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The U.S. Government's Global Hunger and Food Security Initiative

Feed the Future Update for Horticulture Innovation Lab Annual Meeting

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May 6, 2013

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1 FEED THE FUTURE (FTF)

- **Whole of Govt. Presidential Initiative (USAID, STATE, USDA, MCC, PEACE CORPS, ETC.)**
  - Consultative process, USAID leads implementation with partners

2 USAID BUREAU FOR FOOD SECURITY (BFS)

- **Newly created USAID FTF Implementation Arm:**
  - **CSI Office** (relationships with field Missions – Beth Dunford)
    Ag Tech. Support Group: S. Bradley – J.Yazman, S. Poland
  - **SPAMM Office** (budget, finance, accounting – Erica Navarro)
  - **MPI Office** (markets, public/private partnerships – Margaret Enis)
    Partnering for Innovation – Laura Cizmo/Steve Fondriest
  - **ARP Office** (research, policy, knowledge mgmt)

3 OFFICE OF AGRIC. RESEARCH & POLICY (ARP)

- **Research Division (Saharah Moon Chapotin)**
- **Policy Division (Jeff Hill)**
- **Knowledge Management Division (Zachary Baquet)**
- **BIFAD/HICD Unit (Susan Owens, Chief)**
  HICD (Clara Cohen)
  BIFAD (reports to Administrator)

4 AGRIC. RESEARCH DIV. (R)

- **USAID/BFS/ARP/R**
  - **Innovation Labs/CRSPs (Bowman, Long, Turk, Mack, Heron)**
  - **CGIAR (Eric Witte)**
  - **Biotech Projects (New Hire, Chapotin, McMurdy)**
  - **Sustainable Intensification (Jerry Glover)**
  - **New Hires (Irrigation, Aquaculture, Climate Resilient Ag)**
  - **Leads Food Security Innovation Center**

Implement FTF/USAID Agric. Research Strategy

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Major USAID FTF Hort Initiatives

Run by ARP Office (Wash-DC)

1. *IL's (Horticulture & IPM)*
2. *AVRDC*
3. *Biotechnology (Production & Policy – Brinjal, Potato, Banana, Papaya)*
4. *Biofortification (Harvest Plus - OFSP)*

Run by Field Offices (Missions)

1. *VALUE CHAIN PROJECTS*

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FTF Research Strategy Analysis Outcomes

