OFFICE OF INSPECTOR GENERAL

AUDIT OF SELECTED USAID/KENYA AGRICULTURAL PRODUCTIVITY AND AGRICULTURAL TRADE ACTIVITIES

AUDIT REPORT NO. 4-615-11-002-P
DECEMBER 14, 2010

PRETORIA, SOUTH AFRICA

Office of Inspector General

December 14, 2010

MEMORANDUM

TO: USAID/Kenya Mission Director, Erna Kerst

FROM: Regional Inspector General/Pretoria, Christine M. Byrne /s/

SUBJECT: Audit of Selected USAID/Kenya Agricultural Productivity and Agricultural Trade Activities (Report No. 4-615-11-002-P)

This memorandum transmits our final report on the subject audit. We have considered management's comments on the draft report and have incorporated them into the final report as appropriate. As a result of these comments, we deleted recommendation 4 in the draft report from the final report. Management comments have been included in their entirety in appendix II (without attachments).

The report includes seven recommendations to strengthen the mission's agricultural productivity and agricultural trade activities. On the basis of management's comments on the draft report, we consider that management decisions have been reached on recommendations 1–2 and 4–7, with final action taken on recommendation 7. Recommendation 7 is thereby closed upon issuance of this report. Please provide the Office of Audit Performance and Compliance Division (M/CFO/APC) with the necessary documentation to achieve final action on recommendations 1–2 and 4–6.

Regarding recommendation 3, in response to mission comments on the draft, we modified the recommendation by eliminating the requirement to "establish clear policy advocacy objectives" and instead recommending that the mission remind its implementing partners of established objectives to help ensure that policy advocacy is consistent with USAID strategy. Consequently, a management decision has not been reached on recommendation 3. We ask that you notify us within 30 days of any actions planned or taken to address recommendation 3.

I want to express my sincere appreciation for the cooperation and courtesy extended to my staff during the audit.

U.S. Agency for International Development
100 Totius Street X5
Pretoria, South Africa 0027
www.usaid.gov/oig

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SUMMARY OF RESULTS

Kenya is regarded as a critical country in East Africa, the economic engine of the Greater Horn of Africa[1] and a strategic partner of the United States in fighting transnational crime and terrorism. The United States and Kenya share a special relationship extending back to American support for Kenyan independence.

Kenya's agricultural sector contributes about 24 percent of the country's gross domestic product (GDP) and provides about 70 percent of total employment. It is estimated that about 69 percent of all households are engaged in farming activities, and an estimated 84 percent of rural households keep livestock. Through linkages with associated industries, the sector indirectly contributes a further 27 percent of the country's GDP. A poorly performing agricultural sector diminishes employment, incomes, and food security.[2]

A December 2009 World Bank report[3] projected a 2009 GDP growth rate for Kenya of 2.5 percent, well below the 3.7 percent average annual growth rate seen from 2000 to 2009, albeit an improvement from the 1.7 percent growth seen in 2008. The level of economic growth in 2008 and 2009 also did not match Kenya's population growth. Although the Kenyan economy did grow in 2008 and 2009, the agricultural sector declined—by 5 percent in 2008 and 2.3 percent in 2009. The World Bank report noted that the agricultural sector remained "the Achilles' heel of Kenya's economy, both in terms of production and wealth distribution." The sector was hit hard by external shocks and agricultural policies that, according to the report, benefited a very small group to the detriment of the general public, including the majority of Kenya's farmers. The report also noted that rapid population growth has left Kenya unable to provide enough maize, the staple crop, to feed the population.

USAID/Kenya strives to increase rural household incomes through market-led, value-chain[4] development that targets three of Kenya's most important agricultural commodities—maize, dairy products, and horticultural products.[5] The mission aims to expand adoption of productivity-enhancing, sustainable agricultural technologies; enhance business linkages from small farmer to end consumer; and promote trade in agricultural products. In addition, the mission attempts to identify and support appropriate roles of the public and private sectors in agriculture, especially in rural areas, and advocates for policy, regulatory, and legal reforms. Activities are managed by the Economic Growth Team in the Agriculture, Business and Environment Office of USAID/Kenya.

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[1] USAID includes Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania, and Uganda in the Greater Horn of Africa. The region has long been characterized by war and famine caused by widespread poverty and instability.

[2] USAID defines food security as all people at all times having both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life.

[3] World Bank: Poverty Reduction and Economic Management Unit Africa Region. "Still Standing: Kenya's Slow Recovery from a Quadruple Shock (with a special focus on the food crisis)." December 2009.

[4] The agricultural value chain refers to the stages of production, from the farm to the market.

[5] Horticulture is the cultivation of flowers, fruits, vegetables, or ornamental plants.

The 5-year economic growth strategy beginning in fiscal year (FY) 2006 was expected to achieve the following results by 2011: (1) rural household incomes increased by 40 percent in high and medium potential areas[6] and by 50 percent in arid and semiarid areas of Kenya; (2) sustainable and consistent increases in productivity of targeted agricultural commodities; (3) expanded agricultural trade opportunities as evidenced by greater volume and value of targeted commodities sold in domestic, regional and international markets; (4) enhanced access to business support services for micro-, small, and medium enterprises and smallholder farmers; and (5) policies that are more conducive to sustainable long-term increases in rural incomes.

In FY 2009, USAID/Kenya obligated $11.7 million for activities designed to achieve these goals. These activities had total funding of more than $50 million. The largest activities were the horticultural, dairy, and maize programs, run by three implementing partners—Fintrac, Land O'Lakes, and ACDI/VOCA,[7] respectively—through agreements signed by USAID/Kenya. Other significant uses of funds include policy analysis and research implemented by the Tegemeo Institute of Agricultural Policy and Development (Tegemeo Institute); microfinance capacity building implemented by DAI; pastoral development implemented by the Interafrican Bureau for Animal Resources; and water and sanitation programs implemented by the Aga Khan Foundation and World Concern Development Organization. These programs are listed in table 1 in descending order by average cost per year.

