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African Association of Agricultural Economists

Agricultural Growth, Poverty Reduction and Millennium Development Goals in Africa

Outcomes of AAAE Conference

August 18– 22, 2007

La Palm Beach Hotel, Accra, Ghana

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Summary

This booklet covers the outcomes of the AAE conference, held on 18-22 August, 2007 at La Palm Beach Hotel, Accra, Ghana. The main theme of the conference was ***Agricultural growth, poverty reduction and millennium development goals in Africa***. The conference presentations were based on six sub themes mainly:

- Improved Markets for African Farmers for Poverty Reduction
- Advancing Technical change in Africa Agriculture
- The role of Agriculture in Poverty Reduction: Recent experiences from Africa
- Expanding the Frontiers of Agricultural Economics to Meet the challenges of Agricultural Development in Achieving the Millennium Development Goals
- Meeting Africa's Food and Nutrition Challenges
- Agriculture, Environment and sustainable Development

Some of the emerging issues affecting agriculture in Africa include: lack of markets, globalization and market liberalization, biotechnology as a technical option to improve yields, poor infrastructure, lack of information, and new institutional economics (NIE) as a tool to solve development problems, HIV/AIDS prevalence and sustainable agriculture. African countries are challenged by the emergence of globalization. African economies need to change their agricultural and industrial exports from primary products to manufactured goods. Such value addition will improve their participation in international trade, and enhance reduction of poverty. Africa needs to resolve challenges related to food and nutrition that affect many rural smallholder farmers who are poor.

Various initiatives have been established to solve some of the challenges facing Africa. Recent improvements in agricultural productivity occurred due to a paradigm shift in development schools of thought from agriculture as a passive contributor to economic growth to agriculture as a possible engine of growth. This was enhanced by recent reforms to remove urban bias stemming from macroeconomic and tax policies. Emergences of new institutional arrangement have enabled the smallholders to maintain their participation in high value European markets. Public-private partnerships have played a key role in helping smallholder farmers acquire training on certification against European food safety standards, while collective action and marketing has led to higher incomes among the small holder farmers. The introduction of NERICA rice variety has shown a huge potential in improved yields and production of rice in Africa. New Institutional Economics (NIE) could provide theoretical framework to understand markets, system and also answer the 'how' question of agricultural policy. As the need for the NIE becomes clearer, it emerged that agricultural economists across the continent are still being trained in the standard neo-classical economic framework and liberal market ideology.

It was recommended that in order to realize a Green Revolution, Africa need to invest more in research and development of drought-tolerant yield-enhancing technologies. Effective soil management practices based on crop-livestock-feed-agro-forestry interactions or the use of chemical fertilizers are needed. Yields could be increased by application of more inputs per ha with specific focus on fertilizer, and also develop fertilizer-responsive varieties, that are able to convert nutrients to grains or fruits efficiently especially in areas where rainfall is low and unpredictable. Policy agenda in Africa should bring hunger to the forefront of poverty reduction in the context of long-term food security and development. This could be enhanced by developing flexible support for the resilience of food and agricultural systems in crisis situations while enacting anti-hunger policy in the context of the macro-economic environment. Governments should protect vulnerable citizens from hunger by developing social protection strategies, improved diet quality, control of chronic diseases and better crises prevention and management.

Background and Goals of the Conference

The African Association of Agricultural Economists was launched in December 2004 during the Association's inaugural symposium in Nairobi, Kenya. Its objectives include:

1. To improve liaison between agricultural economists with an interest in African issues at the regional and international levels;
2. To promote training, research, policy dialogue and interest in Agricultural Economics on the continent of Africa.
3. To contribute to broad based rural development, poverty reduction, food security and sustainable use of natural resources in the continent of Africa.

The current report is for the second conference with the main theme as: "**Agricultural Growth, Poverty Reduction and Millennium Development Goals in Africa**". The conference was organized by the Association jointly with the Ghana Association of Agricultural Economists (GAAE), with generous support from the Department of Agricultural Economics and Agribusiness of the University of Ghana. The organizing committee received a total of 430 abstracts for consideration out of which 94 papers and 30 posters were selected for presentation at this conference. All submitted abstracts were rigorously reviewed and ranked by an international panel of distinguished scientists. The top ranked abstracts from each sub-theme were automatically selected. The rest of the abstracts were selected taking into consideration regions, countries and gender distribution. The conference consisted of sixteen parallel and four plenary sessions, that were complimented by seven invited panel presentations and discussions. The invited panel presentations were organized by various research and development organizations with activities across the African continent. A total of 240 participants attended the conference. There was a field excursion on the second day for participants to familiarize themselves with economic development in Ghana.

The conference provided an opportunity for agricultural economists and other social scientists in the public, private and non-governmental organizations and institutions to share and assess progress made in improving agricultural productivity in Africa. It also promoted better networking among the professionals.

Oral and poster presentations and discussions in the conference covered six sub-themes, as follows:

1. Improved Markets for African Farmers for Poverty Reduction
2. Advancing Technical change in Africa Agriculture
3. The role of Agriculture in Poverty Reduction: Recent experiences from Africa
4. Expanding the Frontiers of Agricultural Economics to Meet the challenges of Agricultural Development in Achieving the Millennium Development Goals
5. Meeting Africa's Food and Nutrition Challenges
6. Agriculture, Environment and sustainable Development

The following section elaborates each theme as per the issues discussed, progress made and recommendations on the way forward. The report was based on the presentation of different speakers (Appendix 1).

Improved Markets for African Farmers for Poverty Reduction

Summary

The sub theme: "improved markets for African farmers for poverty reduction" was evaluated in relation to the main conference theme of "Agricultural Growth, Poverty Reduction and Millennium Development Goals in Africa". Agriculture remains an important sector in Sub Saharan African economies with many countries relying on the sector for employment, food, household incomes, foreign exchange earnings and source of raw materials for the manufacturing sector. Agricultural productivity begins with access to improved inputs and markets in general.

Commercialization of agriculture involves transition from subsistence farming to market-oriented production. The market –oriented production entails modernization of systems, which include intensification of production processes, adoption of new technologies and farm mechanization. Input utilization and output combinations are therefore guided by profit maximization objectives. Commercialization leads to systematic substitution of non-traded inputs with purchased inputs, gradual decline of integrated farming systems, and emergence of specialized high value enterprises. Drivers of commercialization among smallholder farmers include high opportunity cost of family labor, urbanization, technological progress and increased market demand for food due to population growth. Commercialization of agricultural products can be for both local and international markets (i.e. international trade in addition to local and regional trade).

In recent years, the agricultural sector has faced challenges in international trade particularly as a result of new imperatives in the new World Trade Order arising mainly from new multilateral trading arrangements. The new international trading arrangements affecting agriculture are mainly from the world trade organization (WTO) agreement on agriculture (AoA) and the new African Caribbean and Pacific (ACP) – European Union (EU) economic partnerships (EPA) negotiations. The WTO AoA focuses on liberalization of international agricultural trade and its rules are built on three pillars namely; market access, domestic support and export competition. The ACP-EU EPA negotiations focus on regional integration of ACP countries under EPAs for trade with EU countries under a liberalized trade regime but on a reciprocal basis. The new World Order trading arrangements poses challenges for agricultural development in Sub Saharan Africa.

The new international trade agreements have led to substantial trade liberalization (reduction in tariffs and trade distorting non tariff barriers) in recent years. The main argument advanced to support trade liberalization is that free trade is beneficial because it leads to increased trade and therefore improved welfare of all those involved. Indeed, at the conclusion of the Uruguay Round in 1994, the United Nations Development program (UNDP) estimated that world income would grow by US\$ 200-500 billion within six years. However, these gains would go mostly to the industrialized countries and that Sub Saharan Africa (SSA) in particular would lose US\$ 1.2 billion a year during the period (Economic Commission for Africa (ECA), 1999). Thus, besides the initiatives of the WTO to make international trade free, it was anticipated from the onset that Africa would not gain initially. This was attributed to problems of market access, and a weak industrial and technological base, among other factors. A major concern for SSA countries is the impact of trade liberalization and in particular, continuous reduction in tariffs in the past three decades and use of various not-tariff barriers (NTBs) to restrict SSA exports. As a matter of fact, one of the most striking features of many developed countries' trade policies is the apparent substitution of non- tariff barriers for tariffs.

Emerging Issues on Improved Markets

The topics covered under the theme of *“improved markets for African farmers for poverty reduction”* included linking farmers to markets, achieving competitiveness in agricultural production and trade; agricultural products value addition chains and role of supermarkets, agribusiness, trade (WTO and Regional Blocs) issues, globalization and infrastructure.

