AGree
Transforming
Food & Ag Policy

U.S. Agricultural Development Assistance and Food Aid: Programs and Issues

Stephanie Mercier

November 2012

www.foodandagpolicy.org

This publication was commissioned by AGree to inform and stimulate dialogue about policy reform; it does not represent official AGree positions. The views expressed here are those of the individual authors.

Foreword

AGree seeks to drive positive change in the food and agriculture system by connecting and challenging leaders from diverse communities to catalyze action and elevate food and agriculture policy as a national priority. Through its work, AGree will support policy innovation that addresses four critical challenges in a comprehensive and integrated way to overcome the barriers that have traditionally inhibited transformative change. AGree anticipates constructive roles for the private sector and civil society as well as for policymakers.

AGree has developed the foundation for its work by articulating four interconnected challenges:

- Meet future demand for food;
- Conserve and enhance water, soil, and habitat;
- Improve nutrition and public health; and
- Strengthen farms and communities to improve livelihoods.

Meeting these challenges will require work over the long term and cannot be solved quickly or through a single policy vehicle. AGree is taking a deliberative, inclusive approach to developing a policy framework that can meet the challenges ahead. We are undertaking research to understand problems and assess options, and we are engaging a broad array of stakeholders to contribute insights, guidance, and ideas that lead to meaningful, evidence-based solutions.

This publication represents the sixth in a series of background papers intended to lay the groundwork for a common understanding of the complex issues and policies related to food and agriculture policy across diverse audiences. Our goal is to inform discussion and stimulate debate about future directions for policy.

This AGree backgrounder was written by Stephanie Mercier, former chief economist for the Senate Agriculture Committee. The U.S. government provides short-term food aid and longer-term development assistance to countries facing economic difficulties or natural disasters. Although the two sets of programs have shared goals, they are sometimes not well coordinated with each other. This publication reviews the history and structure of U.S. policy, summarizes different perspectives about the current system, and suggests areas for change. Insights from an expert panel of agricultural and food experts contributed to the discussion.

We hope you find this paper a helpful resource and source of ideas. And we hope you will join the effort to transform federal food and agriculture policy to meet the challenges of the future.

Deb Atwood
Executive Director

Table of Contents

Executive Summary ..... **v**

Historical Background v

U.S. International Food Aid and Agricultural Development Programs vii

Food Aid Programs vii

Agricultural Development Programs vii

Returns on Agricultural Development Spending viii

Key Limitations in U.S. International Agricultural Development and Food Aid Programs viii

Policy Issues viii

Food Aid Reform viii

Agricultural Development ix

Concluding Remarks ix

Introduction **1**

Historical Background **1**

Early Ad Hoc Relief Efforts 1

Emergence of Current Food Aid Policy Focus 2

U.S. International Agricultural Development Assistance Strategy over Time 3

Agricultural Development and Food Assistance as a Share of U.S. Overseas Development Assistance 4

Public Attitude Toward Foreign Policy Funding 4

Descriptions of Current Policies and Programs **5**

Current Food Aid Program Structure 5

Food for Peace Act 6

Food for Progress 7

McGovern-Dole Program 7

Emergency Food Security Program 7

Bill Emerson Humanitarian Trust 8

International Agricultural Development Programs 8

Feed the Future 8

Millennium Challenge Corporation 9

Congressional Jurisdiction over International Food Aid and Agricultural Development Activity 10

Federal Agencies Involved in International Food Aid and Agricultural Development Assistance 10

U.S. Contribution to International Agricultural Research and Development Efforts 11

Distribution of Benefits **12**

Recipient Countries under Food Aid and Agricultural Development Programs 12

Efforts to Target Benefits 13
Current Debates about U.S. Policies and Programs 16
Contribution of Expert Panel 16
Return on Agricultural Development Investments 16
Returns for Agricultural Research 16
Returns for Improving Rural Infrastructure 17
Returns to Investment in Rural Health Care 17
Returns to Humanitarian Assistance 17
Methodological Issues 17
Rethinking Agricultural Development Strategies 18
Origin of the Comprehensive Africa Agriculture Development Program (CAADP) 18
World Bank Agricultural Development Report 18
CSIS Report 18
Senate Foreign Relations Committee Report 19
Chicago Council on Global Affairs Reports 19
Key Limitations of U.S. International Agricultural Development and Food Aid Programs 20
Addressing the Investment Gap 20
Improving Coordination of Activities 21
Specific Proposals for Reforming U.S. Food Aid and Agricultural Development Programs 22
Food Aid Reform Proposals 22
In-Kind Aid versus Local Procurement 23
Monetization 24
Agricultural Development Reform Proposals 24
Cross-Cutting Issues 25
Food Aid and Agricultural Development 25
Agricultural Development and Nutrition 26
Agricultural Development and International Health Care 26
Agricultural Development and Agricultural Trade Policy 27
Domestic Farm Policy and International Agricultural Markets 28
Major Budgetary Issues for International Food Aid and Agricultural Development Programs 29
Concluding Remarks 31
List of Acronyms 14
Endnotes 15

Executive Summary

Since the United States emerged as a major world power in the wake of World War I, one of the key ways that the U.S. government has manifested that influence has been to provide financial and/or technical assistance to countries facing economic difficulties or natural disasters, focusing efforts on developing countries in recent decades.

As agriculture represents a significant share of the economy in most developing countries—at least 30 percent of Gross Domestic Product (GDP) in Africa and South Asia, with 70 percent of the world's poor living in rural areas—assistance is often directed to agriculture. In the short term, the U.S. government provides help for the hungry in the form of international food aid and, over the longer term, seeks to bolster agricultural production and related aspects in the form of agricultural development assistance. Given the shared goals of the two sets of programs, one might expect a significant degree of coherence and integration in how they are conducted. Unfortunately, that is still an aspiration rather than a firm operating principle for the most part.

October 2012 estimates from the UN's Food and Agriculture Organization (FAO) indicate that about 868 million people globally are food insecure. As defined by the U.S. Department of Agriculture (USDA), food security in a household means access by all members at all times to enough food for an active, healthy life. This figure represents an increase in absolute terms in recent years, although a decline as a share of global population since the mid-1990s. Prior to the 2007–2008 food crisis, the United States and other developed countries had allowed their focus on agricultural development to wane. The estimated global total of agricultural development assistance fell from $8 billion annually in 1984 to $3.4 billion in 2004. At the 2009 G-8 summit held in L'Aquila, Italy, in the wake of the crisis, leaders of major countries committed to increase investment in agricultural development by $22 billion over the next three years, with President Barack Obama pledging the U.S. government to provide 16 percent of that amount, or $3.5 billion. A new global food security initiative, called Feed the Future, represents the realization of the President's pledge and embodies a new approach in how the United States intends to tackle this critical problem.

Historical Background

The Marshall Plan (formally the European Recovery Plan) was launched in June 1947 after a speech at Harvard University by Secretary of State George Marshall. The effort was aimed at providing economic and technical assistance to European countries devastated by World War II and facing a food shortage and widespread rationing after a harsh winter in 1946–1947. By the time the Plan ended in 1951, the U.S. government had provided nearly $13 billion in assistance to help re-build European economies, about one-quarter in the form of food. The Plan required recipient governments to match U.S. funding with "counterpart contributions" in national currencies, which were invested after consultation with Plan officials. As part of delivering assistance under the Marshall Plan, specialists from USDA's Office of Foreign Agricultural Relations provided technical assistance to help agricultural sectors recover in recipient countries.

In the early 1950s, the U.S. focus on food relief and agricultural development efforts shifted away from Europe and more toward the developing world. The Agricultural Act of 1949 allowed the Secretary of Agriculture to provide surplus food as donations to "developing countries and friendly countries" to help their agricultural sectors to grow. In late 1961, after passage of the Foreign Assistance Act, President John Kennedy established the U.S. Agency for International Development (USAID), an independent agency with the primary mission of providing long-range economic and social development assistance around the world. Previously, the various offices responsible for operating U.S. international economic development programs had typically been housed organizationally within the U.S. Department of State.

U.S. International Food Aid and Agricultural Development Programs

In fiscal year 2010, the U.S. government provided about $30 billion in total overseas development assistance (ODA). Funding for food aid across all programs totaled just over $2 billion that year, and international agricultural development assistance, primarily provided through USAID, totaled another $2 billion. Thus, short-term assistance to agriculture as international food aid and longer-term development assistance each accounts for about 7 percent of total U.S. overseas development assistance. This share represents a decline in relative terms over recent decades for food aid funding, which has remained fairly stable around $2 billion in nominal terms for the past decade or so, while overall ODA has more than doubled since fiscal year 2000.

Food Aid Programs

The volume and program composition of U.S. food aid has varied greatly over time. Average annual food aid in tonnage averaged nearly 16 million tons of commodities during the 1960s, when food aid shipments accounted for nearly a quarter of the total value of U.S. agricultural exports. Total tonnage dropped by more than half on average during the 1970s, and was only about one-fourth of the 1960s level in the decade of 2001–2010. In 1954, Congress passed the Agricultural Trade Development and Assistance Act—popularly known over time as P.L.-480—a concept supported by President Dwight Eisenhower, in part as a response to the huge commodity surplus that was being accumulated in the U.S. market. The Title II program authorized by this legislation, also known as Food for Peace, has become the largest program in dollar terms among the programs and authorities that are used to provide international food assistance by the U.S. government. Food for Peace provides funding to purchase U.S. commodities, which are distributed for direct feeding to respond to emergency situations such as famines or natural disasters, and also provides funding for commodities that are sold in local markets of recipient countries with the sales proceeds used to fund a range of development activities.

Congress added the Food for Progress program (FFP) in the Food Security Act of 1985, designed to focus efforts in both developing countries and emerging economies on expanding the scope and efficiency of private agricultural markets through improving infrastructure, marketing systems, agricultural processing, and agribusiness development. The most recent legislative addition to the array of U.S. food aid programs was the McGovern-Dole International Food for Education and Child Nutrition Program, established as a permanent program as part of the Farm Security and Rural Investment Act of 2002 (2002 farm bill). Under the McGovern-Dole program, private voluntary organizations (PVOs) and the World Food Program operate projects in developing countries that provide U.S. donated commodities for school meals or take-home rations to "improve food security, reduce the incidence of hunger, and improve literacy and primary education, particularly with respect to girls."

Agricultural Development Programs

Unlike the international food assistance efforts described above, most international agricultural development activities do not fall under discrete named programs with specific Congressional authorization. Instead, USAID relies primarily on broad legislative authority most often provided through the Foreign Assistance Act to operate their programs. Most USAID agricultural development programming now falls under the rubric of the new Feed the Future initiative (FTF), which was launched in 2010 in response to the recognition of the serious setback that had been dealt to agricultural productivity growth in developing countries, especially in Sub-Saharan Africa, from the reduction in donor resources devoted to this area beginning in the 1980s. Between fiscal years (FY) 2010 and 2012, funding for the new initiative has averaged about $1.2 billion annually, most of which has been allocated to specific projects in one of the 19 identified "focus" countries or regional partnerships, but about 10 percent of which has been directed toward research and development activities.

Returns on Agricultural Development Spending

Empirical analyses on returns for various types of spending under these programs indicate that agricultural research and infrastructure investments into improving irrigation capacity and rural roads consistently generate very high returns. Evidence is less clear on investments in rural health care—studies on specific interventions such as providing mosquito nets and iron supplementation demonstrate beneficial impacts, but studies at the macro level show mixed results in the impact of broad health interventions on agricultural income and productivity.

Key Limitations in U.S. International Agricultural Development and Food Aid Programs

Although resource availability for agricultural development in particular has clearly improved in recent years, there is still a significant shortfall in overall funding compared to what is needed to remedy the situation. A 2008 International Food Policy Research Institute (IFPRI) study found that in order to make the appropriate public investments globally in agricultural research and rural infrastructure to meet the second Millennium Development Goal of halving world hunger by 2015, an additional $14 billion annually (roughly double current levels) needs to be spent on these areas in developing countries. With many of the traditional donor countries that belong to the Development Assistance Committee (DAC), including the United States, facing reductions in government spending due to the pressure of heavy public debt burdens, such additional funds are unlikely to come from those sources. Instead, the bulk of the new funding for agricultural development will have to come from elsewhere. Alternative sources must include the developing countries' own governments, development assistance from additional middle-income countries and international organizations outside the traditional donors, and investment from the private sector, both from agribusinesses within developing countries and from outside, in the form of Foreign Direct Investment (FDI) in these countries' agricultural sectors by transnational corporations.

Donor countries, including the United States, continue to struggle with how to manage the transition between providing emergency assistance through food aid programs to a region beset by natural disaster or civil war, and bolstering agricultural development efforts in that same area to avoid a repeat occurrence. Most observers also see poor coordination as a key limitation for the operation of agricultural development efforts, both between government agencies from the same donor country, and between PVOs from various donor countries operating within the same recipient country.

Policy Issues

Examination of policy issues in this paper was augmented through consultation with an expert panel of policy analysts and policy makers from the U.S. government, international organizations, industry, academia, and the NGO community.

Food Aid Reform

One issue is the use of "tied" food aid, in which commodities are sourced from the United States and commodities are transported primarily by U.S.-flagged ships. Advocates of the existing in-kind donation approach insist that reserving purchases of goods and services under the programs to the United States helps to generate economic activity and create jobs in this country. They also point to concerns about widespread corruption in many developing countries, asserting that assistance provided in such countries to governments in the form of cash is easier to divert from its intended purpose than are physical commodities, although under current program rules, most aid goes to local nongovernmental organizations (NGOs) or the World Food Program to distribute. Critics regard this approach as distorting of world trade flows and cost-inefficient, because a significant share of the resources for the program is expended in the form of processing and shipping before the assistance ever reaches the recipient countries. A 2007 study by the U.S. Government Accountability Office found only one-third of dollars spent on the Title II Food for Peace program went to purchase the actual commodities.

A related issue is the use of monetization, under which PVOs conducting agricultural development programs under U.S. food aid programs sell a portion of the commodities they receive in local markets in the recipient country, in order to fund activities that are complementary to the actual food distribution. A 2011 GAO study found that such transactions often generate substantially less proceeds than the commodities originally cost when procured in the United States, amounting to a deadweight loss of about 30 percent on average for FY 2007 through 2009.

Both of these issues will be addressed in the upcoming farm bill. The first few steps were taken when the full Senate adopted legislation on June 21, 2012, which included modest reforms in this direction. On the other hand, the version marked up in the House Agriculture Committee on July 11, 2012, largely maintained the status quo on food aid programs. No action has been taken on the House floor yet on the new farm bill.

Agricultural Development

For the most part, policy discussion related to agricultural development focuses on a broad policy agenda rather than specific proposals to modify existing programs or rules. One exception are reforms to the Bumpers amendment, a provision in Congressional appropriations legislation that originated in 1985 that restricts agricultural development assistance to countries that may produce commodities that could compete with the product from the United States. Cross-cutting topics being looked at include the intersections between agricultural development and other areas of foreign assistance, such as food aid, international health assistance, agricultural trade policy, and the relationship between U.S. farm support programs and international agricultural markets.

Concluding Remarks

Agricultural development experts often say that if they do their jobs well, the end result is that they will do themselves out of their jobs entirely, by ending poverty in developing countries. Recent U.S. efforts to reform and expand food aid and international agricultural development assistance programs have made important strides, but both sets of programs face severe pressure under the effort to reduce the federal budget deficit. Better coordination of activities under both umbrellas would be an important step toward improving the U.S. response to international hunger and poverty. Of the five basic principles established for the new Feed the Future initiative, the most important one may be the last—"stay the course." It may also be the most difficult to sustain.

Introduction

Since the United States emerged as a major world power in the wake of World War I, one of the key ways that the U.S. government has manifested its influence has been to provide financial and/or technical assistance to countries facing economic difficulties or natural disasters, focusing efforts on developing countries in recent decades. As agriculture represents a significant share of the economy in most developing countries—at least 30 percent of Gross Domestic Product (GDP) in Africa and South Asia, with 70 percent of the world's poorest inhabitants living in rural areas—assistance is often directed to the agricultural sector. In the short term, the U.S. government provides help for the hungry in the form of international food aid, and over the longer term, seeks to bolster agricultural production and related aspects in the form of agricultural development assistance. Given the shared goals of the two sets of programs, one might expect a significant degree of coherence and integration in how they are conducted. Unfortunately, such coordination is still an aspiration rather than a firm operating principle for the most part.

On her first day in office in January 2009, Secretary of State Hillary Clinton spoke to U.S. Department of State employees about "three legs to the stool of American power: defense, diplomacy, and development." Her public statement reinforced action taken in the administration of President George W. Bush to emphasize the importance of international economic development, particularly the establishment of the Millennium Challenge Corporation.[1] The last few years have seen a surge in international attention on the need to bolster agricultural production, especially in developing countries, in the wake of the food price spike of 2007-2008, which forced an additional 100 million people globally into hunger and food insecurity by the end of 2008. As defined by the U.S. Department of Agriculture (USDA), food security in a household means access by all members at all times to enough food for an active, healthy life, so food insecurity is lack of such access. The UN's Food and Agriculture Organization (FAO) estimates that about 868 million people worldwide are food insecure.[2] This figure represents in absolute terms in recent years, although a decline in relative terms since the mid-1990s. Prior to this crisis, the United States and other developed countries had allowed their focus on agricultural development to wane. The estimated global total of agricultural development assistance fell from $8 billion annually in 1984 to $3.4 billion in 2004.[3]

At the 2009 G-8 summit held in L'Aquila, Italy, leaders committed to increase investment in agricultural development by $22 billion over the next three years, with President Barack Obama pledging the U.S. government to provide 16 percent of that amount, or $3.5 billion. Although it is not the sole source of U.S. assistance in this area, a new global food security initiative, called Feed the Future, represents the realization of the President's pledge and embodies a new approach in how the United States intends to tackle this critical problem.

This paper examines the history and structure of U.S. agricultural development assistance and food aid. It places these programs in the context of overall foreign assistance spending and the entire federal budget, and summarizes the debate over the strengths and weaknesses of the U.S. system, based in part on input from an expert panel convened to consist of top agricultural and food aid experts. The paper concludes with suggestions on how the U.S. approach might be made more effective.

Historical Background

Early Ad Hoc Relief Efforts

The precursor to official U.S. overseas emergency relief efforts was the Commission for Relief in Belgium (CRB), which was initially organized by a group of private U.S. citizens trapped in Europe at the outbreak of World War I in 1914. Led by a committee that included future U.S. President Herbert Hoover, then a prominent mining engineer working in London, the group acted in response to a severe food shortage in Belgium and northern France after the region was invaded by Germany and subjected to trade restrictions imposed on

belligerents in the war by neutral countries, which at that time included the United States. While not an official U.S. entity, the CRB relied on donations from the U.S. government and other countries, as well as private citizens around the world, to purchase and ship food from the United States to be distributed in Belgium and neighboring regions in France. After the U.S. entered the war in 1917, President Wilson established the U.S. Food Administration, with Hoover as its head, to administer U.S. food reserves for its allies. It is estimated that the CRB and its partners distributed nearly $3 billion worth of food (worth more than $80 billion in 2011 dollars) between 1914 and the end of the war in 1918.[4]

After the Armistice, the U.S. government established the American Relief Administration (ARA) to provide food to war-torn countries in Europe, starting in Western Europe in 1919 and expanding to famine-stricken Russia in 1921, after negotiations with the newly established Bolshevik government. As with the CRB, ARA utilized funds from both the U.S. government and private donations, purchasing a total of 4 million tons of food and other relief supplies in the process. Hoover also headed this organization.[5] Relief operations ended in most of Europe in 1921, and in Russia two years later.

