bonds would increase which would put pressure on interest rates and long term economic growth. Most economists recognize that it would not be in China's economic and political interest to sell all of its US investment holdings but the U.S.'s continued dependence on foreign borrowing is a significant vulnerability in the event of a shock, such as a collapse in U.S. housing prices, or an extreme national security breach, that might slow the inflow of new funds into the United States.

### **China's Agricultural Sector—Opportunities for the U.S.**

China is a large agricultural producer but its rural sector needs more of an opportunity to connect to national and global markets. Improved linkages to the global economy will raise Chinese agricultural productivity and will facilitate greater consumption of higher quality foodstuffs, such as meat, eggs, fish, oils, vegetables and fruits. Currently in China, food accounts for one-third of family expenditures and according to the Consumer Price Index, food prices are at three times their normal rate. The U.S. can help China meet its food needs at lower financial and environmental costs, such as the supply of land and technology cooperation.

One of key elements of agricultural efficiency is transportation and infrastructure. The Chinese Academy of Social Sciences estimates that transport and logistics account for 20% or more of the retail price of goods. Consequently, a shortage of rail cars and rail services on the rail system is a big problem that cannot be ignored. The government of China has realized this problem and investing in highways and ports, but much more investments are required. American agribusiness companies can help Chinese counterparts develop new logistics and delivery systems, such as timely delivery of foodstuffs and other transportation issues.

New distribution channels would lead to greater efficiency in the delivery of goods and offer Chinese consumers a wider range of exported and imported products. In recent years, some large American retailers already have improved ways to import household goods from China. Moreover, with Sino-U.S. agricultural trade, new technologies in food security have been applied widespread for protecting human health and promoting agricultural development. Since the use of modern methods of refrigeration, meat and other perishable goods have become sanitary than those are stored in traditional outdoor markets.

### **China's Educational Policy—Opportunities for Penn State**

A Chinese proverb, “keep on learning as long as you live,” reflects the traditional idea that Chinese value education. Promoting education can be a source of economic growth. The government of China is aware that its continued economic prosperity is dependent on the restructuring of its educational system. Unfortunately, China’s the degree of educational development does not match its degree of economic growth. China is labor abundant and thus rich in human resources. It is important to create and transmit knowledge which is a determining factor of the economic development. Investing in educational training is a prerequisite for achieving the economic, social and environmental goals set by the Chinese government. As China restructures and urbanizes, more and more laborers have to transfer to different regions, sectors which requires additional training and support. It is thus necessary to increase education levels in all regions of the country.

Along with the desire to build a higher education infrastructure responsive to the needs of a vibrant Chinese economy, China has set a target to increase investment in education to 4 percent of GDP to further promote education for all people [14]. At the same time, government officials in China realized it needed to increase the accessibility opportunity of higher education in the country. During the late 1990s, a policy was formulated by the government of China that dramatically increased the matriculation rate. In 1998, the government made a target that will increase enrollment by 15 percent in tertiary institutions before 2010 – this goal was reached in 2005[15]. From 1998 to 2005, the number of the enrolled college students tripled to 20 million. These statistics imply that at least 20 percent of undergraduate students in would like to pursue higher level degrees after their graduation.

Unable to meet the overwhelming demand for higher education through public provision, the government has been liberalizing opportunities for private providers since the 1980s. Since 1999, public universities have been permitted to establish affiliated or second-tier colleges so they can offer more recognized degree programs with less stringent entry requirements. Today, there are more than 1,300 private tertiary institutions operating in China, of which more than 300 are affiliated with public universities [15]. In 2002, the government passed a law for the promotion of private education, which outlines and regulates government support for private universities and other institutions of higher education. Therefore, in addition to building new public institutions and expanding recruitments at existing institutions, the relaxation of the laws that govern private education has contributed to the growth in enrollment over the past decade.

The government in China has taken some measures to improve higher education and further develop key disciplines, such as Project 211 and Project 985. In the early 1990s, China initiated the project for higher education aimed at cultivating talent for national economic and social development strategies in the 21st century. As a supplement to project 211, project 985, which was first announced in 1998, allowed for three-year grant funding and available to small-size elite groups in 10 universities, some of which include Beijing University, Tsinghua University, Fudan University, Zhejiang University and Nanjing University. The two top universities, Beijing University and Tsinghua University, were granted US\$225 million each over five years. Nanjing University and Shanghai Jiaotong University were granted US\$150 million. In 2004, Project 985 entered the second stage and expanded the number of Chinese universities from 10 to 36.

In addition to developing new research centers and improving facilities, some main initiatives of Project 985 was international conferences, recruiting world-renowned faculty and visiting scholars, and helping Chinese faculty attend conferences abroad. Chinese universities are exploring ways to make network with top institutions in the world through the opportunities of Project 985. In addition, Project 985 had introduced dual-degree programs and joint training programs that have become increasingly popular.

