FY’16 Annual Report for AID-OAA-A-14-00031

The USAID Board for International Food and Agricultural Development (BIFAD) held three executive planning meetings and three public meetings in Greensboro, NC; Washington, DC; and West Lafayette, IN. An orientation for one new BIFAD member was held in Washington, DC, and an intensive learning session for all Board members was held. Twenty six other conference calls with BIFAD members were held concerning BIFAD meetings on campuses, BIFAD Awards and BIFAD work plan. They also planned one public business meeting and one convening to be held very soon in the first quarter of FY’17. The agendas for these public meetings and convening’s are in Appendix I.

The Association of Public and Land Grant Universities (APLU) provided significant support for two BIFAD working groups during FY’16: the BIFAD working group for TraiNet & ADS 252/253 and the BIFAD Award for Scientific Excellence in a Feed the Future Innovation Lab. A letter of concern from several leading US universities was sent to BIFAD regarding various USAID visa policies and procedures for individuals being brought to the US for human capacity development activities (both degree-granting and short-term non-degree training). BIFAD expressed the university concerns to USAID, and the Agency responded with some immediate accommodations to those concerns. Other concerns required further information so that BIFAD could effectively communicate with the Agency. The working group collected more information from stakeholders, and APLU conducted a webinar-enabled listening session with more than 40 people so that BIFAD member James Ash could gather further information with university stakeholders. These concerns with further stakeholder support were communicated to various Bureaus within USAID, and the Agency is taking those concerns into account as two key policy directives (ADS 252 & 253) are being revised by the Agency.

The BIFAD fosters excellence in scientific research in Feed the Future Innovation Lab efforts by providing an annual award to a senior researcher (or team of researchers) and a graduate student. The BIFAD Award for Scientific Excellence in a Feed-the-Future Innovation Lab is given based on the recommendations of a working group, and APLU coordinates this working group for BIFAD by soliciting nominations, organizing a review panel of international research experts, communicating the panel’s recommendations to the BIFAD Chairman and Award Chairperson, and then arranging for the Award winners to travel to the BIFAD meeting and give a presentation. A team of researchers from U.C. Davis, Cornell and ILRI won the senior researcher award for their work on poverty thresholds among small-holder livestock owners in Kenya and Ethiopia. The graduate student was from Kansas State University and developed automated approaches for screening wheat varieties in growth trials.

BIFAD conducted a survey of Feed the Future Innovation Lab prime award holder, sub-award holder, technical advisory committee member, USAID program manager and others associated with the Innovation Labs (IL). A total of 62 responses were obtained, and they provided BIFAD with insight concerning which BIFAD activities, information exchanges, e-consultations, and reports/resources of which the respondents were aware. The respondents were asked how the various BIFAD activities had influenced their work. BIFAD will use this data to inform their future approaches to activities, exchanges and reports/resources. The USAID funded KDAD
program hosted the survey and helped develop the survey questions. APLU promoted the survey with the IL community by sending multiple requests to participate, and then to share the results of the survey.

APLU sent numerous communications to the US higher education community (Table 1) concerning various opportunities for university engagement with BIFAD, USAID, and international development. APLU serves at the request of BIFAD, and during this FY, and no consultants were hired during this FY. Communications to BIFAD came from the university community. Fifty one speakers/panelists were invited to make presentations to BIFAD in public sessions, and twenty two of them were female. Twenty two trips were arranged in support of those meetings.

BIFAD members expressed an interest in evaluating the economic impact of public and private-sector research on agricultural crops. Members made some suggestions on individual research studies and APLU collected a PDF copy of those papers. APLU identified additional research papers and collected PDF copies of those for a total of 32 studies. A Google shared drive was established by APLU for use by BIFAD members and Secretariat staff. APLU also authored an annotated bibliography of the 32 studies, and a copy of that bibliography is in Appendix 2.

BIFAD had one new member named by the President of the United States, Dr. Pamela K. Anderson. An orientation was planned for her that included meetings with USAID staff, White House representative and APLU staff. APLU organized these meetings and facilitated the organization of the briefing materials for the orientation.

APLU organized the briefing materials for public meetings and the one convening. APLU also authored some of the various briefing materials needed by BIFAD for the meetings. APLU also organized the BIFAD Secretariat meetings and distributed the agenda and supplementary materials, if needed.

