

## **“Exploring Connections with India” Executive Summary of Survey Results**

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May 23, 2012

### **Overview:**

We sought information on existing faculty partnerships with Indian institutions through a Qualtrics survey. The survey link was disseminated through Associate Deans for Engagement and others in the Colleges. A total of 42 faculty/staff from seven Colleges (plus Grad School) completed the survey, listing 80 partnerships with 44 Indian institutions.

The partnerships were classified as:

- Research: 59%
- Education (including student exchanges): 36%
- Business: 5%

The number of Purdue faculty involved in a given partnership ranged from 1-3, with 42% of partnerships involving 3 faculty. Over 50% of the partnerships were classified as either “Established-Mature” or “Established-Growing”, with 38% in their “Infancy” and 9% “Waning/Inactive.” This shows great potential for growth in partnerships.

### **Challenges and Opportunities:**

The overall set of partnerships with India is widely distributed, both in terms of the number of institutions and the technical areas represented. The majority of the partnerships are relatively small programs – often individual or small-group interactions.

There is strong interest in expanding the research and educational partnerships. A number of faculty expressed interest in joint funding opportunities, as well as workshops or exchange programs. Several faculty reported existing funding for programs, or have submitted proposals for joint funding. Several institutions have multiple partnerships with Purdue, and could be candidates for anchors in India.

### **Participant Suggestions for Expansion of Programs:**

- Collaborative Research/Education Proposals
- Faculty Exchange
- Student Exchange
- A visible summer exchange program, aimed at grad recruiting
- Joint course development
- Workshops and high-level visits

## **“Exploring Connections with India”**

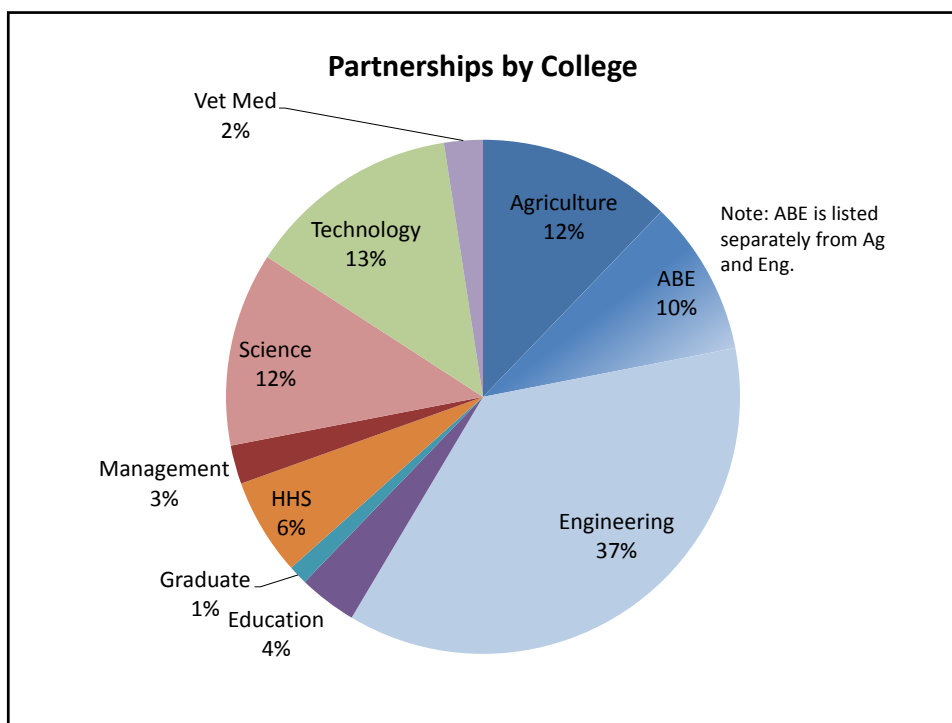
### **Summary of Survey Results**

May 23, 2012

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### **Overview**

- Qualtrics survey circulated to all Purdue faculty – April 2012.
- Survey advertised through Associate Deans for Engagement and International Programs Officers in various Colleges.
- Responses:
  - 43 faculty/staff completed survey
  - 82 partnerships
  - 46 Indian institutions
- This report summarizes the responses, and includes 3 appendices of supplemental data.



