

Since 2011, the Agricultural Innovation Partnership (AIP) has focused on better understanding and improving the livelihood of some of the most deprived farming communities in India. Based primarily in the extremely fertile, yet equally underdeveloped Indo-Gangetic Plains, the project works to improve two interconnected aspects of agriculture—education and extension—through effective engagements that utilize technological advances and innovative strategies. AIP brings together Indian state agricultural universities (SAUs), Land-grant Universities in the US and agri-based companies in a unique partnership that addresses the educational, developmental and commercial aspects of agriculture.



The Innovation Impact



Agricultural Innovation Partnership

Empowering Agriculture, Empowering the Nation

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Credits
Bhaskar Uppuluri
Buddhadeb Roychoudhury
Hemalatha Vijayaraghavan
Regina C. Holl
Suresh Damodaran
Susheel Kumar

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Partners in Progress



Acknowledgements

The Agricultural Innovation Partnership (AIP) project profoundly acknowledges the support of the United States Agency for International Development (USAID). AIP is indebted to its partners—Assam Agricultural University, Banaras Hindu University, Cornell University, Ohio State University, Sardar Vallabhbhai Patel University of Agriculture and Technology, Sathguru Management Consultants, Tata Chemicals Limited, Tuskegee University, University of California, Davis, University of Georgia and University of Illinois at Urbana Champaign—for their assistance, efforts and contributions to the project. AIP would also like to thank all the individuals who made this project possible, especially the faculty members who have worked hard on developing and implementing the various project interventions.

Preface

Rural employment, primarily in agriculture, accounts for the livelihood of two-thirds of India's population, which in turn feeds the nation's 1.25 billion people making agriculture one of the largest and most important sectors in the economy. To ensure sustainable yields over a long period, the agricultural sector requires trained personnel – extension workers, entrepreneurs, and professionals – to make optimum use of natural resources. An effective way of providing trained personnel is by regularly revising university curricula to keep pace with ever-evolving scientific and technical advances thereby imparting the most modern skills to agricultural graduates entering the workforce.

The agricultural sector in India has witnessed unprecedented transformations across the globe. Over the years, agricultural production has evolved in tune with shifts in demand and preference for finished food products. In the past few years India has seen a decline in per capita demand for cereals, which has facilitated a rise in the consumption of vegetables, fruits, dairy and poultry products. Farming in India has become more complex owing to worldwide socio-economic changes such as expansion in global trade, economic cycles, labor scarcity, growing shortage of water and land resources, climate change and technology advancements. These new dynamics warrant a revamped agricultural education, research and extension systems to fulfill the growing demand for specific food items.

The Agricultural Innovation Partnership (AIP) project addresses these crucial needs in agricultural education and extension. AIP was launched in 2011, with the support of the United States Agency for International Development (USAID), under the Feed the Future initiative. AIP endeavors to increase food security and improve the quality of life in the regions of the Indo-Gangetic plains by improving agricultural education and extension systems through a consortium of public and private enterprises to ensure prosperity in the region.

Despite being highly fertile, substantial tracts of agricultural land in the Indo-Gangetic plains remain underutilized. This is primarily due to poor farm management practices, disconnect among the crucial links in the entire food value chain and adverse climatic and social conditions. However, efficient land and resource utilization measures have the ability to transform one of the poorest regions in India into the country's breadbasket.

AIP is working in close association with partner universities and organizations on different aspects of agricultural education and extension, including curricula development; education delivery to students, entrepreneurs and farmers; and technology dissemination to enterprises.

This publication aims to share information and inspire Indian institutions to initiate projects to modernize agricultural education and research. The book carries engaging information on AIP and will be of use to educators, students, researchers, development practitioners, private players engaged in agricultural development, funding bodies and international development institutions.

Foreword

As the International Coordinator of the Agricultural Innovation Partnership (AIP) project, I have been involved in the development, implementation and facilitation of project activities.

Credit for the achievements reported in this publication goes to the faculty and staff who participated in the project activities—the Indian faculty who traveled to the US to develop curricula and extension related programs and the US faculty who hosted them. Faculty members and senior leadership at both Indian and US universities have been the main drivers of AIP accomplishments. It is this combined effort, involving six US universities (Cornell University, Ohio State University, Tuskegee University, University of California, Davis, University of Georgia and University of Illinois); three Indian universities (Assam Agricultural University, Banaras Hindu University and Sardar Vallabhbhai Patel University of Agriculture and Technology); and three private organizations (Sathguru Management Consultants, Tata Chemicals Limited and John Deere) that make this project and its collaboration so unique.

Today, AIP is probably the largest agricultural educational initiative anywhere in the world. This would not have happened without the foresight and support of USAID. The goals and objectives of AIP not only concur with the priorities of a higher level of agricultural education in both India and the US, but also with the broader deliverables outlined in USAID's Feed the Future initiative.

Issues such as governance, gender and equity, malnutrition, enhancing library systems, e-learning, innovative educational programs, modern information and communication technology and extension programs continue to be of high priority and relevance to AIP. These ventures aim at producing graduates who are ready to contribute to the improvement of India's rural and agricultural sectors.

This publication includes the accomplishments and initiatives taken by AIP since 2011. We hope that our endeavor will not only benefit students and faculty, but also encourage senior policy makers in the agricultural education system to debate and approve relevant reforms for developing and implementing more market-driven curricula that address both domestic and global demands.