What? **Sustainable Intensification**

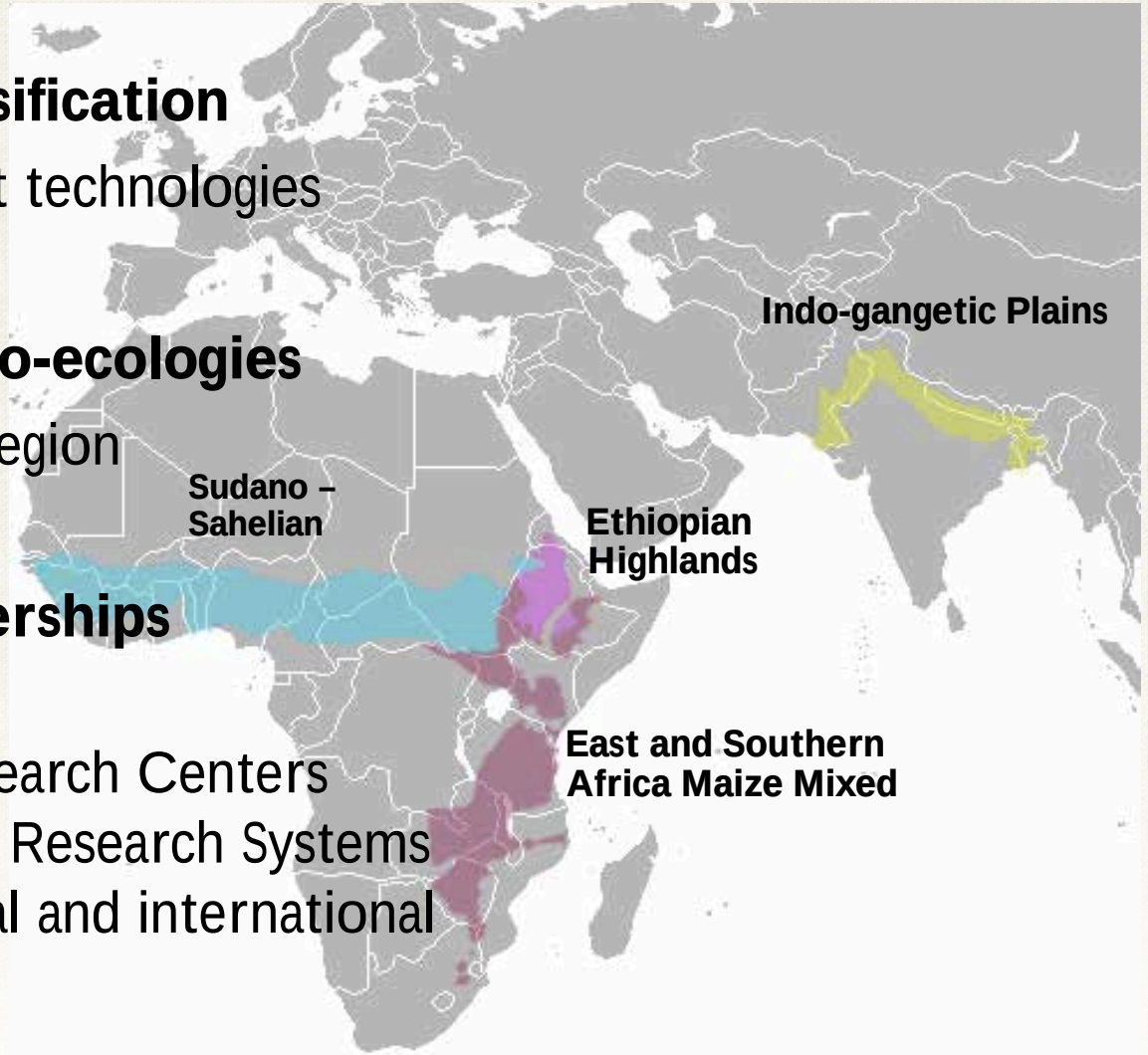
Requires component technologies

Where? **Specific focal Agro-ecologies**

Spillovers to other region

How? **Leveraging partnerships**

US Universities
International Ag Research Centers
National Agriculture Research Systems
Private Sector – local and international



Mission Value Chain Priorities: Hort

- ***East Africa***: Kenya, TZ, Zambia, Moz., S.Sudan
- ***West Africa***: Liberia
- ***Asia***: Nepal, Bangladesh, Cambodia, Tajik., (Indonesia)
- ***LAC***: Guatemala, Honduras, Haiti

- **New Hort VC Developments since Bangkok:**
  - **Nepal – FTF Project (Winrock)**
  - **Kenya – KAVES (Fintrac)**
  - **Liberia – FEDS (DAI)**
  - **Guat. – 2 FTF Projects, 2 local NGOs**

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Research RFA

Thematic Partnerships:

- Responding to critical gaps
- Expanded institutional involvement
- Public-private/international alliances

Target Subject Areas:

- Climate resilient cereals
- Climate resilient legumes
- Climate resilience and disease resistance in Livestock
- Small-scale irrigation and water management
- Post-harvest loss reduction
- Policy research and support

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New AVRDC Grant

"Core" Programming

Breeding, Field Production, Germplasm Conservation, Capacity Building

"Post Harvest" Programming in Target Countries (Ghana, Kenya, TZ, Mali, BD)

1. ***Understanding PH role in the value chain***

2. ***Adapting PH technologies to priority needs***

3. ***Capacity building in PH to ensure understanding of opportunities to add value, minimize loss, improve nutrition***

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New AVRDC Grant

Year 1 "Post Harvest" Programming

1. *Loss assessment surveys*
2. *Needs assessments and intervention points*
3. *Economic cost quantification*
4. *Stakeholder consultation workshops*
5. *Technology adaptation and development (varietal shelf life/Bangladesh; evaporative coolers, "Coolbot", packing crates/Tanzania)*
6. *Participatory trainings (Arusha, Bangkok)*