During World War II, President Roosevelt authorized the U.S. Department of Agriculture (USDA) to provide food assistance to Great Britain. As part of an effort to bolster global food supplies outside of the war zone, USDA employees from the Office of Foreign Relations (OFAR) were also sent to Latin America to help key countries improve their agricultural practices.

The Marshall Plan (formally the European Recovery Plan) was launched in June 1947 after a speech at Harvard University by Secretary of State George Marshall. The effort was aimed at providing economic and technical assistance to European countries devastated by World War II and facing a food shortage and widespread rationing after a harsh winter in 1946–1947. Many historians also retrospectively viewed the Plan as one of the opening salvos of the Cold War. The aid went to 16 European countries, including the defeated enemy of the United States, the country then known as West Germany. Although Eastern European countries, including Russia, were offered the opportunity to receive assistance under the Plan, they refused. By the time the Plan was ended in 1951, the U.S. government had provided nearly $13 billion in assistance (nearly $94 billion in 2011 dollars) to rebuild European economies, about one-quarter in the form of food and most of the remainder directed to the industrial sectors.[6] The Plan required recipient governments to match U.S. funding with "counterpart contributions" in national currencies, which were invested after consultation with Plan officials. As part of delivering assistance under the Marshall Plan, OFAR specialists provided technical assistance to help agricultural sectors recover in recipient countries.

Outside of the Marshall Plan, the U.S. government provided additional assistance to both Germany and Japan under the Government and Relief in Occupied Areas program, which operated from 1945 to 1949. The program allowed only food, fertilizers, seed, and petroleum to be provided, through both grants and long-term loans, totaling about $4.4 billion (about $37 billion in 2011 dollars) for both countries.[7] Both the Japanese and West German governments were later required to re-pay a portion of the money they received under this program.

Emergence of Current Food Aid Policy Focus

In the early 1950s, the U.S. focus on food relief and agricultural development efforts shifted away from Europe and more toward the developing world. The Agricultural Act of 1949, one of a handful of seminal pieces of farm legislation with statutory authorities for programs that do not expire (known as permanent legislation), included a provision (Section 416(b)) that allowed the Secretary of Agriculture to provide surplus food as donations to "developing countries and friendly countries" to help their agricultural sectors to grow.[8] Prior to passage of the 1996 farm bill, U.S. domestic commodity support programs had allowed farmers to forfeit their crops offered as loan collateral to the government in lieu of loan repayment if the prices for

those crops fell significantly. In periods of extended low prices, that program element resulted in a significant accumulation of stocks in government hands. To reduce the inventory, USDA often utilized Section 416(b) authority to donate the food overseas. In the 1990s, when government inventories declined, USDA used this authority to purchase food on the market to support commodity prices. Section 416(b) remains intact through the present, even though the U.S. government no longer holds grain stocks and the authority has not been utilized to any significant degree since 2001. Other programs, such as P.L.-480 Titles I-III, Food for Progress, and the McGovern-Dole International Food for Education and Child Nutrition, emerged over the next few decades, each one targeting an increasingly narrow set of humanitarian and/or economic development objectives. The newer programs also target specific groups within recipient countries more narrowly. Those programs are described in greater detail later in this paper.

In the 1990s, as the foundation of U.S. domestic farm support programs began to shift away from supply control instruments that had frequently resulted in large accumulation of government stocks, so, too, did the underlying objectives of surplus disposal and expansion of international trade that had characterized U.S. food aid programs from the beginning. In the Food, Agriculture, Conservation and Trade Act of 1990 (FACTA), the policy emphasis of the main U.S. food aid program, the Title II "Food for Peace" program was re-focused on improving food security, hunger relief, and activities to encourage economic development.[9] In the 2008 farm bill, the overall legislation authorizing the Title II program was renamed the Food for Peace Act to emphasize the shift in focus.

U.S. International Agricultural Development Assistance Strategy over Time

Under the post-World War II relief programs described above, technical assistance to players in the agricultural sector was often a component of the overall rehabilitation of the war-torn economies of Europe and Japan, but it was never a focus of U.S. efforts and often incidental to the major work being undertaken. As the focus of U.S. assistance shifted toward developing countries with the establishment of standing international food aid programs in the 1950s, the need to support agricultural development activities on a consistent basis began to receive more attention because agriculture was a more important component of these national economies than in Europe and Japan. For example, in 1960, the agricultural sector generated about 40 percent of GDP on average across Sub-Saharan Africa, employing about 80 percent of the region's labor force,[10] as compared to about 6.5 percent of GDP and 15 percent of total employment for countries in Europe.[11]

In late 1961, after passage of the Foreign Assistance Act, President John Kennedy established the U.S. Agency for International Development (USAID), an independent agency with the primary mission of providing long-range economic and social development assistance around the world. Previously, the various offices responsible for operating U.S. international economic development programs had typically been housed organizationally within the U.S. Department of State.

Early USAID activities in Africa and Asia in the 1950s and 1960s focused on building educational and extension capacity, and later on capacity-building within recipient governments. For example, in Ethiopia, U.S. resources established an agricultural high school in Jimma and later an agricultural college in Alemaya.[12] USAID was also a supporter of the development of the state agricultural university system in India through the late 1970s.[13] USAID played a significant role in funding and facilitating the adoption of practices (use of hybrid seed, irrigation, and nitrogen fertilizer) associated with the Green Revolution beginning in the 1960s. This effort spurred significant yield increases for farmers growing grain crops such as wheat, rice, and corn, especially in Asia and South America, and led to lower food prices for hundreds of millions of consumers. In the aftermath of the Green Revolution, some criticized the adverse distributional and environmental impacts it created. These impacts included the fact that much of the early benefits accrued to larger farmers in Asia who could more easily afford to invest in the irrigation technology and agricultural chemicals that were needed, and that

the practices contributed to increased water pollution from agricultural chemical runoff and loss of biodiversity.[14]

In the 1970s, the concept of integrated rural development (IRD) caught on in development circles. As defined in a 1981 USAID paper, IRD is the process of combining multiple development services into a coherent delivery system with the aim of improving the well-being of rural populations.[15] This approach was utilized at a number of donor development agencies, both bilateral and multilateral, such as the World Bank, over the next decade or so, although a number of analysts have judged that it was not very successful. Factors cited as contributing to project problems in Africa included:[16]

- Harsh macroeconomic policies were a drag on the best-designed IRD projects. Many IRD projects did not include a profitable core economic activity to finance social and agricultural services after donor aid was phased out.
- Coordination was a major stumbling block because most IRD projects required inputs from numerous central ministries (agriculture, health, and education), which often did not delegate implementation authority to local ministry representatives. Although it is easy to suggest that decentralization of authority would have helped solve the coordination problem, in practice there was strong and silent African opposition to decentralization, especially in one-party states.
- Although some rural development projects were successful, they were often too skill-intensive to be replicated on a regional or national scale.

Unfortunately, rather than donor organizations and host governments sitting down and trying to fix what had gone wrong with the IRD approach, the decision was made by most donors in the mid- to late 1980s to shift their emphasis of development funding away from agriculture to other sectors of developing country economies. The emergence of large agricultural surpluses in major exporting countries during this period also contributed to the sense that there was no need to boost production in developing countries because shortfalls in domestic availability in developing countries could be addressed through trade.[17] The focus of development efforts did not return to agriculture until the last few years, in the wake of the food price spike in 2007–2008, which pushed an estimated additional 100 million people globally into food insecurity. This renewed attention to agricultural development by the U. S. government has taken the form of the Feed the Future initiative, which is discussed at greater length later in this paper.

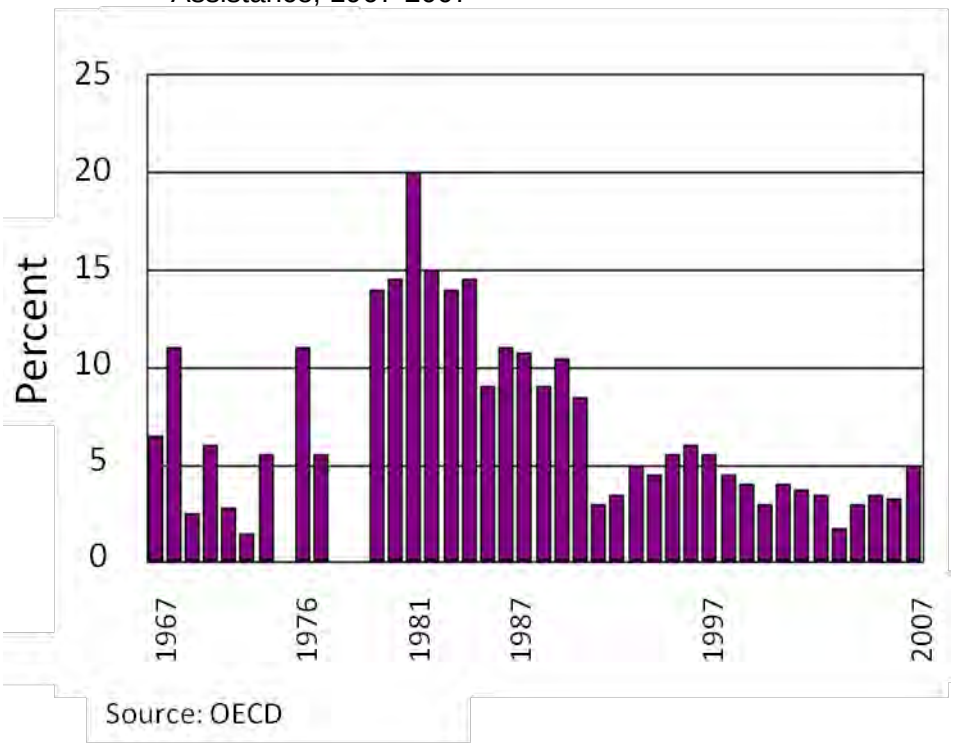
Agricultural Development and Food Assistance as a Share of U.S. Overseas Development Assistance

In fiscal year 2010 (FY10), the U.S. government provided about $30 billion in total overseas development assistance (ODA).[18] Funding for food aid across all programs totaled just over $2 billion that year, and international agricultural development assistance, primarily provided through USAID, totaled another $2 billion. Thus, short-term assistance to agriculture as international food aid and longer-term assistance as development assistance each accounts for about 7 percent of total U.S. overseas development assistance. This share represents a decline in relative terms over recent decades for food aid funding, which has remained fairly stable around $2 billion in nominal terms for the past decade or so, while overall ODA has more than doubled since fiscal year 2000 (FY00).[19] On the other hand, it does represent a relative increase for agricultural development funding, which accounted for only about 4 percent of total ODA spending in the same period, after peaking at about 20 percent in 1981 (Figure 1).[20]

Public Attitude Toward Foreign Policy Funding

Over the last several decades, the American public has evinced contradictory attitudes toward aspects of U.S. foreign assistance policy. Even during the debate on the Marshall Plan in 1947–1948, public polling showed a large share of the public had little or no knowledge of

Figure 1 | Share of Agriculture in U.S. Overseas Development Assistance, 1967-2007



the Plan, but it generated majority support among those who had heard of it.[21] On the positive side, polling on the importance of providing assistance to combat hunger and assist in agricultural development elicits strong public support. A poll commissioned by the Alliance to End Hunger on the day of the November 2008 elections found that two-thirds of U.S. voters would support increased spending on combating global hunger and agricultural development.[22] Similarly, in a 2010 poll by the Chicago Council of Foreign Affairs, 74 percent of U.S. citizens polled favored providing "food and medical assistance" to other countries, and 62 percent favored delivering "aid to help needy countries to develop their economies."[23] Unfortunately, separate polling also indicates support on the part of the U.S. public to cut U.S. foreign assistance funding, although that willingness is clearly affected by an exaggerated perception of what share of U.S. federal government spending goes toward such activities. Rather than the 20–25 percent of federal spending that is commonly asserted in surveys, the actual share of foreign assistance in total U.S. government spending is about 1 percent, as pointed out by President Barack Obama in an April 2011 speech.[24]

Although U.S. overseas development assistance is greater in absolute terms than in any other donor country, accounting for about one-quarter of the total provided globally in recent years, U.S. aid represents a relatively small share of the total U.S. economy as compared to other countries.[25] In data from 2010 compiled by the Organisation for Economic Co-operation and Development (OECD), Norway, Luxembourg, Sweden, and Denmark led donor countries in the share of their nations' Gross National Income (GNI) provided as overseas development assistance at about 1 percent, while the lowest ranked donors in share of GNI were South Korea, Italy, Greece, Japan, and the United States, at between 0.15–0.21 percent. The average across all donor countries was 0.32 percent.[26] By way of comparison, developed countries pledged at the 1992 Rio Summit to provide at least 0.7 percent of national income for development in order to meet the United Nation's Millennium Development Goals, although the United States never formally affirmed that commitment.

Descriptions of Current Policies and Programs

Current Food Aid Program Structure

The volume and program composition of U.S. food aid has varied greatly over time, as shown in Figure 2. Annual food aid in volume terms averaged nearly 16 million tons of commodities during the 1960s, when food aid shipments accounted for nearly a quarter of the total value of U.S. agricultural exports.[27] Total tonnage dropped by more than half on average during the 1970s

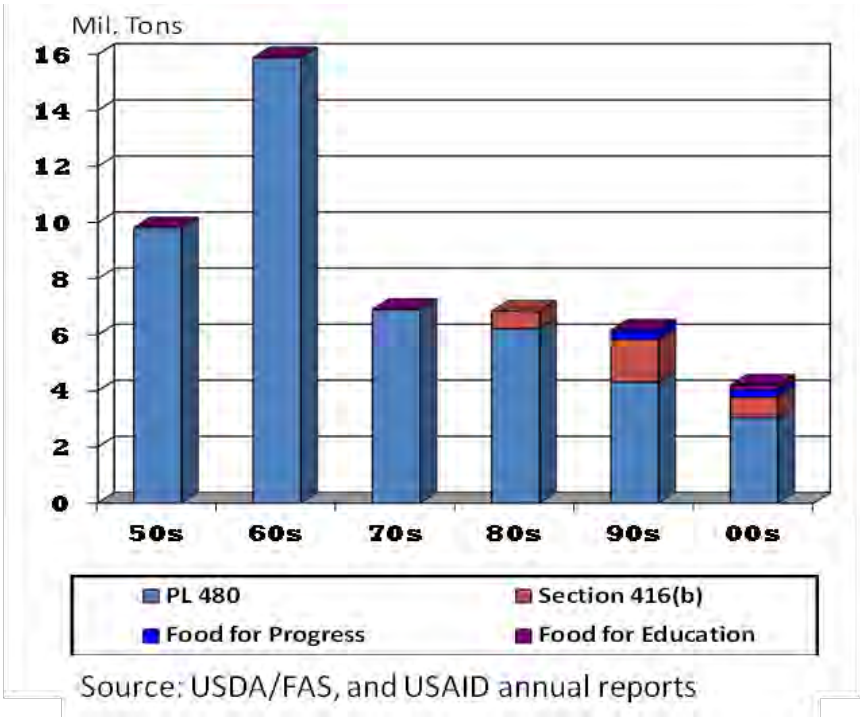
due to increases in commercial exports and reductions in surpluses, and was only about one-fourth of the 1960s level in the decade of 2001–2010.

Food for Peace Act

In 1954, Congress passed the Agricultural Trade Development and Assistance Act—popularly known over time as P.L.-480—a concept supported by President Dwight Eisenhower, in part as a response to the huge commodity surplus that was being accumulated in the U.S. market. The legislation was developed and shepherded through Congress by Senator Hubert Humphrey (D, MN), intended to meet the nation's domestic needs and help accomplish foreign policy objectives. The legislation authorized three distinct programs: 1) Title I, under which USDA sold commodities to foreign governments under concessional credit terms;[28] 2) Title II, under which the government donated commodities to developing countries to address immediate hunger needs and also to support economic development objectives, with programs run by private voluntary organizations (PVOs) or the UN's World Food Program (WFP); and 3) Title III, under which the U.S. government provided food to developing country governments, which was designated to be sold within the recipient country and the proceeds used to support development activities.[29] With the P.L.-480 programs, and with those established later, the agency responsible for operating the program allocates resources centrally based on proposals submitted by eligible organizations, based on evaluation of the need for assistance in the proposed recipient country and the merits of the individual projects being proposed.

Through the early 1990s, concessional sales under Title I made up the bulk of shipments provided by the U.S. government as international food assistance, accounting for a 60 percent share on average between 1956–1991.[30] Between 1989–1991, Title I funding averaged nearly $780 million annually. After the passage of the Food, Agriculture, Conservation, and Trade Act of 1990, which included some changes to the program's loan term structure and objectives, combined with later international criticism of providing food aid as concessional aid rather than in outright grant form, the share of food aid spending under Title I gradually declined. New funding was zeroed out for the program beginning in fiscal year (FY) 2006. Funding for Title III programming was reported with Title I spending until

Figure 2 | Historic Volume and Program Allocation of U.S. Food Aid, 1950-2010, Averaged by Decade



FY 1990—separate reported levels peaked at over $300 million in FY 1993, then receded over time. No funding has been provided for Title III since FY 2002.

The Title II program, also known as Food for Peace, has become the largest program in dollar terms among the U.S. government programs and authorities used to provide international food assistance to hungry people. Food for Peace provides funding to purchase U.S. commodities that are distributed for direct feeding to respond to emergency situations such as famines or natural disasters, and also provides funding for commodities sold in local markets of recipient countries with the sales proceeds used to fund a range of development activities. Prior to 2001, the division of

funding between the two types of activities (emergency and non-emergency) was roughly 50:50—since that time, shipments for emergency purposes have dominated, taking up about 80 percent of total funding on average. The shift occurred largely because of significant, unanticipated need for emergency assistance that emerged over the period, especially as a result of the extended conflict in the Darfur province of Sudan and assistance provided as part of reconstruction in Iraq and Afghanistan after U.S. invasions of both countries. Between fiscal years 2003–2011, spending under Title II averaged about $1.5 billion annually, encompassing both funding through the annual appropriations process and additional funding through emergency supplemental bills in seven of the nine years.[31] Most Title II projects engaged in non-emergency development assistance are approved for multiple years to allow for continuity in a project's activities.

