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PRESIDENTIAL INITIATIVE TO END HUNGER IN AFRICA ANNUAL REPORT 2007



**PARTNERING TO PROMOTE
AGRICULTURAL GROWTH AND FOOD SECURITY**

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FOREWORD

The Presidential Initiative to End Hunger in Africa (IEHA) focuses on smallholder-based agricultural systems and their linkages to markets, the essential elements in reducing hunger in Africa on a sustainable basis. The Initiative is designed to rapidly increase agricultural growth, rural incomes, and food production in sub-Saharan Africa by harnessing the power of new agricultural production and processing technologies; improving the efficiency of agricultural trade and market systems; building the capacity of community and producer organizations; and integrating the vulnerable into development processes. These approaches are even more critical in the current crisis of higher world food prices.

IEHA implements the U.S. government's G-8 commitments to support the African Union's Comprehensive Africa Agriculture Development Program (CAADP), the most ambitious agriculture reform effort to stimulate agricultural-led economic growth ever undertaken in Africa. Working through the CAADP framework, IEHA has leveraged and expanded the capacity of a broad array of African government and private institutions.

This year's report highlights partnerships, a strategic business practice of the Initiative. In 2007 IEHA formed 581 new public-private partnerships, building capacity and leveraging additional resources. These partnerships are critical to the sustainable transformation of Africa's rural economy and are creating jobs and changing lives. More broadly, IEHA's full array of partners include 54 US or international organizations, 35 African government institutions, and 111 African-based NGOs and farmer, market, and business associations,

IEHA's strategic impacts are enabling Africa to manage the current food crisis better than it could have five years ago. By working closely with African leaders and development partners, we are seeing concrete improvements in the efficiency and effectiveness of our development assistance to agriculture. IEHA investments are having a significant impact at a time when the challenge of food security in the region has never been greater due to developments in world food, energy and fertilizer markets. In 2007 we are seeing the cumulative benefits from a sustained, comprehensive effort that began in 2002. We have reached more than double the targets the Initiative set in many areas, including the number of people reached, the value of trade facilitated, the area brought under improved technology, and the return farmers are receiving from their investments. Over this same period we have seen major improvements in the capacity of African public and private institutions, including producer and women organizations, to manage their agriculture agenda.

IEHA has clearly established a solid foundation for scaling up activities that are part of a more robust response to high food prices. Africa Bureau will build on the experience of the Initiative as we contribute to USAID's global response to this crisis, a crisis that threatens the well-being of millions of Africans.

We are pleased to present the 2007 IEHA Annual Report. This report enables us to improve the Agency's decision making and build a framework for transparency and mutual accountability with our African partners and donor community. The results described in this year's IEHA Annual Report clearly demonstrate the value of an integrated approach to investment in agriculture and the impact that can be achieved on transformation, growth, and the reduction of hunger and poverty. We want to recognize, with gratitude, the contribution of the American people to these self-sustaining changes in Africa.

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ABBREVIATIONS AND ACRONYMS

AATF	African Agricultural Technology Foundation
AGOA	African Growth and Opportunity Act
AGRA	Alliance for a Green Revolution in Africa
APEP	Agricultural Productivity Enhancement Program
APHIS	USDA/Animal and Plant Health Inspection Service
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASNAPP	Agribusiness in Sustainable Natural African Plant Products
AU	African Union
BDS	business development services
CAADP	Comprehensive Africa Agriculture Development Program
CBO	community-based organization
CCA	U.S. Corporate Council on Africa
CERAAS	Regional Center for Studies on Improvement of Plant Adaptation to Drought
CGIAR	Consultative Group on International Agricultural Research
CIDA	Canadian International Development Agency
CILSS	Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (French abbreviation for Permanent Interstate Committee for Drought Control in the Sahel)
CIMMYT	Centro Internacional de Mejoramiento de Maiz y Trigo (Spanish abbreviation for International Maize and Wheat Improvement Center)
CNB	Cadre Nationale de Biosécurité (French abbreviation for National Framework for Biosafety)
COMESA	Common Market for Eastern and Southern Africa
CORAF/WECARD	West and Central African Council for Agricultural Research and Development (both English and French abbreviation)
CRSP	Collaborative Research Support Program
DC	Depot Committee
DRC	Democratic Republic of Congo
DREAM	Dynamic Research Evaluation for Management (IFPRI simulation model)
EAC	East African Community
ECOWAS	Economic Community of West African States
EGAT/AG	Bureau for Economic Growth, Agriculture, and Trade/Office of Agriculture (USAID)
EGAT/ESP	Bureau for Economic Growth, Office of Environment and Science Policy (USAID)
EurepGAP	Euro-Retailer Produce Working Group Good Agricultural Practices
FAAP	Framework for African Agricultural Productivity

FAGE	Federation of Associations of Ghanaian Exporters
FANRPAN	Food, Agriculture, and Natural Resource Policy Analysis Network
FAO	Food and Agriculture Organization (of the United Nations)
FARA	Forum for Agricultural Research in Africa
FAS	USDA/Foreign Agricultural Service
FASDEP	Food and Agriculture Sector Development Program
FFS	farmer field school
FFP	Food for Peace (USAID office)
FTF	farmer-to-farmer
G-8	Group of Eight (Canada, France, Germany, Italy, Japan, Russia, UK, and US)
GAPI	Global Alliance for Performance Improvement
GDPRD	Global Donor Platform for Rural Development
GIS	geographic information system
GlobalGAP	Global Good Agricultural Practices (formerly EurepGAP)
GMO	genetically modified organism
GSB	Ghana Standards Board
HACCP	Hazard Analysis Critical Control Point
HPAI	highly pathogenic avian influenza
IEHA	Presidential Initiative to End Hunger in Africa
IFPRI	International Food Policy Research Institute
IIAM	National Institute for Agricultural Research (Mozambique, Portuguese abbreviation)
IITA	International Institute of Tropical Agriculture
ILRI	International Livestock Research Institute
INSAH	L’Institute du Sahel (French abbreviation for a special institute of CILSS)
IR	intermediate result
KARI	Kenya Agricultural Research Institute
MASIP	Malawi Agricultural Sector Investment Plan
MATEP	Market Access, Trade, and Enabling Policies (project)
MDG	Millennium Development Goal
M&E	monitoring and evaluation
MOU	memorandum of understanding
NAC	National Cotton Advisory Committee
NARS	national agricultural research system
NARO	National Agricultural Research Organisation (Uganda)
NEPAD	New Partnership for Africa’s Development
ODA	overseas development assistance
OECD	Organisation for Economic Cooperation and Development
PBS	Program for Biosafety Systems

PFID	Partnership for Food Industry Development
PO	producer organization
PROFIT	Production, Finance, and Improved Technology (project)
PSOM	Program for Cooperation with Emerging Markets (Dutch abbreviation)
PPP	public-private partnership
PVO	private voluntary organization
QPM	Quality Protein Maize
RA	Rainforest Alliance
REC	regional economic community
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SADC	Southern African Development Community
SAF	Strategic Activities Fund
SAKSS	Strategic Analysis and Knowledge Support System
SME	Small and medium-sized enterprises
SO	strategic objective
SoN	Source of Nile fish farm
SPEG	Sea Freight Pineapple Exporters of Ghana
SPS	Sanitary and/or phytosanitary
SRO	sub-regional organization
SSA	sub-Saharan Africa
STCP	Sustainable Tree Crop Program
TA	technical assistance
TFP	total factor productivity
USAID	United States Agency for International Development
USAID/AFR/SD	USAID, Africa Bureau, Office of Sustainable Development
USAID/SA	USAID/Southern Africa
USAID/WA	USAID/West Africa
VAT	value-added tax
WAEMU	West African Economic and Monetary Union also UEMOA (French abbreviation)
WASA	West Africa Seed Alliance
WDR	World Development Report
WFP	World Food Program

EXECUTIVE SUMMARY

“If the world is committed to reducing poverty and achieving sustainable growth, the powers of agriculture for development must be unleashed.”

“Improving the productivity, profitability, and sustainability of smallholder farming is the main pathway out of poverty in using agriculture for development.”

**World Bank
World Development Report, 2008**

The Presidential Initiative to End Hunger in Africa (IEHA) is helping to break the cycle of poverty and hunger in sub-Saharan Africa by transforming agriculture—the means of survival for four out of five Africans—and fulfilling the Millennium Development Goal of halving the number of hungry people in the world by 2015. At a time when the challenge of food security in the region has never been greater, IEHA is helping advance agricultural development to secure a better life for Africans.

Launched in 2002, IEHA is an agricultural development program intended to increase rural incomes in Africa. It is also the vehicle through which the USG supports the implementation of the Comprehensive Africa Agriculture Development Program (CAADP), the most ambitious agricultural reform effort ever undertaken in Africa. CAADP’s strategy focuses on promoting new business practices, stimulating growth and investment, coordinating donor support, incorporating new players into the sector, increasing

transparency and accountability, and enhancing institutional capacity.

Implemented by USAID, IEHA has helped raise rural incomes and increase food security for smallholders by improving policies and increasing productivity and trade. And IEHA helped to boost productivity of major staple foods including maize, rice, cassava and livestock, as well as non-staple crops such as cashews, mangoes, pineapples, and paprika.

In FY 2007 alone, IEHA reached more than 17 million people, including 1.7 million vulnerable households. It assisted more than 3,800 agricultural firms, trained more than 1.8 million people—double the number in FY 2006—helped more than 910,000 farmers apply new technology on 300,000 hectares, introduced technologies to 45 processors, facilitated access to \$40 million in credit, and helped 195,000 enterprises receive business development services. Last year IEHA facilitated \$968 million in international agricultural trade and \$250 million in regional trade. Ninety-eight policy actions resulted

in 20 new policies being enacted and 11 new policies being implemented. In addition, programs introduced international standards to 135 firms, improving their access to markets.

PRODUCTIVITY

In a time of swiftly rising food costs, staple food production assumes even greater than usual importance. IEHA is making real progress on staples: gross profit on maize in Kenya, Mozambique and Uganda increased from \$347 per hectare to more than \$525 per hectare from 2005 to 2007, and smallholders saw sales of \$105 million on more than 500,000 tons of maize. Similarly, banana productivity in Uganda nearly tripled from 2006 to 2007. In Zambia, productivity among livestock holders was improved through the promotion of preventative veterinary care; mortality dropped 70 percent for cattle in the program and the healthier animals brought higher prices. Several examples of IEHA results are provided below and a detailed discussion of results can be found in Chapter 3.

POLICY

In FY 2007 IEHA promoted policy reforms that benefited smallholders by removing key constraints and creating real opportunities. These policy reforms were changes made by African government agencies, marketing or technology organizations, donor agencies, or regional economic groupings that create a more conducive environment for farms and small firms to expand their productive potential. Recognizing that policy change typically involves analysis, stakeholder consultations, enactment and implementation, IEHA tracked progress through these stages. Of the 98 policy actions tracked, two-thirds

of the actions begun in 2004 resulted in new policies being adopted or implemented by the end of 2007. Of those policy actions started in 2005 and 2006, 44 and 66 percent, respectively, were adopted or implemented in FY 2007. Policy reforms, such as instituting commodity standards, developing biosafety regulations and harmonizing seed policies, represent critical steps toward opening markets and improving competitiveness.

TRADE

IEHA's investments in trade capacity building enabled smallholders to enter and compete in domestic, regional and international markets, raising incomes and creating more jobs. IEHA programs promoted international trade totaling \$968 million in 2007. Regional trade was boosted by over \$250 million, and producers sold over \$150 million in agricultural products, including staple foods, in domestic markets. In Mali, mango exports in FY 2007 reached a record-breaking 5,492 tons—a 42 percent increase over FY 2006—in part due to producers' increased ability to meet new specifications for export-quality mangoes that have become the standard for the industry.

In Zambia, IEHA fostered the development of a private agricultural services sector that provides land preparation, spraying, inputs, veterinary services, financial services, production advice and technology dissemination, and that fundamentally changed the way the service industry markets and distributes to small producers. In FY 2007, more than 6,000 Zambian farmers purchased inputs and 670 purchased services, valued at more than \$270,000, from private providers.

FROM RELIEF TO DEVELOPMENT

IEHA is helping to increase productivity and market linkages among smallholders who have limited assets and who are highly vulnerable due to food shortages, civil conflict and illness.

In Uganda, food security programs focused on people affected by war and displacement in the northern and eastern parts of the country. The programs provided these rural households with training on agronomic techniques, improved inputs, linking to markets and environmentally sensitive farming. More than 300,000 formerly displaced people who had returned to cultivate their land received assistance.

In East Africa IEHA partnered with over 500 local organizations to focus on vulnerable households, providing them with vouchers to purchase improved seed in local markets and agronomic training tailored to local conditions. It also made improved cassava varieties available to almost 100,000 smallholders and provided them with information on the management of bacterial wilt disease, which afflicts bananas.

PUBLIC-PRIVATE PARTNERSHIPS

In 2007 IEHA formed 581 new public-private partnerships to facilitate access to broader financing options, assist in skill and knowledge development, and apply USAID's extensive knowledge of Africa to help reduce investment risks. These partnerships have been a core business strategy for IEHA since it was launched. Since 2002, the partnerships have grown in number and impact, giving voice to the private sector while leveraging resources for development.

For crop-improvement projects, one strategic USAID partner is the African Agricultural Technology Foundation, a nonprofit organization formed to facilitate and promote partnerships that deliver proprietary agricultural technologies to smallholders. In Mozambique, a USAID partnership helped establish IKURU, a farmer-owned trading company that links a network of 9,500 farmers from the northern peanut-growing region to markets. IKURU is now the leading farmer-owned business in the country.

CAADP

The AU/NEPAD Comprehensive Africa Agriculture Development Program (CAADP) is an African-led vision and framework designed to ensure that agriculture plays its critical role in supporting transformational development and to improve the effectiveness of development assistance. CAADP serves as a platform that enables USAID to form partnerships with a wide variety of institutions, including African governments, the private sector, PVOs and local NGOs, and other donors. Through the CAADP Partners Platform, USAID coordinates activities with these partners to achieve CAADP objectives. IEHA made significant progress in 2007 in aligning with and supporting CAADP, and the results have been clear.

- African governments are increasing funding for agriculture. Several countries have met the goal to commit 10 percent of their national budgets to agriculture by 2008.
- Development partners, governments and regional economic communities are coordinating efforts to develop agricultural programs built around investment priorities and policies for increased agricultural growth.

- Strategic bilateral and multilateral programs are being implemented and a multi-donor CAADP trust fund, managed by the World Bank, has been established.
- A CAADP partners' platform meets every six months to assess progress, undertake sector peer reviews and set priorities.
- Agricultural growth rates continue to increase, with the average for sub-Saharan Africa reaching close to the six percent target rate.
- Several of the IEHA countries are expected to achieve the Millennium Development Goal to halve the number of hungry people by 2015.

IEHA is building the institutional capacity of government organizations, including policy and research groups; private sector organizations, including trade and finance groups; and civil society groups to lead and manage CAADP. These capacity-building efforts are strengthening African organizations and their enabling policy environments to stimulate agricultural growth.

In March 2007, the Rwanda Round Table meetings resulted in Rwanda becoming the first country to sign a CAADP Compact, an evidence-based, country-level operational plan that identifies a specific set of actions and investments. Signed by the Rwandan Ministries of Agriculture and Finance, the African Union, the Common Market for Eastern and Southern Africa, and development partner representatives, the Compact signals that the Government sees market-oriented agriculture that is led by the private sector and underpinned by public sector investment as the means to reduce hunger and achieve accelerated, broad-based growth.

TECHNOLOGY

IEHA's investments in agricultural technology development yielded significant dividends during 2007. A bioengineered banana resistant to bacterial wilt disease underwent its first field trial in Uganda. In Kenya, maize seed that resists an important pesticide was field-tested, and in 2008 cowpea and cassava field tests commenced. In Burkina Faso in 2008, field trials of bioengineered cotton are underway, while in South Africa bioengineered potatoes are being planted.

The three key African sub-regional agricultural research organizations (CORAF/WECARD, ASARECA, FANRD and FARA) made structural breakthroughs toward coordinating efforts and streamlining agricultural technology development during 2007. As a result, each sub-regional organization has prioritized its research program to align with the commodity sectors contributing the most to economic growth.

Progress was also made on the establishment of a policy and regulatory environment that will allow biotech crops to be used safely and effectively. The Association for Strengthening Agricultural Research in Eastern and Central Africa and the Common Market for Eastern and Southern Africa conducted policy analyses on the economic implications of trade in biotech crops that lay the groundwork for regional harmonization of regulations.

GOALS AND CHALLENGES

To meet the Millennium Development Goal to halve the number of hungry people by 2015, poverty reduction and economic growth must be accelerated in sub-Saharan Africa. Although some countries—Ghana, Uganda and Mozambique—are already on track to achieving the Millennium Development Goal, the impact of the current high food prices will likely impede progress, diverting scarce national resources from development activities to meet urgent food needs. More immediately, increased prices create instability and insecurity, particularly among the vulnerable, who spend up to 70 percent of their income on food.

As sub-Saharan Africa looks to the future, it appears likely that the recent surge in food and energy prices will continue. In some projections cereal prices will rise 30-40 percent by 2050. These projections have fostered an even greater sense of urgency to

increase critical investments in agricultural research, technology dissemination, resource management, infrastructure, policy reform and market linkages.

CAADP offers countries a clear framework for addressing the impacts of food price increases and for meeting the Millennium Development Goal. The IEHA-CAADP alignment is focused on meeting these new challenges. IEHA has established a solid foundation for scaling up activities that will support a robust response. In the coming years, it will work with other donors in East, West and Southern Africa with the four to five countries per region that account for over 60 percent of Africa's population and over 75 percent of its agricultural output. While stimulating regional integration, the activities may make it feasible to enable Africa to close its food gap. This would also create millions of jobs and stimulate substantial foreign and domestic direct investment that can spur broader economic growth and reduce poverty.

I. INTRODUCTION

The Presidential Initiative to End Hunger in Africa (IEHA) is a vigorous effort of the USG to alleviate poverty and hunger in Africa through agricultural development. The Initiative and its work reflect an expanding global consensus that agricultural growth is key to meeting basic development objectives, most especially the Millennium Development Goal (MDG) to halve extreme poverty and hunger by 2015.

This annual report for IEHA describes the Initiative's activities and progress made in FY 2007 in pursuit of that goal. It reports on actions, trends, and results achieved at

Africa-wide, regional, country, and local levels by IEHA's country, regional, and central programs.

IEHA RAISES AFRICAN INCOMES AND EXPANDS FOOD SUPPLIES

Agriculture as a driving force for poverty alleviation is the centerpiece of the World Bank's recently released World Development Report 2008, "Agriculture for Development" (WDR). In it, the authors note that the most important priorities in using agriculture for development are to:

- increase the assets of poor households;
- make smallholders—and agriculture in general—more productive; and
- create opportunities in the rural non-farm economy.

IEHA is enhancing the human and social capital of the rural poor by imparting critical technical and business knowledge and by helping to build producer organizations; it is making smallholders—and value chains—more productive by providing new technology and access to credit and markets; and it is creating demand for locally produced goods and services by raising farm household incomes.

The heterogeneity of conditions in Africa is cited in the WDR as presenting difficult challenges for program design and implementation. Tackling this problem head-on, IEHA's support for regional and continental programs and platforms is part of a carefully planned effort

IEHA makes smallholders more productive; one way is to improve the quality of their products. (Shown here: Ugandan produce.)



JOE BARWICKER

to pool the resources and skills of the many small countries of Africa to make agricultural research and regional markets more efficient.

The WDR identifies underinvestment and misinvestment as reasons why agriculture has not been able to play a larger role in the development of sub-Saharan Africa. IEHA is helping to reform investment policies and is playing an active role in support of the AU/NEPAD Comprehensive Africa Agriculture Development Program (CAADP), under which African countries and donors have committed to raising significantly their policy focus and expenditures on agriculture.

IEHA SUPPORTS AFRICAN PRIORITIES AND BUILDS AFRICAN CAPACITY

IEHA is providing strong support to CAADP, the largest, most ambitious reform process in Africa. Some of the key aspects of CAADP include:

- Commitment to sufficient investment in agriculture by both Africans and donors;
- Alignment: a coordinated approach to agricultural development by Africans and donors and agreement on the right policies and investments;
- Accountability and peer review: bringing needed rigor and lessons learned to bear;
- Donor harmonization; and
- Process that produces results (e.g., Compacts).

Overall, CAADP is an expanded set of key public and private players doing business in new ways. This can be seen in its new, aligned investments; enhanced donor harmonization; policy discussions at all levels; and new monitoring and evaluation processes.

CAADP is built on four pillars: 1) Extending the area under sustainable land management and reliable water control systems; 2) Improving rural infrastructure and trade-related capacities for market accesses;

3) Increasing food supply, reducing hunger, and improving responses to food emergency crises; and 4) Improving agriculture research, technology dissemination, and adoption. This foundation supports the WDR priorities of creating assets for the rural poor and making smallholders more productive, which in turn will change IEHA's agriculture-based focus countries into transforming countries.

In 2007 IEHA provided significant levels of assistance to give its partners—African leaders—the capacity, business practices, knowledge, and development tools needed to shape, lead, and manage the CAADP implementation. IEHA builds the institutional capacity of government organizations, including policy and research groups; private sector organizations, including trade and finance groups; and civil society groups to lead and manage CAADP. These capacity-building efforts are strengthening African organizations and their enabling policy environments to stimulate agricultural growth. Fifteen countries are now engaged in stocktaking, analysis, and roundtable processes to establish CAADP Compacts. The first CAADP Compact, the Rwanda Compact, was signed in March 2007. The Rwanda Round Table process and the signing of the Rwanda Compact demonstrate that this process can mobilize broad government support (e.g., from the Minister of Finance) for an aggressive investment agenda for agriculture. For the first time in Africa's history, CAADP has succeeded in turning ministers of finance, and other cabinet members, into real champions for the agricultural and rural growth agenda.

THE IEHA PLATFORM IN 2007

The WDR divides developing countries into “agriculture-based,” “transforming,” and “urbanized.” It reminds us of the special power of agricultural growth to reduce poverty; using agriculture to reduce poverty requires both targeting the large number of

poor in favored areas and investing in less favored areas to combat extreme poverty.

In FY 2007, IEHA programs were active in six agriculture-based focus countries (Ghana, Kenya, Mali, Mozambique, Uganda, and Zambia) that are on the cusp of becoming transforming countries. IEHA has also begun working in less-favored countries (Malawi and Niger) to reverse the cycle of food insecurity. Countries on the cusp are likely to have sub-national areas that are already transforming, spurred by new technology, access to markets, and other improvements resulting from IEHA investments.

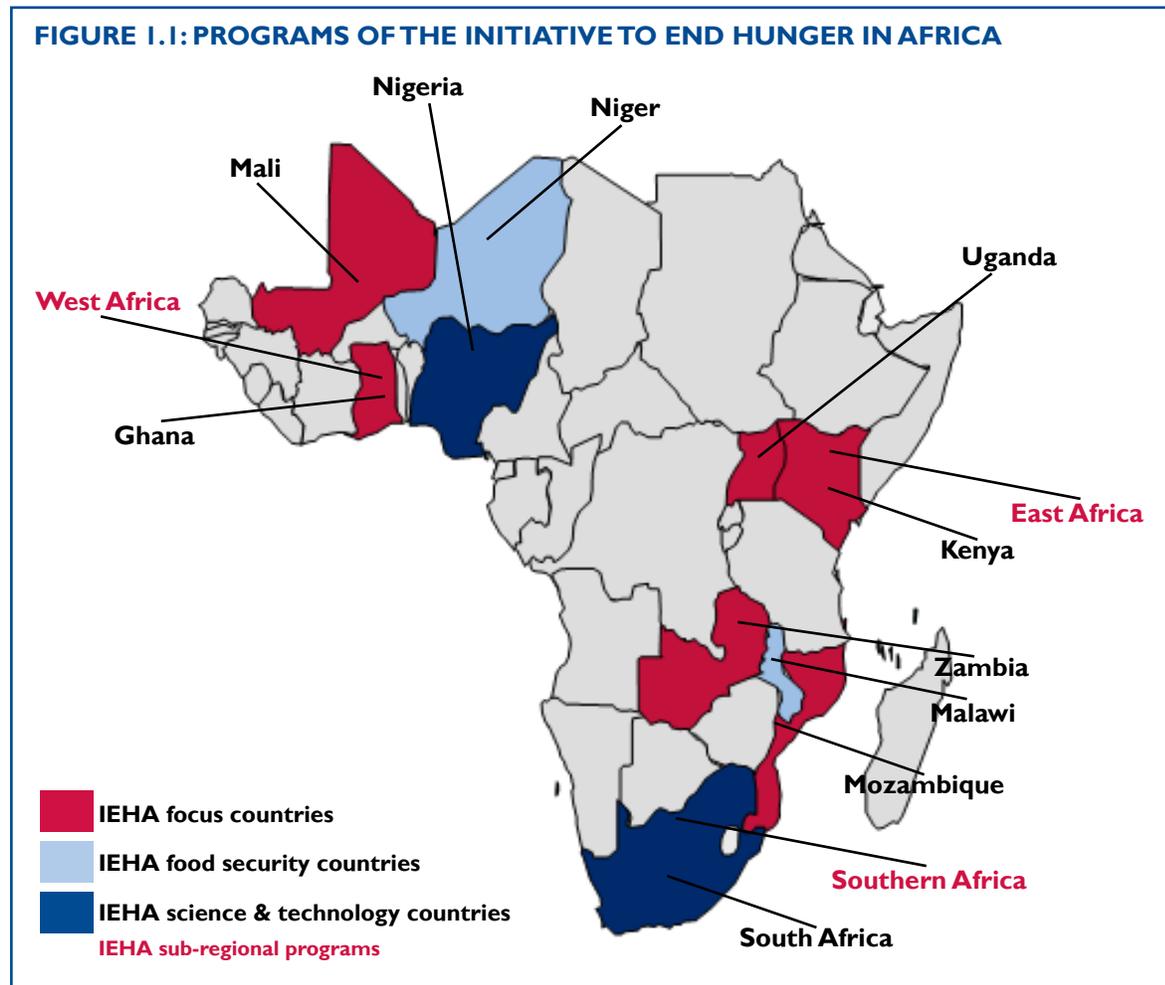
As shown on the accompanying map (Figure I.1), the IEHA portfolio also includes programs based in Washington

and in the three sub-regions. Special programs related to biotechnology were supported in South Africa and Nigeria.

A STRATEGIC FRAMEWORK FOR IEHA

IEHA's goal in sub-Saharan Africa is the first Millennium Development Goal: to cut hunger and poverty in half by 2015. To accomplish this goal, IEHA has made its Strategic Objective (SO) to increase rural income. Contributing to IEHA's SO "increased rural income" are three Intermediate Results (IRs):

1. Enhanced productivity of smallholder-based agriculture;
2. An improved policy environment for smallholder-based agriculture; and
3. Increased agricultural trade.



Capacity building contributes to these results. Institutional and trade capacity development are among the factors leading to increased competitiveness, which in turn leads to increased trade. The SO and IRs are shown in the IEHA monitoring and evaluation (M&E) framework in Figure 1.2

As shown in Table 1.1, IEHA's total funding reached \$192 million in FY 2007. In that same year, \$72.1 million of FY 2007 Development Assistance funding was made available to support IEHA. All of these funds were obligated and support field implementation of programs in FY 2008.

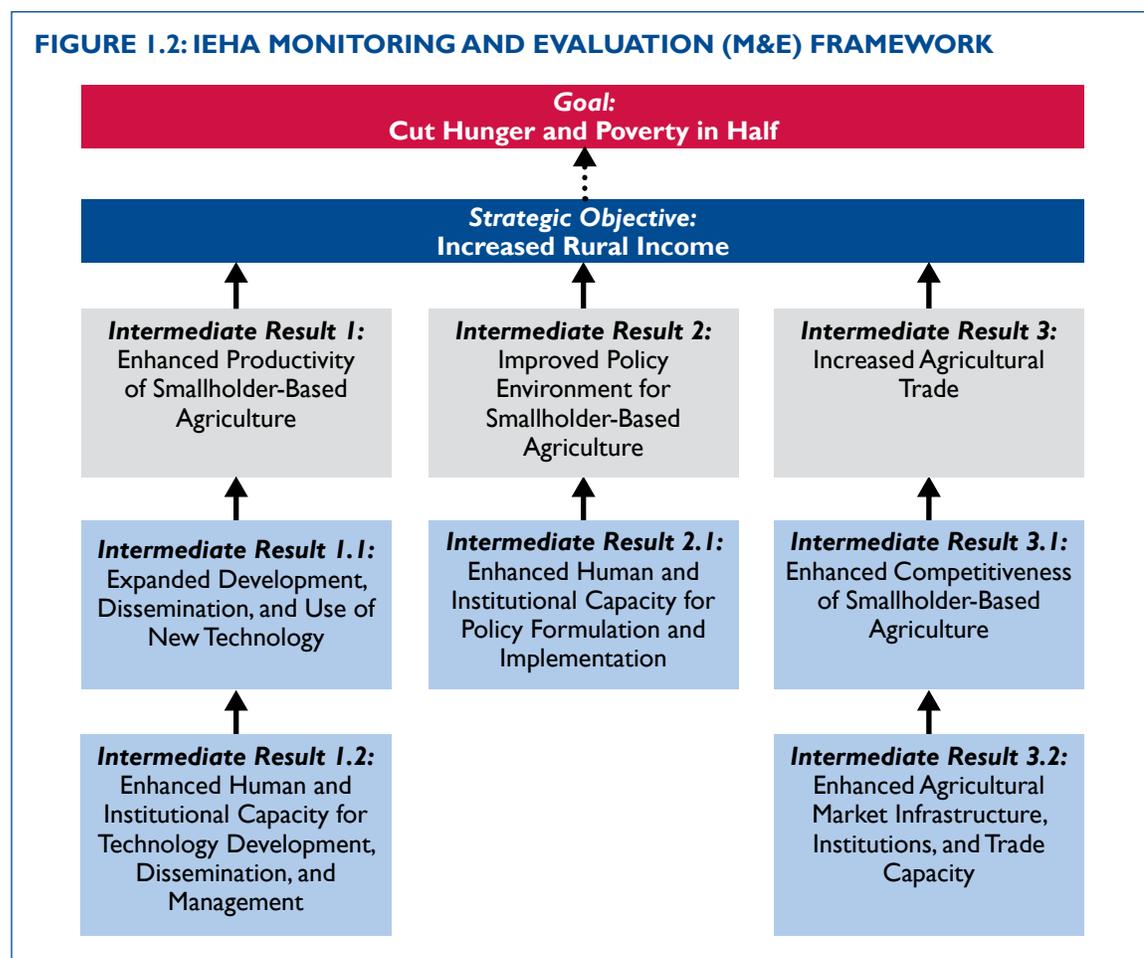
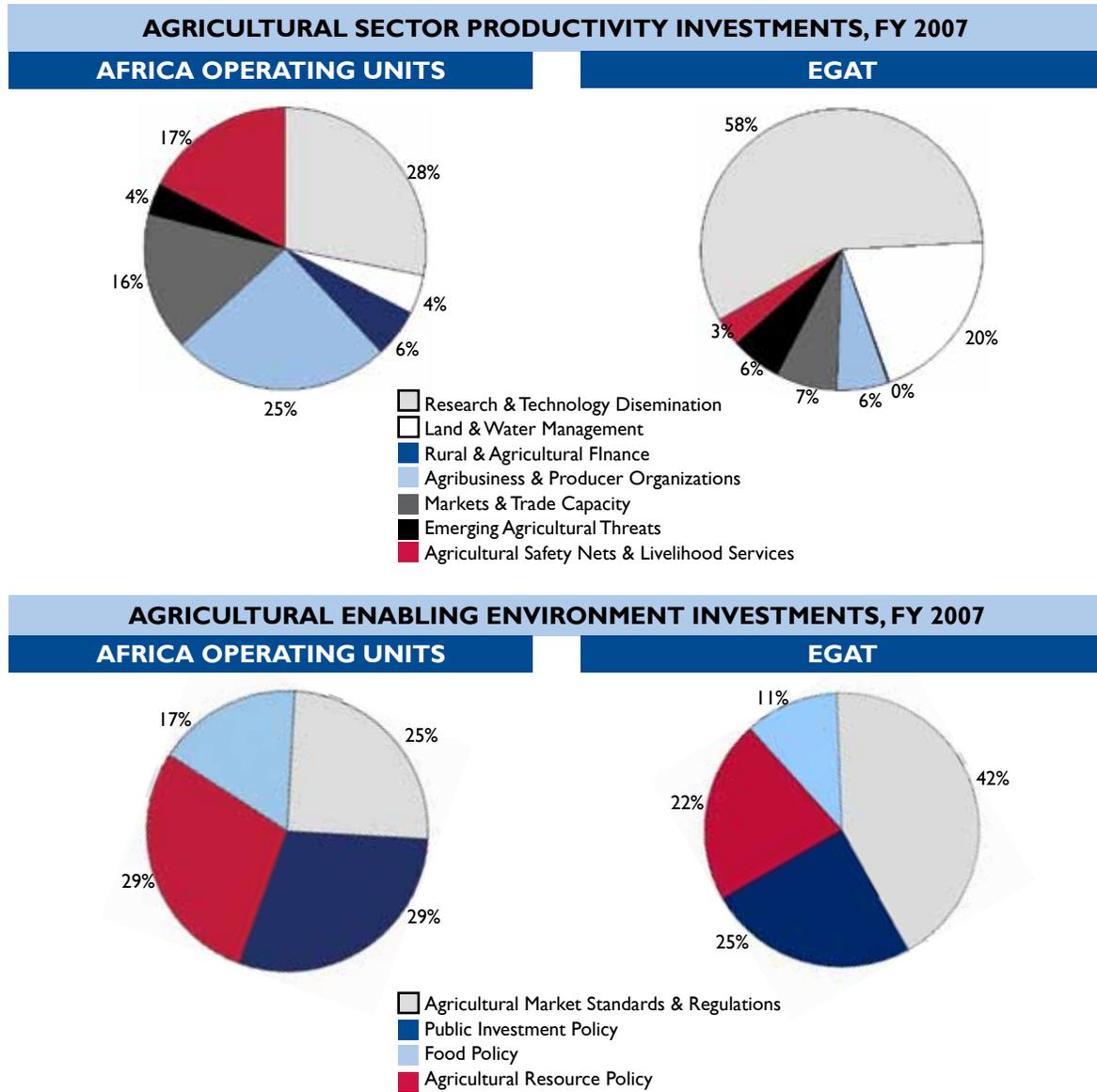


TABLE 1.1		IEHA FUNDING (Millions of Dollars)			
Fiscal Year	Development Assistance	P.L. 480 Title II	Famine Fund	Total	
2003	26.5	NA	NA	26.5	
2004	67.5	NA	NA	67.5	
2005	67.9	NA	5.0	72.9	
2006	75.5	100.0	19.8	195.3	
2007	72.1	100.0	19.8	191.9	

The following charts (Figure I.3) show how funds were expended on IEHA programs, by the Elements and Subelements of the Foreign Assistance Framework. The Bureau for Economic Growth, Agriculture, and Trade

(EGAT) charts show funds programmed by EGAT in support of IEHA; the Africa charts show the use of IEHA funds by USAID operating units in Africa.

FIGURE I.3 : BREAKDOWN OF IEHA PROGRAM EXPENDITURES, FY 2007



OVERVIEW OF REPORT

The remainder of this report summarizes the full range of IEHA's activities and progress in FY 2007. Section 2 describes, by key indicator and by operating unit, the effectiveness of IEHA's programs. Section 3 provides results of IEHA's activities by country and region and supplies a context for understanding both achievements and obstacles to success. Section 4 provides detailed insight into a key tool of the Initiative; that is, the partnerships it forms within and across countries and regions. Section 5 presents detailed information about CAADP, an important reform process that IEHA energetically supports. Section 6 describes the key role of technology, and especially biotechnology, in providing ways to increase agricultural productivity. Section 7 identifies and analyzes global trends affecting smallholders in Africa, reports progress on achieving MDG 1, and provides additional context for understanding IEHA's agenda. The Annexes offer more detail about IEHA's partners, operating unit programs, and the IEHA M&E system.

2. IEHA'S PORTFOLIO ON TRACK

Each IEHA operating unit reports on a set of common indicators developed to track the performance of IEHA-related investments. The indicators include both output measures and impact measures (i.e., results). Operating units surpassing 100% of the targets are regarded as exceeding targets. Those meeting 90%-100% of the targets are regarded as on track. Those meeting 70%-90% of targets are viewed as making progress but needing improvement, and those meeting less than 70% of targets are viewed as failing.

MEETING TARGETS FOR KEY OUTPUTS

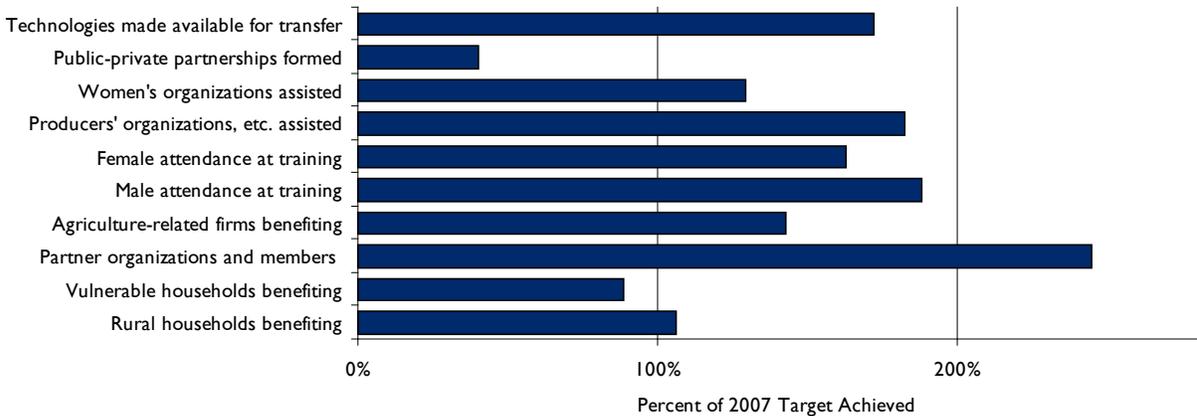
The overall performance of individual IEHA operating units with respect to all output indicators was at or above target levels in FY 2007, as shown in Table 2.1. The performance of all operating units submitting targets and actual data on average exceeded the target level, except for Mali, which met only one of

its output targets for the year. USAID/Mali indicated that in 2007 the results achieved were more limited than in previous years due to reduced funding. All other units achieved either all or most of their targets.

In FY 2007, IEHA as a whole met 8 of its 10 targets for key outputs, as shown in Table 2.2. Achievement of overall targets ranged from 40% to 245% (Figure 2.1).

IEHA reached more than 17.6 million beneficiaries in 2007, including more than 1.7 million vulnerable households. Attendance in training was more than 1.8 million, more than double the number reported in 2006 (600,000), and 1,185 technologies were made available for transfer. Women's attendance in training exceeded 700,000 and more than 1,500 women's associations were assisted. About 800 partner organizations and active institutions of those partner organizations

FIGURE 2.1: ACHIEVEMENT OF OUTPUT TARGETS, ALL IEHA OPERATING UNITS, FY 2007



were also assisted. IEHA helped more than 12,000 other producers' organizations and associations to better serve their smallholder and private sector members. Five hundred eighty public-private partnerships (PPPs) were reported as newly formed. IEHA is in the process of delving more deeply into these data, and a detailed chapter on PPPs is included in this report based on a case study.

We conclude from the reporting that has been completed by all operating units and partners that IEHA was successful in 2007 in field activities and in coordinating initiative-wide actions that were expected to produce the targeted impacts on income, poverty, and hunger.

MEETING TARGETS FOR KEY IMPACTS

In FY 2007, IEHA was also on track in achieving its key impacts. Table 2.3 summarizes the performance of IEHA bilateral missions in reporting on common performance indicators. Two of the six focus missions (Ghana and Zambia) provided full reporting on the performance indicators shown. A total of 24 commodities were reported using the productivity measure of gross margin per hectare, of which two missions met or exceeded targets on nine commodities (two in Ghana; seven in Uganda). Kenya, Mozambique, and Uganda reported a total of five, four, and 10 commodities respectively. Impact in terms of the value of international trade was measured for 18 reported commodities; Kenya, Uganda, and Zambia

met or exceeded their international trade targets by two, one, and one commodity respectively. In intra-regional trade, a total of 21 commodities were reported by five missions: Kenya, Mali, Mozambique, Uganda, and Zambia. Only one commodity met or exceeded the target in Kenya, Mali, and Uganda. The total value of domestic trade (purchases from smallholders) increased to over \$150 million from its 2006 value of \$142 million, with maize, coffee, rice, vegetables, and beef accounting for most of the increase.

In 2007, IEHA helped more than 910,000 farmers bring about 300,000 hectares under new technology, and 45 processors employed new technology. Smallholders sold over \$150 million worth of commodities in domestic markets. The value of international trade in targeted agricultural products was \$969 million, and intra-regional trade was about \$247 million. Beneficiaries accessed close to \$40 million in credit and 195,000 enterprises accessed business development services. Overall, IEHA achieved 100% of its targets (see Table 2.4 and Figure 2.2).

In the area of improvement of the policy environment, 98 policies in total were pursued and 11 of these met target. Many new operating units reported in the policy area in 2007, usually without targets, which partly explains the low rate of met targets. In 20 cases, policy reforms were adopted, and in 11 cases, the new policies were implemented. These policy reforms were changes made by African government agencies, marketing or technology organizations, donor agencies, or regional economic groupings that create a more conducive environment for farms and small firms to expand their productive potential.

FIGURE 2.2: PERCENT OF TARGET ACHIEVED ON IEHA RESULTS INDICATORS, FY 2007

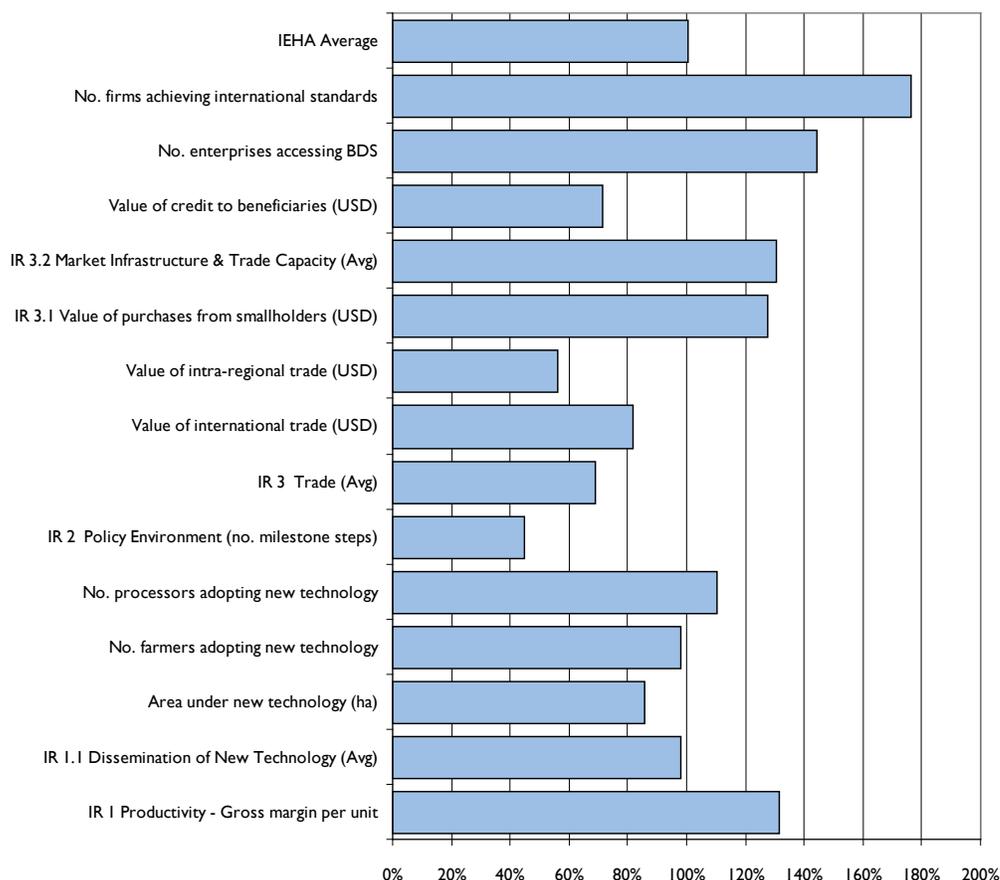


TABLE 2.1 ACHIEVEMENT OF OUTPUT TARGETS, IEHA OPERATING UNITS, FY 2007

Operating Unit	Targets & Data Submitted (No. of Indicators)	Targets Met or Exceeded (No. of Indicators)	Average Percentage of FY 2007 Target Achieved
East Africa	8	8	1579%**
Southern Africa	10	10	331%
West Africa	8	8	205%
Ghana	10	7	173%
Kenya	9	6	441%
Mali	10	1	46%
Mozambique	10	7	272%
Uganda	9	3	105%
Zambia	9	7	225%

Source: Annual M&E reports by IEHA operating units

Note: Average Percentage of FY 2007 Target Achieved is the simple average of the percentage achieved for all of the output indicators for which target and actual data were submitted.

** USAID/East Africa percentage of target achieved is so high because it greatly exceeded its target for training (target: 2,555; actual: over 100,000).

Regional and bilateral operating units report on slightly different sets of output indicators.

TABLE 2.2 **ACHIEVEMENT OF OUTPUT TARGETS, ALL IEHA OPERATING UNITS, FY 2007**

Output Indicator	FY 2007 Target	FY 2007 Actual	Percent of Target Achieved*
Number of rural households benefiting directly from interventions	2,956,158	3,359,043	106%
Number of vulnerable households benefiting directly from interventions	1,793,745	1,767,385	89%
Number of partner organizations and active institutional members of those partner organizations	174	793	245%
Number of agriculture-related firms benefiting directly from interventions	2,364	3,851	143%
Attendance by male individuals in training	409,386	1,046,770	188%
Attendance by female individuals in training	261,763	641,181	163%
Number of producers' organizations, water users' associations, trade and business associations, and community-based organizations assisted	5,994	12,343	182%
Number of women's organizations/associations assisted	958	1,554	129%
Number of public-private partnerships formed	966	581	40%
Number of technologies made available for transfer	566	1,185	172%

Source: Annual M&E reports by IEHA operating units.

*Percent of Target Achieved is calculated using target and actual data from each IEHA operating unit. If an operating unit did not submit a target, then that unit's "actual" was excluded from the calculation. However, the data under "FY 2007 Target" and "FY 2007 Actual" are the complete totals of all data submitted.