The government of China has also singled out the top 10 Agricultural Universities in China as well. These universities also apparently have access to funding available in the 985 and 211 programs, but details remain fuzzy. According to information from the book, “The Chinese University Assessment” by Wu Shulian, Lv Jia, Guo Shilin, the top 10 Agricultural Universities in China and their scientific areas of expertise are as follows:

No.	Location	School Name	Expertise in Sciences
1	Beijing	China Agricultural University	Agricultural Sciences
			Plant Protection
			Animal Sciences
			Veterinarian
2	Jiangsu	Nanjing Agricultural University	Natural Resource Protection
			Agricultural Sciences
			Horticulture
			Veterinarian
3	Shanxi	Northwest Agriculture and Forestry University	Natural Resource Protection
			Wild animal and natural reserves management
			Soil Sciences
			Environmental Resources
			Animal Sciences
4	Zhejiang	Zhejiang University	Forestry
			Horticulture
			Plant Protection
			Tea Sciences
			Environmental Resources
5	Hubei	Huazhong Agricultural University	Animal Sciences
			Natural Resource Protection
			Horticulture
6	Shandong	Shandong Agricultural University	Landscape Architecture
7	Guangdong	South China Agricultural University	Agricultural Sciences
8	Fujian	Fujian Agriculture and Forestry University	
9	Jiangsu	Yangzhou University	
10	Beijing	Beijing Forestry University	Forestry
			Landscape Architecture
			Natural Resource Protection

## **Penn State in China**

In 1907, Penn State's George Weidman Groff, a professor of horticulture, became the first agricultural missionary bringing the idea of agricultural missions under Christian auspices to China. He was assigned to the Canton Christian College (later known as Lingnan University) as a middle school teacher in the [17]. From 1911 to 1912, Groff published the first agricultural bulletin at Lingnan University. At the same time, he organized the Penn State Horticultural Mission to China.

Groff credits his work to "the fellowship and inspiration received from teachers and friends at Penn State." According to historical archives "with the support of staff, students, and alumni, Groff served both Lingnan and Penn State, advocating a reciprocal exchange of cultural ideas in which the United States contributed to China's agricultural science and techniques of extensive agriculture, while receiving an understanding of China's intensive agricultural methods and the value of her unique cultivated and wild floras."

In 1921, Groff created the Lingnan Agricultural College with a faculty of western-trained Chinese, supplemented by a few Penn State and Kansas State staff members. Now, the Lingnan Agricultural College is renamed South China Agricultural University in Guangzhou province of China. From 1907 till now, Penn State and South China Agricultural University has been significant partners for 100 years. Currently, Penn State and SCAU are working together with funding from the McKnight Foundation on joint soybean research.

Other partners in China that have the research contact with Penn State are:

1, **China Agriculture University** (CAU) funded directly by the Chinese Ministries of Education and Agriculture and is located in Beijing. CAU is a Key National University and participates in the State 985 and 211 Programs. The student population is 20,000, with 13,000 undergraduates and 7,000 graduate students. There are 14 colleges at CAU. Approximately 70 universities from all over the world collaborate with CAU on teaching and research projects. The PI visited College of Food Science and Engineering at CAU in May 2007. The College has approximately 25 Professors, 40 Associate Professors, 8 Instructors, 800 undergraduate students, 400 MS and 100 PhD graduate students. Areas of expertise include: animal products, enology, fruit and vegetable processing, food biotechnology, food microbiology, food safety, fermentation and nutrition. Penn State and CAU signed a Memorandum of Understanding in the area of agribusiness in May, 2007. Penn State currently has visiting professors and students from CAU in our Entomology and Horticulture departments.

2, **Northwest A&F University** (NWFU) is a national key university directly under the jurisdiction of Chinese Ministry of Education. It is one of the top universities in China and is supported by the central government under national "Project 211" and "Project 985" programs. These programs aim to develop a number of world-class universities in China. It is also one of the 56 universities in China having graduate school programs. Penn State hosted the President of NWFU in 2007 for discussions in the area of dairy and animal sciences.

**3. Zhejiang University:** Under the direct administration of China's Ministry of Education, the new Zhejiang University is a key comprehensive university whose fields of study cover eleven branches of learning, namely philosophy, literature, history, education, science, economics, law, management, engineering, agriculture and medicine. The university now has 112 specialties for undergraduate studies, and it is entitled to confer masters' degrees in 317 programs and doctoral degrees in 283 programs. Under its administration there are 14 Nation Key Laboratories, 2 National Engineering Research Centers and 3 National Engineering Technology Centers. Besides, it has set up 35 nation key specialties and 43 post-doctor stations.

**4. Nanjing University.** Nanjing University, one of China's key comprehensive universities under the direct supervision of the Ministry of Education, dates from 1902 when it was known as Sanjiang Normal School. During the following decades, it evolved as Liangjiang Normal School, Nanjing Higher Normal School, National Southeast University, the Fourth Zhongshan University, and National Central University. On August 8, 1949, National Central University was renamed National Nanjing University. In October 1950, as required by the Ministry of Education, the name was changed to Nanjing University. In 1952, due to the nationwide restructuring of colleges and universities, some academic units such as the School of Engineering and the School of Agriculture were separated from the university; meanwhile, it merged with the School of Liberal Arts and the School of Sciences of the University of Nanking founded in 1888. Its name remained while its campus moved from Sipailou to Gulou.