Food for Progress

In addition to Title II, which has been the mainstay of U.S. international food aid for more than half a century, Congress added the Food for Progress program (FFP) in the Food Security Act of 1985, designed to focus efforts in both developing countries and emerging economies on expanding the scope and efficiency of private agricultural markets through improving infrastructure, marketing systems, agricultural processing, and agribusiness development.[32] This program is the only U.S. food aid program that regularly receives its funding directly through the farm bill process on a mandatory basis—all the other programs are authorized by provisions of the farm bill but funded for the most part on a discretionary basis through the annual appropriations process.[33] FFP funding is controlled through a statutory cap that limits the amount that can be spent to transport commodities for use in projects to no more than $40 million annually. Total funding for the program has averaged about $145 million annually since FY00, which also includes the cost of acquiring and processing the commodities to be shipped. The Foreign Agricultural Service (FAS) of the U.S. Department of Agriculture administers this program.

McGovern-Dole Program

The most recent legislative addition to the array of U.S. food aid programs was the McGovern-Dole International Food for Education and Child Nutrition Program, established as a permanent program as part of the Farm Security and Rural Investment Act of 2002 (2002 farm bill) after operating as a pilot program under the Secretary of Agriculture's Commodity Credit Corporation Charter Act authority beginning in 2000. The program's conceptual foundation was proposed by former Senators George McGovern (D, SD) and Robert Dole (R, KS), who had worked together on school lunch issues during their tenure as members of the Senate Agriculture Committee. They thought the approach of providing free meals to poor students to improve school attendance and performance could work in developing countries as well as it has in the United States.

Under the McGovern-Dole program, PVOs and the World Food Program operate projects in developing countries that provide U.S.-donated commodities for school meals or take-home rations to "improve food security, reduce the incidence of hunger, and improve literacy and primary education, particularly with respect to girls."[34] Projects that assist in meeting maternal, infant, and child nutrition goals are also eligible for funding under McGovern-Dole. The 2002 farm bill provided $100 million in mandatory money for FY 2003 to run the program, and a provision of the Food, Conservation, and Energy Act of 2008 (2008 farm bill) provided an additional $84 million in mandatory money, but the program has relied upon money acquired through the annual appropriations process for its other years in operation. Since FY 2004, the program has received $106 million annually on average in funding, peaking at $199 million in FY 2010.[35] This program is also run by USDA's Foreign Agricultural Service.

Emergency Food Security Program

The final piece in the "toolbox" of current U.S. food aid programs that directly deliver assistance overseas is unlike the previous programs described in several respects. Set up in April 2010, the Emergency Food Security Program (EFSP) is not specifically established in statute, although it is being operated under broad

standing authority for providing assistance to relieve suffering due to international disasters that has been in place for more than 50 years.[36] Unlike the other international food assistance programs, the EFSP provides cash assistance to help address emergency food needs in developing countries in situations where food is available either locally or regionally but the purchasing power of certain target groups within the population to buy that food is severely impaired. The EFSP is not directly allocated funds through the appropriations process, but is given a share of funding provided for the International Disaster and Famine account to operate its programs. Through June 2011, the EFSP had allocated $339 million to projects in 18 countries, 75 percent of which was utilized to procure food either locally or regionally for recipients, the remainder used for either cash transfers or food vouchers given directly to recipients to do their own procurement.[37] Approved projects are of relatively short duration, between 6 and 12 months, and applicants are encouraged to seek EFSP and Title II funding to be used sequentially.[38]

Bill Emerson Humanitarian Trust

Although not a food aid program in the strictest sense, the Bill Emerson Humanitarian Trust (BEHT) serves as a back-up reserve to the Title II program in case emergency needs overwhelm the program's ability to provide assistance through funds it receives through the appropriations process. Originally established as the Food Security Wheat Reserve as Title III of the Agricultural Act of 1980 (P.L. 96-494), the program was designed to hold commodities that could be utilized for aid if regular outlets for resources were exhausted. The program was renamed the Food Security Commodity Reserve in the Federal Agriculture Reform and Improvement Act of 1996 (1996 farm bill) to underline the fact that commodities other than wheat could be held in the reserve, although that flexibility has never been exercised. The final name change occurred in 1998 to honor the achievements of the late Congressman Bill Emerson (R, MO), who was a strong advocate for helping the needy during his tenure in Congress.

Between 1984 and 2008, various secretaries of agriculture released 7.6 million tons of wheat to augment Title II funds to address unanticipated emergencies, largely in Africa.[39] Throughout most of its history, the grain held in the reserve was stored in commercial elevators in the Pacific Northwest region of the United States, where storage rates were relatively inexpensive. When the preferred staple commodity in the designated recipient country was a grain other than wheat, USDA officials sold wheat from stocks on the open market and used the proceeds to purchase the desired commodities. In the spring of 2008, as the farm bill process neared completion, Secretary of Agriculture Edward Schafer exercised his authority to convert all the wheat then in the BEHT to take advantage of the high commodity prices at the time (yielding about $338 million), and since then, the resources in the BEHT have been held entirely as cash. Currently, there is about $314 million in cash still held in the BEHT, indicating that the Trust has been little used in the past four years, primarily because it requires specific action by Congressional Appropriations Committees to provide funds to replenish resources drawn from the BEHT.

International Agricultural Development Programs

Unlike the international food assistance efforts described above, most international agricultural development activities do not fall under discrete named programs with specific Congressional authorization. Instead, the U.S. Agency for International Development relies primarily on broad legislative authority provided primarily through the Foreign Assistance Act to operate programs, re-allocating (or seeking additional) financial resources and staff as priorities shift over time. In selecting how to invest U.S. agricultural development funds, overall priorities are established centrally by USAID but the scope, and specifics of individual agricultural development projects are primarily determined on a country-by-country or regional basis by USAID Mission staff stationed in the country or region in consultation with recipient governments.

Feed the Future

Most USAID agricultural development programming now falls under the rubric of the new Feed the Future

initiative (FTF), which was launched in 2010 in response to the recognition of the serious setback in agricultural productivity growth in developing countries, especially in Sub-Saharan Africa, from the reduction in donor resources devoted to this area beginning in the 1980s. In the aftermath of the 2007–2008 food price crisis, a period during which world prices for staple food commodities doubled, FAO estimated that an additional 100 million people globally had fallen into food insecurity, to put the global total at around 1 billion. One of the major contributing factors to this increase in hunger stemmed from the fact that agricultural productivity growth had fallen behind population growth in many developing countries, making these countries more dependent on food imports and vulnerable to higher prices.

The initial increase in U.S. resources devoted to agricultural development came in the consolidated fiscal year 2009 (FY09) appropriations bill, passed in March 2009, designating at least $375 million of funds provided for the Development Assistance account be allocated for this purpose, representing a 50 percent increase over USAID funding for agricultural development in the previous fiscal year.[40] Although this increase occurred early in the Obama Administration, it was prompted by a budget request submitted by President Bush. In July 2009, President Obama led his colleagues at the G-8 summit in L'Aquila, Italy, to pledge a net increase of $22 billion over the next three years in funds for international agricultural development, the U.S. share of that amount to be $3.5 billion.

The new initiative, launched in September 2009 in a speech by Secretary Clinton, was to be based on the following principles:

- Allow each country to define its agricultural investment needs (a "country-led approach"),
- Address the underlying causes of hunger and put women at the heart of efforts to find solutions,
- Improve coordination at the country, regional, and global levels to avoid duplication of efforts,
- Use multilateral development organizations, such as the World Bank,[41] and
- Stay the course.

Although USAID spearheads FTF efforts, the initiative is intended as a whole-of-government collaboration, involving USAID, the Department of State, USDA, the Millennium Challenge Corporation (MCC), the Office of the U.S. Trade Representative, and the Department of Treasury (due to its role in coordination of U.S. assistance to international financial institutions). In addition to the new guiding principles, the emergence of FTF has provided considerably more resources for agricultural development than had been available in recent years. Between FY 2010 and 2012, funding for the new initiative has averaged about $1.2 billion annually, most of which has been allocated to specific projects in one of the 19 identified "focus" countries or regional partnerships (identified in Table 1), with about 10 percent of that amount directed toward research and development activities.[42]

Millennium Challenge Corporation

President Bush established the MCC in January 2004 after the enactment of Congressional authorization, with the purpose of "providing such assistance in a manner that promotes economic growth and the elimination of extreme poverty and strengthens good governance, economic freedom, and investments in people."[43] Of the $8.4 billion obligated to compacts with 24 countries and threshold agreements with 21 countries since its founding, MCC expects to spend about $1.4 billion on agricultural and irrigation projects and about $3 billion on infrastructure projects, a large share of which will be constructed in rural areas and thus benefit farmers and other agricultural interests.[44] Country compacts are large, five-year grants designated for countries that meet MCC's complex eligibility criteria (the largest grants to date approach $700 million), while threshold programs are smaller grants awarded to countries (up to $55 million to date) that come close to passing these criteria and are firmly committed to improving their policy performance.

Congressional Jurisdiction over International Food Aid and Agricultural Development Activity

As with most federal programs, the officials operating nearly every food aid and international development program answer to two main sets of Congressional committees—those with jurisdiction over the legislative authority underlying a given program and those with the responsibility for providing funding for that program. With respect to committees holding legislative jurisdiction over these two policy areas, the Senate Committee on Agriculture, Nutrition, and Forestry (SAC) has sole jurisdiction over food aid programs in the Senate; in the House, the jurisdiction is shared between the House Committee on Agriculture (HAC) and the House Committee on Foreign Affairs (HFAC). HFAC gained this jurisdiction in 1974, included broadly under international trade policy, as part of a House-wide reshuffling and clarification of legislative jurisdiction.[45] The Senate counterpart of HFAC, the Senate Committee on Foreign Relations (SFRC), has no corresponding oversight over food aid programs, as joint jurisdictions are far less common in the U.S. Senate than in the U.S. House of Representatives. Legislative authority over international agricultural development activities that occur outside of the U.S. Department of Agriculture are under the jurisdiction of HFAC and SFRC respectively.

The responsibility for providing funds to support these two policy areas is similarly divided. Except for the Food for Progress program, which receives mandatory funding through the farm bill process and is not generally subject to the annual appropriations process, all funding for U.S. international food aid programs described above, except for the EFSP, is provided through the Appropriations Subcommittees for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies of both the House and the Senate. All funding for USAID agricultural development programming, the EFSP (as an activity under the Development Assistance account), and MCC programs is provided through the Appropriations Subcommittees for State, Foreign Operations, and Related Programs of both the House and the Senate.

Federal Agencies Involved in International Food Aid and Agricultural Development Assistance

The U.S. Agency for International Development has the lead role in operating most of the agricultural development activity funded by the U.S. government, as well as the single largest U.S. food aid program, the Title II Food for Peace program. The Office of Food for Peace houses both the Title II and EFSP programs and is located within the Bureau for Democracy, Conflict, and Humanitarian Assistance (DCH). The Bureau of Food Security was established in November 2010 with the primary role of leading the newly announced Feed the Future initiative, bringing together existing USAID offices and staff working on agricultural development issues that had previously been dispersed throughout the agency and also adding new staff to handle the expanded workload.[46] The shift in emphasis during the 1980s away from agricultural development had also triggered an exodus of trained professionals in the field away from the agency—by one estimate, the number of experienced agricultural development officers had declined by 90 percent between the mid-1980s and 2010.[47]

The U.S. Department of Agriculture also maintains responsibility over certain aspects of U.S. food aid and agricultural development activity. USDA's Foreign Agricultural Service (FAS) manages the operation of the Food for Progress and McGovern-Dole food aid programs. Another USDA agency, the Farm Service Agency (FSA), manages the process by which commodities are purchased, processed, and shipped to be used in projects overseas for all U.S. food aid programs, as well as oversees the operation of the Bill Emerson Humanitarian Trust, although the authority to trigger releases from the Trust lies with the USAID Administrator. In general, USDA plays a more modest role in agricultural development activities, although it has been charged with playing a significant role in oversight of agricultural development projects in Iraq and Afghanistan to help bolster that critical sector of both war-torn economies since 2006.[48]

In addition to USAID and USDA, several other U.S. government agencies play roles in agricultural development programs and policy—

- The Millennium Challenge Corporation, as described above;
- The Office of the U.S. Trade Representative (USTR) has the lead responsibility for negotiating trade agreements involving agriculture and coordinating U.S. trade policy overall;
- The Trade Development Agency (USTDA) supports U.S. exports by providing grants to U.S. companies to conduct "reverse trade missions (RTM)" for foreign buyers, conferences, and workshops in countries where potential markets exist, and feasibility studies and pilot projects to demonstrate the effectiveness of U.S. products and services. USTDA has funded $90 million in activities in Sub-Saharan Africa since 1981, including a RTM for African agribusinesses and training and feasibility studies in the region's transportation infrastructure;
- The Overseas Private Investment Corporation (OPIC) supports U.S. exports by providing direct loans and loan guarantees for exports to developing countries and emerging markets, and insurance against financial and political risks faced in those parts of the world. Agribusiness-related deals are currently a minor part of the portfolio, but agency officials have committed publicly to increasing activity in this area. In 2010, OPIC provided insurance to Chemonics Inc., which is engaged in consulting on agricultural development projects all over the world;
- The Department of Defense (DOD) has been engaged in agricultural development projects in Iraq and Afghanistan as part of post-war reconstruction in those two countries, in particular in recent years through its participation in inter-agency Provincial Reconstruction Teams (PRTs), usually through members of the National Guard with expertise in agriculture in their civilian occupations. For example, a PRT operating in Ninewa Province in Iraq constructed 36 small-scale greenhouses in 2009 that had been awarded to local farming associations through a lottery system;
- The Department of State coordinates global food security policy with the United Nations and other multinational institutions and is involved with overall coordination and planning on global food security within the U.S. government; and
- The Treasury Department has the lead in the U.S. government for coordinating with international financial institutions, such as the World Bank, which play a key role in providing financial assistance to developing countries for a range of activities, including agricultural development. The World Bank role is described at greater length later in this paper.

Many of these agencies or departments are major players in the Inter-Agency Policy Council on Agriculture and Food Security established by President Obama in 2010 and run out of the National Security Council, though little of their work product has been released publicly.[49] Also included in this Council are representatives of the Office of Management and Budget, which oversees the federal budget, and the U.S. Government Accountability Office (GAO), which provides oversight of all federal programs for the U.S. Congress.

U.S. Contribution to International Agricultural Research and Development Efforts

As with other aspects of agricultural development, agricultural research has received added attention in recent years. The U.S. government provides support to international agricultural research through a number of channels. At the multilateral level, USAID's Bureau of Food Security manages the U.S. relationship (financial and scientific) with the Consultative Group on International Agricultural Research (CGIAR). The CGIAR, founded in 1971, consists of a cluster of 15 international crop and livestock research institutes that partner with national agricultural research systems to develop new crop varieties and address emerging pest and disease

issues.[50] The U.S. government provided $86 million to the CGIAR system in FY10, the largest single contributor.[51] This amount represents a significant recovery from the relatively low levels provided in recent years—prior to 2010, comparable levels of U.S. CGIAR funding (in nominal dollars) last occurred in the late 1980s.

USAID also sponsors international agricultural research through 10 Collaborative Research Support Programs (CRSPs) established at various U.S. universities. Each program focuses on a different type of crop or livestock species, such as pulses or aquaculture, or type of practice, such as integrated pest management, developing relationships and conducting research with faculty in developing country universities.[52] In addition, Cornell University runs a USAID-funded consortium of public and private sector institutions called the Agricultural Biotechnology Support Program.[53] It is intended to help stakeholder groups in developing countries (scientists, regulators, extension workers, farmers, and the general public) make informed decisions about agricultural biotechnology and to assist in commercializing biotech varieties in countries where the technology has already been accepted.

USDA also has a number of programs that conduct research with or training of foreign agricultural scientists, many of them from developing countries. For example, scientists with USDA's Agricultural Research Service are involved with more than 270 projects in foreign countries, about half of them in the developing world.[54] In addition, the Foreign Agricultural Service operates a number of training and exchange programs, ranging from up to 12 weeks of training for foreign scientists and policymakers under the Borlaug Fellowship program to full master's degree curricula under the International Graduate Studies Program.[55]

As part of the effort to respond to the 2007–2008 food crisis, the World Bank established a new multilateral fund (Global Agricultural and Food Security Program, or GAFSP) to help aggregate and centrally allocate funds from both the public and private sectors to support agricultural development efforts worldwide. Through the end of 2011, GAFSP had received $562 million in funds to distribute, out of a total of $1.1 billion pledged.[56] Canada and the United States are the two largest donors at $180 million and $166 million respectively. The Bill and Melinda Gates Foundation has also provided $30 million to be distributed through GAFSP.

Distribution of Benefits

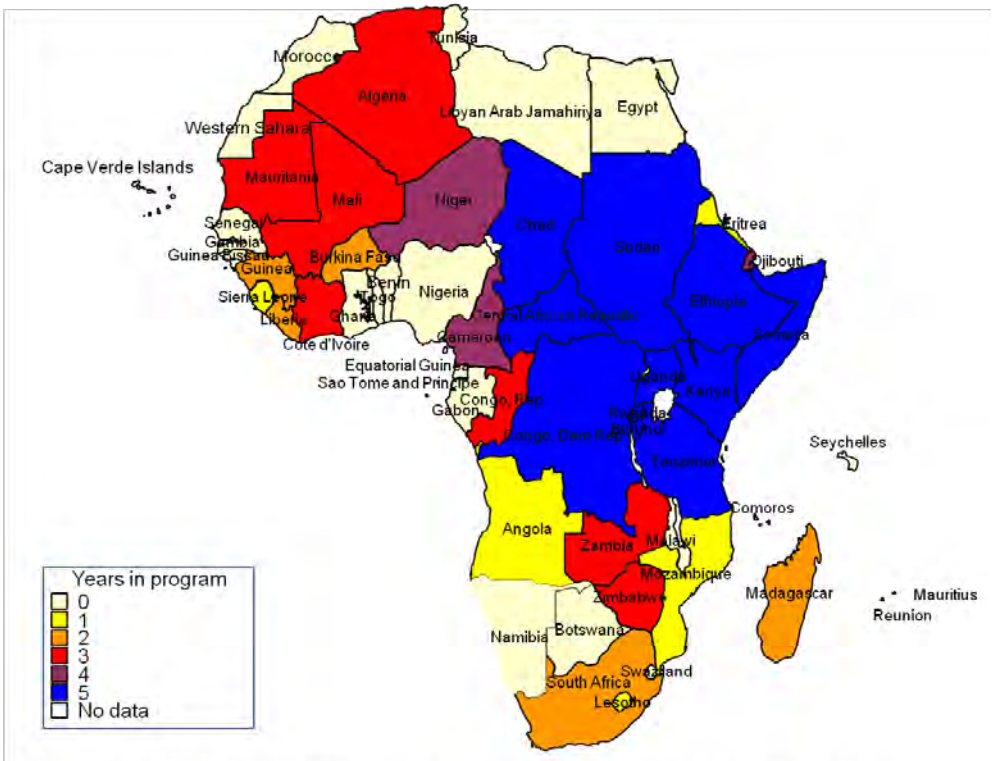
In FY09, people in at least 91 countries received benefits (or were in line to receive benefits) from one or more U.S. foreign assistance programs, including the various food aid programs, Feed the Future, MCC, and the main U.S. health care initiative in developing countries, the President's Emergency Plan For AIDS Relief (PEPFAR).[57]

Recipient Countries under Food Aid and Agricultural Development Programs

Although the food aid programs are intended to address short-term emergency needs, history has shown that many countries in the developing world are prone to face disaster situations on a repeated basis. Between FY 2006–2010, 14 developing countries received Title II emergency assistance in all five years, 11 of them on the African continent.[58] For some of the countries, such as Somalia, Sudan, Uganda, and Afghanistan, prolonged civil conflict over some or all of the period has undermined rural inhabitants' ability to stay in a single place, much less raise crops and livestock beyond a subsistence level. In other countries, initial droughts or other natural disasters have often triggered people to respond through use of negative coping mechanisms, such as selling off livestock for living expenses and pulling their children out of school to save on school fees and put them to work. When the next disaster hits, those mechanisms have already been largely exhausted. Over the same period, a total of 55 different countries received Title II emergency assistance in at least one year, 30 of them in Africa (Figure 3).