<table>
<thead>
<tr>
<th>Custom Indicators for OAA-A-14-00031</th>
<th>Annual Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number meetings/convenings supported</td>
<td>39</td>
</tr>
<tr>
<td>Number of trips arranged</td>
<td>22</td>
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<tr>
<td>Number of communications distributed</td>
<td>110</td>
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<tr>
<td>Number of university communications to BIFAD</td>
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</tr>
<tr>
<td>Number of studies/analyses supported</td>
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<tr>
<td>Number of working groups supported</td>
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</tr>
<tr>
<td>Number of BIFAD speakers/panelists female</td>
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</tr>
<tr>
<td>Number of BIFAD speakers/panelists male</td>
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</tr>
<tr>
<td>Number of consultants female</td>
<td>0</td>
</tr>
<tr>
<td>Number of consultants male</td>
<td>0</td>
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</tbody>
</table>
The BIFAD Secretariat met twenty two times this year in either face-to-face meetings or on conference calls. The focus of the meetings was planning for the executive planning session, the e-consultation and the various BIFAD public meeting. APLU arranged these meetings and either hosted the meetings in our office or hosted the conference calls.
Appendix I
Agendas for public meetings and convening by BIFAD.
Building Human Capital: Nutrition is Fundamental
Salon D: Des Moines Marriott Downtown Hotel
October 14, 2015

The economic impact of malnutrition in the developing world results in the loss or impairment of human capital. Sub-optimal nutrition can severely compromise development goals, and its impact is often underappreciated in both the development community and among the general public. The BIFAD seeks; therefore, to highlight this important issue and begin a dialogue with the nutrition community and other interested parties.

Agenda:

9:00 AM  Welcome and Introduction. Dr. Brady Deaton, Chairman, BIFAD
9:05 AM  USAID’s nutrition strategy under Feed the Future. Dr. Rob Bertram, Chief Scientist Bureau Food Security
9:15 AM  Emerging Trends in the Global Pattern of Malnutrition: Under-Nutrition, Obesity, and Micronutrient Deficiency. Dr. William Masters, Tufts University
9:30 AM  Cognitive and physical development of children and/or adults. Dr. Jessica Fanzo, Johns Hopkins Univ.
9:45 AM  Economic and social impacts of malnutrition. Dr. John Hoddinott, Cornell University
10:00 AM  Lessons from successful nutritional interventions. Dr. Grace Marquis, McGill University, Canada and Dr. Ana Lydia Sawaya, Federal University of São Paulo, Brazil
10:30 AM  Robust discussion with panel and audience
11:00 AM  Concluding remarks, Dr. Brady Deaton, Chairman, BIFAD

Links to Selected Papers Authored by Presenters and USAID Nutrition Policy

- USAID Multi-Sectoral Nutrition Strategy
  - https://www.usaid.gov/nutrition-strategy
  - http://jn.nutrition.org/content/133/11/3879S.long
- Agricultural policy for improved nutrition in Africa and Asia: Evidence to guide the US Government’s investments in food security – Food Security
- The role of food and nutrition system approaches in tackling hidden hunger – Int. J. Environ. Res. Public Health
- Height and weight gains in a nutrition rehabilitation day-care service – Public Health Nutr.
DRAFT AGENDA
BOARD FOR INTERNATIONAL FOOD AND AGRICULTURAL DEVELOPMENT (BIFAD)
BIFAD Public Meeting at Purdue University
October 19-21, 2015

Contact:
Susan Owens (USAID)  Mark Varner (APLU)  Julie Griffith (Purdue)
(703) 229-7066 C (240) 281-6772 C (765) 494-6838 O
Kristin Franklin (USAID)  Karly Kiefer (APLU)
(202) 712-5803 O (202) 478-6030 O

TUESDAY, OCTOBER 20, 2015 EST
3:00 – 5:00 pm  BIFAD Member Outreach Sessions

Session #1: Dr. Brady Deaton
Hosted by:  The Graduate School
Dr. Mark Smith, Dean
Discussion on the Characteristics of Leadership
Session Description: This session will feature a 15 minute presentation and then a dialogue with graduate students and postdocs.
Location: STEW 214A