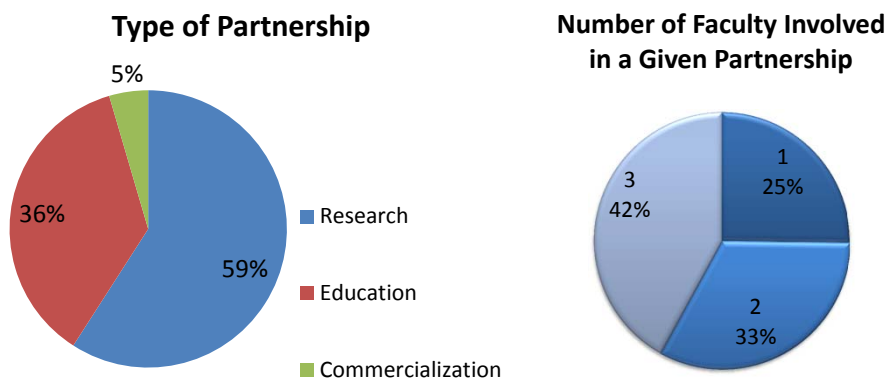
### Indian Institutions (p. 1 of 2)

All India Institute of Medical Sciences  
 Anna University (2x)  
 B.S. Abdur Rahman University, Chennai (2x)  
 Bangalore Baptist Hospital  
 Bhabha Atomic Research Center  
 Center for Cellular and Molecular Biology  
 Centre for Cultures, Technologies and the Environment (CCTE)  
 CIMMYT Hyderabad  
 Cummins College of Engineering for Women  
 Delhi University  
 IIM Bangalore (2x)  
 IIM Kolkata  
 IIM Ranchi  
 IIT Bombay (4x)  
 IIT Delhi (2x)  
 IIT Hyderabad  
 IIT Kharagpur (6x)  
 IIT Madras (10x)  
 IIT Roorkee  
 IIT Ropar  
 Indian Institute of Technology (unspecified city)  
 Indian Agricultural Research Institute, New Delhi (2x)  
 Indian Council of Agricultural Research

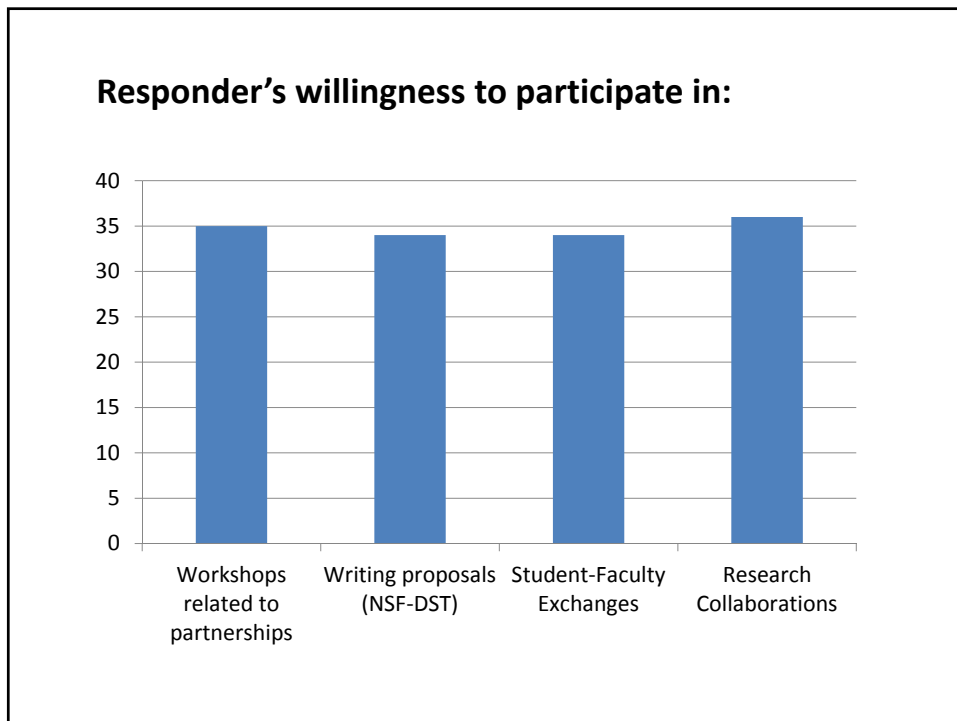
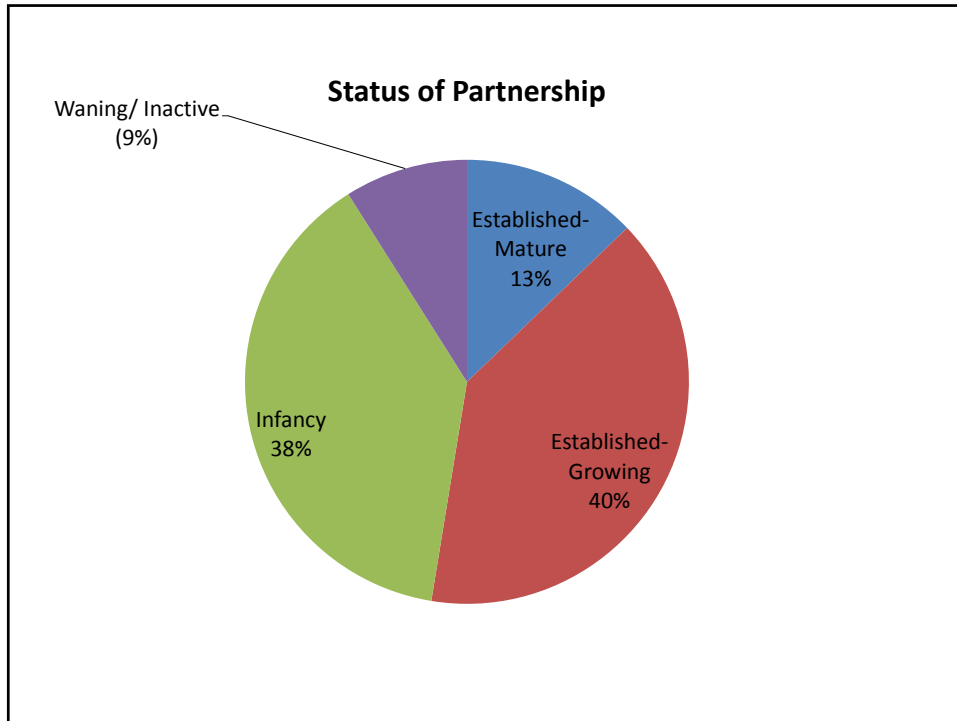
### Indian Institutions (p. 2 of 2)