TABLE 2.3 ACHIEVEMENT OF IEHA INTERMEDIATE RESULTS, BILATERAL OPERATING UNITS, FY 2007

IR, Indicator(s), and Target Categories	Total	Ghana	Kenya	Mali	Mozambique	Uganda	Zambia
IR 1: Enhanced Productivity of Smallholder-Based Agriculture							
<i>Indicator: Gross margin per hectare or per animal</i>							
Number of bilateral operating units reporting on this indicator	4	1	1	0	1	1	0
Number of commodities reported	24	5	5	NA	4	10	NA
Number of commodities for which target met/exceeded <i>a</i>	10	3	b	NA	b	7	NA
IR 1.1: Expanded Development, Dissemination, and Use of New Technology (by country)							
<i>Indicator: Adoption of targeted technologies (area)</i>							
Number of bilateral operating units reporting on this indicator	6	1	1	1	1	1	1
Number of indicators for which target met/exceeded <i>a</i>	4	1	1	0	1	1	0
<i>Indicator: Adoption of targeted technologies (farmers)</i>							
Number of bilateral operating units reporting on this indicator	6	1	1	1	1	1	1
Number of indicators for which target met/exceeded <i>a</i>	3	1	b	1	1	0	0
<i>Indicator: Adopting new technologies (processors)</i>							
Number of bilateral operating units reporting on this indicator	5	1	1	1	0	1	1
Number of indicators for which targets met/exceeded <i>a</i>	3	1	b	1	NA	1	b
IR 2: Improved Policy Environment for Smallholder-Based Agriculture							
<i>Indicator: Policy reform (milestones)</i>							
Number of policies reported	46	23	12	0	0	5	6
Number of policies for which target met/exceeded <i>a</i>	9	6	b	NA	NA	1	2

TABLE 2.3		CONTINUED						
IR, Indicator(s), and Target Categories	Total	Ghana	Kenya	Mali	Mozambique	Uganda	Zambia	
IR 3: Increased Agricultural Trade								
<i>Indicator: Agricultural trade (targeted commodities, international)</i>								
Number of bilateral operating units reporting on this indicator	6	1	1	1	1	1	1	
Number of commodities reported	18	4	5	1	2	4	2	
Number of commodities for which target met/exceeded <i>a</i>	4	b	2	0	b	1	1	
<i>Indicator: Agricultural trade (targeted commodities, intra-regional)</i>								
Number of bilateral operating units reporting on this indicator	5	0	1	1	1	1	1	
Number of commodities reported	21	NA	2	1	8	1	9	
Number of commodities for which target met/exceeded <i>a</i>	3	NA	1	1	b	1	b	
IR 3.1: Enhanced Competitiveness of Smallholder-Based Agriculture								
<i>Indicator: Purchases from smallholders (domestic trade, targeted commodities)</i>								
Number of commodities reported	28	4	4	3	9	7	1	
Number of indicators for which target met/exceeded <i>a</i>	9	b	2	2	b	4	1	
IR 3.2: Enhanced Agricultural Market Infrastructure, Institutions, and Trade Capacity								
<i>Indicator: Value of credit beneficiaries</i>								
Number of bilateral operating units reporting on this indicator	4	1	1	1	0	0	1	
Number of indicators for which target met/exceeded <i>a</i>	1	b	b	0	NA	NA	1	
<i>Indicator: Number of enterprises accessing BDS</i>								
Number of bilateral operating units reporting on this indicator	4	1	1	1	0	0	1	
Number of indicators for which target met/exceeded <i>a</i>	4	1	1	1	NA	NA	1	
<i>Indicator: Number of firms achieving International standards</i>								
Number of bilateral operating units reporting on this indicator	4	1	1	1	0	0	1	
Number of indicators for which target met/exceeded <i>a</i>	1	1	b	0	NA	NA	b	

Source: Annual M&E reports by IEHA operating units.

a The number of targets reported was often different from the number of indicators or commodities reported, and was often greater than the number of targets met.

b Target(s) not reported.

TABLE 2.4 ACHIEVEMENT OF IEHA INTERMEDIATE RESULTS

IR, Indicator(s), and Target Categories	FY 2007 Target	FY 2007 Actual	Percentage of FY 2007 Target Achieved*	
IR 1 Productivity - Gross margin per hectare or per animal				131%
IR 1.1 Dissemination of New Technology				98%
Area under new technology (ha)	215,596	297,675	86%	
Number of farmers adopting new technology	299,406	913,745	98%	
Number of processors adopting new technology	38	45	111%	
IR 2 Policy Environment (number of milestone steps)	38	129		45%
IR 3 Trade				64%
Value of international trade (US dollars)	460,162,835	968,740,722	82%	
Value of intra-regional trade (US dollars)	454,722,776	246,816,239	46%	
IR 3.1 Competitiveness - Value of purchase from smallholders (USD)	86,157,674	150,717,668		128%
IR 3.2 Market Infrastructure & Trade Capacity				121%
Value of credit to beneficiaries (US dollars)	4,447,587	39,955,524	72%	
Number of enterprises accessing business development services	134,031	195,197	144%	
Number of firms achieving international standards	89	109	176%	
IEHA Average				100%

Source: Annual M&E reports by IEHA operating units.

*Percent of Target Achieved is calculated using target and actual data from each IEHA operating unit. If an operating unit did not submit a target, then that unit's "actual" was excluded from the calculation. However, the data under "FY 2007 Target" and "FY 2007 Actual" are the complete totals of all data submitted.

3. IEHA'S RESULTS HELPING TO TRANSFORM AFRICAN AGRICULTURE

OVERVIEW OF IEHA RESULTS FOR 2007

IEHA's results for 2007 reveal that significant progress was made toward enhancing smallholder productivity, improving the policy environment, and increasing agricultural trade — the approaches USAID employs to increase incomes among the poor of rural Africa.

Through sustained investments in programs that support improvements in agriculture — whether through farmer field schools, where growers learn better crop management, or through producer organizations, which link smallholders to viable markets — IEHA

is enhancing long-term food security for farmers and the people who depend on them.

Overall more than 17 million individuals in more than 3.3 million rural households benefited directly from IEHA interventions in FY 2007; more than 1.7 million vulnerable households were helped (Figure 3.1). In each of the last four fiscal years, IEHA has assisted significant numbers of producers' organizations, water user associations, trade and business associations, and community-based organizations. Figure 3.2 shows these data and also the substantial numbers of women's associations and agriculture-related firms that have benefited.

FIGURE 3.1: PERSONS AND HOUSEHOLDS (RURAL AND VULNERABLE) BENEFITING FROM IEHA ASSISTANCE, FY 2004 THROUGH 2007

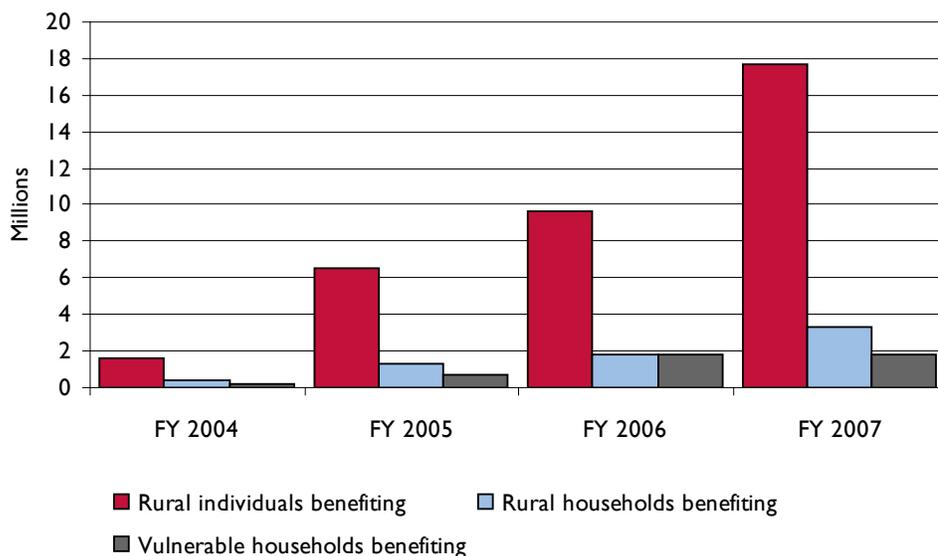
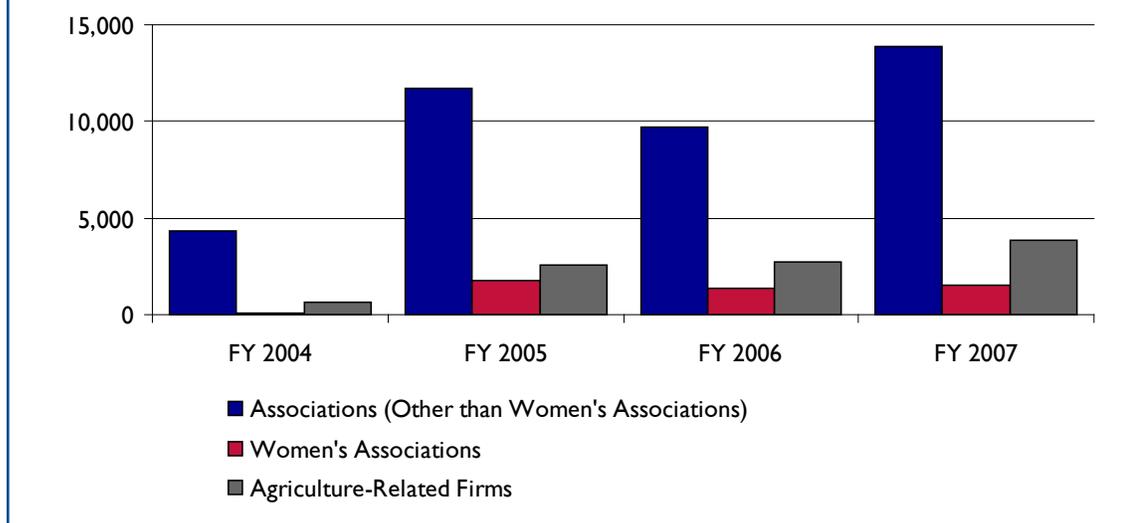


FIGURE 3.2: NUMBER OF FIRMS AND ASSOCIATIONS ASSISTED BY IEHA, FY 2004 THROUGH 2007



The following sections present hard data to show the many dimensions of IEHA's results, along with selected narrative examples from the central bureau-supported programs, focus countries, and regional missions.¹

The details of IEHA's 2007 results follow; here we highlight a few key indicators.

PRODUCTIVITY

Maize productivity (gross profit per hectare) in Kenya, Mozambique, and Uganda increased from 2005 to 2007 from \$347 per hectare to more than \$525 per hectare; in FY 2007 the total area reported for this measurement was more than 175,000 hectares; and the value of maize sales by these smallholders was more than \$105 million on sales of more than 500,000 tons.

FY 2007 IEHA Results in Technology	
Area brought under new technology (hectares)	297,675
Number of farmers adopting new technology	913,745

¹ Annex 2 contains the 2007 annual reports of the IEHA Operating Units. Annex 3 describes how IEHA performance data are collected.

Banana productivity in Uganda nearly tripled from 2006 to 2007. During 2005-2007, cashew productivity in Uganda increased each year, and the value of sales by smallholders for bananas and cashews each reached about \$8 million.

POLICY ENVIRONMENT

IEHA promoted policy reforms by African government agencies, marketing or technology organizations, donor agencies, and regional economic groupings. IEHA programs pursued actions on 98 policies and moved the reform process forward a total of 129 milestone steps, ranging from producing key policy analyses through dialogue with stakeholders to final implementation. Two-thirds of those actions begun in 2004 resulted in a new policy being adopted or implemented by the end of 2007. Of those policy actions started in 2005 and 2006, 44% and 66%, respectively, were adopted or implemented in FY 2007. These policy reforms represent key steps toward opening markets and improving competitiveness, such as instituting commodity standards, developing biosafety regulations, and harmonizing seed policies.

TRADE

IEHA programs promoted international trade that reached an impressive \$968 million in 2007; intra-regional trade was boosted by nearly \$250 million; and overall, small farmers sold over \$150 million in agricultural products, including staple foods, in their domestic markets.

IEHA-supported programs made available credit in the amount of \$40 million in 2007, provided access to business development services to more than 195,000 firms, and successfully assisted 109 firms with certification to meet international standards like Global Good Agricultural Practices (GlobalGAP) and Hazard Analysis Critical Control Point (HACCP).

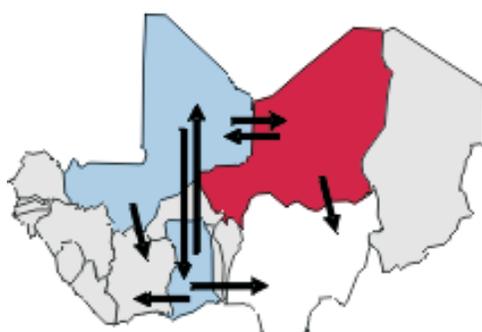
The bottom line: In all of IEHA's focus countries, smallholders in 2007 gained a greater ability to run their farms as businesses and to compete successfully in national and international markets.

IEHA'S REGIONAL APPROACH

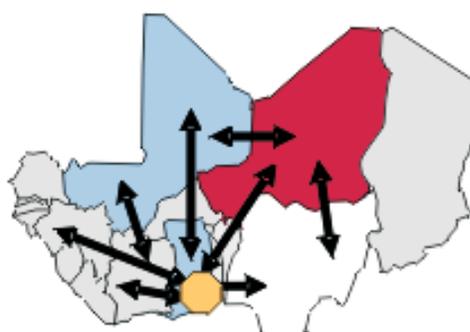
IEHA continued to help transform national economies by working at the regional and sub-regional levels. Many African nations are small and have minimal infrastructure and are therefore often economically isolated. These factors result in development challenges not easily met by individual countries. By collaborating regionally, however, these same countries can capture economies of scale and scope. Together they can address challenges in agricultural productivity and the policy environment. By working regionally, countries are also held accountable to a larger group of stakeholders.

IEHA strongly supports a regional approach that complements the efforts of individual countries. IEHA works in all three of the sub-regions of Africa, and its centrally managed programs also provide leadership and technical expertise to these regions.

FIGURE 3.3: IEHA REGIONAL PROGRAMS – SYNERGY THAT IMPROVES RESULTS



IEHA bilateral programs are increasing productivity and trade...



...and the **synergy** between bilateral and regional programs **broadens** and **boosts** those results through effective partnering

IEHA's operations are aligned with CAADP. IEHA's key regional and sub-regional partners are the regional economic communities (ECOWAS, COMESA, and SADC) and the regional and sub-regional agricultural research organizations (FARA, CORAF/WECARD, and ASARECA) that are leading and implementing CAADP².

USAID'S AFRICA BUREAU ENGAGES THE PRIVATE SECTOR...

In FY 2007 USAID/AFR/SD in collaboration with USAID missions continued to play a strategic role in advancing private sector engagement. Major milestones include the Oslo Conference for African Green Revolution, which was organized, financed, and led by the international agribusiness community and mobilized some of the largest global and African agribusiness interests to align with and support CAADP (August 29–September 1, 2007); the expansion of the Sanitary/Phytosanitary (SPS) program; support of the West Africa Seed Alliance; growth of the African Agricultural Technology Foundation (AATF); a renewed and expanded partnership in the Sustainable Tree Crops Program (STCP); expansion of the East African Grains Council; and initiation of the African Agribusiness Alliance with the Corporate Council on Africa (CCA).

2. REC is a Regional Economic Community; ECOWAS is the Economic Community of West African States; COMESA is the Common Market for Eastern and Southern Africa; SADC is the Southern African Development Community; FARA is the Forum for Agricultural Research in Africa; CORAF/WECARD is the West and Central African Council for Agricultural Research and Development (French abbreviation); ASARECA is the Association for Strengthening Agricultural Research in Eastern and Central Africa; USAID/AFR/SD is USAID, Africa Bureau, Office of Sustainable Development; APHIS is USDA/Animal and Plant Health Inspection Service; USDA/FAS is USDA/Foreign Agricultural Service; and AGOA is the African Growth and Opportunity Act.

... AND OTHER USG AGENCIES TO INCREASE AFRICAN PRODUCTIVITY AND TRADE

USAID/AFR/SD is also working with other USG agencies to open the US market to African suppliers. Effective October 19, 2007, six African commodities have been granted US market access, including Ghanaian okra, peppers, and eggplant, Kenyan baby corn and baby carrots, and South African ribes. These commodities are the first African commodities to be approved as a result of APHIS's expedited Q56 process. USDA/FAS, USDA/APHIS, and USAID have worked closely on SPS capacity building in sub-Saharan Africa to advance the AGOA objectives for increased market access. This included targeted training on the Kenyan commodities and a first-ever APHIS-Government of Ghana consultation regarding the Ghanaian commodities. These activities were in addition to continual direct consultations with USDA's regional SPS advisors. Market access for these commodities is a major accomplishment for all three agencies.

EGAT partners with the Africa Bureau to ensure that its Consultative Group on International Agricultural Research (CGIAR), Collaborative Research Support Program (CRSP) research investments and its Partnership for Food Industry Development (PFID) and Farmer-to-Farmer (FTF) Program technology transfer and capacity building investments are aligned with and support IEHA objectives. These programs focused on developing and disseminating new agricultural and natural resource management technologies and practices to increase African agricultural sector productivity. In addition to these programs build producer, local organization, and agri-enterprise capacity to participate in local markets and regional trade.

FY 2007 results include dissemination of an integrated striga management practices package throughout sub-Saharan Africa; 70 tons of improved sorghum seed disseminated in Zambia; training African plant pathologists from 11 East and West African countries in disease survey techniques for potential export crops; and commercialization of a striga-resistant maize in Kenya through a public-private partnership of multinational and Kenyan seed companies and the AATF.

IEHA ENHANCES SMALLHOLDER PRODUCTIVITY IN FOOD STAPLES AND OTHER COMMODITIES

IEHA considers productivity to be the net value producers can gain from their resources, not just physical yield. For example, in Ghana, farmers are led through a process of productivity analysis that examines yield, costs, post-harvest losses and marketing opportunities, and the financial implications of each on profit per acre.

Comprehensive IEHA data on maize productivity in three countries (Kenya, Mozambique, and Uganda) show a continuing increase in smallholder profits for the crop and other important trends (Figure 3.4 and

FIGURE 3.4: IMPROVEMENTS IN MAIZE PRODUCTIVITY (KENYA, MOZAMBIQUE, AND UGANDA), FY 2005-2007

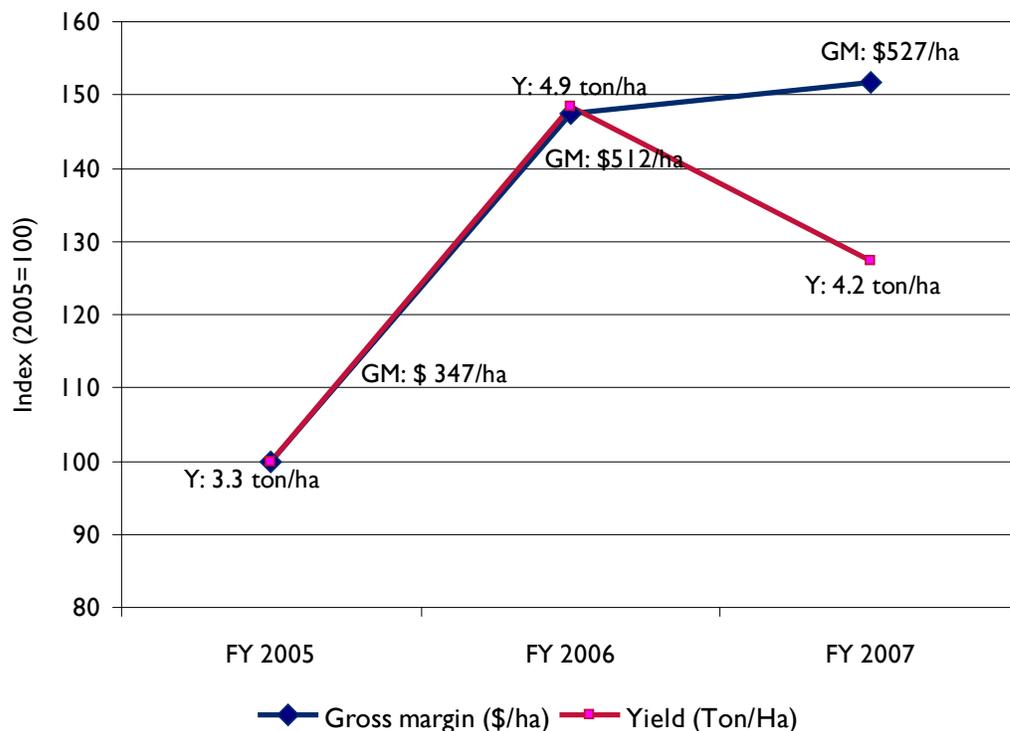


TABLE 3.1 IMPROVEMENTS IN MAIZE PRODUCTIVITY, FY 2005-2007

Country	Year	Area (hectares)	Production (tons)	Quantity sold (tons)	Value of sales (\$US)	Purchased input cost (\$US)	Gross margin per hectare (\$US/ha)	Yield (tons/ha)
Kenya	FY 2005	26,649	89,941	62,958	1,3536,047	9,827,170	357	3.4
	FY 2006	72,774	360,231	252,162	54,214,811	39,359,953	523	5.0
	FY 2007	131,528	695,456	486,819	104,666,057	63,322,984	655	5.3
	Change 06-07 (%)	81	93	93	93	61	25	7
Mozambique	FY 2005	1,722	3,343	1,003	100,300	1,937	193	1.9
	FY 2006	575	1,700	595	71,400	906	353	3.0
	FY 2007	42,359	35,043	5,940	772,379	73,678	106	0.8
	Change 06-07 (%)	7267	1961	898	982	8032	-70	-72
Uganda	FY 2005	2,390	8,960	6,720	643,700	147,380	297	3.7
	FY 2006	3,006	11,273	9,018	877,427	180,360	304	3.8
	FY 2007	4,000	15,000	13,500	1,542,857	448,000	316	3.8
	Change 06-07 (%)	33	33	50	76	148	4	0
IEHA Total	FY 2005	30,716	102,244	70,681	14,280,047	9,976,487	347	3.3
	FY 2006	76,355	373,204	261,775	55,163,638	39,541,219	512	4.9
	FY 2007	177,887	745,499	506,259	106,981,293	63,844,642	526	4.2
	Change 06-07 (%)	133	100	93	94	61	3	-14

Source: Annual M&E reports by IEHA operating units

Table 3.1). Smallholder profits (as measured by the IEHA indicator, gross margin per hectare) may increase for several reasons, including but not limited to an increase in physical yield. The average maize yield in these three countries increased from 2005 to 2006, but then decreased in 2007.

This average result was the combination of a continuing increase in Kenya and a dramatic decline in Mozambique. From 2006 to 2007, the Mozambique data reflect a significant change in the projects/programs reporting, with the consequence that a much larger area is covered, but the average yield and gross margin are much lower (3.0 tons/ha in 2006 vs. 0.8 tons/ha in 2007, and \$353/ha vs. \$106, respectively). The larger share of Mozambique in the total in 2007 (as measured by both area and production) is enough to

push the IEHA average yield down, but not large enough to prevent a small increase in the average gross margin. The reported total value of sales increased dramatically from \$14 million in 2005 to almost \$107 million in 2007, indicating that not only are smallholders making higher profits per hectare, there is also a continuing increase in commercialization.

USAID/Kenya reports detailed data on milk productivity by the sex of the farmer (Table 3.2). These data show a continuing increase in gross margin (profit) per cow, based on significant increases in yield and smaller increases in the price received. The data also show a steady increase in the share of production that is sold—from 75% and 70% for men and women, respectively, in 2006 to 81% and 80% in 2007—with women catching up to men in that regard.

TABLE 3.2 IMPROVEMENTS IN MILK PRODUCTIVITY, KENYA, FY 2005-2007

Household Head	Year	Number of milking animals	Production (thousands of liters)	Quantity sold (thousands of liters)	Value of sales (\$US millions)	Purchased input cost (\$US millions)	Gross margin per animal (\$US/an.)	Yield per animal (L/an.)
Male	FY 2005	42,000	106,596	79,940	18,270	15,350,000	215	2538
	FY 2006	52,500	137,498	105,875	24,203	19,075,000	235	2619
	FY 2007	58,803	174,327	141,205	35,828	19,816,611	415	2965
	Change 06-07 (%)	12	27	33	48	4	76	13
Female	FY 2005	18,000	38,397	26,874	6,144	5,646	173	2133
	FY 2006	22,500	66,218	46,350	10,598	7,155	354	2850
	FY 2007	36,570	97,357	77,885	19,762	11,836	352	2662
	Change 06-07 (%)	63	47	68	86	65	-1	-6.6

IEHA data for other commodities (cashew, coffee, and bananas) also show improvements in productivity and profits during the period 2005-07 (Figure 3.5 and Tables 3.3, 3.4, and 3.5). Yields increased in cashew from 0.25 tons/ha in 2005 to 0.38 tons/ha in 2007; in coffee from 1.0 tons/ha to 1.4 tons/ha; and in banana from 20 tons/ha to 38 tons/ha in the reported areas. Bananas are an important

staple crop in Uganda, yet during this period the share of production that was sold by producers assisted by IEHA fluctuated between 75 and 90 percent. Besides providing for their families, these producers are supplying their neighbors and countrymen with the food that they desire through increases in productivity and their willingness to rely on markets for their income.

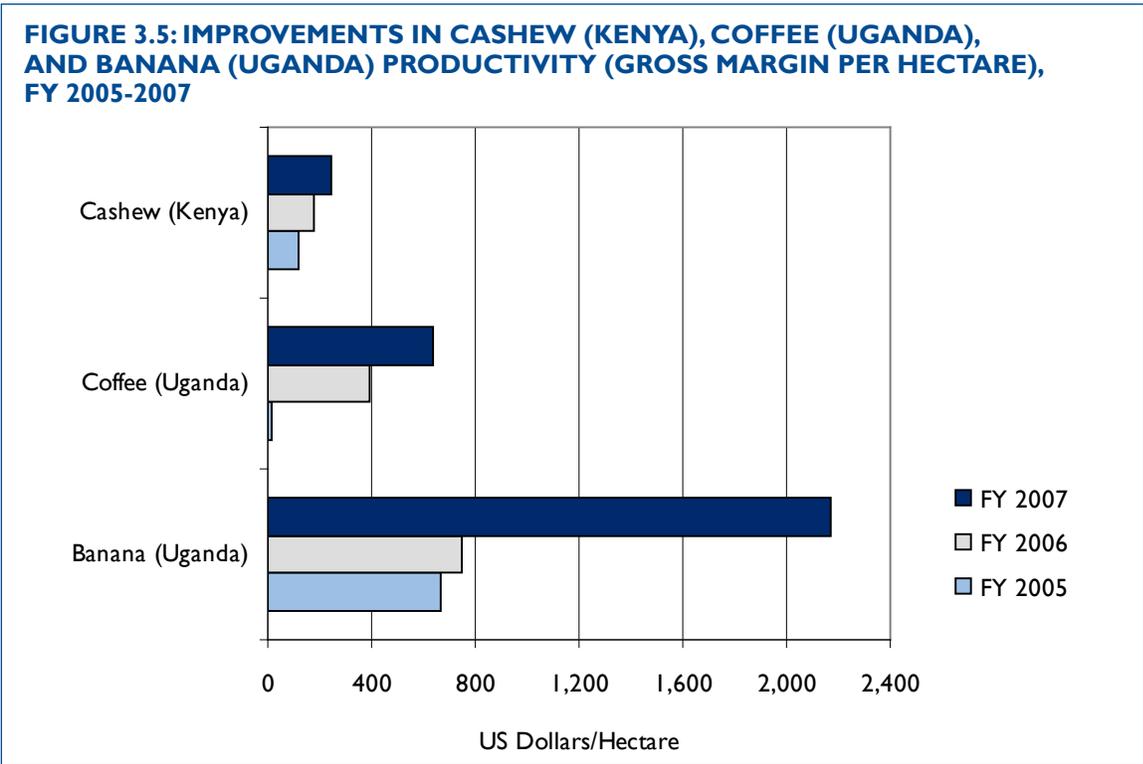


TABLE 3.3 IMPROVEMENTS IN BANANA PRODUCTIVITY, UGANDA, FY 2005-2007

Year	Area (hectares)	Production (tons)	Quantity sold (tons)	Value of sales (\$US)	Purchased input cost (\$US)	Gross margin per hectare (\$US/ha)	Yield (tons/ha)
FY 2005	4,020	80,400	65,000	3,250,000	1,340,000	666	20
FY 2006	3,620	74,400	68,000	3,570,000	1,210,000	744	21
FY 2007	4,180	156,750	117,625	8,065,714	1,672,000	2171	38
Change 06-07 (%)	15	111	73	126	38	192	81

TABLE 3.4 IMPROVEMENTS IN CASHEW PRODUCTIVITY, KENYA, FY 2005-2007

Year	Area (hectares)	Production (tons)	Quantity sold (tons)	Value of sales (\$US)	Purchased input cost (\$US)	Gross margin per hectare (\$US/ha)	Yield (tons/ha)
FY 2005	28,223	7,056	6,350	4,258,520	1,411,140	117	.25
FY 2006	30,946	13,970	12,573	8,382,200	3,783,184	178	.45
FY 2007	28,223	12,000	10,800	7,714,285	1,714,286	242	.38
Change 06-07 (%)	-9	-14	-14	-8	-55	36	-15

TABLE 3.5 IMPROVEMENTS IN COFFEE PRODUCTIVITY, UGANDA, FY 2005-2007

Year	Area (hectares)	Production (tons)	Quantity sold (tons)	Value of sales (\$US)	Purchased input cost (\$US)	Gross margin per hectare (\$US/ha)	Yield (tons/ha)
FY 2005	4,040	4,040	4,040	1,122,000	1,070,600	12	1.00
FY 2006	8,825	11,030	11,030	5,350,000	1,853,000	396	1.25
FY 2007	10,370	14,582	14,582	9,113,750	2,470,530	640	1.41
Change 06-07 (%)	18	32	32	70	33	62	13

The following highlights of IEHA's improvements in productivity in FY 2007 also show how they are being translated into increased profits for smallholders.

Kenya. The Tegemeo Institute's biennial household income survey completed in November 2006 established that:

- Average household income increased in the medium- and high-potential areas (where USAID programs are focused) by 13 percent since 2004; and
- Female-headed households grew their incomes more (19%) than male-headed households (12%), due mainly to significant

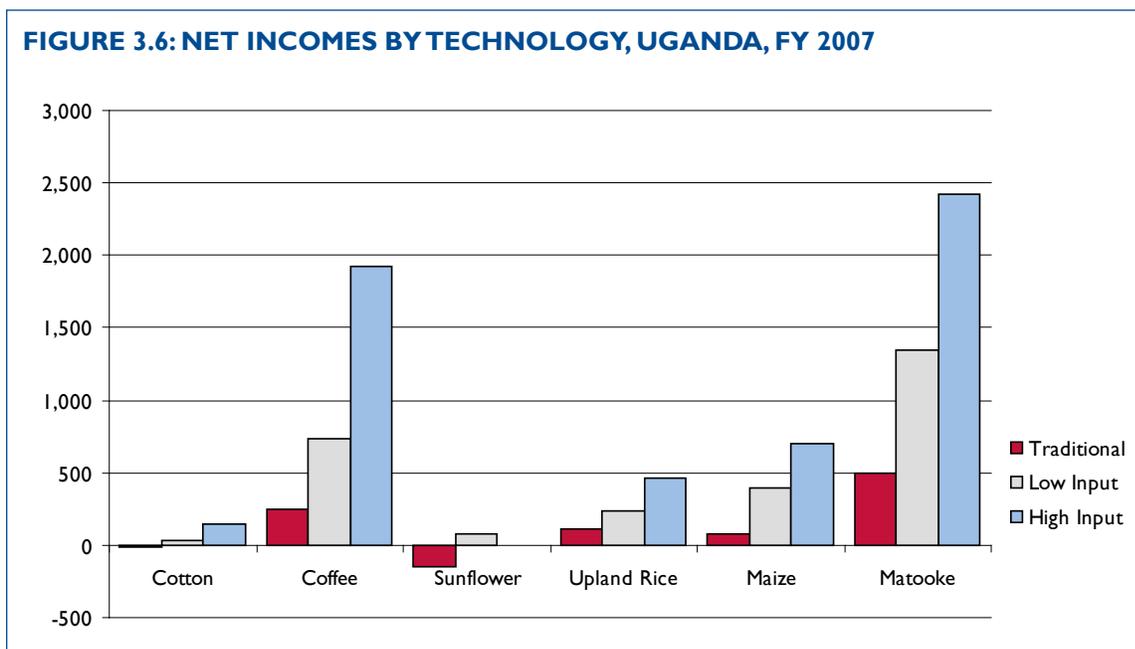
improvements in productivity and trade in the targeted commodities.

Uganda. Through its extension network of Producer Organization Trainers, Area and Site Coordinators, and Lead Farmers and in collaboration with private partners, USAID/Uganda's interventions reached over 280,000 households, exposed about 300,000 farmers to improved technologies, and assisted over 3,500 producer organizations. Exposure to improved technologies was achieved through the establishment of over 8,000 technology demonstration sites and commercial farmer field days. Although technology adoption rates are still higher

at the low input level than at the high input level, there are obvious gains in reductions in unit cost of production and increased

incomes (Figure 3.6) as demonstrated by the results of cost of production analysis conducted among 950 farmers.

FIGURE 3.6: NET INCOMES BY TECHNOLOGY, UGANDA, FY 2007



PRE-PAID VETERINARY SERVICES REJUVENATE HEALTH AND PROFITABILITY OF LIVESTOCK

Mr. Shambosha, a smallholder cattle farmer, had never heard of pre-paid veterinary services when the Herd Health Plan was first proposed to livestock owners in Mumbwa District, in Zambia.

But he decided to try it, and put 40 animals on the plan offered by Agrivet, a commercial veterinary service.

Previously, if his animals had fallen sick, Mr. Shambosha had to travel to either Mumbwa or Lusaka to look for treatment – a costly and time-consuming effort that was often too late to save the animal. With no prophylactic care available, livestock owners in Zambia have lost 60% of their animals to epidemics over the last 10 years.

Mr. Shambosha pays Agrivet K65,000 (\$17) for 12 months of preventative vet services, including weekly dipping and a full range of vaccinations. Agrivet also offers Mr. Shambosha’s community husbandry advice and a range of livestock chemicals.

Mr. Shambosha’s investment has not only saved him money, but has also improved the overall health of his animals. He spends about half what he previously paid for veterinary services and none of his animals has fallen ill. His calving rate has improved 30% and the overall improvement in animal health has increased the animals’ market value. “I recently sold one animal for K2.8 million,” he said. “Before joining the HHP I would have been happy if I had been offered K1.5 million. I’m seeing that my cattle can really be a good income generating option for me, and not just a bank account on the hoof.”

The demand for veterinary services keeps growing. When Agrivet signed its first community contract in Mumbwa District, only 150 animals were on contract. Today, Agrivet services more than 2,000 animals through the pre-paid HHP, and another 2,000 are treated through one-off dipping and vaccinating services. The results in terms of mortality and morbidity reduction have been dramatic.

Zambia. The Herd Health Plan, where private sector veterinarians furnish pre-paid, preventative care, served 25,000 beef cattle. Due to this preventative, pre-paid care for cattle under contract to veterinarians, mortality is down 70%, weight gain has increased, calving rates have improved, and farmers are making more money from beef cattle. Veterinary care promotional events attracted 977 smallholders, with 932 entering into contracts with private sector veterinarians. These smallholder farmers paid \$55,000 for contracted services, covering over 15,000 head of cattle (another 10,000 head were served but not under contract). Thus cattle farmers have moved from asset protection to wealth creation because of this innovative program. In a fifty-farmer survey, results showed that farmers who invested \$750 in preventative care realized a return on their investment of \$8,750, based only on reduced mortality.

IEHA DELIVERS THE RIGHT TECHNOLOGIES TO SMALLHOLDERS

In FY 2007 many of IEHA’s investments at the country level targeted the development and dissemination of new technologies and practices. These facilitate smallholders’ transformation from subsistence and semi-subsistence farmers to market-led, knowledgeable producers and thus their entry into domestic and external markets.

IEHA’s new technologies continued to be adopted by substantial numbers of farmers – more than 900,000 in 2007 – who brought nearly 300,000 hectares under new technology in that year alone (Figure 3.7). The new area was double that achieved in 2006.

FIGURE 3.7: DISSEMINATION OF NEW TECHNOLOGY IN FY 2007

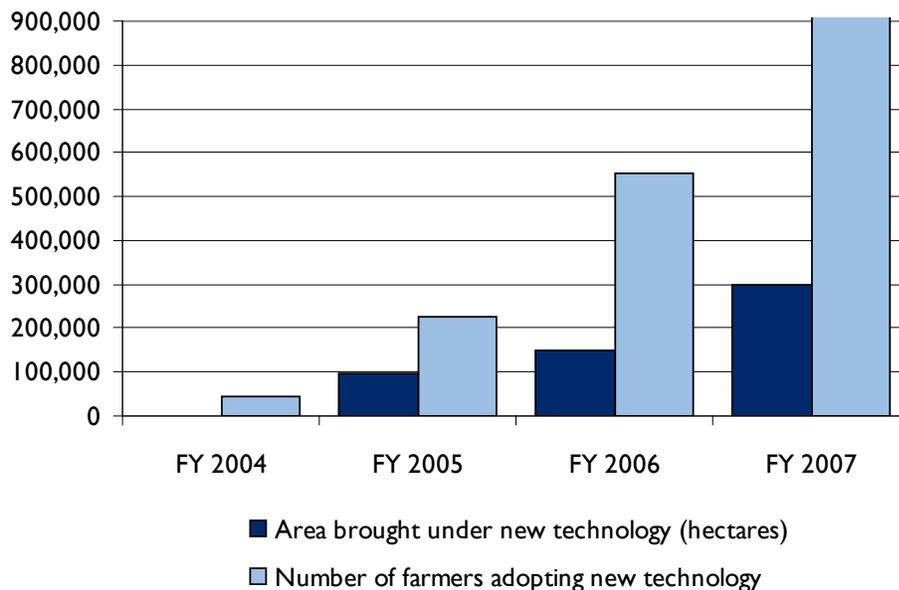


TABLE 3.6		NUMBER OF PROCESSORS ADOPTING NEW TECHNOLOGY IN FY 2007			
FY 2005 Actual	FY 2006 Actual	FY 2007 Target	FY 2007 Actual	Percent Change 2006-2007	Percent of Target Achieved*
27	42	38	45	7%	111%

* Percent of Target Achieved is calculated using target and actual data from each IEHA operating unit. If an operating unit did not submit a target, then that unit's "actual" was excluded from the calculation.

IEHA works along the agriculture value chain, but cannot measure every result it achieves. Apart from improvements on farms, one representative result is the adoption of new technology among processors. In 2007, 45 processors improved their processing methods with IEHA assistance (Table 3.6).

Some examples of new agricultural technologies made available through IEHA and adopted by smallholders include:

Ghana. Most mangoes produced in Ghana are grown on smallholder farms. In FY 2007 the industry was threatened by a white fly infestation. In response, USAID put in place a monitoring and control system based on improved scouting, traps, and improved pruning and field sanitation. Within one year, this burgeoning subsector has increased export sales from \$43,000 to \$403,000.

Mozambique:

- The following five new technologies were made available for transfer: improved varieties for sorghum (Marcia) and beans (IT 16); complete packages for production of seed for local production of beans, maize, and Irish potatoes; home processing of soybeans (into milk, cakes, flour, and cheese) and sweet potato (into cakes, juice and biscuits).
- USAID supported productivity gains based on its highly constructive working relationship with the National Agricultural Research Institute. Significant achievements include the production of virus-free cassava seedlings and their delivery to their partner US private voluntary organizations (PVOs) for further multiplication and delivery to farmers.

Zambia. In FY 2007 the use of new technologies increased at impressive levels over the previous year (Table 3.7).

TABLE 3.7		USE OF NEW TECHNOLOGIES IN ZAMBIA, FY 2007	
Technology	Units	Percent Change 2006-2007	
Conservation farming	Hectares	780%	
Cattle under pre-paid, contracted veterinary services	Head	230%	
Private sector input sales	Hectares planted	88%	

REGIONAL PROGRAMS PLAY KEY ROLE IN BOOSTING SMALLHOLDER PRODUCTIVITY

The small size and limited infrastructure of many African economies present challenges not easily surmounted at the national level. By participating in a regional approach to agricultural research, countries can capture economies of scale and scope unavailable to them individually due to their limited access to finance, human capital, and knowledge. They can also address cross-border problems, e.g., those caused by epidemics.

Investments in regionally based agricultural research lead to significant gains in productivity when they are complemented by programs to transfer and adapt innovations. Some examples of IEHA's progress in developing and disseminating new agricultural technologies at the regional level include:

East Africa. In FY 2007, 24 new technologies linked specifically to support from IEHA were made available from ASARECA through regional partnerships. Highlights include significant progress in the transformation and regeneration³ of regional maize varieties, an important step toward the development of drought-resistant GMO⁴ maize. All improved cassava varieties in national collections were screened for tolerance to cassava brown streak disease, once confined to the coast but now spreading rapidly to mid-elevation areas, where it threatens the livelihood of millions. Regional trials of cassava varieties focused on increased productivity, quality, and suitability for food, flour, and feed. Aiming

³ Transformation and regeneration are key steps in creating a new genetically modified variety. During *transformation* a new gene (for a desired trait) is incorporated into undifferentiated tissue of the crop, e.g., maize. Some cells in the tissue will incorporate the gene, and some will not. Cells not containing the desirable new trait must be eliminated by a screening process. Once this is done, the challenging step is to *regenerate* a whole, fertile, normal plant containing the new gene from the undifferentiated tissue. Maize is particularly difficult to regenerate.

⁴ Genetically modified organism.

to transform cassava into a market crop, USAID developed linkages with the animal feed industry and trained farmers in the production of high-quality dried chips.

The bean network focused on varieties rich in the micronutrients iron and zinc, which are critically deficient in the diets of many rural Africans. Promotion campaigns encouraged production of the new varieties, and provided new recipes and nutrition education. Potato research included development of market linkages for both fresh and chilled French fries, a fast-growing sector of the regional market. Best practices for the production of high-quality seed and the integrated management of widespread diseases such as late blight and bacterial wilt were widely diffused through training and the distribution of leaflets. Three new varieties of potato with high levels of resistance to late blight were identified in regional trials and are ready for dissemination.

Southern Africa. USAID's agricultural productivity program addresses both staple food crops and cash crops; it focuses on both productivity and market access, and it supports both research on and the extension of new technologies. In FY 2007 improved cassava planting material was disseminated to small-scale farmers for duplication and sale to other farmers. Cassava has now become a very important cash crop for the small-scale farmers for starch production. There is currently a huge market for cassava starch in the region for industrial use. Significant achievements were also made in quality assurance and in input use among small-scale commercial producers. Significant increases in yields and improvements in the quality of paprika and birds-eye chili were realized in the Chinyanja Triangle. Small-scale farmers realized price increases of more than 140% and 50%, respectively, for these commodities due to the introduction of grading and to improved competition

among buyers linked to the producers. Moreover, with the introduction of low-cost irrigation and soil fertility technologies, farmers can now plant twice per year.

West Africa. USAID’s partner CORAF established coordination units for food crops and biotechnology and began implementing new regional research priorities, guided by a 2005 evaluation of research programs. USAID promoted improved cereal varieties and best practices, including linking producers to processors willing to pay more for quality. The crop networks set up more than 300 on-farm cereal demonstrations to transfer improved technologies to farmers. Using biotechnology-assisted breeding, rice varieties resistant to a major virus in the region have been developed, which will significantly limit losses from this devastating disease. Research staff was trained and laboratories were equipped to support the use of this breeding tool. For cash crops, seven countries are field-testing new varieties of five vegetables and tomatoes, using biotechnology diagnostics. Through USAID-promoted drip irrigation, farmers began year-round vegetable gardening in Ghana and Burkina Faso, more than doubling production levels. A total of 46 new improved technologies involving improved crop varieties, agronomic practices, and agro-processing, were developed and transferred to farmers in 2007. CORAF has begun implementing its mandate of ensuring that investments in agricultural research and development are prioritized according to their impact.

INCREASED CAPACITY TO DEVELOP AND TRANSFER TECHNOLOGY CREATES SUSTAINABILITY

IEHA is creating lasting capacity now for continued productivity gains in the future. Here are some specifics from FY 2007. Figure 3.8 describes IEHA’s progress in developing new technologies.

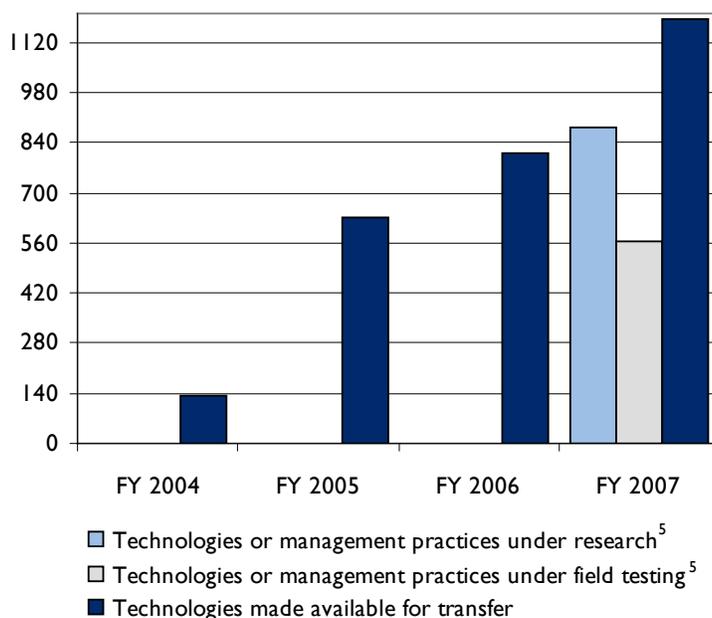
Ghana. In 2007, 35 Good Agricultural Practices (GlobalGAP) trainers were trained; 15 firms and three smallholder producer associations received GAP certification.

Mozambique. The constructive partnership between USAID and the National Institute for Agricultural Research (IIAM) serves as the platform for testing a new approach to funding agricultural research. Research grants have been awarded on a competitive basis to multi-disciplinary teams in topics such as integrated management of striga and maize stalk borer; the impact of trypanosomes and the financial benefits of its control; soybean variety evaluation/dissemination; productivity of goats in the smallholder sector; and physiologic research on the use of Angone and Landim cows for animal traction. This competitive mechanism includes a multi-stakeholder review committee and a transparent award process. IIAM wishes to expand the use of this effective mechanism to coordinate an even larger research budget.

TABLE 3.8 NUMBER OF ORGANIZATIONS PARTNERED WITH REGIONAL PROGRAMS AND ACTIVE INSTITUTIONAL MEMBERS OF THOSE PARTNER ORGANIZATIONS, FY 2004 THROUGH 2007

FY 2004	FY 2005	FY 2006	FY 2007
575	1,437	1,402	793

FIGURE 3.8: PROGRESS IN AGRICULTURAL TECHNOLOGY DEVELOPMENT, FY 2004-2007



In its bilateral and regional programs, IEHA supports the development of many new technologies that will increase smallholder productivity and income.

In its bilateral and regional programs, IEHA supports the development of many new technologies that will increase smallholder productivity and income. (See Figure 3.8).

IEHA BUILDS REGIONAL RESEARCH CAPACITY TO SUSTAIN PRODUCTIVITY IMPROVEMENTS

Regionally planned and coordinated research plays critical roles, pulling together expertise and other resources from the countries to address issues of regional importance, and catalyzing spillovers of technologies and knowledge into similar areas, or development domains, that cut across borders. Cooperation among specialized scientists from different countries allows them to share scarce expertise that would not be available in individual countries, particularly those with small, underfunded research systems.