Session #2: Honorable James M. Ash
Hosted by: Department of Agricultural Economics and the Krannert School of Management
Small Holder Farmer Capital Issues
Session Description: This session will feature a discussion of the issues that small holder farmers face in accessing, retaining and growing the capital they need, including ways to develop a financial and investment infrastructure that is supportive of small holder farmers.
Location: STEW 214B

Session #3: Dr. Harold Martin
Hosted by: Black Cultural Center and College of Engineering
Renee Thomas, Director, Black Cultural Center
Engineering Education and Building Partnerships with 1890 Institutions
Session Description: Dr. Martin will meet with program leaders that are building partnerships between 1890 Institutions and land grant university. This session will also include a tour of the Black Cultural Center
Location: STEW 214C
Session #4: Susan Owens, BIFAD Executive Director and Dr. Mark Varner, Senior Counsel-BIFAD at APLU
Hosted by: Dr. Jess Lowenberg-DeBoer
Careers in International Development
Session Description: The panelists will do a presentation on the different types of careers that are available in international development
Location: STEW 214D

Session #5: Dr. Waded Cruzado
Hosted by: Susan Bulkeley Butler Center for Leadership Excellence
Dr. Patrice Buzzanell, Director
Women in Leadership Positions
Session Description: This session with focus on women in leadership roles. What it takes to break through the glass ceiling. The intended audience is women faculty, staff and students.
Location: STEW 218A

Session #6: Dr. Cary Fowler
Hosted by: Department of Horticulture and Landscape Architecture
Dr. Hazel Wetzstein, Head
Crop Diversity and Food Security
Session Description:
Location: STEW 218B

BIFAD Public Meeting (Live Streamed)
Wednesday, October 21, 2015 EST

8:00 a.m.- 12:30 p.m. Poster Display featuring the Plant Sciences Pipeline
Purdue Memorial Union South Ballroom

8:30 a.m.- 12:30 p.m. BIFAD Public Meeting (live streamed)
Purdue Memorial Union South Ballroom

8:30-9:00 a.m. BIFAD Member Outreach Reports

9:00-9:30 a.m. Presentation of Awards

9:30-10:30 a.m. Panel #1: Climate-Smart Agriculture – Closing the Yield Gap in a Changing Climate
Host: Dr. Jeffrey Dukes, Director, Purdue Climate Change Research Center and Professor of Forestry & Natural Resources and Biological Sciences (confirmed)
 Moderator: Dr. Thomas Hertel, Distinguished Professor of Agriculture (confirmed)
Panelists include: Dr. Mitch Tuinstra, Professor of Plant Breeding and Genetics and Wickersham Chair (confirmed)
Dr. Linda Prokopy, Associate Professor of Natural Resource Social Science (confirmed)
Dr. Cynthia E. Rosenzweig, NASA Goddard Institute for Space Studies (invited 8/24/15)

10:30-10:50 a.m. Question/Answer and Comment Period by BIFAD Members

10:50-11:05 a.m. Break
11:15 a.m.-
12:15 p.m.  
Panel #2: Plant Sciences Research and Education Pipeline  
Host/Moderator: Dr. Karen Plaut, Senior Associate Dean for Research and Faculty Affairs (confirmed)  
Panelists include:  
Dr. Melba Crawford, Associate Dean of Engineering for Research (confirmed)  
Dr. Katy Rainey, Assistant Professor of Agronomy (confirmed)  
Dr. Jian Kang Zhu, Distinguished Professor of Plant Biology (confirmed)  

12:15-12:30 p.m.  
Question/Answer and Comment Period by BIFAD Members  
Public comment period (in-person audience & submitted questions)  

Afternoon Session will be in Room 302/306 in Stewart Center  

2:00-3:30 p.m.  
Panel #3: State, Industry, and University Partnership and Roles in Feeding a Growing World  
Moderator: Dr. Jay Akridge, Glenn W. Sample Dean of Agriculture  
Presentation by: Ted McKinney, Director, Indiana State Department of Agriculture (confirmed)  
Jim Moseley, Farmer (confirmed)  
Claudia Garcia, Senior Director Global Corporate Affairs, Elanco  
Dr. Betty Bugusu, Managing Director, International Food Technology Center (FPL Project)  
Dr. Dieudonné Baributsa, Research Assistant Professor (Purdue Improved Crop Storage – PICS2)  
Gary Burniske, Managing Director, Center for Global Food Security (Borlaug Fellows Program)  