About 250 million Africans live on less than a dollar a day. Majority of the farmers live in rural areas and cultivate small parcels of land for subsistence, but they lack access to new technologies, thus low productivity per capita. When they manage to produce enough, they are unable to sell their produce because they don't have access to markets. They also get very low prices for their produce. Most rural based farmers depend on local or village markets which are often saturated or purchases are not backed by effective demand to make sales meaningful for the desired benefits. In most countries the input/output markets function poorly and market liberalization benefits have eluded smallholders. The government used to help farmers in the input/output markets in the past, but market liberalization ended all that. The assumption behind market liberalization was that the state marketing boards were inefficient. The private sector was to replace the state, and it was assumed that the private sector will perform the marketing functions more efficiently, and also invest in critical market public goods such as storage, transport, market information; and finance for the poor. Today, markets are not working well, are poorly organized and poorly coordinated. Farmers face high transaction costs, as well as high risks and fluctuation in prices for their produce. Prices of inputs are beyond reach, and prices of outputs are low thus dampening incentives to produce and earn a good living.

Market liberalization has created a situation where there are no guaranteed grain prices. Thus, managing food price instability has been a long standing policy challenge, which with mixed experiences of agricultural price policy reforms, has re-emerged as a contemporary policy issue in Africa.

Inadequate skills and lack of information in agricultural production has most often led to low productivity which results in food insecurity. In addition infrastructure challenges range from lack of roads and transport to poor communication networks. The poor states of roads have resulted in high transaction costs, unnecessary delays and spoilage of perishable farm produce.

Progress on Improving Market Access

Agricultural productivity begins with access to improved inputs through working markets. There are several initiatives that are helping develop networks of agro dealers that extend into the rural areas and improve access to inputs and advice to the door steps of farmers. The Rockefeller (RF) led initiatives of agrodealer development through skill training, certification and credit guarantees are turning agrodealers into today's extension agents. In Malawi, over 30% of farmers are being served by agrodealers as compared to less than 20% being served by the government marketing institution or by private companies directly. In some countries, stockists offer after sales services to farmers which include advice on input usage, credit, drug and chemical application. Thus, agodealers or stockists are new players in agricultural extension in rural Africa.

Emergences of new institutional arrangement have enabled the smallholders to maintain their participation in high value European markets. In particular, public-private partnerships have played a key role in helping smallholder farmers acquire training on certification against European food safety standards. Collective action in form of producer organizations

has enabled smallholders to jointly invest in costly facilities and take advantage of economies of scale to remain competitive. Producer organizations also allow for cheaper means for buyers to ensure traceability and are critical in reducing transaction costs of linking up with smallholders. Collective action and marketing has led to higher incomes among the small holder farmers.

There are other emerging opportunities and marketing outlets for rural farmers in the continent. They include supermarket trading, commodity exchanges, regional markets and regional integration. Rapid growth of supermarkets offers new income opportunities but raises new challenges for small scale farmers since market access is hampered by high quality standards and food safety requirements, as well as the need for timely delivery of produce to supermarkets. This is limiting due to poorly developed infrastructure. There are several benefits that accrue from commodity exchange that include long term and stable markets access. However, there are several challenges that face commodity exchanges and include: poorly developed financial market systems, weak legal and regulatory instruments, weak information and communications networks, and frequent government market interventions. Regional trade offers huge market opportunities and rapid growth of regional trade arrangements (RTAs). However, consumer and environmental global value chains have strict requirements for traceability, farm audits and farm certification. Given the high capital requirements to meet these "private standards" (e.g., EUREPGAP) poor smallholder farmers risk being marginalized. The intra-regional trade still accounts for very small share of total trade in Africa due to the administrative hurdles which limit market opportunities.

Market information and linkage system (MILS) has developed in some parts of Africa. The MILS involves harnessing modern information and communication technologies (ICTs) to empower farmers with low-cost reliable and timely market information to enhance bargaining power in the market. It also links the farmer to markets in a profitable and efficient manner. The MILS have rural based Market Information Points (MIPs) which included kiosks located in rural markets, District level market information Centers (MICs), Mobile phone short messaging services, internet based database system, and rural FM radio stations.

Conclusions

New initiative projects with agrodelears across Africa are positioning rural stockists as new players in agricultural extension in rural Africa.

High tariff and non-tariff barriers in developed countries continue to restrict market access for developing countries. Developing countries that try to diversify into high-value processed products face prohibitively high tariffs; which can be 200% higher than tariffs for non-processed commodities.

The high concentration of a few vertically integrated supermarkets within global food retail is also restricting access even as consumer demand increases. These food value addition chains are also setting stringent grades and standards and food safety regulations like traceability and certification which pose new challenges for developing country farmers.

Participation in well functioning commodity markets stimulates decline in real food prices, which increases smallholder farmers' purchasing power for food (as consumers) while enabling re-allocation of their scarce household incomes (as producers) to high-value non-food agribusiness sectors and off farm enterprises.

Recommendations

- Producers and traders need a new kind of information that the traditional, public-sector based market information system can no longer provide. The new initiatives, particularly from East and West Africa should be based on public-private sector partnership and the use of modern ICT (the fastest growing African industry) as a tool for information gathering and dissemination
- Commodity market information institutions need to collaborate with other stakeholders to facilitate smallholder access to timely, affordable and niche-market focused information.
- Developing countries can benefit better from markets and trade in two ways: (1) Horizontal diversification where countries move into high valued crops and products (e.g., horticulture) for which demand is high in the world market; and (2) Vertical diversification where countries move into greater processing and value addition to their products.

Advancing Technical change in Africa Agriculture: Public Policy Issues and strategic choices

Summary

Contemporary Sub-Saharan Africa (SSA) is so similar to tropical Asia several decades ago. In the 1950s and the early 1960s in Asia, population grew rapidly, grain yield was stagnant, and uncultivated land was being exhausted. Therefore, there was serious fear of famine in Asia which led to the Green revolution. The Green Revolution led to development and diffusion of a series of fertilizer-responsive, high-yielding pest and disease resistant modern varieties (MVs). Rice yield per ha doubled, rice cropping intensity increased roughly by 50%, and, as a result, rice production tripled since the mid-1960s.

Today, development and dissemination of new technologies constitute an important strategy for Agricultural intensification, poverty reduction and food security in SSA. Indeed advancing technical change in Africa agriculture has a role to play in the achievement of the conference theme which was "Agricultural Growth, Poverty Reduction and Millennium Development Goals in Africa".

Advancing technical change in Africa agriculture encompasses an evaluation of the extent of farmers risk aversion that affects sustainable agricultural production and rates of technological adoptions by farmers. In the last three decades agriculture research organizations both national and international, have introduced several technologies to farmers in a bid to raise agricultural productivity. Some of the technologies include: improved varieties of maize, wheat, rice, sorghum, millet, cassava and forages. The New Rices for Africa (NERICA) was developed by Africa Rice Center (WARDA) in 1994. With collaboration of the National Agricultural Partners the rice was disseminated from 1997 in some Sub-Saharan African.

Biotechnology has been applied to eradicate pests, weeds and diseases incidences. There are emerging weeds and diseases that affect agricultural productivity. Striga hermonthica (del) Benth is a weed which is threatening rural livelihoods where maize is the major food and cash crop. Striga is an indigenous parasitic weed that attacks cereals and other crops in Africa. In maize croplands alone, striga infests over 2.5 million ha resulting in 1.6 million tons of grain loss worth US \$380 million annually in Africa.

Advancing agricultural technical change in Africa is faced by several challenges that include inadequate information flow, gender disparities, lack of finance for agricultural inputs, high transaction costs and opportunity costs of changing the technology.

Emerging Issues on Technical Change

Some of the topics covered under the theme "*Advancing Technical change in Africa Agriculture*" are public policy issues and strategic choices with special focus on biotechnology, information and communication technology, and bio-chemical and mechanical technologies.

There are various technical, social, institutional, markets and political features that define African Agriculture and influence any technological change. The technical features are low and generally static productivity, predominance of rainfed systems, weathered soils, endemic plant and animal diseases and importance of livestock in farming systems. Some of the social features include women being key in farming but social issues limits their access

to resources, location specific land tenure constraints and growing impact of HIV/AIDS on agriculture. Weak and poorly managed institutions and lack of functioning markets are common features in African agriculture. In addition to global policy constraints on agricultural production, there is low investment in agriculture research and development which is compounded with weak support for Science and Technology from political and economic environment.

Some of the factors that affect technological change in Africa include agricultural extension systems, farmers' health and education, input markets, credit and irrigation facilities. There are limited resources to support the above factors of production in Africa. Financing of small scale farmers has been one of the major concerns to governments in Africa. The financial institutions initiated by governments and donors to finance agricultural productions are inefficient due to inappropriate design and weaknesses in implementation. The microfinance institutions that were supposed to actively finance the small scale farmers have largely failed due to the risk associated with agricultural sector.

Soil fertility decline is a major factor affecting agricultural productivity in Africa. Fertilizers and improved seed technologies were introduced in Africa in the mid of the 20th century. However, the adoption rates remain low. The intensity of fertilizer use is low (average 9kg/ha). Low rates of fertilizer and improved seed has led to a decrease in food production per capita.

Due to the limited resources available it is impossible to answer some of the continents pertinent questions like: where do we invest the limited resources? Do we strengthen extension services before developing new technologies or can Africa invest in fertilizer subsidy, cheap credit, and irrigation investments before developing fertilizer-responsive modern varieties?