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Feed the Future

Food Security Innovation Center



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Food Security Innovation Center

- Leads USAID's implementation of the FTF Research Strategy
- **Integrated, portfolio-based management** across seven priority program themes
- Encourages a multi-disciplinary approach, better linkages among related projects, **cross-project learning** and management efficiencies
- Engages U.S. universities, international research centers, private sector, local agricultural research and educational institutions, think tanks

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FSIC Program Areas

Program for Sustainable Intensification (e.g. ***IPM IL, SANREM IL***, CSISA, Africa Rising)

Program for Climate Resilient Cereals (e.g. Cereals RFA, DTMA, Arcadia PPP, Ceres PPP, CGIAR Rice/Wheat/Maize, Sorghum/Millet RFA)

Program for Advanced Research on Animal and Plant Diseases (e.g. USDA Partnerships under NBCRI, Virus Resistant Cassava)

Program for Productive Legume Research (e.g. ***Dry Grain Pulse IL, Peanut /Mycotoxin IL***, CGIAR Legumes, NBCRI

Program for Safe & Nutritious Foods (***e.g. Horticulture IL, Nutrition IL, Aquafish IL, Livestock IL, AVRDC***, Aflatoxin under NBCRI)

Program for Policy Research & Support (e.g. ***AMA IL***, Program for Biosafety Systems, Enabling Agricultural Trade)

Program for Human & Institutional Capacity Development (e.g. MEAS, InnovATE, MAETS, AWARD, LEAP)

Program for Research on Safe and Nutritious Foods

Links research on the production and processing of safe, nutritious agricultural products to a learning agenda on household nutrition, including the utilization and access to fruits, vegetables, meat, fish, dairy and legumes with the goal of improving child survival, securing family investments in agriculture, and preventing and treating under-nutrition.

Program Area Technical Lead: John Bowman

Current Activities	Activity Manager	Institution
Horticulture Innovation Lab	John Bowman	UC - Davis
Horticulture Innovation Lab Assoc. Award: LAC Assessment	S.Long/J.Bowman	UC - Davis
World Vegetable Center-AVRDC (Core)	John Bowman	AVRDC
World Vegetable Center-AVRDC (Post Harvest)	John Bowman	AVRDC
USDA/NBCRI/Aflatoxin	John Bowman	USDA/ARS
Post Harvest Loss Research (new RFA)	John Bowman	tbd
Nutrition Innovation Lab - Africa	Maura Mack	Tufts University
Nutrition Innovation Lab - Asia	Maura Mack	Tufts University
CRP 4.0 - Nutrition	Maura Mack	IFPRI
Adapting Livestock to Climate Change Innovation Lab	Joyce Turk	Colorado State University
AquaFish Innovation Lab	Joyce Turk	Oregon State University
Aquafish Innovation Lab Associate Award	Joyce Turk	Oregon State University
CRP 3.7 – Meat, Milk and Fish	Joyce Turk	ILRI
Golden Rice - IRRI	Vern Long	IRRI
Harvest Plus - CIAT	Vern Long	CIAT

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Program for Human and Institutional Capacity Development

Challenge: Professional and Organizational Capacities are Inadequate to Address Challenges and Opportunities in the Agricultural Sector

- Public agricultural institutions are weak
- Private sector needs skilled employees
- Experienced faculty and managers are retiring
- Women hold few management positions

Solutions:

- **Strengthen human and institutional capital base**
- **Develop human skills through fellowships and long-term degree training**
- **Strengthen agricultural education institutions**
- **Support best practice development**
- **Support women in agricultural research**

Example Projects:

- InnovATE – Agricultural Training and Education
- African Women in Agricultural Research and Development (AWARD)

Capacity Development Programs

- **Education**: InnovATE and TEAM Africa
- **Extension**: Modernizing Extension and Advisory Services (MEAS), mFarmer
- **Agribusiness/Entrepreneurs:** Africa LEAD, Cooperative Development Program (CDP)
- **Policy and Data**: USDA capacity building of national statistics services (NASS/ERS); Enabling Agricultural Trade (EAT), Program for Biosafety Systems (PBS)
- **Research**: AWARD, Borlaug LEAP, BHEARD, US Global Fellows, USDA FAS Borlaug fellowship