Based on the rankings of Agricultural Universities in China, two other potential research partners include:

1, **Huazhong Agricultural University (HAU)** located in Hubei Province that is in the middle area of China. HAU is a multi-disciplinary comprehensive university giving priority to agriculture, characterized by life sciences and supplemented by the combination of agriculture, basic sciences, engineering, liberal arts, law, economic trade, and management. HAU, one of the first groups of universities in China which are authorized to confer Ph.D. and M.A. degrees, has produced the new China's first doctor majoring in agronomy. Firmly adhering to the two central tasks like teaching and scientific research, HAU maintains its management by means of various levels and flexible forms. As far as the educational quality and academic level are concerned, HAU ranks first among the agricultural universities in China. In addition, it has been converted into national important base for training senior special agricultural personnel and developing agricultural science and technology. HAU comprises 13 colleges (Life Sciences and Technology, Plant Sciences and Technology, Animal Sciences and Technology, Veterinary Medicine, Horticulture and Forestry Sciences, Resources and Environment, Fishery, Food Science, Economics and Trade, Land Management, Humanities and Social Sciences, Engineering Technology, Basic Sciences) and the Foreign Languages Department. There are 48 undergraduate specialties, 87 master specialties, 54 doctor specialties, and 7 post-doctor mobile stations [21].

2, **The Northeast Agricultural University (NEAU)** was established in 1948 in Harbin, Heilongjiang Province in China. It was first called Northeast Agricultural College and in 1994 it

was renamed NEAU. Now The NEAU is one of the key universities in Heilongjiang Province and one of the 211-Project universities in China. There're 19 colleges and 1 educational academy in NEAU. Disciplines as Agronomy, Engineering, Science, Management, Economics, Education, Arts and Laws are strongly supported in NEAU. There are 3 national key disciplines, 2 key disciplines of Agriculture Department, 18 provincial level key disciplines, and 6 post - doctoral programs covering 32 doctoral directions, 65 master programs, and 66 undergraduate programs. Training Department of the State Soy Bean Engineering Research Center and a key opening laboratory of Ministry of Agriculture, and a key laboratory of Ministry of Education about Dairying Science are located on the campus. The biology has become the National Nature Science Base for Basic Science Research and Intellectual Education.

### **A Focus and A Vision**

Based on the analysis of the top 10 universities in China as well as an analysis of our faculty interest (see Appendix 2), this document advocates for a focused initiative in two key areas. First, our strategy should build on the current investment in plant sciences, including the ongoing relationships between our College and SCAU and CAU, as well as possible new partnerships that might begin as a result of the WUN workshop on plant stress later this month at Penn State. During that workshop, meetings have been arranged between SCAU, CAU, Zhejiang and Nanjing with PSU faculty and students in Entomology, Horticulture, Crop and Soil Sciences. This focus area also builds on a recent USDA-funded exchange in the area of plant protection.

The second focus area should be in the area of agribusiness (with a particular focus on food). This focus area would build on the recent MOU between Penn State's College of Agricultural Sciences and Smeal College of Business and China Agricultural University. It also builds on a recent USDA-funded exchange in the area of food safety and food product development.

In support of these focus areas, the recommendation is for an additional budget of \$10,000/year for the next two years to seed program development. Funds would be dedicated primarily to support exchanges of faculty and graduate students, as well as to support student and extension study tours. The targeted outcomes of this two year effort include:

- 1) Joint research programs with funding from both governments;
- 2) Opportunities for short term learning opportunities for our students and staff;
- 3) Joint laboratories and joint professorships.

## APPENDIX 1

Table 1:

<b>Trade Statistics for China and the United States</b>								
Year	Chinese Customs Statistics (Billions of U.S. \$)				U.S. Department of Commerce Statistics (Billions of U.S.\$)			
	Total Imports and Exports	Imports from U.S.	Exports to U.S.	Trade Balance	Total Imports and Exports	Imports from China	Exports to China	Trade Balance
1979	2.45	1.86	0.59	-1.27	2.37	0.65	1.72	1.07
1980	4.78	3.82	0.96	-2.86	4.91	1.16	3.75	2.59
1981	5.89	4.38	1.51	-2.87	5.66	2.06	3.6	1.54
1982	5.34	3.72	1.62	-2.1	5.41	2.5	2.91	0.41
1983	4.03	2.32	1.71	-0.61	4.64	2.48	2.16	-0.32
1984	5.87	3.66	2.21	-1.45	6.38	3.38	3	-0.38
1985	6.99	4.37	2.62	-1.75	8.02	3.86	3.8	-0.06
1986	7.33	4.71	2.62	-2.09	8.35	4.77	3.11	-1.66
1987	7.86	4.83	3.03	-1.8	10.41	6.29	3.5	-2.79
1988	10.01	6.63	3.38	-3.25	14.31	8.51	5.04	-3.47
1989	12.25	7.86	4.39	-3.47	17.8	11.99	5.81	-6.18
1990	11.77	6.59	5.18	-1.41	20.03	15.22	4.81	-10.41
1991	14.2	8.01	6.19	-1.81	25.27	18.98	6.29	-12.69
1992	17.49	8.9	8.59	-0.031	33.2	25.73	7.47	-18.26
1993	27.65	10.69	16.96	6.27	40.31	31.54	8.77	-22.77
1994	35.43	13.97	21.46	7.49	48.07	38.78	9.29	-29.49
1995	40.83	16.12	24.71	8.59	57.31	45.56	11.75	-33.81
1996	48.99	16.3	32.7	16.4	63.46	51.51	11.99	-39.52
1998	54.94	16.96	37.98	21.02	75.36	62.56	12.86	-49.7

NOTE: For U.S. statistics the figures for imports from the United States are from CIF for 1979–1984 and custom value from 1985.