In 2005, the Bush administration made a decision to focus Title II non-emergency (development) assistance to so-called priority countries that would be selected

Figure 3 | Recipients of Title II Emergency Aid in Africa, FY2006-2010



Source: USAID FY2006-2010 Annual International Food Assistance Report

based on quantitative indicators of food insecurity. Since some multi-year assistance projects (MYAPs) were already underway in countries not on the list, that work was allowed to continue until the existing authority ran out and then the PVOs involved would not be allowed to re-apply for new projects in those countries. The current list of priority countries includes Bangladesh, Burkina Faso, Burundi, Chad, Congo (DRC), Ethiopia, Guatemala, Haiti, Liberia, Madagascar, Malawi, Mauritania, Mozambique, Niger, Sierra Leone, Sudan, Uganda, and Zambia. Under a so-called safe box provision included in the 2008 farm bill, development assistance will receive at least $450 million of the funds provided to purchase commodities under Title II in fiscal year 2012 (FY12).

Officials in charge of allocating funds under the new Feed the Future program have designated 19 focus countries to receive agricultural development assistance (Table 1), although funds have only begun to be dispensed in the last several months as it took some time to identify projects that both the U.S. and recipient governments found meritorious. Those countries were selected based on the following criteria:

- Level of need
- Opportunity for partnership
- Potential for agricultural growth
- Opportunity for regional synergy
- Resource availability.

Of the focus countries, 12 are in Africa, and all but three have 50 percent or more of their population earning less than $2/day, which is a key international threshold for poverty. There is a considerable range in the share of focus countries' agricultural sectors in their national GDP, ranging from 12.4 percent in Guatemala to more than 60 percent in Liberia. Agriculture is a key employer in all of these countries, accounting for between 33 percent of the labor force (Guatemala and Senegal) up to 80 percent for Ethiopia, Malawi , and Mozambique.

Efforts to Target Benefits

Under the guidance issued to PVOs seeking to obtain funds for Title II non-emergency projects, PVOs are reminded that "Title II programs must target the vulnerability of food insecure individuals, households and communities directly."[59] Over time, development food aid projects have frequently attempted to target benefits based on occupation (such as smallholder farmers), health status (HIV-AIDS patients and their family members), and legal status (such as refugees or internally displaced persons).

More recently, there has been renewed attention to targeting benefits from both food aid and development

programs to women and to very young children, typically focusing on children under two years of age. A number of U.S. and European-based PVOs and national and multilateral agencies have launched the "1,000 Days Initiative," because of the recognition of the profound impact that the right nutrition can have on children if attained during pregnancy and before they reach the age of two.[60]

On International Women's Day in March 2012, Oxfam UK noted that "women earn only 10 percent of the world's income, yet work two-thirds of the world's working hours."[61] Most proposals for U.S. agricultural development programs are now required to spell out how they will address gender equality issues in their projects, as it is increasingly being recognized how important women in developing countries are to improving household food security and nutrition. Extensive research has found that gender inequality is often greater among the poor, both within and across countries, and that compared to placing income or assets in the hands of men in a given household, providing income or assets to women is associated with improved child health and larger shares of spending on nutrition, health, and housing.[62]

Over the last few years, USAID's Office of Food for Peace has looking at a new approach under Title II to address malnutrition among children in developing countries, called the Preventing Malnutrition in Children Under Two Approach (PM2A). It is designed to target a package of health and nutrition interventions to all pregnant

Figure 1 | Key Characteristics of Feed the Future Focus Countries

Country	Region	Share of population under $2/day income (%)	Agriculture Share of GDP (%)	Agriculture Share of Labor Force (%)
Bangladesh	Asia	81.3	18.7	48.1
Cambodia	Asia	56.5	35.3	70.2
Ethiopia	Africa	77.6	50.7	80.2
Ghana	Africa	53.6	31.7	55.0
Guatemala	Central America	29.8	12.4	33.2
Haiti	Central America	72.2	25.0	50.5
Honduras	Central America	35.4	12.5	39.2
Kenya	Africa	39.9	22.6	75.0
Liberia	Africa	94.8	61.3	70.0
Malawi	Africa	90.4	30.1	80.0
Mali	Africa	77.1	36.5	41.5
Mozambique	Africa	81.6	31.5	80.0
Nepal	Asia	77.6	33.8	65.7
Rwanda	Africa	89.6	34.2	79.5
Senegal	Africa	60.4	16.6	33.7
Tajikistan	Asia	50.9	22.4	55.5
Tanzania	Africa	87.9	28.8	74.6
Uganda	Africa	55.3	24.7	68.7
Zambia	Africa	81.5	21.6	71.6

Source: Primarily World Bank, World Development Indicators. Note: Nicaragua was dropped as a focus country in 2012 due to concerns about governance issues.

women, mothers of children 0–23 months, and children under 2 in food-insecure program areas, regardless of nutritional status.[63] A study in Haiti comparing results from a recuperative approach (i.e., targeting those already suffering from malnutrition) with a preventive approach found that the latter lowered both stunting and wasting among young children by 4-6 percentage points more than the former.[64] The PM2A strategy includes the following components:

- A fortified food ration (e.g., corn soy blend [CSB]) provided for the target beneficiary (usually added to a family food ration);
- Required attendance at regular preventive health visits that include pre- and postnatal health visits for pregnant and lactating women and preventive health and nutrition services for children < 2 years of age (e.g., immunization, vitamin A supplementation, and growth monitoring and promotion); and
- Required participation by beneficiary mothers in behavior change communication activities that are designed to improve maternal and child care, health, and nutrition-related knowledge and practices.[65]

The International Food Policy Research Institute (IFPRI) is currently evaluating this approach in Title II projects in Burundi and Guatemala.

In addition, the McGovern-Dole food for education program targets benefits primarily to children of school age, although some projects involve assistance to younger children as well. A 2004 World Bank study of 41 countries found that, in most countries, the ratio of boys to girls enrolled in secondary school is larger for the poorest 40 percent than for the richest 20 percent of the population, so a key focus of the program is to try to encourage girls to attend and stay in school.[66]

Under Feed the Future, investments are being targeted to specific regions within focus countries deemed to have high potential to expand their agricultural sectors, aimed primarily at raising agricultural productivity and developing supply chains to help small-scale farmers earn a better living. For example, in the highlands of west Guatemala, activities include improving the yield of horticultural crops and coffee and encouraging investment in supply chains to help those products reach markets. In Nepal, activities are centered in 20 districts in the southwest region of the country, to improve productivity of staple crops such as maize, lentils, and rice, but also to grow more high-value vegetables using low-tech irrigation practices.[67] Other high-priority activities include trade capacity-building and improvements to infrastructure (both physical and legal/regulatory). The projects also focus on improved nutrition, including such activities as encouraging planting of home gardens at the household level and reducing post-harvest losses and building value chains for new crops at the regional or national level.

Countries and regions within countries in need of assistance due to slow-onset emergencies are identified through a combination of information on long-term weather forecasts; monitoring of vegetative density, crop, and market conditions; and a country's ability to import food if its production comes up short, analyzed through systems such as the Famine Early Warning System Network (FEWSNET) operated by USAID. Sudden-onset emergencies due to widespread catastrophic events such as floods, hurricanes, or earthquakes require less-thorough analysis but more immediate response. Emergency assistance is generally focused on the regions deemed to be food insecure because of the natural disaster or other crisis under way, but food aid rations are typically distributed generally to the targeted region's population rather than take additional time to try to refine the targeting based on other criteria.

Some observers believe that U.S. overseas development assistance is spread too diffusely, with too few resources concentrated in a given country or region to provide long-lasting benefits. In a joint study completed by the Center for American Progress and the Center for Global Development in May 2012, the authors urged the U.S. government to establish an International Affairs Realignment Commission, along the lines of the Base Realignment Commission (BRAC) used in recent years to consolidate U.S. military bases and facilities, to develop

recommendations to overhaul U.S. foreign policy, including examining potentially duplicative programs, closing missions in individual countries, and even institutional consolidation. The report recommends reducing the number of countries in which the U.S. government provides bilateral economic assistance by about half and focusing activities in three areas in which the United States has demonstrated particular strength—health care, food security, and humanitarian assistance.[68]

Current Debates about U.S. Policies and Programs

Contribution of Expert Panel

The policy analysis and discussion in this paper are informed by interviews with top agricultural development and food aid experts in academia, the federal government, the humanitarian community, and representatives of the private sector[69]. The interviews were conducted using a single questionnaire instrument, but not all panel participants had expertise in both food aid and international development, so did not necessarily address each question in the interview. Policy views asserted in this paper which reflect the views of panel members are so identified:

Dr. Christopher Barrett, Cornell University
Dr. Derek Byerlee, consultant (retired from the World Bank)
Ms. Devry Boughner, Cargill
Mr. Avram "Buzz" Guroff, ACDI-VOCA
Ms. Jeri Jensen, Initiative for Global Development
Dr. Julie Howard, U.S. Agency for International Development
Mr. Allan Jury, United Nation's World Food Program
Ms. Ellen Levinson, Levinson and Associates
Dr. Jerry Nelson, International Food Research Institute (IFPRI)
Dr. Shahla Shapouri, Economic Research Service, U.S. Department of Agriculture
Mr. Phil Thomas, U.S. Government Accountability Office
Ms. Connie Veillette, consultant (retired from the Center for Global Development)

Return on Agricultural Development Investments

Panel participants were asked about what areas they see as top priorities for investing in agricultural development that would generate the highest returns. The responses almost universally included some aspect of agricultural research and development (including extension efforts in many instances), as well some type of investment in agricultural infrastructure, typically improving rural roads, improving access to irrigated water, or improving irrigation efficiency.

Returns for Agricultural Research

To the extent that rigorous analytical work has been conducted on this subject, the research broadly supports the priorities identified by the panel. Most available work tends to focus on returns within a given developing country or region, rather than on investments originating from a specific donor country such as the United States. An extensive body of work dating back to the late 1950s consistently shows a very high return for investments in agricultural research and development. One meta-study sponsored by IFPRI in 2000 examined 292 different publications with nearly 1,900 observations of rates of return to agricultural research and development, with 54 percent of the projects occurring in developed countries, 43 percent in developing countries, and the remainder as multinational or global projects. As compiled in the meta-study, the mean rate of return for research performed in developed countries was 98 percent and 60 percent for research conducted in developing countries.[70] Similar studies on returns from both research and extension yielded somewhat more modest results, but mean returns of nearly 45 percent are still significant.

One analysis suggests that U.S. investment in international agricultural research work conducted at one of the CGIAR centers not only generates significant benefits globally, but also benefits U.S. agriculture when that technology makes its way back to this country. A 1996 study estimated that U.S. wheat and rice producers enjoyed benefit-cost ratios of 190:1 and 17:1 respectively from U.S. funding of seed research at the

International Maize and Wheat Improvement Center (CIMMYT) and the International Rice Research Institute (IRRI) through their adoption of seed varieties developed at those centers.[71]

Returns for Improving Rural Infrastructure

Comparable analyses about other types of public spending or investment under the agricultural development umbrella are less common. In a volume published in 2008 of previous studies on public expenditures on agricultural development, IFPRI analysts presented several developing country studies on the effects of various types of government spending on poverty reduction. In studies on India, China, Thailand, and Uganda, compilations of estimated returns or cost-benefit ratios found that spending on agricultural research consistently ranked first, while rural education and rural infrastructure, particularly roads, were found among the top three in terms of highest returns.[72] These studies estimated the cost-benefit ratio for infrastructure improvements such as roads in these countries at between 5:1 and 7:1. Separate studies on irrigation improvements in Sub-Saharan Africa found average rates of returns of 30 percent for projects completed in the 1990s.[73]

Returns to Investment in Rural Health Care

Empirical studies confirm a linkage between a farm family's health status in developing countries and the productivity of their labor, but the direction of causation is not easy to determine. Specific case studies have found that household-level health interventions, such as iron supplementation and providing mosquito nets to reduce the incidence of malaria, have positive impacts on agricultural productivity and income.[74,75] The World Health Organization estimates that improved sanitation in developing countries has a cost-benefit ratio of about 9:1, but that figure applies to all sectors, not just the rural economy. Studies at the macro level yield mixed results about the broad impact of health interventions on agricultural income and productivity.[76]

Returns to Humanitarian Assistance

There is relatively little analysis available on the impacts of humanitarian assistance such as food aid. A standard rate of return analysis requires identifying a concrete outcome for the investment in question, such as an increase in agricultural output, which is not always easy to identify when it comes to such programs. Food aid is intended to preserve human lives, but its effects are difficult to isolate, especially in chaotic situations such as natural disasters or civil wars. A study conducted in Ethiopia evaluated food aid impacts after a major drought struck the country in 2002. It showed that food aid has persistent effects on beneficiaries' food consumption, an increase of about 30 percent, up to 18 months after distribution had been completed.[77] Related work on the effectiveness of social safety nets in developing countries (provided either as cash or food distributions) finds that the benefits often fail to reach the most vulnerable groups, due to large administrative costs, lack of coordination between program components, and inefficiencies in program operations and in some cases outright corruption and theft. The *Progresa* program, established in Mexico in 1997 in part to cushion against the impacts of trade liberalization under the North American Free Trade Agreement (NAFTA) on subsistence farmers, has been shown to be very well targeted, with 87 percent of benefits going to the poorest 20 percent of households.[78] The households utilized the bulk of those benefits to increase the quantity and quality of the food they consume, leading to marked improvement in the health of the targeted groups.

Methodological Issues

A number of methodological concerns have been raised about this type of analysis, especially when conducted in developing countries. Sample selection bias, arising from problems such as economists tending to prefer evaluating research projects that appear to have succeeded or by using datasets excluding groups of people, such as self-employed workers, is quite common in impact analyses.[79] Similarly, endogeneity, or inclusion of variables in the regression that may be co-decisional with the dependent variable being evaluated, is a frequent criticism of this type of analysis. There are econometric techniques that may be used to alleviate the bias that these problems may create, but they are often neglected. Questions about the appropriate lag lengths for the impact of investments, and the quality and

reliability of data, especially at the micro level for countries in Sub-Saharan Africa, have also been cited as reasons to doubt the validity of results in such work.

Rethinking Agricultural Development Strategies

Between its previous heyday in the late 1980s and its re-emergence in the last few years, agricultural development not only lost its status as a major policy focus for improving the lot of the poor, but also a combination of policy decisions taken by both multilateral institutions and national governments hampered this approach. In structural adjustment programs imposed on many developing countries seeking financial help through entities such as the World Bank and International Monetary Fund in the 1980s and 1990s, countries were often required to reduce public expenditures in areas such as agricultural research and infrastructure, with adverse results for the agricultural sectors in those countries such as stagnating growth in agricultural production.[80] Also, many countries continued to effectively tax their agricultural sectors, both directly and indirectly, although the average effective tax rate for the most agricultural-dependent countries fell from 28 percent in the early 1980s to about 10 percent between 2000–2004.[81] In a world market characterized by large surpluses and low prices, donor countries that were also major exporters faced domestic political pressure to not encourage additional production through development assistance that might create new competition in export markets.

Origin of the Comprehensive Africa Agriculture Development Program (CAADP)

Discussion about the need to refocus attention on agricultural development was initiated within the development community several years before the issue came to the fore publicly in the wake of the 2007–2008 food price crisis. In Sub-Saharan Africa, member governments of the African Union agreed in 2001 to establish a process that would help them spur economic growth and political transformation on the continent. Between 1995 and 2003, most African countries had public expenditures on agriculture as a share of their national GDP well below 1 percent.[82] Out of that realization, the New Partnership for Africa's Development (NEPAD) launched the Comprehensive Africa Agriculture Development Program (CAADP). Heads of state met in Maputo, Mozambique, in 2003, agreeing in the Maputo Declaration to devote 10 percent of their national budgets to agriculture by 2008, with a goal of achieving annual agricultural growth of 6 percent. The CAADP framework encouraged governments to develop detailed plans on priority issues, regions, and sectors of the agricultural economy they would need to tackle, and then to incorporate those plans into their government budget strategies. Progress on agricultural research investment made by member countries under the CAADP framework is discussed later in this paper.

World Bank Agricultural Development Report

Also during the pre-crisis period, the World Bank made a decision to focus its 2008 World Development Report on the issue of agricultural development, a topic the Bank had not tackled in depth since 1982. Released in late 2007 before the food crisis reached its peak, the report acknowledged that agriculture had been neglected as a potential focus of poverty reduction in previous decades, pointing out that GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside of agriculture.[83] The report recommended pursuing a multipronged path for an agriculture-for-development agenda, with the following policy objectives:

- Improve access to markets and establish efficient value chains,
- Enhance smallholder competitiveness and facilitate market entry,
- Improve livelihoods in subsistence farming and low-skill rural occupations, and
- Increase employment in agriculture and the rural nonfarm economy, and enhance skills.