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InnovATE Program

- Institutional capacity building – best practices
- Multi-level: **primary, secondary, vocational/technical**, university, post graduate; multi-institutional: public, private, regional
- New disciplines
- **Gender equity in staff, curricula, students**
- **Administration** and management (financing, incentives, accounting)
- **Curricula** development
- **Faculty development** and pedagogy
- Outreach
- Infrastructure
- Student services

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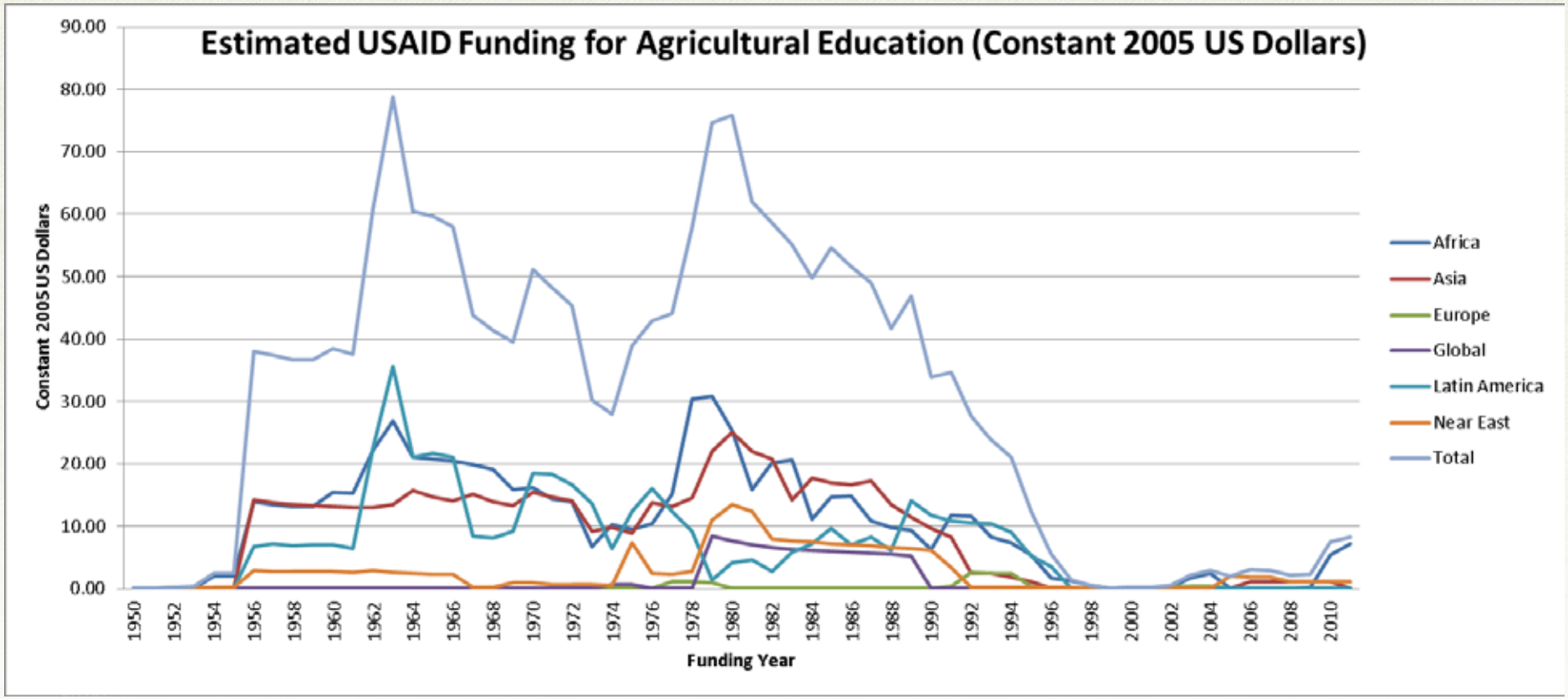

New Alliance for Food Security & Nutrition (from G8 Summit)

