Cornell University

Cornell-In-India
College of Agriculture and Life Sciences
International Programs (IPCALS)[1]

1. **International Agriculture 602, Agriculture in the Developing Nations**, the flagship course in CALS International Programs, operated in collaboration with our private sector Indian partner, Sathguru, brings approximately 50 students to India from departments throughout Cornell. In India, they are joined by students from the Acharya NG Ranga Agricultural University, Hyderabad; Tamil Nadu Agricultural University, Coimbatore; and the University of Agricultural Sciences, Dharwad. This course features India's contemporary developments in the area of agriculture, the food sector, the information technology sector, and the globalization of economic activities combined with exposure to village-based rural life. Students in this course, now in the planning stage for the fourth year of operation, have provided immensely satisfactory feedback on the learning value of this class. For many, it is a life-altering experience.

2. **Agri/food Business Management Program** is an executive development Program conducted by various departments within CALS (AEM, Food sciences, Communications, FEP) in association with Sathguru. Offered once each year for the past 5 years, the program is very popular. It brings together high-level policy planners, industry CEOs of the food industry, academic faculty and leaders from non-government organizations from India and neighboring countries. The group is exposed first in India to the developing country perspective on agri-business and then travels to Ithaca and Upstate New York for practical exposure to US agriculture and agri-business.

3. **The Food Retail Executive Program**, managed by Cornell and Sathguru, aims to strengthen the food retail sector in India. It is modeled after a similar food executive program conducted by CALS/AEM in Ithaca.

4. **National biotechnology symposia** are conducted in association with the Government of India to sensitize stakeholders to the emerging trends in global biotechnology. These programs provide Indian stakeholders with a global perspective on technology status, technology transfer mechanisms, commercialization opportunities, venture capital and product marketing.

5. **An MOU with Tata Chemicals** managed by Cornell and Sathguru, provides for training and capacity building in agricultural extension, food processing, and value addition. The first work plan is in place and implementation is scheduled for the coming year.

6. **The Indian Council for Agricultural Research** (public-funded Indian national program for agricultural research) has an MOU with CALS for joint research and capacity building. Each year CALS receives and trains several visiting scientists and post-doctorates in many areas relevant to India's agriculture.

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7. **The Rice-Wheat Consortium** focuses on constraints to rice and wheat production in the Indo-Gangetic plains. The Crop and Soil Sciences Department in CALS partners with India (ICAR) and other national agricultural research programs in the region.

8. **Strategic advisory services** are provided at both the state and national level by Cornell and Sathguru. Activities have included the creation of a large life sciences park in the State of Tamil Nadu and working with the Department of Biotechnology at the national level to organize a workshop addressing nutritional enhancement and abiotic stress tolerance in agriculture.

9. **The System for Rice Intensification (SRI),** an initiative of the Cornell International Institute for Food, Agriculture, and Development (CIIFAD), is implemented with various Indian agricultural universities and several thousand farmers who have adopted this yield-enhancing technology in India.

10. **The Agricultural Biotechnology Support Project (ABSP) II** is funded by USAID and managed in India by Sathguru. This is a collaborative research project involving public-private-public partnerships for agricultural biotechnology to address constraints to food crop production in the Indian region. Specific projects include:

    a. **Eggplant resistant to fruit and shoot borer (FSB)** in partnership with the Maharashtra Hybrid Seed Company (MAHYCO) and various public sector partners. FSB is the primary pest of eggplant, which is the primary vegetable in the country, planted to 472,000 ha.

    b. **Drought and salinity tolerant rice** utilizing technology developed by Professor Ray Wu of Cornell. Sponsored under the Indo-US agricultural biotechnology initiative involving the Department of Biotechnology of the Government of India and USAID, the project is managed by Cornell-Sathguru and involves several collaborative institutional partners.

    c. **Tobacco Streak Virus (TSV) resistance** in oil seeds such as sunflower and groundnut. Managed by Cornell-Sathguru, this project involves public and private institutions in India and the Danforth Plant Science Center in the U.S.

    d. **Potato resistant to late blight** in collaboration with premier public research institutions in India plus the USDA and partner universities in the U.S. Late blight is one of the world's worst plant diseases (responsible for the Irish famine) and this project offers hope of a solution that could have worldwide impact. It is managed by Cornell-Sathguru

    e. **Intellectual property technology management** in collaboration with the Cornell Research Foundation (CRF) and Sathguru. Courses are delivered in intellectual property management with a focus on life sciences technology transfer.

    f. **Enhancing science-based communication capabilities** related to the utilization of transgenic crops. This effort focuses on the technologies and products mentioned above.