3:30-4:00 p.m.  
Question/Answer and Comment Period by BIFAD Members  
Public comment period (in-person audience & submitted questions)  

4:00-5:00 p.m.  
Poster Session and Reception, East/West Faculty Lounges, Purdue Memorial Union  

6:30-7:45 p.m.  
Special Presidential Panel – Fowler Hall in Stewart Center  
Moderator: President Mitchell E. Daniels, Jr.  
Panelists may include:  
USAID Acting Administrator, Ambassador Alfonso E. Lenhardt (invited)  
Dr. Peter McPherson, President, APLU (Invitation sent 7/28/15 – Will Attend per Mark Varner)  
Dr. Brady Deaton, BIFAD Chair and Chancellor Emeritus, University of Missouri  
Mr. James Morris, Former Executive Director, United Nations World Food Programme (confirmed)
University and CGIAR engagement in international agricultural research

Board for International Food and Agricultural Development (BIFAD)

BIFAD Public Session
Thursday, March 10, 2016
National Press Club, Holeman Lounge, 529 14th Street NW, Washington, DC
Link for livestream at http://www.aplu.org/bifad

8:30am  BIFAD Chair Deaton opens the meeting
Old Business – report from BIFAD working group on TraiNet and USAID ADS 252/253
New Business – Introduction of new BIFAD members
  Recognition of departing BIFAD members
  Introduction of Dr. Barbara Schneeman,
  USAID Higher Education Coordinator

9:00-9:15am  Updates on the USAID Feed the Future Initiative
Beth Dunford, Deputy Coordinator for Development for Feed the Future and
Bureau for Food Security (BFS) Assistant to the Administrator

9:15 -10:40am  Panel on trends and issues - Consultative Group for International Agricultural
Research (CGIAR)
Moderator – Cary Fowler, BIFAD member
Rob Bertram – USAID BFS, Chief Scientist
Jonathan Wadsworth – CGIAR Fund Council at the World Bank, Executive Secretary
Molly Jahn – Professor, University of Wisconsin and CGIAR Consortium Board Member
Marianne Bänziger – Deputy Director General for Research & Partnerships, CIMMYT

10:45-12:00pm  Feed the Future and University engagement with the CGIAR
Moderator – APLU President Peter McPherson
Michael Carter, UC Davis – Program Director for Feed the Future Innovation Lab
for Assets and Markets Access
Vara Prasad, Kansas State University, Program Director for
Feed the Future Innovation Lab for Sustainable Intensification
Adegbola Adesogan, University of Florida, Program Director for
Feed the Future Innovation Lab for Livestock Systems
Susan Johnson, UC Davis, Project Director for Borlaug Leadership Enhancement in
Agriculture Program (LEAP)

12:00pm  Public Comment
12:25pm  BIFAD Chair Brady Deaton Closing Comments and adjournment
THE BOARD FOR INTERNATIONAL FOOD AND AGRICULTURAL DEVELOPMENT (BIFAD)

NORTH CAROLINA A&T STATE UNIVERSITY
Alumni-Foundation Event Center
200 North Benbow Road, Greensboro, NC, 27411

“Collaboration: Leadership, Innovation and Sustainable Technology to Meet the Demands of Global Agriculture”

PUBLIC MEETING AGENDA

Friday, May 20, 2016

8:30 a.m.                  BIFAD Public Meeting, Center Ballroom
Chairman Brady J. Deaton opens meeting and reviews agenda
- Welcome, Dr. Brady Deaton
- Welcome, Harold L. Martin Sr., Chancellor, NC A&T
- Old and new business
- ADS 252/253 Working Groups Status Report by James Ash

8:45-9 am                   Update on Feed the Future
Rob Bertram, Chief Scientist, Bureau for Food Security, USAID

9-9:15 am                   Update on Global Open Data for Agriculture and Nutrition (GODAN)
Jaime Adams, Senior Advisor for International Affairs, Office of the Chief Scientist, Office of the Secretary, U.S. Department of Agriculture

9:15-10 a.m.                Panel 1: N.C. A&T Faculty panel
“N.C. A&T Leadership in International Agricultural Innovation”

Moderator: Dr. Valerie Giddings, Interim Associate Dean for research in the School of Agriculture and Environmental Sciences

Dr. Osei Yeboah, Professor and Interim Director of the Leonard C. Cooper, Jr. International Trade Center, Presenting, “Investing in efforts to address food security and rural poverty for sustainability in developing countries”