K. V. Raman
International Coordinator, Agricultural Innovation Partnership
Cornell University

Curriculum Development

Core Themes

Education Delivery

Technology Dissemination

Effective Extension

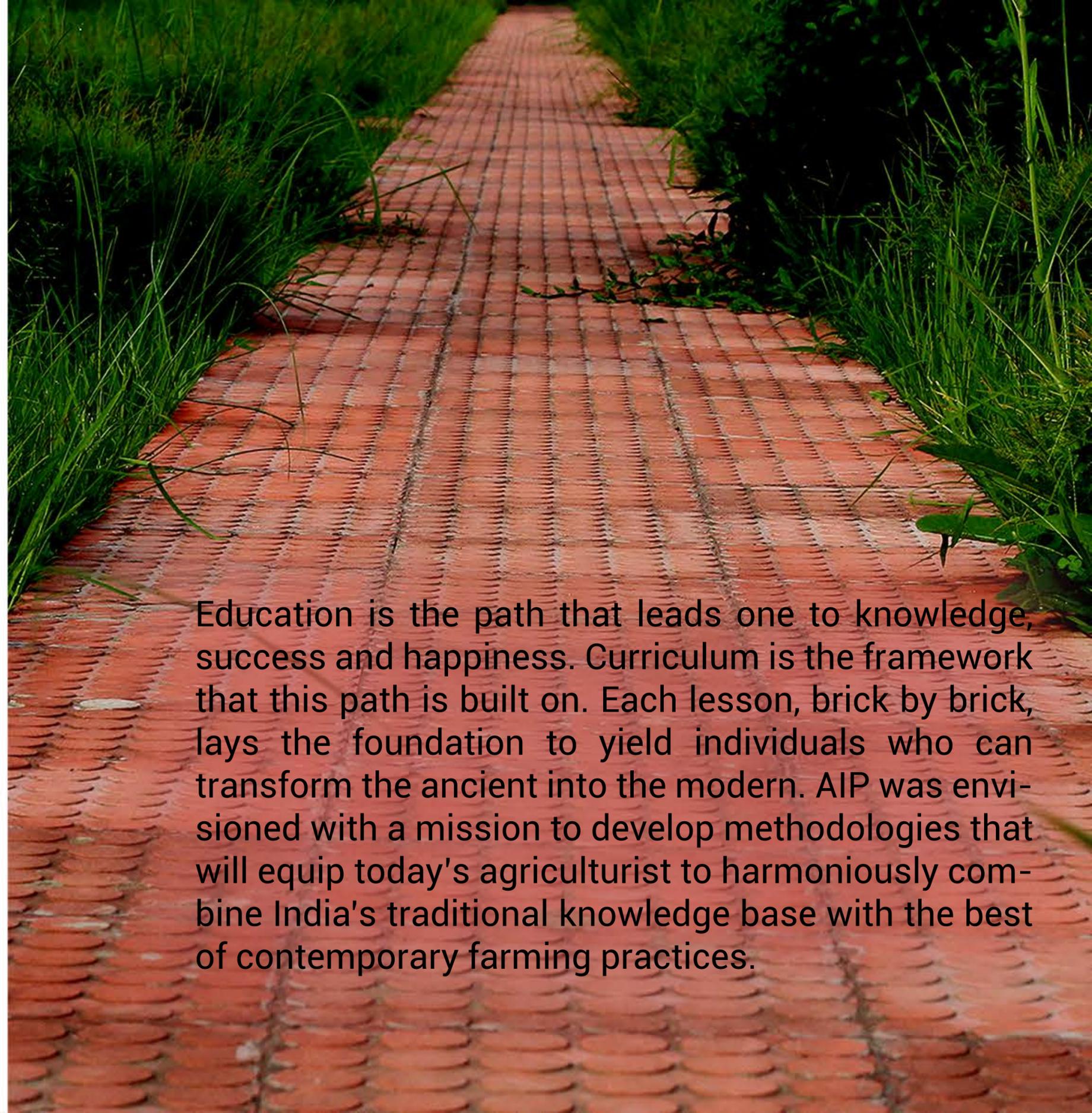


Curriculum Development



“When educating the minds of our youth, we must not forget to educate their hearts.”

The Dalai Lama



Education is the path that leads one to knowledge, success and happiness. Curriculum is the framework that this path is built on. Each lesson, brick by brick, lays the foundation to yield individuals who can transform the ancient into the modern. AIP was envisioned with a mission to develop methodologies that will equip today's agriculturist to harmoniously combine India's traditional knowledge base with the best of contemporary farming practices.

Impassioned and inspired students, if given the right tools, can be the biggest drivers of change. They have the potential to take on the most challenging problems plaguing the world. Academic institutions can play a monumental role in engaging and empowering students. The current Indian agricultural education system needs to be made more industry relevant. AIP began this process by updating the existing curricula at partnering Indian SAUs and introducing 30 new courses, including diploma, undergraduate and certificate programs.



“Our vision is to create graduates ready to work in industries such as food processing, post-harvest engineering, product research & development and quality control. Equipped with the requisite entrepreneurial skills, they will embark upon new businesses, be able to manage supply chains and strategically plan the growth of allied industries such as food biotechnology, food ingredients and hospitality.”



Professor Rakesh Singh
Department of Food Science & Technology
University of Georgia, Athens

Experiential learning

Currently education in India is predominantly “classroom oriented” and lacks the real world exposure that is vital for holistic learning. Since agriculture plays a pivotal role in the Indian economy, global problems affect national agriculture in significant and complex ways. Therefore, agricultural students and professionals benefit exponentially from being exposed to not only practical, but also experiential learning, in both agriculture and rural development sectors.