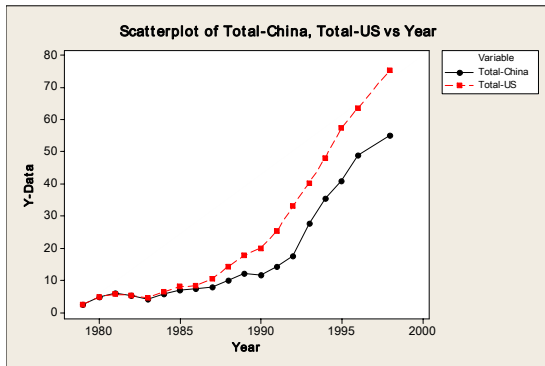


Figure1: Total Imports and Exports of China vs. That of U.S.

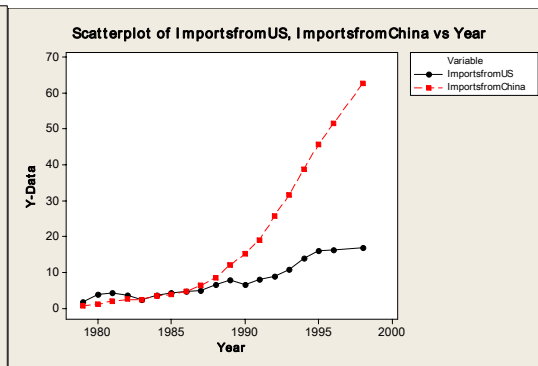


Figure2: Imports from U.S. vs. Imports from China

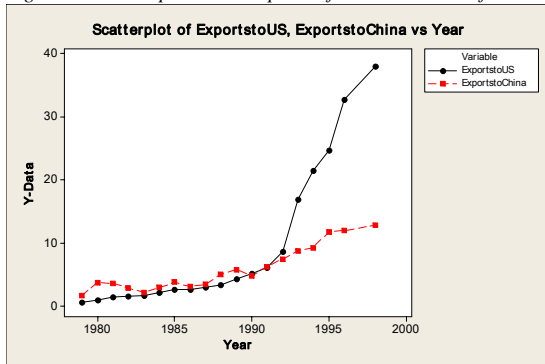


Figure3: Exports to U.S. vs. Exports to China

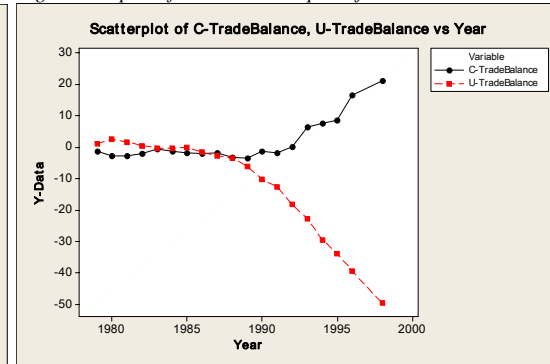


Figure4: Trade Balance of China vs. That of U.S.



## APPENDIX 2

### **PENN STATE FACULTY IN CHINA**

Jonathan Lynch, Horticulture. Professor Lynch is working with South China Agricultural University in Guangzhou on soybean research with funding from the McKnight Foundation. PSU and SCAU just announced a joint laboratory on root biology during President Spanier's trip to China in May 2007.

Jill Findeis, AERS. Dr. Findeis is working with South China Agricultural University in Guangzhou on adoption of new technologies with funding from the McKnight Foundation.

David Abler, AERS. Dr. Abler will be teaching a course which includes trade issues related to China and will be taking students to China in partnership with China Agricultural University in Beijing every other year.

Tom Bruening, Ag and Extension Education. Dr. Bruening has worked with the U.N. Food and Agricultural Organization in China, particularly in the northwest. He is planning to take students every summer to China as part of a new graduate program in international agriculture under consideration.

Henry Lin, Associate Professor - Crop and Soil Sciences – China

Ramaswamy Anantheswaran, - Professor - Food Sciences – China (Visiting Professor)

Donald B Thompson – Professor - Food Science - China (S. Yangtze Univ.)

David Eissenstat – Professor - Horticulture – China (SCAU, Peking, Northeast Univ)

Rick Day – Associate Professor - Crop and Soil Sciences - China (Zhejiang University)

John Carlson – Associate Professor - Forestry - China (Beijing Forestry University)

Marc Abrams – Professor - Forestry - China (Beijing University)

Stephen John Knabel – Associate Professor - Food Science - China

Catherine Cutter – Assistant Professor -Food Science. Dr. Cutter recently returned from China with funding from USDA to explore joint research collaborations with China in Food Safety.