Table 1. Significant Economic Growth Activities Active in FY 2009

Program	Implementing Partner	Estimated Value ($)	Years	Average Cost per Year ($)
Horticulture Development	Fintrac	13,096,513	6.5	2,014,848
Dairy Sector Competitiveness	Land O'Lakes	9,000,000	5	1,800,000
Maize Development	ACDI/VOCA	11,274,845	7.5	1,503,313
Agriculture Policy Research and Analysis	Tegemeo Institute	4,507,216	4	1,126,804
Access to Rural Finance	DAI	2,199,802	3	733,267
Pastoral Development	Interafrican Bureau for Animal Resources	1,997,594	4	499,399
Water and Sanitation	Aga Khan Foundation	1,238,198	3	412,733
Water and Sanitation	World Concern	1,200,000	3	400,000

The objective of the audit was to determine whether selected activities sponsored by USAID/Kenya to promote agricultural productivity and agricultural trade are achieving their main goal of increasing rural household incomes.[8]

The audit found indications that beneficiaries' household incomes have increased. However, as of September 30, 2009, USAID/Kenya was not on track to increase rural

[6] Areas of high and medium potential are those most suitable for agriculture. USAID officials noted that only about 20 percent of Kenya is considered to have high or medium potential.
[7] The name was developed as a result of a 1997 merger between Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance.
[8] Income is defined as gross revenues less related expenses. A USAID official clarified that rural household income was defined as the mean household income, rather than the median household income.

household incomes by 40 percent before the end of 2011, which was the goal in the office's 5-year strategic plan (page 5). Factors contributing to this result included the following:

- Program design hindered achievement of the program's stated goal of increasing rural household incomes (page 6).
- Uncoordinated policy advocacy[9] resulted in a USAID implementing partner advocating for a policy that was likely to be detrimental to most USAID program beneficiaries (page 7).
- The mission did not verify performance results for consistency and accuracy (page 8).

This report recommends that USAID/Kenya:

- Evaluate its economic growth activities to determine whether they are designed to achieve its strategic goals, and implement procedures to evaluate periodically the extent to which economic growth activities are contributing to achieving stated strategic goals (page 7).

- Remind its implementing partners involved in USAID's policy advocacy objectives to help ensure that the advocated policies are consistent with USAID strategy (page 8).

- Revise its FY 2009 Full Performance Plan and Report submission; review monitoring and evaluation documents, and ensure that performance indicators are consistently defined; communicate to all implementing partners how performance reports should be prepared; and develop a schedule for agreement and contracting officer's technical representatives to verify performance information reported by partners (page 10).

Detailed findings appear in the next section. The audit scope and methodology are described in appendix I. USAID/Kenya agreed with six of the seven recommendations, and final action was taken on one recommendation (page 11). USAID/Kenya's comments appear in their entirety in appendix II (excluding attachments).

[9] Advocacy is the process by which individuals and organizations attempt to influence public policy decisions.

This passion fruit plot is farmed by a USAID/Kenya agricultural program beneficiary.
(Photo by Regional Inspector General/Pretoria, May 2010)

AUDIT FINDINGS

The audit found indications that beneficiaries' household incomes have increased. However, as of September 30, 2009, USAID/Kenya was not on track to achieve its overall goal of increasing rural household incomes by 40 percent before the end of 2011, as stated in the economic growth strategy for the period from 2006 to 2011. A survey commissioned by USAID/Kenya and conducted by the Tegemeo Institute found that average household incomes had increased by 16 percent for survey respondents between 2006 and 2008. However, the survey also reported no significant difference between households that were targeted by USAID/Kenya's agricultural activities and households that were not targeted. USAID officials noted that households not targeted by USAID/Kenya's activities may have also benefited from the program's business development focus, and postulated that this explained the insignificant difference between targeted and nontargeted households. USAID officials did not provide any support to verify this claim.

Since the survey, the agriculture sector in Kenya has been hit by a number of problems, as discussed below, which caused the sector to decline by 5 percent in 2008 and an estimated 2.3 percent in 2009, according to a December 2009 World Bank report. The growth rate noted in the Tegemeo Institute survey between 2006 and 2008 would have needed to continue until 2011 to achieve the overall goal, which was unlikely given the agriculture sector's overall decline. Therefore, it is unreasonable to assume that rural household incomes continued to increase at the rate reported between 2006 and 2008.

In addition to these overall economic problems, household incomes increased more slowly than consumer prices from 2006 to 2009. As a result, the overall buying power of program beneficiaries has likely decreased since 2006.

The mission cited many factors as contributing to these results:

- Violence following the 2007 election displaced a significant population in the target area of all three significant agriculture programs, killed livestock of dairy program beneficiaries, and destroyed infrastructure needed for the market to operate effectively.

- A severe drought from the end of 2008 to mid-2009 disrupted all the programs, but especially the maize program, which relies heavily on rain-fed agriculture.

- Economic shocks hurt several of the programs. Higher petroleum and fertilizer prices reduced household incomes, while the global economic downturn reduced international demand for horticultural products.

- Poor government policies and corruption hurt program beneficiaries. Specifically, government price-setting deterred businesses from investing in the maize value chain.

These factors were, by and large, outside the mission's control. However, two factors within the mission's control are discussed below. The audit also noted weaknesses in the way implementing partners and USAID/Kenya collect and report data.

Program Design Hindered Achievement of Stated Goal

USAID's Automated Directives System (ADS) Chapter 201,[10] "Planning," notes that USAID missions should "devise foreign assistance programs and activities to have the greatest possible development impact." ADS Chapter 200, "Managing for Results," states that "USAID seeks to define and organize its work around the end result it seeks to accomplish. This requires making intended results explicit; ensuring agreement among partners, customers, and stakeholders that proposed results are worthwhile; and organizing daily work and interactions to achieve results effectively."[11]

One of the principal areas of focus for USAID/Kenya's agricultural activities has been the Kenya Maize Development Program. This program, implemented by ACDI/VOCA, has received more than $11 million over the past 8 years. Despite this investment, smallholder income has not increased as expected. First, maize is grown mainly for food security purposes and has a low value relative to other crops. According to program beneficiaries, the gross value of an acre of maize with a good harvest would be about 50,000 Kenyan shillings ($667), whereas the gross value of an acre of passion fruit with a good harvest would be about 600,000 Kenyan shillings ($8,000), or 12 times as much as maize. Second, because maize production entails high input costs—maize program officials estimate these input costs at approximately 78 percent of gross value—doubling or tripling the productivity of a smallholder farmer's crop would have only a marginal effect in raising rural household incomes by the stated goal of 40 percent. On the basis of these estimates, increasing productivity from 720 kilograms per acre to 2,250 kilograms per acre would increase net income by only about 7,480 Kenyan shillings ($100) per acre (based on a price of 2,000 Kenyan shillings per 90-kilogram bag). Based on the 2008 Tegemeo Institute survey, for the average smallholder this increase would translate into about 27,000 Kenyan shillings, or about 9 percent of the annual nominal household income of 293,167 shillings reported in the survey. Even if productivity gains reduced input costs from 78 percent of gross value to 68 percent, the resulting increase would have been only about 15 percent of household income.

The maize program has reported significant increases in productivity, but the decision to focus on maize prevented USAID/Kenya from efficiently and effectively increasing rural household incomes. Although emphasizing maize was not an effective means to increase rural household incomes, the mission extended the original 4-year program, which was to expire in 2006, through 2010 and increased the value of the agreement by more than $5 million.

USAID/Kenya renewed the maize program without critically evaluating whether this program was achieving the desired result. The mission's Agriculture, Business and Environment Office did not use the stated goal of increasing rural household incomes by 40 percent as its criterion for selecting which agricultural commodities to target. Specifically, the Agriculture, Business and Environment Office had not modified its basic strategy since 2003. A USAID/Kenya official noted that the strategy had not changed

[10] ADS 201.3.8.
[11] ADS 200.3.2.1.

because the office had not critically evaluated whether the program was achieving the desired result.