To promote experiential learning, AIP supports interdisciplinary exchange among Indian and US faculty, staff and students. One way the project achieves this goal is through the participation of AIP collaborative partners from US and Indian universities in Cornell's International Agricultural and Rural Development (IARD) 4020 and 6020 courses. In IARD 4020, students are exposed to a series of classroom lectures, e-lectures and online discussions that establish a global and regional context for sustainable agricultural development, with focus on specific developmental challenges in India. IARD 6020 begins with a 2 week field study trip to India where US and Indian students and faculty come together to observe agricultural development challenges and methods discussed in IARD 4020.

“One of the biggest drivers of change in this unique ecosystem created by AIP has been the experiential learning module. Extension and outreach activities have helped bring faculty and students directly in touch with entrepreneurs and farmers. The unique ensemble of global experts, exchange students from the US and India and Indian educators have enriched agriculture in rural farms and truly brought alive the spirit of collaboration that was conceived by AIP.”



Professor Samsher
Department of Biotechnology
Sardar Vallabhbhai Patel University of Agriculture & Technology



“Through the AIP project, I was given the opportunity to participate in Cornell University’s IARD 4020 and 6020 courses. I was able to learn about agriculture systems on a global scale and network with my international peers. During the class field study trip across India, I was able to observe several different enterprises. One that affected me the most was Project Dekho, a non-profit eye institute run by Mahyco Research Foundation. They are picking up villagers from their home, treating their eye problems at world class facilities and then dropping them back with proper medication. Attending more than 400 patients a day and setting up an ophthalmic camp every three months is an exceptionally inspiring job.”



Aditi
Student, Sardar Vallabhbhai Patel University
of Agriculture & Technology



Empowering women

Despite making sizeable contribution towards agricultural production, women have little resources to move from subsistence crops to market-oriented production. As men come to control the output and income of the household, there is disparity in the status of rural women and men. For development to trickle down to the society at all levels, women have to be empowered.

AIP believes in empowering women in agriculture through revised agricultural curricula that includes cross-cutting socio-economic themes to ensure gender equity and training rural women who lack farming skills in simple but effective natural resource management techniques. Through education and hands-on training in the field, AIP has worked to improve gender equity in India.



"We developed a broad range of initiatives such as the Integrated Rural Development Program (IRDP) and the Centre for Women's Studies and Development—important resources for introducing gender and socio-economic issues into the agriculture curriculum at BHU. Our engagement with faculty from Indian universities has helped us understand the importance of socio-economic issues in carrying out extension programs. Faculty members from these universities have been visiting Ohio State to gain specialization in women empowerment studies, and we in turn have benefitted from their knowledge of South-Asian farming practices."



Professor Cathy Rakowski
Women's Studies and Rural Sociology, The Ohio State University

Facilitating international collaboration



AIP brings together academia, industry and policy planners from across the world to collaborate on interventions that enhance curricula at Indian SAUs and augment rural transformation in the agricultural value chain.

AIP supports international collaboration through:

- Faculty and student exchange visits to develop and implement new and revised curriculum
- Workshops that train participants in the areas of library science, e-learning, and teaching excellence
- Technology Dissemination and Income Improvement Activities that train small landholders to improve their livelihood using sustainable land and crop management practices

In December 2011, AIP conducted a workshop titled "Harnessing Agricultural Education and Research for Rural Development." The workshop brought academia, industry and policy planners together to reflect on rural transformation needs that would enable competent professionals trained in accelerated technology absorption and dissemination to bring about changes in farming, processing and marketing through extensive engagement with the community of farmers and small enterprises. The workshop was held in Delhi, India, and was attended by globally recognized faculty from leading land-grant universities in the US, universities in Africa, Indian academia and industry professionals to formulate ways to adopt contemporary learning practices and accelerated technology absorption strategies for enhancing the food value chain.

"On behalf of my colleagues I thank all the organizers for giving us a chance to be a part of the AIP program which helped us learn and understand a lot about the processes adopted in agriculture in India as well as in other parts of the world."

Professor Moses B. Kwapata
Lilongwe University of Agriculture and Natural Resources
Bunda College of Agriculture, Malawi, Africa



"AIP has been introduced at the right time when we all needed to know and be aware of the future of agriculture, more so because of the huge demand made on food grain supply all over the world by an ever-increasing world population. The amount of interest expressed by ICAR and the state agricultural universities in the AIP program makes it clear that curriculum reform is critical for ensuring a better future for agriculture. AIP is at the center of the critical issues faced by India and the world."



Professor Max Pfeffer
Senior Associate Dean, Cornell University, New York, USA



"Being a part of the workshop was an enlightening and enriching experience. The workshop helped the participants understand many emerging issues related to agriculture and curriculum. AIP has also given us an opportunity to listen to a range of issues from different stakeholders from across the world. The workshop has boosted up self-confidence among the participants and during these three days helped us realize how to deal with agricultural education and extension better."