Bob Roberts – Associate Professor - Food Science. Dr. Roberts recently returned from China with funding from USDA to explore joint research collaborations with China in Food Safety and dairy product development.

Ed Mills – Associate Professor - Food Sciences. Dr. Mills recently returned from China with funding from USDA to explore joint research collaborations with China in Food Safety.

Ed Rajotte – Professor – Entomology. Dr. Rajotte recently returned from China with funding from USDA to explore joint research in Integrated Pest Management.

Lynn Hoffman, Senior Research Associate - Agronomy - China

Dennis Calvin, Professor - Entomology - China

Jan Pruss, Senior Instructor - Crop and Soil Sciences - China

Gary Petersen, Professor - Crop and Soil Sciences - China

## **Interest in International Projects Comparison of 2002 and 2007 Surveys Study #1**

Surveys of Pennsylvania's county-based extension educators were conducted in 2002 and 2007 to gauge interest in international programs. The key highlights of this survey reveal:

- A higher percentage (73%) of county-based educators is interested in being involved with international programs, up 3% from 2002.
- The largest percentage of educators is interested in the Americas (23%), up 4% from 2002. The next most requested areas were Western Europe (20%) and Central/Eastern Europe (18%), a decrease of 3% and 5%, respectively.
- A high percentage (80%) of educators was interested in receiving more information from the Office of International Programs about international programs, up 2% from 2002.
- 51% of agents are willing to host international guests, down 6% from 2002.

In summary, these surveys indicate that nearly 75% of extension educators surveyed are interested in being involved with international programs, with nearly 25% most interested in the Americas.

**Interest in International Programs**  
**Interest in Participating in International Study Tour for**  
**Cooperative Education**  
**Study #2**

A survey was administered to Pennsylvania's county-based extension educators to gauge interest in participating in a study tour for cooperative extension. The results indicate:

- 66% of respondents would like to participate
- Of that 66%:
  - 75% would be interested in a tour in the Americas
  - 72% would be interested in a tour of Western Europe
  - 71% would be interested in a tour of Central/Eastern Europe
  - Others would be interested in Africa (46%), East Asia and Pacific (46%), South Asia (36%), Middle East and North Africa (25%)

These results indicate that a majority of county-based extension educators are interested in international study tours for cooperative extension. The Americas is the most requested site followed by Western Europe and Central/Eastern Europe. (NOTE: Most respondents requested multiple locations and some requested all possible locations.)

## **Interest in International Projects Language Training Needed Survey #3**

A survey of Pennsylvania's county-based extension educators was conducted to determine the level of interest in language learning. The results include:

- Roughly half of the respondents are interested in language training (54%);
- Of that group, nearly all (94%) are interested in Spanish language training;
- Other languages requested are Chinese (11% of the 54%), Japanese (5% of the 54%) and Arabic (5% of the 54%), with an insignificant number of people requesting Hindi, Polish, French, Italian and Portuguese. (NOTE: Some people requested training in multiple languages.)
- Counties in which at least 50% of respondents wanted Spanish language training were (excluding counties with only 1 responding agent): Adams, Beaver, Bedford, Berks, Blair, Cambria, Clinton, Fayette, Greene, Huntingdon, Indiana, Juniata, Lancaster, Mercer, Monroe, Montgomery, Northumberland, Pike, Schuylkill, Snyder, Somerset, Sullivan, Warren, Washington, York;
- Those regions most interested in Spanish language training are: Southwest (9 of 11), Central (5 of 17), Capital (3 of 9), Southeast (3 of 9), Northeast (3 of 11), Northwest (2 of 10).

These results show that there is a significant interest in language training and the predominately requested language is Spanish. Some counties are more interested in language training than others but it is not evident if this is caused by individual motivation or actual needs.

**STUDY ABROAD STRATEGIC PLAN 2007-2015**  
**COLLEGE OF AGRICULTURE SCIENCES**  
**Marilyn McPheron, Study Abroad Coordinator**

The College of Agricultural Sciences at Penn State is adamant that international experiences are an important aspect of undergraduate academic careers. Such experiences enable students broaden their vision and situate their course work in a more global context. They add value to domestic academic experiences and can significantly enhance future careers.

While there is still work to be done, we have made steady progress toward the goal of providing international opportunities to our undergraduates. The world needs to know that the next generation of Penn State graduates is sincerely interested in and knowledgeable about global affairs. To deserve this reputation, our students need to be equipped with a full understanding of other cultures, societies, economies, political systems and, of course, agricultural and food systems. Their understanding needs to acknowledge the complex ways in which these systems interact across multiple levels, from the local, to the global. While such an outlook would benefit any Penn State graduate, those in the College of Agricultural Sciences stand to make a tremendous contribution. A better understanding of global agricultural issues should enable our graduate to contribute in a more informed way to enhancing world food security and thus reducing an important cause of civil conflict worldwide.