Progress in Agriculture Technical development

Application of manure to cropped fields has led to slight improvement in soil fertility. A project on Balance Nutrient Management Systems (BNMS) has since 2000 been implemented in Northern Guinea Savanna (NGS) of Nigeria. The project has tested and promoted two major technology packages aimed at improving soil fertility. The technology packages are a combined application of inorganic fertilizer and manure (BNMS-manure) and a soybean/maize rotation practice referred to as BNMS-rotation. By the year 2005 the adoption of BNMS-rotation had reached 40% while that of BNMS-manure had reached 48% in Northern Guinea Savanna.

The introduction of NERICA rice variety has shown a huge potential in improved yields and production of rice in Africa. IRRI's Experimental Fields in Mozambique have shown high productivity (more than 5 tons per ha using IRRI varieties)

Use of Biotechnology to generate pest or disease resistant varieties is emerging today in Africa. This is a novel approach used on crops like bananas, cassava and sweet potatoes. A biotechnological approach to controlling the striga weed was to induce herbicide resistance in maize and to coat the seed to provide chemical protection from infection. This technology was realized after 12 years of collaborative research and development and is ready for deployment in Africa. This effort is most advanced in Kenya, where the imazapyr-resistant (IR) maize hybrid *Ua Kayongo* (Striga Killer) was tested by over 13,000 households and registered for commercial release by Western Seed Company. Compared to a currently recommended commercial hybrid (H513), *Ua Kayongo* improved maize yields by 1022 kg ha⁻¹, reduced striga expression by 81% and increased farmer's net return by \$143 ha⁻¹

(+63%). This technology occupies a central role in the design of comprehensive eradication initiatives but hindrance to achieving this goal has emerged from unlikely sources. Crop breeders committed to developing alternative, striga-immune varieties self-indulgently dismiss IR maize as a technological dead-end while "green" interests unfairly label IR-maize a GMO. However, it was proposed that there is need to refocus all available resources upon assisting striga's victims in Africa.

Stall-feeding of highly productive *dairy cows* is a technology that has been adopted in some parts of SSA aimed at increasing productivity on increasingly small sizes of land. The technology is labor intensive though in most case productivity is high.

Some work was done on reducing post harvest loses. Tropical Horticulture Enterprises (T.H.E) is an initiative that adds value to fruits, bananas and vegetables in Uganda. The main out put of this initiative are processed dried fruits, fresh fruits, banana flour and fresh vegetables. It taps 22% of banana and fruit loss at farm gate due to failure to access markets timely, besides poor handling knowledge and poor storage facilities in rural agricultural producing areas in the country. The initiative boasts of linkage with farmers and it has a bottom up network through which farmers have benefited in various training. The main objective of this initiative is to improve farmers' incomes through providing an alternative avenue and market access to foods produced and ferried to markets without any value addition. This initiative adds value by way of preservation through sun drying of fruits and bananas. It also vacuum packs fresh fruits and vegetables. The dried bananas are milled into flour. It promotes employment opportunities in the country due to multiplier effect, boosts nutrition values and maintains food security in the country and the region at large.

Conclusions

It is no longer a dream to realize a Green Revolution in SSA, as indicated by the new rice technologies (OGR and NERICA).

A promising alternative technology that has been adopted is the use of cow manure and agroforestry, while stall-feeding improved cows, which is reminiscent of the Agricultural Revolution in 18th century England.

Recommendations

- In order to realize a GR, Africa need to invest more in research and development of drought-tolerant and yield-enhancing technologies.
- Africa need to develop effective soil management practices based on crop-livestock-feed-agroforestry interactions or the use of chemical fertilizer for a sustainable GR. Yields could be increased by application of more inputs per ha with specific focus on fertilizer, and also develop fertilizer-responsive varieties, that are able to convert nutrients to grains or fruits efficiently. Develop fertilizer-responsive and drought-tolerant varieties for areas where rainfall is low and unpredictable.
- There is need for policy and institutional interventions that enhance farmers' adoption and scaling-up of integrated soil fertility management in order to enhance growth in maize productivity.
- Smallholder agriculture, characterized by subsistence production, does not exhibit effective demand for credit and funding therefore requires means other than the competitive market.

- Sustainable agricultural financing needs alternative schemes that secure both credit from financial institutions and farmers' income. Also, the new institutional economics perspective can be used to analyze and guide decision-making with respect to alternative schemes for agricultural financing.

The role of Agriculture in Poverty Reduction: Recent experiences from Africa

Summary

Agriculture plays a major role to all economies in SSA. It contributes to the economic (70% of employment, 40 % of exports and 37% of GDP), social (direct livelihood of over 50% of rural people) and environmental service (carbon sequestration, watershed management and preserver of biodiversity but also a polluter) sectors. Since agriculture contributes 70% of employment but only 37% of GDP, it implies that poverty is concentrated in rural and agricultural areas.

Due to the large concentration of the poor in rural agricultural sectors, rapid industrial growth implies rising rural-urban inequality and the difficulty in redistributing income generated outside the agricultural sector. Hence agriculture can be said to have a comparative advantage in reducing poverty.

Agriculture contributes to poverty reduction through its growth and participatory effects. Growth effects can be direct (through its productivity effects on growth) or indirect growth (through its linkages with non-agriculture). Participatory effects occur because the poor participate more in agricultural growth, especially, in low-income countries resulting in much larger poverty reduction impact. Strengthening the participation of smallholder farmers in commercial agriculture is important for the attainment of the fundamental development indicators such as improved incomes, food security and economic prosperity envisioned in major national policy documents of most African governments.

Different levels of progress associated with the role of agriculture in poverty reduction through agricultural commercialization have been recorded in Africa. In comparable Africa countries such as Malawi, the process of agricultural commercialization generally leads to an increase in per capita household incomes, although the greatest benefit has been to the better-off-households. Poor households often sell their produce early in the season immediately after harvesting when the prices are at their lowest, and buy in the deficit season from the market when the prices are highest. Smallholder farmers in East and West Africa also experience similar price fluctuations. Weak institutional frameworks discourage private sector effective involvement in commercial agriculture.

Emerging Issues on Role of Agriculture

The topics covered in this section were mainly success stories and emerging challenges, as well as the role of education in reducing rural poverty.

Despite favorable trends in global development drivers such as rising population, per capita incomes and emerging urban dietary preferences, most smallholder farmers remain poor. Due to that scenario, the three East African (EA) countries Tanzania, Kenya and Uganda with a population of about 95 million people and Gross Domestic Product (GDP) of USD 34.2 billion has established economic and regional co-operation; the East African Community (EAC). The premise for economic and regional co-operation has been underpinned for the need for a common market and to boost regional trade. The ultimate goal of these efforts is to achieve one of the international development objectives of increasing growth to 7% a year that is required to reduce income poverty among households.

African countries are challenged by the emergence of globalization. They need to have an ability to participate in international markets. Therefore, they have to consider changing their exports from primary products to manufactured goods. Value addition to agricultural

and industrial products is vital to improving the participation in international trade, the economies and hence reduction of poverty.

Drought affects agricultural productivity in Africa leading to poverty scenarios among households. Drought is endemic to Africa and especially the southern and Eastern part of the continent. Farmers in Zimbabwe experiences drought once every two to three years. Relief agencies traditionally respond to drought by providing farmers with enough seed and fertilizers to enable them re-establish their cropping enterprises. In the absence of seed relief intervention there are limited sustainable options for farmers to maintain high productivity levels in drought prone hotspots of Africa.

In East and Southern Africa, maize is the major staple crop but its yields have been stagnating and production cannot keep up with the population growth. The production of the maize and other crops are negatively affected by drought and unreliable rainfall, poor soil fertility among many other factors. The low yield of the maize is one of the main causes of continued poverty among smallholder farmers.

Inability to establish and sustain agri-business in order to improve product processing and marketing has posed a major hindrance to improved agricultural productivity. Value addition is paramount if smallholder farmers have to get premium prices for their products and enhance the role of agriculture in poverty reduction.

Progress in Economic Development and Role of Agriculture

To alleviate the impact of drought in Southern Africa, ICRISAT has been working with stakeholders in Zimbabwe to test more suitable farming strategies that will increase food production levels even under drought conditions; by developing drought resistant varieties of sorghum, pearl millet and groundnuts. The drought resistant varieties only offered limited gains in productivity. More recently ICRISAT has been testing strategies to sustainably improve crop productivity. The project involved two major components conservation basin techniques that use planting basins, which concentrate limited water and nutrients resources to the plant, and the precision application of small doses of nitrogen-based fertilizers. These simple technologies have increased average yields by 15-75 percent, being obtained by more than 300,000 farm households. At the same time farmers apply inputs more efficiently.

In some few cases efforts have been geared to a streamlined agri-business system like emulated by the tea sub-sector in Kenya. In the smallholder tea sub-sector, farmers are organized to private companies, owns factories, engage in produce assembling and processing, contract experts for profession services, have micro-financing institutions serving them, and procure fertilizer from overseas in bulk to distribute it to members. Farmers get information from the extension officers who work in the agri-business.