- ü African countries commit to **policy changes** to increase private investment
- ü More than **45 companies** have committed over **$3 billion**
- ü Initially launched in **Ghana**, **Tanzania** & **Ethiopia**
- ü ***Feed the Future is the major U.S. contribution to this effort, and "technology scaling" is the focus***

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Scaling Technologies

Challenge: Bringing Promising Agricultural Technologies to Scale

- A set of global opportunities and country-based actions

Partners:

- Country governments, CGIAR, Innovation Labs (US Universities), Private Sector, Implementing Partners, Other donor agencies

Solutions:

- New Alliance Technology Platform
- Mission Scaling Plans, addressing constraints to policy and technology adoption
- Alignment of research priorities, including CGIAR and University partners

Learning Agenda:

- Technology Matrix (wiki)
- Private sector pathways for dissemination of publicly funded technologies
- Regional technology spillovers
- Sustainable intensification model
- Favorable conditions for technology and policy adoption

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Scaling Technologies

Remarks by Administrator Rajiv Shah to the CGIAR Board of Directors
Friday, December 7, 2012

Nearly fifty years ago, when USAID Administrator William Gaud coined the term Green Revolution, he was speaking not just about the new varieties of wheat and rice, but about the vast potential of agricultural technology to open new frontiers in development.

It wasn't long before the Consultative Group on International Agricultural Research (CGIAR) was formed. The CGIAR was a response to a growing recognition that a worldwide network of agricultural research centers was needed to carry on the ideals of the Green Revolution.

Within a decade, the CGIAR had grown to include over a dozen centers—from Mexico to Nigeria.

But the ultimate test of an international research system is not the glamor of the inventions, but the impact of its results.

Today, we have technologies that can help farmers grow more productive crops and improve water management. **The evidence base is growing around a select number of technologies that—if taken to scale—can impact tens of millions of lives**.

But those technologies are not reaching nearly enough farmers.

Tom Hobgood's comments in Dar – "something isnt' right….."

USAID Support for Scaling Up Technologies

USAID Feed the Future programs

- Compile information on current and potential technology priorities through a "Wiki" inventory
- Conduct portfolio reviews including a discussion on constraints and opportunities to scale key technologies
- Develop technology scaling plans

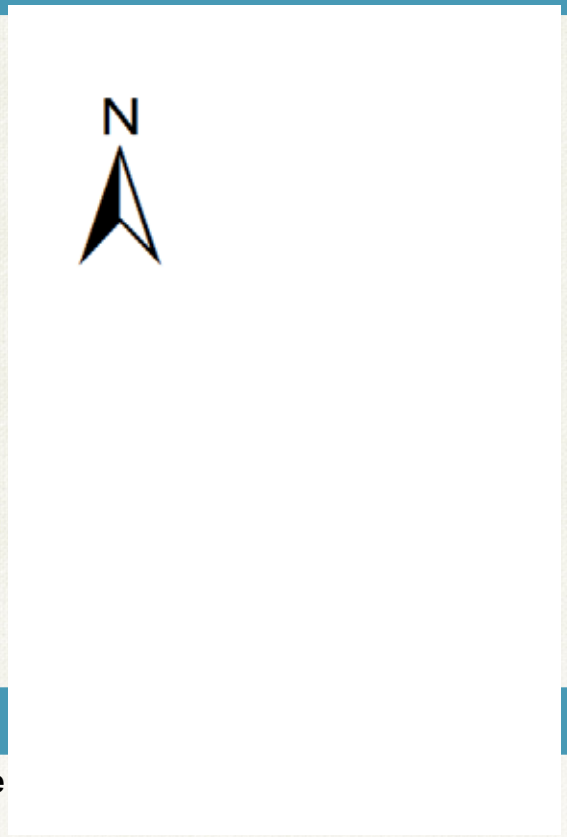
USAID Support for Scaling Up Technologies

Implementation of G8 New Alliance Enabling Actions

- **Technology Platform,** to provide data and modeling to assist countries to set technology priorities and yield targets (IFPRI and FARA)
- **Scaling Seeds and Technologies Partnership**, to support programs in seed sector development and adoption of related technologies (AGRA)
- **ICT Extension Challenge**, to design and implement information approaches to support adoption of technologies
- Determining 10 year targets for yields and adoption rates that will improve food security
- Identifying constraints to adoption