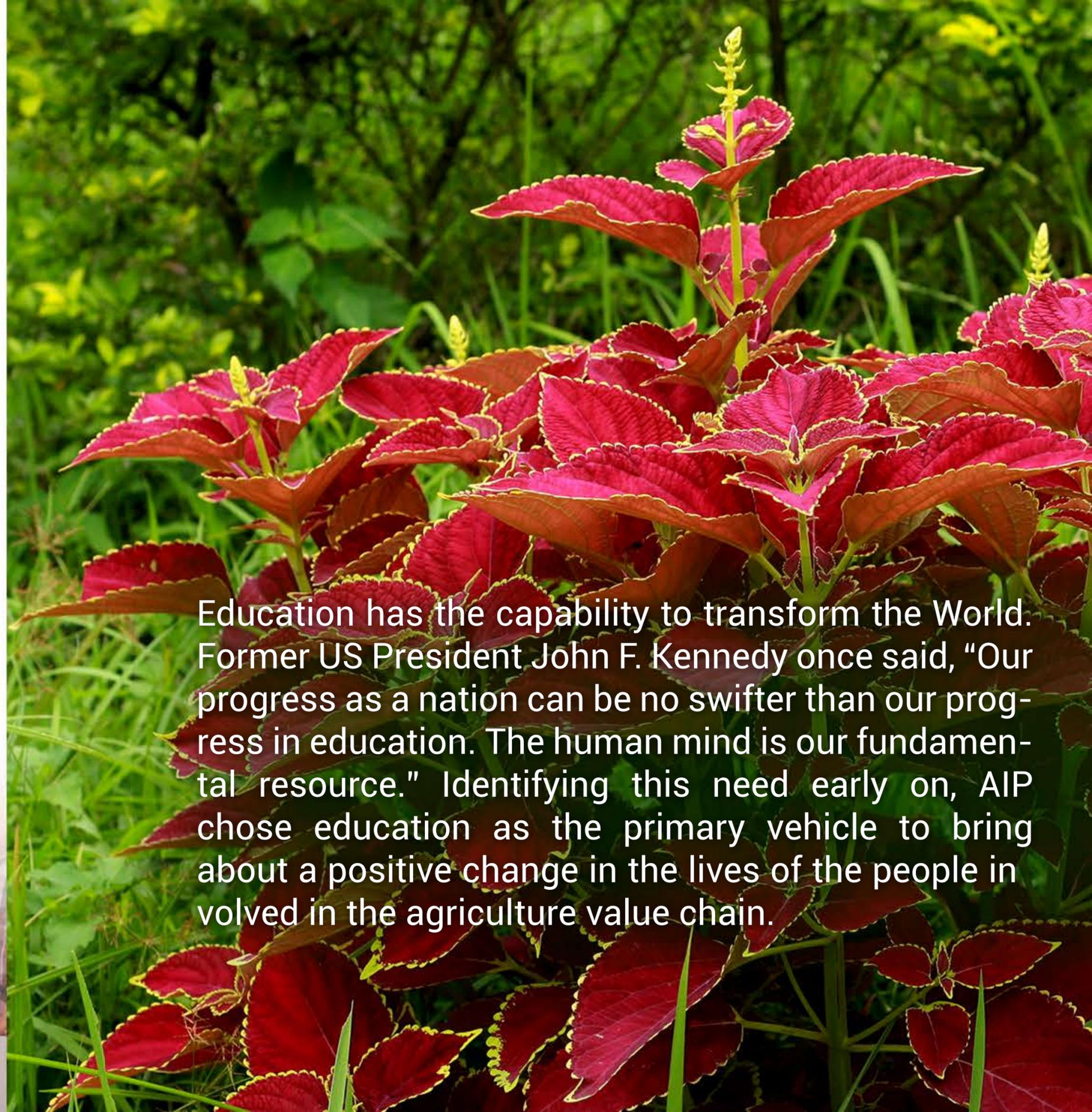
Professor C. S. Prakash
Plant Molecular Genetics, Tuskegee University, Alabama, USA



Education Delivery

“ Education is the most powerful weapon which you can use to change the world. ”

Nelson Mandela



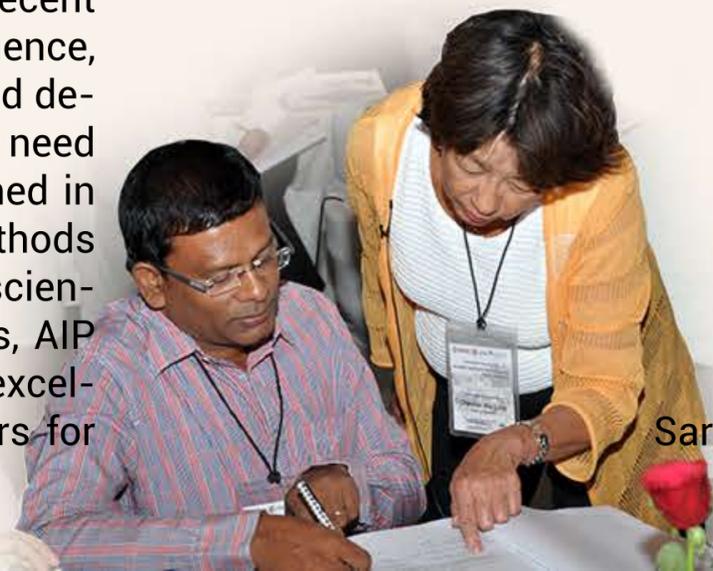
Education has the capability to transform the World. Former US President John F. Kennedy once said, “Our progress as a nation can be no swifter than our progress in education. The human mind is our fundamental resource.” Identifying this need early on, AIP chose education as the primary vehicle to bring about a positive change in the lives of the people involved in the agriculture value chain.

Teaching excellence

Centers for teaching excellence at India's agricultural universities will facilitate a forum for meaningful dialogues, trigger thought processes on issues that impact teaching and learning, and help improve education.