5. "Technologies under research" and "technologies under field testing" are indicators new in FY 2007; thus there are no data for earlier years.

IEHA is helping to build the capacity of Africa's regional research systems, through its continuous support to the three sub-regional organizations: ASARECA, CORAF/WECARD, and Southern Africa Development Community (SADC). Some of IEHA's successes in this area include:

East Africa. ASARECA experienced a transitional year in 2007. The association concluded a phase of operations that involved working with 17 semi-autonomous regional networks and programs. The networks and programs implemented a total of more than 90 projects with national partners. This year, with IEHA support, ASARECA began to implement a new operational plan that will reorganize the Secretariat into a new structure with seven programs, including staple crops, livestock and fisheries, policy, biotechnology and biodiversity, and technology uptake and up-scaling. Through this new structure, ASARECA will implement fewer, larger projects that will address high-priority issues with clear regional benefits and spillovers.

The ASARECA biotechnology program catalyzed the formation of a public-private business network of tissue culture practitioners, to overcome bottlenecks to the regional distribution of vegetatively propagated crops. The Crop Crisis Control Project has successfully developed regionally coordinated approaches in six countries to slow the spread and reduce the impact of cassava mosaic virus and banana bacterial wilt, two catastrophic diseases of critically important staple crops.

Southern Africa. To support the development of new technologies and ensure sustainability of improvements in agricultural productivity, USAID enhanced the capacity of many individuals and institutions. In FY 2007 it:

- Established sweet potato, potato, and cassava seed multiplication units (in the public and private sectors) in Zambia, Malawi, Mozambique, and Angola;
- Provided chemical analysis training to researchers in natural products; and
- Trained 6,612 farmers and 121 extension staff in four irrigation technologies (drip, river diversion, clay pots for storage, and treadle pumps).

As a result:

- Farmers now use treadle pumps with storage and efficient drip kits rather than wastefully flooding fields; and

- Staff at Mozambique’s tissue culture laboratory can now analyze diseases of potato, sweet potato, and cassava. In FY 2006 the laboratory had been refurbished; in FY 2007 equipment and training were provided, including training in tissue culture for potato breeding.

West Africa. USAID, the UK Department for International Development (DfID), and other donors worked together to strengthen CORAF/WECARD regional organization in its coordination of agricultural research and development in West and Central Africa. In addition to leading the implementation of CAADP Pillar 4, the key CORAF achievements in FY 2007 included:

- Developing jointly with its various constituencies a 10-year strategy and 5-year operational plans with eight prioritized investment programs;
- Recruiting key staff for, and establishing the following units: biotechnology, cereals coordination, monitoring and evaluation, and internal audit;
- Improving the institutional capacity of the Regional Center for Studies on Improvement of Plant Adaptation to Drought (CERAAS) following its assessment.

One way that IEHA builds capacity is through training. During the period 2004-2007, IEHA trained more than 1.9 million men and over 1.1 million women (Table 3.9).

TABLE 3.9		ATTENDANCE AT TRAINING BY SEX, FY 2004 – 2007				
Indicators	FY 2004	FY 2005	FY 2006	FY 2007	Percent Change 2006-2007	Percent of Target Achieved*
Male attendance at training	138,359	342,696	381,007	1,046,770	175%	188%
Female attendance at training	67,363	219,926	209,210	641,181	206%	163%

* Percent of Target Achieved is calculated using target and actual data from each IEHA operating unit. If an operating unit did not submit a target, then that unit’s “actual” was excluded from the calculation.

NEW POLICIES ENABLE SMALLHOLDERS TO PRODUCE MORE FOOD AND FIBER

A policy environment that is free of distortions and promotes competition is critical to the ability of smallholders to increase their productivity and enter new markets. In FY 2007 IEHA-promoted policy reforms improved the enabling environment for smallholders and agriculture-based enterprises by removing key constraints and creating real opportunities. IEHA promoted policy reforms by African government agencies, marketing or technology organizations, donor agencies, and regional economic groupings.

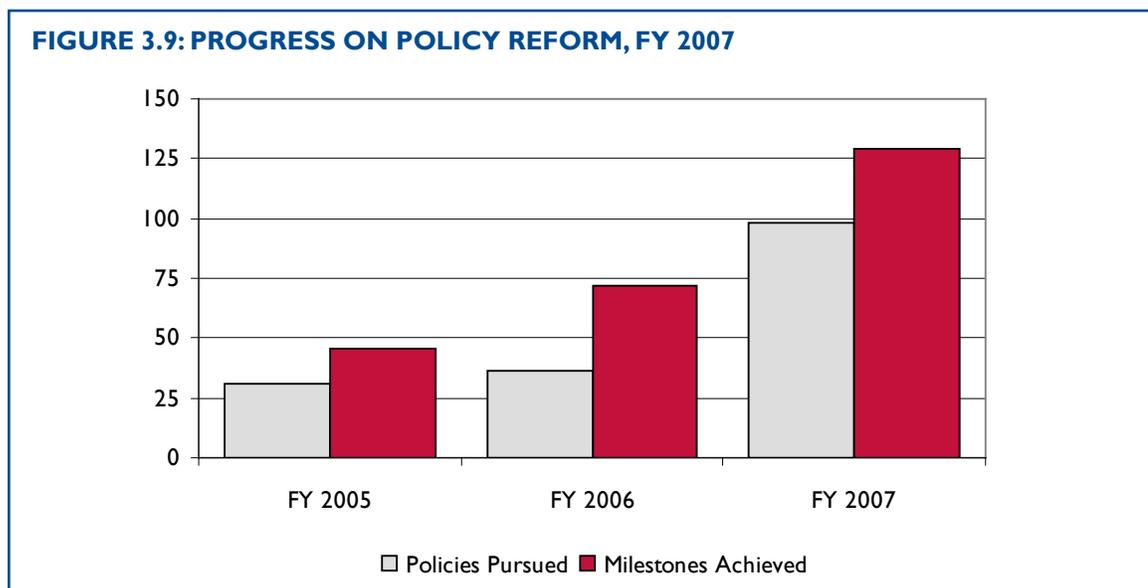
The IEHA M&E system uses a 6-point scale for measuring policy progress, categorizing the status of each policy reform process by a milestone from New through Analysis, Dialogue, Proposal, Adoption/Passage⁶, and, finally, Implementation. Each of these stages of reform is significant.

Even at the outset of the process, “new” indicates that USAID efforts resulted in a key issue being put on the reform agenda. Next,

completion of analysis signifies the beginning of an evidence-based process to improve the enabling environment, in collaboration with stakeholders. The **dialogue** that engages policymakers is often a new process, one that reflects the voices of stakeholders,

especially the private sector, which has often not been heard. By the time a specific **proposal** for reform is put forward, a lot of work has gone into studying and discussing the evidence and issues; thus the proposal should reflect many views and be well justified, therefore having a good chance at approval. **Adoption** of a new policy is usually out of the control of project staff and can only be influenced by stakeholders. Partly for these reasons, adoption is a key milestone that shows that important change is possible. Nevertheless, a new policy’s adoption may by itself not result in any real change on the ground; laws and decrees often need implementing regulations, and the new policy needs political support to ensure that it is enforced. When implementation has been completed, it is clear that the reform is on its way to having an impact.

On the IEHA milestone scale, in 2007 the IEHA policy program advanced 98 policies a



6. Also sometimes referred to as “Approval.”

TABLE 3.10		SUMMARY OF PROGRESS ON POLICY REFORM, FY 2007, BY REFORM STATUS		
Operating Unit	Number of Reforms in Progress	Number of Reforms Achieving Target	Number of Reforms Achieving Approval	Number of Reforms Achieving Implementation
Ghana	23	6	3	3
Kenya	12	NT	5	3
Uganda	5	0	0	0
Zambia	6	3	1	2
Southern Africa	8	NT	5	0
West Africa	3	2	0	2
EGAT/AG	6	NT	5	1
EGAT/ESP	4	NT	0	0
AFR/SD	31	NT	1	0
Total	98	11	20	11

NT= No targets reported

TABLE 3.11		PROGRESS ON POLICY REFORM, FY 2007, BY COUNTRY AND POLICY		
Policy	Baseline Year⁵	Status		
		Start of FY 2007	End of FY 2007	
Ghana				
Foreign Exchange bill to liberalize foreign exchange market	2005	Proposal	Passage	
Support implementation of Growth and Poverty Reduction Strategy II	2005	Passage	Implementation	
Tariff structure for competitiveness	2005	Analysis	Implementation	
Implement Regulatory Impact Assessment	2005	Passage	Passage	
Review of FASDEP (Agric policy)	2005	Proposal	Proposal	
Facilitate public private partnership at fruit terminal Shed 9 at port	2005	Implementation	Implementation	
Pesticide Regulation reform	2005	Proposal	Proposal	
Operationalize Venture Capital Trust Fund	2005	Implementation	Implementation	
Develop Long-Term Savings Plan	2005	Proposal	Proposal	
Revise regulatory framework for Non-Bank Financial Institutions	2005	Dialogue	Proposal	
Analysis of interest rate spread to inform Ministry of Finance policy on commercial bank regulation	2005	Proposal	Analysis	
Develop Venture Capital Trust Fund guidelines document for fund operations	2005	Implementation	Implementation	

⁵Year in which the policy action was initiated.

TABLE 3.11 CONTINUED			
Policy	Baseline Year	Status	
		Start of FY 2007	End of FY 2007
Develop Ghana Stock Exchange Rulebook	2005	Implementation	Implementation
Operationalize Labor Act	2005	Passage	Implementation
Development of secondary natural gas regulations	2005	Proposal	Passage
Draft telecoms bill	2005	Proposal	Proposal
Draft National Communications Act Amendment	2005	Proposal	Proposal
Draft e-legislation bills	2005	Proposal	Proposal
Draft national agency bill	2005	Proposal	Proposal
Draft borrowers and lenders bill	2006	Dialogue	Proposal
Develop new seed act	2006	New	Analysis
Develop plant quarantine act	2006	New	Analysis
Kenya			
Economic Recovery Strategy for Wealth and Employment Creation (ERS)	2003	Analysis	Implementation
Strategy for Revitalization of Agriculture (SRA)	2004	Analysis	Implementation
Dairy policy and bill	2004	Dialogue	Implementation
Livestock policy and bill	2004	Analysis	Proposal
Cotton policy, bill and act	2004	Analysis	Passage
Consolidation of policies in agriculture	2003	New	Dialogue
National Food Nutrition and Security Policy	2004	Analysis	Proposal
Pyrethrum amendment bill	2006	Proposal	Proposal
Coffee amendment bill 2007	2006	Analysis	Passage
Uganda			
Zero rating of VAT on handling Services at Entebbe Airport for Export of Fresh Produce	2004	Approval	Discontinued
Institutional reform of the cold store at Entebbe	2004	Dialogue	Discontinued
Import duty and VAT on gunny sacks used for coffee and other exports	2004	Approval	Discontinued
Reduction of proposed levy on fish catch and exports in the Fisheries Authority Bill	2004	Approval	Discontinued
Lack of Financing Policy and Mechanisms to Support Competitive Economic Growth	2004	Partial Approval	Discontinued
Formulation of Trade Policy and Institutionalization of Inter Institutional Trade Committee	2004	Proposal	Discontinued

TABLE 3.11 CONTINUED

Policy	Baseline Year	Status	
		Start of FY 2007	End of FY 2007
National Biosafety Policy	2004	Proposal	Dialogue
Include Fish in the National Feeds Policy	2005		Proposal
Include aquaculture equipment in the Agricultural Equipment import duty exemption policy	2005		Proposal
Policy for importation “Fish Sex Reversal Hormone”	2005		Proposal
Policy to allow fish farmers to purchase nets from approved vendors	2005		Dialogue
Zambia			
Agricultural Market Development Plan	2005	Approval	Implementation
Removal of VAT on agricultural inputs	2005	Approval	Implementation
Agricultural input marketing	2005	Dialogue	Passage
Horticulture marketing channels	2007		Analysis
Cotton reforms	2007		Analysis
Maize export ban	2007		Dialogue
Southern Africa			
Promotion of agriculture input vouchers policy system in 3 SADC countries	2006		Analysis
National Policy on Biotechnology and Biosafety Malawi	2007		Proposal
National Biosafety Act for Malawi	2006		Passage
Biosafety regulations and guidance	2006		Passage
SADC seed variety release system and implementation manual	2004		Passage
SADC seed certification and quality assurance system and implementation manual	2004		Passage
SADC quarantine and phytosanitary measures for seed system and implementation manual	2004		Passage
SADC plant variety protection system - Plant Breeders Rights – Draft	2005		Proposal
West Africa			
Agricultural Policy of the West African Economic Community (ECOWAP)	2004	Implementation	Implementation
Common biosafety regulation for prevention of biotechnological risks in the CILSS countries	2005	Passage	Implementation
Common regulations for conventional and transgenic seeds in the CILSS countries	2005	Passage	Implementation

TABLE 3.11 CONTINUED			
Policy	Baseline Year	Status	
		Start of FY 2007	End of FY 2007
EGAT/AG			
West Africa Regional: Regulatory framework for seed certification and quality control	2004	Proposal	Adoption/Passage
Benin and Burkina Faso: Fertilizer sector policy guidelines.	2005	New	Proposal
Mali: National regulatory framework for fertilizer quality control	2007	New	Adoption/Passage
Africa Regional: Develop national and regional strategies for fertilizer promotion	2006	Proposal	Adoption/Passage
Malawi: Encourage government to engage private sector dealers in the fertilizer subsidy program	2007	Proposal	Adoption/Passage
Nigeria: Develop market-friendly subsidy scheme	2007	New	Implementation
EGAT/ESP			
Kenya National Biosafety Bill	2007		Proposal
COMESA regional biosafety policy	2007		Dialogue
Kenyan regulations for contained use of bioengineered organisms	2007		Analysis
Kenyan regulations for environmental release of bioengineered organisms	2007		Analysis
AFR/SD STCP			
Reform of Liberia cocoa marketing policy (LPMC)	2007	Analysis	Dialogue
Extension service reform	2007	New	Analysis
Policy for public sector provision of perennial tree crops, plantains, roots and tubers, and rice	2007	Analysis	Dialogue
Reform of cooperative development agency	2007	New	Analysis
The economics of interventions in the related commodity markets of the cocoa belt of Cameroon	2007	Analysis	Analysis
The economics of interventions in the related commodity markets of the cocoa belt of Nigeria	2007	Dialogue	Dialogue
The economics of interventions in the related commodity markets of the cocoa belt of Côte d'Ivoire	2007	Analysis	Analysis
The economics of interventions in the related commodity markets of the cocoa belt of Ghana	2007	Analysis	Analysis

TABLE 3.11 CONTINUED

Policy	Baseline Year	Status	
		Start of FY 2007	End of FY 2007
AFR/SD SAKSS			
Policies that reduce risks associated with vulnerability	2007	New	Analysis
Investment policies in the agriculture sector needed to reach CAADP goals	2007	Analysis	Dialogue
Policies to encourage agricultural growth and investment needed to reach CAADP goals in Rwanda	2007	Analysis	Dialogue
Policies and investment needed to reach CAADP goals in Uganda, Kenya, Zambia, and Malawi	2007	New	Analysis
Region-wide strategies for R&D and infrastructure	2007	Analysis	Dialogue
Policies to encourage regional information sharing through the use of ReSAKSS nodes	2007	New	Analysis
AFR/SD SAKSS – EA			
Non-tariff barriers to trade of maize and beef cattle	2007	New	Analysis
Livestock investment options in North Eastern Province, Kenya	2007	New	Dialogue
Policy for extension services to pastoral communities in Kenya	2007	New	Dialogue
Policies addressing conservation agriculture and mixed-use farming in the Lake Victoria basin	2007	New	Dialogue
Policies on improved land management (reduce soil erosion)	2007	New	Dialogue
Policies on improved agricultural productivity (increasing crop yields per area)	2007	New	Dialogue
Policies targeting vulnerable livelihoods in Kagera and Mara river basin	2007	New	Dialogue
Use of SAKSS in Rwanda to promote an evidence-based approach to inform CAADP implementation	2007	New	Passage
AFR/SD SAKSS- WA			
Policies that support climate change adaptation		New	Analysis
Investment policies for ecological sites in Benin, Guinea, Mali, Nigeria, and Senegal		New	Analysis
Investment strategies to meet CAADP targets at national level		New	Dialogue

TABLE 3.11 CONTINUED			
Policy	Baseline Year	Status	
		Start of FY 2007	End of FY 2007
AFR/SD SAKSS – SA			
Integrating market and trade considerations into food security and vulnerability policies	2007	Analysis	Dialogue
Policies to capitalize on region-wide growth opportunities	2007	New	Analysis
Policies that impede payoffs to public investments in agriculture sector	2007	New	Dialogue
Policies that affect the range of local livelihood options in the SADC region	2007	New	Analysis
Public investment policies in the agricultural sector to reach MDGI in southern Africa	2007	New	Analysis
Agricultural subsidies and contract farming policies to improve agricultural productivity	2007	New	New

total of 129 steps (1.3 steps per policy). (See Figure 3.9 and Table 3.10.) Table 3.11 shows all agriculture-related policies under design or improvement that are supported by IEHA field missions, and the accomplishment in 2007 of milestones in those processes. The following are selected details of these critical improvements.

IEHA promotes and supports policy actions in all areas relevant to agricultural growth and productivity enhancement. These areas include policies on agricultural inputs like seed and fertilizer and on targeted commodities like maize, rice, coffee, cotton, horticultural

products, and others. Public goods like research, extension, and information are the focus of another set of reforms. Broader policies target issues relevant to the entire agricultural sector, and the broadest area is macroeconomic policies. The distribution of IEHA's efforts across these categories is shown in Figure 3.10 and in Table 3.12. Full details of all of the policy actions underway are provided in Table 3.11.

One way to appreciate the progress being made by IEHA operating units in pursuing and accomplishing improvements in the enabling environment is by examining the current

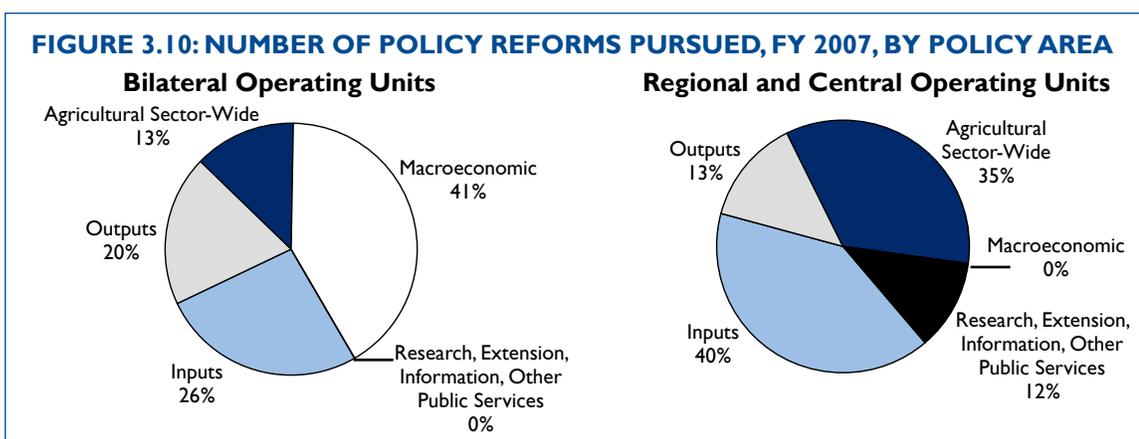


TABLE 3.12		NUMBER OF POLICY REFORMS PURSUED, FY 2007, BY POLICY AREA				
Operating Unit	Inputs	Outputs	Agricultural sector-wide	Macroeconomic	Research, Extension, Information, Other Public Services	
Ghana	2	1	2	18	0	
Kenya	4	4	3	1	0	
Uganda	4	0	1	0	0	
Zambia	2	4	0	0	0	
Southern Africa	8	0	0	0	0	
West Africa	2	0	1	0	0	
EGAT/AG	6	0	0	0	0	
EGAT/ESP	4	0	0	0	0	
AFR/SD	1	7	17	0	6	
Total	33	16	24	19	6	

status of each reform relative to when the reform process was initiated. In Figure 3.11 we note that 45% of the reforms started in 2004 were approved or implemented in 2007 (17% were implemented), and most of the rest were discontinued. Among those seven policy actions categorized in 2007 as “Discontinued,” four had already reached “Approval” in 2006, and one had reached the proposal stage. Thus two-thirds of those actions started in 2004 resulted in a new policy’s being adopted or implemented by the end of 2007.

Of those policy actions started in 2005, 44% were adopted or implemented in FY 2007 (32% were implemented), and the largest number were at the “Proposal” stage at the end of the reporting year; of those started in 2006, two-thirds were approved but none were implemented in 2007. Of those actions started in 2007, over 90% were in the analysis or dialogue stage at the end of FY 2007.

What these results show is that policy reform takes time and effort, and that IEHA programs are spending the time and making that effort. As a result, they are succeeding in significantly enhancing the enabling environment for smallholder agriculture in

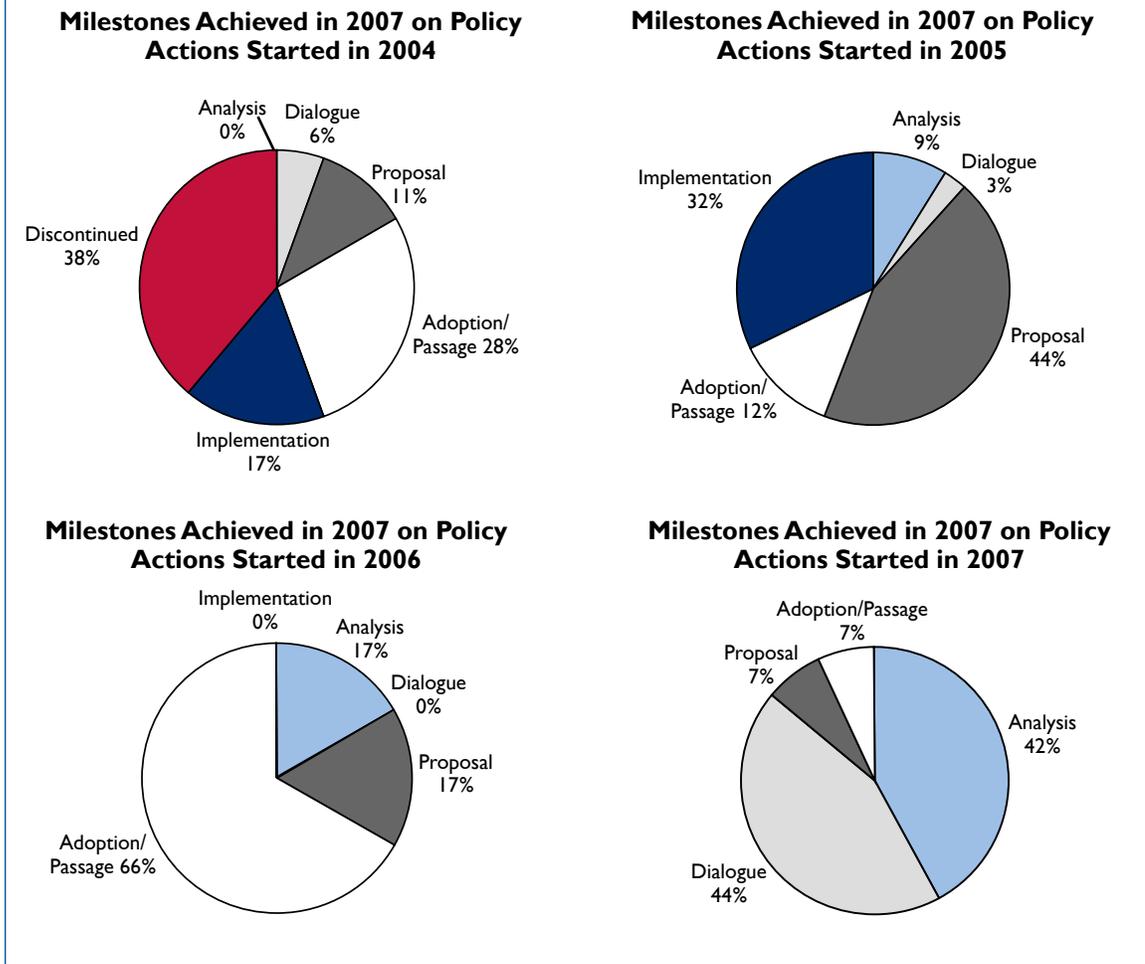
Africa at the country and regional levels.

The following are some specific examples of progress during 2007 in improving the enabling environment for productivity and trade in IEHA focus countries:

Kenya. The alignment of the Government of Kenya (GOK) and donor policy objectives, approaches, and investments improved in FY 2007. The CAADP process in Kenya was officially launched in December 2006. The GOK’s ambitious new Vision 2030 strategy targets agriculture among the six priority sectors for increasing investment. As a result, in the FY 2007/08 budget, expenditures on agriculture increased by 20% over 2006/07 to 6.8% of the overall budget. The Tegemeo Institute of Egerton University participated in the formulation of the Kenya Vision 2030 Strategy, continued to support the Agricultural Sector Coordination Unit in implementation of Kenya’s overarching GOK-donor Strategy for Revitalizing Agriculture, and was appointed to the CAADP policy stocktaking team.

Zambia. The uneven commitment of the Government of Zambia (GRZ) to reform and its slow pace toward an agriculture-led,

FIGURE 3.11: PROGRESS IN POLICY ACTIONS IN FY 2007, BY YEAR ACTION WAS INITIATED



market-driven economy remains a serious issue. The GRZ embraces a market-led economic agenda, but implementation continues to be inconsistent with this approach. USAID-supported analyses have shown that entitlement programs, including fertilizer and maize subsidies, are inefficient and counterproductive to private-sector-led agricultural growth. In FY 2007, these analyses were presented to the GRZ and have been embraced by the donor community. The GRZ's uncertain behavior creates concern that Zambia's participation in CAADP may not achieve the desired results of poverty reduction and food security.

Ghana:

- Three commodity standards (cashew, okra and griffonia) have been developed and approved by the Ghana Standards Board;
- Four inspection manuals (for cashew nuts, voacanga, griffonia and okra) were completed;
- Illustrated posters for six commodities were produced (Smooth Cayenne, Queen Victoria and MD2 pineapple, Golden and Solo papaya, and cashew).

Kenya. USAID, USDA/FAS, USAID/EA, USAID/EGAT and several local organizations conducted a series of stakeholder consultations/advocacy sessions and provided

technical input to finalize a Biosafety Policy and a Biotechnology Bill that was presented to Parliament. USAID also began working with local stakeholders with the ultimate aim of building the understanding and capacity of the eight GOK agencies charged with various biosafety regulatory responsibilities.

In addition, the following policy reforms were advanced in Kenya in FY 2007:

- A Policy Paper, Draft Bill, and Cabinet Memo (leading to consolidated legislation) were prepared on the harmonization of policies in agriculture;
- A Policy Paper, Draft Bill, and Cabinet Memo were prepared on food and nutritional security policy;
- A Dairy Policy was finalized, and a Dairy Bill was prepared and presented to Parliament; and
- A Livestock Policy Sessional Paper and Bill were drafted and presented to Parliament.

Mali. Previously recognized at the scientific level as a key tool to increase productivity, agricultural biotechnology is now officially recognized by the Government of Mali (GRM). In 2005, with assistance from USAID and other donors, a National Framework for Biosafety (French abbreviation CNB) was developed for Mali. On February 28, 2007, the biosafety framework made very

important progress when it was adopted by the GRM in the form of a decree issued by the Minister of Agriculture. The decree does not have the force of law until it is approved by the National Assembly, so during 2007 the Ministry of Agriculture presented the CNB decree to the National Assembly for approval. Due to resistance by an anti-GMO group, the CNB has not yet been approved. Once the CNB decree is approved by the National Assembly, it becomes law and new variety trials can start. The committee that originally developed the biosafety framework, including the Ministry of Agriculture's Institute of Rural Economy, is currently educating the public about GMO crops. Some originally anti-GMO representatives have come to accept GMOs and are collaborating with the CNB committee.

Mozambique. In FY 2007, USAID lent critical support to the cashew processors' industry association in advocating against a minimum wage law that would damage the prospects for growth in the sector. As a result, the government agreed to review a more measured approach for wages in the agricultural processing sector in 2008.

Uganda. Major advances were made in biotechnology policy. For the first time, the National Biosafety Committee approved field trials for genetically modified bananas. Approval for biotech cotton trials may also be imminent.

IEHA TACKLES REGIONAL POLICY ISSUES

Commodity flows among African countries are hampered by many types of barriers, including trade tariffs; seasonal export restrictions;

USAID/Mozambique works with small businesses like Miranda to improve the quality of raw and processed cashew kernels and to attract investors. It employs dozens of previously unemployed workers, including these women.



poorly harmonized measures, grades, and standards; and corruption at customs posts. Making improvements in policy can have a significant impact on agricultural trade. IEHA's regional approach to improving the enabling environment aims to facilitate the safe flow of people, goods, capital, and knowledge across borders. The mechanisms may include free trade zones; common monetary unions; harmonized customs, grades, and standards; science and technology networks; regional trade associations; farmer organizations; and partnerships for regional security and governance. When policies and regulations that govern the cross-border distribution of germplasm and seed are harmonized, markets are opened and private investment in seed systems is encouraged.

Regional cooperation in the development

LANDMARK EVENT IN SOUTHERN AFRICA

SADC's adoption of policies and tools for harmonizing regional seed systems proved to be one of the most significant achievements in FY 2007, ending a decade-long debate. In 2007, SADC ministers approved a seed system harmonization package that included both policies and operational manuals for three key regional seed issues. These policies have, in essence, harmonized disparate national policies and procedures on seed certification, seed variety release, and plant breeders' intellectual property rights. Building on these successes, USAID also funded a comprehensive regional seed variety catalog and a website on the harmonization processes, policies, and procedures. The ministers' approval is a landmark event that should smooth the way for private seed companies to invest in the region and thus increase the availability of a wide variety of high-productivity seeds.

of harmonized regulations for biosafety and intellectual property protection builds trust and practical working relationships that facilitate the use of cutting-edge technologies. Some examples of progress in policy reform include:

East Africa. ASARECA and COMESA made progress on the development of a common regional policy and regulatory framework for biosafety, following up on the analytical work that led to a positive decision by the COMESA Council of Ministers in 2006. A biosafety bill was tabled in the Parliament of Kenya this year. USAID is also working with COMESA to get the harmonized standards for maize trade recently adopted by the East African Community (EAC) applied throughout the COMESA region. At a first-ever meeting between COMESA and the EAC to harmonize a specific trade policy, an agreement was reached that will be referred to the Council of Ministers. A second joint meeting of the two bodies resulted in an agreement on eight quality standards for dairy products.

Southern Africa. The Program for Biosafety Systems (PBS) works with national partners in Malawi to develop an enabling environment for the introduction of novel, genetically modified crop varieties. The final draft of the National Policy on Biotechnology and Biosafety, which sets out the country's vision and guiding principles for the application and management of modern biotechnology, was submitted in July 2007 to the Cabinet for review. PBS supported the review and improvement of the national Biosafety Bill, which will govern the introduction of genetically modified products in Malawi. The bill was approved and gazetted in August 2007. Following adoption of the Biosafety Bill, detailed implementing regulations are required to make the bill fully operational; these were submitted to the Minister for Environmental Affairs for approval in July 2007.

West Africa. A major milestone in FY 2007 was the approval of the Biotechnology Action Plan at the ECOWAS ministerial

biotechnology conference in Accra in March 2007. This is significant because it spells out a road map for biotechnology development, including the regulation of GMOs, in the region. Although the Biotechnology Action Plan will be presented for official approval at the ECOWAS Heads of State Conference in June 2008, the implementation process has already started. Part of the Action Plan is the development of a regional biosafety regulatory framework. This framework is now in an advanced stage of development by CILSS and will be presented for approval by the ECOWAS Heads of State Conference in December 2008, after which these regulations would become legally binding in the entire region.

The favorable movement in biotechnology development at the highest level is a major achievement in West Africa, given the very negative campaign in opposition to GMOs that previously dominated in the region. This engagement shows clearly that West African ministers believe that biotechnology can help in achieving the CAADP objectives and that they are ready to take action.

ECOWAS is committed to mobilizing funding for the implementation of the Action Plan. After the meeting of the ECOWAS Specialized Technical Committee on Food and Agriculture in November 2007, the budget for the 2008 Biotechnology Operational Plan presented by CORAF (\$2.7 million) was accepted by the Conference of Ministers. CILSS has presented a 2008 Operational Plan for Biosafety, and in a high-level meeting in November 2007 of the West African Economic and Monetary Union (WAEMU), CILSS, and ECOWAS, it was agreed that WAEMU will collaborate with and build on the work accomplished by CILSS.

As part of the process of reaching a regional accord on biotechnology and biosafety, individual countries have been debating the issues and moving forward with new legislation. The Parliament in Burkina Faso

approved a new law on biosafety. The Bt⁷ cotton trials underway in the country are being carried out in the framework of this law and according to specific agreements with Monsanto. While USAID did not directly work with Burkina Faso on the biosafety law, it provided assistance, through a biosafety consulting firm, to strengthen the capacity of the Agence Nationale de Biosécurité in field trial application and commercial release. Ghana has also just passed a law that allows for confined field testing. It will be reviewing applications for Bt cowpea, Bt maize, and virus-resistant cassava.

The USAID-supported agriculture advisor at ECOWAS (with co-financing from field support programs) helped finalize the regional biotechnology action plan. He played a major role in promoting the regulatory framework prior to, during, and after the ECOWAS Ministerial, mainly at the political level. IEHA supports a coordinator at the *Institute du Sahel* (INSAH), who is responsible for the technical content of all of the biosafety work, and additional technical input from a biosafety consulting firm. IEHA also supports CORAF's biotechnology coordinator, who manages the implementation of the ECOWAS Biotechnology Action Plan.

Despite the long period of time required to achieve this goal — Action Plan development began in 2004 — USAID has maintained its support. As a result, West Africa, USAID, and IEHA can take pride in this key policy achievement.

IEHA INVESTS IN POLICY DEVELOPMENT AND IMPLEMENTATION

IEHA ensures that the enabling environment will continue to improve by building local capacity to formulate and implement policies that help smallholders transform their farms into

7. Bt stands for *Bacillus thuringiensis*, a soil bacterium which is genetically inserted into cotton so that the plant produces its own toxin, harmful to crop pests but harmless to humans and most beneficial insects.

successful commercial operations. Assistance to organizations often focuses on improving their ability to advocate for better policies.

Ghana:

- Two Market Intelligence Reports were produced to detail opportunities in the export horticulture industry. Reports were produced in collaboration with industry stakeholder and Government of Ghana agricultural and export agencies. Plans for transfer of this market information system to the export association were finalized and the transfer will take place in 2008.
- USAID assisted the Federation of Associations of Ghanaian Exporters (FAGE) to produce “Ready for Take Off,” which lays out the drivers of competitiveness for growing the export horticulture industry. This publication is targeted at Government of Ghana decision makers, potential investors and key private sector producers and exporters.

Mozambique:

- In FY 2007, USAID provided the Department of Economics at the Ministry of Agriculture with tools to conduct better analysis on changes in income over time. As a result, for the first time, the Ministry has conducted analyses of the panel data from the Agricultural Income Survey of the 2005/2006. A comparison of results from the 2004/2005 season with those of 2005/2006 shows a significant increase in production, especially in cereals (30%), cassava (40%), sweet potatoes (80%), and sunflowers (300%). Considering the high contribution of crop income to household income, particularly in the poorest quintile, the analysis suggests significant improvements in income for most smallholder farmers in 2006. In addition to improvements in household incomes, reduced levels of child malnutrition and shorter hunger periods were reported.
- USAID-trained socio-economists at the National Agricultural Research Institute conducted diagnostic research, area-

focused priority-setting and profitability analyses, technology adoption studies, and impact assessments of agricultural research. Four of these economists were deployed to Manica and Nampula provinces to work with scientists to identify best-bet technologies that result in productivity enhancement and technology adoption at the farm level.

IEHA BUILDS REGIONAL CAPACITY FOR POLICY IMPROVEMENT

IEHA supports the development of capacity in each of the sub-regions of Africa to formulate and implement policies that help smallholders transform their operations. Examples include:

Southern Africa. In 2007 the Food, Agriculture, and Natural Resource Policy Analysis Network (FANRPAN) developed a new long-term strategy and business plan⁸ for sustainability and gained recognition by COMESA and the African Union/New Partnership for Africa’s Development (AU/NEPAD). As a result, USAID has been joined by both DfID and the Canadian International Development Agency (CIDA) as supporting donors. One of the key guiding principles for the new strategy is to build the capacity of southern African nationals to demand, supply, and use evidence for policy development in the FANR sector to ensure that the region creates a conducive policy environment for attaining the MDGs and supporting the implementation of CAADP programs. FANRPAN’s new strategy involves three mutually supportive thrusts: capacity building, research, and voice.

Over the last two years, FANRPAN has begun the process of reorganizing its 12 national nodes to improve their effectiveness as conveners of stakeholder dialogues on agricultural issues. Although each country has its own approach, the model that is being adopted, to

⁸ “Strategy and Business Plan for Institutionalizing FANRPAN as a Recognized Source of Quality Evidence-Based Policy Research and Effective Advocacy for Agriculture and Natural Resources in Southern Africa.” September 2007.

promote dialogue, is to move the ‘hosting’ responsibility from research institutes and university departments to an institution that is recognized for its ability to organize national consultative meetings and has a high level of acceptance within government, among stakeholders in the agricultural sector (including smallholders), and civil society.

FANRPAN’s new research strategy seeks balance between long-term programmatic research supporting regional policy change, exploration of emerging policy areas in anticipation of needs, and implementation of commissioned research.

USAID strengthened the Southern Africa Seafood Association by uniting several component groups. The association is now successfully lobbying local governments on issues such as catch quotas.

West Africa. In the cotton subsector, newly formed National Cotton Advisory Committees (NACs) will ensure that stakeholders have a voice in advancing cotton reform issues and determining implementation priorities in Benin, Burkina Faso, Mali, and Chad. In each NAC, the

public and private sectors, as well as regional organizations, are represented. The member institutions, 10 to 15 in total, include:

- Producer organizations supporting cotton and other crops produced in cotton zones;
- The cotton processing industries (ginners, oil, textiles);
- The interests of the government;
- Technical support to producers in cotton zones (extension services, NGOs, agricultural research);
- Input suppliers; and
- Financial institutions supporting the industry, farmers, and input suppliers.

SMALLHOLDERS COMPETE SUCCESSFULLY IN EXPORT MARKETS

IEHA’s investments in productivity, sound enabling environments, and trade capacity permit smallholders to enter and compete in domestic and external markets, creating more income for smallholders and more jobs for the economy. During 2004-2007, IEHA assistance promoted international trade in targeted agricultural products with a total value of \$3 billion; (Figure 3.12).

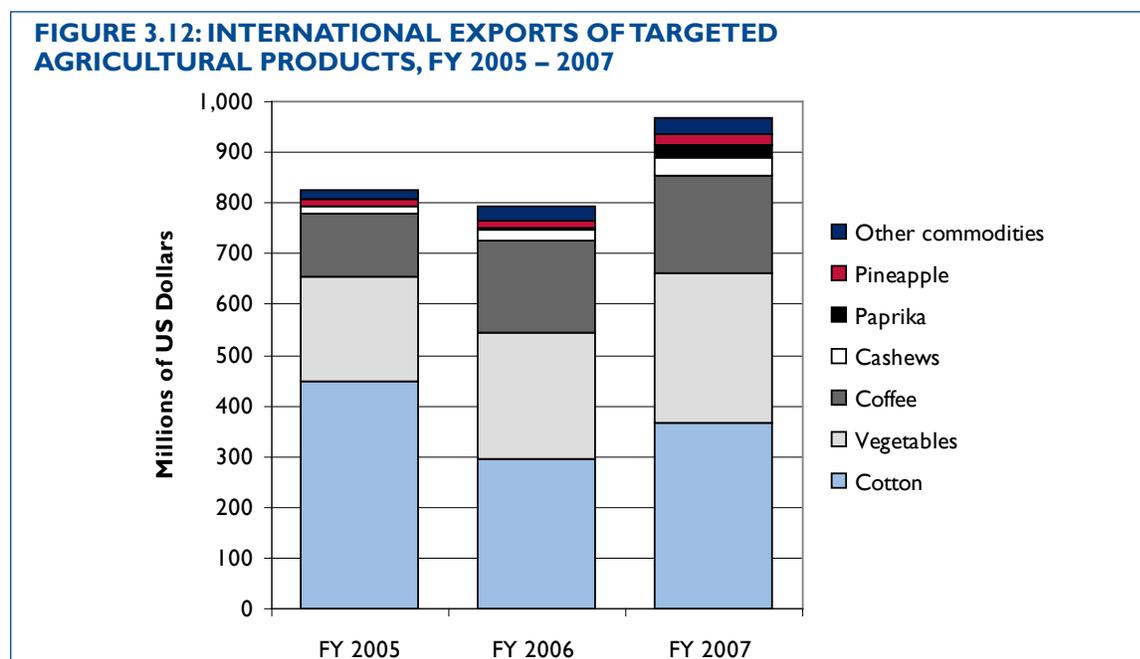
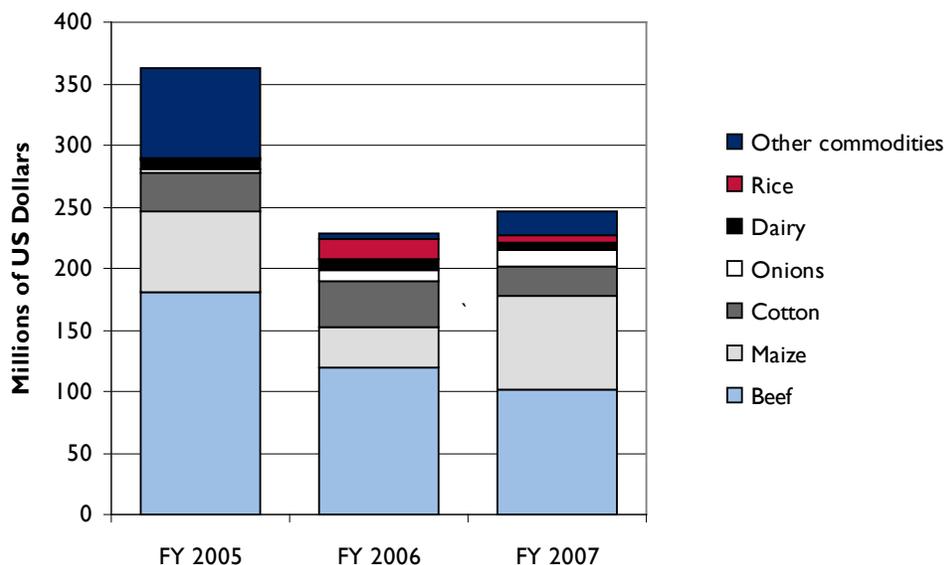


FIGURE 3.13: INTRA-REGIONAL EXPORTS OF TARGETED AGRICULTURAL PRODUCTS, FY 2005 – 2007



Major products exported to international markets included cotton, vegetables, coffee, cashews, paprika, and pineapple.

Similarly, during 2005-2007, IEHA assistance resulted in intra-regional exports of targeted agricultural products with a total value of nearly \$1 billion (Figure 3.13). Major commodities exported to these markets in nearby countries included beef, maize, cotton, onions, milk, and rice. Other commodities that were reported in significant values in 2005 include goat/mutton and shea; in 2007 other commodities important in intra-regional trade were cassava, cocoa, seed, vegetables, and coffee.

Some examples of IEHA successes in promoting agricultural trade include:

Mali:

- Total mangoes exported reached a record-breaking 5,492 mt in FY 2007, a 42% increase over FY 2006. Even though export by boat was still the main mode, Malian mangoes were also flown out by plane (1,204 mt) and transported by truck (703

mt) to markets in the sub-region (Algeria, Burkina, Mauritania, and Senegal). The total value of mangoes exported by 29 exporter groups was \$7.57 million. A focus on quality led to the definition of standard specifications for export-quality mangoes that are now considered the reference for the mango industry.

- In the potato value chain, USAID helped trader cooperatives enter domestic and sub-regional markets. Thirteen potato trader cooperatives (575 members, 403 males/172 females) used new techniques of improved post-harvest handling, packaging, storage, and marketing. They sold 5,594 mt to domestic (2,453 mt) and sub-regional markets (2,225 mt), for a combined total sales value of \$4,388,577, an increase of 53% in sales value. New markets in the region, such as in Burkina Faso, Côte d'Ivoire, Togo, and Ghana, provided new opportunities. Producers and traders not only increased volumes exported, but also earned more profit due to the higher prices in neighboring country markets.

Uganda. Using technical assistance (TA) and its Strategic Activities Fund (SAF), USAID

focused on building strong producer-buyer linkages and strong national associations that can boost production and the quality of the products. Through the formation and strengthening of producer organizations (POs) and depot committees (DCs), enterprises have benefited from increased supply of good quality products, more reliable supply, greater loyalty of farmers, and greater operational efficiency. USAID trained farmers on farmer-enterprise linkages and on bulking for the market. The volumes and value traded and USAID's role and contribution are shown in Table 3.13. For cotton, sunflower, vanilla, and flowers, support provided by USAID covered the entire subsector; for coffee and upland rice, USAID's contribution to the subsector's results may be rated at 60% and 40%, respectively.

REGIONAL EFFORTS BOOST TRADE IN THE SUB-REGIONS AND BEYOND

IEHA promotes increased trade both by working across regions through partners such

as trade associations and also through direct assistance to small agricultural producers.

East Africa. USAID contributed to increased trade in the targeted commodities by increasing trust through regional private sector associations, improving mechanisms for structured trade, improving market information, and reducing policy and regulatory barriers in cooperation with COMESA and the EAC. For the calendar year 2006, intra-regional trade increased to 187% over the baseline of 2001, and trade out of the COMESA region increased to 90% over the same baseline.

Southern Africa. USAID provided support to groundnut producers in Malawi, who are now producing seed for sale to South Africa, and it linked greenhouse producers of specialty vegetables in Malawi, Zambia, and South Africa to South African supermarkets in each country. Training in HACCP stimulated regional trade in several commodities: poultry producers in Mozambique and Zambia are now selling to South African supermarkets operating in their countries; trout producers in Lesotho

TABLE 3.13 TRADE IN AGRICULTURAL COMMODITIES SUPPORTED BY USAID/UGANDA, FY 2006 – 2007

Crop	Volume (Tons)		Value (Millions of US dollars)		Support Provided by USAID
	FY 2006	FY 2007	FY 2006	FY 2007	
Cotton	18,992	23,096	20.5	25.4	<ul style="list-style-type: none"> • SAF to the 8 lead ginners • TA to ginners' association, individual ginners
Coffee	120,139	162,255	170.3	257.0	<ul style="list-style-type: none"> • SAF to 9 leading exporters • TA to coffee processors and POs/DCs
Sunflower	25,700	28,100	4.9	5.6	<ul style="list-style-type: none"> • SAF to two leading buyers/processors
Upland rice	48,000	60,000	10.8	13.7	<ul style="list-style-type: none"> • TA and SAF to rice processors
Vanilla (cured)	229	277	5.5	4.8	<ul style="list-style-type: none"> • SAF to vanilla association
Flowers	7,596	6,631	34.7	31.6	<ul style="list-style-type: none"> • SAF to floricultural association • TA for mid-level managers
Total			246.8	338.2	

are selling to a processor in Cape Town who supplies the large Woolworths chain; and producers in Namibia are selling beef to Angola and both goats and goat meat to the Democratic Republic of Congo (DRC).