CSIS Report

In July 2008, at the peak of the international food crisis, the Center for Strategic and International Studies (CSIS) issued a report entitled *A Call for a Strategic U.S. Approach to the Global Food Crisis.* The task force that developed the report was chaired by Senators Richard Lugar (R, IN) and Robert Casey (D, PA). The report laid out the policy setting for the United States at the time,

and recommended that the U.S. government modernize its emergency assistance programs (including doubling available funding), make rural development and agricultural productivity U.S. foreign policy priorities, revise the U.S. approach to bio-fuels, focus U.S. trade policy on promoting developing country agriculture, and strengthen U.S. organizational capabilities.[84]

Senate Foreign Relations Committee Report

The minority staff of the Senate Foreign Relations Committee issued a report on global food insecurity in 2009 requested by Senator Lugar, the committee's ranking Republican member. The report's findings were based in part on staff observations gained through travel to 10 developing countries in all regions of the world. This report identified the need to focus on strengthening agricultural research capabilities at the national and international level, encompassing research, education, and extension, and improving coordination on these efforts between donor agencies and developing country governments and between donor agencies working in the same countries.[85] It also offered a series of recommendations on development approaches that the U.S. government should pursue, which to some extent echo the World Bank policy objectives described above. They included focusing on smallholders, embracing technological solutions, empowering individuals rather than enabling poverty, raising income, supporting markets, reducing price volatility, increasing market information, and integrating nutrition into food security programs. The report's release was followed by the introduction of the Global Food Security Act by Senators Lugar and Casey in the Senate (S. 384) and Representative Betty McCollum (D, MN) in the House (H.R. 3077) in February 2009, which attempted to codify the report's recommendations as amendments to the Foreign Assistance Act[86,87] The Global Food Security Act was not enacted into law, and had not yet been re-introduced in the current (112th) Congress at the time of this writing.

One noteworthy area addressed in this report was the suggestion that the U.S. government should consider offering to provide support to countries wanting to develop or implement regulatory frameworks that would allow them to introduce genetically modified seed into their agricultural sectors, a view shared by many in the expert panel interviewed for this paper. Along those lines, IFPRI conducts a Program for Biosafety Systems to assist in the responsible development and use of biotechnology in developing countries, which is active in 15 countries. This program is funded primarily by USAID.

Chicago Council on Global Affairs Reports

The Chicago Council on Global Affairs issued a report in January 2009 that challenged the U.S. government to take a leadership role in helping to advance agricultural development in Sub-Saharan Africa and South Asia, to spark a "Second Green Revolution." The effort was chaired by Dan Glickman, former U.S. secretary of agriculture, and Catherine Bertini, former executive director of the UN's World Food Program. The report laid out five broad areas of recommendations for improving the U.S. effort, with several specific policy actions under each area.[88] The five areas are as follows:

- Increase support for agricultural education and extension at all levels in Sub-Saharan Africa and South Asia,
- Increase support for agricultural research in Sub-Saharan Africa and South Asia,
- Increase for rural and agricultural infrastructure, especially in Sub-Saharan Africa,
- Improve the national and international institutions that deliver agricultural development assistance, and
- Improve U.S. policies currently seen as harmful to agricultural development abroad.

A progress report issued by the Council in May 2011 gave the U.S. government an overall grade of B– in addressing the recommendations of the 2009 report, with the highest grade achieved in the area of improving national and international institutions (B+) and the lowest grade for progress in addressing U.S. policies seen as harmful to agricultural development efforts (D).[89]

Key Limitations of U.S. International Agricultural Development and Food Aid Programs

Panel participants were asked to address what they considered the main reason why the global effort to reduce hunger is falling short of the objective established at the World Food Summit in 1996, which is to reduce the number of hungry people to 400 million by 2015. The panel's consensus view was that major donor countries, including the United States, failed to muster the political will to devote the resources necessary to achieve the goal, mainly paying lip service to the effort until relatively recently. They agreed that there has been a renewed commitment to agricultural development since the 2007–2008 global food crisis, both among donor countries and in developing countries. One respondent also pointed out that the FAO measure of food insecurity that is often cited, which is based on caloric intake, should not be the focus—the underlying problem is malnutrition, primarily lack of micronutrients, which is believed to be more widespread than inadequate caloric intake.

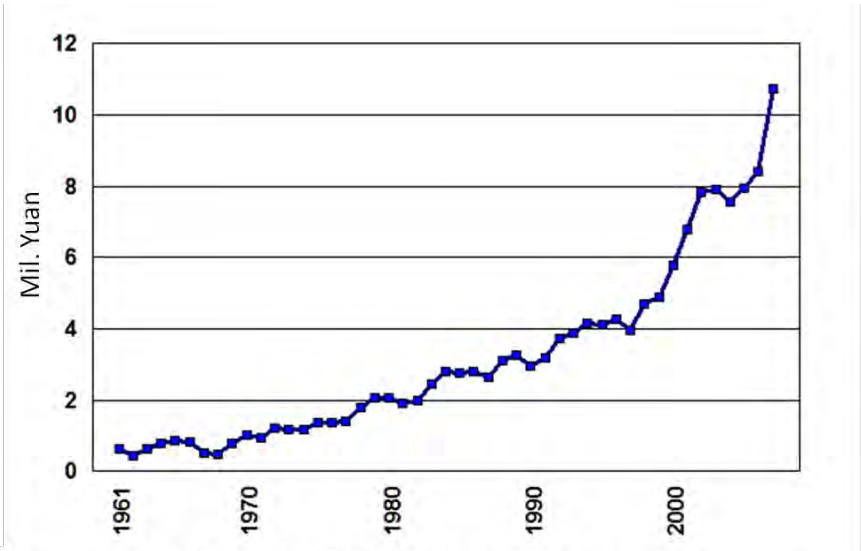
Addressing the Investment Gap

Although resource availability for agricultural development in particular has clearly improved in recent years, there is still a significant shortfall in overall funding compared to what is needed to remedy the situation. A 2008 IFPRI study found in order to make the appropriate public investments globally in agricultural research and rural infrastructure to meet the second Millennium Development Goal of halving world hunger, an additional $14 billion annually (roughly double current levels) needs to be spent on these areas in developing countries.[90] Other estimates, such as the study commissioned by the Global Harvest Initiative in 2011, are even higher, projecting an overall agricultural investment gap of $88.7 billion annually.[91] With many of the traditional donor countries that belong to the Development Assistance Committee (DAC),[92] including the United States, facing reductions in government spending due to the pressure of heavy public debt burdens, panel participants largely agreed that the majority of such increased funds are unlikely to come from those sources.

Instead, the bulk of the needed new funding for agricultural development will likely have to come from other sources. First and foremost, the developing countries' own governments need to continue to expand their investments in this area, as 27 Sub-Saharan African countries have committed to do in their CAADP compacts, although only seven of them have reached the goal of spending 10 percent of their national budget on agriculture according to the most recent data from 2009.[93] It is no accident that several large developing countries that have emerged in recent decades as global economic powers, such as India, China, and Brazil, have strong records in investing in agricultural productivity research over that same period. In particular, China's public spending on agricultural research increased an average of 17 percent annually between 1997–2007, adjusted for inflation (Figure 4).[94]

In addition to the traditional developed country donors, such as the United States, the European Union (EU), Japan, Canada, and Australia, which have provided the backbone of agricultural development and food assistance over time, additional countries and

Figure 4 | Chinese Agricultural Research Spending (inflation-adjusted), 1961-2007



Sources: Fan, S. et al., 2006; Chen and Zhang, 2008.

international organizations have stepped up in recent years to provide some types of assistance. In 2010, the OECD reported $9.5 billion in overseas development assistance (ODA) provided to the agricultural sectors in developing countries. Of that total, 68 percent came from DAC donors. Most of the remainder came through multilateral institutions, including EU-wide agencies like the European Community Humanitarian Office (ECHO) and the UN's International Fund for Agricultural Development (IFAD), which distribute funds collected from all their member states.[95] On the food aid front, the World Food Program (WFP) reported food aid deliveries totaling 5.4 million tons in 2010, 83 percent from DAC countries, 11 percent from multilateral entities, and the remaining 5 percent from other countries, such as Russia, Brazil, China, Kazakhstan, Qatar, and Thailand, and from private companies, such as PepsiCo and Sodexo.[96]

The final, but perhaps most important, component of additional investment in agricultural development will likely have to come from the private sector, from agribusinesses within developing countries and from outside, in the form of Foreign Direct Investment (FDI) in these countries' agricultural sectors by transnational corporations and also activities by private charitable foundations. Several panel participants identified the need to "leverage" public investment in agricultural development by establishing partnerships on activities such as infrastructure construction and improving agricultural supply chains in which the private sector has a comparative advantage. Such an effort is a major focus of the new Feed the Future initiative, but panelists felt its success will depend in large part on maintaining a strong and continuing dialogue between the private sector and government agencies involved. The year 2010 marked the first time that more than half of the incremental increase in FDI globally across all economic sectors was made in the economies of developing countries, although FDI flows into Sub-Saharan Africa and South Asia actually fell by 9.7 percent compared to the previous year.[97]

U.S.-based charitable foundations, such as the Ford and Rockefeller Foundations, played major roles in agricultural research and development in the past—much of 1970 Nobel Peace Prize winner Dr. Norman Borlaug's work in wheat breeding in Mexico was funded by the Rockefeller Foundation—but these organizations changed their funding emphasis to other areas in recent decades. Over the last few years, the Bill and Melinda Gates Foundation has taken a major role in funding agricultural development activities, particularly in Africa. As of June 2011, Gates had committed $1.8 billion in funds to such efforts.[98]

At a symposium on agricultural development hosted by the Chicago Council on Global Affairs on May 18, 2012, President Obama announced the formation of a New Alliance for Global Food Security and Nutrition, involving multinational and African businesses and national governments in both donor and key African countries, to increase investment in sustainable agricultural development.[99] Forty-five businesses have made specific commitments to invest up to $3 billion as part of this initiative.

Improving Coordination of Activities

Donor countries, including the United States, continue to struggle with how to manage the transition between providing emergency assistance through food aid programs to a region beset by natural disaster or civil war, and bolstering agricultural development efforts in that same area over the long run to avoid a repeat occurrence. While several panel participants pointed to the need to develop greater resilience in the targeted population, effective coordination between programs has been lacking to attain that objective. All relevant U.S. programs have nominally been under the coordination of the Director of Foreign Assistance since 2006, housed in the State Department, but coordination mechanisms are still a work in progress.[100] Even with programs under the umbrella of USAID, food aid programs and agricultural development programs are run by different sets of officials, draw on different sources of funding, and answer to different sets of Congressional committees. The obstacles to effective coordination are even greater for programs run by agencies in different departments of the U.S. government, with different organizational structures in terms of the distribution of personnel

between Washington, DC, and overseas posts, and different sets of stakeholder groups to deal with.[101] Marked improvements in this area could lead to more efficient allocation of resources, a critical need in light of emerging budgetary pressures.

Most observers, including many panel members, also see poor coordination as a key limitation for the operation of agricultural development efforts, both between government agencies from the same donor country, and between PVOs from various donor countries operating within the same recipient country. The classic example of this problem is Haiti, where developed country agencies and their partner PVOs have been at work for decades operating perhaps hundreds of distinct development projects, many of them in agriculture. Unfortunately, the country has seen little concrete gain from the effort. In Haiti, the average yield for cereals actually fell by nearly 7 percent between 1961 and 2009, while Haiti's population rose by 150 percent.[102] By contrast, the global average corn yield increased 168 percent over the same period.[103] In the aftermath of the massive earthquake that hit Haiti in early 2010, donor countries did improve their degree of coordination, with USAID incorporating its food assistance into the food security cluster established by UN agencies and working more closely with other donor agencies.[104]

While most panel participants applauded the U.S. commitment to the "country-led" approach under Feed the Future, many questioned whether many of the priority countries identified have sufficient institutional capacity in their key government ministries and within civil society to be effective partners in the process. Several noted one component lacking in the current U.S. approach to agricultural development is support for graduate training of students from developing countries in areas of agricultural science, both at U.S. universities and at schools in developing countries. As described above, USAID and USDA currently engage in training of agricultural scientists, but generally not long enough for students to complete graduate degrees. This preference marks a departure from the 1970s through 1990s, when both USAID and a number of charitable organizations such as the Rockefeller and Ford Foundations provided scholarships at U.S. universities for such purposes. For example, the total number of USAID postgraduate scholarships in the United States for students from developing countries in all fields of agriculture fell from 310 in 1990 to 82 in 2000.[105] Many current officials and scientists in developing countries benefitted from such training, but the U.S. pipeline in this area has effectively dried up.

Specific Proposals for Reforming U.S. Food Aid and Agricultural Development Programs

Since the Feed the Future initiative, the current incarnation of U.S. agricultural development efforts, has only been around for a few years and the main U.S. food aid program, the Title II Food for Peace program, has been around for nearly 60 years, it is not surprising that more attention has been focused on reforming the latter than the former.

In recent years, U.S. agency officials have acknowledged a need to devote more resources to monitoring and evaluating the results of the food aid or agricultural development programs they administer, and some improvements have been made. A provision of the 2008 farm bill allowed USAID to use a small portion of funds allocated to the Title II program to bolster monitoring and evaluation of non-emergency Title II projects, which previously had not been permitted. In addition, developers of the Feed the Future initiative have committed to including measurable indicators of progress for their projects in priority countries. A U.S. government report on this topic is due to be released in late in 2012.

Food Aid Reform Proposals

U.S. food aid programs have been criticized for several decades by many in the international humanitarian community for providing only "tied" food aid, which they regard as distorting of world trade flows and cost-inefficient. This phrase refers to the U.S. government requirement that only U.S.-sourced commodities be

purchased for the programs and that U.S.-flagged ships be utilized to transport at least 75 percent of the food. Although these two requirements are linked conceptually, they are quite distinct legislatively and politically. The first requirement, which some have dubbed "Buy American," stems from provisions promulgated under various farm bills that currently apply to all food aid programs, both those run by USAID's Office of Food for Peace and USDA, with no exceptions. The second requirement, although most commonly associated with food aid shipments, requires that a fixed percentage of all goods purchased under any U.S. assistance or trade promotion programs be shipped overseas on U.S.-flagged vessels, regardless of type. This cargo preference provision falls under the jurisdiction of a different set of Congressional committees (the Senate Commerce Committee and the House Committee on Transportation and Infrastructure) and is not typically part of a farm bill's portfolio of issues.

In-Kind Aid versus Local Procurement

Advocates of the existing policy defend this approach by maintaining that reserving purchases of goods and services under the programs to the United States helps to generate economic activity and create jobs in this country. They also point to concerns about widespread corruption in many developing countries, asserting that assistance provided in such countries to governments in the form of cash is easier to divert from its intended purpose than are physical commodities, although under current program rules, most aid goes to international or local non-governmental organizations (NGOs) or the World Food Program to distribute. Another rationale for maintaining in-kind assistance is that the general public sees shipping U.S. food as providing double benefits, to U.S. farmers as well as to recipients in developing countries.

Cargo preference is primarily justified on the grounds of national defense. Advocates argue that it is crucial to preserving the sea-lift capacity of the U.S. merchant fleet (both ships and trained personnel) to move U.S. military equipment overseas in a time of war.[106] Cargo preference rules for food aid shipment require that the Maritime Administration reimburse the agencies operating food aid programs for a portion of the cost differential associated with using U.S.-flagged ships rather than foreign carriers. A provision of the Moving Ahead for Progress in the 21st Century Act (MAP-21), a two-year extension of the main transportation legislation in the United States, enacted on July 6, 2012, pared back cargo preference requirements on food aid from 75 percent to 50 percent and dropped the reimbursement requirement for that portion.[107]

In order to better inform the debate, a provision of the Food, Conservation, and Energy Act of 2008 provided $60 million to USDA to conduct a pilot program that would allow PVOs to run field-based projects using locally procured foods rather than U.S.-sourced commodities (known as the LRP pilot). The projects under the LRP pilot were completed in September 2011, and an unofficial assessment of the results conducted by a consortium of PVOs participating in the pilot and economists at Cornell University was completed and released in January 2012.[108] A second independent study commissioned by USDA as required by the farm bill provision has not yet been released. The Cornell study indicated that for certain types of commodities, particularly bulk grains and pulse crops, LRP offers a significant cost advantage over food procured and shipped from the United States, on average 54 percent and 24 percent respectively, although for processed foods such as vegetable oil, U.S. commodities were less costly. The study also found a distinct advantage in buying locally in terms of timely delivery to recipients in emergency situations, on average a savings of 14 weeks compared to direct delivery from the United States. The time advantage is less pronounced for aid delivered within the Western Hemisphere.

The study did not compare LRP against a second option available to U.S. food aid officials, which allows them to use U.S. commodities stored in several prepositioning warehouses overseas and in a warehouse on the Gulf of Mexico at San Jacinto, TX. The ability to utilize pre-positioned commodities has been greatly expanded in recent years due to a legislative change in the 2008 farm bill. USAID officials believe that the expanded availability of commodities held in pre-positioning warehouses has

enabled them to respond to emergencies much more quickly, as soon as within two weeks in some regions of the world.[109]

Monetization

A related issue is the use of monetization, in which PVOs conducting agricultural development programs under U.S. food aid programs sell some or all of the commodities they receive in local markets in the recipient country, in order to fund activities. A 2011 GAO study found that such transactions often generate substantially less proceeds than the commodities originally cost when procured in the United States, amounting to a deadweight loss of about 30 percent on average for FY 2007 through 2009.[110] Such transactions also run the risk of distorting the functioning of local markets, to the detriment of both producers and consumers.

The main basis for defending monetization is the assistance it provides in developing local markets and supply chains in recipient countries, and its ability to bolster local supplies when they are constrained. However, several PVOs have criticized its use because of inherent inefficiencies. The group CARE went further, vowing to phase out its use of monetization by the end of FY 2009. They achieved that goal, engaging in monetization only in Bangladesh in a targeted manner in conjunction with the national government.[111] The main problem is that PVOs have insufficient access to cash resources within most food aid programs, which forces them to rely on monetization to fully carry out their projects. The 2008 farm bill modestly expanded PVOs' access to cash to cover certain non-food expenses under Section 202(e) of the Food for Peace Act, reducing pressure to monetize under Title II development projects. As a result, the share of food monetized under those projects fell by about 14 percent between 2009 and 2010. Over the last few years, USAID has provided funds for activities to complement Title II non-emergency food distribution through its Community Development Fund (CDF).

The U.S. Congress is currently stalled in its consideration of a new farm bill to take effect in 2012, to replace the 2008 farm bill that expired on September 30, 2012. Several panel participants indicated that increasing flexibility through more use of LRP, phasing out monetization, and getting rid of cargo preference should be tackled in the course of that debate. The bill that passed by the full Senate on June 21, 2012, incorporated modest reforms on LRP and monetization but did not address cargo preference, which falls outside the jurisdiction of the House and Senate Agriculture Committees. The version marked up by the House Agriculture Committee on July 11, 2012, included largely status quo food aid provisions. No radical changes are anticipated in the process, as farm bills tend to make evolutionary changes, not revolutionary ones.