The methodology of teaching has undergone significant changes in recent years. Explosion of knowledge and information, developments in arts, science, engineering, management, medicine, agriculture, and other fields, and rapid development in information and communication technologies, have led to the need of modernizing current teaching methodology. Teachers need to be trained in pedagogy, use of audio-video tools, web content development, modern methods of teaching, examination and evaluation methods and use of software for scientific data analysis. To address these changes in teaching methodologies, AIP has worked closely with partnering Indian SAUs to introduce teaching excellence tools for faculty and students and facilitate the creation of Centers for Teaching Excellence on university campuses.



"At a time when students from some of the best educational institutions are complaining of disinterest in studies, centers for teaching excellence seem a viable option to improve the scenario. AIP's workshop on teaching excellence inspired us to set up a center to foster innovation in teaching. It has been a major hit at Sardar Vallabhbhai Patel University of Agriculture and Technology. It trains teachers, updates course content and makes teaching interactive and more fruitful."



Professor Arvind Bakhshi
Former Vice Chancellor

Sardar Vallabhbhai Patel University of Agriculture and Technology

E- Learning

India, with its large amount of available bandwidth and thirst for learning and instruction, has reached a turning point for millions of learners. Through its e-learning initiative, the AIP project has the potential to lead a major evolution in education for the country





"We have been working with Banaras Hindu University, Sardar Vallabhbhai Patel University of Agriculture and Technology and Assam Agricultural University. Today all three institutions have OLAT—an online learning management system—and each have been trained and given equipment to help capture and create e-learning materials."



Ananth Murthy
Information Specialist, Sathguru Management Consultants

"AIP sponsored the audio/video equipment necessary for capturing lectures in the classroom and publishing them. With technology adoption, positive changes are already in the offing. Teachers are witnessing improvement in the overall grades of the students. In a few years from now, we plan to switch over to blended learning system, where students would be provided with full time online support, apart from their classroom training sessions. For us this incredible achievement will definitely change the way we used to teach and learn."



Jyoti Kumar Gogoi
Professor-In-Charge
ARIS Cell, Assam Agricultural University

AIP is bringing about a paradigm shift in agricultural education by transforming communication, knowledge delivery and student engagement through digital learning.





"Lecture capture has enabled me and many of my classmates to watch the lectures at our own pace, go anywhere in the presentation, stop, start, and repeat. These are advantages that we did not have earlier. We can now understand the lectures better and have higher chances of improving our grades."



Shyam Cheng Konwar
Student
Assam Agricultural University



"We are sharing new technologies with our partner institutions as part of the AIP project. 'Blackboard Software' services include syncing assignments, readings, and other resources through the Online Learning And Training (OLAT) tool. And the Massive Open Online Course (MOOC) style 'on-line video lecture capture capability' of Cornell's Transnational Learning experience brings classroom lectures from around the world to Indian Agricultural Education."



Stefan Einarson
Director, Transnational Learning at Cornell University



AIP's lifeline depends on the effective use of library resources developed for millions of students. The state-of-the-art digitized library and online resources, information hubs, web-based tools and applications, along with the use of social media, have promoted interactive and user-oriented knowledge management systems that align themselves with the needs of researchers. At the center of this information transfer are the librarians, trained effectively under the aegis of AIP in cutting-edge technology.

“The mind is not a vessel to be filled, but a fire to be kindled.”

Plutarch



Transforming the learning process through library science

"Our visit to the Albert R. Mann Library at Cornell helped us gain great insights. Thanks to the knowledge gained through AIP, we have transformed our library to a campus-wide knowledge hub that supports both online and offline learning. It's for the first time ever that a cyber library has been established in a state agricultural university in India, which highlights the concerted efforts of AIP in empowering us with the necessary skills to set up and manage a digital storehouse of information."