Recent improvements in agricultural productivity occurred due to a paradigm shift in development schools of thought from agriculture as a passive contributor of economic growth to agriculture as a possible engine of growth. This was enhanced by recent reforms to remove urban bias stemming from macroeconomic and tax policies. There has been a policy shift to give more attention to agriculture (NEPAD requires member countries to devote at least 10% of total budget to agricultural investments and anti-poverty reduction strategies (PRSPs) with renewed focus on agriculture and rural development).

Participation in the market is a challenge that faces rural farmers. Low levels of output are sold and fewer farmers from rural Africa participate in markets compared to the peri-urban

areas. Even though opportunities for profitable commercial agriculture were observed in growing demand, emerging food preferences and intensive farming, there was no improvement in market participation by the rural farmers. At village level, market participation is hampered by poor quality and high cost of inputs, high transportation costs, high market charges and unreliable market information. Seasonal rain-fed production of agricultural commodities experiences over-supply and the inherent low prices during the harvest periods, and low supply accompanied by high prices in the off- season period. At the household-level, the determinants of percentage of output sold are producer prices, market information arrangement, output, distance to the market, share of non-farm income and gender. Lack of effective participation in the market by the rural farmers challenges the role of agriculture as an engine of economic growth.

Conclusions

The pursuit of input-efficiency provides higher and more sustainable productivity gains necessary to achieve food security and reduce poverty incidences in drought-prone farming systems. It is more viable to adopt conservation farming techniques particularly under drought conditions.

Africa's agricultural performance has been relatively low compared with other developing countries and other non-agricultural sectors. Between the mid 1980s and 2000 agricultural sector growth rate declined reaching a low of negative 4.1% in parts of Africa in 1992/93 due to: drought, poor agricultural policies, inconsistencies in policy, institutional and legal framework, poor access to credit by the majority of small holder farmers, and declining public funding to agricultural sector

Various institutional, technological and investment challenges hinder many smallholder farmers in Africa from participating in commercialized production and marketing systems, worsening levels of poverty among smallholder farmers

Any slight improvement in African Agriculture is associated with decreased poverty levels

Recommendations

- Encouraged and educate farmers in Africa on efficient use of inputs in order to undertake profitable farming activities
- Good governance and institutional frameworks that are participatory are fundamental in enhancing the role of Agriculture in poverty reduction
- Regional trading blocs in Africa should refocus their export from primary goods to value added processed products in order to fetch better prices in the world market
- Extension personnel should train farmers to target off-season production for different high-value commodities in order to reduce over-supply and the inherent low prices during the harvest periods.

Expanding the Frontiers of Agricultural Economics to meet the challenges of Agricultural Development in Achieving the Millennium Development Goals

Summary

Most of the population (60-70%) in African depend on agriculture and have sophisticated production systems and coping mechanisms capable of adopting promising innovations, but still realize only 20-30% of the potential agricultural productivity. Agriculture is affected by several factors like climate change, globalization and market liberalization. Current agriculture systems cannot be sustained in the face of deteriorating livelihoods, scarce water resources, degraded environment and depletion of biodiversity which is vital for a healthy continent. Therefore, expanding the frontiers of agricultural economics to meet the challenges of agricultural development is inevitable. These will lead to a provision of information about technical and scientific options and analysis of the socio-economic consequences of the available options. As a result there will be enhanced knowledge on agricultural and rural development strategies on adoption of technologies and understanding of the farming systems.

Africa experiences policy and market failures despite the existence of both state-led and market liberalization policies. Agricultural economics has a role to play in the understanding of market liberalization in the context of Africa continent. The experience of African economies with the ideology of market liberalization since 1980s was negative. The process has little impact on agricultural development. The above experiences in Africa provide lessons for the future developments of markets and are partly to blame for the limited success with market-led development in Africa. As a result many countries in Africa are focusing on a new role for the government in creating the appropriate institutional framework needed for agricultural development. Hence institutional economics is one of the frontiers that agricultural economics can explore to meet the challenges of agricultural development in achieving the millennium development goals. Other new focal areas to be tackled by agricultural economics are the role of collective action and co-operatives.

Emerging Issues on Expanding to new Frontiers

The presentation covered topics in institutional economics, quantitative and qualitative methods, new tools to run agriculture as a business and agriculture finance.

Challenges in the agricultural economics domain include the failure to recognize institutional changes, just as technical change and infrastructural development. To understand institutional changes there is need for agricultural economics to undertake institutional analysis, hence application of the new institutional economics (NIE). NIE builds on, modifies and extends neo-classical theory to permit it to deal with issues that were beyond its capability, seeks to reveal the way in which non-markets institutions (trade laws, property rights, contracts, etc) can cope in the presence of market failures, address agricultural development issues in developing countries in the presence of frequent market failure and imperfect markets, or existence of informal rules of behavior in most developing countries. Some of the important aspects of NIE that agricultural economics need to expand its frontiers to include public choice and political economy, transaction costs economics, theory of collective actions and property rights. Collective actions groups, have many advantages and are sometimes essential, yet they can reinforce or perpetuate inter-and intra-gender inequalities when their functioning is left entirely subject to internal mismanaged community dynamics. Contribution of gender with special emphasis on women farmers towards rural agriculture as well as factors constraining access to rural agricultural

production and consequently household food security are vital dimensions for exploration by agricultural economics.

New tools to run agriculture are emerging. There was a proposed alternative measure of irrigation water efficiency based on the concept of input-specific technical efficiency, which contrasts with measures previously used in literature. The proposed methodology was applied to a randomly selected sample of 144 citrus growing farms located in Nabeul (Tunisia). A stochastic production frontier approach, based on Battese and Coelli's (1995) inefficiency effect model, was used to obtain farm-specific estimates of technical and irrigation water efficiency. In addition, a second-stage regression approach was used to identify the factors influencing irrigation water efficiency differentials across citrus growing farms.

The impact of microfinance institutions in reducing poverty and its effect in achieving the millennium goal is one of the frontiers that agricultural economics can explore in solving the recurrent poverty issues on the continent.

New Frontiers for Agricultural Economics

NIE could provide theoretical framework to understand markets, system and also answer the 'how' question of agricultural policy. As the need for the NIE becomes clearer, it emerges that agricultural economists across the continent are still being trained in the standard neo-classical economic framework and liberal market ideology. However, there is an initiative to create a common collaborative masters program in agricultural economics for 16 Universities in Africa that will include NIE. The course is aimed at teaching students agricultural and rural development challenges in Africa and also ensures that students understand various elements of the NIE paradigm and theoretical framework as well as the application of the theory to solve the problems constraining agricultural development in Africa.

Results of a case study from Tunisia on irrigation water efficiency indicate that technical efficiency ranges from a minimum of 12.9% to a maximum of 90.7% with an average estimate of 67.7%. This suggests that citrus producers may increase their production by as much as 32.3% through more efficient use of production inputs. Further, mean irrigation water efficiency was found to be 53%, which was much lower than technical efficiency and also exhibited greater variability ranging from 1.6% to 98.87%. The estimated mean irrigation water efficiency implies that the observed quantity of marketable citrus could have been maintained by using the observed values of other inputs while using 47.0% less of irrigation water. Moreover, the estimated mean irrigation water technical cost efficiency is found to be 70.81% indicating a potential decrease of 29.19% in total cost by adjusting irrigation water to its efficient level. In addition, the vast majority of farms have achieved irrigation water technical cost efficiency greater than 90% (71% of farms).

Women are so far particularly discriminated against with regards to access to land, with significant negative impacts on their productivities and incomes in many parts of Africa. Women have more obstacles constraining their productivity in rural agriculture. Agricultural economics has expanded its frontiers to the issue of women and factors of production.

Conclusions

NIE can be used to extend the frontiers of agricultural economics so as to understand the type of institutional innovations needed to enhance poor farm households and traders' integration and participation in agricultural and rural development initiatives

The collaborative masters program (NIE course) initiative among the 16 universities in Africa will ensure that the students will at the end of the course be able to analyze the constraint on agricultural and rural development through the application of the NIE philosophy and thereby identifying the options for accelerating the process of agricultural and rural development.

Recommendations

- Develop new institutional frameworks involving the state, private sector, NGOs and other actors in agricultural development issues
- Recognize institutional changes as one of the most important requirements for rural and agricultural development,
- Promote problem solving through 'institutional analysis'
- Revise the syllabus of agricultural economics to include application of New Institutional Economics (NIE)

Meeting Africa's Food and Nutrition Challenges

Summary

Food and nutrition security remains a growth and productivity issue. Its distributional aspects come to the fore as the economics and sociology of poverty change with growth. Its sequencing, transition, and trade off influence policies and their outcomes.