When asked about renewing the maize program, the director of the Agriculture, Business and Environment Office noted that he was not sure how the goal of increasing rural household incomes by 40 percent had been developed and said that he and the office staff have not really considered it much since the plan was written in 2005. He also indicated that the program's activities were broader than the overall goal of increasing rural household incomes. His response indicates that the strategic planning process was not given enough consideration.

Although maize program officials noted that they encourage beneficiaries to diversify beyond maize, the program's advocacy of maize encourages farmers to use their limited resources to cultivate maize, reducing the available resources that could be used to invest in a dairy cow or passion fruit seedlings. As a result of insufficient emphasis on strategic planning, the incomes of program beneficiaries under the maize program did not increase to the extent they could have if they had focused on horticultural or dairy products. Therefore, the Regional Inspector General/Pretoria makes the following recommendations.

> ***Recommendation 1.*** *We recommend that USAID/Kenya critically evaluate its economic growth activities to determine whether they are designed to achieve the mission's strategic goals, and determine whether funds could be more effectively allocated.*

> ***Recommendation 2.*** *We recommend that USAID/Kenya implement procedures to evaluate periodically the extent to which economic growth activities are contributing towards achieving stated strategic goals, including an analysis of programming options.*

Uncoordinated Policy Advocacy May Have Harmed Program Beneficiaries Financially

The National Security Strategy of the United States, March 2006, notes:

> While most of the world affirms in principle the appeal of economic liberty, in practice too many nations hold fast to the false comforts of subsidies and trade barriers. Such distortions of the market stifle growth in developed countries, and slow the escape from poverty in developing countries. Against these short-sighted impulses, the United States promotes the enduring vision of a global economy that welcomes all participants and encourages the voluntary exchange of goods and services based on mutual benefit, not favoritism.

In line with this strategy, the Department of State/USAID Strategic Plan covering FYs 2007–12 notes that, "We will support free markets and free trade to unleash the power of the private sector to promote economic growth and prosperity." USAID/Kenya's 2006 strategy notes that the mission will use a "market-led approach" to foster economic growth.

However, in January 2009, a subpartner of ACDI/VOCA advised the Minister of Agriculture that farmers could not support themselves with the price that the National Cereals and Produce Board (NCPB) was paying for maize in early 2009. The ACDI/VOCA FY 2009 annual report stated that "on 28th January 2009 CGA [the subpartner] members held a meeting with the Minister of Agriculture, Hon. William Ruto, at his office. At this meeting, the GoK [Government of Kenya] revised the NCPB buying price for maize to Kshs [Kenyan shillings] 2,300 up from Kshs 1,950." This action increased the price of maize for consumers. Because, as noted in a December 2009 World Bank report, more than 60 percent of smallholder farmers are net buyers of maize, the policy change resulting from the advocacy may have hurt most program beneficiaries. The Government of Kenya has maintained the 2,300 Kenyan shillings buying price set in early 2009, while countries such as South Africa have exported maize at the equivalent of 1,000 Kenyan shillings per 90-kilogram bag.

This policy advocacy was due to a lack of awareness by the mission and its partners of the overall economic growth strategy. While USAID was not involved in the policy change directly, USAID/Kenya officials nonetheless defended ACDI/VOCA's actions by noting that the subpartner is a member-based farmer organization and was advocating on behalf of its members, even though the initiative was at variance with the mission's strategy. Maize program officials noted that the Government of Kenya needed to intervene to allow maize farmers to recover their costs. This type of intervention artificially increased the market price, contrary to the market-led approach adopted by USAID. Additionally, the subpartner's assertion that maize farmers could not recover their costs at the original market price calls into question the effectiveness of increasing rural household incomes by increasing maize production, as described above.

Raising grain prices through market intervention or trade restrictions implies transfer of income from rural and urban households to a small proportion of well-to-do, large-scale farmers. These actions undermine the policy of increasing rural household incomes and decreasing economic inequality. Based on these circumstances, the Regional Inspector General/Pretoria makes the following recommendation.

> ***Recommendation 3.*** *We recommend that USAID/Kenya remind its implementing partners involved in policy analysis and advocacy of policy advocacy objectives to help ensure that implementing partners advocate for policies consistent with USAID strategy.*

Mission Did Not Verify Performance Results

USAID's ADS Chapter 203, "Assessing and Learning,"[12] addresses data quality standards. These standards require that data clearly and adequately reflect the intended result and that established mechanisms be in place to help ensure high-quality reported data.

The audit disclosed errors, unsupported figures, and internal inconsistencies in three of the five performance indicators prepared for FY 2009 and selected as representative of

[12] ADS 203.3.5.1

the program by mission officials, as described below.

- Although ACDI/VOCA officials said that they were confident that at least 370,000 households benefited from the maize program in FY 2009, the officials did not have any summary documentation to allow verification of this result. Although the mission's performance management plan noted that the maize program maintains information on names of beneficiaries, sex, household composition, the education level of household members, the amount of land owned, and Global Positioning System coordinates, the maize program could not produce any of this information for the 370,000 households that reportedly benefited from the program. A maize program official noted that program staff members tally the number of seed recipients from reviewing logs kept by seed distributors. Staff members do not keep records of their math.

- The dairy program, implemented by Land O'Lakes, reported supporting 80,119 households in FY 2009 and 102,656 households since the start of the program, but the mission used the 102,656 households to prepare its FY 2009 annual report. Using the cumulative total overstated the number of dairy program beneficiaries by 28 percent.

- USAID/Kenya's FY 2009 Full Performance Plan and Report presented significantly misleading information. Specifically, the report summary stated that smallholder horticulturalists had sold 20 million metric tons as a result of USAID assistance, while the narrative agreed with the horticulture program's annual report in noting that USAID had helped smallholder horticulturalists increase their sales by 20,010 metric tons.

- The dairy program's target for 2009 was 19,900 metric tons of dairy products valued at $10 million. The reported result was 3,396 metric tons, with a value of $12 million. These figures indicate that the estimated value of dairy products ($500 per metric ton) used in setting the target was badly flawed: The actual value was $3,612 per metric ton. These figures were never questioned by the mission until the auditors raised it as an issue.

- The indicator *Percent change in annual production per unit of output* is not well designed to evaluate performance, for the following reasons:

  - The targets and actual results are reported as numbers, rather than percentages, and the baselines presented are for different years, making it difficult to determine the progress made by the respective programs.

  - Units of production are reported in aggregate, although maize, dairy products, and nuts are not measured in comparable units of production.

  - After a few years, beneficiaries will graduate from the program and new beneficiaries will be added, lowering the production per unit of output.

  - The methodology used by the maize program for its baseline did not include more productive areas that were being targeted by the maize program that would have increased this baseline significantly.