Indian Institute of Science (5x)  
 Indian Institute of Tropical Meteorology, Pune  
 Indian School of Business  
 Indian Society of Agribusiness Professionals  
 Indira Gandhi Agricultural University  
 Indira Gandhi Centre for Atomic Research, Kalpakkam  
 Institute of Experiential Learning  
 International Rice Research Institute  
 JNCASR (4x)  
 Kakdwip Research Centre, CIBA  
 MAHYCO Company  
 Microsoft Research India  
 MS Ramaiah University, Bangalore  
 National Center for Biological Science (Tata Institute of Fundamental Research), Bangalore  
 Punjab Agricultural University (2x)  
 Rajdhani Engineering College, Orissa, India  
 Sri Ramachandra Medical University, Chennai  
 Tamil Nadu Agricultural University (2x)  
 Tamil Nadu Veterinary and Animal Sciences University, Chennai  
 Tata Institute of Social Science  
 University of Agriculture Sciences, University of Horticulture Sciences, Bangalore  
 University of Mumbai (VJTI)  
 Vellore Institute of Technology (2x)  
 Veterinary College in Bangalore

### Type/Scope of Partnerships



Note: Partnerships with several institutions were listed in multiple categories



### Ideas for Expansion of Programs – Sample Comments

- Collaborative research/education proposals.
- Develop mutually beneficial collaborations for addressing societal issues.
- Faculty exchange.
- Student exchange.
- Graduate student mentoring or training.
- Having a visible summer exchange program with the IITs can potentially help attract bright undergraduates to campus. Some of them might decide to pursue their PhD at Purdue.
- Workshops and high-level visits, plus involvement of interested faculty.
- Exchange course development underway.
- Loss of travel support for Discovery Park liaison (Pankaj Sharma) was a significant blow to developing collabs in India.
- Technology development at Purdue and testing/evaluation on Indian side - complementary value-chain perspective; subsequent educational and training for new technology in Indian setting.
- Direct 1-1 contact with other groups for graduate student hire and training.
- Just submitted UKIERI UK-US-India Trilateral Research in Partnership grant proposal with this university.
- Continued discussions to develop collaborative service learning projects for Purdue students to undertake in India.
- Engage IUSSTF for larger follow-on grant.
- Dr Raghothama and I have engaged the PAU faculty and administration in hopes to start a joint PAU-Purdue Research Center at PAU, Ludhiana, Punjab.
- Potential exists to grow in the area of nanotechnology exchange visit - collaborations underway; engage through nanoHUB-U and related educational technologies.
- Have received funding from Indo-US STF. Need to set up a continuing set of activities, rather than one-time that we have had.

### Ideas for Expansion of Programs – Sample Comments

- Prof Raji Sundararajan is doing joint research, and we took our students for India spring break study abroad to interact with students. They are interested in student and faculty exchange and more joint research.
- This program is a scholarship provided by Cummins to have CCEW students come to Purdue to obtain their MS. We would like to expand this relationship to have faculty exchange. I have also taken students from Purdue to India for a study abroad program and we have visited CCEW to interact with faculty and students.
- I've been involved in collaboration with JNCASR for about 3 years and the science is great. The logistics are really bad. Travel issues always seems to be a rate limiting step to further the collaboration. This issue needs to be solved long-term in a better way. Also, when we have hosted JNCASR students at Purdue, housing is always an issue. We need an I-House at Purdue!