There are well-founded fears that it is unrealistic to expect Africa to achieve the Millennium Development Goal 1 (MDG1) to eradicate extreme poverty and hunger and to halve the proportion of people who suffer hunger by 2015. Recent efforts of African governments to meet the MDG1 have resulted in a number of initiatives including the Comprehensive African Agricultural Development Programme (CAADP) framework that calls for 6% agricultural growth rates, the Maputo Declaration calling for 10% of total public spending to be on agriculture, and the 2006, Abuja Declaration calling for an increase in fertilizer use from 8 – 50 kg/ha by 2015. CAADP estimates that an average investment of US\$18 billion/year will be required to trigger sufficient agricultural growth rate to meet MDG1. Meanwhile, budgetary allocation to agriculture in many African nations is low and an analysis of trends in foreign development assistance to Africa over a 10-year period (1995-2004) showed that the annual commitment to agriculture out of the total assistance of US\$230 billion declined from 11% in 1995 to 6% in 2004. This decline could be traced to the frustration of donors and African governments alike at the failure of agriculture to achieve sufficient progress towards food security and poverty reduction.

However, it is obvious that sustained economic, social, political and nutrition is the beginning of human development. Nutrition has, however, not been viewed as a development imperative in many African countries. Agricultural and health policies, projects and programmes and the conduct of agricultural and health research in most African countries do not consider nutrition to any significant degree.

Emerging Issues in Feeding Africa

Meeting Africa's food and nutrition challenges had a special focus on agriculture growth, rural poverty and hunger; health (HIV/AIDS, malaria), food insecurity and rural poverty; and gender inequality, food insecurity and rural poverty

A fundamental challenge worldwide is ensuring that millions of households living in poverty have access to enough food to maintain a healthy life, reduce rural poverty and hunger. Africa looked for ways to solve the problem of food security for a long time. Food security issues are considered an important topic in discussions among African leaders. While few governments in Sub Sahara Africa have national data on food security and poverty, information on rural food security and poverty are not readily available in most countries in Africa.

Attainment of nutritional security is a major focus of the Millennium Development Goals. Yet, Africa countries are yet to make significant progress in becoming nutritionally secure. Over the years, maternal obesity and child under-nutrition have concurrently been on the increase in the continent. The rise in obesity and child under nutrition is attributed to, among others, urbanization-driven shifts in eating habits and lifestyle, changes in purchasing power, food assistance and stress-related medical conditions.

Food production, poverty, malnutrition and health are very intricately linked and the result of that linkage is probably the most important determinant of development and, thus, the

realization of the MDGs in Africa. It is a misconception that food security implies food and nutrition security.

The prevalence rates of HIV/AIDS remain high in Africa. Although the trend shows a decline, the prevalence levels still pose a threat to labour intensive sectors such as agriculture. Further, the affected and infected households suffer from lack of food compounded with high health costs and are unable to undertake agricultural activities.

Progress in Meeting Food and Nutrition Challenges

There is evidence from the past that food security projects only succeed when governments provide political leadership and financial support. In some cases the governments provide an enabling environment for organized farmers groups who actively participate in decision-making; and that close public-private-partnership exist. The vice versa seems to be true where food security projects have failed in Africa.

There has been much effort put in the fight against malnutrition in Africa with few success stories but many failures. For instance the case of Malawi the government alone reported to have spent about 1.5 billion United States Dollars in the fight against malnutrition from 1992 to date. As if undermining all the efforts involved, the country has not recorded any significant improvement in the nutritional indicators for the past three decades despite a number of nutrition interventions running in Malawi. Why they have not been able to eradicate malnutrition remains a million dollar question in most people's minds. The rest of the countries in Africa are unable to eradicate malnutrition, just like the case in Malawi.

High prevalence of diseases like malaria and HIV/AIDS pose a major risk to labor availability in the agricultural sector. Sick household members are unable to contribute to agriculture leading to food and nutritional insecurities. The endemic diseases in the continent promote the inability of Africa economies to meet its food and nutritional requirements for the population.

Conclusions

Based on the lessons learned from **foreign development assistance to agriculture and Food security in Africa in the last decade**, previous projects and the subsequent more favorable rules of engagement of donors with beneficiaries, it was concluded that the challenges and responsibility for getting agriculture back to the front-burner of the development agenda is largely that of African governments

In countries where food security projects have succeeded, the respective government participated in the projects among other stakeholders and provided an enabling environment for the project implementation

HIV/AIDS is positively related with low crop production and the intensity of the association seems to vary with farming system in Africa. Although poverty may increase vulnerability to HIV/AIDS infection, once a household is affected, vulnerability to poverty may increase such that a vicious cycle of welfare losses is initiated

HIV/AIDS is associated with low agricultural production and incomes. Consequently, poverty levels are higher in the affected households and income inequalities among the poor get worse, Therefore, poverty and HIV/AIDS interventions may need to be implemented simultaneously.

Recommendations

- Food policies, projects, programmes and research should focus on food and nutrition security and not just food security.
- Food security programmes, in subsistence economies, aimed at revamping production should further focus more on enhancing accessibility to production resources and improving the quality of labor through training
- Policy agenda in Africa should bring hunger to the forefront of poverty reduction in the context of long-term food security and development. This could be enhanced by developing flexible support for the resilience of food and agricultural systems in crisis situations while enacting anti-hunger policy in the context of the macro-economic environment
- Governments should protect vulnerable citizens from hunger by developing social protection strategies, improved diet quality, control of chronic diseases and better crises prevention and management
- Given the high prevalence rates of HIV/AIDS in Africa, there is need for panel studies that monitor the welfare of households as they try to deal with the effects of HIV/AIDS. Such information may aid in development of intervention strategies that compliment rather than crowd out effective household and/or community mitigation and coping strategies.

Agriculture, Environment and sustainable Development

Summary

Agriculture employs over half of the population in Africa and utilizes soils and water resources; but without commensurate contribution to development nor its sustainability resulting in increased poverty, depleted and degraded resources. Today, sustainable natural resource and environmental development and management are a great challenge for ecological and economic planning in Africa. Sustainable development involves a complex set of cross-cutting issues which touch all sectors of society including the environment.

Pressure on renewable natural resources in Africa, particularly land, water, and forests comes from a series of forces and trends which include population growth and migration, particularly to areas of large reserves of exploitable natural resources; poverty and growing desperation of rural families living in marginal areas (arid and semi-arid) who depend on natural resources for their survival; the need for different Governments to earn foreign exchange from exploiting natural resources (e.g. timber, minerals, etc.); and the vulnerability of renewable natural resources to free market forces in a context in which the capacity to manage them sustainably is lacking. Therefore the issues of agriculture, environment and sustainable development are of great importance to Africa and their respective economies.

Emerging Issues in sustainable Development

Presenters provided analysis of pro-poor growth strategies in the African semi-arid tropics, effects of drought and mitigation, and climate change and its impacts on agriculture. The main challenge facing most African countries is on how to align agriculture to contribute to sustainable development, under: massive rural poverty, degraded soil and scarce water resources, and still poorly prepared human resources, governance and market structures internally.

Agriculture in Africa is also influenced by globalization and corresponding fierce competition for access to external markets and opportunities. Many African countries have moved into the production of non-traditional agricultural products to diversify their exports and increase foreign currency earnings. Accessing developed country markets requires meeting food safety standards brought about by several demand and supply side factors. Food retailers in the EU have developed protocols relating to pesticide residue limits, field and packinghouse hygiene, and traceability. In this changing scenario where food safety requirements are getting increasingly stringent, there are worries that companies that establish production centers in LDCs might exclude smallholder farmers.

Poverty and environmental degradation associated with agriculture in rural Africa are residues of the ways societies have managed themselves and performed politically, socially and economically. These include the case of boom and bust of specialized commodity production system/economies, political conflicts and other social and economic disruptions. The chain of causation or contributing factors, for these poverty and environmental degradation hot spots, can usually be traced further back and wider to nationally and internationally predominant models of governance, commercial and power relations through markets, foreign aid modalities and even geopolitical initiatives and alliances

Poverty and environmental degradation are results of the way societies have worked and performed in the past and are an inherited responsibility of the whole society today.

Therefore, society at large has the means and compelling reasons to take on its inherited responsibility and to help more decisively and quickly, even through well-directed transfer payments, to alleviate extreme poverty and environmental degradation in order to achieve or enhance sustainable development.

Progress reported

Emerging from SAPs, WTO, globalization and donor encouragement, the governance model beginning to predominate in Africa is efficiency driven, free market and economic growth oriented. However, this model will produce wealth but at the expense of widening and deepening poverty and environmental degradation (equity and sustainability are not spontaneous). Any agriculture oriented activities that cause environmental degradation will lead to unsustainable development.

There are new developments within African countries that also promote pro poor policies and programs with some attention to sustain and manage the environment. Though few initiatives in number there are currently well established initiatives across Africa that seek to protect environmental degradation and enhance biodiversity. However, the effects of such developments are still minimal. Since poverty has some negative impacts on the environment (e.g. deforestation for income, cultivation along the river banks due to lack of arable land and water pollution), eradication of the same should be on the forefront of all the continents agenda. Poverty alleviation efforts should be more thoughtful, sustainable and meaningful in scale.

Conclusions

Poverty and most environmental degradation associated with agriculture in rural areas are residues of the ways societies have managed themselves and performed politically, socially and economically.