IEHA HELPS SMALLHOLDERS BECOME MORE COMPETITIVE

In all of IEHA's focus countries, smallholders are learning to run their farms as businesses and to compete successfully in national and international markets. In 2007, IEHA programs helped smallholders to sell over \$150 million in targeted agricultural products in domestic markets; the most important commodities were vegetables, cotton, rice, maize, cashews, coffee, and bananas. (see Table 3.14). Examples of success in promoting domestic markets include:

Ghana:

- In FY 2007, USAID promoted a new maize variety and linked 125 producers to the feed milling industry. Yields and net revenues per hectare of this variety were double those of traditional ones.
- Similar improvements in market linkages resulted in female tomato producer groups selling directly to local tomato paste factories. The quality and productivity of

the tomato farms increased through USAID's introduction of improved technologies such as drip irrigation and improved seed.

- Production of a new pineapple variety demanded by European importers is being expanded with USAID assistance. In FY 2007, of the 3,626 additional hectares planted, this new pineapple variety accounted for 400 hectares, translating into an increase in production of 50% and an increase in revenue of \$5 million.

Kenya. USAID's maize and dairy programs assisted over 350,000 small farmers, creating estimated incremental household income of \$73 million and \$25 million, respectively, in FY 2007. Horticulture was once again among Kenya's leading growth sectors and the country's leading export sector, with over \$700 million in total exports. USAID contributed to that growth by helping more than 30,000 producers increase their gross annual sales by an average of \$359 per grower, for a total incremental income exceeding \$10 million.

Mozambique. USAID support along the animal feed value chain deepened the role that these emerging industries have on economic growth and their prospects for linkages with industrial processes upstream. Due to USAID-funded trials and demonstrations in soybean production, farmers started preparing larger tracts of land for expansion.

TABLE 3.14 PURCHASES FROM SMALLHOLDERS OF TARGETED AGRICULTURAL PRODUCTS, FY 2005 – 2007 (US Dollars)			
Commodity	FY 2005	FY 2006	FY 2007
Vegetables	23,161,945	29,662,679	25,411,432
Cotton	9,065,000	28,297,526	39,713,813
Rice	829,700	12,039,000	13,707,416
Maize	8,660,638	1,541,553	11,088,275
Cashew	284,709	3,803,232	10,833,512
Coffee	1,122,000	5,355,961	9,120,193
Bananas	3,250,000		8,961,900
All other commodities	25,134,517	61,125,450	31,881,127
Total	71,510,170	141,825,401	150,717,668

Two of the largest importers of animal feed invested their own resources in FY 2007 to acquire processing equipment, providing a clear vote of confidence that soybean production and processing are ready to take off in Mozambique.

Uganda:

- Private sector players increased their investments, showing their interest in procuring higher volumes of more efficiently produced crops. USAID's private sector partners made over \$2 million worth of new investments in oilseed, cotton, and rice processing.
- A recent evaluation found that USAID/Uganda's flagship productivity program effectively engaged smallholders, helping to integrate them into commercial farming and improve their ability to adopt new techniques.

Southern Africa. In FY 2007, USAID partners disseminated improved cassava planting material to small-scale farmers for duplication and sale to other farmers. Cassava has become a very important cash crop for small-scale farmers, with sales reaching \$335,000 in FY 2007. There is currently a huge market for cassava starch in the region for industrial use, including papermaking. New low-cost cassava processing equipment, including solar driers, has allowed farmers in eight countries to take advantage of these new market opportunities. The new equipment has also made it easier to process cassava into flour, which is consumed in producing households and also sold to bakeries. Bakeries in Malawi, Zambia, and Mozambique are substituting cassava flour for 40% of imported wheat flour to reduce the cost of bread. This saves the bakeries up to 23% of the cost, which helps keep consumer prices low.

BUSINESS ASSISTANCE REVIVES LEATHER MARKET

Kabwe Tannery Limited in Zambia processes raw hides and skins into "wet blue" and finished leather. The company had ceased operations when USAID-supported Market Access, Trade, and Enabling Policies (MATEP) program offered help in 2005. Despite having staff and equipment, Kabwe did not have the cash to buy hides or chemicals.

Kabwe Tannery played an important role in Zambia's livestock/leather sector as a principal buyer of hides from smallholder producers and small rural abattoirs. Without Kabwe's demand for hides, a glut developed and prices collapsed.

MATEP helped Kabwe Tannery develop a recovery plan, financed an initial supply of hides and chemicals, and identified an export market for processed wet blue hides. Kabwe now has a business relationship with East Hides Limited of London, one of the largest purchasers of wet blue leather in the world.

The local impact has been significant. Since receiving initial support from MATEP, Kabwe has been in continual operation and 34 staff members have steady employment. The price of raw hides rose from \$2 in 2005 to \$10 in 2007 and Kabwe now does tanning on a contract basis. This not only adds value locally to hides that were previously exported raw from Zambia, but it expands hide market outlets for smallholder farmers and small abattoirs. Kabwe expects to process and export up to 25,000 hides next year, both in direct exports and in contract tanning, for a total export value of \$800,000.



Drums for soaking and liming skins.



Batching wet blues after inspection.



Loading wet blues into a truck for export.

IEHA FILLS KEY GAPS IN TRADE CAPACITY

IEHA is building trade-supporting institutions, imparting critical market-related knowledge, and developing business services targeted to smallholders and agriculture-based firms. Facilitating access to credit and business development services (BDS) and helping firms and farmers to meet international quality standards are key steps in the transformation of the agricultural economy to an efficient one in which poverty and hunger are declining.

In 2007, IEHA programs facilitated credit to beneficiaries in the amount of \$40 million, a dramatic increase from previous years (Figure 3.14). The number of enterprises able to access BDS as a result of IEHA assistance also climbed steeply to over 195,000 (Figure 3.15). IEHA experts also work with firms on the detailed and unfamiliar requirements for international trade certification; in 2007 the number of firms meeting these standards and receiving certification was 109, more than double the number in 2006 (see Figure 3.16 and Table 3.15).

FIGURE 3.14: VALUE OF CREDIT TO BENEFICIARIES, FY 2005 - 2007

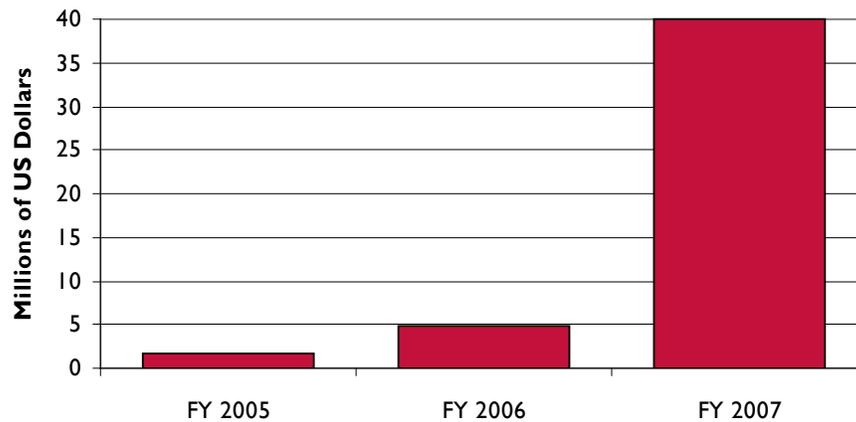


FIGURE 3.15: NUMBER OF ENTERPRISES ACCESSING BDS, FY 2004 - 2007

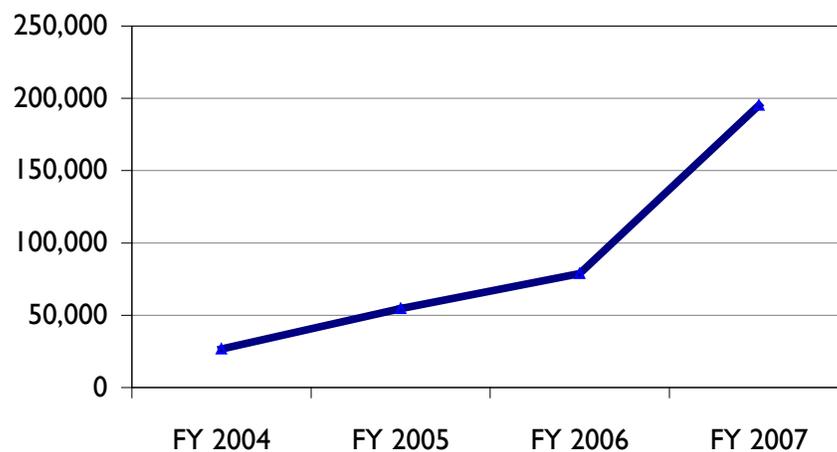


FIGURE 3.16: NUMBER OF FIRMS ACHIEVING INTERNATIONAL STANDARDS, FY 2004 – 2007

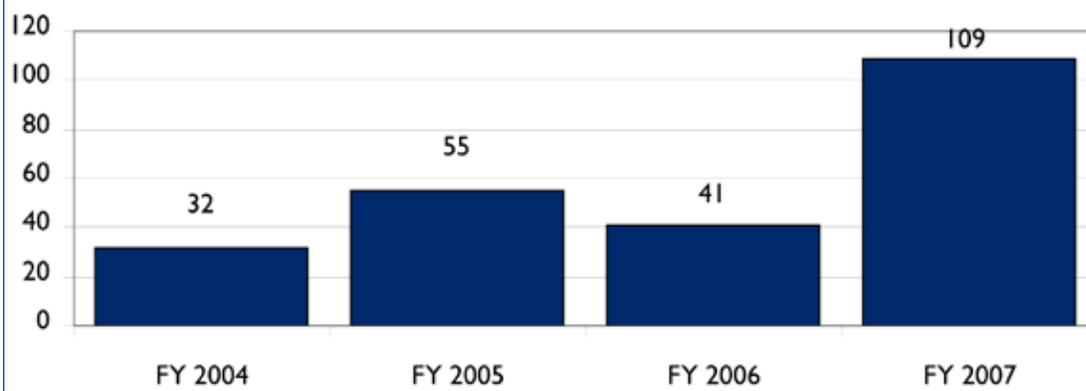


TABLE 3.15 CAPACITY OF MARKET INSTITUTIONS, FY 2004 – 2007

Indicator	FY 2004	FY 2005	FY 2006	FY 2007	Percent Change 2006-07	Percent of Target Achieved*
Value of credit to beneficiaries (US dollars)	-	1,599,234	4,834,057	39,955,524	727%	72%
Number of enterprises accessing BDS	26,682	54,539	78,766	195,197	148%	144%
Number of firms achieving international standards	32	55	41	109	166%	176%

* Percent of Target Achieved is calculated using target and actual data from each IEHA operating unit. If an operating unit did not submit a target, then that unit's "actual" was excluded from the calculation.

SPRAYING SERVICES IN ZAMBIA'S EASTERN PROVINCE

Mrs. Jere, a widow with three children, grows two hectares of maize and beans to feed her family and a hectare of cotton as a cash crop. She has always relied on borrowing her brother's old sprayer to control pests in her cotton, which damaged her crops.

Recently, she took advantage of a new service being offered by her neighbor, Mr. Lungu, who owns a new, highly efficient sprayer. Mr. Lungu was one of 11 farmers in Eastern Province who participated in a pilot initiative promoted by the USAID-supported Project Production, Finance, and Improved Technology (PROFIT). The pilot was designed to create contract spraying services within the Dunavant Zambia Ltd. network of cotton farmers. Dunavant staff trained the farmers to use pesticides safely and PROFIT trained them to provide an efficient spraying service to their clients.

Mr. Lungu was able to reduce the time spent spraying a hectare of cotton from 4 hours to 2 hours, and used 10 liters of spray per hectare, compared with 120 liters per hectare required for a conventional knapsack sprayer.

As a result, Mrs. Jere's cotton yield and profit rose substantially. Since she had contracted out all her spraying needs, she was able to spend more time weeding her fields, which improved yields in her maize crop.

Demand for spraying services following the pilot project was high; PROFIT and Dunavant have scaled up the initiative to include 100 spray contractors in Eastern Province, and PROFIT is working with two other major cotton companies to replicate the project elsewhere.

Following are some examples of IEHA's success in helping farmers reach new markets:

Ghana. A growing supplier database has been developed to assist processors and exporters in sourcing products from local farms. A geographic information system (GIS) database was created that links more than 8,000 farmers to exporters and processors. GIS mapping is a requirement for obtaining certification for export to Europe and for organic certification.

Kenya. Under USAID support to the Export Promotion Council, 500 companies (40% women-owned) have been trained to date in export readiness to enhance their competitiveness in the US market. During the reporting year, eight firms participated in the Specialty Coffee Association of America convention and exhibition, securing confirmed orders valued at \$12 million.

Zambia. USAID/Zambia's interventions to address systemic constraints to competitiveness and market access have fostered the development of an in-community service sector around land preparation, spraying services, input provision, veterinary services, financial services, and private sector extension. This represents a fundamental change in the way the agricultural service delivery industry markets and distributes to small farmers. Moreover, the demonstration that private input and service provision can increase the productivity and profits of smallholder farmers represents a dramatic shift in the way Zambia views public and private sector roles in the agricultural sector. In a society that assumes that smallholders have inadequate resources to purchase inputs and services, over 6,000 purchased inputs in FY 2007, and 670 purchased services (tillage, spraying, weeding, integrated pest management) valued at more than \$270,000 from private providers. Eleven private input retailers provided extension services to 21,974 farmers, and 43,225 farmers received

extension services through outgrower schemes. The private sector conducted 28 in-community promotional events and 14 retail training events to build the smallholder market – events that were not attended or financially supported by USAID’s implementing partner.

MOVING THE VULNERABLE FROM RELIEF TO DEVELOPMENT

IEHA is helping both smallholders with limited assets and those who are highly vulnerable due to food shortages, civil conflict, and illness, by increasing their productivity and linking them to markets. Some examples of USAID’s success in assisting the vulnerable include:

Mali. The Government of Mali (GOM) recognizes the necessity of linking individual and community responsibility for ensuring the availability of food at all times through a combination of policy implementation and planning. A key component of USAID’s programming this year was the completion of community-level planning in food security. More than 1 million households (nearly three-quarters of them considered vulnerable) benefited from the planning process, contributing to increased and diversified food production and enhanced marketing opportunities. During FY 2007, more than 1,600 local leaders were trained, of whom 20% were women; they included elected officials, mayors, members of civil society, members of the local administration, leaders of local farmer and private-sector organizations, and local radio journalists. The GOM is using about \$1 million from the national budget to fund activities under the national food security plan in Gao, one of the northern regions of Mali.

A woman in Mozambique is using information she learned in a Food for Peace program to teach farmers in her community the best ways of selecting seed for the planting season.

Uganda. The Title II food security programming is focused exclusively on the war- and displacement-affected populations in the northern and eastern part of Uganda. Most former internally displaced persons in eastern Uganda have returned to their farmsteads, and Title II programming is providing these rural households with training on agronomic techniques, improved inputs, marketing, and environmentally-sensitive farming. Title II partners have provided assistance to more than 300,000 people who have returned to their places of origin or their own land for cultivation.

East Africa. USAID/East Africa published a recipe book and distributed it regionally to promote the consumption of orange-fleshed sweet potato varieties, an excellent source of Vitamin A. National partners have supplemented this with large-scale distribution of calendars, posters, and leaflets. Development of these nutritious varieties is also supported by USAID/EGAT under the HarvestPlus project.



The Crop Crisis Control Project worked through 37 NGOs and 500 local organizations to reach a total of nearly 100,000 farmers with improved cassava varieties and focused awareness on the management of banana wilt. The focus was on the demand side: identifying vulnerable households, using vouchers to empower them to choose varieties, and providing training tailored to local conditions.

West Africa. In response to a 2005 Niger crisis assessment, USAID supported the expansion of CILSS's regional food security early warning and monitoring system to 15 countries. Of these, nine are carrying out all basic data collection functions; six use the vulnerability assessment mechanism; and one piloted the use of nutrition data and the use of food (instead of crop) balance sheets.

4. IEHA PARTNERSHIPS: ENGINES OF GROWTH AND OPPORTUNITY

“Public-private partnerships leverage information, ideas, technology, and innovation needed to solve our most pressing human problems.”

**Director of Foreign Assistance and USAID
Administrator Henrietta H. Fore**

Public-private partnerships (PPPs) are at the heart of USAID’s strategy in Africa and around the world. In fact, says USAID Administrator and Director of Foreign Assistance Henrietta H. Fore, “USAID is the world leader in engaging the private sector through mobilizing ideas and resources, skills and technologies.”

Partnering is critical to IEHA, and to the agricultural agenda of CAADP, because it engages the private sector and gives it a voice, demonstrates the commitment of the private sector to complementary objectives, and leverages additional resources for development.

Since its inception, IEHA has been committed as a strategic business practice to supporting PPPs, and has had substantial success in using them to help African smallholders and their organizations. In this way, as in others, IEHA is aligned with the goals of CAADP.

The most important result of IEHA’s PPPs is transformation of the rural economy through enhanced productivity and strengthened links to markets. The impact of USAID’s funding is magnified through these partnerships, by mobilizing resources from multiple sources. In turn, these resources are managed through flexible and innovative partnerships that create jobs and change

lives. The resulting experience and long-term relationships contribute to their sustainability.

In this section, the importance of public-private partnerships will be illustrated through several examples that demonstrate the very real opportunities for success through collaboration.

The public-private partnerships supported by IEHA have certain important characteristics that contribute to their success:

- A jointly defined problem and solution, evidenced by advance planning and often by a signed MOU;
- Shared risks and responsibilities;
- Significant contributions of cash or in-kind resources by the public partners and at least the main private partner;
- Having complementary development objectives for the public partner and business objectives for the private partner;
- Ensuring that the development objective will help the ultimate customers, who are different from the private partners.

This chapter presents a special set of PPPs formed by IEHA in 2007; the data come from a case study, which is expected to improve future reporting on PPPs. We also present details of certain partnerships that illustrate the power of effective collaboration.

IEHA PARTNERSHIPS: TOOLS FOR CULTIVATING SUCCESS

An important measure of success for any development program is the partnerships it forms. They are the foundation on which progress is built. This is nowhere more evident than in IEHA, where the focus from the beginning has been on promoting sustainable agricultural growth through African-led partnerships. The 89 public-private partnerships IEHA formed in 2007 (with 154 partners) are summarized in the tables below.

The details provide insight into the complex nature of the partnerships – how they were structured and where, by whom, and with what capital. As we will see, the data represent technologies distributed, commitments kept, and markets opened. The results of these efforts are seen most vividly in the examples that follow, of African farmers whose productivity and prospects for a secure future have been improved.

TABLE 4.1 PARTNERSHIPS	
...focusing on technology development and dissemination	66
...focusing on post-production value chain objectives	25
...in which at least one private partner is African	78
...in which at least one private partner is international	17
...in which at least one private partner is another donor	4
...with significant third partner	12

The vast majority of partnerships IEHA joined in 2007 had at least one African private partner, a significant factor in creating a lasting incentive for success.

USAID/Africa has worked to ensure that American aid dollars are matched or exceeded by other stakeholders in the region, both public and private.

TABLE 4.2 USAID AND LEVERAGED RESOURCES IN IEHA PPPS FORMED IN 2007				
(Millions of US Dollars)				
Item	USAID	All Other Partners	(Main) Private Partner	Other Partners
Cash contribution	9.3	7.4	4.5	2.9
In-kind contribution	0.037	4.4	3.2	1.1
Total contribution	9.3	11.8	7.7	4.0
Ratio of private to public total contribution				1.26
Ratio of private to public cash contribution				0.8

All the sub-regions of sub-Saharan Africa benefited from the public-private partnerships formed in 2007.

TABLE 4.3 LOCATIONS OF IEHA PPPS FORMED IN FY 2007			
Operating Unit	Number of PPPs	Partners (Not including USAID)	
		Number	Per PPP
Ghana	19	24	1.26
Mozambique	1	6	6.00
Uganda	23	24	1.04
Zambia	38	55	1.45
Southern Africa	3	40	13.33
West Africa	5	5	1.00
IEHA Total	89	154	1.73

Virtually every type of organization participated in these partnerships, with the largest cohort being national private companies.

TABLE 4.4 TYPES OF ORGANIZATIONS PARTNERING WITH IEHA IN 2007 (Number)			
Organization Type	All Partners Other Than USAID	Main Private Sector Partner	All Other Partners
National for-profit	92	70	22
National non-profit	2	2	0
International for-profit	20	10	10
International non-profit	14	4	10
Bilateral and multilateral donors	5	0	5
Host country government	16	1	15
International research	1	0	1
National university	1	0	1
Local trade association	3	2	1
Total	154	89	65

OUT OF THE WEEDS: MAIZE CROP THRIVES WITH NEW SEEDS

Striga weed currently infests about 2.4 million hectares of sub-Saharan Africa's maize cropland, causing massive yield losses estimated at 1.6 million tons per year, valued at more than \$380 million. Through the Striga partnership, which began in 2004, the African Agricultural Technology Foundation (AATF) facilitated development and field testing of an exciting new approach to Striga management in maize fields, one that allows farmers to grow maize and kill Striga at the same time.

It required combining imazapyr, a chemical herbicide manufactured by BASF Group, with maize seeds bred to resist imazapyr. The new seed, marketed as StrigAway®, was developed over a 12-year period through the collaboration of several African national agricultural research organizations, along with the International Maize and Wheat Improvement Center (CIMMYT) and the International Institute of Tropical Agriculture (IITA).

During 2005 and 2006, imazapyr-resistant maize was field-tested on more than 13,000 farms in western Kenya. Western Seed Company launched StrigAway® seed commercially in December 2006 and has produced about 60 tons that will become available in 2008. On-farm demonstrations are now underway in Tanzania and Uganda.

STARVATION WEED

Each Striga plant can produce more than 50,000 seeds, which lie dormant in the soil until a cereal crop is planted again. This dormancy can last more than 15 years. As Striga germinates, its roots become entwined with and penetrate the host crop's roots, and draw nutrients away from the crop. This causes severe stunting of the food crop and yield loss.

GOAL: HELP SMALLHOLDER FARMERS IMPROVE CROP YIELDS



Rose Katete of Teso, Kenya, has seen significant gains in her farm's productivity since a public-private partnership helped introduce her to a new type of maize seed.

"I pulled and buried Striga on my five-acre farm for the past 17 years," said Ms. Katete, "and the problem only grew worse. During a farmer field day we learned about herbicide-treated seeds and I was one of the first farmers in the community to receive the new maize seed. It has provided the best crop of maize that I have ever grown!"

"In order to achieve the results we desire - the results our stakeholders demand - we must be open to new ways of doing business."

**Henrietta H. Fore
Administrator,
U.S. Agency for
International Development
and Director of U.S. Foreign
Assistance**

Combined with other management techniques, the new seed represents a breakthrough technology that can significantly increase maize crop yields.

Success has many fathers; especially in a public-private partnership that requires private sector technology, public sector funding, non-profit management, and institutional know-how. The battle for maize has been no exception.

THE AFRICAN AGRICULTURAL TECHNOLOGY FOUNDATION

The IR-seed breakthrough would not have been possible without the cooperation of numerous private and public groups.

Among the most important contributors to this and other crop-improvement projects in 2007 has been the AATF, a non-profit organization designed to facilitate and promote public-private partnerships that deliver proprietary agricultural technologies to smallholder farmers in sub-Saharan Africa.

The organization was formally launched in 2004 with support from USAID's Africa and EGAT bureaus, the Rockefeller



THE MAIZE PARTNERS

BASF Group of Germany is a global chemical company with operations on five continents. It contributed \$650,000 to the development of Striga weed control.

IITA, along with CIMMYT, helped to develop the seed over a 12-year period.

CIMMYT is an international non-profit organization dedicated to improving food security and farm productivity in developing nations.

The Kenya Agricultural Research Institute (KARI), based in Nairobi, coordinates research programs in crops, livestock and range management, land and water management, and socio-economics.

Western Seed Co. of Kenya contributed \$600,000 to the commercialization of the herbicide-resistant maize seed.

Foundation, and the UK Department of International Development.

The organization contributes to capacity building by engaging African institutions in the execution of tasks that contribute to the foundation's mission, focusing its attention on proprietary and innovative technologies that have been largely unavailable to African farmers.

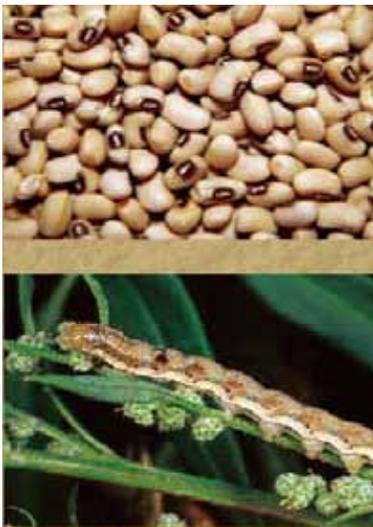
The AATF has become an effective agent, working along the complete product value chain, from production through distribution, to creation of markets for the products.

BIOTECHNOLOGY IMPROVES COWPEAS, BANANAS

Efforts to improve food security and enhance marketable commodities often begin with biotechnology.

The cowpea is a key leguminous crop that makes an important economic contribution and provides essential protein to the diets of West Africans. Partnerships formed by AATF are expected to field-test insect-resistant, bioengineered cowpea in Puerto Rico in mid-2008, and possibly in Nigeria or Burkina Faso.

The bioengineered cowpea has killed, in laboratory trials, 100% of the target insect pest *Maruca*, which causes an average loss of 60% of the harvest in West Africa.



Top: Cowpea.
Bottom: *Helicoverpa armigera*.

Similarly, banana wilt disease is responsible for severe damage to the important East Africa Highland banana, a key source of food energy in the region. Farmer-preferred varieties have little natural resistance to the disease, but there has been significant progress toward the development of a bioengineered banana that will not be susceptible to bacterial wilt.

Meanwhile, international

negotiations are underway to establish a liability and redress system for bioengineered products that will better enable companies to donate their technologies.

SWEET SUCCESS: SALVAGING COCOA, HELPING FARMERS

The Sustainable Tree Crop (STCP) program of USAID/AFR/SD is a public-private partnership that promotes improvements in the cultivation and marketing of cocoa in West Africa, which supplies 70% of the world's supply.

The private partners – companies such as Mars, Hershey, Nestlé, and Kraft – are helping to secure the vital supply chain for cocoa while helping to protect the livelihood of more than 1.5 million farmers and 50% of the region's foreign exchange.

Concerned that the cocoa supply is increasingly threatened by the loss of fertile forests and the impact of disease and pests, the chocolate industry formed the World Cocoa Foundation in 2000 to find solutions. These private partners and USAID together donated \$12 million in cash and in-kind resources to core-fund STCP in 2000. Today, the organization unites farmers and producers, the global chocolate industry and cocoa trade, donors and development agencies, the public sector, and research institutes to develop programs and partnerships that benefit cocoa farmers and protect the supply of cocoa.



Designed to teach farmers about disease and pest control, crop management and improving farming techniques, farmer field schools have proven highly effective in driving change in cocoa communities.

Combining multiple sources of expertise, STCP has developed a high-quality, inexpensive training program based on farmer field schools (FFS). Some 16,000 cocoa farmers in five countries have participated in the schools, learning key lessons on crop management, pest and disease control, and quality control. Another 38,000 farmers have benefited from farmer-to-farmer diffusion of knowledge.

Farmers who have participated in the field schools have seen cocoa yields 15% to 40% higher, while pesticide use has dropped 10% to 20%. Improved marketing has contributed to dramatic income increases of 20% to 50% for these smallholders.

The farmer field school program has exceeded expectations, to become the flagship activity of STCP. It is, however, only one tool among many others that is putting knowledge, skills and decision-making power directly into the hands of the farmers and their organizations. The program features a flexible organizational framework that draws on skills and resources from multiple stakeholders, including those who can best intervene at the local level.

A SUSTAINABLE NICHE

USAID/West Africa has partnered with Kraft Foods to create a niche market for high-quality premium-priced cocoa certified by the Rainforest Alliance (RA).

Kraft and its partners pledged \$1.4 million in cash and in-kind resources over three years, supplemented by \$600,000 from USAID, to provide training and incentives for farmers. The intensive training covers environmental and sanitary issues as well as increased productivity.

GOAL: BUILD STRONGER COOPERATIVES TO ENSURE CONTINUING SUCCESS

Douaye Philippe Traore is a member of a cocoa cooperative that is a candidate for Rainforest Alliance certification in the central-western region of Cote d'Ivoire. Mr. Traore was proposed as a FFS facilitator, but STCP did not select him for the role. However, the cooperative had such respect for the FFS extension approach and in the certification process, the president and board members provided funds for Mr. Traore to set up a FFS on his cocoa farm.



A nicely trimmed cocoa tree on Douaye Philippe Traore's farm.

A few members of the cooperative began to attend the FFS training sessions. Convinced by the results of the new farming practices and knowledge the trainees were acquiring, the rest of the 30 FFS

participants who had arrears immediately paid their membership dues. This resulted in significant improvements in the cooperative, including increased productivity of their cocoa farms.

From 2006 to 2007, cocoa production in the Daloa and Abengourou areas of Cote d'Ivoire increased from 1,570 mt to 6,000 mt. More than 12,000 hectares came under sustainable cocoa production and 355 farmers became RA-certified. In addition to receiving higher prices for RA-certified cocoa, these farmers saw plot yields increase 50%. Farmers' cooperatives have been strengthened and access to the global cocoa market has improved, especially as demand and prices continue to rise.

An important testimonial to the success of the partnership is growing competition among other buyers for their premium product.

BLIND COMMUNITIES GAIN SELF-RELIANCE WHILE GROWING QUALITY VEGETABLES FOR HOTEL

Two blind communities in Livingstone, Zambia, who formerly survived by begging at the Sun International Hotel resort, are now supporting themselves with income earned from vegetable farming as the result of a partnership sponsored by Sun International, USAID/Southern Africa, University of Zambia, and the National Agriculture Research Center.

Sun approached USAID in 2005 with the idea to help the communities gain self-sufficiency. USAID suggested that the hotel partner with Agribusiness in Sustainable Natural African Plant Products (ASNAPP) to offer the blind communities an opportunity to grow specialty vegetables, which the hotel could feed its guests.

The hotel paid \$300,000 to construct a high-tech greenhouse with irrigation and hire a full-time manager. USAID

contributed technical assistance to train the growers in good agricultural practices; the university and the agriculture center provided expert research and advice.

In 2007, the vegetable farmers sold 708 tons of produce to the Sun Hotel, valued at \$786,000. The experiment has been so successful that Sun has agreed to fund construction of an additional \$60,000 greenhouse in 2008, which will be owned and maintained by the blind communities. Sun has assisted the communities in opening a revolving account where some earnings are set aside to finance continuing operations.

The partnership has satisfied several objectives. With their new income, the blind growers no longer beg from tourists and can afford to send their children to school. The hotel benefits from having a reliable supply of high-quality vegetables at a negotiated price, while the growers have a dependable market for their produce. The partnership demonstrates that, with cooperation and ingenuity, even disadvantaged communities can earn a living.

PROMOTING COMMODITIES WITH CORPORATE INVOLVEMENT

USAID/Uganda has utilized \$3.7 million from its Strategic Activity Fund (SAF) to leverage an \$8 million investment to help commercialize commodities such as coffee, cotton, grains, oilseeds, spices, and floriculture.

The fund, available through USAID's Agricultural Productivity Enhancement Program (APEP), has provided support to public institutions, NGOs, associations, and businesses through cost-shared ventures focused on innovative projects all along the commodity value chain.

An evaluation of the SAF investment found that it succeeded, in part, because it was able to link smallholders to a



M. HERICK

A vanilla farmer and agricultural extension agent looking at vanilla beans.

true corporate partner that not only supplemented project funds but also directed crop promotion activities.

The SAFs have provided outreach in conflict-affected areas where APEP staff cannot freely travel; when it engages a private sector firm or NGO, their marketing activities may continue even after APEP funds have run out.

GHANAIAN PINEAPPLE EXPORTS GAIN FROM QUALITY INSPECTIONS

In December 2006, USAID/Ghana began a partnership with the Sea Freight Pineapple Exporters of Ghana (SPEG) and the Ghana Standards Board (GSB) in an effort to raise the incomes of smallholder farmers and exporters with improved quality control.

With a \$195,000 cash investment from USAID and in-kind contributions from the other partners, an international inspection company was hired to test the quality of pineapple shipments from 10 SPEG members at ports and packing houses. The inspection firm trained quality control managers at each firm and prepared reports to provide feedback on harvesting and post-harvest methods.

In 2007, this partnership improved production practices and certified smallholder farmers through the GlobalGAP quality assurance program. Income for smallholder fields in the coming year is expected to double as a result of improved quality, certification, and linkages with exporting firms. During the inspection period, the percentage of pallets conforming to all quality norms increased from 35% to 61%. While the internal quality of the fruit rated above 96% throughout the program, external quality averaged 69%, which fell short of the 75% minimum requirement.

As quality awareness increases, SPEG members should be able to increase their export earnings. To sustain the progress, members have agreed to finance a two-year extension of the inspections and expect to raise quality to match minimum international standards.

BETTER SEED TO REAP GREATER FOOD SECURITY

Seed is a critical input for increasing agricultural productivity and reducing food insecurity and poverty.

At the end of 2007, USAID partnered with the Alliance for a Green Revolution in Africa (AGRA) on a five-year, \$61 million project to develop a commercial seed



USAID

Healthy Ghanaian pineapples.

industry in West Africa. The West Africa Seed Alliance (WASA) seeks to provide small-scale farmers in Ghana, Mali, Nigeria, Burkina Faso, and Niger with affordable, timely, and reliable access to high-quality seeds.

Through this alliance, partners will establish a network of over 800 agro-dealers in each of the five focus countries to reach more than 500,000 farmers. USAID has committed \$6.1 million to the program, which plans to support 25 local seed companies and train about 90 plant breeders and agricultural scientists.

The main resource partners include AGRA, USAID, Pioneer Hi-Bred, a DuPont business; Monsanto; Kemseed; and the African Seed Trade Association.

RESTORING ZAMBIA'S GROUNDNUT INDUSTRY

Zambia was once a major producer and exporter of groundnuts, but a series of setbacks and missteps reduced it to a minor crop for on-farm consumption or local sales only.

In June 2007, USAID/Zambia's MATEP Project committed \$250,000 to a partnership with Tiger Brand Foods of South Africa to help create a reliable high-quality source of peanuts for Tiger's Black Cat peanut butter.

The effort resulted in the formation of a new company, Choice Nuts, which began to organize smallholder farmers and undertake grading, sorting, and shipping of the nuts to South Africa.

Both Tiger and Choice Nuts contributed in-kind resources and Barclay's Bank provided a \$300,000 loan for start-up expenses. In addition, the non-profit Zambia Agricultural Technical Assistance Centre made a \$150,000 loan.

In 2007, the partnership generated exports of 500 tons of smallholder-grown groundnuts, with exports of 12,000 tons expected in 2008. Tiger could eventually purchase 20,000 tons annually as production increases. Results point to a successful and sustainable new agribusiness for Zambia that may help revive one of the country's dormant commodities. Moreover, the experience should be replicable for other agro-partnerships in the future.

ANCHORING COMMERCIAL FISH FARMING IN UGANDA

In 2005, USAID/Uganda began a pioneering partnership with the ambitious aim of establishing the first large-scale commercial fish farm in the country. The farm would provide knowledge, training, and credibility to smallholder fish farms, as well as anchoring the demand for fish feed so that a commercial feed mill could be developed and sustained.

USAID's private partner in the venture is Source of Nile Fish Farm (SoN), itself a joint venture. Also participating is the

Grading and sorting groundnuts in Zambia.



USAID

Dutch Program for Cooperation with Emerging markets (PSOM), and the National Agricultural Research Organisation (NARO) of Uganda, which donated use of its ponds for one year at the Kajjaansi station.

USAID contributed \$46,200 to the start-up, which was combined with PSOM's \$756,000 grant to SoN. SoN has made a major investment of \$500,000, which would be at risk if a commercial feed mill is not successful.

USAID has also assisted with training of staff to oversee construction and management of the ponds and technical advice on design, seining, harvesting, and handling techniques.

The farm was initially stocked in November 2006, and the SoN farm quickly became the main source of quality tilapia fingerlings in the country. Still in its early stages of construction, the farm sold 88,000 fingerlings and one ton of fish in 2007. Other fish farmers are benefiting from SoN's technology and advice and three extensive training sessions have been held for the mostly-female workers.

As an aquaculture demonstration project, the partnership has already proved itself to be extremely valuable for small fish farmers.

The partnership demonstrates several important development objectives, including private sector commitment to the overall agenda. The enterprise has the additional benefit of expanding the local capacity for global trade, as investors in the SoN farm have experience exporting tilapia to Europe and intend to target some of the production to that market.

STRENGTH IN NUMBERS: IKURU GROWS TO PROMINENCE

A rural network of smallholder farmers in Mozambique has developed into a powerful business entity that has outgrown expectations.

In 2007, USAID/Mozambique recommitted its support of a key partnership that has helped establish IKURU ("strength" in the Macua language), a network of more than 9,500 farmers, into a profitable, dividend-paying business.

The partnership was developed in the peanut-growing region of northern Mozambique, starting with a group of 21 farmers' associations known as FORA. Today, farmers have become equity holders as well as producers, and IKURU is the leading farmer-owned business in the country.

An aerial view of the Source of Nile fish farm in 2007, ten months after construction began; the farm is now about double this size.



JEFF ETHERIDGE

Dr. Nelly Isyagi checks dissolved oxygen concentration and temperature in a fish holding tank at Umoja Integrated Farm. Oxygen meters can help farmers improve survival rates of catfish hatchlings from 10% to 90%.



KARENVEVERICA



Peanut farmers from Naihava Association, a founding member of IKURU, on their farm.

The partnership began in 2003 when the FORA began a collaboration with two social investors, Oxfam Novib and the Global Alliance for performance Improvement (GAPI), and a Mozambican investment company, with support from the Cooperative League of the USA, the USAID-funded NGO. The partners established an innovative farmer-owned trading company to eliminate middlemen from their peanut sales. IKURU became an effective trading organization for agricultural products, and its shareholders are the highest performing FORA in three provinces. More recently, new partners have joined: Twin Trading, a marketing firm, and Norwegian producer cooperatives Norges Vel and Norges Felleskjop.

The partners provide investment, technical assistance, volunteer services and training, management systems and know-how, and trading experience.

Sales have tripled since 2003, and in 2006, IKURU products were the first to be exported from northern Mozambique directly to a European market, including 100 tons of Fair Trade-certified products, which sell at a 25% premium over local market prices.

Not surprisingly, as profits and dividends have grown, many more FORA have expressed interest in joining IKURU.

5. CAADP SPURS AGRICULTURAL GROWTH AND INVESTMENT

The AU/NEPAD Comprehensive Africa Agriculture Development Program (CAADP) is an African-led vision and framework designed to ensure that agriculture plays its critical role in supporting transformational development and to improve the effectiveness of development assistance. In 2007, in collaboration with our development partners, IEHA made significant progress in aligning with and supporting CAADP, which is the largest, most ambitious agricultural reform process ever undertaken in Africa.

CAADP IS ACHIEVING RESULTS

African governments are increasing their funding for agriculture.

- Development partners, governments, and regional economic communities are coordinating efforts to design comprehensive and integrated agriculture development programs at the country and regional levels that are evidence-based and identify investment priorities and policies that will increase agricultural growth.
- Strategic programs are being implemented by governments and development partners through bilateral and multilateral programs and a multi-donor CAADP trust fund managed by the World Bank was established.
- A CAADP partners' platform, composed of development partners and African leaders, meets every six months to assess progress, undertake sector peer reviews and set priorities.

- Agriculture growth rates are continuing to increase with averages reaching close to the 6% target rate; and
- Several of the Presidential Initiative Countries—Ghana, Uganda, and Mozambique—are expected to achieve the MDGI of reducing poverty and hunger by half by 2015. Agricultural growth has been a major driver of poverty reduction in these countries.

CAADP addresses policy and capacity issues across the entire agricultural sector and across the entire African continent. CAADP offers multiple opportunities for progress on the Monterrey and Paris Declarations; promotes African mutual accountability and financial and political commitment; integrates the need to address chronic vulnerability into the mainstream development agenda; and provides a framework for Africans and their development partners to work jointly to assist famine-prone countries tackle the root causes of hunger. The G-8 (at Heiligendamm, St. Petersburg, Gleneagles, and Sea Island) and major OECD partners have committed to support the African Union's implementation of CAADP.

In 2007 IEHA assisted CAADP partners in undertaking a number of reforms and capacity-building efforts to address critical constraints to CAADP implementation at the continental, regional, and country level consistent with the AU/NEPAD action plan. This included establishing the institutions, tools, and capacity to enable African leaders to manage the agriculture agenda; making strategic investments;

harmonizing and coordinating donor support; incorporating new players; and increasing transparency and mutual accountability.

Constraint 1: The aspirations of African leaders to undertake major reforms have been constrained by lack of basic analytical and management tools and governance systems that would allow them to do business differently.

Reform 1: Establishing the institutions, tools, and capacity to enable African leaders to manage the agriculture agenda.

In 2007 IEHA provided significant levels of assistance at the continent level to give African leaders the capacity, business practices, knowledge, and development tools needed to shape, lead, and manage the CAADP implementation. IEHA provided funding and technical assistance to develop two of the four major pillar frameworks for CAADP; the Markets, Infrastructure, and Trade Pillar and the Food Security Pillar.¹ The pillar frameworks provide the overall strategy and policy to guide activities. USAID assistance enabled African leaders to develop the basic CAADP implementation policy frameworks through support to AU, NEPAD, and African technical organizations leading the processes of pillar framework development.

In each sub-region—East, West, and Southern Africa—IEHA made major progress in establishing regional analytical “nodes” by funding and providing technical assistance to the Regional Strategic Analysis and Knowledge Support Systems (ReSAKSS) program. As a result of this effort, evidence-based planning and monitoring systems are being used at the regional and country levels to ascertain funding priorities, identify

¹ The Agriculture Research, Technology Dissemination and Adoption Pillar framework, Framework for African Agricultural Productivity (FAAP), was endorsed by the African Union in 2006. The FAAP is available at <http://www.fara-africa.org/networking-support-projects/faap/>.

policy bottlenecks, and assess progress. The Initiative also assisted in building the institutional capacity of the regional economic communities (COMESA and ECOWAS) to coordinate their members’ CAADP planning processes and improve their communication systems, strategies, and protocols to support CAADP implementation. USAID support is enabling the RECs to assist member countries to undertake preliminary analytical work and stakeholder discussions to establish regional CAADP Compacts, which are integrated strategic investment plans that identify the policies and specific investments required to achieve 6% annual agricultural growth. IEHA also provided funding to strengthen the capacity of sub-regional technical organizations (e.g., ASARECA, CORAF, CILSS) that work with RECs to lead and manage regional programs.

Our bilateral IEHA program assisted in building the institutional capacity of government organizations, including policy and research groups; private sector organizations, including trade and finance groups; and civil society groups to lead and manage CAADP. Several bilateral IEHA programs are establishing policy-and-evidence-based review processes through support for country-specific Strategic



Market analysts exchange information with wholesaler traders in XaiXai City, Mozambique.

Analysis and Knowledge Support Systems (SAKSSs). These include Ethiopia, Uganda, Ghana, Mozambique, Nigeria, and Malawi.

These capacity-building efforts are strengthening African organizations and their enabling policy environments to stimulate agricultural growth and to achieve the objective of African leaders for agriculture, reflected in CAADP goals. Approximately 15 countries are now engaged in stocktaking, analysis, and roundtable processes to establish CAADP Compacts. The first CAADP Compact, the Rwanda Compact, was signed in March 2007, and several others are underway.² The Rwanda Round Table process and the signing of the Rwanda Compact demonstrate that this process can mobilize broad government support (e.g., from the Minister of Finance) for an aggressive investment agenda for agriculture. For the first time in Africa's history, CAADP has succeeded in turning ministers of finance, and other cabinet members, into real champions for the agricultural and rural growth agenda.

Constraint 2: The total level of public and private sector investment has not been sufficient to stimulate broad-based growth in the sector.

Reform 2: Making strategic investments.

Traditionally, investments in African agriculture have been “projectized,” often focusing on “islands of success.” In 2007, together with development partners, IEHA made investments that focus on the fundamentals of agriculture as a business—getting commercial seed and fertilizer markets to work, improving staple food markets so that staples can be traded between surplus and deficit areas, and improving infrastructure and science capacity. The pace of CAADP implementation has been slowed due to a lack of stable funding to comprehensively and



An improved maize storage facility in Uganda.

consistently support the RECs and national institutions responsible for implementation.

IEHA is making new investments in African agriculture, as well as continuing support for programs that align with and support CAADP pillars and priorities. These investments are being concentrated at the regional and country level, supported and reinforced through global programs. The investments, made jointly with African governments and development partners, are focused on new tools and approaches to work with and leverage private commercial and not-for-profit capacity and investment. Our efforts are concentrated on improving access to finance, markets, services, technology, and economic opportunities critical for CAADP's success.

At the regional level, USAID is making new investments and renewing existing ones with RECs that support CAADP priority actions, namely:

² The process that led to the Rwanda Compact, with its lessons learned, is discussed on p.74.

- Expand regional agricultural trade (output and input markets) through regional programs, including RATES/COMPETE, RELPA, and ATP³;
- Increase private sector regional investment through public-private partnerships for cocoa, seed, cotton, and coffee;
- Increase access to technology across the region through support for sub-regional research organizations such as ASARECA and CORAF;
- Increase regional market access and share of markets, through SPS, cotton, and livestock programs;
- Expand and improve regional commercial food staples markets; and
- Establish and strengthen regional surveillance and early warning systems for emerging threats and diseases, including animal health systems, for highly pathogenic avian influenza (HPAI).

At the country level, USAID is:

- Focusing on grades and standards programs that improve market access;
- Increasing attention to development of commercial seed and input systems;
- Expanding dairy and livestock programs, including animal health services for emerging diseases such as HPAI;
- Extending efforts to support public-private partnerships;
- Broadening programs to increase access to financial services; and
- Linking small producer associations and their members to markets.

³ RATES is the Regional Agriculture Trade Expansion Support project in East Africa, which is nearing completion and will be replaced by COMPETE, the Competitiveness and Trade Expansion program; RELPA is the Regional Enhanced Livelihoods in Pastoral Areas program in East Africa; and ATP is the Agribusiness and Trade Promotion program in West Africa.

The establishment of the CAADP Trust Fund represents a major achievement in 2007. IEHA led the way in collaborating with the World Bank to establish and provide funding for this multi-donor trust fund. The fund will provide the stable funding base needed to strengthen capacity and support CAADP implementation.