Agricultural Development Reform Proposals

For the most part, policy recommendations in the agricultural development area focus on a broad policy agenda, such as that put forward by the Chicago Council for Global Affairs and described above, rather than specific proposals to modify existing programs or rules. One exception has been a focus on the problems created over the last few decades by the restrictions imposed by Section 209 of Public Law 99-349, commonly known as the Bumpers amendment.[112] The provision was imposed in the mid-1980s at the insistence of U.S. farm and commodity groups because of a backlash against USAID projects that had helped boost the emergence of the highly successful soybean sectors in Brazil and Argentina. The provision had barred USAID from providing support to any agricultural research project that may result in a country exporting an agricultural commodity that competes directly with U.S. exports on the world market. The practical result of this restriction was that many proposed projects never received due consideration, because the Bumpers rule effectively mandated a costly and time-consuming review before such projects could be approved. However, as part of the omnibus FY12 appropriations bill enacted in December 2011, the original Bumpers rule was modified to allow USAID to waive the provision's application (and thus the review process) for projects proposed for the very poorest of developing countries, unless it was for a commodity already produced in exportable quantities in

that country.[113] Although this modified provision technically only applies for the current fiscal year, it has the potential to become a standing appropriations rider as was the case with the original Bumpers language.
With respect to Feed the Future, activities on the ground under the initiative have only been up and running in some (not all) focus countries for less than a year, so it is a bit premature to evaluate success. Some criticism has been leveled at the mix of activities contemplated under the initiative, with too little focus on trade capacity-building and private sector involvement and also some concern about whether the "whole-of-government" approach to implementing Feed the Future is more rhetoric than fact in terms of coordination among U.S. government agencies.

Cross-Cutting Issues

Food Aid and Agricultural Development

Although food aid and agricultural development assistance attempt to address the same underlying issue—sustained food insecurity in many parts of the developing world—and compete for resources in government budgets, most observers believe that there is need for both forms of assistance, but also great need for improved integration between the two. In the short run, human suffering and hunger must be alleviated when it can by food aid, but longer-run measures are needed to improve the agricultural sector where possible. While there is broad support for food aid to address humanitarian emergencies, there is less consensus when it comes to food aid for development purposes, largely because of the inefficiencies described above.[114] Under the "safe box" provision included in the 2008 farm bill, PVOs that operate development projects under Title II are assured access to at least $450 million in FY12. However, some groups would like to see that set dollar amount converted to a percentage of available Title II funds, in case total funding continues to be reduced under budgetary pressures. Others would like to see the safe box eliminated, and agricultural development efforts gradually shifted out of Title II.[115] However, both U.S. food aid and agricultural development programs have distinct and politically effective sets of stakeholders in their current configurations, so a significant shift in the distribution of resources between the two types of programs seems unlikely to occur any time soon.
Instead, there has recently been a strong push for the U.S. government to better conform its activities in these two areas with the so-called DFID model, the approach to integrating food aid and agricultural development that has emerged in recent years in the Department for International Development of the United Kingdom. Recommendations in this area include:[116]

- Integrating a senior development official into the White House national security apparatus,
- Better coordination across U.S. national security agencies,
- Linking newer aid programs with the existing development assistance structure,
- Adopting the UN Millennium Development Goals as U.S. policy,
- Considering ways to reduce the amount of tied aid,
- Garnering support for development from both sides of the political spectrum,
- Guaranteeing funding for projects for multiple years,
- Pushing aid decision-making to country programs, and
- Updating and clarifying the U.S. foreign policy framework.

Prior to the crisis of 2007–2008, it was widely agreed that donor countries were significantly under investing in international development assistance. That situation has improved in recent years, with total official agricultural development aid nearly doubling between 2006 and 2010 according to OECD data. In value terms, global food aid shipments also increased by about 40 percent during that period to $3.7 billion in 2010, but tonnage shipped fell, due to higher commodity prices.[117] Over the long run, just under half of the food aid distributed internationally comes from the United States. If the U.S. government were to make a strategic decision to shift significant resources out of food aid into agricultural development, an important question to answer would be who would step up to fill the hole left

by U.S. withdrawal, when the WFP makes its emergency appeals for assistance.

Agricultural Development and Nutrition

The Scaling Up Nutrition (SUN) initiative is a global effort to coordinate efforts to attain one of the major Millennium Development Goals, that of halving global hunger by 2015. The initiative was launched in 2010 and is supported by the relevant agencies of the United Nations and more than 100 national agencies, non-UN international agencies, universities, and NGOs.[118] The goal of reducing hunger and undernutrition has been embedded in most of the recent efforts to emphasize the importance of agricultural development in developing countries, such as through the Feed the Future initiative in the United States. SUN is focused on encouraging interventions in the three following areas:

- Promoting optimal feeding and caring practices, such as breast feeding,
- Increasing the intake of vitamins and minerals through both supplements and fortification, and
- Therapeutic feeding to prevent moderate undernutrition and treat both moderate and severe undernutrition.

Agricultural Development and International Health Care

As with international food aid, agricultural development and health assistance programs compete for funding in the international economic development area. Before the 2007–2008 global food crisis, support for international health assistance was politically popular and received significant financial support. President George W. Bush made funding to combat HIV-AIDS overseas a political priority in his 2003 State of the Union speech, and funding for the PEPFAR initiative rose from $2.2 billion in fiscal year 2004 to $6 billion in fiscal year 2008, his last year in office.[119] Over the last five years, the U.S. government has spent an average of $6.4 billion annually to combat HIV-AIDS globally (encompassing research, prevention, and treatment),[120] five times greater than annual funding for Feed the Future in recent years.

In 2007, the Bush Administration released a conceptual framework aimed at improving coordination between PEPFAR and the Title II program, to address the need to improve the nutritional status of HIV-AIDS patients to make anti-retroviral drugs more effective in combating the disease. Since that framework was developed, more Title II programming has focused food distribution to HIV-AIDS patients within targeted regions.
Decisions in the area of health care policy, such as reproductive health care, can also have adverse implications for agricultural development. The Mexico City Policy, also known as the global gag rule, imposed under President Ronald Reagan in 1984 to prevent the United Nation Population Fund from facilitating abortions in China, had the effect of reducing assistance for family planning services throughout the developing world during the administrations of Republican Presidents over the last few decades. As a result, fewer contraceptives and condoms and less family planning education were made available in these countries, leading to higher fertility rates, more unintended pregnancies, more unsafe abortions, and greater spread of HIV-AIDS than otherwise would have been the case.[121] Among its many impacts, HIV-AIDS tends to debilitate and/or kill the most productive members of households, reducing household productivity and impairing intergenerational transfer of knowledge and skills, a deadly combination for rural families already mired in poverty.[122]

Especially in rural areas in developing countries, agricultural development and health status are inextricably linked. In addition to HIV-AIDS, rural residents face problems with malaria, typhus, and other diseases common in tropical areas. Providing rural residents with mosquito nets under health programs helps reduce the incidence of malaria, but certain types of agricultural development projects, such as bringing in water to irrigate crops, can actually increase the spread of malaria.[123] This strongly suggests that groups working on agricultural development and malaria control in the same regions need to closely coordinate their activities, so as not to work at cross-purposes.

While the recent focus on agricultural development has placed a priority on improving nutrition, empirical analyses indicates that not much has been achieved in

this area yet. A review sponsored by the UK's DFID in 2011 found most of the 7,000 agricultural intervention projects aimed at improving the nutritional status of children did not establish a credible counterfactual against which to measure health improvements. Of the 23 studies that did meet that standard, none of them showed evidence of improvements in terms of absorption of micronutrients such as iron and Vitamin A, nor reductions in rates of childhood stunting or wasting.[124] This spotty record underscores the importance of improving monitoring and evaluation for all international economic development projects.

Agricultural Development and Agricultural Trade Policy

The current text in the agricultural portion of the Doha Round of WTO multilateral trade negotiations contains no direct references to agricultural development, although the entire Round is formally known as the Doha Development Agenda. It does seek to discipline food aid programs under the premise that they constitute a form of export subsidy, based primarily on the outdated presumption that the programs are used to dispose of surplus agricultural products into developing country markets. The draft text attempts to differentiate between food aid provided for emergency purposes, and that provided for development purposes, and would impose stringent restrictions on in-kind aid and in particular use of monetization as part of the latter, allowing it only for purchase of agricultural inputs to be used in a given project.[125] This draft text was presented to WTO members at the so-called mini-Ministerial meetings held in Geneva, Switzerland, in July 2008, but the meetings broke down before delegates had an opportunity to discuss the revised food aid language. The Doha Round negotiations have been essentially stalled since that time, as major WTO member countries are split on a handful of key issues in both agricultural trade talks and negotiations over non-agricultural market access.

Most panel participants view the stalled Round as negative for agricultural development, though its completion has become less important since recent high prices have significantly reduced the distorting impact of export subsidies and domestic support. A couple of the respondents expressed relief at the current stalemate, due to the restrictions its current draft language would have imposed on the operations of U.S. food aid programs.

Developed countries such as the EU and the United States began to provide preferential trade access to developing countries in the 1970s, usually cast in terms of lower tariffs or enhanced quotas for products originating from such countries. The goal of such systems is to encourage those countries to develop the capacity to export products, helping their economies grow and earn foreign currency. Most developed countries have one system that applies generally across all developing countries, known as the General System of Preferences (GSP), but also operate distinct preferential access agreements for certain regions of the world with enhanced access for certain products over what would be available under basic GSP rules. For the United States, those regional trade preference agreements apply to the Caribbean Basin countries (since 1983), Andean countries (since 1991), and Sub-Saharan Africa (since 2000).

In theory, trade preferences can assist in spurring economic growth by providing a higher rate of return to investing in developing countries to offset the higher risks due to institutional barriers and unreliable infrastructure.[126] In practice, however, trade preferences for agricultural products are less generous than those for other types of products, excluding entire categories of products that are politically sensitive, thus making investing in agriculture less attractive than investing in other sectors. Data show that developing country exporters (with preferences included) face average tariffs of 16 percent for agricultural products, as compared to 2.5 percent for other types of goods.[127]

Most observers believe that the commodity price spikes that occurred in 2007–2008 were exacerbated by some countries' decision to impose export bans or similar measures on trade in staple commodities. Although such restrictions are clearly distorting of world trade flows, they were not addressed in a meaningful way in the Doha Round draft texts at the time the negotiations

stalled. Most panel participants supported the notion that a successful Round, which would eliminate export subsidies, reduce trade-distorting domestic agricultural support, and reduce agricultural tariffs, would be supportive of agricultural development efforts by helping to smooth trade flows and reduce the recent volatility of commodity prices.

Views were mixed among panel participants as to whether high prices or price volatility is more damaging to food-insecure populations in developing countries. Panel members who believe high prices are a greater concern cited the lack of hedging activity among farmers, even in developed countries, as evidence that volatility is not a significant problem. Those more concerned about price volatility pointed out that price volatility engenders uncertainties in markets and makes it more difficult for farmers to plan, while they can plan for consistently high prices. Since 2008, FAO has been very heavily engaged in monitoring food prices and discussing policies that would help countries mitigate associated problems.[128] Their effort is entitled "High and Volatile Food Prices," which suggests that they assign significant weight to both aspects of the problem. Several of the panelists noted the importance of distinguishing between the two phenomena, since they require different types of policy interventions.

Domestic Farm Policy and International Agricultural Markets

A substantial body of economic analysis has shown that domestic farm support subsidies, provided primarily in developed countries and linked to farmers' current production decisions, distort world market prices and trade flows. Consequently, the Uruguay Round negotiations under the General Agreement on Tariffs and Trade (GATT), which led to the creation of the World Trade Organization in 1994, was the first of the multilateral trade liberalization rounds to fully incorporate agriculture and related policies. The Uruguay Round Agreement on Agriculture (URAA) included provisions establishing separate categories of domestic support programs, the most trade-distorting of which (dubbed "amber box") member countries agreed to limit their annual spending on.

The U.S. cap on trade-distorting domestic support spending is currently $19.1 billion annually and primarily covers spending under the marketing assistance loan program, the Average Crop Revenue Election (ACRE) program, and the dairy and sugar price support programs.[129] Other components of the U.S. farm safety net, such as the direct-payment, countercyclical-payment, and crop-insurance programs, are reported under other categories. The U.S. government has never come close to breaching that cap according to its official notifications.

In 2002, the government of Brazil filed a case under the WTO dispute settlement body (DSB) process against U.S. cotton support programs and export credit guarantee programs, claiming not that the programs violated U.S. commitments under the URAA, but that they violated the Subsidies and Countervailing Measures Agreement (SCM), another part of body of agreements that makes up international trade rules under the WTO. The SCM requires that member countries not utilize subsidies or similar policies that impose adverse effects on other countries. Brazil's position has prevailed at every step of the DSB process. The U.S. government committed in an agreement in 2010 with Brazil to undertake reforms of its cotton-support programs in the course of the 2012 farm bill, in exchange for Brazil refraining from taking retaliatory action against U.S. trade interests, as they are entitled to do under the terms of the decision rendered by the final WTO arbitration panel on this case in August 2009.[130] Congress is contemplating changes to cotton programs in the 2012 farm bill, but early indications suggest the proposed new or revised programs may not fully satisfy the government of Brazil. A new round of dispute settlement efforts could ensue from the current process if a compromise is not reached.

In the market environment that prevailed when the Uruguay Round was completed and when the initial stages of the Brazil cotton case were decided, global commodity prices were relatively low. Multiple empirical analyses indicated that domestic support programs in the U.S. and other developed countries contributed to the situation, although there has been a wide range of estimates of the price impact from farm

programs, varying both by commodity and by methodology used. However, over the last several years, prices for commodities supported under U.S. domestic farm programs have risen significantly, with program prices now well below levels prevailing in world markets. Under these circumstances, even so-called amber box programs are not really affecting farmers' crop production decisions.

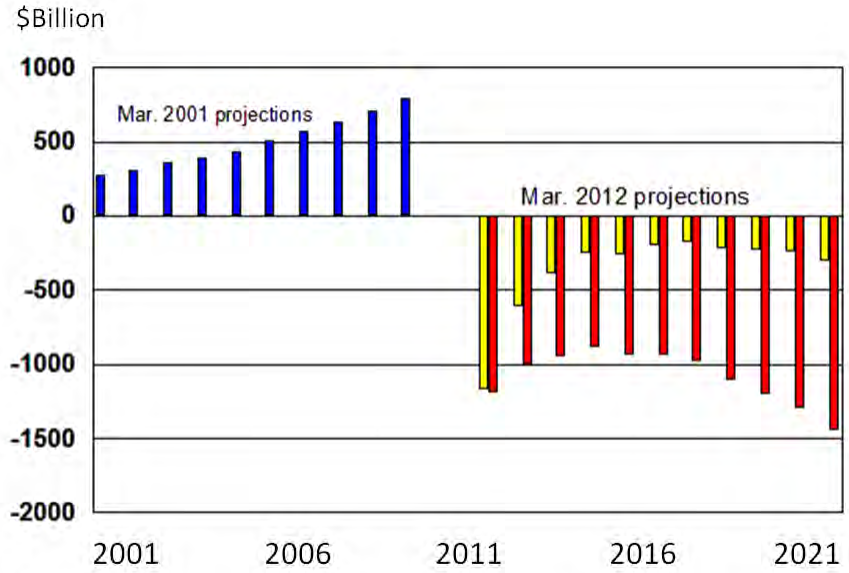
Although not now seen as the sole cause of recent increases in prices as some early critiques suggested, the expansion of global bio-fuels production using agricultural commodities such as corn, sugar, and vegetable oil as feedstocks has been established as a contributing factor.[131] This expansion has occurred in large part as a result of national policies established around the world that mandate a certain annual use of bio-fuels or provide subsidies to encourage its production (or in some cases, both types of policies). Most panel participants agreed that bio-fuels contributed to the price spike of 2007–2008, but did not think that totally eliminating bio-fuels policies was politically feasible or necessarily desirable. Instead, they favored investments to move bio-fuels production to utilize feedstocks other than food crops (such as dedicated energy crops or waste materials such as crop residue or restaurant grease), or modifying the mandates so that they could be relaxed in the event of high crop prices.

Major Budgetary Issues for International Food Aid and Agricultural Development Programs

Going forward, all U.S. programs under the foreign assistance umbrella will face considerable budget pressure for the next several years. The size of the U.S. fiscal budgetary deficit has ballooned in recent years due to a combination of a weak economy, extended military commitments in Iraq and Afghanistan, large and continuing tax cuts, and a Congress and Executive Branch until recently unwilling to offset major new expenditures. In 2001, the Congressional Budget Office (CBO) projected the U.S. government would be in surplus for the entire 10-year baseline period. Since that time, the projected surplus turned to a deficit of significant proportions. Figure 5 shows CBO's projections based on two sets of assumptions: 1) the official baseline (in yellow bars), which CBO must assume under its rules that all current laws expire as scheduled, and 2) an alternative fiscal scenario (shown in red bars), under which CBO assumed that the current tax rates (initially reduced in 2001 and 2003) will be extended past their current expiration at the end of 2012, that the threshold at which the Alternative Minimum Tax (AMT) kicks in will be indexed, that the reduction in Medicare reimbursement rates for doctors will continue to be mitigated ("Medicare doc fix"), and that the budget sequestrations required beginning in January 2013 under the Budget Control Act of 2011 (BCA) will not take effect.[132] It is too early to predict the exact outcome of political debates over the four issues addressed in CBO's alternative fiscal scenarios, but large deficits are likely to continue.

In a taste of the struggle to come, the House approved a FY13 budget resolution in March 2012 that recommends massive cuts in discretionary non-defense spending programs in order to avert the cuts to U.S. defense

Figure 5 | Contrasting U.S. Budget Projections



Source: CBO

spending that will occur if the sequestered reductions under BCA take effect. The recommendations in the Budget Committee report include zeroing out agricultural development spending under Feed the Future going forward, arguing that its programs and food aid programs such as Title II Food for Peace are overlapping.[133] The Senate has not taken up the House budget resolution for consideration, but the House has passed a resolution deeming the funding levels for FY13 to be binding as though it had passed both houses.

Before the BCA took effect in August 2011, the House and Senate envisioned very different funding levels for U.S. food aid and agricultural development programs for FY12. On the food aid front, the House version would have provided $1.03 billion for the Title II Food for Peace program, a 30 percent reduction from FY11 levels, while the Senate version would have provided $1.56 billion for Title II, a 4 percent increase over FY11 levels. With respect to the McGovern-Dole Food for Education and Child Nutrition program, the House version would have provided $178.6 million for FY12, while the Senate version would have provided $188 million, representing 10.3 percent and 5.6 percent cuts from FY11 respectively. The House State/Foreign Ops FY12 appropriations bill did not specify a funding level for Feed the Future, although the overall figure provided for Development Assistance (DA) under the bill was only $2.068 billion, as opposed to $2.519 billion provided for FY11. The Senate FY12 bill specified $1.3 billion for Feed the Future in the committee report, with $1.1 billion for bilateral efforts and $200 million for the World Bank's GAFSP fund. Their overall DA figure was $2.55 billion. With the funding levels established under BCA in place, the final figures were closer to the Senate levels for all programs, at $1.4 billion for Title II, $184 million for

McGovern-Dole, and about $1.1 billion for Feed the Future. For FY13, the House and Senate appear to be on a collision path again for funding these programs.