Society at large has the means and compelling reasons to take on its inherited responsibility, to help more decisively and quickly, to alleviate extreme poverty and environmental degradation, even through well-directed transfer payments.

Recommendations

- African countries should pursue and develop a common vision that also builds greater consciousness regarding the forces at play, strategic priorities, and resulting opportunities and restrictions to pursue an agricultural based development that is environmentally sustainable
- Need for social governance and economic management models that motivate and enable people to consciously engage in the development process, to make it more effective (efficient) and sustainable and to obtain a fair share of the resulting benefits
- Promote the development and harmonization of policies for the use and management of natural resources within the continent
- Facilitate implementation of relevant environmental and natural resource conventions, that protect and promote sustainable utilization of Africa's biodiversity, forests and wetlands

Outcomes of AAAE Conference, 2007

- Promote awareness on sustainable natural resources and environmental management and governance while promoting common positions at international negotiations on environmental issues

Appendix 1

Theme: Agricultural Growth, Poverty Reduction and Millennium Development Goals in Africa, August 18-22, 2007. Accra, Ghana

Saturday, 18 August 2007

1400 – 1700 AAAE Executive Committee Meeting

Sunday, 19 August 2007 Arrival and Registration

1000 – 1800 Registration Desk open, Local Organizing Committee (LOC)

1400 – 1800 Exhibits and Posters set up, LOC

1430 – 1700 AfJARE Editorial Board meeting

1700 – 1900 Any Pre conference Organized Meetings

Monday, 20 August 2007

0730–0830 Registration Continues.

Opening session

Chair: *Hon. Edouard Tapsoba, FAO Regional Representative-Ghana* *Rapporteur:* *Betty Kibaara*

0830 – 0835 Call to order and Welcome, Chair, LOC and AAAE-West Africa, *Egnonto M. Koffi-Tessio*

0835 – 0845 Comments from the Session Chair. *Hon. Edouard Tapsoba*

0845 – 0915 Introduction: *Willis Oluoch-Kosura*, AAAE President.

0915 – 0940 Keynote Address: Agricultural Growth, Poverty Reduction and Millennium Development Goals in Africa. *Monte Jones*, Executive Secretary FARA

0940 – 0955 Guest of honour speech and Official Opening. *Hon. Ernest A. Debrah*, Ministry of Food and Agriculture (MOFA), Ghana.

0955 – 1000 Vote of Thanks, *Akin Adesina*, Vice President, AAAE/AGRA

1000 – 1040 *Coffee break and group photo*

Plenary session 1: Mid Morning Keynote Presentations

Chair: *Anthony Ikpi, University of Ibadan*

Rapporteur: *Emelly*

Mutambatsere

1040 – 1100 AAAE Presidential Address. *Willis Oluoch-Kosura*, University of Nairobi/CMAAE

1100 – 1115 Advancing Technical Change in African Agriculture: Public Policy Issues and Strategic Choices. *Keijiro Otsuka*, RIPS/FASID/ IAAE

1115 – 1130 The Role of Agriculture in Poverty Reduction: Recent Experiences from Africa. *Regina Adutwum*, NDPC

1130 – 1145 Expanding the Frontiers of Agricultural Economics to Meet the Challenges of Agricultural Development in achieving the Millennium Development Goals. *John Mburu*, ILRI

1145 – 1200 Meeting Africa's Food and Nutrition challenges. *Ousman Badiane*, IFPRI, South Africa

1200 – 1215 Improved Markets for African Farmers for Poverty Reduction. *Akin Adesina*, AGRA, Kenya

1215 – 1230 Agriculture, Environment and Sustainable Development. *Josue Dione*, UN-Economic Commission for Africa

1230-1300 Discussion

Discussants: *Shenggen Fan, IFPRI and Patrick Kormawa, UNIDO*

1300 – 1400 *Lunch*

Afternoon Sessions

Parallel session 1: Improved Markets for African Farmers for Poverty Reduction

Chair: *Marwan Soliman*

Rapporteur: *Agboh-Noameshie,*

Rita Afiavi

1400 – 1415 Linking Farmers to Markets through Modern Information and Communication Technologies: The Case of KACE in Kenya. *Andrian W. Mukhebi, J. Kundu, A. Okolla, M. Wambua, W. Ochieng and G. Fwamba*. Kenya Agricultural Commodity Exchange (KACE)

1415 – 1430 The Market of Cattle of the Governorship of Sidi Bouzid: A Lever of Rural Development of the Tunisian Center. *Salah Selmi, Mohamed Elloumi, Chercheur A L'inra, Leila Allagui and Walid Chouaibi*. Enseignant-chercheur à l'ESA-Mograne

1430 – 1445 Finding a Sustainable Linkage between the Emerging Farmer and Formal Markets: The Case of Pick 'N Pay and the Zanyokwe Farmers in the Eastern Cape of South Africa. *Flash A. Bediako*. University of Fort Hare

1445 – 1500 Durability of the Systems of Production of the Small Ruminants: An Approach of Animal Health – Marketing. *Lokman Zaibet and Abdelhafidh Hassen*. Ecole Supérieure d'Agriculture de Mograne

1500 – 1515 Linking Farmers to Markets: The Case of Grain Marketing Information in Western Kenya. *Martin Odendo, and Hugo De Groot*. Kenya Agricultural Research Institute (KARI)

1515 – 1530 Agricultural Value Chain Development in West Africa – Methodological Framework and Case Study of Mango in Benin. **Cathelijne Van Melle, Ousmane Coulibaly and Kerstin Hell.** International Institute of tropical Agriculture (IITA), Benin

1530-1600 Discussion
Discussants: Joseph Karugia, AERC and Nadedjo Bigou-Lare, Université de Lomé, Togo

1600–1620 Tea break

1620 – 1820 **Panel Discussion 1.** Market Liberalization and Impacts on Pro-Poor Growth

Facilitator: Steve Staal. ILRI

Chair: Benjamin K. Acquah

Rapporteur: Adetonah

Sounkoura

Presenters: John Lynam, Karl Rich, Thom Jayne, Julius Mangisoni and Julius Okello

Discussants: Wilfred Ongaro, Godwin Ameleke

Parallel session 2: Advancing Technical Change in African Agriculture: Public Policy Issues and Strategic Choices

Chair: Bernadette Kamgnia

Rapporteur: Lydia Ndirangu

1400 – 1415 Consumer Perception of Sorghum Variety Attributes in The Lake Zone Tanzania. **January Mafuru, David W. Norman, John (Sean) Fox.** ARI- Ukiriguru

1415 – 1430 Soil Fertility Management and Maize Productivity in Malawi: Curvature Correct Efficiency Modeling and Simulation. **Hardwick Tchale and Johannes Sauer.** World Bank

1430 – 1445 Financing Smallholder Agricultural Production in Kenya: An Analysis of Effective Demand for Credit. **Rose A Nyikal.** University of Nairobi

1445 – 1500 Determinants of Adoption and Intensity of Use of Balanced Nutrient Management Systems Technologies in the Northern Guinea Savanna of Nigeria. **Akinola Adebayo, Arega D. Alene, R. Adeyemo, D. Sanogo, A.S. Olanrewaju, C. Nwoke, G. Nziguheba**

1515 – 1530 Backyard Fish Farmers Information Needs in Osun State, Nigeria. **Israel Ogunlade.** University of Ilorin

1530-1600 Discussion
Discussants: Ousmane Coulibaly, IITA, Lokman Zaibet

1600–1620 Tea break

1620 – 1820 **Panel Discussion 2.** Linking Small-Scale Farmers to High-Value Markets

Facilitator: Spencer Henson. University of Guelph

Chair: Elias Ayuk

Rapporteur: Annet Abenakyo

Presenters: TBA

Discussants: Salah Selmi, Francis Mwaura, Namuli Nasozi

Parallel session3: The Role of Agriculture in Poverty Reduction: Recent Experiences from Africa

Chair: Tshikala Tshibaka

Rapporteur: Maggie

Kisaka

1400 – 1415 Science in Agricultural Relief and Development Programs: The Case of Conservation Farming study from Zimbabwe. **Kizito Mazvimavi, Steve Twomlow, Conrad Murendo and Tawedzegwa Musitini.** International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

1415 – 1430 Tea Farming Enterprise Contribution to Smallholders Well Being in Central and Western Highlands of Kenya. **Francis Mwaura and Ogise Muku.** Tea Research Foundation of Kenya

1430 – 1445 Cereal Marketing and Household Market Participation in Ethiopia: The Case of Teff, Wheat and Rice. **Berhanu Gebremedhin and Dirk Hoekstra.** International Livestock Research Institute (ILRI)

1445 – 1500 Agriculture and the Challenge to Reduce Poverty in East Africa. **Evelyne Lazaro and Jeremia R. Makindara.** Sokoine University of Agriculture

1500 – 1515 Integrating Small Scale Farmers into Bread Wheat Marketing Chain through Contract Farming in Ethiopia. **Getaneh Wubalem and Bekabil Fufa.** Haramaya University