Several factors led to these deficiencies:

- USAID/Kenya officials were not always aware of the data collection methodologies used by implementing partners for reporting results because monitoring and evaluation documents utilized by mission officials (such as the performance monitoring plan) did not always accurately state these methodologies.

- Implementing partners had difficulty answering questions related to supporting documentation for reported indicators, and mission officials did not recognize that data quality was a problem. For example, both mission and maize program officials participated in three meetings without providing support for the 370,000 households that were claimed to have benefited from the maize program in the mission's reporting.

- Finally, the agreement officer's technical representatives and contracting officer's technical representatives did not adequately review implementing partner performance reporting systems, allowing deficiencies such as the lack of support for the 370,000 households noted above to persist for years without being addressed.

As a result of unreliable and misstated reporting, USAID cannot determine whether the program has been successful. To address these deficiencies, this audit makes the following recommendations.

Recommendation 4. *We recommend that USAID/Kenya (a) review its fiscal year 2009 Full Performance Plan and Report submission, (b) identify which figures are inaccurate, and (c) revise the report accordingly to prevent others from relying on inaccurate figures in the future.*

Recommendation 5. *We recommend that USAID/Kenya review monitoring and evaluation documents, including the performance monitoring plans for implementing partners and the mission, and make the necessary changes to ensure that performance indicators are consistently defined.*

Recommendation 6. *We recommend that USAID/Kenya communicate to all implementing partners the way performance reporting should be prepared, stressing the need to maintain supporting documentation for all reported information.*

Recommendation 7. *We recommend that USAID/Kenya develop a schedule for agreement officer's technical representatives and contracting officer's technical representatives to review periodically the performance reporting systems and information for the agreements and contracts they oversee.*

EVALUATION OF MANAGEMENT COMMENTS

In its comments on the draft report, USAID/Kenya agreed with recommendations 1–2 and 5–8, and disagreed with recommendations 3 and 4. In response, we modified recommendation 3 and deleted recommendation 4. Consequently, recommendations 5–8 in the draft report were renumbered as recommendations 4–7 in the final report. Management decisions have been reached on recommendations 1–2 and 4–7, with final action taken on recommendation 7. Recommendation 3 remains without a management decision. Our detailed evaluation of management's comments follows.

For recommendation 1, the mission agreed to critically evaluate its economic growth activities to determine whether they are designed to achieve the mission's strategic goals and determine whether funds could be more effectively allocated. As part of this effort, the mission is developing a multiyear Feed the Future strategy to help plan future agriculture and food security activities, which is expected to be completed by June 30, 2011. This strategy will be informed by an upcoming independent impact evaluation which will cover a number of areas, including value chain projects and rural finance. Based on management's comments, a management decision has been reached on recommendation 1.

For recommendation 2, the mission agreed to implement procedures to evaluate periodically the extent to which economic growth activities are contributing toward achieving stated strategic goals, including an analysis of programming options. Specifically, the mission is developing an agenda for knowledge management and evaluative activities to accompany its Feed the Future strategy implementation. The objective is to implement a dynamic evaluation/assessment schedule that will inform the progress of Feed the Future implementation, options for programming, and future funding, as well as to share best practices with the wider stakeholder community. This agenda will be prepared along with the Feed the Future multiyear strategy, which will be approved no later than June 30, 2011. Therefore, a management decision has been reached on recommendation 2.

For recommendations 3 and 4 in the draft report, the mission disagreed with our recommendations to establish clear policy advocacy objectives and communicate them to all implementing partners involved in policy analysis and advocacy and to develop procedures for mission involvement during policy advocacy to help ensure that implementing partners advocate for policies consistent with USAID strategy. The mission stated that it has established clear policy objectives and communicated these to implementing partners to the extent permissible. Specifically, the project description for the maize program signed in 2002 was clear that the approach to be employed is market-driven. Additionally, the mission takes issue with our inclusion of the Tegemeo Institute in this finding, rightfully pointing out that they are advocates against price controls and government interventions in the market. As a result, we eliminated the reference to the Tegemeo Institute.

We agree that the policy objectives are clear in the Kenya Maize Development Program cooperative agreement. The agreement states that "the objective of the Kenya Maize Development Program is to increase incomes of smallholder maize farmers in rural areas through a *market-driven* production system" (emphasis added). Elsewhere, one of the "program principles and approaches" in the agreement states that "implementation of the Kenya Maize Development Program will take a market driven production approach."

Despite these objectives, ACDI/VOCA engaged a subpartner that advised the Government of Kenya to increase price controls, contradicting the research and advocacy of Tegemeo Institute. Upon discovering this, the then-director of the Agriculture, Business and Environment Office, as well as ACDI/VOCA and subpartner officials, defended the actions of the subpartner. This lack of awareness indicates that policy advocacy objectives were not as clearly understood as the mission believes they were.

Based on the mission's comments, we modified recommendation 3 by eliminating the requirement to "establish clear policy advocacy objectives" and instead recommending that the mission remind its implementing partners of these objectives to help ensure that policy advocacy is consistent with USAID strategy. Consequently, a management decision has not been reached on recommendation 3.

This mission pointed out that there are limitations to its involvement under assistance agreements. Specifically, USAID/Kenya noted that "Under the terms of its cooperative agreement with ACDI/VOCA, sub-recipients, sub-awardees and contractors have no relationship with USAID." Because of these limitations, we have deleted recommendation 4 in the draft report from the final report.

For recommendation 4 (previously recommendation 5), the mission agreed to (1) review its FY 2009 Full Performance Plan and Report submission, (2) identify which figures are inaccurate, and (3) revise the report accordingly to prevent others from relying on inaccurate figures in the future. The mission stated that this would be completed by January 31, 2011, and therefore a management decision has been reached on recommendation 4.

For recommendation 5 (previously recommendation 6), the mission agreed to review monitoring and evaluation documents, including the performance monitoring plans for implementing partners and the mission, and make the necessary changes to ensure that performance indicators are consistently defined. Although the mission believes its monitoring and evaluation plans are consistently defined, it is currently implementing a new strategy that will realign the monitoring and evaluation documents by September 2011. Accordingly, a management decision has been reached on recommendation 5.

For recommendation 6 (previously recommendation 7), the mission agreed to communicate to all implementing partners the way performance reporting should be prepared, stressing the need to maintain supporting documentation for all reported information. The mission noted that new agreements will include standard language on the preparation of performance reports beginning no later than June 30, 2011. Current partners will be resensitized through written communication no later than December 31, 2010.[13] Finally, the mission periodically holds trainings for implementing partners on monitoring and evaluation, including one held in September 2010. Based on the mission's comments, a management decision has been reached on recommendation 6.