Most importantly, African governments have been increasing their spending for agriculture in recent years. However, we are still far from achieving the CAADP target of allocating 10% of national budgets to agriculture, pledged as part of the 2003 Maputo Declaration. As a share of total government expenditures, spending on agriculture Africa-wide has ranged from 4% to 6% since 1980. In 1980, spending had reached 7%, but fell to 4% in the 1990s before increasing to 6% in 2005. Thus, at the continent level, Africa is still very far from its target. While a majority of countries have allocated 3% to 6% of their national budgets to the sector, there are some positive signs among a few. For example, Burkina Faso, Ethiopia, Guinea, and Mali achieved the 10% mark in 2005. Another eight countries are close behind at rates of 8% to 10%: Chad, Mozambique, Malawi, Gambia, Madagascar and Zambia. Only a few are below 3%, including: Lesotho, Central African Republic, Togo, Democratic Republic of Congo, Ghana and Guinea Bissau.

African governments committed to reaching the 10% allocation for agriculture by 2008. As Table 5.1 illustrates, the share of agricultural expenditures has increased for SSA, rising from 4.8% in 2002 (the year before the commitment was made) to 5.3% in 2005, the last year for which data are available.

TABLE 5.1 GOVERNMENT EXPENDITURE ON AGRICULTURE AS A PERCENTAGE OF TOTAL EXPENDITURE (PERCENT)

	2002	2003	2004	2005	2006
IEHA Countries					
Ghana ¹ *	0.7	1.4	2.0	1.5	..
Kenya ¹	5.0	4.6	4.2	3.8	..
Mali ¹	10.6	12.7	14.5	10.8	..
Mozambique ³	17.1	1.2	9.1	9.1	..
Uganda ⁴	4.2	4.2	5.0	3.2	5.2
Zambia ⁴	1.8	2.3	4.0	8.0	8.0
Rest of SSA					
Benin ¹	3.5	4.4	3.9	..	..
Botswana ¹	4.4	4.7	4.5	3.3	..
Burkina Faso ^{1,2}	9.2	9.2	15.9	15.0	..
Burundi ³	3.6	6.1	4.4	..	..
Cameroon ^{1,2}	3.5	3.4	3.6	3.6	..
Central African Republic ¹	..	..	2.7	..	..
Chad ¹	..	..	9.7	..	..
Congo, Dem. Rep. ³	0.8	0.7	1.5	1.8	..
Cote d'Ivoire ^{1,2}	5.5	4.5	4.4	4.4	..
Ethiopia ¹	7.4	7.5	13.6	16.5	..
Gabon ³	0.6	0.9	0.8	..	..
Gambia ¹	..	..	8.5	..	..
Guinea ¹	..	..	14.0	..	..
Guinea Bissau ¹	..	..	0.5	..	..
Lesotho ³	4.1	4.9	3.0	2.9	..
Madagascar ³	8.0	7.9	8.0	8.0	..
Malawi ⁴	8.7	6.6	7.0	11.0	9.0
Mauritania ¹	..	..	5.5	..	..
Namibia ³	6.0	6.0	5.3	5.5	..
Niger ¹	..	..	0.9	..	..
Nigeria ^{1,4}	3.2	3.2	3.2	3.8	5.8
Rwanda ^{1,5}	8.6	3.9	4.0	3.4	3.3
Senegal ¹	3.8	3.6	4.4	..	..
Sudan ³	1.7	3.1	5.4	..	..
Swaziland ³	4.0	3.3	3.3	5.0	..
Tanzania ³	4.5	6.8	5.5	5.5	..
Togo ^{1,2}	2.0	2.4	2.3	2.3	..
Zimbabwe ¹	8.3	9.0	6.6	7.7	..
Sub-Saharan Africa ¹	4.8	4.4	4.9	5.3	

Sources:

1. Calculated by IFPRI using International Monetary Fund's Government Finance Statistics Yearbooks with some revisions from country sources.

2. Projected by IFPRI for 2005 figures using the IMF data in 1 above.

3. From the NEPAD/AU/FAO/World Bank 2006 budgetary tracking surveys.

4. From preliminary in-country surveys by ReSAKSS nodes with in-country network partners (Zambia, Nigeria), and in some cases as part of broader Public Expenditure Review studies under taken in collaboration with the World Bank and national government agencies (e.g. Uganda, Malawi). For Nigeria, 2006 figures are preliminary estimates based on the federal budget.

5. From Diao et al. 2007 (IFPRI)

* For Ghana, some preliminary results of an agricultural expenditure survey carried out by IFPRI shows that if expenditures allocated to other agricultural-related agencies in central government (Ministries of Forestry and Fisheries, the Ghana Cocoa Board, etc.) are included, this figure can quickly rise to a share of 4% of total the national budget.

.. Data unavailable

Achieving the spending target of 10% does not guarantee the desired results for each country. Some countries may have invested a great deal in the past and are now on track to meet the MDG for poverty, whether they meet the current spending target or not. These include Ghana, Mozambique, and Uganda (see Fan et al., 2008), with average annual spending shares of 7% to 8.5% per year throughout the 1980s (see Table 5.2). Therefore, any further increases in investments for agriculture within these countries will promote more rapid declines in poverty. However, other countries will need to spend more than the 10% level to reach MDG1. This includes countries such as Burkina Faso, Ethiopia, and Mali that are already spending at the 10% mark or above that will need to invest more efficiently or increase the absolute level of spending to achieve the MDG target. Therefore, while the 10% benchmark is useful to generate greater political commitments for increased spending in agriculture, each country will need to consider carefully the investments required to generate the growth rates needed to halve its poverty and hunger by 2015.

In addition to national-level patterns of investment in agriculture, it is useful to examine spending patterns at the sub-national level. This is especially important considering the trend for greater government decentralization among several African countries. Moreover, spending at the local level can have significant impact on development

	AGRICULTURE EXPENDITURE AS A PERCENTAGE OF TOTAL EXPENDITURE (ANNUAL AVERAGE PER PERIOD)		
	1980-1990	1990-2000	2000-2005
Burkina Faso	5.1	5.2	10.7
Ethiopia	8.4	9.6	9.9
Ghana	6.9	2.6	1.7
Kenya	9.6	5.8	4.6
Malawi	12.3	9.1	4.7
Mali	6.6	11.7	12.4
Nigeria	5.7	2.8	3.5
Uganda	8.5	2.6	5.4
Zambia	12.3	3.0	2.6
Africa	7.4	4.6	4.8

Source: IFPRI, based on IMF Government Finance Statistics & IMF Statistical Appendix of various countries (2008)

outcomes and rural poverty. Several country studies have been undertaken by the International Food Policy Research Institute (IFPRI) and all three ReSAKSS nodes to examine the nature and location of spending in agriculture in Malawi, Mozambique, and Zambia in Southern Africa; Uganda and Kenya in Eastern Africa; and Nigeria and Burkina Faso in Western Africa.⁴ We summarize key findings for the IEHA countries of Ghana, Uganda, and Zambia in terms of the extent to which there is an increase in spending for agriculture at the sub-national or local level. A key observation across all three countries is that there has been an increase, although not in every region of the country.

⁴ Additional countries will be added in 2008 upon review of the results from these first set of countries and with input from the RECs, AU and NEPAD. The results from this work are intended to serve as key input into the CAADP M&E framework which remains to be finalized by the AU and NEPAD in 2008. A draft framework was prepared by IFPRI and the ReSAKSS nodes and revisions are now underway with further consultations with the Africa Union, NEPAD, and the CAADP pillar institutions.

In Ghana, for example, per capita spending at the regional and district levels has been rising over time, a reflection of the government's commitment towards greater decentralization. There has been substantial variation, however, with the lower and upper regions receiving the greatest increases in recent years on a per-capita basis. The Upper East region benefited the most, with a 40% increase from 2004 to 2005. (see Figure 5.1).

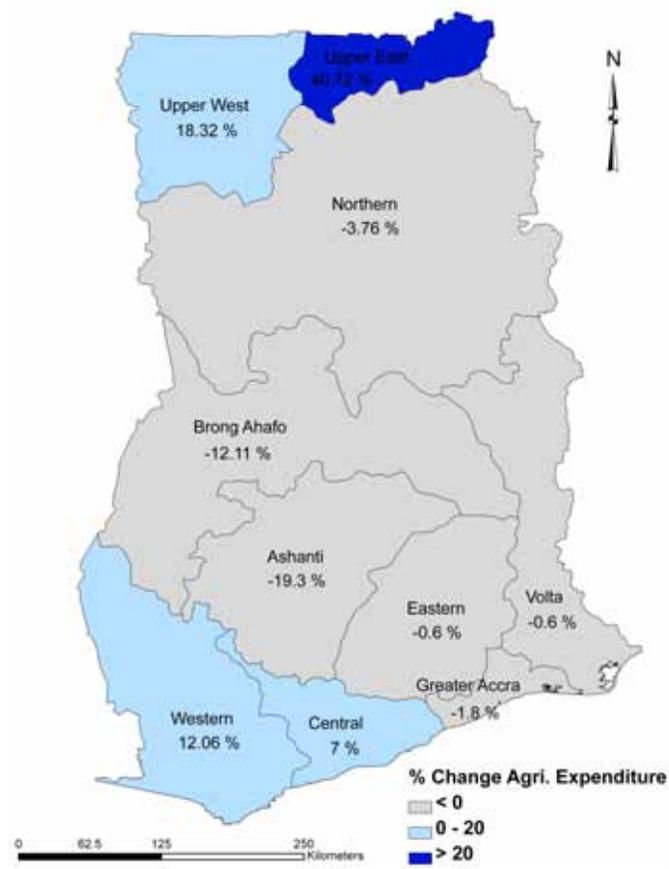
The larger Northern region did not witness any increase from 2004 to 2005. Yet, the returns on public investments in agriculture are highest in this region (Benin et al. 2008). These results suggest that new agricultural investment in the Northern region of Ghana will yield the highest benefits in terms of raising agricultural productivity, increasing household incomes, and reducing poverty.

As in Ghana, agricultural expenditures at the district level in Uganda have increased over time. The Northern region witnessed the greatest increase from 2004 to 2005 (see Figure 5.2). None of the regions witnessed any declining trends. While Fan et al. (2004) show higher economic returns from agricultural investments in the Western and Central regions, it is in the Northern region that the number of people lifted out of poverty is highest for every dollar invested in agriculture.

Zambia has increased its agricultural budget share remarkably in recent years, just falling short of 10% in 2005 and 2006. In the more recent period (2006 to 2007), agricultural spending at the sub-national level also increased in almost all regions. The largest increase occurred in the Southern and Copperbelt provinces. The Northwestern and Eastern provinces also received a boost, increasing by about 50% (see Figure 5.3).

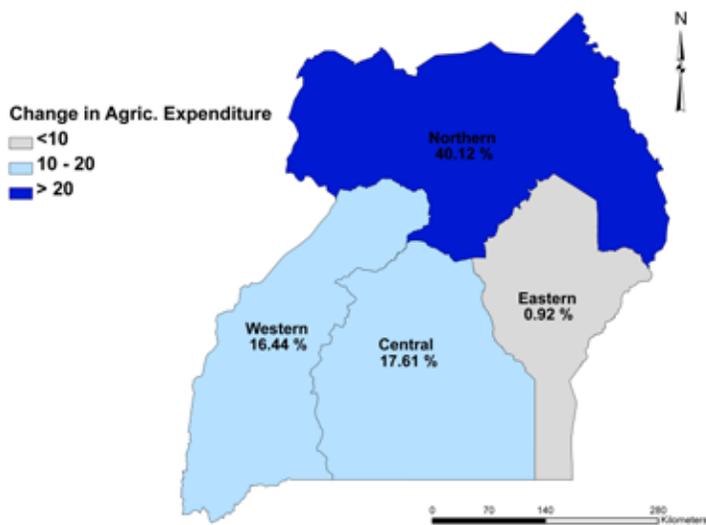
As agriculture forms the backbone of many African economies, the trend of increasing commitments to agriculture and rural

FIGURE 5.1 PERCENT CHANGE OF AGRICULTURE EXPENDITURE PER CAPITA BETWEEN 2004 AND 2005 BY PROVINCE, GHANA



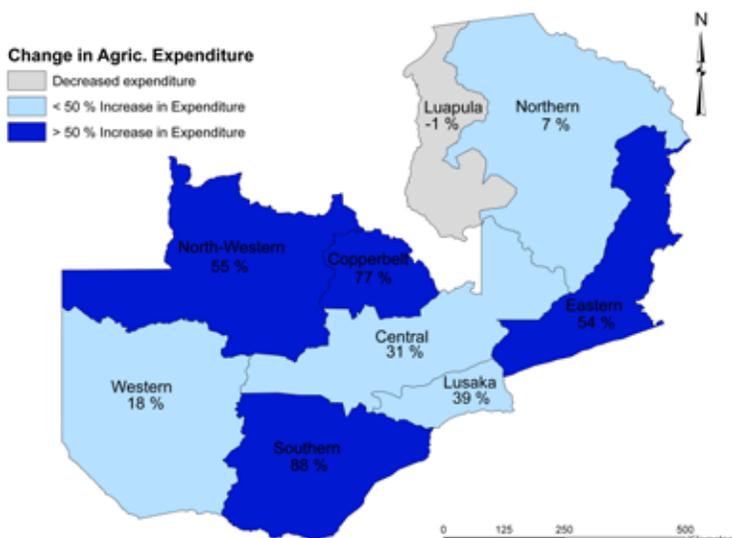
Source: Benin et al. 2008, forthcoming

FIGURE 5.2: PERCENT CHANGE OF AGRICULTURE EXPENDITURE PER CAPITA, FY 2004 - 2005, UGANDA



Source: Ministry of Finance

FIGURE 5.3: PERCENT CHANGE OF AGRICULTURE EXPENDITURE PER FARMER, FY 2006 - 2007, ZAMBIA



Source: Benin et al. 2008, forthcoming

development is heartening. Although African leaders agree that agriculture and rural development are essential to the reduction of poverty, only a handful of countries had translated this acceptance into immediate budgetary commitments by 2005. With the recent surge in food prices, which will severely affect both rural and urban populations, increased spending in agriculture and rural development becomes even more crucial in Africa. Increasing investment in agriculture will improve agricultural productivity and ensure a long-term and stable supply of affordable food to the African population, particularly the African poor. The good news is that CAADP is helping to generate attention about the importance of investing in agriculture to meet the MDG and growth objectives in the region. Several countries are now on their way to signing CAADP compacts with serious budgetary commitments to agriculture. It is too early to determine the extent to which these commitments will translate into actual spending allocations.

Among donors, the allocation picture could be better. Total overseas development assistance (ODA) for agriculture in sub-Saharan Africa has hovered around US \$1 billion a year since the 1990s (OECD 2007). While absolute dollars allocated to agriculture have increased, the share of total ODA has not. There are signs of a resurgence of funding for agriculture, especially following the publication of the 2008 World Development Report, which placed agriculture on the forefront for achieving growth and poverty reduction in Africa.

Constraint 3: Donor support to African agriculture has been inconsistent, with both donors and governments pursuing multiple objectives.

Reform 3: Harmonized and Coordinated Donor Support. CAADP is fundamentally changing the way development partners do business. Development partners have all been asked to support the

development of and align their development funding to CAADP compacts. In 2007, USAID, through IEHA, helped establish and fund new donor harmonization and coordination processes, including the Global Donor Platform for Rural Development (GDPRD) and the CAADP Partnership Platform. The GDPRD Secretariat, based in Bonn, Germany, provides communication and coordination for donors involved in agriculture and rural development. GDPRD, with IEHA assistance, established a CAADP Secretariat focused solely on improving donor coordination and sharing lessons learned. The CAADP Partnership Platform, supported by the CAADP Secretariat, meets every six months to review progress, discuss lessons learned, and set priorities for the next six months.

Constraint 4: The private sector and foundations have not been engaged in African agricultural development nor committed to investing in agriculture. Direct private investment in agriculture is currently insufficient to achieve the CAADP target growth rates.

Reform 4: Incorporating New Players into the Sector. Private sector companies and associations, civil society organizations, farmer organizations, and foundations have begun to engage in CAADP. IEHA facilitated this engagement by funding and providing technical assistance to the private sector and farmer associations to offer them a voice in the CAADP policy and review processes. IEHA is expanding private investment in African agriculture through the promotion and support of public-private partnerships (PPPs). In 2007, IEHA funded 581 new PPPs including support for the U.S. Corporate Council on Africa (CCA), the West Africa Seed Alliance and the STCP. IEHA intends to further expand PPP alliances in 2008.

Constraint 5: Clear criteria for identifying investment priorities for governments and the donor community are lacking, as is a shared commitment to assessing investment performance.

Reform 5: Increase Transparency and Mutual Accountability. By engaging in the CAADP roundtable processes and the CAADP Partners' Platform all stakeholders—donors, governments, private sector organizations, civil society groups, and foundations—are increasing their transparency and working towards mutual accountability.

In close collaboration with the RECs, their member states, and local and regional partners, the SAKSS funded by IEHA helped countries to assess policy and investment options for accelerating growth and reducing poverty and hunger, collect data on key indicators such as public spending; and facilitate timely access to the knowledge by African policymakers and development partners. This information provides the data for evidence-based decision-making, increases investment-decision transparency, and provides the baseline data that permits assessment of trends and sector performance.

IEHA also supported public expenditure reviews to assess how funding for agriculture was being utilized. The result was better tracking of agricultural budgets in CAADP countries, baseline information on how money is spent, and identification of strategic issues that should be addressed to manage these budgets more efficiently.

Finally, IEHA is building interest in and concern for mutual accountability, and supporting the CAADP Partnership Platform in deepening its efforts. The Initiative also produces an annual report that highlights USAID support to CAADP at the country, regional, and continental level. This report is made available to the public and we are happy to make it available to the African Partnership Forum.

RWANDA SIGNS FIRST CAADP COMPACT AFTER THOROUGH DELIBERATION

Rwanda has taken an important step toward implementing CAADP, an effort that requires a serious commitment to a specific set of actions and investments. These were laid out in Rwanda's CAADP Compact, which was signed by the Rwandan Ministries of Agriculture and Finance, the African Union, COMESA, and development partner representatives in March 2007. The GoR sees a private-sector led, market-oriented agriculture, underpinned by public sector investment, as the means to achieve faster, broad-based growth. The overarching

goal is the transformation of the sector, leading to an annual growth rate of 7% for agricultural GDP, 6% for food crop production, and 8% for animal resources and export crop production by 2011. The GoR has defined the following programs for 2007-2011, which represent Rwanda's priorities across the four CAADP pillars:

- Intensification and development of sustainable production systems (CAADP Pillars 1, 2, and parts of 3);
- Support to the organization of producers (Pillar 4);
- Promotion of commodity chains and development of agribusiness (Pillars 1 and 2);
- Institutional development (Pillar 4).

NATIONAL OWNERSHIP AND LEADERSHIP

The Ministers of Agriculture and Finance were involved prior to and during the Round Table meetings, demonstrating strong national ownership of the process, which built on Rwanda's Strategic Plan for Agricultural Transformation. Involvement of the Ministry of Finance was critical given its influence in budget allocation and its role in monitoring adherence to the Maputo Declaration goal of allocating 10% of the national budget to agriculture.

TIMELY STOCKTAKING AND STRATEGIC ANALYSIS

The stocktaking exercise carried out early in the Round Table process included an inventory of development efforts using local consultants familiar with the landscape. The analyses highlighted any gaps toward alignment with CAADP and helped to focus discussions surrounding a compact. The GoR engaged IFPRI to assess the

Land use is intensive in Rwanda.



STOCKXCHNG (WWW.XCHU)

options for agricultural growth and poverty reduction, including long-term investment requirements, using a multi-market economy-wide model. The model analyzed how much agricultural growth would be required to meet development goals; further analysis estimated the cost of achieving these targets.

In preparation for the Round Table, the ReSAKSS-East and Central Africa (ECA) node helped to conduct an assessment for analysis and knowledge systems required to inform the implementation of the CAADP strategy. The assessment helped to shape recommendations for establishing a Rwanda SAKSS, an information tool essential for guiding future investments and policies. The ReSAKSS coordinator for East Africa traveled to Rwanda numerous times in advance of the Round Table to consult with stakeholders and development partners.

FULL PARTICIPATION OF STAKEHOLDERS

In addition to the agriculture and finance ministers, other Rwandan government agencies participated, as well as members of the private sector and civil society, including farmers' organizations. Non-Rwandan participants included a broad coalition: a Commissioner from the African Union,

NEPAD's Agriculture Advisor, COMESA's Assistant Secretary General, and members of the donor community. This strong representation contributed to political buy-in at the highest government level and among key stakeholders and helped to facilitate the necessary public-private collaboration. The process that led to the signed Compact was hailed as a major success at the second CAADP Partnership Platform (PP) meeting in Addis Ababa, September 27-28, 2007. The challenge now is to maintain this momentum and commitment among all partners.

CONCLUSION

Considerable progress was made in implementing CAADP in 2007. As a result of CAADP, we are witnessing, for the first time in the history of African agriculture, an investment strategy for development and cooperation in Africa, a broad consensus on objectives, targets, implementation processes, and partnership principles. The foundation for better policy and program outcomes is being established country by country and region by region, and the risk of frequent strategy changes and uncoordinated donor and government efforts, which have significantly impeded progress in Africa for several decades, is being significantly minimized as the CAADP process reaches fruition at the country and regional levels.

6. ADVANCING AGRICULTURE THROUGH TECHNOLOGY

In 2007, the four key pan-African agricultural research organizations made significant structural breakthroughs and established clear priorities, and many African countries began to reap rewards from earlier investments in technology.

The four organizations restructured to be better aligned with the CAADP roadmap and to produce, through greater efficiencies and a sharper focus, a more substantial impact. The restructuring proceeded after a lengthy and evidence-based process that involved consultation among national scientists and international experts.

Each sub-regional organization determined its commodity and functional priorities, such as staple and non-staple crops, livestock and fisheries, disease management, information exchange, and market access. In addition, the Secretariats of ASARECA, CORAF/WECARD, and FARA strengthened their management systems to accommodate an expanding portfolio of responsibilities and meet international standards for organizational integrity.

Likewise during 2007, IEHA-supported research in agricultural technologies began to pay off. In eastern and southern Africa, advances in the development of disease- and drought-resistant varieties of staple crops promised major benefits for smallholder farmers. In 2007, Uganda planted its first field trial of a bioengineered crop, a disease-resistant banana. Maize seed that resists a

key pesticide was field-tested in Kenya; field trials for cowpea and cassava will commence in 2008, along with bioengineered cotton in Burkina Faso and potato in South Africa.

In parallel, important progress was made in creating the policy and regulatory frameworks that will facilitate the safe and effective use of biotech crops. The USAID-funded Program in Biosafety Systems, ASARECA, and COMESA conducted policy analyses on the economic implications of trade in biotech crops that provided the basis for the COMESA Ministers of Agriculture to endorse the regional goal of harmonized regulations.

In addition, IEHA provided training and stimulated productivity through better management and farming techniques, and through marketing alliances that increased production and dissemination of improved crop seed.

A researcher in a cassava field, Uganda.



M. MCGAHUEY

AGRICULTURAL RESEARCH AND DEVELOPMENT PRIORITIES: REGIONAL AND SUB-REGIONAL ORGANIZATIONS

Technology-related progress in 2007 provides reason for optimism that agricultural research is building momentum and providing sustainable solutions to alleviate hunger and poverty.

In this section, we summarize the structure and responsibilities of the major agricultural organizations, both geographically and by priority activities, and describe advances made through investments in biotechnology as well as via traditional crop-improvement techniques.

One regional and three sub-regional organizations (SROs) facilitate the implementation of CAADP's Pillar 4, improving agriculture research, technology dissemination, and adoption:

- **Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)** based in Entebbe, Uganda, leads the effort in eastern and central Africa. The Association links national research institutes (NARS) and other partners in 10 countries.¹
- **West and Central African Council for Agricultural Research and Development (CORAF/WECARD)** based in Dakar, Senegal, has similar responsibilities in western and southern regions, involving NARS in 21 countries.²

¹ ASARECA's member countries are: Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania, and Uganda.

² CORAF/WECARD's member countries are Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic of Congo, Cote d'Ivoire, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Nigeria, Democratic Republic of Congo, Senegal, Sierra Leone, Chad, and Togo.

- **Food, Agriculture and Natural Resources (FANR) Directorate of the Southern African Development Community (SADC)** based in Gaborone, Botswana, links NARS in 12 countries.³
- **Forum for Agricultural Research in Africa (FARA)** coordinates continental-level efforts.
- The four organizations see improved delivery and impact of scientific knowledge, policy options, and technologies as powerful instruments to drive their respective sub-regions toward meeting the CAADP agenda on technology and Millennium Development Goal 1 to cut hunger and poverty. The organizations implement their programs through and in collaboration with the member NARS in their respective regions.

Through rigorous trend analysis and consultation with a wide range of stakeholders over several years, these organizations have set priorities for regional activities that add value to what can be accomplished separately in the member countries. In the case of ASARECA and CORAF, the first step was a regional



FISH PROJECT, UGANDA

Careful data recording is a key step in agricultural research.

³ FANR/SADC's member countries are Angola, Botswana, Democratic Republic of Congo, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe.

analysis in collaboration with IFPRI. This combined a multi-market model with IFPRI's Dynamic Research Evaluation for Management (DREAM) model to rank commodities according to the potential economic impact of increased productivity, including regional spill-over benefits. These results were discussed at meetings with national scientists and international experts. In eastern Africa, the expert and stakeholder consultations led to the development of a 10-year Strategic Plan for the sub-region.

Over the years, ASARECA and CORAF had operated as overseers and coordinators of loose, decentralized, regional commodity networks and programs. These provided many benefits to the national programs, but it proved difficult and inefficient to coordinate scattered, small activities and show systematically how they added up to effective regional collective action.

The two SROs and FARA have developed five-year Operational Plans⁴ that are supported jointly by a coordinated group of donors, in part through multi-donor trust funds. Similarly, FANR has developed a Multi-Country Agricultural Productivity Program (MAPP)⁵ and an institutional design document⁶ to establish a Semi-Autonomous Sub-Regional Organization comparable to ASARECA and CORAF. Operations are being reorganized or newly designed into seven programs each in ASARECA and CORAF/WECARD and five programs each in FARA and SADC. In all the organizations, the transition was initiated in 2007, and the newly designed or consolidated

programs will be operational by the end of 2008. Each of the programs has developed, or will soon develop, a program strategy. The new/consolidated program areas, priority areas to be covered, and priority interventions by region are provided in Table 6.1.

The management at the Secretariats of ASARECA, CORAF/WECARD, and FARA are being strengthened so that the systems will be capable of managing an expanding portfolio and meeting international standards for financial management, procurement, planning, reporting, monitoring, and evaluation. The Secretariats of the Sub-Regional Organizations are also responsible for the regional implementation of the pan-African programs coordinated by FARA. These include SCARDA (capacity building), RAILS (information), and DONATA (technology up-scaling). In collaboration with the regional economic communities (COMESA for eastern and southern Africa and ECOWAS for western Africa), the SROs will provide backstopping to member countries on the implementation of activities identified at the CAADP round tables. Each organization is governed by a board that includes representatives of the private sector, universities, farmers' associations, the CGIAR, and directors of the member NARs, and report to a General Assembly of representatives of their respective regional stakeholders in the case of the SROs and continental stakeholders in the case of FARA. See www.asareca.org; www.coraf.org/; www.fara.infosysplus.org/; and www.sadc.int/fanr/index.php for more information.

⁴ ASARECA Operational Plan 2008 – 2012, April, 2008; CORAF/WECARD Operational Plan 2007-2011; FARA Medium Term and Operational 2008 to 2012, March 2008

⁵ SADC Multi-country Agricultural Productivity Programme (SADC MAPP), Programme Document, Volume 1: Main Text

⁶ Proposal For The Establishment of A Sub-Regional Organisation on Agricultural Research for the Southern African Development Community (SADC) Region; Proposed to be known as: CARDESA (Centre for Agricultural Research and Development for Southern Africa), April 2008

TABLE 6.1 REGIONAL PROGRAMS, R&D PRIORITY AREAS, AND INVESTMENT OPTIONS BY SUB-REGIONS

Program Area	Priority Areas	Selected Priority Interventions
Eastern Africa		
1. Staple crops	<ul style="list-style-type: none"> • Cassava, bananas, maize, rice, and potatoes 	<ul style="list-style-type: none"> • Regional cassava disease mitigation and market expansion • Regional banana disease mitigation and market expansion
2. Non-staple crops	<ul style="list-style-type: none"> • Coffee, beans and pulses, oilseeds, horticulture 	<ul style="list-style-type: none"> • To be determined in 2008
3. Livestock and fisheries	<ul style="list-style-type: none"> • Regional disease management • Market access • Feed systems 	<ul style="list-style-type: none"> • To be determined in 2008
4. Agro-biodiversity and biotechnology	<ul style="list-style-type: none"> • Genetic conservation • Regional use of new gene technologies 	<ul style="list-style-type: none"> • Regional platforms for genetic research • Improve tissue culture capacity • Drought-resistant maize • Conservation of underutilized species
5. Natural resource management and forestry	<ul style="list-style-type: none"> • Increased economic benefits of sustainable NRM by farmers 	<ul style="list-style-type: none"> • To be determined in 2008
6. Policy analysis and advocacy	<ul style="list-style-type: none"> • Trend analysis • Regional harmonization of key policies and regulations • Advocacy with policy-makers 	<ul style="list-style-type: none"> • Regional impact of increased food prices • Implementation of agreed harmonized policies on biosafety and regional movement of seeds
7. Up-scaling and knowledge management	<ul style="list-style-type: none"> • Exchange of knowledge and best practices • Research on extension systems 	<ul style="list-style-type: none"> • Easily available information on a set of technologies and best practices • Database on farmers groups • Training module for advisory services
Western Africa		
1. Livestock	<ul style="list-style-type: none"> • Small ruminants, piggery, poultry and large ruminants 	<ul style="list-style-type: none"> • Processing & value addition; animal health • Feed and fodder management
2. Staple crops	<ul style="list-style-type: none"> • Rice, maize, sorghum, millet, cassava, yam, banana, and plantain, vegetable and fruits 	<ul style="list-style-type: none"> • Post-harvest; pest, and disease management; regional trade; market access; policy options; seed systems
3. Non-staple crops	<ul style="list-style-type: none"> • Horticultural and high value crops (e.g. cocoa, gum arabic) 	<ul style="list-style-type: none"> • Post-harvest; breeding for product quality, yield and stress resistance • Seed systems; policy options
4. Natural resource management	<ul style="list-style-type: none"> • Agriculture and forestry 	<ul style="list-style-type: none"> • Best practices (soil and nutrient management, biodiversity conservation methods) • Policy options; mitigation climate change impact; knowledge management
5. Biotechnology	<ul style="list-style-type: none"> • Priority crops and livestock 	<ul style="list-style-type: none"> • Regional policy options • Development and application biotechnology
6. Policy, market and trade	<ul style="list-style-type: none"> • Priority crops and livestock 	<ul style="list-style-type: none"> • Regional trade integration (e.g. tax incentives; tariff barriers; rent-seeking practices); tenure security for fish producers; land tenure and conflict management
7. Knowledge management	<ul style="list-style-type: none"> • Priority crops and livestock 	<ul style="list-style-type: none"> • Regional KM capacity; technology dissemination; regional information and learning system

TABLE 6.1 CONTINUED

Program Area	Priority Areas	Selected Priority Interventions
Southern Africa		
1. Farmer empowerment	<ul style="list-style-type: none"> ● Capacity and access to information, technology, and services 	<ul style="list-style-type: none"> ● Agribusiness linkages; ● Access to market, insurance, and credit
2. Research and technology generation	<ul style="list-style-type: none"> ● Institutional innovations and capacity 	<ul style="list-style-type: none"> ● Regional platform; resource mobilization; ● Human capacity; networking; ● Identification of policy and technology; R&D priorities
3. Advisory services and innovation systems	<ul style="list-style-type: none"> ● Access to technology and services 	<ul style="list-style-type: none"> ● Advisory services; networking; ● Dissemination of good practices and technologies
4. Education, training, and learning systems	<ul style="list-style-type: none"> ● Institutional and HR capacity 	<ul style="list-style-type: none"> ● Partnership; information and communications technology (ICT) learning system; ● Curriculum reform; HR development
5. KM, ICT, and communication	<ul style="list-style-type: none"> ● Knowledge management 	<ul style="list-style-type: none"> ● ICT capacity; database and networking system; ● Market information - price, capital
Continental/FARA		
1. Advocacy and resource mobilization	<ul style="list-style-type: none"> ● Increased and sustained financing of R&D 	<ul style="list-style-type: none"> ● Advocacy for increased & harmonized investment; M&E/Peer review; FAAP monitoring system; support country compact development process
2. Access to knowledge and technologies	<ul style="list-style-type: none"> ● Institutional capacity and best practice for effective technology transfer 	<ul style="list-style-type: none"> ● Enhanced knowledge and information system; ● Institutional innovations for information & technology exchange; M&E; technology transfer
3. Regional policies and markets	<ul style="list-style-type: none"> ● Policy options 	<ul style="list-style-type: none"> ● Policy analysis; identify policy constraints; develop and advocate enabling policy options and harmonization
4. Capacity strengthening	<ul style="list-style-type: none"> ● Institutional reform 	<ul style="list-style-type: none"> ● HR strategy; curriculum development; centers of excellence
5. Partnerships and strategic alliances	<ul style="list-style-type: none"> ● Institutional innovation 	<ul style="list-style-type: none"> ● Linking with regional global players; broaden stakeholders' participation, e.g., private sector; pan-African R&D initiatives

IMPROVING CROPS THROUGH BIOTECHNOLOGY

Over the last five years, USAID has helped several African countries build a foundation of biotechnology activity, an effort that has begun to yield real progress. In 2007, with support from USAID, a few nations made significant strides in the scientific and policy arenas that will soon make bioengineered seed and crop materials available to smallholder farmers.

Africa has lagged behind Latin America and Asia in the development, testing, and adoption of biotech crops. Worldwide, more than 100 million ha are under cultivation with biotech crops, but relatively few are in Africa. First-time biotech plantings in Africa amounted to just 1.8 million ha in 2007, all of them in South Africa. However, Uganda last year planted its first field trial of a bioengineered crop, a disease-resistant banana, and technical breakthroughs in other research projects will permit field trials in 2008 on cowpea and cassava. Policy advancements in Malawi and Ghana in 2007 have paved the way for initial field trial applications in those countries.

These advancements resulted from a targeted strategy to invest in agricultural technologies that can improve smallholder incomes, while at the same time developing regulatory systems that will facilitate the safe and effective use of the technology by farmers and traders. The link between biotechnology and the enabling policy environment is critical; regulatory systems are necessary to advance research and provide a framework for commercialization of enhanced varieties. Conversely, the challenging political dimensions of agricultural biotechnology are better addressed when local institutions have technical experience with these crops and a stake in the outcome of policy decisions. USAID has succeeded in building support among key

stakeholders – researchers, regulators, policymakers, NGOs, and media – which began to produce concrete results in 2007.

USAID brings to the work of international and African partners a strategic focus on product development, demonstrated by the emergence of new varieties of banana, cowpea, cassava, and potato. Two Global Development Alliances helped produce technical breakthroughs in cassava and cowpea. Researchers developed bioengineered cassava that resists the virus that causes cassava mosaic disease as well as cowpeas that resist a pod-boring insect, Maruca, which is responsible for 50% yield loss in West Africa. Both are ready for field-testing.

USAID has emphasized the importance of moving research from the laboratory into the hands of farmers, a challenge for bioengineered crops that must navigate complex regulatory processes. Nearly all bioengineered crops in production worldwide were developed and marketed by multinational corporations. Outside of China, only one has been developed and released by the public sector. But a partnership of USAID, Michigan State University, and the Agricultural Research Council of South Africa is ready to add one more: an insect-resistant potato that has cleared final technical hurdles and will be considered for regulatory approval in 2008 in South Africa. This scale-neutral technology will allow smallholder and larger farms to reduce insecticide use, increase potato yields, and reduce storage losses to the potato tuber moth.

The South African research community gained valuable experience from moving this product from the laboratory to regulators while reaching out to the potato industry and farmers' organizations to build awareness and market acceptance. This project will be a first for South African public researchers and provide a model for future publicly developed technologies.

Rice crops also have benefited from USAID-supported biotechnology research. The Africa Rice Center is ensuring that New Rice for Africa (NERICA) varieties – valued for their resistance to drought and high yields – are also virus-resistant with the use of DNA marker-selected breeding tools. Losses due to rice viruses range from 29% to 95% in West Africa.

A major focus of USAID investment has been biotechnology policy and regulatory development, which is necessary for African governments to make decisions on the application of technologies, to address new complexities in sourcing and delivering food aid that may contain products of biotechnology, and to reduce future barriers to regional agricultural trade. Taking the first step in policy development, Ghana drafted and introduced a legislative instrument that, when adopted, will allow the first field trials in that country. Technical assistance to Malawi enabled the government to update its biosafety act and issue biosafety regulations and guidelines that will permit field trials in 2008. Malawi has expressed strong interest in testing bioengineered cotton. Kenya's Parliament will consider comprehensive legislation that would allow for the commercial or open release of biotech crops, the result of two years of outreach by local NGOs to government ministries and parliamentarians. The level of understanding and support for biotechnology built among the parliamentarians was evident in the two readings of the bill during their 2007 session.

Regional economic and research organizations have begun to develop policies that will strengthen and complement actions at the national level. In East Africa, the USAID-funded Program in Biosafety Systems, ASARECA, and COMESA conducted policy analyses on the economic implications of trade in biotech crops at the regional, national, and international levels that provided the basis for the COMESA Ministers of Agriculture to endorse the regional goal of harmonized regulations.



Planting rice in Mali.

In 2007, FANRPAN concluded analyses that have positioned SADC to engage with COMESA to consider similar regional discussions on biosafety regulation. In West Africa, at the 3rd ECOWAS Ministerial on Biotechnology and Biosafety, ministers endorsed a regional action plan and issued a statement supporting the use of agricultural biotechnology to increase productivity, competitiveness, and sustainability of the farming sector. Toward that end, INSAH/CILSS is working with ECOWAS on the modification and adoption of a Biosafety Convention that would permit regional-level decisions and safety assessments on biotech crops.

In Uganda, 50% of the population depends on banana or matoke for a food staple. USAID is partnering with the government of Uganda to develop and deploy technologies to combat a suite of diseases that threaten this crop, grown by thousands of smallholder farmers. Farmers usually depend on natural re-growth of banana plants as a source of planting material. But this is a slow process and often transmits plant diseases from one field to the next, reducing yields and shortening the lifespan of the plantation. To address damaging outbreaks of banana bacterial wilt, USAID is working with a Ugandan tissue culture company,



Peppers for sale in Accra, Ghana.

Agro Technologies, to supply clean banana planting materials and set up demonstration gardens to educate farmers. So far, farmers have utilized the improved materials and management practices on 4,000 acres and have benefited from higher yields as well as higher income from selling clean planting material to other farmers. The cost of clean material from tissue culture is still prohibitive for many small farmers, so USAID is working with IITA to develop farmer-operated macro-propagation units to multiply the disease-free plantlets at lower cost.

A partnership of the National Agricultural Research Organization of Uganda, Katholieke Universiteit Leuven, and the Centre for Plant Science at the University of Leeds took a major step forward in a longer-term research effort to develop bananas with resistance to black sigatoka fungus. The Ugandan government began field trials of these bioengineered bananas in 2007, a significant milestone. USAID support for both the research and the biotechnology regulatory development was critical to this advance.

Overall, 2007 witnessed an increasingly positive tone in national and regional biotechnology discussions as well as measurable progress in the development of technology and related policies. We expect to see further momentum in 2008 as other IEHA countries approve field trials, additional technology moves through the research pipeline, and, most notably, Burkina Faso becomes the second country in Africa to begin commercial-scale production of a biotech crop; in this case, cotton. USAID funded the training of regulators in Burkina Faso to help develop their science-based regulatory system. These advances will happen only with African leadership, with governments making informed decisions based on the value these technologies can create for individual farmers and national economies.

TECHNOLOGY DEVELOPMENT AND DEPLOYMENT: ACHIEVEMENT THROUGH PARTNERSHIP

IEHA support to the CGIAR Centers contributes significantly to the four pillars of CAADP. The primary focus, however, is on the implementation of Pillar 4.

CGIAR Centers generate technologies, policies, and improved management practices through research and development partnerships that draw on academic researchers, private sector companies, and NGOs. The Centers' research priorities are designed to link productivity growth with markets and income generation. Recent advances in agricultural production and marketing linked to CGIAR efforts include:

Cassava. IITA has helped boost Nigeria's cassava production to 45 million tons per year, making it the world's largest grower. New cultivars resistant to cassava mosaic disease have been planted on 4,656 ha; small-and-medium-scale enterprises have generated \$25 million in revenues; processing equipment fabricators have been set up in seven states; cassava-related jobs employ more than 25,000 people; and a modern factory has been constructed that uses cassava to produce 30,000 tons of glucose syrup per year, buying 400 tons of the root daily from 20,000 poor farmers.

Livestock. International Livestock Research Institute (ILRI) research led to policy reforms in the Kenya dairy sector which enabled small-scale milk vendors to participate in formal markets with greater efficiency and at lower cost. The reforms have helped contribute \$33.5 million annually directly to the Kenyan economy and another \$130 million indirectly, with spillover benefits to neighboring countries. Dairy-sector

regulators in Rwanda, Kenya, Tanzania, and Uganda agreed in 2007 to promote the new approaches to training and certification that ILRI advocated in Nigeria. Kenya now has nearly 2 million smallholder dairy farms that produce 4 billion liters of milk per year.

Maize. CIMMYT has helped introduce better maize varieties, stressing research on resistance to stress, stem borer, and Striga weed, and improved nutritional content. New varieties of Quality Protein Maize (QPM), designed to combat childhood malnutrition, have been released in four East Africa countries so far – Ethiopia, Kenya, Tanzania, and Uganda. In 2007, seed companies reported having released at least 3,300 tons of QPM seed, sufficient to sow 130,000 ha. An independent Ethiopian research institute reported that use of QPM seed is associated with healthier pre-school children. Since 2001, 11 improved varieties of maize have been introduced in the region.

Groundnuts. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) has developed high-quality disease-resistant varieties of groundnuts, a key protein source. The new varieties have been rapidly and widely adopted and are now in production in Uganda, Malawi, Mozambique, and Zambia, with Kenya soon to follow. Better aflatoxin management has helped producers meet international quality standards and improve smallholder competitiveness in global markets. A USAID-supported seed revolving fund uses a sustainable, public-private approach where capital is invested in seed production and recouped from sales to the private sector. The fund has produced and sold more than 625 tons of groundnut and 146 tons of pigeonpea seed since its establishment in 1999.

Seed. A farmer-led organization joined forces with CIMMYT, WorldVision International, and Swaziland's national research and extension system, to create the Lesibovu Community Company, which produces and markets popular drought-tolerant maize seed, including the ZM521 variety, which yields 30% to 50% more crop under drought and low soil-fertility conditions. Swaziland seed farmers increased production from 25 kilos to 41,000 kilos annually after receiving training in production and marketing.

BETTER COORDINATION YIELDS RESULTS

The concrete results produced by CGIAR's research and technology dissemination in 2007 were due in part to an alliance formed by the Centers to better coordinate projects and agenda for more efficient operation. With too many independent efforts underway simultaneously, partners recognized the need to vet major program decisions and priorities through the sub-regional organizations. In addition, consultations across funding agencies have resulted in a greater consensus that informs CGIAR decision-making.

The CGIAR Centers have brought scientific knowledge and technology to bear on the challenges facing smallholder African farmers with significant, quantifiable results while taking steps to better align these efforts with both IEHA and CAADP.

CONCLUSION

IEHA-supported programs in agricultural technology contributed to positive change in 2007, including better-defined priorities, more efficient coordination of activities among organizations, encouraging developments in research and development, and wider dissemination of technology. Despite continuing challenges, sub-Saharan Africa made progress in sustainable farming practices, productivity, and competitiveness, as well as public policy and regulatory frameworks needed to drive biotechnology advances into the marketplace.



Zambian fruit market—selling fruits on the road.

CONSTANTIN CONSTANTINOU

7. PROGRESS TOWARD GOALS AND NEW CHALLENGES

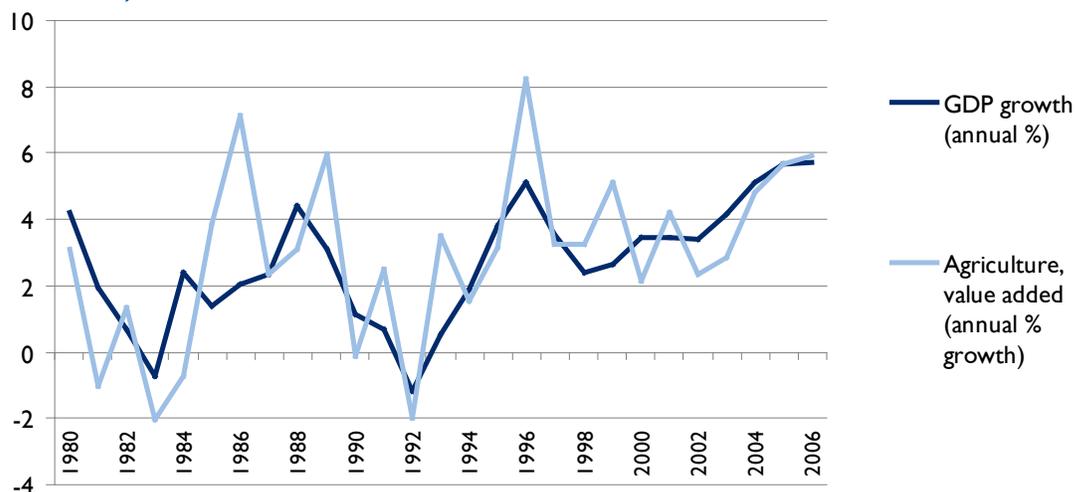
Famine, food insecurity, and malnutrition have many causes, including climate, culture, geography, and history, but hunger often arises most directly from poverty. IEHA's goal – embodied in MDG 1 – is to help solve the problem of hunger and the poverty that causes it by promoting agricultural growth. Although real progress has been made toward that goal, it has not been as quick or as uniform as it needs to be.