Students participating in international experiences return with increased confidence, renewed interest in their studies, a more focused plan for undergraduate academic careers and a new appreciation for opportunities available. Many students return with a better understanding of what they would like to accomplish with their education when they graduate. I have never had a student say they regretted their participation. Instead, every student has expressed the opinion that the experience changed their lives for the better.

**Study Abroad**  
**Strategic Plan 2007-2015**  
**College of Agricultural Sciences**

**I. 1999--Where We Started**

Available data suggest that in 1999 a mere 0.5% of the College of Agricultural Sciences' students studied abroad. That same year, Penn State President, Graham Spanier declared "The truth is that the idea of "going global" is no longer a novelty, it is an essential requirement for the survival of nearly all enterprises in the new millennium.

The Office began to assess reasons so few students were studying abroad. Common misconceptions included:

- study abroad is too expensive
- a student will not graduate in four years if they study abroad. Some majors are very structured, with courses given in a specific semester sequence; missing a semester could mean an extra or even two extra semesters.
- courses completed during a study abroad experience will not be count toward course requirements

Additionally:

- Many students work while attending school in order to pay for the next semester; if a student is abroad, no money is being saved toward that next semester.
- occasionally, it is difficult to find courses at a foreign institution in your particular major that would substitute for courses at PSU.

When we began to address students in freshman seminars, we emphasized that all students must take a certain number of GEN ED requirements---every university in the world has courses that would count toward these. The key, of course, is to begin working with your academic advisor immediately as a freshman and set out a course timeline that allows for GEN ED credits to be taken during the Junior or Senior year (typical years for students to study abroad).

In listening to students recount their experiences abroad, it soon became apparent that *any* international experience was beneficial---semesters abroad, spring break short term study tours associated with courses, three-six week summer programs, 1-3 month summer internships. However, in agriculture, short term experiences had never been heavily promoted. We felt that if students had an opportunity to participate in a short term experience associated with a well planned course and of reasonable cost during their undergraduate careers, the experience would be valuable and some students might then be interested in seeking a longer-term experience.

We felt that awards for all international experiences should be established to help offset the costs and make such experiences affordable to more students in the College. We began to develop endowments focused on study abroad in order to allow students to be financially able to have a variety of international experience options to choose from. Since 2002, over \$50,000 to 142 students has been awarded via these endowments. Additional details are provided in section II.

## **II Where We Are Today**

In fall 2005, we officially opened the Study Abroad Lounge on the first floor in Ag Admin. The Lounge offers students and their parents a highly visible space to learn about the emphasis on Study Abroad in the College. Materials on university wide programs, college programs, major specific programs and country specific programs can all be found here along with helpful brochures on culture shock, medical considerations, diversity issues, political climate, etc. College students who have studied abroad regularly volunteer time in the lounge to answer questions and act as peer advisors to students seeking initial information on study abroad options.

We have increased the number of undergraduate students studying abroad from .5% in 1999 to approximately 11% in 2007 (166 students). This compares with an average of 3% nationwide.

**UNDERGRADS International Experience: Semester Studying Abroad/Short Term Study Abroad/Summer/Internships/Research 1999-2008**

	TOTALS	Study Tour	Semester Program	Year Program	Summer	Internship	Research
<b>1999</b>	10		9				1
<b>2000</b>	38	27 plus	11				
<b>2001</b>	25	22	1			1	1
<b>2002</b>	50	36	8		3	2	1
<b>2003</b>	90	77	11	1	1		
<b>2004</b>	68	43	17		5	1	
<b>2005</b>	144	113	18	0	4	9	0
<b>2006</b>	78	47	18	1	8	6	
<b>2007</b>	166	142	15		6	2	1
<b>2008</b>							

? = I believe these numbers may be slightly higher but these are the ones I am aware of.

**SUMMARY BY YEAR**

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Undergrad Enrollment Univ. Park</b>	1953	1806	1599	1482	1445	1430	1436	1400	1496	
<b># who studied abroad</b>	10	38	25	50	90	68	144	79	166	
<b>% studied abroad</b>	.5 %	2 %	1.6 %	3.5 %	6 %	4.8 %	10 %	6%	11%	

The development of endowments with a focus on financially aiding international undergraduate experiences certainly played a part in increasing our numbers going abroad.

Development of such endowments takes time. To date, we have four endowments:

- The Russell Seward Scholarship toward Study Abroad Semesters awards \$1500 a year to a student studying abroad anywhere in the world for one semester.\*



- The Ronald and Dorothy Young Endowment for International Experiences, with preference given to Food Science and Agribusiness Management majors. Since 1999, a total of \$24,050 has been awarded to 58 students.
- The George Settlemyer Endowment for International Experiences, with preference given to Crops & Soil Science, Horticulture and Landscape Contracting majors. In its first two years, this endowment has provided \$30,140 to 36 students. In addition, it provides \$5000 in support every other year toward a Crops & Soils Sciences, Horticulture or Landscape Contracting short term study abroad experience.
- The Boyd and Margaret Wolff GOTCHA (Give Others a Chance to Have an Adventure) endowment. Students receiving funds from GOTCHA give 10% of their award back to the principal within two years of graduating from PSU, thus enabling the fund to continue growing and helping more and more students each year. Since its establishment in 2002, \$25,782 has been awarded to 48 students.