Professor A. K. Srivastava
Librarian, Central Library, Banaras Hindu University

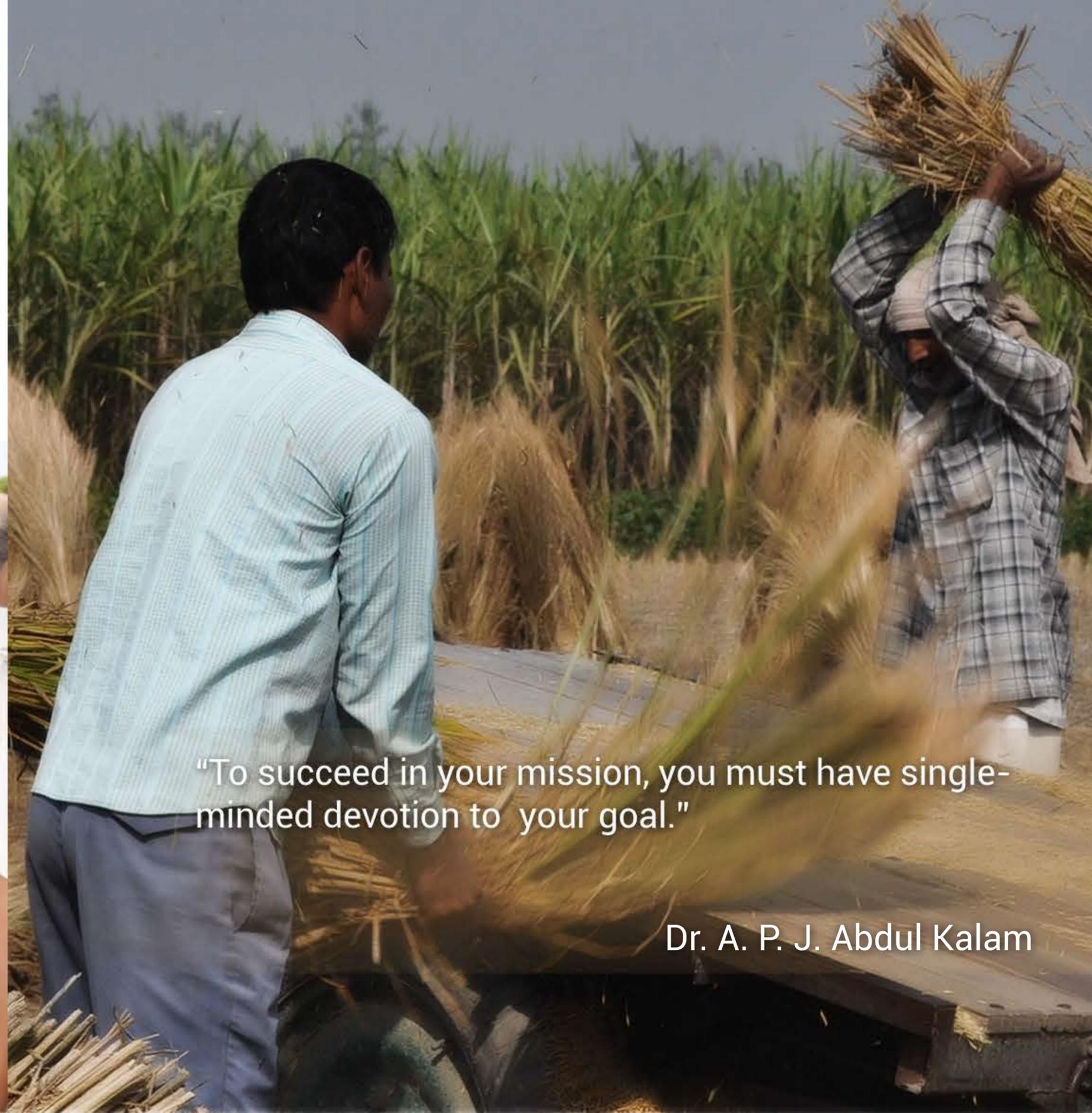


"With access to 12,000 journals, the library has become a knowledge dispensation center. A user-friendly set-up of digital resources accessible anytime of the day, the cyber library has truly empowered us to take full advantage of the benefits that information and communication technology has to offer. The Cyber-library has transformed our concept of the library as just a place to borrow books from; it's a window to the world for us. We are all reaping the rewards of the set-up every day."



Kriti Mishra
Student, Banaras Hindu University

Effective Knowledge Delivery to Farmers



"To succeed in your mission, you must have single-minded devotion to your goal."

Dr. A. P. J. Abdul Kalam

Natural resource management

One of AIP's major extension initiatives is teaching farmers simple natural resource management (NRM) techniques. Location-specific, cost-effective and eco-friendly, these conservation and management techniques help generate higher input efficiency, agricultural productivity and profitability without deteriorating the natural resource base.



"It is not possible to take more out of an agro-ecosystem than what is put into it without jeopardizing its essential functions. It is important to build upon the traditional knowledge and yet avail the benefits of modern innovations. Also, the biophysical processes of soil, water, vegetation and environmental desertification are governed by the human dimensions related to economic, political, social, cultural, ethnic, gender and religious factors."

Professor Rattan Lal
School of Environment & Natural Resources and
Director, Carbon Management & Sequestration Centre
The Ohio State University



"I grow sugarcane in my 2 hectare land in a distant village in Western Uttar Pradesh. Having been trained in AIP's NRM workshop, I am able to more effectively manage my farm. Water management through furrow irrigated raised bed planting system has helped me save water and increase farm productivity by 25% in one year. Precision farming, vermi-composting and effective fertilizer use have helped in the improvement of soil health. My monthly expenditure has gone down, and I have saved ₹42,000 this year. I will now diversify into more profitable crops such as scented rice and french beans."

Braham Pal Singh
Farmer, Village Jagaheri, Muzaffarnagar, Uttar Pradesh
Participant, workshop on NRM in May 2012





Many marginal farmers have now begun the process of building capacity for integrated, participatory and sustainable approach to transforming agriculture.

However, the growth faces a limitation due to physical distances between farmers, researchers and extension workers. The solution lies in the application of Information and Communication Technologies (ICT).

"To date, a large number of farmers trained by AIP have experienced significant positive difference in their lives through simple, but efficient natural resources management techniques taught by AIP. Adoption of NRM techniques, such as water conservation, pest management, reforestation, crop diversification, crop rotation and soil health controls, are benefiting farmers and have led to an increase in their yields and incomes."



Professor Ashok Kumar
Department of Soil Science, College of Agriculture
Sardar Vallabhbhai Patel University of Agriculture & Technology



At nearly 7 billion, the growing world population continues to present enormous challenges for the nations. Dealing head-on with the challenge is the farming community, aiming to produce and supply safe and nutritious food in a sustainable way. Environmental changes in weather patterns and erratic rainfall affect the crop yields. Depletion of natural resources such as degrading soil fertility, soil erosion, deforestation, burning of crop residues, water mismanagement and decrease in underground water levels pose a threat to the institution of farming.