Consistent with the spending levels for FY13 provided under BCA, the Senate Agricultural Appropriations Subcommittee reported its bill on April 26, 2012, which provided $1.46 billion for the Title II program and $184 million for the McGovern-Dole program. On the other hand, the House Appropriations Committee has adopted allocation amounts for FY13 for the Agricultural and Foreign Operations Appropriations Committees in line with the House budget resolution and well below BCA levels, so they provided only $1.15 billion for the Title II program in their bill reported out of subcommittee on June 6, 2012. In September 2012, the President signed legislation extending FY12 funding levels through the first half of 2013, leaving the final decision on appropriations to the new 113th Congress once it convenes on January 2013.[134] This legislation leaves funding for food aid and agricultural development programs largely unchanged, but with FY13 cuts from automatic budget sequestration of about 8.2 percent looming for January 1, 2013.

These conflicting levels represent a fundamental clash over the importance of funding for these types of programs between the Tea Party culture that has infused the House Republican caucus, which does not view foreign assistance spending as a priority area and thus ripe for reductions, and the more mainstream view of U.S. foreign assistance, which holds that foreign assistance represents an important manifestation of U.S. global leadership and reducing it might send signals to other countries that the United States is relinquishing that role. Although the scope of global food insecurity clearly signals a need to many for an increase in spending in these areas, panel participants indicated that it will be a major effort just to maintain funding at current levels. The panel expressed broad consensus that the humanitarian community needs to do a better job of conveying the importance of these programs to the general public.

Panel participants suggested two basic approaches to this effort. The first would emphasize the moral and compassionate grounds for U.S. engagement in such assistance and relate stories about how well these efforts have succeeded. It was noted that several often-utilized success stories are decades old, and that the U.S. government and its partners ought to draw on more recent experiences. The second tack recommended was to tout the advance of agricultural economies in

developing countries through U.S assistance, and how improved economic growth frequently leads to expansion of import demand for a range of products as more prosperous citizens seek to expand and diversify their consumption patterns, to the benefit of U.S. exporters. Yet a third argument might be based on enhancing U.S. national security by reducing the likelihood of political instability in and/or mass immigration from these countries, but many panel participants felt that food insecurity is typically only one of many problems plaguing such countries and thus the connection between the two phenomena is more difficult to draw.

Concluding Remarks

Agricultural development experts often say if they do their jobs well, the end result is that they will work themselves out of their jobs entirely, by ending poverty in developing countries. Recent U.S. efforts to reform and expand food aid and international agricultural development assistance programs have made important strides, but both sets of programs face severe pressure under the effort to reduce the federal budget deficit. Better coordination of activities under both umbrellas would be an important step toward improving the U.S. response to international hunger and poverty. Of all of the basic principles established for the new Feed the Future initiative, the most important one may be the last—"stay the course." It may also be the most difficult to sustain.

List of Acronyms

ACDI-VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance (U.S. PVO)
ACRE program	Average Crop Revenue Election (USDA)
ARA	American Relief Administration
BCA	Budget Control Act
BEHT	Bill Emerson Humanitarian Trust (USDA)
CAADP	Comprehensive Africa Agricultural Development Program
CBO	U.S. Congressional Budget Office
CGIAR	Consultative Group on International Agricultural Research
CIMMYT	Center for International Maize and Wheat Improvement (CGIAR)
CRB	Commission for Relief in Belgium (WW I famine relief)
CRSP	Collaborative Research Support Program
CSB	corn-soybean blend (food aid product)
CSIS	Center for Strategic International Studies
DA	Development Assistance account (USAID)
DAC	Development Assistance Committee (OECD)
DCH	Bureau for Democracy, Conflict, and Humanitarian Assistance (USAID)
DFID	Department for International Development (United Kingdom)
DOD	U.S. Department of Defense
DSB	Dispute Settlement Body (WTO)
ECHO	European Community Humanitarian Office
EFSP	Emergency Food Security Program
FAO	Food and Agriculture Organization (UN)
FAS	Foreign Agricultural Service (USDA)
FDI	Foreign Direct Investment
FEWSNET	Famine Early Warning System Network
FFP	Food for Progress program (USDA)
FSA	Farm Service Agency (USDA)
FTF	Feed the Future (USAID)
FY	Fiscal year
GAFSP	Global Agricultural and Food Security Program (World Bank)
GAO	U.S. Government Accountability Office
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GNI	Gross National Income
GSP	Generalized System of Preferences
HAC	House Committee on Agriculture
HFAC	House Foreign Affairs Committee
HIV-AIDS	Human Immunodeficiency Virus-Acquired Immune Deficiency Syndrome
IFPRI	International Food Policy Research Institute (CGIAR)
IRD	Integrated Rural Development
MCC	Millennium Challenge Corporation
MYAP	Multi-Year Assistance Project (Title II)
NEPAD	New Partnership for African Development
ODA	Overseas Development Assistance
OECD	Organisation for Economic Co-operation and Development
OFAR	Office of Foreign Agricultural Relations (FAS/USDA)
OPIC	Overseas Private Investment Corporation
PEPFAR	President's Emergency Plan for AIDS Relief

PM2A	Preventing Malnutrition in Children Under Two Approach
PRT	Provincial Reconstruction Teams
PVO	Private Voluntary Organizations
SAC	Senate Committee on Agriculture, Nutrition, and Forestry
SCM	Subsidies and Countervailing Measures Agreement (WTO)
SFRC	Senate Foreign Relations Committee
URAA	Uruguay Round Agreement on Agriculture (WTO)
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture
USTDA	U.S. Trade Development Agency
USTR	Office of the U.S. Trade Representative
WFP	World Food Program (UN)
WTO	World Trade Organization

Endnotes

[1] Council on Foreign Relations. "Millennium Challenge Act of 2003." Enacted as Title VI of the Foreign Operations, Export Financing, and Related Operations Appropriations Act of 2004. Accessed July 14, 2012: http://www.cfr.org/poverty/millennium-challenge-act-2003/p16232

[2] Food and Agriculture Organization, United Nations. "State of Food Insecurity in the World, 2012." Accessed October 9, 2012: http://www.fao.org/docrep/016/i3027e/i3027e00.htm

[2] World Bank. "Agriculture for Development." 2008 World Development Report. Accessed Mar. 26, 2012: http://siteresources.worldbank.org/INTWDR2008/Resources/WDR_00_book.pdf

[4]The Belgian American Education Foundation. "The Commission for Relief in Belgium (C.R.B.) 1914." Accessed Jan. 30, 2012: http://www.baef.be/documents/about-us/history/the-commission-for-relief-in-belgium-1914-.xml?lang=en

[5] The Hoover Institution, Stanford University. "The American Relief Administration in Soviet Russia." Accessed Jan. 30, 2012: http://www.hoover.org/library-and-archives/exhibits/27238

[6] Hogan, M. *The Marshall Plan: America, Britain, and the Reconstruction of Western Europe, 1947-1952.* (Cambridge: Cambridge University, 1987).

[7] Serafino, N. et al. *U.S. Occupation Assistance: Iraq, Germany and Japan Compared. RL-33331* (Washington, DC: Congressional Research Service, Mar. 2006). Accessed Feb. 2, 2012: http://www.fas.org/sgp/crs/natsec/RL33331.pdf

[8] Senate Committee on Agriculture, Nutrition, and Forestry. "Compilations—Agricultural Act of 1949." Accessed Feb. 3, 2012: http://www.ag.senate.gov/library/compilations

[9] Ackerman, K. et al. "Agricultural Export Programs: Background for 1995 Farm Legislation." AER-716 (Washington, DC: Economic Research Service, U.S. Department of Agriculture, June 1995).

[10] Economic Commission for Africa, United Nations. "Transforming Africa's Economies-Overview." (Addis Ababa, Ethiopia: April 2001). Accessed Feb. 10, 2012: http://www.uneca.org/eca_resources/Publications/books/transforming_africas_economies/index.htm

[11] Rosenblatt, J. "The Common Agricultural Policy of the European Community—Principles and Consequences." Occasional Paper No. 62, International Monetary Fund, November 1988.

[12] Adams, D. "Agricultural Development Strategies in Ethiopia—1950-1970." Accessed Feb. 12, 2012: http://pdf.usaid.gov/pdf_docs/PNADW072.pdf

[13] Pal, S., and D. Byerlee. "India: The Funding and Organization of Agricultural R&D—Evolution and Emerging Issues." Chapter in *Agricultural R&D in the Developing World: Too Little, Too Late?* Edited by P. Pardey, J.M. Alston, and R.R. Piggott. (Washington, DC: IFPRI, 2006).

[14] International Food Policy Research Institute. "Green Revolution: Curse or Blessing?" IFPRI Policy Brief, 2002. Accessed June 8, 2012: http://www.ifpri.org/sites/default/files/pubs/pubs/ib/ib11.pdf

[15] Brinkerhoff, D. "The Effectiveness of Integrated Rural Development: A Synthesis of Research and Experience." Accessed Feb. 13, 2012: http://pdf.usaid.gov/pdf_docs/PNAAS642.pdf

[16] Eicher, C. "Flashback: 50 Years of Donor Aid to African Agriculture." Paper presented at NEPAD conference, Pretoria, South Africa, December 2003. Accessed Feb. 14, 2012: http://www.ifpri.org/sites/default/files/pubs/events/conferences/2003/120103/papers/paper16.pdf

[17] Thurow, R., and S. Kilman. *Enough—Why the World's Poorest Starve in an Age of Prosperity.* (New York: Public Affairs, 2009).

[18] Overseas development assistance spending is typically differentiated in policy discussions from foreign assistance spending, which also includes military assistance.

[19] The big increase in ODA during the past decade was primarily allocated to health care assistance, especially for addressing the scourge of HIV-AIDS in developing countries.

[20] Hanrahan, C., and M. Ho. "The U.S. Global Food Security Initiative—Issues for Congress." R40945 (Washington, DC: Congressional Research Service, November 2009). Accessed Feb. 13, 2012:

http://www.nationalaglawcenter.org/assets/crs/R40945.pdf

[21] Gallup, G. "Marshall Plan Still Gaining Support." *St. Petersburg (FLA) Times*, Dec. 9, 1947. Accessed June 8, 2012: http://news.google.com/newspapers?nid=888&dat=19471209&id=bflOAAAAIBAJ&sjid=6U4DAAAAIBAJ&pg=4265,5657278

[22] Freedman,T., S. Gill, and S. Feder. "An Electorate Ready for Action: 10 Key Findings on Hunger." Results and analysis of 2008 election polling, on behalf of the Alliance to End Hunger, Jan. 2009. Accessed Feb. 14, 2012: http://alliancetoendhunger.org/building-political-will/hunger-message-project/Findings/documents/HungerMessageProject2008ExitPollReport-email-printversion.pdf

[23] Chicago Council on Global Affairs. "Constrained Internationalism: Adapting to New Realities." Accessed Feb. 14, 2012: http://www.thechicagocouncil.org/UserFiles/File/POS_Topline%20Reports/POS%202010/Global%20Views%202010.pdf

[24] Obama, B. "Remarks by the President on Fiscal Policy." Speech at George Washington University, Washington, DC, April 13, 2011. Accessed Feb. 14, 2012: http://www.whitehouse.gov/the-press-office/2011/04/13/remarks-president-fiscal-policy

[25] Organisation for Economic Co-operation and Development. "Comparison of Flows by Type, 2010." OECD Development statistics database. Accessed Feb. 13, 2012: http://www.oecd.org/dataoecd/30/55/47452876.xls

[26] Organisation for Economic Co-operation and Development. "Table 13: Comparisons of flows by type in 2010." OECD Statistics from A to Z: Aid (Development). Accessed Feb. 13, 2012: http://www.oecd.org/document/0,3746,en_2649_201185_46462759_1_1_1_1,00.html

[27]Ackerman, K. et al. "Agricultural Export Programs: Background for 1995 Farm Legislation." AER-716 (Washington, DC: Economic Research Service, U.S. Department of Agriculture, June 1995).

[28] If Title I were to be reactivated, loans under Title I would have to be repaid within 30 years, with a grace period of up to 5 years. Repayment may be made in either dollars or local currency of the borrowing country.

[29] Barrett, C., and D. Maxwell. *Food Aid After 50 Years—Recasting Its Role.* (New York: Routledge Press, 2005).

[30] Ackerman, K. et al. "Agricultural Export Programs: Background for 1995 Farm Legislation." AER-716 (Washington, DC: Economic Research Service, U.S. Department of Agriculture, June 1995).

[31] Skoric, D. "Title II Food Aid Programming." Presentation made at 2011 International Food Aid and Development conference. Accessed Feb. 10, 2012: http://www.fsa.usda.gov/Internet/FSA_File/2011ifadc_post_info.htm

[32] In the 1990 farm bill, after the fall of the Iron Curtain, eligibility for the Food for Progress program was expanded to include Eastern European countries, including new states that were formerly part of the Soviet Union.

[33] Food for Progress funding was authorized in statute to be allocated either through loans or grants, but only the latter authority has been utilized.

[34] Statutes Related to the Food for Peace Act, Agricultural Trade Laws. "Section 3107 of the Farm Security and Rural Investment Act of 2002: McGovern-Dole International Food for Education and Child Nutrition Program." Accessed Feb. 9, 2012: http://www.ag.senate.gov/library/compilations

[35] Ho, M., and C. Hanrahan. "International Food Aid Programs: Background and Issues." R41072 (Washington, DC: Congressional Research Service, 2010). Accessed Feb. 8, 2012: http://www.fas.org/sgp/crs/misc/R41072.pdf

[36] House Committee on International Relations, Senate Committee on Foreign Relations. "Legislation on Foreign Relations Through 2002—Section 491 of the Foreign Assistance Act of 1961, International Disaster Assistance—Policy and General Authority." Accessed Feb. 9, 2012: http://www.usaid.gov/policy/ads/faa.pdf

[37] Brooks, J. "USAID Emergency Food Security Program (EFSP): Program Overview and Progress To Date." Presentation made at 2011 International Food Aid and Development conference. Accessed Feb. 10, 2012: http://www.fsa.usda.gov/Internet/FSA_File/2011ifadc_post_info.htm

[38] Mercier, S. "Thinking Ahead—What's Up with U.S. Food Aid Policy in Advance of the 2012 Farm Bill?" Policy paper commissioned by the Partnership to Cut Hunger and Poverty in Africa, June 2011. Accessed Feb. 10, 2012: http://www.partnership-

africa.org/content/partnership-report-food-aid-policy-and-2012-farm-bill

[39] Foreign Agricultural Service, U.S. Department of Agriculture. "Bill Emerson Humanitarian Trust." Fact sheet, released March 2006. Accessed Feb. 10, 2012: http://www.fas.usda.gov/excredits/foodaid/EmersonTrust.pdf

[40] Mercier, S. "Thinking Ahead—What's Up with U.S. Food Aid Policy in Advance of the 2012 Farm Bill?" Policy paper commissioned by the Partnership to Cut Hunger and Poverty in Africa, June 2011. Accessed Feb. 10, 2012: http://www.partnership-africa.org/content/partnership-report-food-aid-policy-and-2012-farm-bill

[41] Although Secretary Clinton's speech was not specific about the role she had in mind for multilateral organizations, since 2010 the U.S. government has helped to set up and fund the World Bank's Global Agricultural Food Security Program (GAFSP) and has worked to coordinate agricultural research and development projects with the UN's food agencies and the entities that make up the Consultative Group on International Agricultural Research.

[42]ForeignAssistance.gov. "Feed the Future Initiative." Accessed Feb. 15, 2012: http://www.foreignassistance.gov/Initiative_FTF_2011.aspx?FY=2011

[43] Millennium Challenge Corporation. "Millennium Challenge Act of 2003." Accessed Feb. 15, 2012: http://www.mcc.gov/documents/reports/mca_legislation.pdf

[44] ForeignAssistance.gov. "Millennium Challenge Corporation." Accessed Feb. 15, 2012: http://www.foreignassistance.gov/Agency_MCC.aspx

[45] Congressional Record. 30 September, 1974: 32956-33010.

[46] Shah, R. "Remarks by USAID Administrator Rajiv Shah." Comments at release of the 2011 World Hunger Report prepared by the Bread for the World Institute, November 22, 2010. Accessed Feb. 17, 2012: http://www.usaid.gov/press/speeches/2010/sp101122.html

[47] Uphaus, C. "The Challenge to Feeding the Future: Capacity Building at USAID." Chapter in *2011 Hunger Report* (Washington, DC: Bread for the World Institute, November 2010). Accessed Feb. 17, 2012: http://files.hungerreport.org/reports/2011/hunger-2011.pdf

[48] Foreign Agricultural Service, U.S. Department of Agriculture. "Rebuilding Agriculture and Food Security in Afghanistan," and "Rebuilding Agriculture and Food Security in Iraq." USDA/FAS website. Accessed Feb. 17, 2012: http://www.fas.usda.gov/icd/drd/afghanistan.asp and http://www.fas.usda.gov/country/Iraq/development/iraq.asp

[49] Office of the Press Secretary, the White House. "Fact Sheet: U.S. Global Development Policy." Released September 22, 2010. Accessed Feb. 17, 2012: http://www.whitehouse.gov/the-press-office/2010/09/22/fact-sheet-us-global-development-policy

[50] Alston, J. et al. "International Initiatives in Agricultural R&D: The Changing Fortunes of the CGIAR." Chapter in *Agricultural R&D in the Developing World—Too Little, Too Late?* Edited by P.G. Pardey et al. (Washington, DC: IFPRI, 2006).

[51] Consultative Group on International Agriculture Research. "Who We Are: Donors and Funding." Accessed Feb. 29, 2012: http://www.cgiar.org/who/members/funding.html

[52] Collaborative Research Support Programs, U.S. Agency for International Development. "CRSP." Accessed Feb. 29, 2012: http://crsps.org/

[53] A precursor program with the same name was run out of Michigan State University between 1991 and 2003.

[54] Agricultural Research Service, U.S. Department of Agriculture. "International Research Projects." Accessed Feb. 29, 2012: http://www.ars.usda.gov/research/projects.htm?slicetype=International

[55] Foreign Agricultural Service, U.S. Department of Agriculture. "Trade and Scientific Exchange Programs." Accessed Feb. 29, 2012. http://www.fas.usda.gov/icd/rsed/res-scient-exchanges.asp

[56] Global Agricultural and Food Security Program, World Bank. "Funding." Website database. Accessed Feb. 29, 2012: http://www.gafspfund.org/gafsp/content/funding

[57] Mercier, S. "Thinking Ahead—What's Up with U.S. Food Aid Policy in Advance of the 2012 Farm Bill?" Policy paper commissioned by the Partnership to Cut Hunger and Poverty in Africa, June 2011. Accessed Feb.

10, 2012: http://www.partnership-africa.org/content/partnership-report-food-aid-policy-and-2012-farm-bill

[58] Data drawn from USAID's International Food Assistance Reports, various years.