For recommendation 7 (previously recommendation 8), the mission agreed to develop a schedule for agreement officer's technical representatives and contracting officer's technical representatives to review periodically the performance reporting systems and information for the agreements and contracts they oversee. The mission noted that contracting and agreement officer's technical representatives will review implementing partners' reporting systems every 6 months and document findings in trip reports. Accordingly, a management decision has been reached and final action has been taken on recommendation 7.

In addition to its responses to specific recommendations, the mission made several general comments, which are included in appendix II. Although we generally agreed with these comments, the following specific points should be clarified:

- The mission noted that the finding that the incomes of maize program beneficiaries did not increase to the extent they could have if activities were focused on horticulture or dairy is not indisputable (see page 21). Specifically, the mission adduced a Government of Kenya report and the potential for maize's increased contribution to the Kenyan economy as evidence disputing the finding. Yet the mission's own comments acknowledge the negative effect of "politically motivated interference" in realizing these potential benefits. Apart from issues of food security, this interference—which is only mentioned in the context of maize and no other commodity—calls into question the effectiveness and efficiency of continued reliance on maize as a vehicle for increasing rural household incomes.
- In conjunction, the mission noted that "the idea that production of horticultural crops can replace the production of maize by smallholders and thereby raise incomes of most smallholders is further undermined by the finding that at least initially there was very little overlap between smallholders targeted by the KMDP and KHDP programs" (see page 21). Nonetheless, every horticulture program beneficiary we spoke with also grew maize. To the audit team, this demonstrates that maize farmers can and sometimes do switch to horticulture products when the rewards outweigh the costs. However, the mission noted areas that require further study, including the market's ability to absorb horticulture products and the willingness of smallholder farmers to switch from maize to horticulture products. The mission raised some excellent issues that should be addressed during planning for its upcoming Feed the Future initiative, described in response to recommendation 1.
- The mission disputed our estimates used to calculate the return to farmers of increased productivity. Although the reported numbers are not indisputable, they are comparable to those referenced by the mission in its comments. Specifically, the resulting proceeds per acre using mission figures would not have changed the $100 estimate noted in the report (assuming the 1,750 Kenyan shillings estimate) on page 6. Even when we adjusted our estimates to take into account the increased efficiency, the results show that under ideal circumstances

[13] In appendix II, the mission notes that partners would be resensitized through written communication by November 30, but on December 3, 2010, the mission notified us that this action had been delayed.

(doubling or tripling productivity), smallholder incomes would only have increased by 9 to 15 percent, which would not be sufficient to increase rural household incomes by 40 percent, which was the stated goal of the program.

SCOPE AND METHODOLOGY

Scope

The Office of Inspector General conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. The objective was to determine whether selected USAID/Kenya's agricultural productivity and agricultural trade activities are achieving their main goal of increasing rural household incomes. We believe the evidence obtained provides that reasonable basis. Audit fieldwork was conducted at USAID/Kenya and at selected offices and activity sites of the implementing partners in Kenya from May 17 to June 4, 2010, and covered FY 2009.

In FY 2009, USAID/Kenya obligated $11.7 million to programs designed to increase rural household incomes. These programs had a total funding of more than $50 million.

In planning and performing the audit, the audit team assessed management controls related to management review, proper execution of transactions and events, and review of performance measures and indicators. Specifically, we examined and evaluated documentation prepared by the mission and cooperating sponsors, including the following:

- Implementing partners' agreements and amendments
- Implementing partners' proposals
- Implementing partners' support for reported performance indicators, as available
- USAID/Kenya's Increasing Rural Household Incomes Performance Management Plan
- Target and actual performance results
- Data quality assessment for Strategic Objective 7
- USAID/Kenya's FY 2009 Full Performance Plan and Report
- USAID/Kenya's FY 2009 certification required under the Financial Managers' Financial Integrity Act of 1982 (as codified in 31 U.S.C. 1105, 1113, 3512)

We also interviewed key USAID/Kenya personnel, implementing partner officials, and beneficiaries.

Methodology

To answer the objective, we interviewed mission and implementing partner officials. We sought to understand the mission's agricultural productivity and agricultural trade activities and to identify the key performance indicators used to measure the contribution of those activities to meeting the main goal of increasing rural household incomes.

Next, we examined claims and assertions made in USAID/Kenya's Full Performance Plan and Report for FY 2009, under "Economic Growth," as submitted in the Foreign Assistance Coordination and Tracking System. We considered both judgmental and statistical sampling to test numerical assertions regarding reported beneficiaries of the mission's agricultural activities, but did not use any samples because the major implementing partners could not provide sufficient supporting documentation from which to sample.

We also analyzed key performance indicator data to determine whether they had apparent inconsistencies, met established targets, and were auditable. Of the six indicators listed as key by USAID/Kenya officials, one was not reported on in FY 2009, one did not have a target set, and two had apparent inconsistencies. Of the remaining two, only one, *Number of policies/regulations/administrative procedures analyzed as a result of USG assistance*, exceeded its target. Therefore, we placed additional emphasis on interviewing monitoring and evaluation specialists working for the implementing partners to determine how performance targets and results were set and obtained. As part of this process, we conducted site visits in Kenya, but the summary data were not available to conduct a sample of key performance indicator data.[start

We reviewed a survey conducted by the Tegemeo Institute of Agricultural Policy and Development (Tegemeo Institute) in 2006 and 2008 and the two corresponding reports. Specifically, we analyzed figures presented in one of the reports and interviewed officials from the Tegemeo Institute to understand their methodology. Overall, we did not find any deficiencies in the survey methodology.

Finally, we reviewed documents as part of our audit procedures. These included excerpts from USAID/Kenya's FY 2009 Full Performance Plan and Report; the agreements with implementing partners and all modifications; and the implementing partners' support for reported performance indicator data. We also utilized the Government Accountability Office's *Standards for Internal Control in the Federal Government* and USAID's Automated Directives System, Chapters 200 through 203.

MANAGEMENT COMMENTS

To: Christine M. Byrne, Regional Inspector General /Pretoria

From: Erna Kerst, USAID/Kenya Mission Director /s/

Date: October 19, 2010

Subject: **Audit of Selected USAID/Kenya Agricultural Productivity and Trade Activities (Draft Report No. 4-615-10-00X-P)**

This memorandum transmits USAID/Kenya's management responses for the eight recommendations resulting from the above-referenced audit performed by your staff from May 17 to June 4, 2010 (Draft Report No. 4-615-10-00X-P) (the "Draft Report") at USAID/Kenya.

The Mission wishes to express its appreciation for the efforts undertaken by the Regional Inspector General's audit staff to accurately determine whether selected USAID/Kenya agricultural productivity and trade activities are achieving their main goal of increasing rural household incomes. The audit has stimulated a thorough review of the Mission's procedures, which we believe will be improved as described below. The Mission agrees with six of the recommendations (1, 2, 5, 6, 7 and 8) made in the Draft Report and provides a report of existing procedures, corrective actions underway and target completion dates for compliance with these recommendations. The Mission disagrees with recommendations three and four of the Draft Report for specific reasons as detailed below.