While rural livelihood in the fertile Indo-Gangetic plain depends almost entirely on agriculture, the land remains highly underutilized. The low productivity of farms prevalent in the region needs to be tackled to ensure food security, improve nutrition and increase farmer prosperity. Efficient land and resource utilization, along with the use of technology and proper farming practices, can transform this region into the nation's breadbasket. Cognizant of the situation, AIP adopted effective extension models to realize sustainable yields and rural development in the region.



Connecting the agricultural ecosystem

AIP facilitates improved connectivity among farmers, entrepreneurs, extension workers, universities and public departments through the simple mobile phone. An android-based tablet application, needing minimum training support to understand, is easy to use and serves as a one-stop solution for all queries related to agriculture.

Improving agriculture using mobile applications



AIP has developed a comprehensive mobile application that includes a database with complete information on the farmer's specific geographical area, land usage, and techniques adopted. The application also includes videos of in-field presentations on best agricultural practices; remote crop management for timely technical assistance; multi-channel call centers for farmers; market price forecasts; and GPS-based field surveys, all of which will make the lives of farmers much easier. The future is full of possibilities in this innovation ecosystem.

Technology dissemination

With the objective of improving the income and livelihood of farmers and small-scale entrepreneurs, AIP launched its Technology Dissemination and Income Improvement Activity (TDIIA). Working in alliance with Krishi Vigyan Kendras (KVKs), AIP has conducted several workshops and training programs for farmers focusing on technical adoption. The farming community in different regions of Uttar Pradesh has been trained in the effective production of maize, okra, pigeon pea, summer maize and mango.

“The future depends on what you do today.”

Mahatma Gandhi



Technology dissemination and income improvement activities focus on

- Simple natural resource management techniques.
- Effective approaches to sowing, choosing and planting better crop varieties.
- Integrated pest and disease management, broad based approach to control pests and diseases.
- Input usage and their modes of application.
- Effective storage and transportation of produce.



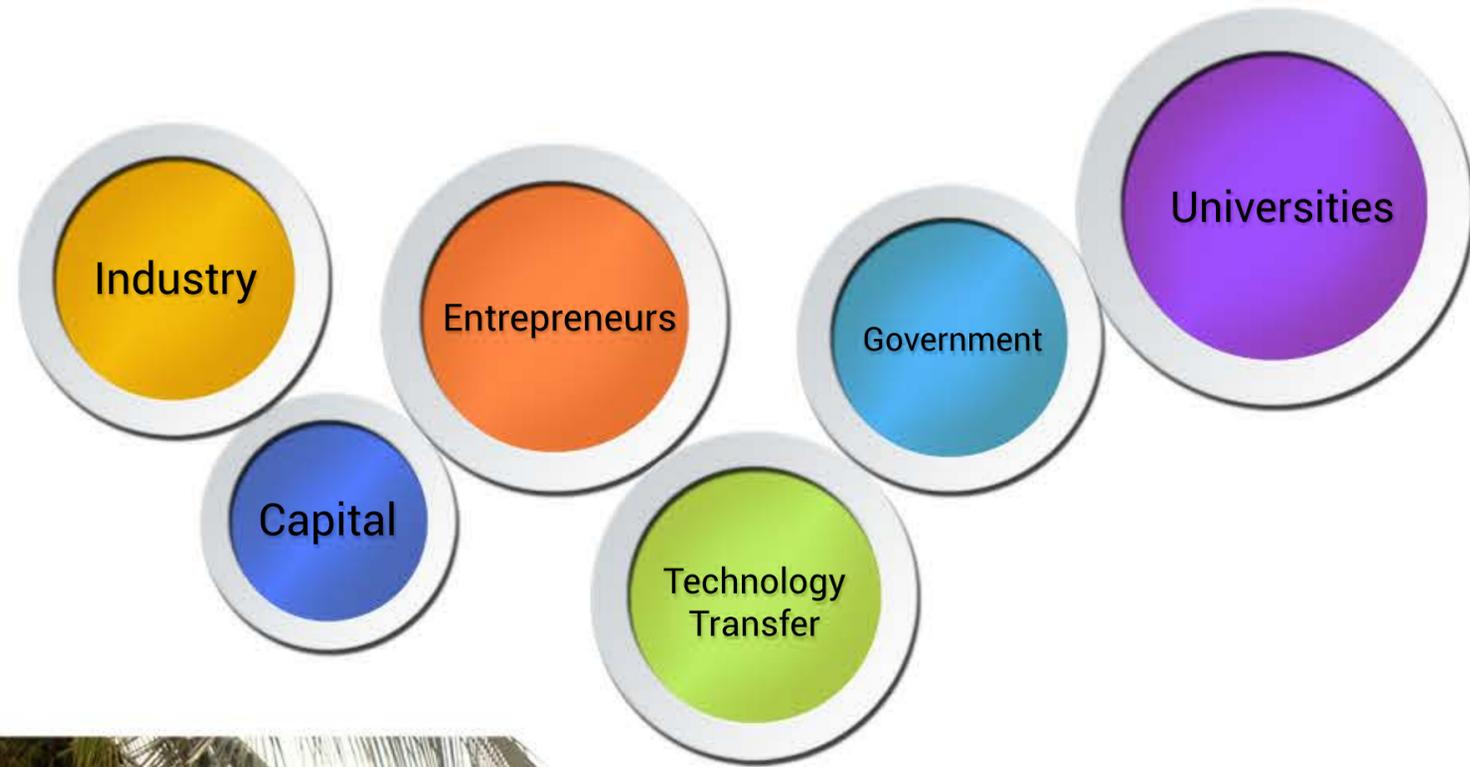
The world rejoices when the farmer smiles.