Malawi - Opportunities for Immediate Scaling

Focus Areas



Value

Geographic narrowing: Seven districts straddling central and southern regions (Dedza, Mchinji, Lilongwe, Ntcheu, Mangochi, Balaka, and Machinga)

Key objectives:

- Improved nutritional status of women and children
- Value chain investments to develop markets and improve nutritional options
- Engaging the Malawi government to improve the policy environment

Technology	Contributing Impacts	Category
Drought tolerant maize varieties and hybrids	Increased productivity and resilience	Cereal
Vitamin A Enriched Maize	Nutritional Outcomes	Cereal
Orange fleshed sweet potato (OFSP)	Nutritional Outcomes	**Root & Tuber**
Aflatoxin mitigation in groundnut	Nutritional Outcomes / Improved Marketability	Legume
High yielding, promiscuous soybeans	Nutritional Outcomes / Increased Productivity	Legume
Higher yielding, drought tolerant pigeonpea	Nutritional Outcomes / Increased Productivity	Legume
Small fish ponds as demand driver for soy	Nutritional Outcome / Improved Marketability	Animal Sourced Foods
African indigenous vegetable production	Nutritional Outcomes	**Horticulture**

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Scaling Technologies

Innovation Lab Role in Scaling Technologies

- Innovation Labs cannot be responsible for actual scale out. Mission projects, national extension systems, local ngos, and the private sector accomplish scale out

- Innovation Lab research products have to be better designed to ensure "use". Research "use" takes place when coupled with "user demand" during the research process itself…. *RIU*

- The Labs must have some level of responsibility to facilitate or assist with the scale out – i.e., work at the interface of technology finalization and scale out

- MUST SOMEHOW TWEAK OUR RESEARCH INVESTMENTS SO THAT TECHNOLOGIES WITH THE HIGHEST POTENTIAL FOR ADOPTION RECEIVE FOCUS…. NEED FRAMEWORK/GUIDELINES

Feed the Future Partnering for Innovation

New $67 M program to expand commercial access of technologies to smallholder farmers in order to quickly and sustainably improve productivity and incomes.

- **Pilot Technology Support sub-awards** for field testing of agricultural technology in new markets and will include up to $400,000 in fixed-price funding support that is based on meeting specific milestones spelled out in each agreement.
- **Commercialization Partnership Support sub-awards** will develop PPPs to support the scaling up of proven agricultural technologies to smallholders.
- **Technical advisory services** in support of commercialization of technologies and partnerships
- Build a **Knowledge Network** that provides a platform for continuous learning, analysis and dialogue about technologies and PPPs.