This memorandum also provides general comments and clarifications to issues raised in the Draft Report with respect to specific program activities. The Mission believes that certain of the Draft Report findings should be recast as qualified findings rather than stated as undisputed facts. In the section entitled General Comments, the Mission details a number of points made in the Draft Report related to the appropriateness of investment in maize productivity and marketing improvements vis-à-vis other potential investments to raise smallholder incomes, as well as to the effect on program beneficiaries of higher maize prices paid to farmer smallholders. The Mission believes that the Draft Report findings with regard to these points stand to benefit from additional information, particularly of an agro-economic character, which has now been provided.

In brief, these comments highlight:

- Further details regarding the Mission's focus on "smallholder farmers"; in particular, how this focus required strategic support of production and livelihood systems on which smallholder rural farmers depend. Small-scale farmers contribute 75% of overall maize production, the main staple food in Kenya which averages over 80% of total cereals (rice, wheat, millet sorghum). The Mission's focus on smallholder farmers, which required complementarity between food security and cash commodities. Support to the maize program was complemented by support to horticulture development (including tree crops), dairy sector competitiveness, agricultural policy, rural finance and non-financial business development services. Assistance to high value horticulture and dairy value chains in maize growing areas and other medium to high potential agro-ecological areas of the country was intended to contribute to increased household incomes and diversification of livelihoods.

- The Mission's promotion of business development services, including rural finance, which equally aimed at diversifying off-farm income sources for rural households.

- The role of the maize program within a multi-faceted economic growth portfolio. The Mission's support to the maize sector was aimed at increasing productivity and market efficiency of the maize production system as a means of increasing incomes in this predominant sub-sector.

- Challenges to a finding that an implementing partner aided an implementing sub-partner to advocate for a policy at odds with the Mission's objectives.

I. Management Response to Recommendations

Recommendation 1. *We recommend that USAID/Kenya critically evaluate its economic growth activities to determine whether they are designed to achieve the mission's strategic goals and determine whether funds could be more effectively allocated.*

Management Response: USAID/Kenya agrees with this recommendation. The Mission's Economic Growth program has been transitioning to a new strategy since the beginning of FY2010 with the development of its "Feed the Future" (FtF) Implementation Plan (www.feedthefuture.gov). The Mission is presently reviewing its FtF strategy through analytical work and stakeholder consultations with the goal of developing a multi-year strategy that will guide implementation of its future agriculture and food security activities. Furthermore, a high-level interagency FtF strategic review will be held November 18-19, 2010 in Washington. The purpose of the FtF country reviews is to give senior management in Washington a sense of how countries and missions are progressing in the planning and implementation of Feed the Future and to identify what each mission needs from Washington in order to complete a USG multi-year food security strategy. The reviews are also an opportunity for Washington to provide strategic input into mission planning. The development of USAID/Kenya's multi-year strategy is being assisted by expert external consultancies and technical support from USAID/Washington. In addition, the Mission will fund an independent impact evaluation of the economic growth activities undertaken over its most recent strategic period (2006–2011) to derive evidence-based lessons that will inform the multi-year strategy. This evaluation will be quite extensive in that it will cover: (i) value chain projects; (ii) rural finance; (iii) technology; (iv) research; and (v) policy projects. The evaluation is expected to be completed no later than January 31, 2011 and the five-year FtF strategy approved no later than the second or third quarter of FY 2011.

Recommendation 2. *We recommend that USAID/Kenya implement procedures to evaluate periodically the extent to which economic growth activities are contributing towards achieving stated strategic goals, including an analysis of programming options.*

Management Response: USAID/Kenya agrees with this recommendation. Currently, the Tegemeo Institute provides biannual assessments of the extent to which the Mission's economic growth activities are contributing to achieving the program's goal: Increasing Household Incomes. Tegemeo conducts a specially designed 'Household Indicator Survey' to monitor, *inter alia*, changes in income, yield, production and gross margins in geographic areas in which the USAID partners implement their programs. The survey data are available for 2004, 2006, 2008; data collection for 2010 has been completed and will be ready for use by November 2010. The survey will be reviewed to align with the outcomes of the FtF strategy development and new indicators by September 2011. In addition, the Mission is developing an agenda for knowledge management and evaluative activities to accompany its FtF strategy implementation that can be supported by employing specialized expertise from various institutions including the Tegemeo Institute, ReSAKSS, FEWSNET, and various consultancies. This work will be supplemented by analytical work funded by USAID/Washington. The objective is to implement a dynamic evaluation/assessment schedule that will inform: the progress of FtF implementation; options for programming; future funding, as well as to share best practices with the wider stakeholder community. This agenda is planned to accompany the FtF multi-year strategy and will be proposed to be incorporated as an addendum of the approved multi-year strategy.

Recommendation 3. *We recommend that USAID/Kenya establishes clear policy advocacy objectives and communicate them to all implementing partners involved in policy analysis and advocacy.*

Management Response: USAID/Kenya disagrees with this recommendation. The Mission has established clear policy objectives that are communicated to implementing partners to the extent permissible. Specifically, the Mission's policy objectives in support of private sector-led markets are clearly articulated in its FY 2006 – 2011 Strategy Statement. All policy analysis and advocacy work supported by the Mission reflects these objectives. For example, Attachment 2 of the Kenya Maize Development Program (KMDP) cooperative agreement signed in 2002 leaves no room for ambiguity in terms of the market-driven approach to be employed by the implementing partner ACDI/VOCA (Attachment 1). The Mission contends that if a project involves policy advocacy objectives then these requirements should be clear through the project's design and reinforced during the processes that accompany the review, approval and oversight of the implementing partner's work plan. This is best done within the framework of individual projects and is already the practice at USAID/Kenya. Furthermore, other means exist to communicate policy objectives to implementing partners, including feedback associated with Mission portfolio reviews, analysis of results submitted for Agency reporting, and formative evaluations.

Findings reported on pages 7 and 8 of the Draft Report state that the Tegemeo Institute research aided a sub-partner to lobby the Government of Kenya (GOK) to raise the price that the National Cereals and Produce Board (NCPB) was paying for maize, and imply that this was a policy action supported by the institute. [14] These findings are simply not correct. In fact, at the request of the Ministry of Agriculture (MOA), the Tegemeo Institute computed maize production costs during a period of high input prices. The information reported by Tegemeo indicates that even the most inefficient farmers could support themselves at the then price of 1,950 Kenyan shillings (KSH) per 90-kilogram bag of maize (Attachments 2 and 3). In other words, the ACDI/VOCA sub-partner's advocacy before the MOA to raise the price offered by the NCPB did not benefit from the research conducted by the Tegemeo Institute. Moreover, the Tegemeo Institute has provided analytical research advising against price controls and government interventions in the operation of free markets (Attachment 4).