1515 – 1530 Les marges de commercialisation et l'équité du commerce des produits alimentaires au Togo. **Egnonto M. Koffi-Tessio, Kokou Tossou et Etsri Homevoh.** LARPSAD, ESA-UL

1530-1600 Discussion
Discussants: Martin Odendo, KARI and Daniel B. Sarpong, University of Ghana
Open discussion

1600–1620 Tea break

- 1620 – 1820 **Panel Discussion 3.** Recent Developments in the Global Food Markets: Implications for Sub-Saharan Africa's Agriculture and food Security
Facilitator: *Aliou Diagne*. African Rice Research Centre (WARDA)
Chair : *Ousmane Badiane* *Rapporteur: N'cho A. Simon*
Presenters: *Bamba Ibrahim, Ousmane Coulibaly, Papa Nouhine Dieye, Kalilou Sylla*
Discussants: *Victor Okuruwa, Olatundje Akande, N. Bigou-Lare, Aude Goulivas*
- Parallel session 4: Expanding the Frontiers of Agricultural Economics to Meet the Challenges of Agricultural Development in achieving the Millennium Development Goals**
Chair: *Ibrahim El-Dukheri* *Rapporteur: Philip Nyangweso*
- 1400 – 1415 Rural Household Labour Demand, Contract Choice, Hoarding Cost and Poverty: Evidence from Western Kenya. *Gathungu Edith and Philip Musyoka*. Egerton University
- 1415 – 1430 A Game Theoretic Approach to Analyse Cooperation between Rural Households in Northern Nigeria. *Marloes Gerichhausen, E.D. Berkhout, H.J.M. Hamers, Victor Manyong*. International Institute of Tropical Agriculture (IITA)
- 1430 – 1445 Does Participation in Microfinance Programs Improve Livelihoods: Empirical Evidence from Makueni District, Kenya. *Joy Kiiru, John Mburu and Klaus Flohberg*. Bonn University
- 1445 – 1500 Linking Mara Fruits and Vegetable Growers to Serengeti National Park Tourist Hotels Market. *Adventina Babu*, Han van de Meerendonk and Cipridion Maganga. Ukiriguru Agricultural Research and Development Institute
- 1500 – 1515 Empirical Analysis of Agricultural Growth and Unemployment in Nigeria. *Ope Ayinde, K. Ayinde, I.J.B. Memudu, and V. I. Ojehomon*. University of Ilorin
- 1515 – 1530 Gendered Impact of Irrigated Rice Schemes' Governance on Farmers' Income, Productivity and Technical Efficiency in Benin. *Florent M. Kinkingrinhou-Médagbé, Aliou Diagn, Afiavi R. Agboh-Noameshie and Patrice Y. Adégbola*. WARDA
- 1530-1600 Discussion
Discussants: *Anthony Panin, Victor Manyong'*
Open discussion
- 1600–1620 Tea break**
- 1620 – 1820 **Panel Discussion 4.** Knowledge Management and Pro-poor Innovation for Food and Agriculture Development in Africa
Facilitator: *Asenso-Okyere, Kwadwo* (IFPRI Addis Ababa)
Chair: *Rose A. Nyikal* *Rapporteur: Felix Asante*
Presenters : *Regina Birner, Ephraim Nkonya, Dunstan Spencer and Josue Dione*
Discussants: *Eija Pehu, Shenggen Fan*
- 1900 Reception Dinner

Tuesday, 21 August 2007

0830 Call to order and announcements

Plenary session 2: Regional and International Initiatives in Africa

Chair: Robert Groot, IFDC

Rapporteur: Troskie, Dp

0830 – 0845 Eastern and Central Africa Programme for Agricultural Policy Analysis (ECAPAPA). **Michael Waitbaka**

0845 – 0900 Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN). **Lindiwe Majele Sibanda**

0900 – 0915 Agricultural Policy within the Economic Commission for West Africa (ECOWAS)
Daniel Eklu

0915 – 0930 Re-governing Markets IDRC

0930 – 0945 Small Scale Producers Access to High Value Markets IDRC

0945 – 1000 Scientists without Borders. **Evelyn Strauss**

1000 – 1015 Collaborative Masters in Agricultural and Applied Economics (CMAAE). **Thomson Kalinda**

1015 – 1030 Status of Preparations and Implementation of Regional Plans for Collective Action of the CGIAR Centers in Africa. **S. Keya**, WARDA and **Ravi Prabhu**, Alliance of the CGIAR Centres.

1030 - 1040 Open Discussion

1040 – 1100 Tea break

Mid Morning Sessions

Parallel session 5: Meeting Africa's Food and Nutrition Challenges

Chair: Michael Waitbaka

Rapporteur: Fred Nimoh

1100 – 1115 The Prevalence of Under-Nourished Child Obese Mother Phenomenon in Rural Areas: Evidence from Central Province of Kenya. **John G. Mburu** and **Julius J. Okello**. University of Nairobi

1115 – 1130 The Impact of Drought on Household Food Security in the Limpopo Basin of Semi Arid Southern Africa: The Case of Kgatleng District in Botswana. **Benjamin K. Acquah**. University of Botswana

1130 – 1145 Agriculture for Food and Nutrition Security: A Must for Achieving the Millennium Development Goals in Africa. **Saa Dittoh**, **Abdul-Razak Abizari** and **Margaret Akuriba**. University for Development Studies, Tamale Ghana

1145 – 1200 Foreign Development Assistance to Agriculture and Food Security in Africa in the Last Decade: Lessons for Tomorrow. **Simeon K. Ehui** and **I. Okike**. World Bank, Abuja, Nigeria

1200 – 1215 Opportunities for African Small Farmers in Ethical Foods Markets: An Entrepreneurial Perspective. **Vincent Amanor-Boadu**. Kansas State University, Manhattan

1215 – 1230 Principaux facteurs qui affectent l'état nutritionnel et de santé des enfants exposés à l'aflatoxine au Bénin: Application du Model Probit. **Allomasso, Raymond**, **O. Coulibaly**, **I. Gliho**, **K. Hell**-Institut International d'Agriculture Tropicale, Station du Bénin

1230 – 1245 Impact Des Politiques D'alphabetisation Sur La Production Et La Securite Alimentaires Au Togo. **Egnonto Koffi-Tessio**, **Kpotogbe Homevor** et **Komi Kouma**. LARPSAD, ESA-UL

1245 – 1300 Discussion

Discussants: Leonard Oruko, ASARECA and Bassolet Boubié, Université de Ouagadougou

1300 – 1400 Lunch

Parallel session 6: Agriculture, Environment and Sustainable Development

Chair: Ernest Aliyetey

Rapporteur: Joyce Omwoha

1100 – 1115 Livestock and Livelihoods: Development Goals and Indicators Applied to Senegal. **Roland-Holst, D.** and **J. Otte**. University of California Berkeley

1115 – 1130 Livelihood Strategies of Resource-Poor Farmers in Striga-Infested Areas of Western Kenya. **Victor M. Manyong**, **Arega D. Alene**, **George. D. Odhiambo**, **Mignouna, H.D. Mpoko Bokanga**, **Gospel Omanyia**, and **S.J. Nindi**. International Institute of Tropical Agriculture (IITA)

1130 – 1145 Labour Requirements and Profitability of Alternative Soil Fertility Management Options in Zambia. **Ajayi Olu C.** and **Akinnifesi F.K.** World Agroforestry Centre (ICRAF)

1145 – 1200 Unexploited Agricultural Growth: The Case of Crop-Livestock Production Systems in Zimbabwe. **Sabine Homann** and **Andre van Rooyen**. ICRISAT

1200 – 1215 Institutional Innovations for African Smallholder Compliance with International Food Safety Standards: Experiences from Kenyan, Ethiopian and Zambian Green Bean Growers. **Julius Juma Okello**, **Clare Narrod** and **Devesh Roy**. University of Nairobi

- 1215 – 1230 Benefit-Cost Analysis and Socio-Economic Considerations of Trypanosomiasis Control and Treatment in Northern Ghana. **Wahab, Salifu and Sam Asuming-Brempong.** Tuskegee University.
- 1230 – 1245 Development and Dissemination of Improved Cassava Varieties in Uganda: Analysis of Adoption Rates, Variety Attributes and Speed of Adoption. **Steffen Abele, Edgar Twine, Pheneas Ntawuruhunga, Yonah Baguma, Charles Kanobe and Anthony Bua.** National Agricultural Research Organization (NARO), Namulonge Agricultural and Animal Research Institute (NAARI)
- 1245 – 1300 Discussion
Discussants: Fidèl Tshingombe Mulubay, University of Kinshasa and Samuel Asuming-Brempong, University of Ghana
- 1300 – 1400 Lunch**

Parallel session 7: Panel Discussion 5

- 1100 – 1300 Conflict Resolution and Food Security in Africa. Managing the Transition from Conflict to Post-Conflict in Africa: Case Studies of Southern Sudan, Democratic Republic of Congo and Ethiopia
Facilitator: Prabhu Pingali (FAO) and Brian De Silva (USAID)
Chair: Wilfred Mwangi *Rapporteur: John G. Mburu*
Presenters: Brian De Silva, Severin Mugangu, Alemu Asfaw and Luca Alinovi
Video presentation: Managing the transition from conflict to post-conflict Southern Sudan
Discussants: Brian De Silva, Cesar Guvele, Rashid Hassan, Salamah Magnuson, Peter Boateng
- 1300 – 1400 Lunch**