[59] Office of Food for Peace, U.S. Agency for International Development. "Request for Applications for Title II Development Assistance Programs." Accessed Mar. 2, 2012: http://www.usaid.gov/our_work/humanitarian_assistance/ffp/fy12.developmentprogramrfa.pdf

[60] Thousand Days. "1,000 Days Can Shape A Child's Future." Accessed June 10, 2012: http://www.thousanddays.org/resource-slug/1000-days-infographic/

[61] Oxfam UK. "Gender Equality." Accessed Mar. 26, 2012: http://www.oxfam.org.uk/oxfam_in_action/issues/gender.html

[62] Thomas, D. ""The Distribution of Income and Expenditures within the Household," *Annales d'Economie et de Statistique*, Vol. 29:109-136, 2002.

[63] FANTA-2. *Title II Technical Reference Materials TRM-1: Preventing Malnutrition in Children Under 2 (PM2A): A Food Assisted Approach.* Revised November 2010. (Washington, DC: Food and Nutrition Technical Assistance Project 2 (FANTA-2), AED, 2010).

[64] Ruel, M. et al. "Age-based Preventive Targeting of Food Assistance and Behavior Changes and Communications for Reduction of Undernutrition in Haiti: a Cluster Randomized Trial." *The Lancet*, Vol. 371, Issue 9612, Feb. 16, 2008.

[65] International Food Policy Research Institute. "Diet Quality and Health of the Poor—Preventing Malnutrition in Children Under Two." IFPRI Fact Sheet. Accessed Mar. 28, 2012: http://www.ifpri.org/book-741/node/8347

[66] The World Bank. "Engendering Development: Through Gender Equality in Rights, Resources, and Voice." World Bank Policy Research Report No. 21776, 2001.

[67] U.S. Agency for International Development. "Feed the Future Presentation: Nepal." Accessed July 14, 2012: http://nepal.usaid.gov/in-the-spotlight-archive/575-an-in-depth-presentation-of-usaidnepals-upcoming-feed-the-future-project.html

[68] Norris, J., and C. Veillette. "Engagement Amid Austerity: Re-Orienting the International Affairs Budget."
Center for American Progress and Center for Global Development, May 2012. Accessed July 15, 2012: http://www.cgdev.org/content/publications/detail/1426170/

[69] Not all panel participants had expertise in both agricultural development and food aid programs, so any consensus panel view referenced reflects only those who responded to a specific question.

[70] Alston, J. et al. "A Meta-Analysis of Rates of Return to Agricultural R&D: Ex Pede Herculem?" IFPRI Research Report No. 113, 2000.

[71] Pardey, P. et al. "Hidden Harvest: U.S. Benefits from International Research Aid." Food Policy Report, International Food Policy Research Institute, September 1996. Accessed Apr. 4, 2012: http://faculty.apec.umn.edu/ppardey/documents/Hidden_Harvest.pdf

[72] Fan, S., and N. Rao. "Public Investment, Growth, and Rural Poverty." Chapter in *Public Expenditures, Growth, and Poverty*, edited by S. Fan. (Baltimore, MD: The Johns Hopkins University Press, 2008).

[73] African Development Bank, Food and Agriculture Organization, International Fund for Agricultural Development, International Water Management Institute, and World Bank. "Investment in Agricultural Water for Poverty Reduction and Economic Growth in Sub-Saharan Africa." (Washington, DC: World Bank, 2007).

[74] Basta, S. et al. "Iron deficiency anemia and the productivity of adult males in Indonesia."*American Journal of Clinical Nutrition*, Vol. 32 (1997):916–25.

[75] Gollin, D., and C. Zimmerman. "Malaria: Disease Impacts and Long-Run Income Differences." Department of Economics Working Paper 2007–30. Storrs: University of Connecticut

[76] McNamara, P. et al. "Do Health Investments Improve Agricultural Productivity?" IFPRI Discussion Paper No. 01012, July 2010.

[77] Gilligan, D., and J. Hoddinot. "Is There Persistence in the Impact of Emergency Food Aid? Evidence on Consumption, Food Security, and Assets in Rural Ethiopia." *American Journal of Agricultural Economics*, Vol. 89, issue 2 (May 2007):225-242.

[78] Coady, D. "Social Safety Nets." Chapter in *Public Expenditures, Growth, and Poverty*, edited by S. Fan (Baltimore, MD: The Johns Hopkins University Press, 2008).

[79] Rosenzweig, M. "Microeconomic Approaches to Development: School, Learning, and Growth." Center Discussion Paper No. 885, Economic Growth Center, Yale University. March 2010.

[80] Fan, S. et al. "Public Spending in Developing Countries: Trends, Determination, and Impact." Chapter in *Public Expenditures, Growth, and Poverty*, edited by S. Fan (Baltimore, MD: The Johns Hopkins University Press, 2008).

[81] Anderson, K. *Distortions to Agricultural Incentives: A Global Perspective* (London and Washington, DC: Palgrave, McMillan and World Bank, 2008).

[82] Omilola, B. et al. "Monitoring and Assessing Targets of the Comprehensive Africa Agriculture Development Programme (CAADP) and the First Millennium Development Goal (MDG) in Africa," ReSAKSS Working Paper No. 31, July 2010. Accessed Mar. 29, 2012: http://www.resakss.org/

[83]World Bank. "Agriculture for Development." 2008 World Development Report. Accessed Mar. 26, 2012: http://siteresources.worldbank.org/INTWDR2008/Resources/WDR_00_book.pdf

[84] Morrison, S., and J. Nesseth Tuttle. "A Call for a Strategic U.S. Approach to the Global Food Crisis." Center for Strategic and International Studies, July 2010. Accessed Apr. 11, 2012: http://csis.org/files/media/csis/pubs/080728_food_security.pdf

[85] Minority Staff, Senate Committee on Foreign Relations. "Global Food Insecurity: Perspectives from the Field." 111th Congress. Government Printing Office, February 2009. Accessed Apr. 5, 2012: http://lugar.senate.gov/food/pdf/Report.pdf

[86] Lugar, R., and R. Casey. "The Global Food Security Act." Introduced in the 111th Congress as S.384 (and H.R.3077), February 2009. Accessed Apr. 11, 2012: http://thomas.loc.gov/cgi-bin/query/D?c111:7:./temp/~mdbsAyexBf

[87] An earlier version of the legislation was introduced in September 2008 (S. 3529), late in the 110th Congress.

[88] Leaders Group on Agricultural Development, Chicago Council on Global Affairs. "Renewing American Leadership in the Fight Against Global Hunger and Poverty." January 2009. Accessed Apr. 11, 2012: http://www.thechicagocouncil.org/UserFiles/File/GlobalAgDevelopment/Report/gadp_final_report.pdf.

[89] Leaders Group on Agricultural Development, Chicago Council on Global Affairs. "2011 Progress Report on U.S. Leadership in Agricultural Development." May 2011. Accessed Apr. 11, 2012: http://www.thechicagocouncil.org/UserFiles/File/GlobalAgDevelopment/Newsletter/CCGA%20GADI%20Progress%20Report%20-%20Final.pdf

[90] Fan, S., and M. Rosegrant. "Investing in Agriculture to Overcome the World Food Crisis and Reduce Poverty and Hunger." IFPRI Policy Brief No. 3, June 2008.

[91] Motes, W. "Global Food and Agricultural Productivity: The Investment Challenge." Commissioned by the Global Harvest Initiative, January 2011. Accessed Apr. 13, 2012: http://globalharvestinitiative.org/Documents/Motes_The_Investment_Gap_Jan_31_2011/pdf/Motes_The_Investment_Gap_Jan_31_2011.pdf

[92] The Development Assistance Committee (DAC) is a forum for consultation among aid donors on assistance to less-developed countries. It functions as part of the Organisation for Economic Co-operation and Development (OECD), headquartered in Paris, France. Fuhrer, H. "The Story of Official Development Assistance." OECD, 1996. Accessed Apr. 14, 2012: http://www.oecd.org/dataoecd/3/39/1896816.pdf

[93] Regional Strategic Analysis and Support System (Re-SAKS). "CAADP Targets." Accessed Apr. 13, 2012: http://www.resakss.org/

[94] Fan, S, et al. "China: An Unfinished Research Agenda." Chapter in *Agricultural R&D in the Developing World: Too Little, Too Late?* (Washington, DC: International Food Policy Research Institute, 2006), and Chen, K., and Y. Zhang. "Agricultural R&D as An Engine of Productivity Growth: China." Regional Case Study under *Foresight Project on Global Food and Farming Futures.* Government Office on Science, United Kingdom. 2008. Accessed Apr. 14, 2012: http://www.bis.gov.uk/assets/foresight/docs/food-and-farming/regional/11-591-r2-agricultural-r-and-d-productivity-growth-china.pdf

[95] Organisation for Economic Co-operation and Development. "OECD Creditor Reporting System." Accessed Apr. 14, 2012: http://www.oecd.org/document/33/0,2340,en_2649_34447_36661793_1_1_1_1,00.html

[96] World Food Program, United Nations. "Food Aid Information System: Quantity Reporting." Accessed Apr. 14, 2012: http://www.wfp.org/fais/reports/quantities-delivered-two-dimensional-report/run/donor/All/year/2010/cat/All/recipient/All/code/All/mode/All/basis/0/order/0/

[97] Hebebrand, C. "Leveraging Private Sector Investment in Developing Countries' Agrifood Systems." Study commissioned by the Global Agricultural Development Initiative, Chicago Council on Global Affairs. May 2011. Accessed Apr. 14, 2012: http://www.thechicagocouncil.org/UserFiles/File/GlobalAgDevelopment/Report/CCGA%20GADI%20Private%20Sector%20Policy%20Paper%20FINAL%20VERSION.pdf

[98] Bill and Melinda Gates Foundation. "Agricultural Development: Strategy Overview." Accessed July 15, 2012: http://www.gatesfoundation.org/agriculturaldevelopment/Documents/agricultural-development-strategy-overview.pdf

[99] Obama, B. "Remarks by the President at Symposium on Global Agriculture and Food Security." May 18, 2012. Accessed June 10, 2012: http://www.whitehouse.gov/the-press-office/2012/05/18/remarks-president-symposium-global-agriculture-and-food-security

[100] Organisation for Economic Co-operation and Development. "Evaluation in Development Agencies." 2010. Accessed Apr. 15, 2012: http://browse.oecdbookshop.org/oecd/pdfs/browseit/4310171e.pdf

[101] Mercier, S. "Thinking Ahead—What's Up with U.S. Food Aid Policy in Advance of the 2012 Farm Bill?" Policy paper commissioned by the Partnership to Cut Hunger and Poverty in Africa, June 2011. Accessed Feb. 10, 2012: http://www.partnership-africa.org/content/partnership-report-food-aid-policy-and-2012-farm-bill

[102] World Bank. *World Development Indicators, 2011.* (Washington, DC: The World Bank, 2011).

[103] Food and Agriculture Organization, United Nations. "FAOSTAT-Agriculture."Accessed Apr. 14, 2012: http://faostat.fao.org/site/567/default.aspx#ancor

[104] Binder, A. "Gathering and Analyzing Information for Food Assistance." Chapter in *Uniting on Food Assistance*, edited by C. Barrett et al. (London and New York: Routledge, Taylor and Francis Group, 2012).

[105] Eicher, C. "Rebuilding Africa's Scientific Capacity in Food and Agriculture." Michigan State University. Paper commissioned by the InterAcademy Council (IAC) Study Panel on Science and Technology Strategies for Improving Agricultural Productivity and Food Security in Africa, 2004. Accessed Apr. 15, 2012: http://ideas.repec.org/p/ags/midasp/11543.html

[106] Maritime Administration, U.S. Department of Transportation. "Cargo Preference." Website fact sheet. Accessed Apr. 17, 2012: http://www.marad.dot.gov/ships_shipping_landing_page/cargo_preference/Cargo_Preference_Landing_Page.htm

[107] U.S. Congress. "Section 100124 of the Moving Ahead for Progress in the 21st Century Act of 2012 (P.L. 112-557)," enacted July 6, 2012.

[108] Lentz, E. et al. "The Impacts of Local and Regional Procurement of U.S. Food Aid: Learning Alliance Synthesis Report." Chapter in *Final Report: A Multidimensional Analysis of Local and Regional Procurement of US Food Aid.* Cornell University, January 2012. Accessed Apr. 17, 2012: http://www/dyson.cornell.edu/faculty_sites/cbb/Papers/LRP%20Ch%201%Lentz%20et%20al.pdf

[109] Mercier, S. "Thinking Ahead—What's Up with U.S. Food Aid Policy in Advance of the 2012 Farm Bill?" Policy paper commissioned by the Partnership to Cut Hunger and Poverty in Africa, June 2011. Accessed Feb. 10, 2012: http://www.partnership-africa.org/content/partnership-report-food-aid-policy-and-2012-farm-bill

[110] Government Accountability Office. "Funding Development Projects through the Purchase, Shipment, and Sale of U.S. Commodities is Inefficient and Can Cause Adverse Market Effects." GAO-11-636, June 2011. Accessed Apr. 18, 2012: http://www.gao.gov/assets/330/320013.pdf

[111] Personal conversation with Blake Selzer, Senior Policy Advocate, CARE, Apr. 16, 2012.

[112] Named after Senator Dale Bumpers (D, AR) who offered the original amendment in 1985.

[113]Public Law 112-74. "Section 7025—Commerce, Trade, and Surplus Commodities." Provision in Consolidated Appropriations Act of 2012, enacted December 23, 2011. Accessed Apr. 18, 2012:

http://www.gpo.gov/fdsys/pkg/BILLS-112hr3671ih/pdf/BILLS-112hr3671ih.pdf

[114] Tschirley, D., and J. Howard. "Title II Food Aid and Agricultural Development in Sub-Saharan Africa—Towards a Principled Argument for When, and When Not, to Monetize." Michigan State International Development Working Paper No. 81, 2003. Accessed Apr. 20, 2012: http://ageconsearch.umn.edu/bitstream/54572/2/idwp81.pdf

[115] Elliott, K. "Can Food Aid Help Feed the Future?" Council on Global Development blog, June 11, 2011. Accessed Apr. 20, 2012: http://blogs.cgdev.org/globaldevelopment/2011/06/food-aid-for-development-does-it-make-sense-with-feed-the-future.php

[116] Richard, A.C., and G. Rupp. "The DFID Model: Lessons for the U.S." Occasional Paper, School of Advanced International Studies, Johns Hopkins University, April 2009. Accessed July 31, 2012: http://transatlantic.sais-jhu.edu/publications/articles/DIFD_Model_final.pdf

[117] Hanrahan, C., and C. Canada. "International Food Aid: U.S. and Other Donor Contributions." RS-21279, Congressional Research Service, February 2011. Accessed Apr. 20, 2012: http://www.fas.org/sgp/crs/misc/RS21279.pdf

[118] United Nations. "Scaling Up Nutrition—Portal for the SUN Movement." Accessed July 18, 2012: http://www.scalingupnutrition.org/

[119] The United States' Presidents Emergency Plan for AIDS Relief. "PEPFAR Funding: Investments That Save Lives and Promote Security." Fact sheet updated June 2011. Accessed Apr. 21, 2012: http://www.pepfar.gov/press/80064.htm

[120] Henry J. Kaiser Family Foundation. "U.S. Federal Funding for HIV-AIDS: President's Budget Request for Fiscal Year 2013." HIV-AIDS fact sheet. Accessed Apr. 21, 2012: http://www.kff.org/hivaids/upload/7029-08.pdf

[121] Alexander, K.C. "Anticipated Effects of the U.S. Mexico City Policy on the Attainability of the UN Millennium Development Goals and Future Development Efforts in Subsaharan Africa." Working Paper, Portland State University, 2009. Accessed July 31, 2012: http://www.pdx.edu/honors/sites/www.pdx.edu.honors/files/Alexander.pdf

[122] Haddad, L., and S. Gillespie. "Effective Food and Nutrition Responses to HIV-AIDS: What We Know and What We Need to Know." International Food Policy Research Institute, FCND Discussion Paper No. 112, June 2001. Accessed July 31, 2012: http://www.ifpri.org/sites/default/files/pubs/divs/fcnd/dp/papers/fcndp112.pdf

[123] Asenso-Okyere, K. et al. "Addressing the Links Among Agriculture, Malaria, and Development in Africa." 2020 Conference on Leveraging Agriculture For Improving Nutrition and Health, IFPRI Conference Brief No. 16, February 2011. Accessed Apr. 21, 2012: http://www.ifpri.org/sites/default/files/publications/2020anhconfbr16.pdf

[124] Masset, E. et al. "A Systematic Review of Agricultural Interventions that Aim to Improve Nutritional Status of Children." Department for International Development (DFID), May 2011. Accessed Apr. 21, 2012: http://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=QbYFOlTyugs%3D&tabid=2974&mid=5583

[125] The Chair of the WTO's Agricultural Negotiations Committee prepared and presented the draft to members in July 2008. The specific disciplines addressing food aid are located in Annex L of the draft modalities document. It can be found on the WTO website, at http://www.wto.org/english/tratop_e/agric_e/chair_texts08_e.htm

[126] Brenton, P., and Ikezuki, T. "The Impact of Trade Preferences, with Particular Attention to the Least-Developed Countries." Chapter in *Global Agricultural Trade and Developing Countries*, edited by M.A. Aksoy et al. (Washington, DC: World Bank, 2005).

[127] Anderson, K., and W. Martin. "Agricultural Trade Reform and the Doha Development Agenda." Discussion Paper No. 0517, Centre for International Economic Studies, Adelaide University (Australia), August 2005. Accessed Apr. 24, 2012: http://web.services.adelaide.edu.au/cies/papers/0517.pdf

[128] Food and Agriculture Organization, United Nations. "High and Volatile Food Prices: FAO Support to Country Level Contingency Planning." Rome, Italy. 2012. Accessed Apr. 25, 2012: http://www.fao.org/fileadmin/user_upload/ISFP/HVFP_Publi.pdf

[129] In 2011, the U.S. government notified the WTO of $4.3 billion in amber box spending for the 2009 marketing year, the most recent submission.

[130] Schnepf, R. "Brazil's WTO Case Against the U.S. Cotton Program." Congressional Research Service, RL-32571, June 2010. Accessed Apr. 25, 2012: http://www.nationalaglawcenter.org/assets/crs/RL32571.pdf

[131] Trostle, R. "Global Agricultural Supply and Demand: Factors Contributing to the Recent Increase in Food Commodity Prices." WRS-0801, Economic Research Service, U.S. Department of Agriculture. July 2008. Accessed Apr. 25, 2012: http://www.ers.usda.gov/publications/wrs0801/wrs0801.pdf

[132] Congressional Budget Office. "Updated Budget Projections: Fiscal Years 2012 to 2022." March 2012. Accessed Apr. 26, 2012: http://www.cbo.gov/sites/default/files/cbofiles/attachments/March2012Baseline.pdf

[133] Committee report on H. Con. Res. 112. "Establishing the budget for the United States Government for fiscal year 2013 and setting forth appropriate budgetary levels for fiscal years 2014 through 2022." Resolution passed the U.S. House on March 29, 2012. Not considered by Senate as of this writing.

[134] U.S. Congress. "H.J. Res. 117-Continuing Appropriations Resolution, 2013." PL 112-175, enacted September 28, 2012.