It is useful to put both progress and obstacles to progress into the context of global and African trends that affect outcomes, especially the IEHA results that are described in previous chapters. This chapter summarizes progress made in sub-Saharan Africa and the IEHA focus countries toward accomplishment of IEHA's goal in the context of those trends. Current global events are having an enormous impact, including huge food

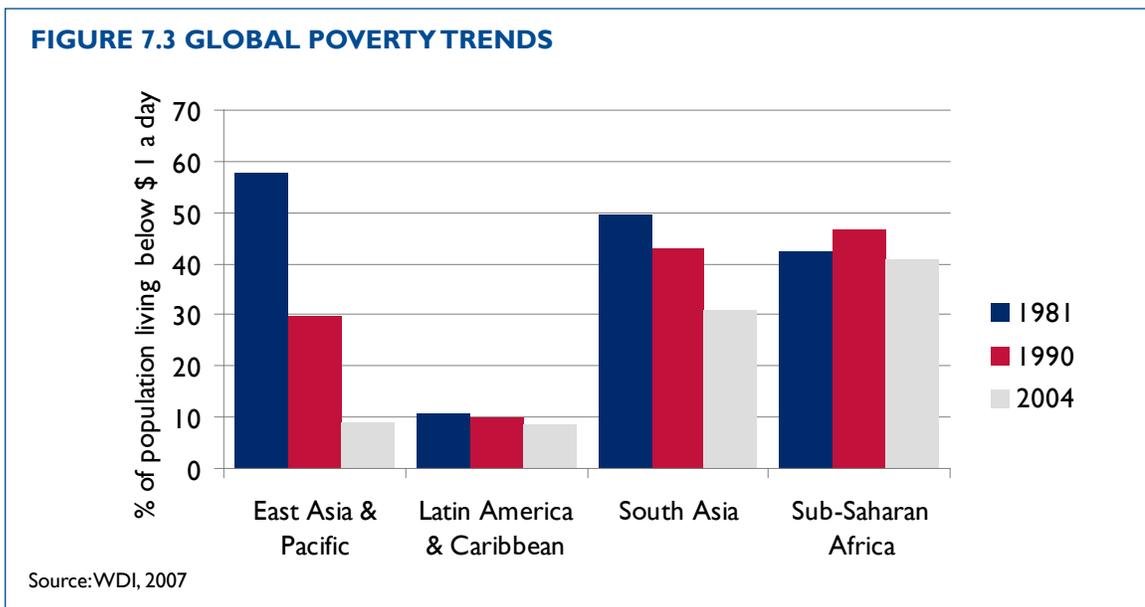
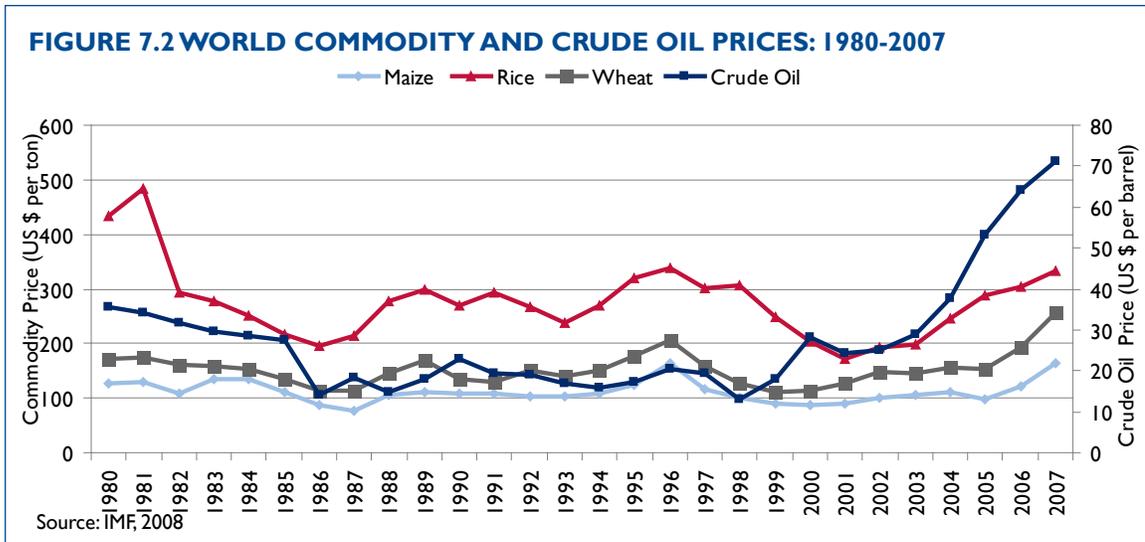
price increases and climate change. This chapter highlights some specific challenges that affect the entire world, but could have particularly severe impacts on the vulnerable populations of sub-Saharan Africa.

Overall trends for SSA in 2007 generally follow the pattern of recent years. Economic and agricultural growth continued to be positive in most countries, with averages reaching close to 6% (Figure 7.1). Prices continued to rise, most dramatically for crude oil, but also for major staples (Figure 7.2). A positive trend has been a decrease in poverty (Figure 7.3), although it has occurred at a much slower rate than in East and South Asia. This trend is threatened, however, by rising food and energy prices as well as environmental challenges, which increase vulnerability to poverty and hunger.

FIGURE 7.1 GDP AND AGRICULTURAL GDP GROWTH RATES, 1980 - 2006, SUB-SAHARAN AFRICA



Source: IFPRI, calculated from World Bank WDI, 2007.



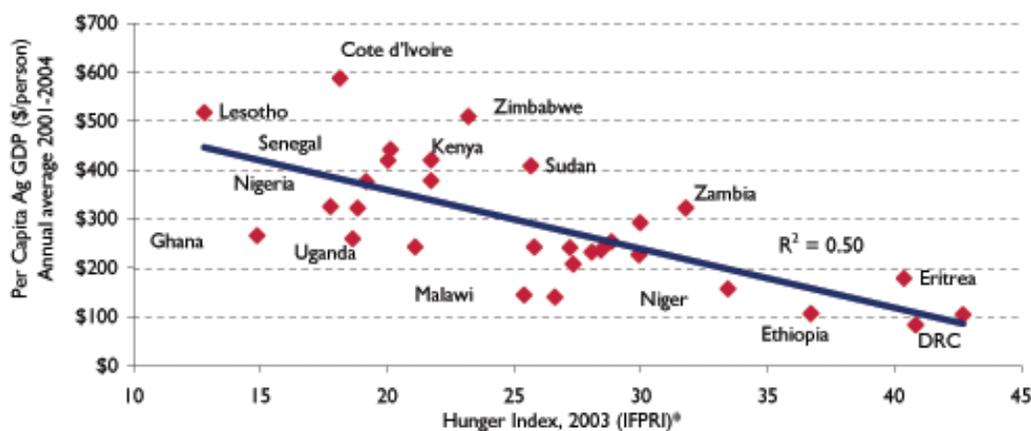
MDG UPDATE

Despite some positive trends in recent years, growth and poverty reduction need to accelerate in order for SSA to reach the MDGI goal of halving poverty and hunger by 2015. At the country level, however, there are signs of significant progress. Among the IEHA countries, Ghana, Uganda, and Mozambique are well on the way toward halving poverty and reducing undernourishment. Given that agriculture is the main source of income for the rural poor, growth in this sector has been

a major driver of poverty reduction. As Figure 7.4 illustrates, agricultural growth is strongly associated with reduced levels of hunger.

The most recent data for Ghana and Uganda indicate that those countries will likely reach the poverty goal within a few years. This has occurred in the context of high economic and agricultural growth rates of 4-7% in recent years. However, sub-national data for Ghana and Uganda show that certain areas are benefiting from increased growth, while others in the more impoverished northern districts are being left behind.

FIGURE 7.4 HUNGER CORRELATION WITH AGRICULTURAL GDP PER CAPITA



Source: WDI, 2007

New national poverty rates from Kenya show a decrease in poverty from 49% in 1990 to 46% in 2005/06 (Table 7.1). While this seems to be a small change, it marks a reversal in the previous trend in national poverty, which reached a rate of 52% in 1997 and 55% in 2001. The most dramatic decrease,

comparable to Uganda and Ghana, has been Mozambique, where poverty rates have been falling at a rate of 4% per year. On average, child malnutrition rates have been falling more slowly, with the exception of Uganda. In Mali, it actually rose at a rate of 4.3% per year during the second half of the 1990s (Table 7.2).

TABLE 7.1 NATIONAL POVERTY RATES IN IEHA COUNTRIES

Countries	National Poverty Rates				Average Annual Change between Later and Early Period (%)	Poverty Target for 2015 (%)
	Early Period		Later Period			
	(%)	Survey year	(%)	Survey year		
Ghana	50.0	1992	28.5	2005 ¹	-4.2	26.00
Kenya	52.0	1997	45.9	2005/06 ²	-1.4	24.40
Malawi	65.3	1998	52.4	2004/05 ³	-3.1	27.00
Mali	63.8	1998	63.8	2001 ⁴	0.0	34.00
Mozambique	69.4	1997	54.0	2003 ⁵	-4.1	34.70
Niger	63.0	1993	-	-	-	31.50
Uganda	56.0	1992	31.5	2006 ⁶	-4.0	28.00
Zambia	72.9	1998	68.0	2004	-1.2	34.85

Sources: World Development Indicators, 2007.

¹ World Bank, Ghana. ² CBS-Kenya, 2007. ³ National Statistical Office, Malawi. ⁴ Mali PRSP, 2002.

⁵ Country Assistance Strategy Paper, World Bank. ⁶ Uganda Bureau of Statistics, 2006.

TABLE 7.2 CHILD MALNUTRITION RATES FOR SUB-SAHARAN AFRICA					
Countries	Child Malnutrition Rates				Average Annual Change between Later and Early Period (%)
	Early Period		Later Period		
	(%)	Survey year	(%)	Survey year	
Ghana	27.3	1994	22.1	2003	-2.3
Kenya	22.3	1993	19.9	2003	-1.1
Malawi	27.6	1992	22.5	2004*	-1.7
Mali	26.9	1996	33.2	2001**	4.3
Mozambique	27.0	1995	23.7	2003	-1.6
Niger	42.6	1992	40.1	2000	-0.8
Uganda	25.5	1995	15.9	2006**	-4.2
Zambia	25.1	1992	23.0	2003	-0.8
SSA	32.1	1995	29.6	2005	-0.8

Sources: World Development Indicators, 2007.

* United Nations Official MDG, 2007 and ** Country Demographic Health Survey for year in parenthesis

Note: Child Malnutrition refers to children whose weight-for-age is below 2 standard deviations.

AGRICULTURAL GROWTH

For 2003-2005, economic and agricultural growth rates in SSA reached averages of 5.4% and 5.2%, respectively. Although these growth trends have been quite positive in recent years, they are not yet at the level of other developing regions of the world (Figure 7.5). Nevertheless, 11 African countries reached the CAADP target of 6% agricultural growth in 2005 (Figure 7.6). In addition to examining the level of growth achieved, it is useful to note the change in the amount of

variability in growth over time. While many countries experienced greater variability in their growth rates during the last decade, including Mozambique, Malawi, and Zambia, a greater number have achieved steadier growth rates in the current decade. Evidently, more African economies are increasingly improving their resilience to shocks in the agricultural sector (Table 7.3). Countries that have consistently reached growth rates near or greater than 4% since 2001 include Angola, Cameroon, Gabon, Republic of the Congo, Ghana, Nigeria, and Tanzania.

TABLE 7.3 ANNUAL AGRICULTURAL GROWTH RATES, 1990-2005

Regions/Countries	Average Annual Agricultural GDP Growth (%)			Annual Agricultural GDP Growth (%)		
	1990-2000	2001-2003	2003-2005	2003	2004	2005
Kenya	1.94	-0.5	4.2	2.4	1.7	6.8
Uganda	3.70	3.1	5.2	2.3	5.2	5.1
Malawi	8.6	4.3	-3.4	5.9	2.7	-9.1
Mozambique	4.9	10.0	5.0	9.1	6.3	1.8
Zambia	4.2	1.6	1.8	5.0	4.3	-0.6
Ghana	3.4	4.6	5.5	5.2	7.0	4.1
Mali	2.6	6.5	1.3	17.7	-4.7	7.6
Niger	3.0	n/a	n/a	6.0	n/a	n/a
East Africa	2.6	0.2	4.6	n/a	n/a	n/a
Southern Africa	2.7	2.4	2.0	n/a	n/a	n/a
West Africa	3.4	2.1	4.4	n/a	n/a	n/a
Sub-Saharan Africa	3.3	2.6	5.2	2.9	4.8	5.7

Source: World Development Indicators, 2007

As a whole, SSA has been achieving a small but steady increase in agricultural productivity. Total factor productivity¹ (TFP) has also increased slowly, growing at 1.83% in 1994-2003, a rate comparable to Latin America and above that of India (Nin Pratt and Yu, forthcoming). Many countries experienced greater increases in TFP after making major policy changes in the structural adjustment periods of the late 1980s and early 1990s (Table 7.4). For example, Ghana went from an average TFP of -3.48% during the period 1964-1983 to a rate of 4.52% after the Economic Recovery Program was instituted in 1984.

¹ A ratio of total output to total inputs used in the production process. TFP growth is typically derived as the difference between the weighted averages of the rates of growth in the value of individual products and inputs used.

TABLE 7.4 POLICY EVENTS AND CHANGES IN SELECTED SSA COUNTRIES

Country	Before Structural Adjustment			After Structural Adjustment		
	Period	Policy	TFP Growth (%)	Period	Policy changes	TFP Growth (%)
Ghana	1964-1983	Socialist policy targeting food import substitution. Promotion of mechanization. Grain marketing board.	-3.48	1984-2003	Economic Recovery Program, trade liberalization and foreign exchange controls lifted.	4.52
Kenya	1974-1993	Import substitution policies, poor incentives for investment, inappropriate agricultural policies, inadequate credit, and poor international terms of trade.	1.90	1994-2003	Major program of economic reform and liberalization (mid-1990s). Elimination of price controls and import licensing, removal of foreign exchange controls, privatized publicly-owned companies, conservative fiscal and monetary policies. Liberalization of maize market, abolition of maize movement controls. Progress on fertilizer policy, cereal marketing policy, marketing of cotton, dairy, sugar, and coffee.	1.05
Malawi	1964-1994	Agricultural production, marketing controlled by government. Slow agricultural reform progress after 1981.	-0.23	1995-2003	All input and output prices were set free except for maize production and marketing of hybrid seed; maize liberalized. Fertilizer subsidy still used.	4.39
Mali	1964-1994	Socialist-inspired policies, state intervention, nationalization, state-owned enterprises in several sectors, public monopoly on foreign trade, price controls.	-0.66	1995-2003	Reforms implemented 1988- 1995: Liberalization of regulatory environment, elimination of price controls, import quotas eliminated, export taxes dropped; reform program of the public enterprise sector; devaluation of CFA franc.	2.41
Mozambique	1975-1992	Socialist government after independence, conflict, and civil war.	-3.04	1993-2003	End of civil war, implementation of economic reforms.	4.14
Niger	1961-1993	Political instability, internal conflicts, severe drought in 1974.	-1.99	1994-2003	CFA franc devaluation (1994), adoption of a structural adjustment program (SAP) (1996): elimination of price controls and restrictions on trade; simplification of tariff system. Program established for privatization of public enterprises.	4.01
Uganda	1971-1979	1970s saw rise and fall of Idi Amin, and collapse of Ugandan economy. With the exception of coffee, all agricultural production came to a halt. Government seized control of business and industrial sectors, as well as agriculture.	-0.96	1980-2003	Uganda began Economic Recovery Program in 1987 to: 1) restore incentives to encourage growth, investment, employment and exports; 2) promote and diversify trade; 3) enhance sustainable economic growth and development through the private sector; and; 4) liberalize trade at all levels.	0.72
Zambia	1968-1990	Nationalization of copper mines, oil crisis, and fall in copper prices resulted in balance of payment crisis. End of Soviet Union resulted in major policy change and call for elections.	-0.50	1991-2003	Economic reforms after democratic multi-party elections in November 1991. Privatization of many state industries, and maintained positive real interest rates. Exchange controls were eliminated and free market principles endorsed.	1.48

Source: Nin Pratt and Yu, 2007. Notes: (a) IMF, 1998

FIGURE 7.5 GLOBAL AGRICULTURAL GDP GROWTH TRENDS

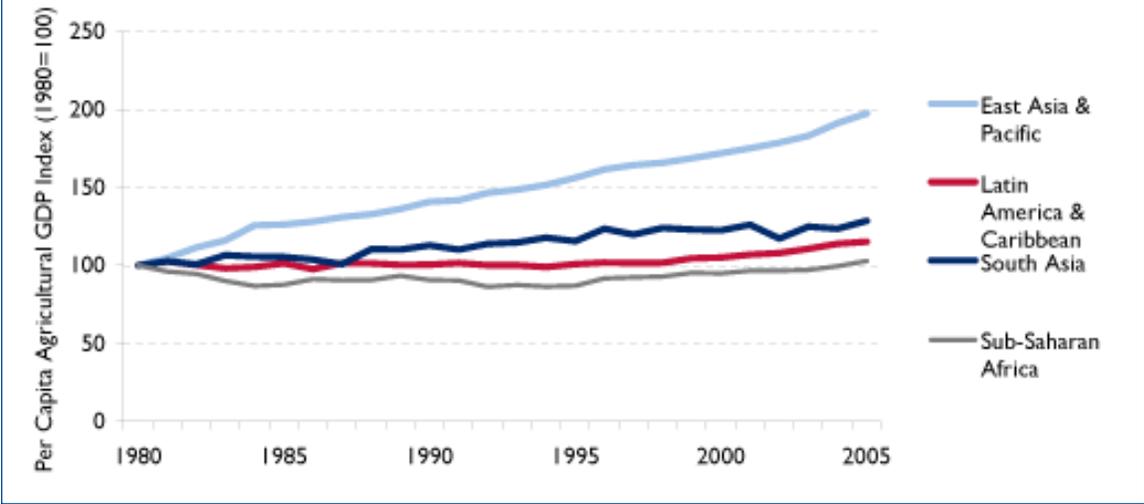
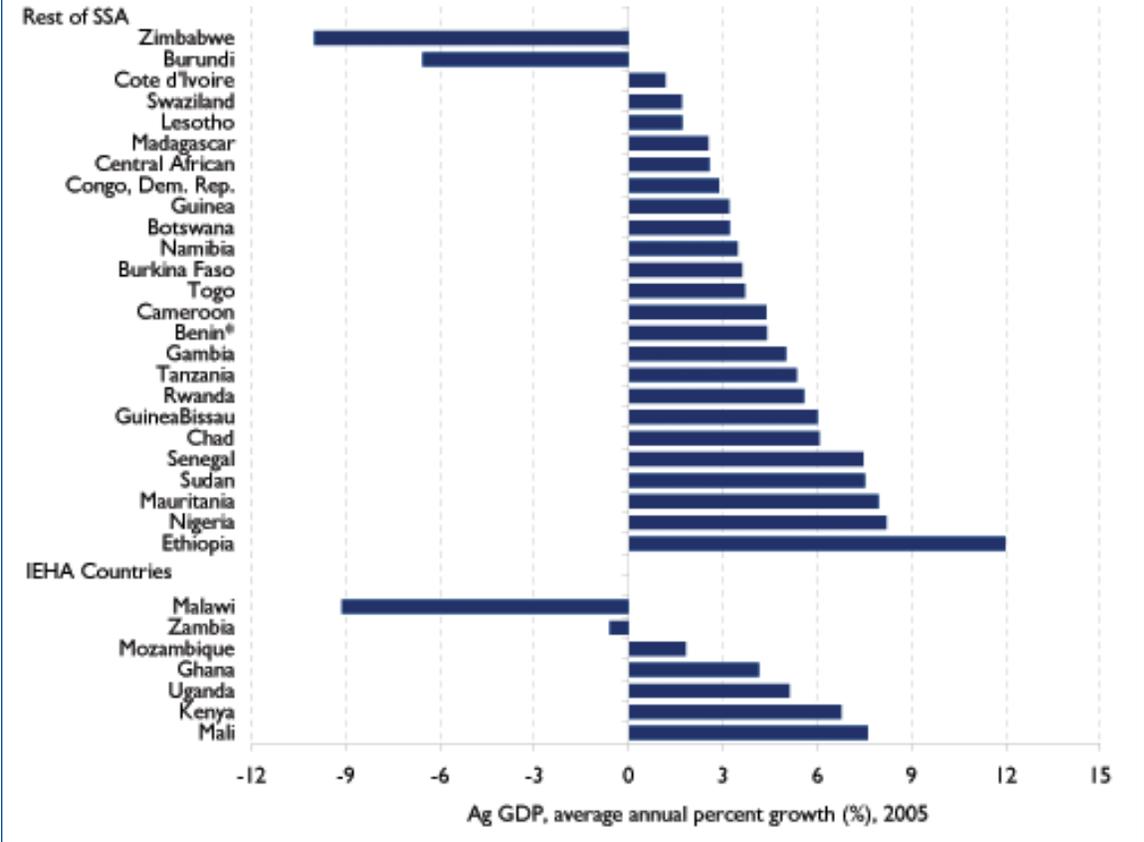


FIGURE 7.6 AGRICULTURAL GDP GROWTH RATES, 2005



HIGHER AGRICULTURAL EXPENDITURES REQUIRED TO ACCELERATE GROWTH

Under CAADP, African countries have pledged to increase their expenditures on agriculture in order to bring about the target rates of agricultural growth. African countries have been increasing their spending on agriculture, but more needs to be done to achieve the CAADP target of allocating 10% of national budgets to agriculture. Progress on increasing expenditures on agriculture to 10% of all expenditures, as well as related issues, is reviewed in the chapter on CAADP.

HIGH FOOD AND ENERGY PRICES INCREASING VULNERABILITY

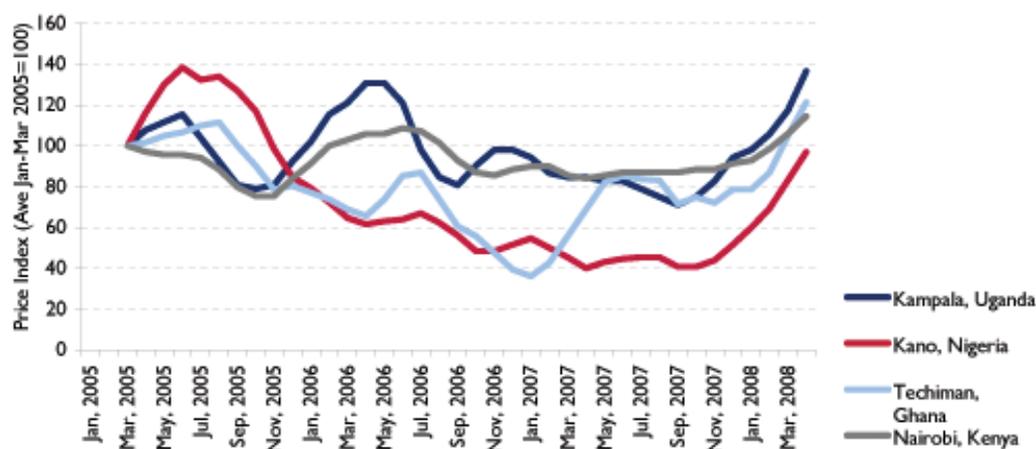
At this writing, the world is likely experiencing the beginning of a food crisis the magnitude of which has not been seen for decades.

The world is currently experiencing rising and volatile food and energy prices. These high prices may not only undermine food security of the poor but also threaten national security and the overall global economy. Major commodity and crude oil prices have been on an upswing since 2000.

In the last five years, for example, prices of maize and wheat have almost doubled, while that of crude oil tripled (Figure 7.2).

The recent high global energy and food prices have inevitably affected Africa. Recent reports indicate skyrocketing food and energy prices on the continent, particularly in countries that are net importers of cereals (FAO-GIEWS, 2007). In late 2007 and earlier this year, high food and energy prices resulted in violent food riots in Senegal, Cameroon, Mauritania, and Burkina Faso. Hikes in maize prices have occurred in countries where production has been hampered by adverse weather. Despite consecutive bumper harvests, Ethiopia has been experiencing extraordinarily high maize, wheat, and teff prices since 2004; producer maize prices reached a record high of \$248 per/mt in November 2007. While the Ethiopian government has taken measures to stabilize the soaring prices by subsidizing food sales and banning grain exports, the impact of these measures has yet to be seen. Cereal prices have also been on the upswing since 2003 in IEHA countries such as Uganda, Ghana, and Kenya (Figure 7.7). High producer prices will likely translate into high consumer prices, given high marketing and transaction costs.

FIGURE 7.7 MAIZE PRODUCER PRICES, 1991- 2008



Sources: Eastern Africa Regional Trade Intelligence Network <http://www.ratin.net/> (for Kenya and Uganda) and West Africa Agriculture Trade Network <http://www.wa-agritrade.net> (for Ghana and Nigeria).

Global supply response has been insufficient to meet the growing food demand. In 2006, world cereal production fell for a second consecutive year, by 2.1%. This drop in cereal production was mostly driven by a contraction in wheat production of about 3.6% and in maize of about 2.5%. Cereal harvests were particularly disappointing in Australia, where production fell by 60% due to a prolonged drought. In Africa, cereal production went up 3.3% in 2006, with the biggest surge in West Africa, where cereal production increased 5.8%. Despite the increased production, individual countries such as Senegal, Cape Verde, parts of Nigeria, and Ghana experienced declines in production due to poor rains and long dry spells. In addition, these countries have a higher dependency on cereal imports, which has left them vulnerable to the rising global prices. In southern Africa, cereal production decreased significantly from 14.5 million mt in 2005 to 9.7 million mt in 2006.

IMPACT OF HIGH FOOD AND ENERGY PRICES ON THE POOR

High energy and food prices can be expected to have detrimental effects across most parts of SSA. As the majority of countries in SSA are net importers of cereals, high oil prices will exacerbate costs of procuring and distributing imports. This will present serious challenges in West and Central Africa, which has the greatest number of net importers. These sub-regions will continue to rely on imports: IFPRI's IMPACT model projects net cereal imports to increase from 4.6 million mt in 1997 to 9.7 million mt by 2025.

SSA has in the past met much of its domestic demand for cereals through food aid, particularly during periods of droughts and floods. Higher food prices reduce the availability of food aid, which can lead to its becoming increasingly more

“I am confident we - the U.S. and other donors - can stem and reverse the supply-demand imbalance that exists in food staples ... we must rely much more on the private sector and on broad alliances. We have new tools, and we need to use them: markets, trade, and science will transform our approach.”

**Director of Foreign Assistance
and USAID Administrator
Henrietta H. Fore**

**Testimony to Senate Committee
on Foreign Relations, May 14, 2008**

targeted. Unavailability of or reduced food aid can further increase prices. Most poor households in SSA are net buyers of food and spend a disproportionately large share of their incomes on food. Thus higher food prices will result in fewer food purchases and households reverting to less nutritious diets. This will likely trigger hunger and malnutrition in a region that has the largest share of the world's ultra-poor people, about 121 million people living below US 50 cents a day (Ahmed et al., 2007).

IEHA WORKS TO COUNTER THE IMPACT OF HIGH STAPLE FOOD PRICES

IEHA recognizes the imminent threat posed by the dramatic rise in prices for staple foods. For the very poor in Africa, living on a dollar or less per day and spending up to 70% of their household budget on food, very high food prices can mean stark choices between taking a sick child to the clinic, paying school fees, or putting food on the table. IEHA has been working and will continue to work at reducing the impact of the staple food price crisis in several ways.

Increased staple crop **productivity** and enhanced participation in **markets** – which balance the supply and demand for staples – are the fundamental targets for IEHA in addressing the crisis. In achieving these targets, IEHA programs put more food into domestic and regional markets, where the increased supply has a price-dampening effect. IEHA also promotes more effective markets, which make food available to more consumers in more places and reduce transaction costs.

The results of IEHA's programs can be seen at the country level in the example of maize. Comprehensive IEHA data on maize productivity in Kenya, Mozambique, and Uganda show a continuing increase in smallholder profits for this important staple. The reported total value of sales increased dramatically from \$14 million in 2005 to almost \$107 million in 2007, indicating that smallholders are making higher profits per hectare and that commercialization is increasing. Besides providing for their families, these producers are supplying neighbors and countrymen with the food that they desire through increases in productivity and their willingness to rely on markets for their income.

At the regional level, IEHA assistance from 2005-2007 contributed to intra-regional exports of targeted agricultural products with a total value of nearly \$1 billion. Major commodities exported to these markets in nearby countries included beef, maize, cotton, onions, milk, and rice.

To achieve greater productivity and better access to markets, IEHA invests in several results-oriented approaches:

INCREASING THE PRODUCTIVITY OF STAPLE CROPS

- In Ghana, IEHA promoted a new maize variety and linked 125 producers to the feed-milling industry; yields and net revenues per hectare of this variety were

double those of traditional ones.

- In Mozambique, improved seed varieties for sorghum and beans were made available, as well as packages for multiplying seed for local production of beans, maize, and Irish potatoes; home processing technologies for soybeans and sweet potato were disseminated. IEHA helped to introduce virus-free cassava seedlings for further multiplication and delivery to farmers.
- In Uganda, increasing crop productivity led private-sector players to increase investments; more than \$2 million in new investments were made in oilseed, cotton, and rice processing.
- In southern Africa, USAID partners disseminated improved cassava planting material to smallholders. Cassava has become a very important cash crop for small-scale farmers, who sold more than \$335,000 worth in 2007. New low-cost cassava processing equipment, including solar driers, has allowed farmers in eight countries to take advantage of new market opportunities.
- In Mali, USAID programs focused on the completion of community-level planning in food security. More than 1 million households benefited from the process, contributing to increased and diversified food production and enhanced marketing opportunities.
- In East Africa, the Crop Crisis Control Project, a regionally coordinated response to the catastrophic spread of two serious diseases of staple crops (cassava mosaic virus and banana wilt) provided nearly 100,000 farmers with improved cassava varieties and focused awareness on the management of banana wilt.

IMPROVING NATIONAL POLICIES AND MARKETING SYSTEMS FOR STAPLE FOOD CROPS

Zambia. USAID-supported analyses showed that entitlement programs, including fertilizer and maize subsidies, are inefficient and counterproductive to export-focused,

private-sector-led growth. In 2007, these analyses were presented to the GRZ and embraced by the donor community.

Uganda. Major advances were made in biotechnology policy: For the first time, the National Biosafety Committee approved field trials for genetically modified bananas.

ALLEVIATING FOOD SHORTAGES AND IMPROVING SEED AVAILABILITY WITH BETTER REGIONAL TRADE POLICIES

East Africa. USAID is working with COMESA to get the harmonized standards for maize trade recently adopted by the East African Community (EAC) applied throughout the COMESA region. At a first-ever meeting between COMESA and the EAC to harmonize a specific trade policy, an agreement was reached that will be referred to the Council of Ministers.

Southern Africa. SADC's adoption of policies and tools for harmonizing regional seed systems ended a decade-long debate. These policies have harmonized disparate national policies and procedures on seed certification, seed variety release, and plant breeders' intellectual property rights. The ministers' approval is a landmark event that should smooth the way for private seed companies to invest in the region and increase the availability of high-productivity seed, including staple crops.

West Africa. As part of the process of reaching a regional accord on biotechnology and biosafety, individual countries have been debating biotechnology and biosafety issues and moving toward new legislation. Ghana legalized confined field testing and will be reviewing applications for Bt cowpea, Bt maize, and virus-resistant cassava.

BUILDING RESEARCH CAPACITY AND FOCUSING RESEARCH PRIORITIES ON STAPLE CROPS

During 2007, in eastern and southern Africa, advances in the development of disease-and-drought-resistant varieties of staple crops promised major benefits for smallholder farmers. A disease-resistant GMO banana was planted for the first time; maize seed that resists a key pesticide was field-tested in Kenya; field trials for cowpea and cassava will commence in 2008.

With IEHA support, ASARECA began to implement a new operational plan that focuses on seven programs, including staple crops, livestock and fisheries, policy, biotechnology and biodiversity, and technology uptake and up-scaling. ASARECA will implement fewer, but larger projects that will address high-priority issues with clear regional benefits and spillovers.

In southern Africa, USAID helped to establish sweet potato, potato, and cassava seed multiplication units (in the public and private sectors) in Zambia, Malawi, Mozambique, and Angola.

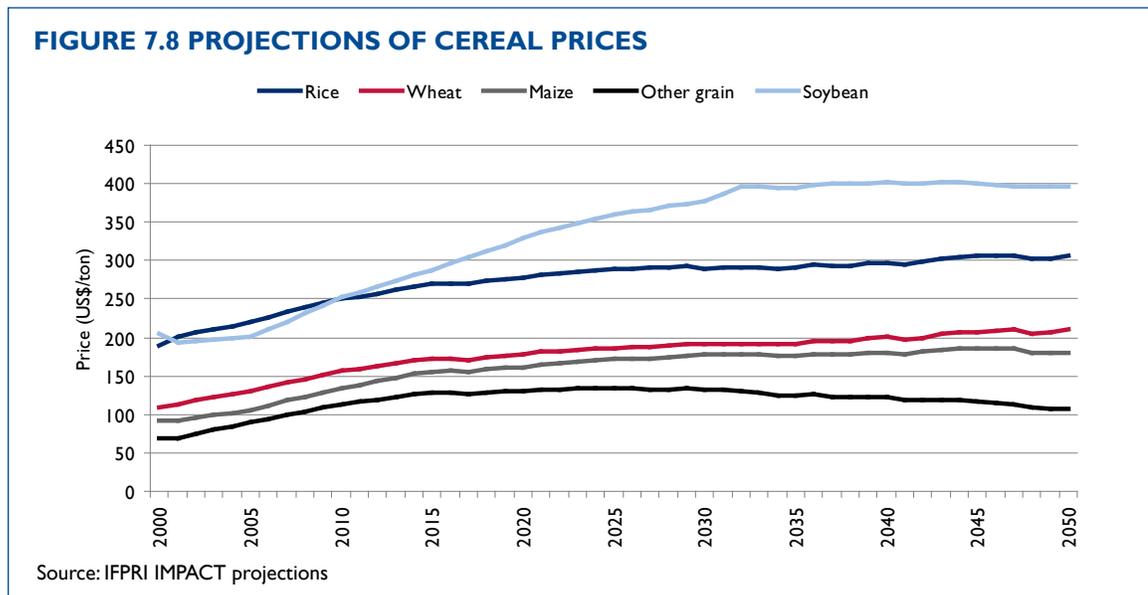
CORAF/WECARD established coordination units for food crops and biotechnology. USAID promoted improved cereal varieties and best practices, including linking producers to processors and setting up more than 300 on-farm cereal demonstrations. Using biotechnology-assisted breeding, rice varieties resistant to a major virus disease in the region have been developed.

In Mozambique, USAID partnered with the National Institute for Agricultural Research and began testing a new approach to funding agricultural research. Research grants have been awarded on a competitive basis to multidisciplinary teams researching topics such as integrated management of striga, maize stalk borer, and livestock productivity.

LOOKING AHEAD

The recent surge in food and energy prices is not likely to end soon. IFPRI IMPACT projections show increases in cereal prices of 30% to 40% by 2050 (Figure 7.8). African countries and their development partners can work on making the much-needed investments in rural infrastructure and agricultural research, improving their enabling environments, and connecting their farmers to markets, especially regional markets.

Such initiatives and others have been laid out under the four-pillar framework of the CAADP agenda, which is strongly supported by IEHA. IEHA results have already begun to help countries deal with existing challenges, and the IEHA/CAADP alignment, with its clear priorities, will continue to help them meet these new challenges. Clearly IEHA has established a solid foundation for scaling up activities that are part of a more robust response to high food prices.



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ANNEX I. IEHA'S PARTNERS

GOVERNMENT PARTNERS

GHANA

Ministry of Education Science and Sports
Ministry of Food and Agriculture
Ministry of Local Government Rural
Development and Environment
MoFEB
NDPC

KENYA

NCST

MALAWI

MOAFS
MONRW
Reserve Bank of Malawi

MALI

Ministry of Agriculture
Ministry of Livestock & Fisheries
Ministry of Investment & Promotion
Ministry of Commerce & Industry
OMA

MOZAMBIQUE

Bank of Mozambique
IIAM
Ministry of Agriculture
MIC

UGANDA

Agricultural Engineering & Appropriate
Technology Research Centre (AEATREC)
Department of Water Development
MAAIF
NAADS
NAFIRRI
NEMA
UNCST
NARO

EAST AFRICA

NARIs
Government trade and regulatory authorities

WEST AFRICA

Agence de Regulation du Café Cacao
FARA
NEPAD
Ministries of Agriculture and Trade
Inter-agency Cotton Sector Reform Bodies

SOUTHERN AFRICA

National Department of Agriculture -
Agricultural Research Council
National Department of Science and
Technology

AFRICAN IMPLEMENTING PARTNERS

GHANA

Biotechnology and Nuclear Agricultural Research Institute

KENYA

N/A

MALAWI

Central Region Milk Producers Associations

FINCA

MPOTO Dairy Farmers Associations

Malawi Dairy Industry

NASFAM ACE

OIBM

PRIDE Malawi

Total Land Care

MUSSCO

MALI

ACOD

AVD

G-Force

INAGEF

SABA

MOZAMBIQUE

Banco Oportunidade de Mocambique

IKURU

IIAM Zonal Research Centers

Mozambican and South African Agricultural colleges

UEM

UGANDA

Makerere University

EAST AFRICA

CARITAS

CEDERU (DRC)

REFSO (Kenya)

Other local NGOs

WEST AFRICA

Annader Extension Service

ACMC

AU-SAFGRAD

National Agricultural Research Systems & extension

Ministries Agriculture and Inter-agency Cotton Sector Reform Bodies

Producer and trader organizations (ROPPA, RESIMAO, ROESAO)

Plant Protection & Meteorology Departments

Senegal Institute of Food Technology

Songhai NGO Center in Benin

SEXAGON

Universities

SOUTHERN AFRICA

AfricaBio

National Department of Agriculture - Agricultural Research Council

INTERNATIONAL PRIVATE SECTOR PARTNERS

GHANA

Counterpart International
International Business Initiatives
Heifer International

MALAWI

General Mills
Twin Trading Ltd.

MALI

Syngenta
Winrock

MOZAMBIQUE

CIP
IFPRI
IITA

UGANDA

INBAP
World Fish Center

EAST AFRICA

International companies buying in the region and/or with investments in the coffee, dairy, cotton, and grain marketing and milling sectors

WEST AFRICA

Afrique Vert
AMEDD
Armajaro
CARE
EDE Consulting
Hellen Keller
Kraft Foods
International Cotton Advisory Council
International Service for Acquisition of
Agricultural Biotechnology Applications
Rain Forest Alliance
SG 2000

SOUTHERN AFRICA

Syngenta

REGIONAL ORGANIZATIONS

MALAWI

Eastern and Southern Africa Dairy Association

MALI

CILSS

INSAH

ECOWAS

UEMOA

UGANDA

BIO-EARN

FAO/ Fisheries

EAST AFRICA

ASARECA

COMESA

WEST AFRICA

Agence Basin Niger

Africa Meteo Center

CORAF

CILSS

INSAH

CEEAC

CEMAC

CMA

ECOWAS

FARA

INSAH

RECAO

RESIMAO

ROESAO

ROPPA

WAEMU

UEMOA

INTERNATIONAL RESEARCH INSTITUTIONS

KENYA

International Livestock Research Institute

ISAAA

MALAWI

CIAT

ICAF

ICRISAT

IITA

World Fish Center

MALI

ICRIST

WARDA

IFDA

MOZAMBIQUE

CIP

IFPRI

IITA

UGANDA

INBAP

World Fish Center

ZAMBIA

Michigan State University

EAST AFRICA

Biodiversity

CIAT

CIP

ICRISAT

IITA

ILRI

IFPRI

IVMI

WARDA

WEST AFRICA

Advance Research & Development Institute
AVRDC
Biodiversity International
CIMMYT
CIRAD
Cornell University
FAO
ICRAF
ICRISAT
IFPRI
IITA
IWMI
Universities
UC Davis
WARDA

SOUTHERN AFRICA

South Africa
CIAT
CIP
IFPRI

PRIVATE SECTOR PARTNERS

GHANA

CARE Ghana
Geomar
TechnoServe Ghana
The Services Group

KENYA

ABSTCM
Bridge Works Africa
CGA
FIPS Africa
Fineline Systems
IBL Regina Seeds
Osho Chemical Industries
Seminis Seeds
STAK
WWS

MALAWI

Agricultural Commodity Exchange
AGRICANE
ALTRIA
Bank of Malawi
Dairibord Malawi
Ethical Nuts
Farmers World
FINCA
Lilongwe Dairies Ltd.
Katete Farms
OIBM
Opportunity International
Pride Malawi
Malawi Dairy Industries Ltd.
MUSSCO
Mweramkaka Dairies
Northern Dairies Ltd.
Southern Dairies Ltd.
SUNCREST Ltd.
Twin Trading Ltd.
Unilver

MALI

Banks
Export Associations
MicroFinance Institutions
Producer Associations

MOZAMBIQUE

Chiquita, Rift Valley Investors
Farmers
GAPI
Local agricultural input companies
New Horizons

UGANDA

Balton Uganda
Nuvita
SON Fish Farm
Uganda Fishnet Manufacturers
Ugachick

ZAMBIA

Choice Nuts
Dunavant
Freskpikt,
York Farm

EAST AFRICA

EAFA
ESADA
EAGC
ACTIF
Small private companies in many member countries
Private cassava and banana multipliers
Ugachick

WEST AFRICA

Armajaro
Bourse du Café et Cacao
BusyLab Software Company
EDE Consulting
INTERFACE
Kraft Foods
Maslaha Seed Nigeria Ltd.
MTN in Ghana
Premier Seed Co. Nigeria Ltd.
Rain Forest Alliance
Regional Smallholders Agriculture Production Organization
Sahelian Womens Organization (REFESA)
SG 2000
Unicontrol Commodities

SOUTHERN AFRICA

N/A

OTHER DONORS

GHANA

GTZ

KENYA

World Bank

FAO

JICA

SIDA

DfID,

Danida,

IFAD

DfID

JICA

WFP

MALAWI

Coca Cola

CORDAID

EU

Elimination of Child Labor in Tobacco

FAO

France

General Mills

IITA

ICRAF

ICRISAT

Prosperity Worldwide

Government of Norway

MALI

Canada

EU

FAO

France

Netherlands

World Bank

MOZAMBIQUE

ASDI

Gates Foundation

Noraid

World Bank

UGANDA

ADF

DANIDA

EU/CDE

France

Norway

ZAMBIA

Swedish international Development Agency

EAST AFRICA

AfDB

CIDA

Bill & Melinda Gates Foundation

GTZ

DFID

EU

SIDA

IDRC

WEST AFRICA

Agriterro (The Netherlands)

Belgium

Canada

CIDA

Denmark

DFID

EU

FAO

France

Germany

GTZ

IDRC

Italy

Nippon Foundation

OCHA

SCAC

UNDP

World Bank

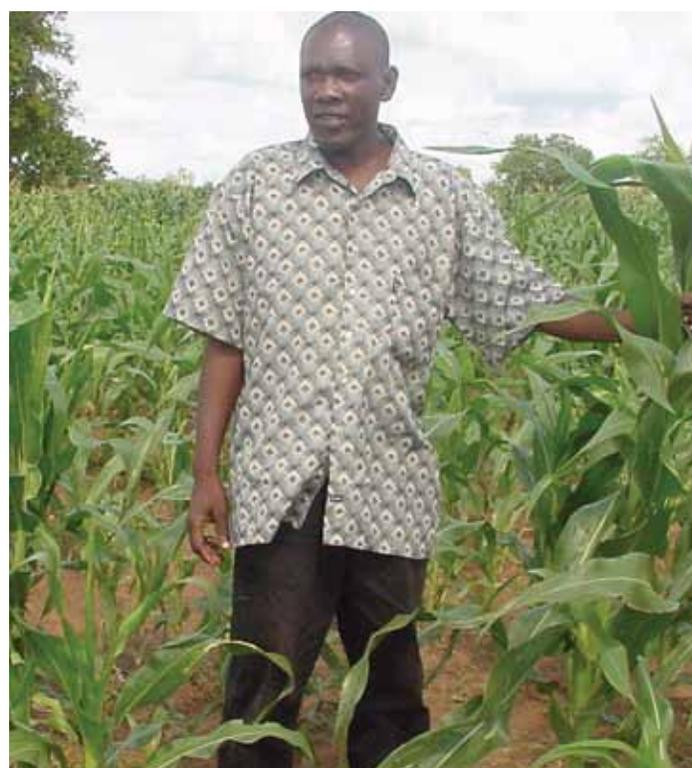
ANNEX 2. IEHA OPERATING UNITS' 2007 ANNUAL REPORTS

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN GHANA, FY 2007

USAID's Initiative to End Hunger in Africa (IEHA) has provided additional budgetary and technical support to USAID in Ghana since 2004. The initiative has thus enabled USAID to positively impact the lives of more than 60,000 rural Ghanaian households by helping them to participate in Ghana's growing commercial agricultural sector and helped Ghanaian businesses to increase agricultural exports by approximately \$30 million per year. Implementation of the program is based on a comprehensive and sustainable strategic approach to ending hunger in Ghana that targets increased agricultural productivity, an improved policy environment for agribusiness development, and increased opportunities for trade in agricultural commodities.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

USAID/Ghana's focus on productivity in the agricultural sector, especially for smallholders, has been greatly expanded through participation in IEHA. USAID considers productivity to be the net value producers can gain from their resources, not just physical yield. Farmers are led through a process of productivity analysis that examines yield, costs, post harvest losses, and marketing opportunities and the financial implications of each on profit-per-acre. The scope of commodities covered is considerable: maize, citrus, tomatoes, onions, voacanga and griffonia (medicinal plants), pineapple, mango, papaya, Asian vegetables, and cashews.



USAID

Ghanaian farmer inspects his maize field.

A common denominator for all activities is the mainstreaming of new technology and management approaches for productivity increases and commodity quality improvements. This contributes to deepening the link between the small farmer and the end market. The assistance includes putting in place the Good Agricultural Practices (GAP) certification scheme, which serves as a basis for sustainable agriculture and is an essential step to participating in major export markets.

Assistance provided to increase productivity under IEHA during FY 2007 has led to the following major achievements:

- An improved variety of maize was disseminated via 125 demonstration sites. Revenue and profit per acre were doubled on these half-acre sites.
- Okra production, based on the introduction of an improved variety, and the development of market linkages, was extended to 991 smallholders and 27 nucleus firms. In this first year of outreach, the program produced 97 mt of okra, valued at \$176,820. It was exported mainly to the EU market.
- Fifteen drip irrigation sites were developed and are now operating for smallholder horticultural production. These are pilot sites that will serve as the basis for wider extension of this highly efficient technology.
- Nineteen new agricultural technologies were introduced in FY 2007, making a total of 87 technologies that were extended to 5,760 farmers as a result of assistance from IEHA.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

IEHA's success in meeting its goal of ending hunger is dependent on a sound understanding of the national economy and the policies that affect investment in the sectors that offer the best prospects for pro-poor growth. The IEHA-funded Ghana Strategic Support Program (GSSP) has begun analytical work with the Government which is designed to identify the public investment strategies that will favor agricultural growth and growth in the geographic regions most affected by poverty. GSSP is working with Ghanaian policy analysts to help them master the analytical tools necessary to achieve this end.

The GSSP is analyzing current public expenditure patterns to determine returns on investments in the agricultural sector

which, coupled with the use of a Social Accounting Matrix (SAM) analytical model, will help define the shifts and/or increases in spending necessary to achieve Millennium Development Goals for reducing poverty.

The research outputs during this year targeted the following issues:

1. Structural transformation required to achieve middle income status;
2. The role of agriculture and agro-processing in the economy;
3. Constraints and opportunities for increasing agricultural productivity;
4. Characterization of smallholder agriculture;
5. Patterns of expenditure at the national level and by district assemblies;
6. Policymaking in the country: the case of rice subsidies;
7. Identifying strategic interventions to develop food crops

The ability to create the legal and regulatory frameworks for the generation and use of genetically modified products is crucial to enhancing growth in emerging economies. IEHA funds are being used to help Ghana's policymakers and consumers to better understand the role that genetically modified crops can play in developing opportunities for trade and create the legal and regulatory frameworks for their testing and development.