Recommendation 4. *We recommend that USAID/Kenya develops procedures for mission involvement during policy advocacy to help ensure that implementing partners advocate for policies consistent with USAID strategy.*

Management Response: <u>USAID/Kenya disagrees with this recommendation</u>. USAID is limited to the degree to which it can exercise substantial involvement in the case of assistance instruments. Findings reported on pages 7 and 8 are critical of the policy advocacy actions of one of the sub-partners of ACDI/VOCA (the prime). Under the terms of its cooperative agreement with ACDI/VOCA, sub-recipients, sub-awardees and contractors have no relationship with USAID. Further, USAID/Kenya's agreement with ACDI/VOCA is limited to three areas of substantial involvement: (i) Annual Work Plans; (ii) Key Personnel; and (iii) Monitoring and Evaluation. Accordingly, USAID/Kenya and the recipient (in this case ACDI/VOCA) can agree on the objectives, principles, approaches, tactics, results to be achieved and make adjustments as required in these three areas. Thus, USAID/Kenya is obliged to monitor its recipient's performance in the area of policy advocacy to the extent necessary in order to ensure that it is in compliance with the purpose of the agreement, which in the case of a cooperative agreement is to "accomplish a public purpose of support or stimulation authorized by Federal statute" (22 CFR §226.11). If USAID finds that the public purpose is not being accomplished then it can choose to terminate or suspend the award in whole or in part "if a recipient materially fails to comply with the terms and conditions of an award."

USAID/Kenya's procedures for involvement in policy advocacy are clear. The Mission engages in policy advocacy through joint donor fora and through diplomatic avenues with the Department of State. Also, the Mission, in collaboration with other donors, provides support to the GOK's Agriculture Sector Coordination Unit (ASCU) to assist with the reform of market-distortive policies and streamline regulations in the agriculture sector. Beyond these direct USG policy initiatives, the Mission believes that local stakeholders' advocacy for policies supported by the USG but acting independently of direct USG involvement helps to impart credibility in the eyes of the GOK and public.

Recommendation 5. *We recommend that USAID/Kenya (1) review its fiscal year 2009 Full performance Plan and Report submission, (2) identify which figures are inaccurate, and (3) revise the Draft Report accordingly to prevent others from relying on inaccurate figures in future.*

[14] The unnamed subpartner is a Kenya-wide organization that represents cereal growers of all types.

***Management Response*:** USAID/Kenya agrees with this recommendation. The Mission will review its FY2009 Performance Plan and Report (PPR), identify inaccurate figures, and revise the Draft Report by January 31, 2011.

Recommendation 6. *We recommend that USAID/Kenya review monitoring and evaluation documents, including the performance monitoring plans for implementing partners and mission, and make the necessary changes to ensure that performance indicators are consistently defined.*

Management Response: USAID/Kenya agrees with this recommendation. It should be noted that all performance indicators in the Mission's monitoring and evaluation plans are consistently defined, the majority of which are standard agency indicators. In August 2008, the Mission held a two-day partners' workshop to streamline consistency in interpretation of indicator definitions, which was followed-up with data quality assessments for each partner. However, the Mission will continue to work with implementing partners to ensure consistency in the interpretation of the definitions. Furthermore, the Mission's and partners' monitoring and evaluation plans will be reviewed and updated to align with indicators for the FtF and the new strategic focus by September 2011.

Recommendation 7. *We recommend that USAID/Kenya communicate to all implementing partners the way performance reporting should be prepared, stressing the need to maintain supporting documentation for all reported information.*

Management Response: USAID/Kenya agrees with this recommendation. The Mission will ensure that guidance for preparation of performance reports is consistently communicated to all new implementing partners. This will be accomplished via standard language to be incorporated into future agreements and contracts beginning no later than June 30, 2011. In addition, current implementing partners will be re-sensitized to the standards for performance reporting through written communication to them from USAID/Kenya by November 30, 2010; the need to maintain supporting documentation for all reported performance-related information will be emphasized in that document. Finally, the Mission periodically participates in structured monitoring and evaluation training and performance reporting sessions with implementing partners. For example, recently (September 2010), the Mission facilitated a training session on the Agency's monitoring and evaluation standards for a new implementing partner. In the future, USAID/Kenya will sponsor periodic workshops for its implementing partners' monitoring and evaluation staff so that experiences can be shared and USAID's requirements reinforced.

Recommendation 8. *We recommend that USAID/Kenya develop a schedule for agreement officer's technical representatives (AOTR) and contracting officer's technical representatives (COTR) to review periodically the performance reporting systems and information for the agreements and the contracts they oversee.*

Management Response: USAID/Kenya agrees with this recommendation. The Mission has taken steps to strengthen data quality through periodic data quality assessments (DQAs) in compliance with ADS requirements. Recent assessment reports—2007 and 2009—are available. As part of their oversight role, COTRs and AOTRs working on Economic Growth programs will review implementing partners reporting systems every six months and document findings in trip reports. During this exercise, the COTR or

AOTR will occasionally be accompanied by the Economic Growth and/or Mission monitoring and evaluation officers. Structured DQAs will be undertaken within the Economic Growth portfolio to assess all new and continuing activities to ensure data limitations are addressed. USAID/Kenya will seek to have these assessments occur with a periodicity that exceeds the Agency mandatory standard of a data quality assessment at some time within the three years before submission of data reported to Washington for Government Performance and Results Act (GPRA) reporting purposes or for reporting externally on Agency performance (ADS 203.3.5.2).

II. General Comments

The Mission carefully reviewed the findings presented in the Draft Report to support recommendations 1-4 and believes that some of such findings stand to benefit from additional information, particularly of an agro-economic character, which is provided below and in the accompanying attachments.

Ensuring Household Income: Investment in Maize versus Passion Fruit

USAID/Kenya's support for the dairy sector through the Kenya Dairy Sector Competitiveness Program and for horticulture through the Kenya Horticulture Development Project (KHDP) demonstrates the Mission's recognition of the need for smallholder diversification in areas such as dairy and horticulture. However, this recognition does not diminish the role of staple food, in the case of Kenya—maize—in ensuring increased household income. Thus, the Mission believes that the Draft Report critique of investment in Maize should be cast as a qualified finding rather than an undisputed fact.

The Draft Report states that "the decision to focus on maize prevented USAID/Kenya from efficiently and effectively increasing rural household incomes" (p. 6), and continues, stating that "the incomes of program beneficiaries under the maize program did not increase to the extent they could have if they had focused on horticultural or dairy products" (p. 7). Nevertheless, the Mission believes this is not indisputable. For example, despite the fact that the returns to other commodities may be higher, the recently completed GOK Medium Term Investment Plan (MTIP) highlights the importance of maize and other cereals in poverty reduction. "In general, agricultural growth driven by growth in cereals crops is more effective in reducing poverty than is that driven by other crops. Cereals are especially effective at reducing poverty amongst the poorest households." (MTIP, page 21) The maize value chain contribution to GDP is approximately 3% or $942 million, which could grow if the production and marketing system could be improved. (Agricultural Value Chain Financing in Kenya: Assessment of Potential Opportunities for Growth, October 2009, page 41.) Politically motivated interference in the market acts as a deterrent to increased potential for this important commodity.