Dr. Anthony Yeboah, Professor and Chairperson of the Department of Agribusiness, Applied Economics and Agriscience Education. Presenting, “Adopting a cohesive land-grant approach to facilitate international agricultural research and development”

Dr. Manuel Reyes, Professor in the Department of Natural Resources and Environmental Design in the School of Agriculture and Environmental Sciences. Presenting, “Saving resources and growing food is inseparable: The paradigm to guide policy and funding”
THE BOARD FOR INTERNATIONAL FOOD AND AGRICULTURAL DEVELOPMENT (BIFAD)

NORTH CAROLINA A&T STATE UNIVERSITY
Alumni-Foundation Event Center
200 North Benbow Road, Greensboro, NC, 27411

“Collaboration: Leadership, Innovation and Sustainable Technology to Meet the Demands of Global Agriculture”

PUBLIC MEETING AGENDA

10-10:15 a.m.  Question/Answer and comment period by BIFAD members

10:15-10:30 a.m.  Break, Executive Board Room

10:30-11:15 a.m.  Panel 2: N. C. Biotechnology Center Industry panel
“Sustainable Technology Development to Meet Demands of Global Agriculture”

Moderator: Scott Johnson, Vice President of Agricultural Biotech

Dr. Nic Bate, Group Leader for Agronomic Traits, Syngenta

Dr. Gregory Kelly, COO, SoBran BioScience

Kathy Flores, General Manager, Perdue Farms Specialty Crops

11:15-11:30 a.m.  Question/Answer and comment period by BIFAD members

11:30 a.m.- noon  Public comment period (in-person audience & submitted questions)
(Media to be invited)

Noon  Closing remarks and meeting is adjourned
Appendix II.
An annotated bibliography of selected studies concerning the economic impact of public- and private-sector research on agricultural crops.
An annotated bibliography of selected studies concerning the economic impact of public- and private-sector research on agricultural crops

In Press:


This book chapter was written by authors who have published on other assessment topics for IFPRI in the past. They review the three basic approaches to quantifying ex post agricultural research impact. The limitations of these approaches are also considered. The authors also review the various evaluations of agricultural research impact in Africa. Varietal development and pest management research receive specific attention. The need for quantitative impact assessment when evaluating agricultural R&D is emphasized.

2015:


A 500+ page book published primarily in electronic format that is a part of a series of texts on natural resource management and policy. Various models of R&D funding along with productivity are described, along with extensive data summarized in 100 tables. There is a focus on US funding/productivity, but there is also some information provided on a global basis. The book closes with a summary of main finding and a synthesis of the key implications. The cost-benefit analysis is particularly enlightening, but is focused on the various models used for analysis.


A 13 page book chapter published in an overall book with 15 chapters that attempt to lay the intellectual foundation for sustainable development, with a focus on policy design. The authors outline how the direct and indirect effects of agricultural innovation have been favorable. They predict a worsening of the agricultural productivity slowdown in the future, especially in higher income countries. They conclude that a restoration of investments in agricultural innovation may be required to adapt to emerging diseases/pests and the changing physical climate for agriculture.


A review article by authors from FAO in Rome, Italy and published in the European J. of Development Research. They used five datasets to evaluate the relative size of various
investments in agriculture including on-farm investments and government investments for 76 low- and middle-income countries. On farm investments were greater than government investments by a four to one ratio. The authors also determined that the levels of foreign direct investments in primary agriculture were small and their significance was often overstated.


An original research article by authors from IFPRI and the University of Georgia and published in the journal Agricultural Economics. Data from 85 low- and middle-income countries were evaluated to determine how components of the agricultural innovation system interacted with various levels of technical inefficiency. Their analysis suggests that significant increases in agricultural production can be realized by using “efficiency-enhancing investments,” but with the same level of agricultural inputs.


An original research article, by authors from the University of Minnesota, which was published in the American Journal of Agricultural Economics. Data concerning agricultural R&D funding from domestic sources as well as from China, Brazil and India were analyzed. They found the expected decline in domestic funding for agricultural R&D and a significant increase in both public and private-sector funding of agricultural R&D in China, Brazil and India. They also determined that the trends in global funding of agricultural R&D are accelerating. The authors discuss the implications of these trends.