Technology dissemination to enterprises



Product commercialization



AIP helps both entrepreneurs and academia adopt and transfer technologies to enable product commercialization and facilitates the flow of information and knowledge among farmers, enterprises and institutions to promote innovative processes. An innovative ecosystem will ensure better academia-industry collaboration, leading to an improved agriculture and technology adoption system. AIP fosters innovation for sustainable economic growth, competitive advantage and higher yield efficiencies in production and processing.

“Our initiative for developing and commercializing novel food products from locally available raw materials is building up the innovation ecosystem created among universities and policy planners to maximize the income of farmers and small entrepreneurs.”



Dr. Mamoni Das
Faculty, Food & Nutrition, Home Science
Assam Agricultural University



"I am privileged that for the first time an interdisciplinary team with several experts from an agricultural university has taken the pain to train me. As a small entrepreneur in food processing, I benefitted through exciting interactions with faculty from the universities who showed me how to prepare better, hygienic products. Thanks to the training, I now sell improved value-added products from fruits and vegetables such as jams, jellies, and fruit juices, among others."

Laveena Jain
Participant, AIP's fruit and vegetable training program
Owner, Tripti Foods
Meerut, Uttar Pradesh



अचार
मुरब्बे
चटनी
जैम



AVON BAKERS & CONFECTIONERS

"AIP's workshop on baked food production provided me with effective and useful knowledge on standard, hygienic techniques to produce quality products. After the workshop I went on to produce improved baked food items on my own. AIP helped me become an entrepreneur."

Bhim Mirg
Participant, AIP's workshop on manufacturing baked food products
Owner, Avon Bakers & Confectioners
Meerut, Uttar Pradesh

"AIP has helped me reach out to the entrepreneurs and has offered a platform to materialize my ideas. I have successfully transferred some of my technologies and in the process touched several lives around me."



Professor Mineswar Hazarika
College of Veterinary Science, Department of Livestock Products Technology
Assam Agricultural University

"I took part in AIP's training program for baked food processors where they trained me on several useful and necessary aspects of manufacturing baked food products that were hygienic as well as tasty. I especially enjoyed the part where they taught us how to adhere to the international standards in food manufacturing. Thanks to the training, I now produce quality food products like cakes, breads, biscuits, pastries, patties, etc."

Saurabh
Participant, AIP's workshop on manufacturing baked food products
Owner, Shiv Shakti Bakery
Meerut, Uttar Pradesh



AIP assisted Meghalee Food Product, a women's self-help group in India, to adopt the technology of meat and fish pickle preparation developed by Assam Agricultural University (AAU). This partnership will help Meghalee tap into the opportunity of commercializing novel processed food products. This process has set the precedence for many more such university and industry partnerships in the future and enabled AAU to commercialize its technology and research findings for greater public good.



Meghalee Bora
Proprietor, Meghalee Food Product
Jorhat, Assam

"Introducing innovative products in the market is the key to ensure our position as a market leader. Initial survey conducted for chicken and fish pickle developed by Assam Agricultural University and transferred to us through AIP indicated good market potential of these products. We will use our reach to popularize these in the entire northeastern region for a positive economic and societal impact."



"The success of a product doesn't just lie in its production, but how it engages into people's lives. AIP has helped us connect innovation with entrepreneurship and provide consumers with access to new products and greater convenience. The commercialization of chicken and fish pickle through Maghalee Food Product will enrich the variety and palatability of the Assamese cuisine. The process of commercialization has helped us touch several lives around us."



Dr. Pranjoyti Sharma
College of Fisheries, Assam Agricultural University



Way Forward: A More Sustainable Agriculture

Knowledge drives developmental strategies and is a key determinant of sustainable agricultural development.

AIP values acquisition and effective dissemination of knowledge and knowledge management initiatives directed towards innovation, efficiency and change management. AIP strives to create a distinctive and sustainable agricultural system to enhance the knowledge value chain.

India needs sustainable and strategic intensification of agriculture across its value chain to ensure greater output. In the near future, food will be a developmental factor as much for India as for several economies across the world. AIP is striving to nurture an agricultural system, which is environmentally, economically and socially sustainable and can make a vital contribution towards responding to the challenge of reducing poverty and ensuring food security.

AIP, through its efforts to improve education delivery, productivity and economic returns of the agricultural community in the Indo-Gangetic plains, plans to facilitate knowledge transfer to other developing nations in Africa and the rest of the world; build capacity among the rural communities to withstand stresses such as droughts and floods; and enhance incomes of smallholder farmers through innovation to ensure clean and green farming practices.

AIP's

key focus on capacity development for agricultural transformation and food security in the Indo-Gangetic plains, and its attention towards issues that impact the implementation, monitoring and tracking of agricultural transformation and food security, will ensure a better future for the region.

AIP believes in investing in sustainable and inclusive agriculture and in developing supportive measures. Sustainable agriculture is the key to long-term and inclusive growth, especially in developing countries like India, due to its strong multiplier impact on other sectors like processing, packaging, marketing, transportation as well.

AIP is working to transform the agricultural system in the region to ensure that limited resources are engaged more effectively. AIP believes in innovation, growth and sustainable productivity to ascertain continued existence of India's production base to feed a growing population, while enhancing rural livelihoods.