The Ghana Program for Biosafety Systems is actively engaged in the following areas:

- Facilitating implementation of the Ghana bio-safety law;
- Building capacity to conduct field trials on GM products and conduct environmental and food safety assessments;
- Creating stakeholder awareness of biotechnology;
- Developing a biotechnology/biosafety policy for the country;
- Conducting confined field trials of GM crops.

INCREASED AGRICULTURAL TRADE

With the assistance of IEHA, work is continuing to integrate smallholder farmers into export-oriented value chains that can consistently meet market demands in quality, volume, efficient logistics, and price. A focus on market information and criteria for export is supported by training in good agricultural practices, testing of new varieties, and linkages to exporters. Additionally, the IEHA program has supported the development and application of grades and standards for several commodities. This has helped Ghana to achieve the following results:

- Export of horticultural products resulting from IEHA-funded assistance has increased by approximately \$8 million over the past year, rising to \$31 million.
 - Thirty-five Good Agricultural Practices (GlobalGAP) trainers were trained. Ten pre-audit assessments were conducted for pineapple and mango. Twenty-six firms and three smallholder producer associations received GAP certification.
 - Three commodity standards (griffonia, cashew, and okra) have been developed and approved by the Ghana Standards Board. Four inspections manuals for cashew nuts, voacanga, griffonia, and okra were completed. Illustrated posters for six commodities were produced (Smooth Cayenne, Queen Victoria, and MD2 pineapple, Golden and Solo papaya and cashew).
 - Pineapple inspections program is in place and being implemented to improve quality of exports and enhance Ghana's reputation for high-quality produce.
- A growing supplier database has been developed to assist processors and exporters in sourcing products from local farms. A GIS database was created that links more than 8,000 farmers to exporters and processors. GIS mapping is a requirement for obtaining certification for export to Europe and for organic certification.
 - Two Market Intelligence Reports were produced to detail opportunities in the export horticulture industry. Reports were produced in collaboration with industry stakeholder and Government of Ghana agricultural and export agencies. Plans for transfer of this market information system to the export association were finalized and the transfer will take place in 2008.
 - USAID assisted the Federation of Associations of Ghanaian Exporters to produce "Ready for Take Off" which lays out the drivers of competitiveness for growing the export horticulture industry. This publication is targeted at Government of Ghana decision makers, potential investors, and key private sector producers and exporters.
 - The second annual Exporters Directory was produced and distributed at key trade fairs to facilitate sourcing from Ghanaian producers.



USAID

Vegetable seller in a market, Ghana.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN KENYA, FY 2007

USAID/Kenya programs used a combination of IEHA and other development assistance resources to increase household incomes for rural smallholder maize, dairy, and horticulture farmers and fish-folk through enhanced agricultural productivity and increased access to trade and markets. The programs supported the development and transfer of improved technology; enhanced trade and market systems; strengthened agriculture-related institutions and community-based producer organizations; and increased agricultural and livestock production and marketing in arid and semi-arid lands (ASALs). The last bi-annual household income survey was carried out in FY 2006; hence household income data for FY 2007 is not available. The data will be reported in FY 2008, after the next survey has been conducted. The program has, however, made good progress in the following key output indicators during the reporting period, achieving or surpassing targets:

- More than 490,000 rural households benefited from program interventions during the year, including 8,101 vulnerable households. Benefits included enhanced access to inputs, improved technologies, market linkages, and training on improved agronomic practices, which combined to enhance productivity and trade in targeted commodities, contributing to higher incomes and improved food security.
- About 429,000 people (of whom about 41% were female farmers) received short-term training in good agronomic practices and use of improved agricultural technologies. Out of the total number trained, about 325,000 were maize farmers.
- A total of 43 new technologies were made available for transfer to smallholder farmers and 23 more technologies were under research and field testing as a result of USAID program interventions. Some of the technologies were the same as were transferred in previous years, but were made available to new producers as the program expanded to new geographical areas.
- Over 73,000 micro- and small enterprises (MSEs) accessed business support services such as input supply, extension, technologies, market linkages, and training, compared with 58,900 in FY 2006. More than 23,000 of them were linked to large-scale private sector exporters and processors.



Processing avocados at East African Growers, a large-scale horticultural exporter based in Nairobi.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

In order to address agricultural sector productivity, marketing, and other value-chain issues, USAID programs transferred 43 improved agricultural technologies to the maize, dairy, and horticulture farming communities, as well as to fisher-folk in

Suba District around Lake Victoria. At the end of FY 2007, a total of 23 new technologies were under research and field testing by Kenya Agricultural Research Institute (KARI) and other USAID program implementers. These results surpassed the respective FY 2007 targets of 30 and 13.

The programs provided short-term agricultural sector productivity training to 428,980 farmers, 20% over the target. The number of women beneficiaries was proportionally higher than expected at 41% of total trainees (174,136), compared with the expected 31%. The multiple interventions of USAID's Kenya Maize Development Program (KMDP) increased average yields per acre by 9% (from 32 to 35 90-kg bags) and gross margins to \$17.46 per ha. The combined interventions of the Kenya Dairy Development Program (KDDP) led to an average productivity increase of 4% (from 10.36 to 10.74 liters/cow/day). USAID's Kenya Horticultural Development Program (KHDP) pioneered new commercial production techniques for domestic and export crops, thereby increasing productivity by more than 20% and raising average gross annual sales for 30,000 smallholders by an average of \$359 per grower. USAID's Kenya Business Development Services (KBDS) program developed a commercial service market for tree fruit sprayers with a new loan product that was used by more than 3,000 farmers to access productivity-enhancing technologies. The USAID-supported North Eastern Pastoral Development Program (NEPDP) strengthened local livestock marketing associations to open new markets and improved access of remote pastoral communities to animal health services. PL480 Title II development programs improved the food security of geographically targeted communities in the ASALs by introducing more productive technologies, improving market access, and other related interventions. The total number of rural

households benefiting directly from USG assistance (490,644) was 5% above target and includes a sub-set of vulnerable households (8,101) covered by the Title II programs. During the period, five individuals received long-term agricultural sector productivity training in biotechnology and horticulture.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

The Africa-led CAADP process was launched in Kenya in 2007 and is expected to reinforce implementation of Kenya's overarching GoK-donor Strategy for Revitalizing Agriculture (SRA), which is in turn closely linked to the GoK-donor Kenya Joint Assistance Strategy 2007-2012. During the period, a multi-donor program was developed for the Agricultural Sector Coordination Unit (ASCU) to lead SRA inter-ministerial coordination through 2014.

USAID contributed to an enhanced agricultural enabling environment in FY 2007 through direct support to ASCU and SRA implementation within the agricultural donors group. It also supported the ongoing research and analyses by the Tegemeo Institute of Egerton University aimed at informing the policy debate. Tegemeo participated in the formulation of the Kenya Vision 2030 Strategy, continued to support ASCU in SRA implementation, helped build capacity for the Parliamentary Committee on Agriculture, Lands, and Natural Resources in order to influence policy through the National Assembly, and was appointed to the CAADP policy stock-taking team. The following policy reforms were advanced in FY07:

- Preparation of Policy Paper, Draft Bill, and Cabinet Memo for harmonization of policies in agriculture leading to consolidated legislation;
- Preparation of Policy Paper, Draft Bill, and Cabinet Memo on Food and Nutritional Security Policy;

- Finalization of Dairy Policy and preparation and presentation of Dairy Bill to Parliament;
- Drafting of the Livestock Policy Sessional Paper and presentation of the Bill to Parliament.

USAID, USDA/FAS, USAID/EA, EGAT and several local organizations conducted a series of stakeholder consultations and advocacy sessions and provided technical input to finalize a Biosafety Policy, and a Biotechnology Bill, which was presented to Parliament. USAID also began working with local stakeholders with the ultimate aim of building the understanding and capacity of the eight GoK agencies charged with various biosafety regulatory responsibilities. USAID's microfinance capacity-building project (KEMCAP) helped facilitate passage of the Microfinance Act, which will facilitate provision of financial services to smallholder farmers and other rural clients. USAID's maize and dairy programs worked closely with USAID/EA's RATES project in strengthening nascent regional marketing organizations. USDA/APHIS collaborated with USAID's horticulture program to facilitate approval of new Kenyan horticultural export commodities to the U.S.

INCREASED AGRICULTURAL TRADE

To increase trade, the KBDS program facilitated market linkages between 23,659 smallholder producers and private sector exporters and processors. KHDP assisted more than 25,000 smallholder producers of export vegetables to meet sanitary and phytosanitary standards for EU markets, and to some extent for U.S. markets. Two new products (carrot and baby corn) have been approved by USDA for entry into the U.S. market, based on successful pest-risk analysis. The combined interventions have increased the annual incomes of more than 30,000 smallholders by more than \$10.7 million (an average \$359 per grower).

Trade in horticultural crops and products between Kenya and the U.S. is increasing following KHDP-supported representation at major U.S. trade shows. Direct marketing with U.S. buyers has also generated new interest in processed vegetable products and essential oils. The total value of Kenya-U.S. horticultural trade, to which USAID contributed, increased from \$8.2 million in FY 2006 to an estimated \$10.1 million in FY 2007, albeit below the target \$12 million (due in part to the continued weakening of the dollar vis-à-vis the Kenya Shilling).

Under USAID support to the Export Promotion Council, 500 companies (40% women-owned) have so far been trained in "export readiness" to enhance their export competitiveness to the U.S. market. During the reporting year, eight firms participated in the Specialty Coffee Association of America Convention and Exhibition, securing confirmed orders valued at \$12 million.

A total of 23,860 MSEs were linked to large-scale export and processing firms by USAID's KBDS program during the year, exceeding the target of 14,000. The volume of purchases from USAID-assisted smallholder dairy, maize, and horticulture farmers was 7.4 million mt, valued at \$472.6 million. Commodity sales in international markets for horticulture and maize grew from \$220.3 million in FY 2006 to \$260.7 million, exceeding the FY 2007 target of \$243.2 million by 7%. KMDP-assisted maize farmers sold 26,371 mt in the regional market, valued at \$5.6 million, compared to \$1.7 million in FY 2006. The volume sold in the reporting period compares favorably with a target of 25,585 mt for FY 2007, while the value is 56% above target due to escalating prices. Similarly, exports of dairy products to the East African region continued to rise from 1,000 mt valued at \$1.4 million in FY 2006 to 1,950 mt valued at \$5.9 million in FY 2007.

INITIATIVE TO ELIMINATE HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN MALI, FY 2007

During 2007, the USAID/Mali Accelerated Economic Growth Program continued activities to achieve IEHA's Intermediate Results by focusing on improving agricultural productivity through technology adaptation and transfer, improving the policy environment through human and institutional capacity building, and increasing agricultural trade through enhanced competitiveness and market systems. Major IEHA program achievements in FY 2007 included:

- Agricultural interventions benefited 1,900,019 households (68% of them considered vulnerable) through increased and diversified food crop production and enhanced marketing opportunities and structural food security, a 54% increase from the previous year.
- Training in production and processing practices for 245 agriculture-related firms helped enable them to meet international market standards.
- More than 6,500 individuals (4,867 men and 1,643 women) were trained in good agricultural production and marketing practices.
- USAID/Mali provided 372 organizations (producers' organizations, water-user associations, trade and business associations, and capacity-building organizations) with a better understanding of good governance in matters affecting their operations; as well as how to obtain business development services for members.
- Help was offered to 255 women's organizations, including skills that will enable them to diversify their livelihoods; increase their access to and control of food and other resources; and improve their incomes.
- A total of 45 new public-private partnerships were formed.

- Improved production and marketing efficiencies resulted from the transfer of 32 new technologies to producers.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

A number of village associations acquired new or improved methods of rice storage, management, and recordkeeping. During FY 2007, 2,377 tons of rice were stored and/or bought by 97 associations, an increase from 38 associations in FY 2006. This number included 87 village associations in the rice credit storage program and 10 women's associations in the rice trader program, representing 4,192 beneficiaries (2,904 men and 1,288 women). From 2006-2007 there was a 25% increase in beneficiaries (15% more men and 48% more women) and an increase from 6 to 10 in participating women's associations.

During FY 2007, training was provided for the mango sector on targeted technologies, following the cahier de charges as well as the norms and standards for EurepGAP.



Filling buckets at a water source in a garden tended by a women's agricultural cooperative.

More than 3,000 beneficiaries (2573 men and 489 women) learned new technologies, including orchard treatment, integrated pest management, best production practices, and packaging and handling. Utilizing the new technologies and acquired best practices, 5,114 ha obtained EurepGAP certification required for international export.

In the potato value chain, USAID assistance helped producer groups obtain agricultural inputs necessary to increase their production. Trader cooperatives received technical assistance to put Malian potatoes on domestic and sub-regional markets. Thirteen trader cooperatives (575 members comprised of 403 men and 172 women) used new techniques of improved post-harvest handling, packaging, storage, and marketing to put 5,594 mt of produce on the domestic and sub-regional markets. All domestic sales conformed to national standards and potatoes sold on the sub-regional markets adhered to international standards. Sales from FY 2006 to FY 2007 increased 27% domestically and 35% sub-regionally. Continued efforts to improve the storage and conservation of potatoes will help traders take advantage of more market possibilities when prices are high.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

PROMISAM (Project to Mobilize Food Security Initiatives in Mali) is USAID/Mali's main activity focused on food security policy. Its objective is to help the Government of Mali implement its decentralized national food security strategy. A key focus of the project is to help Malian townships (communes), counties (circles), and states (regions) develop their own local food security plans. The project also provides technical support to the Malian Food Security Commission in the Office of the President staff in Bamako.

Local-level food security training sessions, which are a precursor to developing the local plans, were completed for all regions of the country. A total of 1,610 local leaders (1315 men and 295 women)—mayors, CCC members, NGO members, members of the local administration, leaders of local farmer and private-sector organizations, and local radio journalists—in the regions of Kidal, Koulikoro, Mopti, and Ségou completed training programs in concepts of food security and their use in the development of local food security plans. These leaders subsequently returned to their communities and led the development of the commune-level, circle, and regional food security plans. During FY 2007, local leaders in 90 of the 118 communes in the Ségou region completed their commune-level food security plans.

By September 2007, 561 of Mali's 696 rural communes (81%) had completed their own local food security plans. The Malian government used the plans to target initial activities funded under the national food security plan (PNSA) in the Gao region, using 500 million FCFA (~\$100 million) from the national budget. It also used the plans to program 750 million FCFA in funding for the Gao, Youwaru, and Bandiagara areas, and has committed to making the local plans the basis for future programming of activities under the PNSA. Several NGOs and PVOs are using the plans to help program their activities and investments in rural Mali. USAID continued to provide ongoing counsel through this activity to the CSA on a number of issues, including the development of the government's 2007 food security action plan.

Activities during the year also included strengthening national capacity for implementing a biosafety system for the safe handling, transfer, and use of biotechnology products. Short-term training on the agricultural biosafety and food safety enabling environment was provided for 72 men and

13 women. USAID, along with other donors, assisted the Malian authorities to develop a biosafety framework which has now been approved by the government and is awaiting ratification by the National Assembly.

INCREASED AGRICULTURAL TRADE

In the rice value chain, activities focused on the trade of Malian grown rice in the domestic markets. The rice credit storage program, introduced in FY 2004, enabled producers from the regions of Sikasso, Ségou, Mopti, Timbuktu, and Gao to store their rice and market the produce when prices increased. The activity took full advantage of seasonal price fluctuations to improve small producer revenue and liquidity and increase the capacity of producer organizations to plan, manage, and finance operations. The project provided training to participating village associations in assessing the quality of rice for storage, storage management and control, recordkeeping, and calculations of loan repayments and rice marketing periods. The annual protocol agreements with the microfinance institutions helped support 97 village associations (10 were women-only groups) representing 4,192 beneficiaries (2,904 men and 1,288 women) store a total of 2,377 tons of rice, and market 2,221 tons.

The women's commercial rice trader program provided women with an opportunity to obtain credit, allowing them to buy rice when market prices were low and resell the same rice again when prices increased, thus providing a profit margin. During FY 2007, 10 women's groups (192 beneficiaries) participated in the program, an increase from 6 groups in 2006. The groups received a total of \$40,421 credit. They were able to successfully sell 461 tons of rice, compared to 62 tons in FY 2006, creating a \$17,000 net profit.

Total mangoes exported reached a record-breaking 5,492 mt in FY 2007, a 42% increase over 2006. Even though export by boat (3,585 mt) was still the main exportation mode, Malian mangoes were also flown out by plane (1,204 mt) and transported by truck (703 mt) to markets in the sub-region (Algeria, Burkina, Mauritania, and Senegal). The total value of mangoes exported by 29 exporter groups during FY 2007 was \$7.57 million. The focus on quality led to the definition of standard specifications for export-quality mangoes that are now considered the reference for the mango industry.

In the potato value chain, the project helped trader cooperatives enter domestic and sub-regional markets. Potato trader cooperatives (13, with 575 members comprised of 403 men and 172 women) used new techniques of improved post-harvest handling, packaging, storage, and marketing of 5,594 mt of produce to domestic (2,453 mt) and sub-regional (2,225 mt) markets, with FY 2007 combined total sales value of \$4,388,577. This represented an increase of 30% produce and 53% sales value from 2006 to 2007. Opening new markets in the region, such as in Burkina Faso, Côte d'Ivoire, Togo, and Ghana, has provided opportunities, allowing producers and traders to not only increase volumes exported, but also earn more profit due to higher market prices in neighboring countries.

Of the 13 potato cooperatives assisted during FY 2007, six associations (five mixed and one women-only, comprised of 118 men and 118 women) participated in local production and trade activities in Ségou and Timbuktu. They did not receive credit through a financial institution; however, agricultural inputs were financed and provided through USAID activities in FY 2006, which the associations reimbursed to themselves in the form of revolving funds. The total value for the six associations is \$10,136 of revolving funds in microfinance accounts used and reimbursed for potato production and trade activities.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN MOZAMBIQUE, FY 2007

USAID/Mozambique is in a better position to report on IEHA results in FY 2007 than in previous years due to improvements in the reporting framework and partner response, as well as results beginning to accrue from prior-year investments.

During FY 2007 a significant level of effort went into improving the framework for output reporting (the system formerly known as OPIN). A Mission-funded consultant worked closely with the team from Abt Associates, providing feedback on the limits to the old system with an eye toward simplifying the data gathering process and yielding a more robust data set.

In spite of these improvements, however, Mission results under IEHA are threatened by funding shortfalls. The Mission's Rural Incomes Program, SO6, under which all IEHA funds are obligated, has experienced a sustained decrease in funding levels over the last four years.

As a result of this scenario, all activities related to feeder road rehabilitation have ceased, hampering the achievements possible under the increased agricultural trade result. The Mission's rural business development program was cut by a third in FY 2007, with an immediate reduction in the number of benefiting farmers associations, further compromising the objectives under enhanced productivity and increased agricultural trade.

With respect to the Title II-funded cooperating sponsors involved in Development Assistance Programs (DAPs), FY 2007 coincided with a one-year extension period during which the partners were engaged in their final evaluations and anticipation of the new cycle of multi-year assistance program preparation. As a result, many programs focused on consolidating or even reducing field activities, rather than expanding coverage.

In FY 2007, USG-funded agricultural and rural enterprise activities were consistent with the overall IEHA objective of rapidly and sustainably increasing agricultural growth and rural incomes. IEHA funding allowed the USG to make grants to Title II cooperating sponsors, field support awards to generate better agricultural techniques and practices, and associate awards that strengthened central and district-level institutional capacity. IEHA also provided business development services to stakeholders in transformative industries, stimulating employment and expanding financial instruments for rural investments. These activities address each of the IEHA Intermediate Results, as well as the cross-cutting objectives of gender equity, contributing to broad-based growth.

ANNEX 2 TABLE I		FUNDING LEVELS (USD\$ MILLION)		
Fiscal Year	IEHA Funding	Other Ag/EG funding	Total Available	
2003	\$3.9	\$9.7	\$13.6	
2004	\$6.0	\$9.8	\$15.8	
2005	\$6.9	\$3.8	\$10.7	
2006	\$6.2	\$2.2	\$8.4	
2007	\$6.0	0	\$6.0	

Economic growth through improvements in rural household income continued. The Government of the Republic of Mozambique reports overall agricultural sector growth of 8.8% in 2006-2007, and there is evidence that this growth is shared broadly by rural households. The Mission continued funding technical assistance to the Ministry of Agriculture's national household income survey. The comparison of results from the 2004-2005 season with those of 2005-2006 shows significant increase in production, especially in cereals (30%), cassava (40%), sweet potatoes (80%), and sunflowers (300%). Considering the high contribution of crop income to household income, particularly in the poorest quintile, the analysis suggests significant improvements in income for most smallholder farmers in 2006. In addition to improvements in household incomes, reduced levels of child malnutrition and shorter hunger periods were reported.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

The data tables show a significant increase in maize production. Although modest productivity gains have occurred in some areas, the spike reflects the improved response by our implementation partners as a result of the improved reporting framework. By choosing to focus on three strategic commodities (maize, cassava, and sweet potato) the Mission's program reporting has already improved, with all partners responding this year, compared with two last year.

The Mission continued its support to the Mozambican National Institute for Agricultural Research (IIAM). Training was carried out for scientists and economists in the use of tools and methodologies for conducting profitability evaluations of different agricultural technologies. Capacity-building focused on conducting diagnostic research, area-focused priority-setting and profitability analyses,

technology adoption studies, and impact assessments of agricultural research. Four of the trained economists were deployed to Manica and Nampula provinces to work with scientists to identify best-bet technologies that result in productivity enhancement and technology adoption at the farm level.

IEHA funds supported the work of three international agricultural research centers in FY 2007. Each followed a methodology of station and farm trials and linked with field partners, including private farmers under contract for the multiplication of improved seeds and planting material. The on-farm trials allowed for an evaluation of the new technology to occur in a realistic setting, in accordance with farmer constraints such as labor, inputs, climate, and market access. Once affordable methodologies and management practices were identified, their replication and adoption by a great number of farmers was assured. Building on previous success with identifying brown streak virus-resistant cassava and the propagation of clean planting material at IIAM's IEHA-funded tissue culture laboratory,



USAID

Cashews ready for harvest.

the CGIAR partners also supported the dissemination of improved soybean, Irish, and sweet potato planting material.

The constructive partnership between the Mission and IIAM serves as the platform for testing a new approach to funding agricultural research. Research grants have been awarded on a competitive basis to multi-disciplinary teams led by a prime researcher, in such applied topics as: integrated management of Striga and maize stalk borer; the impact of trypanosomes and the financial benefits of its control; soybean variety evaluation and dissemination; productivity of goats in the smallholder sector; and physiologic research of the use of Angone and Landim cows for animal traction. In addition to a range of relevant research topics, this competitive mechanism includes a multi-stakeholder review committee and a transparent award process which IIAM wishes to expand to coordinate an even larger research budget.

In FY 2008, the Mission will continue working with the IIAM and its zonal research centers, while helping it to forge strategic partnerships with the NGO and private sectors. Large-scale private investments offer unique prospects for collaborative research in the fruit industry, a sector where Mozambique possesses physical and geographic advantages.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

Progress in improving the enabling environment for agriculture was mixed due to changes in senior management at the Ministry of Agriculture that resulted in increased uncertainty, low staff morale, and apparent increased lack of coherence in public investment programming. Political imperatives, rather than analysis and strategic planning, dominated decision-making. In response, the USG intensified its participation in bilateral

and donor-led policy discussions as well as discussions with provincial and district authorities and private sector constituencies.

Despite steps backward at the ministerial level, USG efforts improved the general business climate and prospects for agricultural growth. The USG supported the Ministry of Agriculture in conducting an in-depth analysis of the household Income Survey data in order to better understand factors contributing to rural household income growth and the impact of mortality and morbidity associated with HIV/AIDS. These data and analyses inform an increasing set of stakeholders, including the media and civil society, on measures that may improve the contribution of agriculture to the poverty reduction agenda.

During FY 2007, the IEHA-funded Business Development Services (BDS) provider lent valuable support to the cashew processors' industry association in advocating against a minimum wage law that would damage the prospects for growth in the sector. As a result, the government agreed to review a more measured approach for wages in the agricultural processing sector in 2008. Continued dialogue with the GoM on policies related to labor, land, and finance are required to encourage more private sector investments in the rural economy.

INCREASED AGRICULTURAL TRADE

Under IEHA, support along the animal feed, confectionary nuts, horticulture, and forestry value chains continue to bear fruit. The IEHA-funded BDS program has supported the re-introduction of soybean production in Mozambique, with the area under cultivation expected to jump to 2,000 ha in 2008. In FY 2007, two of the largest importers of animal feed invested their own resources to acquire processing equipment, providing a clear vote of confidence that soybean production and processing is ready to take

off in Mozambique. By the end of 2008, we expect to register reductions in the cost of animal feed, with concomitant improvements in poultry sector competitiveness.

In the confectionary nut value chain, in addition to continued progress in improving competitiveness in cashew processing, IEHA funding assisted in the establishment of a multi-stakeholder platform to address the high levels of aflatoxins found in peanuts, a significant barrier to trade. A proposal is under preparation for a public-private partnership to improve planting and storage methods, as well as to strengthen laboratory diagnostic capabilities.

Our BDS partner contributed to the development of Mozambique's afforestation strategy which indicates that the promotion of forest plantations on 3 million ha would create 100,000 jobs (direct and indirect) within 10 to 15 years, increasing to 300,000 jobs within 20 years; establish 10,000 to 15,000 out-growers and small businesses

within 20 years; and result in annual export revenues of at least \$10 billion within 20 years of value-added timber products. Our partner is working with a number of new investors in the forest plantation sector in order to begin making these projections real.

The Mission's implementing partner has helped broker the commitment by one multinational fruit producer and the interest of another multinational to source high-value fruit from Mozambique to supply profitable markets in the Middle East and Eastern Europe. Attention was focused at first on bananas, with pineapples, mangoes, and avocados having potential as exports in the future. The advantages to high-profile foreign investment in the fruit sector include the introduction of quality standards; prospects for significant job creation; stimulation of demand in ancillary industries such as packing, transport, and laboratories; as well as improved efficiencies and greater volumes of business for the private concessionaires running the ports of Nacala and Beira.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN UGANDA, FY 2007

Although poverty levels in Uganda are down from 56% in 1993 to 31% in 2006, widespread poverty and hunger remain a common characteristic of rural Uganda, particularly the areas in Northern Uganda, where populations are emerging from a 20-year civil conflict. In Northern Uganda, the level of extreme poverty at 61% remains higher today than the national poverty rate during the early stages of the conflict in 1992-93. Clearly, meeting the goal of ending hunger and poverty will require a more rapid acceleration of agricultural growth, particularly in Northern Uganda. Therefore, IEHA related-interventions continue to target crops that are likely to yield the largest impact in terms of food security, livelihoods, and income generation, and transformations in agricultural productivity.

Specifically, in FY 2007, USAID Uganda's agricultural programs have continued to focus on strengthening producer organizations and building linkages between the organizations and market players. The programs also continued to devote considerable resources to technology demonstration; applied research (including biotechnology); agricultural training (including long-term formal education); as well as promoting public-private partnerships. Major achievements of 2007 include:

- More than 346,000 households (including over 30,000 vulnerable households assisted by Title II programs) benefited from agricultural interventions aimed at increasing and diversifying crop production, enhancing marketing opportunities, and improving food security.
- Over 100 agriculture-related firms were helped to understand and adopt production and processing practices that will enable them to meet international market standards.
- More than 225,000 men and 120,000 women were trained in various disciplines of agricultural production and marketing practices.
- Over 3,500 groups, (of which 71 are women's organizations), including associations of producers, water users, trade and business associations, and capacity-building organizations, were trained to take advantage of economies of scale and helped to build partnerships with other technical assistance providers.
- More than 25 new technologies were released and transferred to producers, leading to improved production and marketing efficiencies.
- Over 20 new partnerships were formed with private sector players, thereby encouraging more farmers to participate directly in the value chain dynamics.
- In the area of biotechnology, three technologies are under research and one technology is under field testing (with two others ready for field testing pending approval by GoU authorities). In addition, there has been remarkable physical and human resource capacity-building at the National Agricultural Research Organization (NARO) including construction of a state-of-the-art Biosafety Greenhouse.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

USAID Uganda's Agriculture programs seek to address major causes of low productivity and lack of competitiveness of Ugandan agricultural products in regional and international markets.

Overall, USAID's programs continued to record significant improvements in factor (land and labor) productivity, particularly in terms of increasing crop yields per unit of production, lowering unit costs of production, minimizing post-harvest losses, and boosting overall production so that commodity systems become more competitive. For example, through a combination of technology adoption, good weather and better world market prices during 2006-07, over 2.5 million bags (60kg) of coffee (a target commodity under USAID's programs) exports reached \$250 million—the first time since 1998-99 that Uganda has realized an export value of more than \$200 million.

Through its extension network of Producer Organization Trainers (POTs), Area and Site Coordinators, and Lead Farmers, and in collaboration with corporate partners, USAID Uganda's Agricultural Productivity Enhancement Program (APEP), the main IEHA activity, interventions reached more than 280,000 households; exposed about 300,000 farmers to improved technologies (Annex 2 Table 2); and assisted over 3,500 producer organizations (POs) country-wide. Exposure to improved technologies was achieved through the establishment of over 8,000 technology demonstration sites and commercial farmer field days. Although technology adoption rates are still higher at the low input level (Annex 2 Table 3) than at the high input level, there is obvious improvement in reducing unit-cost of production and increasing incomes (Annex 2 Figure 1) as demonstrated by

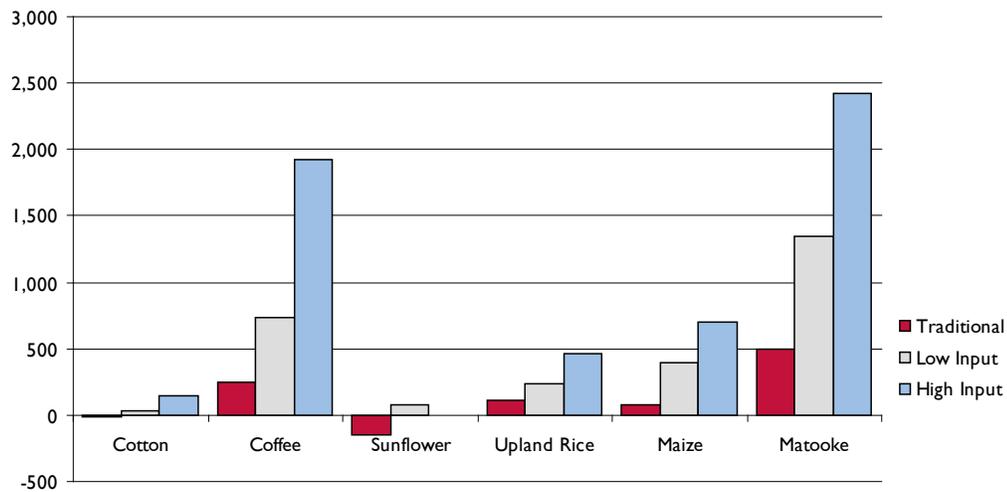
Crop	Exposure and Adoption		
	No exposed	LI adoption	HI adoption
Cotton	131,437	88,063	854
Coffee	47,138	30,640	1,886
Sunflower	34,354	30,919	172
Upland rice (paddy)	44,408	35,526	2,220
Maize/barley	2,654	2,389	1,062
Banana (matooke)	8,360	5,434	167
Sesame	11,318	4,527	0
Vanilla	9,285	7,428	0
Total	288,954	204,926	6,361
% adoption	--	71%	2.2%

the results of cost of production analysis conducted among 950 farmers. An additional 66,000 households (including about 30,000 vulnerable households) benefited from Title II productivity enhancement activities. Most of the vulnerable households are IDPs either still living or just returned from camps. Title II activities largely targeted a broad array of food crops plus some cash generating commodities such as sunflower, upland rice, and maize.

In addition to exposure to technology, POs were trained to build trust and confidence among members, identify additional business opportunities and incentives, foster accountability, bulk market their

Crop	Technology/production practice		
	Traditional	Low input	High input
Cotton	0.500	1.050	2.500
Coffee	1.000	2.000	4.500
Sunflower	0.625	1.500	n.a
Upland rice (paddy)	2.500	4.000	5.500
Maize	1.500	4.500	7.00
Banana (matooke)	15.000	35.000	70.000

ANNEX 2 FIGURE.1 NET INCOMES BY TECHNOLOGY (US/HA/ANNUM)



products, and bulk purchase inputs in order to take advantage of economies of scale and build partnerships with other technical assistance providers including government entities, NGOs, and CBOs.

Also positively affecting agricultural sector productivity was the increasing investment by private sector players interested in procuring higher volumes of more efficiently produced crops. For example, USAID APEP's private sector partners made over \$2 million worth of new investments in oilseeds, cotton, and rice processing.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

USAID Uganda's only policy-oriented activity—Strengthening the Competitiveness of Private Enterprise (SCOPE)—ended September 30, 2006. All policy interventions under this activity were discontinued thereafter. However, USAID APEP and other activities continued to support policy and regulatory change and dialogue related to the value chains within which they work by providing expert opinion, guidance, and issue profiles to stakeholders. For example, USAID APEP, in collaboration with

the Uganda Commodity Exchange (UCE), developed standards for post-harvest handling, milling, and polishing to enhance the quality of Ugandan rice. As part of this process, USAID APEP hosted and facilitated rice policy stakeholders' meetings and continued to provide technical input as well as perform a secretarial role for the Uganda EAC rice task force members which include GoU through the Office of the Vice President, the private sector (rice processors and chemical companies), and NGOs,

The USAID Program for Biosafety Systems (PBS), in collaboration with USAID APEP and the USAID Agricultural Biotechnology Support Program II, continued the dialogue for developing a national biosafety policy; strengthening of the overall biotechnology and biosafety regulatory and policy framework; and strengthening of the National Biosafety Committee (NBC). The USAID FISH activity also initiated dialogue with the GoU to include fish feeds in the National Feeds Policy; include aquaculture equipment in the agricultural equipment import duty exemption policy; formulate a policy for importation of "Fish Sex Reversal Hormone;" and formulate a policy to allow fish farmers to purchase fishnets from approved vendors.

On the policy front, the GoU has pledged, through CAADP, to increase investments in the agricultural sector up to at least 10% of their national budgets. This, along with complementary and well-aligned investments by donors (including USAID), should raise the annual growth rates in agricultural GDP to about 6%, enough to stimulate broad economic growth and reduce poverty. USAID is one of the donors supporting the CAADP process, which includes a realignment and consolidation of various agricultural development policies.

INCREASED AGRICULTURAL TRADE

USAID’s agricultural programs have continued to focus on strengthening producer organizations and building linkages between those organizations and other value chain actors, particularly “support” and “end” market actors. In doing this, the programs devoted considerable resources promoting public-private partnerships. As a result, program interventions continued to bring together stakeholders in selected value chains to identify and implement actions aimed at promoting sector level growth.

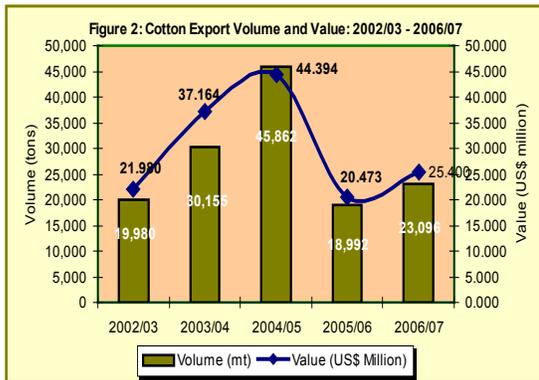
USAID APEP focused on building strong producer-buyer linkages and strong national associations that can boost production and quality of products being supported by the project. Through the formation and strengthening of POs, this approach has delivered a win-win situation for the enterprises and farmers, with the former benefiting from increased supply of good quality products, more reliable supply, greater loyalty of farmers, and greater operational efficiency. Farmers, on the other hand, benefited from increased production and profits, greater knowledge of the market, a guaranteed buyer, and improved production techniques. USAID APEP focused its activities and resources on training farmers on quality improvement and improved agronomic practices through demonstration fields, farmer-enterprise linkages, and bulking for the market, as well as a replanting program (for perennial crops) as a short-term solution to replacing old and diseased plants. APEP also supported out-grower programs in sunflower, sesame, coffee, barley and cotton (organic). USAID APEP continued to support the flower industry through research, training, and market promotion.

Crop		Volume traded (mt)		Value (US\$ million)		Type of support provided by USAID APEP
		FY '06	FY '07	FY '06	FY '07	
Cotton	18,992	23,096	20.473	25.400	<ul style="list-style-type: none"> • SAF to the 8 lead ginners in the country • TA to the UCGEA and individual ginners 	
Coffee	120,139	162,255	170.344	257.041	<ul style="list-style-type: none"> • SAF to 9 leading exporters, contributing over 70% of coffee exports • TA to coffee processors and POs/DCs 	
Sunflower	25,700	28,100	4.943	5.620	<ul style="list-style-type: none"> • SAF to two leading buyers/processors 	
Upland rice	48,000	60,000	10.847	13.715	<ul style="list-style-type: none"> • TA and SAF support to rice processors 	
Vanilla (cured)	229	277	5.496	4.845	<ul style="list-style-type: none"> • SAF to vanilla association VANEX 	
Flowers	7,596	6,631	34.720	31.610	<ul style="list-style-type: none"> • SAF to floricultural association UFEA • TA for middle level managers in the industry 	
TOTAL			246.823	338.231		

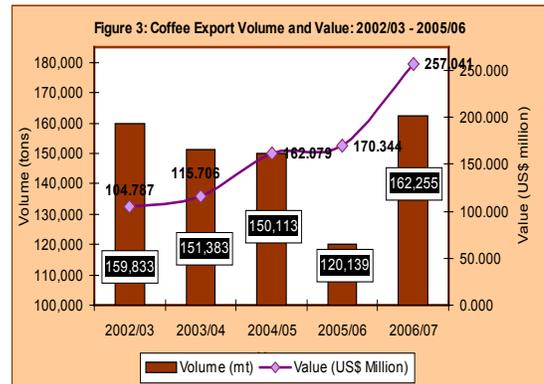
The volumes and value traded and USAID APEP's role and contribution are shown in Annex 2 Table 4. For cotton, sunflower, vanilla, and flowers, support provided by USAID APEP covered the entire industry. For coffee and upland rice, USAID APEP's contribution vis a vis the entire industry may be rated at 60% and 40%, respectively.

Export performance for cotton and coffee, the crops where USAID APEP has provided over 65% of its resources, are shown in Annex 2 Figures 2 and 3 respectively. Clearly, FY 2007 witnessed a significant increase in trade over FY 2006.

ANNEX 2 FIGURE 2. COTTON EXPORT VALUE: 2002/03 - 2006/07



ANNEX 2 FIGURE 3. COFFEE EXPORT VALUE: 2002/03 - 2006/07



INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN ZAMBIA, FY 2007

USAID Zambia invests IEHA resources to increase private sector competitiveness. The focus areas are: access to markets; expanded use of production and value-addition technologies; access to business development services; and creating an enabling environment for growth. In spite of the negative impact of a rapid (30% over two months) appreciation of the local currency, activity and results increased significantly in FY 2007, in the key programs: PROFIT (Production, Finance, and Improved Technology); MATEP (Market Access, Trade and Enabling Policies); Michigan State University's Food Security Research Project (MSU-FSRP); the Agricultural Consultative Forum (ACF); and the Zambia Agribusiness Technical Assistance Center (ZATAC). Major program achievements and highlight for the year include:

- More than 200 agriculture-related firms were helped to adopt production and processing practices that will enable them to meet international market standards.
- Over 119,000 farmers were trained in good agricultural production and marketing practices, and were introduced to a broad range of topics, including market analyses and development, recordkeeping, crop quality control, post-harvest handling, product grading, and aggregation of commodities, among others.
- The value of production per production unit increased significantly due to improvements in service delivery and improved technologies: cotton 240% increase; honey 24% increase; red meat 29% increase; and high-value crops 50% increase.
- The overall value of production-per-client increased more dramatically: cotton 990%; honey 17% (heavy rains during flowering damaged the honey crop); red meat 94%; and high-value crops 127%.
- With one understandable exception, results related to the area or number of commodities under new technologies increased at impressive levels: Conservation farming (ha) 780% increase; cattle under pre-paid, contracted veterinary services (head of cattle) 230% increase; contract production (ha) 12% decline because of lower prices paid to farmers due to 30% appreciation of local currency; private sector input sales (ha planted) 88% increase in area planted.
- The value of exports of targeted commodities increased by 38%, and the value of sales of smallholder production increased 83%.
- Almost 44,000 ha of additional land are under improved technologies and/or improved management practices.
- Six technologies were further extended to producers, leading to production and marketing efficiencies. Technologies promoted included conservation farming, improved honey production, improved herd health management techniques; private sector input provision, improved seed variety and breeds; tillage, and spraying.

Activities under all three intermediate results are interconnected and mutually supportive:

- Increased efficiencies and productivity make more Zambian products competitive in local, regional, and international markets.
- Policy liberalization increases export opportunities for small producers and exporting firms.
- The expansion of trade revenues stimulates the enactment of more business-friendly policies.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

The Cooperative League of the United States of America's (CLUSA) Production, Finance and Improved Technology (PROFIT) project contributed to the adoption of improved technologies, increased competitiveness and greater market access for over 120,000 farm families. In addition to working to strengthen weak links in selected value chains (cotton, livestock, dairy, honey, maize, horticulture, paprika/chilies, and community tourism) they focused on addressing systemic weaknesses in cross-cutting service delivery industries.

The shortfall in meeting some targets is largely attributable to the near-collapse of the cotton industry, which was brought about by the rapid and dramatic appreciation (30%) of the local currency. All businesses that had kwacha costs and foreign currency markets suffered from the appreciation. In the case of cotton, the lower kwacha price paid to producers led to a 60% drop in production in 2006 and lost income throughout the value chain. However, the future direction of the cotton sub-sector appears to be encouraging. Some 45,000 farmers have been trained in conservation farming techniques tailored for cotton; a mobile-phone payment system has been tested with cotton farmers; the third-party distributors are taking over input and service provision to cotton farmers, allowing the cotton companies to remove themselves from the problematic role of furnishing in-kind credit for inputs and services. This fundamental change in the cotton production model will eliminate the most contentious and damaging practice of pirate buying within the industry.

The small rural Choma Dairy Collection Center in Southern Province and a farmer (in cap) recording his 5 liter delivery along with the manager of the collection center. The sale of the milk is a significant source of income for subsistence farmers.

PROFIT's interventions to address systemic constraints to competitiveness and market access have fostered the development of an in-community service sector around commercial land preparation, spraying services, input provision, veterinary services, financial services, and private sector extension services. This represents a fundamental change in the way the agricultural service delivery industry markets and distributes to small farmers. As a result, rural communities are commercially connected to a range of services and markets, and more equitable commercial output markets. More than 68,000 individuals have received training in improved technical skills and management across various value chains. PROFIT provided 69 agribusinesses and producer organizations with assistance to improve management capacities.

Animal health. The Herd Health Plan, where private sector veterinarians furnish pre-paid, preventative care, served 25,000 beef cattle. As a result, mortality is down 70% for cattle under contract to veterinarians; weight gain has increased; calving rates have improved;



FENTON SANDS

and farmers are making more money from beef cattle. Smallholder farmers paid \$55,000 for contracted services, covering more than 15,000 head of cattle (more were served that were not under contract). Another 977 smallholders attended veterinary care promotional events, with 932 entering into contracts with private sector veterinarians. Cattle farmers have moved from asset protection to wealth creation because of this innovative program. In a 50-farmer survey, results showed that farmers who invested \$750 in preventative care realized a return on their investment of \$8,750, based only on reduced cattle mortality.

Private sector input provision. In an environment where the government undercuts the viability of the private sector's profitable enterprises in agriculture, the expansion of private sector input dealers has been notable. In a society that assumes smallholders have inadequate resources to purchase inputs and services, over 6,000 have purchased inputs and 670 have purchased services (tillage, spraying, weeding, integrated pest management) valued at more than \$270,000, from private sector providers. The private sector conducted 28 in-community promotional events and 14 retail training events to build the smallholder market and, significantly, the PROFIT project did not attend or financially support the events. The demonstration that private sector input and service provision can increase the productivity and profits of smallholder farmers represents a dramatic shift in the way Zambia views agriculture. Private sector agricultural extension services were provided to 21,974 farmers by 11 private agricultural inputs retailers; and 43,225 farmers received extension services through outgrower schemes.

Dairy. In FY 2007, 2,412 farmers were involved in dairy development activities; 33% of whom were female-headed households. The program distributed 77 improved dairy animals to vulnerable farmers. Plans to

distribute an annual total of 250 animals were curtailed by the government ban on livestock movement as a result of a cattle disease outbreak in Southern Province. The program benefited 347 farmers through the artificial insemination program, with 557 animals inseminated. Technical assistance in animal nutrition and pasture establishment enabled farmers to produce an average of 2,892 liters of milk per household per year. In 2007, five new milk collection centers were added, for a total of 15, to provide services such as market linkages to dairy processors and input suppliers, milk handling techniques, and business skills. The collection centers sold 265,859 liters of milk to dairy processors.

Food security. In FY 2007, the only multi-year assistance program, "Consortium for Food Security, Agriculture and Nutrition, AIDS, Resiliency and Markets" (CFAARM) started operating in Western and Southern Provinces. The program did not contribute toward productivity of smallholders during the year due to a delay in funding. However, CFAARM provided food assistance to the most food-insecure households affected by floods in Western Province and drought in Southern Province. CFAARM reached 3,369 households (20,217 beneficiaries). Normally, the hunger period is from November to March, but the assistance was provided early because the affected households' crops were destroyed either by floods or drought.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

The USAID Mission is one of three lead donors in the agricultural sector (together with Sweden and the World Bank) and has engaged in policy dialogue with the Zambian government. The Mission has also been active in preparations for the launch of CAADP in Zambia, in close consultation with other donors and COMESA.

With its regional collaborators, ReSAKSS-SA and COMESA, Michigan State's FSRP identified strategic options for Zambia to accelerate agricultural growth and therefore contribute to the Government of Zambia's target of 6% annual growth. Through consultations, government and donor investment in agriculture were monitored. FSRP, with its local collaborators, has analyzed the effects of alternative policy options and identified concrete approaches for raising agricultural productivity growth. FSRP has also continued to work with the national Central Statistical Office to build the capacity of national data and information systems and thereby allow for reliable monitoring of the performance of the agricultural sector and poverty levels. FSRP's role in improving the quality of local data also serves a "public goods" function as it enables other local and international research institutes to acquire and use high-quality data which otherwise would not be available. Investment in producing accurate data is essential for producing analysis that provides accurate conclusions and implications for development strategy. It is also important for monitoring governments' progress toward achieving CAADP objectives.

MSU-FSRP made significant contributions to agricultural policy design and implementation through its analytical work:

Cotton reforms. Unrestrained competition in the cotton sector is a threat to continued investment by the private sector and achievement of significant growth. Through the cotton working group, the project worked with government and the private sector to prepare workable amendments to the Cotton Act, which will develop stronger rules of conduct, and rein-in pirate buying.