\*The Russell Seward Scholarship is stewarded by Denise Connelly, head of the Scholarship Committee, in the Undergraduate Office. I do not have figures for this Scholarship.

As a scholarship, the funds awarded go to the students' Bursar account and is applied to their total owed. However, the endowments through the Study Abroad Office have been set up as awards. Awards are given directly to the student and may be used to offset any expense arising from their international experience. The majority of students use the award toward their airfare.

Awards given have ranged from \$68-3000, depending on the needs of the individual student. Applications and instructions for the Young, Settlemyer and GOTCHA awards can be found at: <http://www.cas.psu.edu/docs/international/ScholarshipsUndergrad.htm>

Our goal is 25 students a year on semester programs, one student a year on a year-long program, 150-200 students a year on spring break and summer programs, and 5-10 students a year on international internships and to have a short-term program in each major on a biannual basis. Following are some examples of programs already underway:

- AEE takes a group of students each spring break to either a Latin America destination for a Rural Participatory Assessment Practicum or to an Eastern European country to look at

Agricultural Education Methods in Developing Countries. Forestry takes students at the end of the spring semester, every other year, to look at Forestry Policies/Practices in Germany. Both AEE and Forestry are working toward sponsorships/endowments that will make these self sustaining into the future.

- Food Science and Agribusiness Management (AERS) worked with the University of Costa Rica to provide a unique combined experience in 2005. With a goal of UCR students coming to PSU alternating years, UCR provides reasonable housing and transportation costs thus making this experience affordable. In addition, resources are being explored to make this every other year exchange sustainable into the future.
- Horticulture and Landscape Contracting are trading off...with one going one year and the other the next. Landscape Contracting went on a tour of English Nurseries/Gardens in 2005, Horticulture went on a Horticulture Marketing tour of the Netherlands in 2006 and 2007 Landscape Contracting toured garden and landscapes in Italy. These tours are working with alumni and industry to create a sustainable source of funding.
- ERM/ERRI/Agroecology are all worked with Earth University in Costa Rica toward a spring break study in 2007. The Settlemyer endowment provided some support with additional support for these first time program offerings coming from the College of Agriculture's Office of International Programs as well as from the Undergraduate Office. Resources for sustainability are being explored.
- The Settlemyer endowment also supported a Crops & Soils Sciences "Soils & Civilizations" study tour to Turkey and Jordan in summer 2007. Currently, there are plans for this study tour to be biannual.
- Every third year, the Dairy and Animal Science Club coordinates an international study tour for members. The majority of the expenses are offset by fundraisers.

We are currently helping two additional majors a year get a start on an every other year short term offering. In addition to offering \$5000-7000 in support from our office and the Undergraduate Office for their first time coordination efforts, we work with the unit and with Development Office to discover ways to permanently endow the study abroad efforts of the unit. In the next two years, we will work with Veterinary Science, Ag & Bioengineering and Poultry Science. By 2010, every major should have a sustainable biannual short term study program in place.

We continue to promote semester programs via presentations to the Freshman Seminar students, Governor's School Students, summer LEAP participants, regular announcements of opportunities and financial aid opportunities in the on-line student newsletter and to the program coordinators of each unit, flyers posted, noon time brown bag presentations by returning students and noon time seminars given by groups returning from short term programs.

### **III. Where We Want to Be**

Our goal eventually is to have an endowment toward international experiences for each major in the College. These endowments would support one short term or summer experience every other year, five to ten awards ranging from \$250-500 to individual students toward a short term or summer program, one \$1000-1500 award a year toward an internship, and one or two semester awards yearly (\$1500-3000 yearly). We want to develop academically successful, sustainably secure programs. With financial aid to offset costs, plus an array of agriculture focused programs, we believe a goal of 25% of our students having international experiences during their undergraduate experiences is attainable – perhaps even 30-40%!

### **FUTURE GOALS**

- By 2010, 20 Students a year participating in semester programs; by 2015, 25 students a year participating in semester programs
  - Create Major Hand-Outs which show where students can go to do this
  - Seek additional endowments to enable us to give a major award (\$2500-3000) to each student who chooses to do a semester abroad program
- By 2010, one student a year participating in a year-long program