www.partneringforinnovation.org

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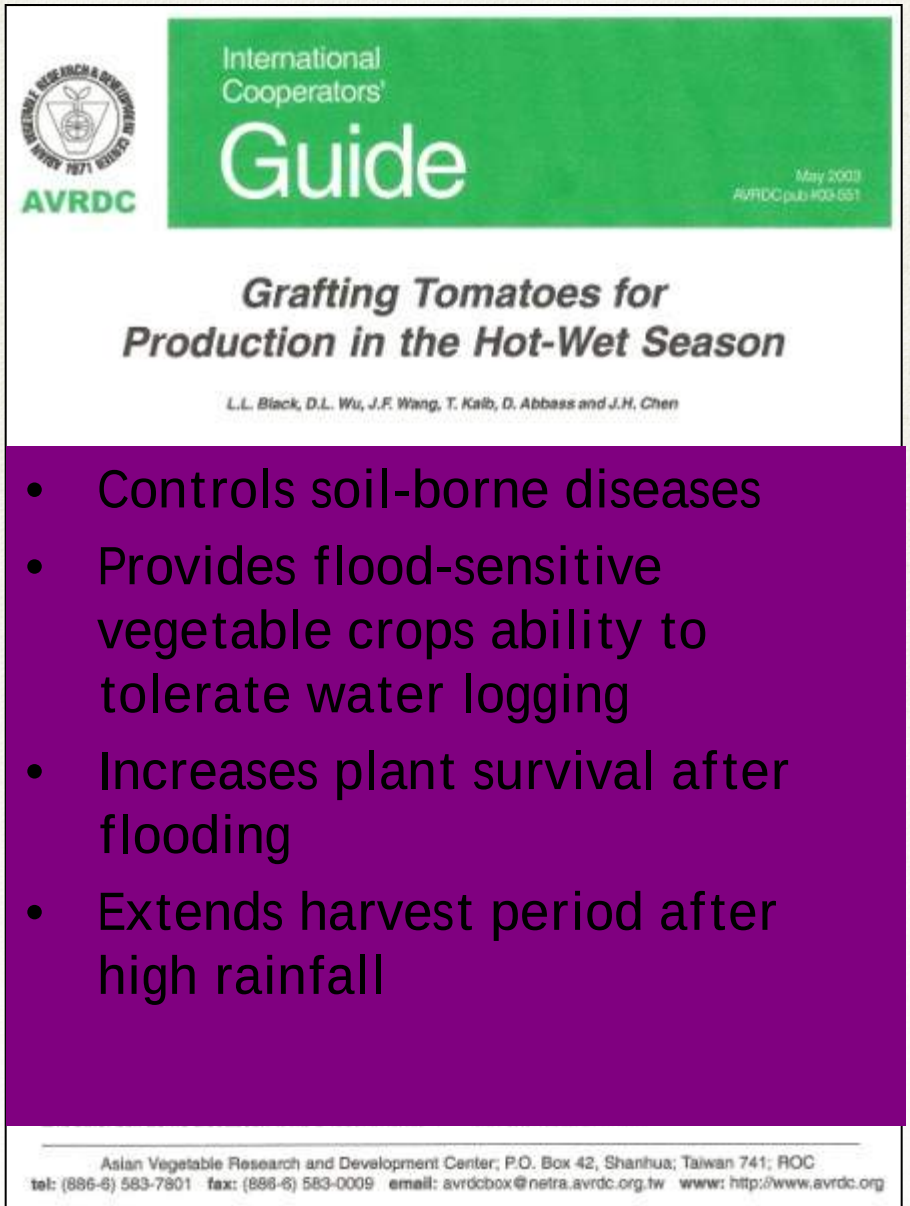
Grafting



- Controls soil-borne diseases
- Provides flood-sensitive vegetable crops ability to tolerate water logging
- Increases plant survival after flooding
- Extends harvest period after high rainfall

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Grafted v. NonGraft

Is the “package”scalable?

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FTF Progress: Focus & Concentrate

- Since FY 2008, USAID has obligated **over $3 billion in agriculture resources.**
- FTF resources have been concentrated in priority countries where we expect to have the biggest impact on reducing poverty and undernutrition/stunting.
- Since the inception of FTF in 2010, **agriculture programs have been phased out in 22 countries.**
- USAID has focused and concentrated FTF resources by reducing the total number of countries receiving assistance **from 57 countries in FY 2010 to 36 countries in FY 2013.**

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FY12 Feed the Future Results

- In recent years, **poverty rates have fallen by an annual average of 5-6 percent** across Feed the Future focus countries.
- **Stunting has also decreased by an average of 5-6 percent** from 2009 to 2012.
- Approximately **7 million** farmers applied new technologies and practices in FY12, which is more than four times greater than the number in FY11.
- **Over 3 million** hectares of land came under improved cultivation and management practices in FY12, almost double the amount of hectares in FY2011
- FTF leveraged over **250 million** dollars in new private sector investment in the agriculture sector in FY12.
- USAID FTF programs helped support education and training opportunities for over **900** students in degree-seeking programs related to agriculture and food security.