Fertilizer reforms. The study analyzed the effects of the input subsidy program. FSRP has found that the government program has displaced commercial fertilizer sales. The

beneficiaries of the government subsidized fertilizer were among the better-off smallholders and not the poor. The objective is to ultimately identify politically feasible options for improving small farmers' access to fertilizer and using it in cost-effective and profitable ways, so as to promote sustainable rural productivity growth.

Maize reforms. The analysis focused on the magnitude of maize price instability in countries with reasonably open trade policies (Mozambique, Mali, and Kenya since 2005) versus countries restricting regional trade (Zambia, Malawi, and Kenya before 2005). This work informed the debate on the role of government in developing the maize economy. Preliminary results indicate that the degree of price instability is higher in countries using aggressive trade restrictions such as export and import bans, and frequent changes in import tariff rates.

Raising the quality of public agricultural spending. FSRP examined the size and composition of public agricultural spending in order to track progress in achieving the CAADP 10% level, and identifying alternative investments that can lead to accelerated growth and poverty alleviation. This work highlighted the skewed investments the government of Zambia is making in seasonal subsidies at the expense of long-term, broad-based investments. This work served as a prototype for similar studies in Malawi and Mozambique.

Kwacha policy. FSRP, jointly with the Zambia National Farmers Union, analyzed the impact of kwacha appreciation on agriculture. Agricultural export earnings and incomes of farm households fell. There was also a surge in imports of cereals, meat, and dairy products which affected domestic production of these commodities. The strong kwacha reversed the gains in export diversification and earnings.

Industrial utilization of cassava. FSRP's work with the Acceleration of the Cassava Utilization Task Force contributed to the development of official trade standards for cassava chips and flour. Private and public sector task force members, including FSRP, participated on the Zambian Bureau of Standards Roots, Tubers, and Derived Products Technical Committee.

Increased agricultural trade. The market access component focuses on facilitating export deals. A two-pronged approach is used: focusing on market development and focusing on client services to exporters. In both instances, our support is market-demand driven. Within the market development focus are subcomponents dealing with regional market development and value chain development. Within the client services focus are subcomponents dealing with buyer linkages and enterprise support.

Market development - regional market development. The regional market development subcomponent tries to take advantage of Zambia's comparative advantage in supplying products to the Central and Southern Africa regions. This is a departure from market development activities of the past, which focused principally on high value European markets. Unfortunately, high transport costs and difficult logistical links continue to make access to European markets extremely challenging for Zambia. The reverse is true for regional markets.

Regional markets are fast becoming more lucrative. With fast growing urban populations throughout the region, urban food market growth has outstripped most other markets. A growing middle class in the region has also seen a more selective customer with increased disposable income. The Southern African region is therefore increasingly offering a more complex and higher-value market for suppliers.

MATEP has specifically targeted for development markets in South Africa, DRC, Namibia, Angola, and Botswana. Market development activities in the region include market research, outward trade missions, buyer identification, trade show attendance, and generic industry marketing.

Market development - value chain development. The value chain subcomponent focuses on products with the most potential for sustainable export growth from Zambia. This is determined by the size, reliability, and projected growth of demand and the ability to put together a reliable, competent, and competitive supply chain. MATEP started out with eight value chains: coffee, maize, horticulture/floriculture, cassava, honey, paprika, cotton, and livestock products. In response to new opportunities uncovered by MATEP, the project added four more value chains since project startup: seed, chili, groundnuts, and dry beans.

Two new themes have emerged as MATEP pursues value chain development; MATEP's efforts to help Zambian companies move up the value chain; and efforts to strengthen linkages to smallholder farmers. MATEP helped start a new fruit and vegetable canning factory; assisted a new processor of paprika oleoresin, a food coloring; and worked with the coffee industry to improve quality and increase the production and export of "specialty" grade coffee. Across many value chains, MATEP is helping exporters move up the chain by entering retail sales and/or raising business margins.

A burgeoning urban food market in the region is increasing market opportunities for retail packaged food products. Zambian honey, maize, groundnuts, sugar beans, baby vegetables, flowers, cassava and many other products are of very high quality, but post-harvest care, processing, and packaging remain a significant challenge for moving into retail sales. Zambian organic honey,

for example, is a world-class product that cannot be found glass-bottled and labeled locally on the shelf of a high-end retail outlet. Yet the demand for such products in the region is enormous, as revealed in MATEP's business-to-business meetings, exhibitions, and other market linkage exercises.

Examples of strengthening smallholder linkages are the newly added value chains of groundnuts and beans, crops grown exclusively by smallholders in Zambia. Both crops have a long history of local production, but tend to be grown with little linkage to export markets. By focusing on the full value chain—production, harvesting, aggregation, storage, sorting, grading, processing, and transportation—MATEP is increasing earning opportunities to farmers growing these crops. Demand for beans in the region can easily exceed 20,000 mt in the near future. The groundnut and bean value chains could provide an annual income of US\$ 10 million for smallholder farmers, with the potential to double or triple that figure over the next 10 years, based solely on markets MATEP has already identified.

Client services - buyer linkages. The client services sub-component focuses on providing clients with business development services that result in exports. MATEP focuses mainly on helping clients secure long-term sustainable export relationships with buyers in the region. Client services are demand-

driven; either the client comes to MATEP with a specific requirement, or a market demand uncovered by MATEP leads to contacts with possible suppliers, leading to a MATEP/Client relationship. Business development services to clients include short-term technical assistance, market linkage support, screening buyers, standards improvement, packaging, financing, and other services. Since project startup, 64 clients received market access business development services. MATEP had 46 active market access clients during FY 2007.

Client services - enterprise support.

The enterprise support sub-component focuses on services MATEP provides to clients beyond buyer linkages to enable them to meet export requirements. One of the biggest concerns of an importer is the ability for the supplier to understand and meet their demands. In addition, statutory and market grades and standards are constantly changing. MATEP plays a critical role as an intermediary between exporters and importers, assuring buyers that their needs will be met and working with Zambian suppliers to meet those demands. This level of enterprise support has proved indispensable in sealing buyer/seller deals in the groundnut, bean, and honey value chains.

Of the 64 clients MATEP clients has worked with so far, several stand out for particular attention: Freshpikt, ZEOCo, Zamseed, Kabwe Tannery, and African Spices.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN EAST AFRICA, FY 2007

The USAID/East Africa/Regional Economic Growth and Integration (REGI) program is implemented primarily through two regional programs. The first is a cooperative agreement with the ASARECA, a sub-regional organization of national agricultural research institutes and other public and private partners in 10 countries. It provides a framework, supported by a group of donors, for regional adaptive research, testing, and scaling up of improved technologies and knowledge; promotion of improved policies to facilitate regional development; and capacity building. In addition, USAID/EA/REGI maintains a contract with Chemonics International to implement the Regional Agricultural Trade Expansion Support (RATES) project, which is working through private sector associations of traders and their partners to facilitate increased trade within the region and access to global markets for six commodity value chains: maize and other staples, specialty high-value coffee, dairy products, and cotton.

Both of these programs work very closely with COMESA, which is responsible for coordinating the implementation of CAADP in this region. Activities supported directly by IEHA are integrated in our REGI office, along with other support to COMESA to facilitate regional trade, both directly and through a separate contract for the East Africa Trade Hub, as well as with activities in natural resource management and environmental protection.

In addition, the office is implementing two activities supported by the Famine Prevention Fund that are linked with IEHA. The Crop Crisis Control Project (C3P) is a regionally coordinated response to the regional spread of two catastrophic diseases of staple food

crops: cassava mosaic virus and banana bacterial wilt. Resistant varieties of cassava are being multiplied and distributed to farmers. No resistance to bacterial wilt is available, but public awareness and training on management practices is slowing the spread of the disease and reducing the impact. The program is implemented under the auspices of COMESA and ASARECA by Catholic Relief Services (CRS), in collaboration with the International Institute for Tropical Agriculture (IITA), Bioversity International, and nearly 40 local NGOs in six countries. The Regional Enhanced Livelihoods in Pastoral Areas (RELPA) project is designed to break the cycle of recurrent food crises among the people living in the semi-arid Mendera Triangle, an area that straddles northeastern Kenya, southern Ethiopia, and southern Somalia. The project links and builds upon diverse programs and projects to improve livestock production and marketing and the development of alternative livelihoods, as well as improved early warning and humanitarian response. RELPA is supporting COMESA to implement Pillar 3 of CAADP and to improve the policy environment and strengthen the voice of pastoral people in public and private decision-making. The project is implemented through two cooperative agreements; one with Tufts University and partners, and the other with a consortium of NGOs led by CARE.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

ASARECA experienced a transitional year in FY 2007. The association concluded a phase of operations working through a total of 17 semi-autonomous regional networks and programs, of which USAID/IEHA directly supported research on policy, biotechnology,

and four regionally important staple crops: cassava, beans, potatoes, and sweet potato. The networks and programs implemented a total of more than 90 small projects with national partners; a diffuse structure which was difficult to manage and monitor. This year, ASARECA implemented a new operational plan which will reorganize the Secretariat. The new structure will oversee seven programs, including staple crops, livestock and fisheries, policy, biotechnology and biodiversity, and technology uptake and up-scaling. Under this structure, ASARECA will implement fewer, but larger projects, addressing high-priority issues with clear regional benefits and spillovers. An evaluation of lessons learned was performed to carry forward into the new phase.¹

In FY 2007, ASARECA made available 24 new technologies linked specifically to support from USAID/IEHA, plus 11 through the other partners. Some highlights follow:

- Significant progress was made in the transformation and regeneration of regional maize varieties, an important step towards the development of drought-resistant GMO maize.
- All improved cassava varieties in key national collections were systematically screened for tolerance to cassava brown streak disease, which was previously confined to the coast but is rapidly spreading to mid-elevation areas where it threatens the livelihood of millions.
- Regional trials of cassava varieties were conducted for increased productivity, quality, and suitability for food, flour, and feed. Steps were taken to transform cassava into a market crop through the development of linkages with the animal feed industry, and the training of farmers in the production of high-quality dried chips.
- The network on common (Phaseolus) beans focused on the identification and promotion of varieties rich in the micronutrients iron and zinc, which are

critically deficient in the diets of many rural Africans. Promotion campaigns encouraged production of the new varieties, as well as new recipes and nutrition education. The network also made progress on the selection of snap bean varieties for regional and international markets.

- Potato research focused on the promotion of suitable varieties and the development of market linkages for both fresh and chilled French fries, a fast-growing sector of the regional market. Best practices for the production of high-quality seed and the integrated management of widespread diseases such as late blight and bacterial wilt were widely diffused through training and the distribution of leaflets. Three new varieties with high levels of resistance to late blight were identified in regional trials, and are ready for release and dissemination.
- A recipe book was published and distributed regionally to promote the consumption of orange-fleshed sweet potato varieties, an excellent source of Vitamin A. National partners have also distributed similar calendars, posters, and leaflets.

The ASARECA networks and programs worked through 140 partner organizations and assisted more than 2,900 producers' and trade associations and CBOs and 68 women's organizations. C3P worked through 37 NGOs and 500 local organizations to reach a total of nearly 100,000 farmers with improved cassava varieties and focused awareness on the management of banana wilt. The focus was on the demand side: identifying vulnerable households, using vouchers to empower them to choose varieties, and offering training tailored to local conditions. Cassava activities will be carried forward with the support of a grant from the Bill & Melinda Gates Foundation. The RELPA project initiated its field activities very late in the fiscal year, and will have outputs and results to report in 2008.

¹ Natural Resource Institute (NRI) (2007) *End of program review of ASARECA's networks, projects, and programs.*

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

Our partners exceeded their targets on reaching key milestones for improving the policy environment to reduce barriers to regional agricultural development and trade. ASARECA and COMESA made progress on the development of a common regional policy and regulatory framework for biosafety, following up on the analytical work that led to a positive decision by the COMESA Council of Ministers in 2006. A biosafety bill was tabled in the Parliament of Kenya this year. RATES is working with COMESA to get harmonized standards for maize trade that were recently adopted by the East African Community (EAC) applied throughout the COMESA region. At a first-ever meeting of COMESA and EAC to harmonize a specific trade policy, an agreement was reached that will be referred to the Council of Ministers. A second joint meeting of the two bodies resulted in an agreement on eight quality standards for dairy products. ASARECA worked with partners to reach agreement on quality

standards for processed products of cassava and potato. In addition, collaboration with the regional node of the Strategic Analysis and Knowledge Support System (SAKSS) got underway on the regional mapping of investments and on the impact of non-tariff barriers on trade in maize and livestock. The ASARECA biotechnology program catalyzed the formation of a public-private business network of tissue culture practitioners, to overcome bottlenecks to the regional distribution of vegetatively propagated crops.

INCREASED AGRICULTURAL TRADE

RATES contributed to growth in agricultural trade in the targeted commodities by increasing trust through regional private sector associations, improving mechanisms for structured trade, providing better market information, and reducing policy and regulatory barriers in cooperation with COMESA and EAC. For the calendar year 2006, intra-regional trade increased 187% over the baseline of 2001, and trade out of the COMESA region increased 90% over the same baseline.

ANNEX 2 TABLE 5		VALUE OF INTRA-REGIONAL TRADE WITHIN COMESA OF SELECTED COMMODITIES (US\$)				
	Baseline 2001	2002	2003	2004	2005	2006
Maize	3,780,248	52,379,540	28,840,755	41,623,297	19,290,152	66,546,855
Cotton/Textiles	29,482,547	29,242,102	23,114,092	32,279,004	37,220,451	23,326,552
Dairy	491,525	1,415,259	2,252,708	4,680,451	13,192,748	7,200,680
Total	\$33,754,320	\$83,036,901	\$54,207,555	\$78,582,751	\$69,703,352	\$97,074,086
% change		146%	60%	133%	106%	187%

ANNEX 2 TABLE 6		VALUE OF INTERNATIONAL (EX-COMESA) EXPORTS OF SELECTED COMMODITIES (US\$)				
	Baseline 2001	2002	2003	2004	2005	2006
Maize	1,546,038	1,194,985	2,411,263	5,852,934	260,787	1,991,007
Specialty Coffee	60,099,073	74,390,917	88,344,960	125,848,824	162,122,946	173,690,186
Cotton/Textiles	215,611,538	209,165,165	209,239,896	440,056,066	288,454,196	352,926,080
Dairy	2,099,683	672,006	3,332,431	2,551,833	983,080	2,498,120
Total	\$279,356,332	\$285,423,073	\$303,328,550	\$574,309,658	\$451,821,009	\$531,105,393
% change		2%	9%	106%	62%	90%

Source: COMESA official trade statistics

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN SOUTHERN AFRICA, FY 2007

Working to end food insecurity in Southern Africa remains a key USG priority. USAID/ Southern Africa's program is focused on increasing adoption of improved agricultural technologies and on the facilitation of market access for small-scale producers. Targeting the Chinyanja triangle (eastern Zambia, central and southern Malawi, and the highlands of Mozambique), and parts of Angola, Namibia, and South Africa, implementing partners achieved significant results in FY 2007 in enhancing productivity, improving policy, and increasing trade.

The following indicators were tracked during the reporting period:

- Number of rural households benefiting directly from interventions 12,292
- Number of vulnerable households benefiting directly from interventions 9,213
- Number of partner organizations and active institutional members of partner organizations 70
- Male attendance at training 19,425
- Female attendance at training 12,949
- Number of public-private partnerships formed 73

A total of 12,292 rural households benefited and 9,213 vulnerable households benefited from intervention in Angola, Malawi, Mozambique, and Zambia. A total of 33,374 farmers, extension staff, and policymakers received training through this program.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

USAID's agricultural productivity program addresses both staple food crops and cash crops; it focuses on both productivity and market access, and it supports both research and extension of new technologies. The productivity program is comprised of six regional commodity research and development networks, supported by a marketing unit, an enterprise development activity, and biotechnology research. Each network leverages USAID funds with private-sector dollars by at least 30%.

Cassava, sweet potato, potato, groundnuts, and beans provide excellent yields for food security and commercial production. Cassava realized a profit margin of over \$890 per ha for the farmers; potatoes \$320 per ha; and sweet potatoes \$200 per ha. Farmers who intercropped their maize with beans and groundnuts improved their maize yields as well as made a profit from selling beans and groundnut seeds. In FY 2007, improved cassava planting material was disseminated to small-scale farmers for duplication and sale to other farmers. Cassava has now become a very important cash crop for the small-scale farmers for starch production. There is currently a huge market for cassava starch in the region for industrial use.

Significant achievements were made in quality assurance (e.g., paprika) and input use among small-scale commercial producers. Significant increases in yields and improvements in quality of paprika and birds-eye chili were realized in the Chinyanja Triangle. Small-scale farmers realized a 60% increase in price due to the introduction of grading and to improved competition among buyers linked to the producers. Moreover, with the introduction of low-cost irrigation and soil fertility technologies, farmers can now plant twice per year.

USAID partners conducted soil sampling and analysis in the Chinyanja Triangle and provided site-specific fertilizer recommendations and soil fertility management strategies. Seed and fertilizer trading companies trained small agro-dealers on the use of chemical fertilizers, setting up demonstrations that were also visited by local farmers.

To support the development of new technologies and ensure sustainability of improvements in agricultural productivity, USAID enhanced the capacity of many individuals and institutions. Sweet potato, potato, and cassava seed multiplication units (in the public and private sectors) were established in Zambia, Malawi, Mozambique and Angola with USAID support. Chemical analysis training was provided to researchers in natural products. USAID partners trained 6,612 farmers and 121 extension staff in four irrigation technologies (drip, river diversion, clay pots for storage, and treadle pumps). Treadle pumps are now used with storage and efficient drip kits rather than wastefully flooding fields.

Capacity was built at Mozambique's tissue culture laboratory to analyze diseases of potato, sweet potato, and cassava. In FY 2006, the laboratory had been refurbished. In FY 2007, equipment and training were provided, including training in tissue culture for potato breeding.

Other cash crops that made significant profits for the farmers include herbal teas and essential oils as well as specialty vegetables.

Areas of progress in the introduction and implementation of new technologies include:

- Adoption increased significantly; over 30% of the farmers in the target areas adopted the new technologies in their fields.
- Number of new technologies or management practices under research 8
- Number of new technologies or management practices under field testing 11
- Number of technologies made available for transfer 255

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

Through technical assistance, grant support, and institutional mentoring, USAID assisted the regional institutions FANRPAN and the SADC Seed Security Network to research, formulate, and advocate for improved agricultural policies that foster intra-regional trade, increase crop diversification, improve access to markets and market information systems, and improve market standards.

ICRISAT and Iowa State University assisted the SADC Seed Security Network to develop regional harmonized seed regulations that were adopted by SADC Ministers of Agriculture in June 2007 and approved by the Council of Ministers in August 2007. Procedures for submitting a new seed variety for listing, procedures for verification of applicants, procedures for registration and release, as well as the SADC variety catalogue were drafted and received for approval by technical officials and permanent secretaries of all member states. The process is now at the implementation stage. This has opened doors for seed companies, especially small-scale seed companies, to invest in the region. This will then lead to access to improved seed, improved productivity, and increased

income for farmers. The public sector has been trained in these areas to monitor variety release and certification. Malawi has established the first model institution, a seed business development incubator to commercialize certified seed. Plant breeders' rights laws were enacted in Mozambique and approved at the presidential level in Zambia. A regional seed variety catalogue for SADC was developed.

The Program for Biosafety Systems (PBS) works with national partners in Malawi to develop an enabling environment for the introduction of novel, genetically modified crop varieties. The National Policy on Biotechnology and Biosafety was developed through broad consultations. The policy sets out the country's vision and guiding principles for the application and management of modern biotechnology. The final draft was submitted to the Cabinet in July 2007 and is expected to be adopted in October 2007. PBS supported the review and improvement of the national Biosafety Bill, which will govern the introduction of genetically modified products in Malawi. The bill was approved and gazetted in August 2007. Following adoption of the Biosafety Bill, detailed implementing regulations are required to make the bill fully operational. These were submitted to the Minister for Environmental Affairs for approval in July 2007.

FANRPAN and COMESA signed an agreement to work together on early action to advance CAADP Pillar 1, which promotes better land and water management, in Malawi and Zambia. FANRPAN has assisted east and southern Africa to develop a joint fertilizer strategy that was tabled to the Heads of State Summit in Abuja in June 2006. It also developed a long-term strategy and business plan for its sustainability and gained recognition by COMESA and AU/NEPAD. As a result USAID has been joined by both DfID and CIDA as a supporting donor.

USAID has strengthened the Southern Africa Seafood Association by uniting several component groups. The association is now successfully lobbying local governments on issues such as catch quotas.

Significant progress has been made regarding the harmonization of farm inputs in the region. This was marked by the approval by SADC ministers of the seed harmonization process. This process is now to be applied to both seed and fertilizer farm inputs. SADC is also forging ahead on establishing a regional research body that will coordinate research and work with regional networks on policy issues that affect the growth in agriculture GDP.

Currently the region has one regional institution that is conducting agricultural policy research. The institution has been undergoing some capacity strengthening with USAID assistance. Other donors have now come on board. Both DFID and Canadian CIDA are now providing financial and technical support to FANRPAN to continue the capacity-building and strengthening process.

INCREASED AGRICULTURAL TRADE

USAID's agricultural program ensures that small-scale farmer associations are linked to regional markets, increasing their sales of staple and high-value commodities and demonstrating the profitable opportunities in intra-regional trade.

New low-cost cassava processing equipment, including solar driers, has allowed farmers in eight countries to take advantage of market opportunities. They are now selling cassava starch for industrial use (in paper making). The low-cost equipment has also improved the efficiency of processing cassava into flour, which is both consumed in producing households and sold to bakeries. Bakeries in Malawi, Zambia, and Mozambique have begun substituting cassava flour for up to 40% of

imported wheat flour to reduce the cost of bread. This represents a cost saving of up to 23% for the bakeries, which is then transferred to the consumer. A similar process is used in Mozambique and Malawi, where yellow-flesh sweet potato flour is substituted for 30% of wheat flour. This has been found to reduce the cost of production by up to 30% and at the same time provide much-needed Vitamin A to the rural population.

USAID provided support to groundnut producers in Malawi, who are now producing seed for sale to South Africa, and linked greenhouse producers of specialty vegetables in Malawi, Zambia, and South Africa to South African supermarkets in each country. Training in HACCP has led to regional trade in several commodities. Poultry producers in Mozambique and Zambia are now selling to South African supermarkets operating in their countries. Trout producers in Lesotho are selling to a processor in Cape Town who supplies the large Woolworths chain. Producers in Namibia are selling beef to Angola and both goats and goat meat to DRC. Finally, the Japanese market has been tapped by the rooibos, honeybush, and lemongrass tea producers. In September, a Japanese importer placed an order for one ton of tea.

The region has seen an increase in intra-regional trade. Small-scale farmers are now being linked to regional markets. Farmers are now supplying big South Africa companies with paprika, birds-eye chili, and herbal teas.

Indicators of IEHA's successful strategies to improve the agricultural economy include:

- Business-related training was provided to 73 agribusinesses through the BDS program.
- Farmers, agro-processors, and marketers improved their standards and were able to enter the formal markets. Some agro-processors, especially in the livestock sector, meat, and seafood, received training and certification in HACCP. In Namibia, Mozambique, and South Africa, these agro-processors were able, for the first time, to do business with large supermarket chains.
- Interventions directly benefited 566 agriculture-related firms.
- Assistance was provided to 73 producer organizations, water user associations, trade and business associations, and CBOs.
- Help was provided to 54 women's organizations.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN WEST AFRICA, FY 2007

This report highlights the results of the USAID/West Africa mission (USAID/WA) agriculture portfolio for both core IEHA and non-IEHA funds, as well as resources from other USAID Missions and donors. The results are reported by the IEHA Intermediate Results.

USAID/WA's goal is to enhance agricultural productivity, food security, and natural resources management. We recognize that agriculture is the engine for West Africa's economic growth and improving it is necessary to end the cycle of hunger in sub-Saharan Africa, which begins and ends in poverty.

African heads of state and governments recognize the critical importance of agriculture, which, unfortunately, continues to perform poorly. They therefore endorsed the CAADP, of the New Partnership for Africa's Development (NEPAD), in 2003. CAADP provides a framework for collaboration to restore agricultural growth and rural development in Africa and to provide for African peer review at the policy level. A key target of CAADP is to achieve an annual agricultural growth rate of 6 percent.

A policy document developed from a USAID-commissioned strategic analysis of West Africa's agriculture sector is now the basis for USAID/WA's agriculture programs and is also aligned with CAADP's goals. The analysis found that the region's main contributors to economic growth are a \$20 billion trade potential with cereals, especially rice, and livestock in the Sahel. Cocoa and cotton are important cash crops. Intra-regional trade is, however, constrained by cross-border impediments such as illegal taxes and poor infrastructure, including roads and communication.

USAID/WA therefore continues to focus on supporting the main regional and international organizations, and the private sector, including the West and Central African Council for Agricultural Research and Development (CORAF/WECARD), the Permanent Interstate Committee for the Control of Drought in the Sahel (CILSS), the Economic Community of West African States (ECOWAS), and the International Agricultural Research Centers (IARCs) in promoting integration and regional trade. Several private sector organizations are also contributing to USAID's agribusiness development efforts, both financially and technically.

ENHANCED PRODUCTIVITY OF SMALLHOLDER-BASED AGRICULTURE

Capacity enhancement included training of approximately 4,925 men and 1,165 women in areas including information technology, trade, and related business activities, seed production, impact assessment, biotechnology, and the influence of HIV/AIDS on agriculture. The cereals networks on maize led by the International Institute of Tropical Agriculture (IITA), on sorghum and millet led by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and on rice led by the Africa Rice Center (WARDA), jointly coordinated by CORAF and INSAH and implemented by the National Research Institutions as part of the research coordination agenda, worked with 13 new partner institutions, set up more than 300 on-farm demonstrations, made 10 technologies available for transfer, produced 42 kg of NERICA rice breeder seed, and facilitated the production of 200 mt of commercial improved maize and sorghum seed. The latter was a response to a growing demand for a reliable

supply of good quality improved seeds in the region, especially NERICA rice and Quality Protein Maize. The \$61 million Seed Alliance trained 24 nationals from nine Francophone countries on business plan development. The alliance will address the critical need for good quality seeds on a sustained basis. Hybrid sorghum trials gave between 300 and 900 kg yield increases over the local checks. CORAF hosted a training workshop in Cote d'Ivoire for Liberia, Sierra Leone, and Cote d'Ivoire to address issues constraining research programs in these conflict-emerging countries. The workshop will be followed by a proposal for targeted assistance to help these countries participate in CORAF's competitive research grant program.

High-yielding varieties of five vegetables, including virus-resistant tomato cultivars, are in joint multi-location field testing in seven countries by the Agricultural Biotechnology Support Program (ABSP II) and World Vegetable Center project. This activity will also be aligned with the Seed Alliance. Three rice varieties resistant to the rice yellow mottle virus identified in the biotechnology funded project are undergoing field testing. Institutional and human capacity has also been enhanced in the four beneficiary countries.

USAID programs in Mali, Niger, Burkina Faso, Senegal, and Nigeria on marketing and processing cereals improved production management and marketing strategies which link producers with processors and the poultry sector to supply good quality sorghum and millet grain. In addition, farmers who followed the recommendation to sell grain a few months before harvest time increased their revenues by up to 40%. With global prices for cereals predicted to rise over the next several years, increased sorghum and millet production should result in improved revenues for farmers and other industries utilizing cereals, thereby advancing IEHA and CAADP objectives.

Farmers who earned Rainforest Alliance certification were rewarded with higher prices and yields for their premium cocoa. Production in Cote d'Ivoire increased from 1,578 mt (303 mt certified) in 2006 to an estimated 6,000 mt in 2007. The 2007 tonnage is based on previous average cocoa yields, as the harvest is still underway. Revenue for 2006 cocoa production was \$342,377,403. Farmers testified that the benefits derived from the training on environmental awareness, improved sanitation, better organized cooperatives, and increased incomes provided incentives to pursue certification. The next challenge is to mount a vigorous consumer education campaign about the positive aspects of certified cocoa in order to expand demand.

The cotton project hosted consultations, constituted national committees, and is introducing a nitrogen-phosphorus fertilizer for use by more than 66,500 farmers on about 80,000 ha. The bulk fertilizer purchase will help minimize the current problem of fertilizer adulteration.

IMPROVED POLICY ENVIRONMENT FOR SMALLHOLDER-BASED AGRICULTURE

Through the various strategic partnerships forged, USAID/WA programs assisted 145 partner organizations, 100 agriculture-related firms, 38 women's organizations, and 588 producers and other organizations to improve negotiating skills and collective bargaining power, and to access agricultural input, credit, and other services to improve effectiveness and become viable entities. In addition, 2,856 men and 815 women received training in agriculture-related issues through the food security, trade, research coordination, and certified cocoa alliance programs. More than 40 public-private partnerships were forged and more than \$11 million additional resources were leveraged from other donors. Private sector groups

appealed to government Ministers through ECOWAS for the removal of cross-border road harassment, including illegal tariffs, which is a major impediment to regional trade.

USAID's and other donor funds, particularly the United Kingdom Department for International Development (DFID) strengthened the institutional capacity of the 21-member state CORAF/WECARD regional organization in its coordination of agricultural research and development in West and Central Africa. Other donors include World Bank, International Development Research Center (IDRC), and French Cooperation (SCAC).

The key CORAF achievements, particularly in leading the implementation of CAADP Pillar 4 on agricultural research, technology dissemination, and adoption include:

- Developing jointly with its various constituencies a 10-year strategy and 5-year operational plans with eight prioritized investment programs;
- Recruiting key staff and establishing the following units corresponding to the key staff: biotechnology, cereals coordination, monitoring and evaluation, and internal audit;
- Improving institutional capacity of the Regional Center for Studies on Improvement of Plant Adaptation to Drought (CERAAS) following its assessment;
- Implementing within the West African Economic and Monetary Union (UEOMA) countries a project entitled, "Policy options for a competitive and sustainable milk sub-sector" in Burkina Faso, Niger, Mali, and Senegal.

Support to CILSS, charged with addressing food insecurity in West Africa, in accordance with CAADP Pillar 3 on increasing food supply and reducing hunger, achieved the following:

- Developing a draft strategy for West Africa food security for CAADP Pillar 3, creating a

regional food security council, and revising the food aid chart;

- Collaborating with the AU-NEPAD in developing the draft Africa-wide food security strategy and draft strategy on land and water management;
- Supporting three countries in their efforts to adopt national biosafety regulations;
- Collaborating with ECOWAS and relevant organizations in the implementation of the West Africa common policy (ECOWAP);
- Extending the online data portal to Burkina Faso and Mali at the Sahel Institute and training 28 country nationals on database entry.

Other donors contributing to CILSS are Canada, Denmark, France, Germany, Italy, EU, UN, and CORAF member states.

The USAID/WA funded Agricultural Advisor at ECOWAS continued his work with the Department of Agriculture in leading the West Africa CAADP process, which is behind schedule. However, the new commissioner and agriculture advisor initiated consultations in Burkina Faso, Benin, Niger, Mali, Nigeria, Togo, and Senegal on developing their national compacts on CAADP.

INCREASED AGRICULTURAL TRADE

USAID/WA agricultural trade project seeks to remove regional trade impediments by (a) providing timely information on prices and market opportunities; (b) improving business for producers and traders to respond to production and market opportunities; and (c) providing relevant information on tariff and non-tariff barriers, including cross-border harassment of agribusiness groups. In 2007, the project worked with 13 partner organizations and 460 producer and trader associations and forged 4 public-private partnerships for trading in nine agricultural commodities – maize, rice, cassava, cattle, tomato, onion, cashew, shea, and fertilizer in 11 countries – Benin, Burkina Faso,

Mali, Ghana, Nigeria, Senegal, Guinea, Cote d'Ivoire, Niger, Gambia, and Togo. More specifically, individuals and business groups testified that they saved significant amounts of money from illegal taxes as a result of the training programs the project organized.

The project's major achievements include:

- Training for more than 12,400 producers, traders, and other agribusinesses to improve trade;
- Organizing trade fairs resulting in significant trade deals and long-term relationships;
- Developing an innovative electronic trading platform, TradeNet, (www.tradenet.biz), which has linked 537 markets in 13 West African countries; collected and disseminated 640,000 pieces of agriculture-related information; initiated networking among agribusinesses; and partnered with GSM companies in Ghana, Nigeria, and Cote d'Ivoire to disseminate agricultural prices and forecasts to subscribers;
- Providing grants of \$1.4 million to 64 agribusinesses in 12 countries to enhance trade capacities, such as setting up more than 100 Agribusiness Information Points (ABIPs) and six associations which invested their \$62,000 grants in three trade fairs in Senegal and Nigeria, resulting in \$1.86 million in sales and trade deals, mainly in livestock, fish, and onions.
- Providing crucial assistance for selected associations trained by the project to monitor regional trade, which increased from \$169 million for 13 associations in 2006 to approximately \$584 million for 16 associations in 2007; indirect beneficiaries volunteered to report 2005 and 2007 revenues from trading mainly in staple crops and livestock in the amount of \$52 million.
- Capturing the increased trade trends during the last three years; for example, 18,000 mt to 88,000 mt of cereals between September 2006 and January 2007, mainly due to the introduction of electronic media.

INITIATIVE TO END HUNGER IN AFRICA: PERFORMANCE OF IEHA ACTIVITIES IN THE OFFICE OF FOOD FOR PEACE, FY 2007

FY 2007 IEHA/FFP STRATEGY OVERVIEW

The Office of Food for Peace (FFP) primarily seeks to reduce food insecurity in vulnerable households by assisting those households suffering from chronic hunger. In FY 2007, FFP carried out activities in eight IEHA focus countries through highly integrated programs intended to meet the basic food needs of vulnerable households. Globally, FFP reached more than 40 million people in FY 2007, and nearly 5 million people in the eight IEHA focus countries through these programs. By meeting the basic food needs of vulnerable households, FFP activities laid the groundwork for agricultural renovation. FFP resources also helped several private voluntary organizations (PVOs) implement programs that uphold the objective of agricultural development.

Many of the programs aimed to reduce malnutrition, particularly among pregnant and lactating women, but also among children under the age of five. Several programs also promoted basic water and sanitation-related improvements to lower malnutrition in 2007.

In addition, the programs assisted vulnerable households to reach food security through increasing agricultural productivity, strengthening livelihoods, and improving access to markets both as sellers and as buyers. Many of the FFP activities in 2007 involved the development of productivity-enhancing technologies, as well as intensive training programs for the communities. These technologies increased food security for many poor farm communities. Other FFP activities in 2007 attempted to improve access to markets. FFP believes that improving food-related market structures and systems is vital for all IEHA countries.

FEWS NET: The Famine Early Warning Systems Network (FEWS NET) activity is a set of integrated activities managed by the Office of Food for Peace intended to: 1) deliver early warnings of hazards, food insecurity, vulnerability to food insecurity, and famine; 2) increase the quantity and improve the quality of information used to make comparable food security and vulnerability monitoring, needs assessments, preparedness, and contingency and response planning; and 3) develop national and regional emergency early warning and food security monitoring and assessment capabilities. The overall goal of the activity is to help prevent food insecurity and famine through early identification and warning to decision-makers.

FY 2007 IEHA/FFP COUNTRY OVERVIEW

- **Ghana.** FFP provided resources to three PVOs to implement multi-year programs largely focused on reducing food insecurity in the northern regions of the country. In FY 2007, FFP provided 32,050 tons of food assistance.
- **Kenya.** FFP provided resources to three PVOs to implement multi-year programs focusing primarily on reducing food insecurity in the northern, southeastern, and western regions of the country.
- **Malawi.** FFP provided Catholic Relief Services with resources to implement a multi-year program focusing on food security and maternal and child nutrition.
- **Mali.** FFP provided both emergency and non-emergency programs with resources in Mali. FFP provided the World Food Programme with over 4,000 tons of emergency food aid in Mali in FY 2007.
- **Mozambique.** FFP provided resources to six PVOs to implement multi-year programs. These programs focused on

food security, agricultural development, and health and nutrition. More than 50,000 tons of food assistance was provided in FY 2007.

- **Niger.** FFP provided two PVOs and the World Food Programme with resources for both emergency and non-emergency programming in FY 2007. Over 10,000 tons of food aid was distributed.
- **Uganda.** FFP provided four PVOs with resources in Uganda for multi-year programs, focusing on food security, agricultural development, and improving dietary diversity. Emergency assistance totaling nearly 90,000 tons was also provided in FY 2007.
- **Zambia.** FFP provided nearly 13,000 tons of food assistance to support the Land O'Lakes and Catholic Relief Services program, improving food security and maternal and child health in more than 7,000 Zambian households.

FEWS NET COUNTRY OVERVIEW

Numerous activities were undertaken around the world in FY 2007 by FEWS NET; some of the major activities and accomplishments included:

- **Greater Horn of Africa.** A focus of work in the Greater Horn of Africa (GHA) was working to improve regional coordination and contributing to the harmonization and standardization of food security analysis tools in the region. In order to do this, three Food Security and Nutrition Working Group (FSNWG) meetings were conducted to discuss a broad range of regional issues, to plan the regional analysis workshop, and to improve the Integrated Phase Classification (IPC) tool. As a result, information will be more readily available for decision-making on food security issues, while early warning and food security monitoring and assessment capabilities will be improved.
- **Mali.** During June and July 2007, FEWS NET conducted a Food Security and Climate Outlook workshop in Bamako, Mali. Food Crisis Prevention Network

partners, including UN World Food Programme (WFP), Food and Agriculture Organization of the United Nations (FAO), 15 Early Warning Systems (EWS) country representatives, and members of the farmers organizations of Réseau des Organisations Paysannes et de Producteurs de l'Afrique de l'Ouest (ROPPA) participated. This study culminated in a report which presented a regional climate prognosis and current food security conditions.

- **Niger.** The FEWS NET Niger office worked to evaluate ongoing food security and nutrition issues in FY 2007 by conducting assessments, monitoring current conditions, and participating in training. FEWS NET conducted a rapid assessment of early childhood nutrition to assess the structural character of malnutrition as well as the utilization rate of cross-border health resources.
- **Southern Africa.** FEWS NET is part of the Southern Africa Development Community (SADC) Regional Vulnerability Assessment Committee (RVAC) and contributes to the implementation of the activities outlined in SADC's five-year program on Vulnerability Assessment and Analysis capacity building in the region. In FY 2007, RVAC members were requested to assist SADC to secure funding for the activity once the terms of reference for the proposed consultancy were drafted and agreed upon. FEWS NET secured USAID surge funding to improve, rationalize, and harmonize the existing information systems to provide credible and timely information for key decisions to be taken. FEWS NET is now providing oversight for the consultancy. The FEWS NET Regional Representative and the Malawi FEWS NET Representative will also provide technical and institutional orientation to the consultant at various points during the consultancy.
- **Zambia.** The FEWS NET Zambia office conducted trainings on assessments in FY 2007 in response to both floods and a prolonged dry spell in parts of the country

in 2006 and 2007. In collaboration with WFP, this office conducted a training program for enumerators on collection of in-depth vulnerability information which helps combat current and future food insecurity.

FY 2007 IEHA/FFP IMPLEMENTATION OVERVIEW

FFP-supported activities that improved food security had an impact in multiple countries and involved numerous partners:

- **Kenya.** Food for the Hungry (FHI) and Adventist Development and Relief Agency (ADRA) each distributed 7,000 tons of food to malnourished children and mothers, while Cooperative Assistance for Relief Everywhere (CARE) implemented a small farmers' development program to increase food security in vulnerable areas.
- **Mali.** World Food Programme (WFP) targeted nutritional activities to malnourished children and their families in the country's most food-insecure areas. Africare received resources from FFP in FY 2007 to continue its joint Chad-Mali multi-year development program, focusing on agricultural productivity and health and nutrition.
- **Uganda.** ACDI/VOCA reached nearly 15,000 households in FY 2007 through improving food security and household access to food.
- **Ghana.** Opportunities Industrialization Centers International (OICI) developed agricultural training through their FFP-funded multi-year assistance program in Ghana. More than 500 households were reached in FY 2007 by OICI's agricultural training on farm budgeting, resource allocation, and land preparation to improve food security for the community.
- **Mali.** World Food Programme (WFP) provided Food for Training activities to identify and assist food-insecure households.

FFP-supported activities helped vulnerable households to feed themselves better as a result of increased farm output, increased farm income, and improved market access. Examples include:

- **Mozambique.** Save the Children (SCF) was provided with FFP resources for a multi-year assistance program in Mozambique, and has focused on agricultural development and food security. In FY 2007, SCF worked towards increasing sustainable output through the introduction of disease-resistant crops, expanding rural enterprise by promoting market expansion and improving crop storage, as well as improving household nutrition through diet diversification.
- **Niger.** Africare developed a massive food security initiative through FFP's multi-year assistance programming. The initiative works to increase farm income and improve market access through training and infrastructure development.
- **Uganda.** ACDI/VOCA improved the food security and household income of thousands of farmers through agricultural development, and developed infrastructure to support the ability of vulnerable households to mitigate shocks.
- **Zambia.** Land O'Lakes continued its multi-year assistance programming through FFP in FY 2007, further developing the Consortium for Food security, Agriculture and Nutrition, AIDS, Resiliency and Markets (C-FAARM), which assists vulnerable households increase their food security.

ANNEX 3: COLLECTION OF IEHA PERFORMANCE DATA

IMPORTANCE OF IEHA PERFORMANCE MONITORING SYSTEM

IEHA's performance monitoring system tackles the difficult problem of reporting on development efforts taking place at the community, national, regional and continent levels. Using a set of common indicators, it tracks and aggregates performance across different geographical areas, commodities, enterprises, and development activities. IEHA has put in place a way to tell its story in a more coherent manner, while still recognizing the richness and diversity of individual efforts.

IEHA is also working on building national level data and analysis systems to track primary development indicators like income, poverty, and hunger. It is examining the linkages between the micro and macro level performance measures, and between outputs, intermediate results, and impacts. Review of performance data allow IEHA management to understand better areas in which improvements or changes of course need to be made.

In 2004 IEHA had about one thousand individuals who were involved in collecting, reporting and analyzing performance data. It is that kind of network of dedicated individuals that produced the data for this report.

IEHA indicators include both quantitative and qualitative information to create the most comprehensive picture of progress made that is possible and that can be aggregated across Operating Units. IEHA indicators are consistent with those in the unified

Foreign Assistance Coordination and Tracking System (FACTS) system in the new Foreign Assistance Framework, thereby minimizing reporting burden on Operating Units.

DATA COLLECTION PROCEDURES

IEHA requests data at the end of the USG Fiscal Year for the year just ended. The IEHA annual report is prepared as soon as possible thereafter.

IEHA collects data on outputs and on results from participating Operating Units. Data on higher-level goals and objectives (like rural household income and the MDGs) are also collected. IEHA solicits narratives with all performance data to ensure that the meaning of the data is properly understood and can be incorporated into IEHA reporting. All indicators are defined in the user-friendly template that IEHA sends to Operating Units for use in submitting data.

Data reported reflect the direct effects of USAID interventions; except as noted, they reflect the project scope not national statistics. Data reported are requested to be the incremental amounts for the year being reported, not cumulative amounts that include previous years.

Most indicators have only one or two data elements and reporting is quite straightforward. Most of the IEHA indicators were already in use by some or all of the Operating Units before they were designated as IEHA indicators. Some indicators, like gross margin per unit area, have several data

elements that need to be reported so that results can be properly aggregated across Operating Units and so that a richer story can be told about the progress made.

The IEHA template has been carefully designed so that Operating Units may send these templates to their implementing partners and have them complete the data entry. The template makes it easy for Operating Units to assemble all relevant data and forward them to the IEHA M&E coordinator as one complete report for that Operating Unit. The IEHA M&E coordinator assembles all data from Operating Units and drafts an annual report and associated charts and tables.

In addition to the USAID Operating Units that participate in and report to IEHA, SAKSS and ReSAKSS units/nodes also provide key analytical information that helps IEHA to track progress toward higher-level goals and to understand better the importance and relevance of the results reported by the IEHA operating units.

IEHA PERFORMANCE INDICATORS

The following are the indicators of performance that IEHA uses, shown by Intermediate Result.

Intermediate Result 1: Enhanced Productivity of Smallholder-Based Agriculture

Indicator: Gross margin per unit

Definition: Gross margin (profits) per hectare/animal for targeted commodities. Reporting by crop includes: area, value of sales, quantity sold, total cost of purchased inputs, and production. Reporting by dairy animal includes: number of milking animals, value of dairy product sales, quantity sold, total cost of purchased inputs, and total production.

Sub-Intermediate Result 1.1: Expanded Development, Dissemination, and Use of New Technology

Indicator: Adoption of targeted technologies

Definitions:

- Area under new technology
- Number of farmers who adopted new technology
- Number of processors who adopted new technology
- Volume of produce processed using new technology

Sub-Intermediate Result 1.2: Enhanced Human and Institutional Capacity for Technology Development, Dissemination, and Management

Indicator: Institutional capacity (technology)

Definition: Partner Institution Viability Assessment (PIVA) score of relevant institution (or equivalent quantitative information about the scale and quality of change).

Intermediate Result 2: Improved Policy Environment for Smallholder-Based Agriculture

Indicator: Policy reform (milestones)

Definition: Several stages were defined to measure the progress of reform: analysis completed; dialogue conducted; proposal submitted to relevant body for consideration; legislation (or decree, etc.) passed/signed/approved; implementation begun (e.g., regulations issued)

Sub-Intermediate Result 2.1: Enhanced Human and Institutional Capacity for Policy Formulation and Implementation

Indicator: Institutional capacity (policy)

Definition: PIVA score of relevant institution (or equivalent quantitative information about the scale and quality of change).

Intermediate Result 3: Increased Agricultural Trade

Indicator: Agricultural trade

Definitions:

- Volume and value of international agricultural exports (targeted commodities)
- Volume and value of intra-regional agricultural exports (targeted commodities)

Sub-Intermediate Result 3.1: Enhanced Competitiveness of Smallholder-Based Agriculture

Indicator: Domestic agricultural trade by smallholders (targeted commodities)

Definitions: Volume and value of purchases from smallholders of targeted commodities

Sub-Intermediate Result 3.2: Enhanced Agricultural Market Infrastructure, Institutions, & Trade Capacity

Indicator: Trade-supporting transactions and capabilities

Definitions:

- Value of credit (including working capital) disbursed to targeted beneficiaries;
- Number of targeted enterprises accessing BDS;
- Number of targeted firms achieving international standards; and
- PIVA score of relevant organization (or other quantitative information about the scale and quality of change).

IEHA OUTPUT INDICATORS

The following are the output indicators on which IEHA bilateral operating units report.

- Number of rural households benefiting directly from interventions
- Number of vulnerable households benefiting directly from interventions
- Number of agriculture-related firms benefiting directly from interventions
- Male attendance at training
- Female attendance at training
- Number of producers' organizations, water user associations, trade and business associations, and community-based organizations assisted
- Number of women's organizations/associations assisted
- Number of public-private partnerships formed
- Number of technologies made available for transfer

The following are the output indicators on which IEHA regional and central operating units report.

- Number of partner organizations and active institutional members of those partner organizations.
- Number of agriculture-related firms benefiting directly from interventions
- Male attendance at training
- Female attendance at training
- Number of producers' organizations, water user associations, trade and business associations, and community-based organizations assisted
- Number of women's organizations/associations assisted
- Number of public-private partnerships formed
- Number of technologies made available for transfer

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