### Other information collected:

- Nature of Primary Point of Contact (individual faculty, department, university admin).

### Appendix 1: Current MOUs with Indian Institutions (from IP website)

Country	Institution/ Title	Type	Dates	College/Program
India	International Crops Research Institute for the Semi Arid Tropics (ICRISAT) Memorandum of Understanding	Memorandum of Understanding	1996 - 2001	College of Agriculture
India	Birla Institute of Technology and Science (BITS) Memorandum of Understanding	Memorandum of Understanding	2005 - 2010	College of Science
India	Department of Science and Technology, Republic of India Memorandum of Understanding	Memorandum of Understanding	2007 - 2013	Discovery Park
India	Cummins College of Engineering for Women- CCEW Memorandum of Understanding	Memorandum of Understanding	2008 - 2013	College of Engineering
India	Centre for Cellular and Molecular Biology Memorandum of Understanding	Memorandum of Understanding	2008 - 2013	Discovery Park
India	University of Agricultural Sciences (UAS) Memorandum of Understanding	Memorandum of Understanding	2010 - 2015	College of Agriculture

### Appendix 1, cont'd: Student Exchange Programs with Indian Institutions (from IP website)

Country	Institution/Title	Type	Dates	College/Program
India	Birla Institute of Technology Birla Institute of Technology	Student Exchange	2003 -	Office of Dean of International Perpetual Programs
India	Indian Institute of Technology Bombay Indian Institute of Technology Bombay	Student Exchange	2004 -	Office of Dean of International Perpetual Programs
India	GEARE Bombay GEARE Bombay	Student Exchange	2006 -	Office of Dean of International Perpetual Programs

### Appendix 2: Indian Students Attending Purdue (Source: Tom Atkinson, Graduate School)

- 748 graduate and professional students from India (Fall 2011)
- #2 of all countries (China is #1 with 1022 and South Korea #3 with 357).
- Graduate Council task force is studying dual and joint degree programs – this may have a big impact on how we may work with Indian and other international institutions in the future.
- We should likely revisit the issue of whether to accept three-year Indian degrees for (graduate school) admission.



### Appendix 3: Purdue Faculty of Indian Origin (p. 1 of 2) (Total: 90 Faculty)

Institute Name	Bachelors	Masters	Ph.D.	Other	Total Number of Degrees
<b>Non-U.S. Institutions</b>					
Aligarh Muslim University/India		1			1
AP Agricultural Univ/India	2				2
Birla Inst of Technology & Science	2	3	1		6
Bombay University	1			Diploma 1	2
C R State College	1				1
Calcutta University	3	1			4
Christ Church College India		1			1
G.n.d. University,punjab	1				1
Haryana Agric Univ/India		1	1		2
IIT Bombay	5				5
IIT Calcutta	1				1
IIT Chennai	1				1
IIT Delhi	3		1		4
IIT Kanpur	4	4	3		11
IIT Kharagpur	9				9
IIT Madras	6				6
IIT New Delhi		1			1
IIT Roorkee	1				1
Indian Inst of Management		1			1
Indian Institute of Science Bangalore		3	2	Assoc 1	6
Indian Institute of Science Unconfirmed			1		1
Indian Statistical Institute	1	3	1		5
Indian Vet Research Inst		1			1

### Appendix 3: Purdue Faculty of Indian Origin (p. 2 of 2) (Total: 90 Faculty)

Institute Name	Bachelors	Masters	Ph.D.	Other	Total Number of Degrees
<b>Non-U.S. Institutions</b>					
Jadavpur University	3				3
Janahrlal Nearu University, Delhi		1			1
Karnatak University/India	1	1	1		3
Krishi Viswa Vidyalyaya	1				1
M. S. University of Baroda	1				1
Madras University	2	1			3
Panjab University	1				1
Presidency College	1				1
Punjab Agricultural University	2	1			3
Regional Engineering College	1				1
Shiva Ji University	1				1
St Thomas College/India	1	1			2
Tata Institute of Fundamental Research			1		1
University of Agricultural Scien	1	1			2
University of Agriculture	1	1			2
University of Allahabad	1				1
University of Bombay	2	1			3
University of Calcutta	3		1	Assoc 1	5
University of Delhi	1	2	1		4
University of Madras	2	1	1		4
University of Mysore	2			Assoc 1	3
University of Poona	3	1	1		5