A review article by authors from Rutgers University and the University of Minnesota that was published in the Annual Review of Resource Economics. The authors review trends in agricultural R&D funding in both high-income and developing countries, and they note significant increases in R&D funding from the private-sector. They describe the “drivers” for these trends, focusing around both scientific advances in genetic analyses and liberalization in application of those scientific advances. The authors also review the complimentary nature of public- and private-sector funding for agricultural R&D.

2014:


An article by authors from the Universities of California and Minnesota and published in the Journal of Economic Perspectives. They review the reasons for increased agricultural output over the last 50 years. The role for agricultural innovation in this trend is described, as is the potential for “spillover” across national borders for these various innovations. The impact of the CGIAR
system of R&D is also discussed. The decline of importance of agricultural production by high-income countries is also profiled.


The Australian authors conducted a macro-analysis on three global networks of agricultural research and finance systems and published the results in the journal Innovation. The focus of their work was on “ecologically sustainable intensification” for agriculture. Australia was used as a test case. The characteristics of the global agricultural finance system and the global agricultural research system were profiled.

Newman, K. 2014. What is the evidence on the impact of research on international development? A 72 page white paper published by the Department for International Development, Glasgow, UK.

The author describes trends in the funding for research investments by low-income countries and international development donors. Pathways were cited that describe how research contributes to development. The evidence for each of the pathways was reviewed, and the author also identified which commonly held assumptions were not backed by research findings.

2013:


The authors are from the World Bank, and they summarized the latest results from 131 economies around the world using 545 harmonized household survey tools. They found that the greatest economic return to schooling in developing countries was for higher education.


A 10 page review article by authors from the Universities of Minnesota and California, Davis that was published in a supplement to the journal Agricultural Economics. The article describes their new research findings concerning the prospects for agricultural productivity growth in the coming decades. The changes in investments in public agricultural R&D funding by middle income countries have become significant and have altered the relative importance of those countries as producers of agricultural food products. The decline in the real rate of public R&D funding in high-income countries continues in spite of the data concerning the rate of return on those funding investments.


The multitude of authors from a variety of institutions published their evaluation of research on wheat-stem rust in a two-page article that was published in the prestigious journal Science. The authors estimated that while losses due to wheat stem rust would be less than estimates published
by others, but there was still insufficient research on the topic. They estimated that the global funding was half of what was needed, and the authors call out USDA for recent cut-backs on this topic. The authors suggest that their research methodology could be used to estimate the needed “research investment streams” needed to sustain or improve food security globally.


The authors from Virginia Tech University and USDA published a ten-page research article evaluating the funding of maintenance research on agricultural topics in the journal Food Policy. The authors conclude that research organizations have an increased reliance on out-of-state funding sources, which may end up skewing the research focus away from maintenance topics. The authors also point out that the various impacts of climate change may increase the need for adaptive research on topics that are ‘maintenance’ in nature.


The authors are from FAO, Purdue University, the CGIAR system and Michigan State University. They utilized a global economic model to estimate the amount of land mass that would have not gone into agricultural production from 1965 to 2004 due to increased food availability brought about by widespread adoption of improved varieties of the major cereal crops. This improvement in crop varieties is often called the ‘green revolution.’ Norman Borlaug had predicted that improved yields would lead to decreased pressure to deforest land or take grassland into crop production. The authors found that their model agreed with this prediction, but to a smaller magnitude than Borlaug predicted. The authors also discuss various approaches to improving agriculture.


The authors from Texas A&M, Iowa State University and a university in China evaluated the potential impacts of climate change on returns to agricultural research investments in the US in an eight page article in the journal Climatic Change. They estimate that a 7-17% increase in agricultural research investments would be needed by 2100 to overcome the effects of climate change. Those increases are particularly important for the Southern Plains of the US, which would require an increase of 57% in public R&D funding.

2012:


The authors are from the University of California, Davis and an unaffiliated agricultural economist from Uruguay, and they published a 22 page original research study evaluating the
benefits of public agricultural R&D since 1990 in Uruguay in the Journal of Australian Agricultural and Resource Economics. They evaluated the INIA, which is the national agricultural research system of Uruguay. The rate of return on investments in INIA was 23-27% annually, and while these have been good investments for Uruguay, greater investments may have been warranted.