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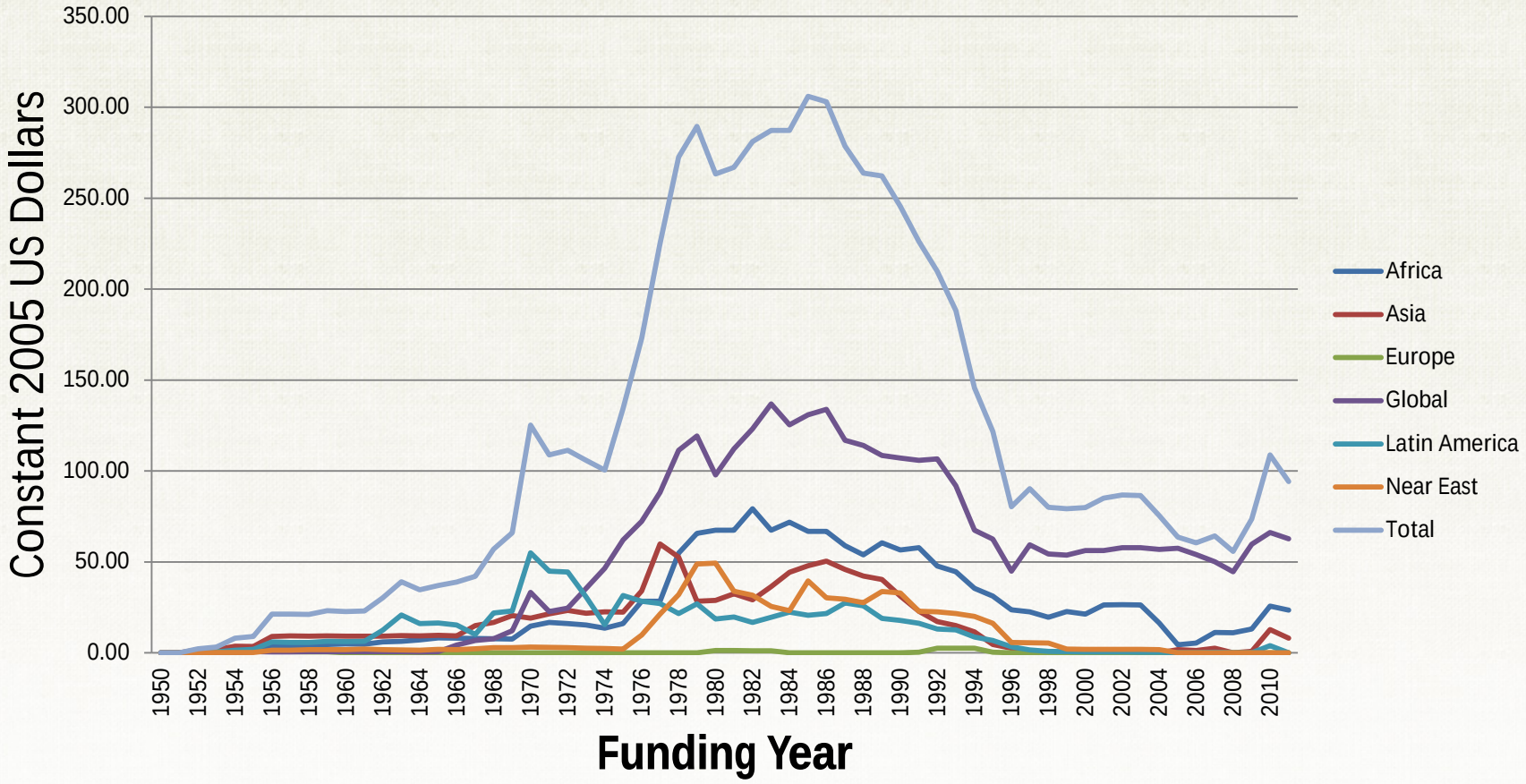
USAID Funding for Ag Research



Gary Alex USAID

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HORTICULTURE IL:
"Future Considerations"

1. *Truly integrate VC projects and hort research efforts*
2. *Integrate hort into SI (CSISA, SAGCOT)*
3. *Focus on New Alliance (Ghana, TZ, Moz)*
4. *Become more involved with "scaling agenda" and action planning*
5. *More aggressive on Associate Awards*
6. *Highlight gender/nutrition impacts*
7. *Back to pre-harvest basics? (mulches, fertilizer deep placement, irrigation, intercropping, soil/water dynamics, etc.)*

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HORTICULTURE: ARUSHA, TANZANIA

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HORTICULTURE: ARUSHA, TANZANIA

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HORTICULTURE: CAMBODIA

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“Asante sana”/ “Cam on”/ Thank you!
(www.feedthefuture.gov)