Beyond these basic facts, it is important to look into the specifics of the Draft Report's claim that investing in passion fruit would have been a better investment than the Mission's support for work in the maize sub-sector. Although, there are advantages to passion fruit investment, the report's interpretation eliminates capital investment, agro-climate, and markets for produce (non-storable). Moreover, the analysis ignores why smallholders might grow maize. Maize has a permanent market—can be stored, traders will come to the village to purchase surplus. On the other hand with respect to horticultural products, if the grower does not have an established market then the product perishes. Farmers will need a contract to establish passion fruit. The scalability of passion fruit needs to be examined—how many smallholder maize farmers can actually be growing passion fruit before the market is flooded?

More generally, the idea that production of horticultural crops can replace the production of maize by smallholders and thereby raise incomes of most smallholders is further undermined by the finding that at least initially there was very little overlap between smallholders targeted by the KMDP and KHDP programs—only in Nandi. Thus, there is a need for further analysis to determine if in fact maize-producing smallholders can and will change from maize production to horticultural production, which will necessarily include an analysis of agro-ecological, socio-economic, and market/demand factors. However, it is clear that maize farmers (almost 75%) also tend to plant a range of other food crops (Attachment 5). Finally, the replication of horticultural and specialty crop production and programs is more difficult than the replication of cereals and bulk commodity crops, due to the specialty nature of the higher-value crops. The ease of replication and transferability of horticultural results require actual empirical evidence to reach firm conclusions.

<u>Doubling or Tripling Productivity will have Marginal Impact on Income</u>

The Mission also believes that the statement in the Draft Report states that input costs for maize producers [sic] amount to 78% of gross value (p. 6) is also disputable. Data from Tegemeo Institute's cost of production surveys indicate that in 2008, production costs for those farmers, who did not rent land for maize (almost 90% of all farmers), ranged from 47% to 68% of production value, depending on farmer efficiency and price received.[15] For inefficient (low yield) farmers, production costs per acre were 51-68% of price received. (Price range: 1,750 – 2,300 KSH/bag.) For efficient farmers, costs were 47% to 62%, depending on price received. In addition it is worth noting that 2008 is likely to be a high production cost year because of the high price of fertilizer, and poor rains.

Significantly, it is important to clarify the relationship between net income accounting and productivity increases. As long as net income is positive, productivity increases will result in proportionally larger increases in income the higher is the proportion of costs to revenues. This is because productivity increases raise revenue relative to costs. To illuminate the effect of productivity increases consider the actual 2008 data on costs of production, and assume a price received of 1,750 KSH/bag (90kg) (in 2008 farm gate prices ranged from 1,750 KSH/bag to 2,300 KSH/bag). Inefficient farmers had yields of ten bags per acre, resulting in net farm income (returns to land, household/unpaid labor and management) of 1,750x10-11,840=5,660 KSH. Because efficient farmers had double the yields of inefficient farmers, their returns to land, household labor and management were 1,750x20-21,810=13,190 KSH, that is, more than twice that of inefficient farmers. At a farm-gate price of 2,300 KSH/bag, the comparable figures are 11,160 KSH and 24,190 KSH; again the higher productivity of the efficient farmer results in more than double the net income. The conclusion is that a maize program that doubles productivity by moving farmers from inefficient production strategies to efficient

[15] Cost of production figure taken from Tegemeo Institute's maize production budget summary, 2008 (attached).

production strategies can more than double net maize income, both on conceptual grounds and on the bases of empirical evidence.

Higher Maize Prices Hurt Most Program Beneficiaries

On page 8, the Draft Report states that according to a December 2009 World Bank report, more than 60 percent of smallholder farmers are net buyers of maize. Therefore, any price increase will hurt program beneficiaries. However, this statement ignores the dynamic nature of agricultural activity and the heterogeneity of farmers/consumers. It is worth noting that Tegemeo Institute research (Food Security in Kenya: The Role of Policy Research and Analysis, February 2009) estimates 51% of farmers as net purchasers and that other research (http://www.fao.org/es/esc/common/ecg/17/en/JAYNE_et_al_paper_FAO_conference_V2.pdf) identify that the proportion of net purchasers rises in poor years and falls in good years. Nonetheless, it is indisputable that over the long-term, low food prices are beneficial to both urban and rural populations. If the staple food markets are stable and relatively low, then farmers will be more apt to diversify into other possibly higher value crops.

However, there are a number of observations that can be made related to prices and by inference to the higher price engineered by the MOA at the beginning of 2009:

- Urban purchasers may be hurt by the higher price, although the retail maize price data for the period in question do not show conclusively that urban maize prices rose in response to the increase in farm gate price—in fact, the increase in farm gate price seems to come after the increase in urban retail prices; the high retail prices are possibly attributable to the high world prices for maize in 2008 and Kenya's maize import tariff.

- There is no doubt that smallholder net purchasers of maize who have no other production or consumption options available to them will be hurt by the higher price. However, by the same token, smallholders who can increase their maize production and move from being net purchasers to net producers will benefit from higher prices.

- The impacts of maize price increases vary by region. The percentage of maize growers who are net purchasers ranges from 22% in North Rift to over 90% in the Coast (Jayne, Myers and Joro, 2006, http://www.aec.msu.edu/fs2/kenya/iaae_kenya_effects_ncpb_maize_policy.pdf).

- Smallholders who are net purchasers of maize but with flexible consumption options may also benefit from the higher maize price if they can substitute other foods for maize (and thus move to net maize seller status without increasing maize production). The consumption response of smallholders in Kenya to the 2008 food price spike has apparently not been studied.

- Relevant to consumption flexibility, Benson et al (Attachment 6) show that Uganda was able to weather the 2008 food price crisis in part because of the Ugandan ability to switch to food crops that weren't affected by international price spikes, e.g. from maize, wheat and rice to cassava, banana and yam. Although a comparable analysis is not available for Kenya, one could draw the inference that during times of high maize prices, consumption patterns may change significantly, providing net purchasers some measure of adaptation to the higher maize prices.

- Over a longer time period (e.g. past ten years), data show that the affordability of food in Nairobi has improved (http://www.aec.msu.edu/fs2/papers/idwp98.pdf).

Once again, the Mission wishes to express its appreciation for the efforts undertaken by the Regional Inspector General's audit staff and the findings in the Draft Report. We remain available to respond to further questions or requests for information or clarification regarding this memorandum or the information transmitted herewith.

U.S. Agency for International Development
Office of Inspector General
1300 Pennsylvania Ave., NW
Washington, DC 20523
Tel: (202) 712-1150
Fax: (202) 216-3047
www.usaid.gov/oig