The authors are USDA agricultural research economists, and Choices is a magazine from the Agricultural and Applied Economics Association for food, farm, and research issues. After a discussion of the growth in agricultural productivity from an international perspective, the authors consider 15 case studies for various regions of the world. They describe the global regions where productivity is growing and consider various ways that countries can be categorized. They also discuss drivers of the agricultural productivity growth.

2011:


The authors are from the Universities of California, Davis, Wyoming, Minnesota and Cal Poly. This is a classic 20-page article published in the American Journal of Agricultural Economics that is highly cited from top authors on the topic. The authors were able to construct a research database for all 50 states and they have developed what they felt was a more accurate model of “spillover effects.” They also found that the rates of return were smaller than those typically reported in the literature due to a methodological flaw in previous studies.


The authors are Managing Director and Founder of KSG in San Francisco. The review article provides an often cited foundation for their concept of ‘collective impact’ on social issues. The approach identifies five conditions that need to be considered before organizations should begin working together towards a common goal.


The authors are from the University of Stellenbosch in South Africa and the University of Minnesota. They published a 26 page article in the journal Agrekon. They profile investments in agricultural research by South Africa and they describe the impacts on scientists and the innovation system.

The authors are from Virginia Tech. Univ., the Donald Danforth Plant Science Center in St. Louis, and Washington University St. Louis. They calculated the economic benefits from eating cassava biofortified with Vitamin A and iron when compared with alternative fortification approaches. The consumption of biofortified cassava would reduce potential health and disability consequences of Vitamin A and iron deficiency. The authors found that the estimated cost of alleviating these deficiencies via biofortified cassava consumption would be more cost effective than direct dietary supplementation with iron and Vitamin A. The authors observed that cassava yield traits beneficial to farmers that were included when biofortification traits were added during genetic modification would likely be critical to varietal adoption by farmers.

2010:


The authors are from the Universities of Minnesota and California, Davis. They published a chapter in Handbooks in Economics that describes the nature and length of lag between research spending and impacts on productivity or other innovation outcomes. They also publish some of the most important results on rate of return to agricultural research and how those economic benefits are distributed.


The authors are an agricultural economist from N.C. State University and a private consultant who frequently works with the CGIAR system data. They reviewed the impact of research published by CGIAR scientists since 2000. The authors found that a paucity of data exists concerning their central question of whether the large benefits that had been demonstrated for CGIAR research conducted prior to 2000 had been maintained. Some data exists for wheat and potato crop improvement, and the benefits were maintained or expanded for these two crops. The authors made conclusions regarding the split of funding over various topics since 2000. A prioritization of impact assessment was also recommended.

2009:


The author is from the University of Illinois. This 432 page book describes the private and social benefits of higher education in countries with a variety of OECD classifications. A strong case is made that a lack of complete understanding of the value provided by higher education leads to a underinvestment in higher education.

2007:

The authors developed a mathematical approach for predicting the economic impact of research efforts upon alleviating poverty, using peanut research in Uganda as an example.

2006:


The authors are from Harvard University, and they describe the evidence that suggests that additional funding should be given by donors for higher education.


This 300+ page book is the second edition of a highly cited effort by authors from Iowa State and Yale Universities. They provide not only a historical perspective on the development of the agricultural innovation system in the United States, but they indicate that they have updated the data significantly from the first edition that was published in 1993. The chapter on private sector R&D and biotechnology was updated significantly. The book highlights the economics of public agricultural research in a 25 page chapter. The chapter on the international dimensions of US agricultural research continues to foster the incorrect notion that US trained foreign scientists do not return to their home country. Recent data from the USAID CRSPs (now Innovation Labs) suggest that this is not the case, but the book chapter does not take this into account.


The authors reviewed impact assessments for research studies conducted by CGIAR scientists in the sub-Saharan Africa region. Most reports evaluated small-scale interventions. Most large-scale studies were focused on new varietal trials or pest control research efforts. Economic benefits were estimated using a meta-analysis. Most of the economic benefits were attributed to biological control of pests, for example the mealybug on cassava. It was estimated that only 20% of benefits were due to genetically improved varieties. While the aggregate benefits of CGIAR-NARS research investments exceeded the costs of the research, there was insufficient research data available to evaluate to full portfolio of CGIAR research being conducted for this region of the world.
2002:


The paper has been requested and will be added to the shared drive when it is available.