- Identify several freshman students a year who have the potential to do this
  - Work with student and academic advisor to create a course timeline toward this goal
  - Identify national sources of funds for the student to apply for and work with them to prepare application and/or
  - Create an endowment that awards one student a year a substantial amount for a year-long academic semester abroad
- 150-200 Students a year participating in EMBEDDED Short Term Programs
    - Continue to work with units to create sustainable, biannual study tours associated with a semester long course
    - Approach Block & Bridle and the Wildlife/Fisheries Ag Clubs – if they would consider sponsoring a study tour every two or even three years, in the manner of the Dairy Science Club, the interest would reach across several majors. Also, they have easy potential for earning funds to defray the cost.
    - Work with units and Development to create sustainable support for regularly offered study tours
- 5-10 Students a year participating in international internships
    - Create a plan for identifying students, internships and funding and bringing them together. Currently, students who are doing a spring semester in Australia can work with Andrea Van DeWow to create a summer internship to follow. More opportunities of this sort might encourage more students to follow their semester abroad with an internship and vice versa, might encourage students interested in international summer internships to do it in conjunction with a semester abroad.
- An endowment for each major that specifies international experiences
    - Currently, we have three endowments that specify preference of a particular major but may be awarded outside the major if majors do not apply. To have such an endowment for each major would enable us to do more marketing of specific international destinations if we were able to offer dollars also.
- Develop new promotional materials:
    - Create handouts specific to each major to show where they can go for a semester and still graduate in 4 years
      - I have been advocating this to unit heads for several years but have not been able to generate interest. Rob Shannon has agreed to create such a hand out for ERM students with Victoria University in Wellington, New Zealand as the recommended destination.
    - Have a general Study Abroad Information session at the beginning of each semester in the 122 Study Abroad Lounge (in addition to continuing classroom visits, etc.).
      - Find a better way to promote the general sessions offered by the university Education Abroad Office

- Regularly scheduled noon time seminars by students who have had an international experience – an opportunity for them to show their pictures and talk about any aspect they wish
- Yearly photographic contest with entries displayed in the hall outside the 122 Study Abroad Lounge
  - Appropriate Prize(s)?
- Retire t-shirts as the promotional give away? Create a deck of cards featuring a globe back and suits with pictures taken from students' photos. Students studying abroad for a semester would receive a deck of cards, a PSU t-shirt and a CAS ball cap. It would be suggested that they give the t-shirt and cap to a peer from the country they are studying in before they return to the US.
- Certificate of recognition for students who have completed a semester abroad
- Recognition at Graduation ceremonies. Students who have had an international experience could be asked to stand.
- Continue to work with the College Development Office to create endowments specified for international experiences OR toward embedded short term experiences for particular majors

#### **IV. Resource Needs**

- 20K Study Tour Fund
- Promotional and Travel Funds
- Staffing Needs
  - Work Study Student
  - Student Volunteers in the Lounge – for peer advising role
  - Development work
  - Logistics Support (travel arrangements, itineraries, etc.)
  - Risk Management Oversight for the College
  - Mini-grant research and writing

## Appendix 8: Tag Along Program Impact 2004-2007

The Tag Along Fund is currently funded at approximately \$15,000/year. In FY 04/05 – 06/07, \$45,960 was awarded to 40 participants. This averages to almost \$1,150/award.

### These participants were comprised of:

17	Graduate Students	\$ 17,835.00
2	Undergraduate Student	\$ 2,500.00
8	Extension Personnel	\$ 9,900.00
9	Staff	\$ 10,200.00
4	Faculty	\$ 5,525.00

### A breakdown of awards by department

Agricultural and Biological Engineering	1	\$ 750.00
Ag. Economics and Rural Sociology	5	\$ 5,850.00
Agricultural Extension and Education	5	\$ 5,419.00
Crop & Soil Sciences	5	\$ 4,970.00
Dairy and Animal Science	2	\$ 2,930.00
Entomology	0	\$ 0.00
Food Science	0	\$ 0.00
School of Forest Resources	2	\$ 2,750.00
Horticulture	6	\$ 9,028.00
Plant Pathology	3	\$ 3,684.00
Poultry Science	0	\$ 0.00
Veterinary and Biomedical Science	4	\$ 2,000.00
Extension (County-based)	4	\$ 5,100.00
Inter-departmental/Inter-college	3	\$ 3,479.00

The great majority of Tag-Alongers stated that the Tag Along Fund was instrumental to the College's 2005-2008 Strategic Goals A and B: Increase Enrollment and enhance student success, and Enhance knowledge discovery and translation. Students state, "*I presented preliminary data at an international conference and received feedback, as well as encouragement, about my research from [international] scientists in my field*" and "*...it allowed me to further understand the role of sustainable practices in agricultural communities, and has allowed me to incorporate these principles into my own research*". One faculty member pointed out that, "*...having the staff [there] allowed each of the student teams to more effectively get the information and support they needed in planning and implementing their projects*", while a second faculty member states, "*The opportunity to "Tag Along" along on the 2005 study tour was instrumental in laying the groundwork, in cooperation with the International Programs office and others, for future study tours involving students in ERM and other environmentally-oriented majors in the College.*"

Finally, extension personnel found that the Tag Along fund allowed them to help the College reach Goal D: Lead and manage the College as a system. "*More than just learning...I was able to personally see the variables that have a big effect on natural resource management around*

*the globe. Now...I bring with me some insight into the whole mechanism of broad-scale variables that play a role in each situation”, “It felt wonderful to actually help extension educators understand the problem and how to fix it. I feel like I had a huge impact on a lot of producers and helped a lot of people”, and “Two-hundred and fifty extension education educators participated in the three-day training workshop and about 150 extension officers participated in the needs assessment data collection process.”* were just some of the comments made about the Tag Along Program’s impact with extension personnel.