Parallel session 8: Panel Discussion 6

- 1100 – 1300 New Developments in East Africa: NERICA, Development of Milk Markets and Intensification of Farming Systems.
Facilitator: Keijiro Otsuka, GRIPS/FASID and Frank Place, ICRAF
Chair: Mark Odhiambo *Rapporteur: Yomoya Matsumoto*
Presenters: Yakashi Yamano, Steve Staal, Frank Place and Yoko Kijima
Discussants: John Omiti, Aliou Diagne, James Nyoro and Betty Kibaara
- 1300 – 1400 Lunch**

Afternoon Sessions: Poster session

Facilitator: Edith Adera

1400 – 1530 Poster Session

1530 – 1730 Field trip

Facilitator: Yaw Osei-Asare and Samuel Asuming-Brempong

Evening Sessions

1900 – 2100 Networking and Donors Round table

Wednesday, 22 August 2007

0830 Call to order and announcements

Morning Sessions

Parallel session 9: Improved Markets for African Farmers for Poverty Reduction

Chair: Isaac J. Minde

Rapporteur: Flash A. Bediako

- 0830 – 0845 Policy and Institutional Effects on Market Participation by Smallholder Rice Farmers: Case Studies in Burkina Faso, Mali and Niger. **Ali Touré, Ibrahim Bamba, Aliou Diagne, Koré Harouna, Youssouf Cissé, Daniel Kaboré.** Rice Policy and Market Development, WARDA
- 0845 – 0900 Patterns of Restructuring Food Markets in South Africa: The Case of Fresh Produce Supply Chains. **D. Chikazunga, Joordan. D, Biénabe. E and Louw A.** University of Pretoria
- 0900 – 0915 Has Imported Rice Crowded-Out Domestic Rice Production in Ghana? What Has Been The Role Of Policy? **Sam Asuming Brempong and Yaw Bonsu Osei-Asare.** University of Ghana, Legon
- 0915 – 0930 Changing Face of the Agri-Food Market: A Farmers Response and Possible Solutions from a Provincial Perspective. **Bongiswa Matoti, Nick Vink, and Estelle Bienabe.** Western Cape Department of Agriculture, South Africa
- 0930 – 0945 Trade Liberalization in the South African Livestock Industry: Implications for Rural Development. **Oyewumi, O.A., Jooste, A., Britz, W., and van Schalkwyk, H.D..** University of the Free State and Markets and Economic Research Centre (MERC)
- 0945 – 1000 Competitiveness and Revealed Comparative Advantage in the SADC Maize Industry. **Emelly Mutambatsere.** Cornell University

- 1000 – 1015 Consumer Preferences and Market Opportunities for Processed Cowpea-Based Products in the Coastal Regions of Ghana. **Fred Nimoh**, *S. Asuming-Brempong and D. B. Sarpong*. University of Ghana
- 1015 – 1030 Cereal Price Instability in Ethiopia: An Assessment of Sources and Policy Options. **Rashid Shahidur and Meron Assefa**. International Food Policy Research Institute (IFPRI)
- 1030 – 1045 Discussion
Discussants: Saa-Dittoh, University for Development Studies and Salifou Abdul-Wahab, Tuskegee University
- 1045 – 1100 Tea break**

Parallel session 10: Advancing Technical Change in African Agriculture: Public Policy Issues and Strategic Choices

Chair: Ponniah Anandajayaskeram

Rapporteur: Winnie Alum

- 0830 – 0845 Gendered Impact of Nerica Adoption on Farmers' Production and Income in Central Benin **Agboh-Noameshie, Rita Afiavi, Kinkingninhoum-Medagbe, F.M. and Diagne, A.** WARDA
- 0845 – 0900 Financing Agricultural Inputs in Northern Togo through Inventory Credit System: An Economic Analysis of Institutional Response. **Abdou Konlambigue**. International Center for Soil Fertility and Agricultural Development (IFDC)
- 0900 – 0915 Smallholder Agricultural Surplus and Input Use under Transactions Costs: Maize Supply and Fertilizer Demand in Kenya. **Arega D. Alene, Victor M. Manyong, Gospel Omany, H.D. Mignouna, Mpoko Bokanga, George D. Odhiambo**. International Institute of Tropical Agriculture (IITA)
- 0915 – 0930 Risk Aversion and Sustainable Maize Production in Nigeria: Some Challenges and Prospects for Agricultural and Economic Development. **Luke O. Olarinde and Victor M. Manyong**. Ladoke Akintola University of Technology
- 0930 – 0945 Analysis of Factors Influencing Adoption of Dairy Technologies in Western Kenya. **Makokha Stella N., Karugia J., Staal S. and Willis Oluoch-Kosura**. Kenya Agricultural Research Institute
- 0945 – 1000 Impact Assessment of Agricultural Research and Development to Reduce Virus Problems in Tomato Production in Mali: Farmers' Perceptions. **Nouhoheflin. Theodore T., Coulibaly O., Norton G., Soumare S., Sissoko P.** International Institute of Tropical Agriculture
- 1000 – 1015 Did Farmers' Livelihood Improve? An Impact Assessment of Incorporating Forages into the Crop-Livestock System in the Coastal Savannah of Ghana. **Godwin Ameleke, Okantah S.A., Sottie, E.T., Marfo-Ahenkora E. A and Aboe, P.A.T.** CSIR Animal Research Institute
- 1015 – 1030 The Impact of Access to Credit on the Adoption of Hybrid Maize in Malawi: An Empirical Test of an Agricultural Household Model under Credit Market Failure. **Franklin Simtowe, Manfred Zeller**. Bunda College of Agriculture
- 1030 – 1045 Discussion
Discussants: Bassolet Boubié, Université de Ouagadougou and Ralandison Tsilavo, Kagoshima University, Japan
- 1045 – 1100 Tea break**

Parallel session 11: Panel Discussion 7.

0830 – 1045 African Agricultural Multilateral and Regional Trade

Facilitator: FAO Trade (*Accra office & Rome office*)

Chair: Protase Echessah

Rapporteur: Bidogez Jean claude

Presenters : TBA

Discussants : Lamissa Diakité , Nicole Mason and Open discussion

1045 – 1100 Tea break

Parallel session 12: The Role of Agriculture in Poverty Reduction: Recent Experiences from Africa

Chair: Patrick Kormawa

Rapporteur: Peter

Shimon Otieno

- 0830 – 0845 Strategies to Promote Market-Oriented Smallholder Agriculture in Developing Countries: A Case of Kenya. **John Omiti, David Otieno, Ellen McCulloch, Timothy Nyanamba**. Kenya Institute for Public Policy Research and Analysis (KIPPRA)
- 0845 – 0900 Farmers' Perceptions and Willingness to Pay for Metarhizium Based Biopesticide to Control Cotton Bollworms in Benin (West Africa) **Adetonah, Sounkoura, O. Coulibaly, T. Nouhoheflin, C. Kooyman, D.Kpindou**. International Institute of Tropical Agriculture.

- 0900 – 0915 Recent Developments in the Rwandan Agriculture: The Challenges of Attaining Food Security and Abolishing Absolute Poverty. **Jose Ariyappillil Mathai**. National University of Rwanda
- 0915 – 0930 Assessing Potential Impact of a Farmer Field School Training on Perennial Crops in Cameroon. **Njankoua Wandji Dieu ne dort**, *Nyemeck Binam, Sonii David, Jonas Mva Mva and James Gockowski*. International Institute of Tropical Agriculture
- 0930 – 0945 Impediments to Competitiveness of Small-and Medium-Scale Maize Milling Enterprises in South Africa. **Orefi Abu**. University of Pretoria, Pretoria
- 0945 – 1000 The Distributional Effects of Horticultural Export Value Chains Among Smallholders in Southern Ghana. **Victor Afari-Sefa**. Center for Development Research, Bonn
- 1000 – 1015 Integrating Poverty Classes and Economic Surplus Analysis the Example of BT Maize in Kenya. **Hugo De Groote**. CIMMYT
- 1015 – 1045 Discussion
Discussants: Klutse Amatévi, IFDC Lawrence S. Musisi Department of Agriculture, South Africa
- 1045 – 1100 Tea break**

Mid Morning Sessions

Parallel session 13: Panel Discussion 8: Stimulating Innovation and Adoption of Innovations in African Agriculture

1100 – 1300 **Facilitator: William A. Masters.** Purdue University
Chair: Edith Adera *Rapporteur: Esther Njuguna*
Presenters: Will Masters, Akin Adesina, Sidi Sanyang & Shenggen Fan
Discussants: Franklin Simtowe, Simeon Ehui, Aliou Diagne

1300 – 1400 Lunch

Parallel session 14: Expanding the Frontiers of Agricultural Economics to Meet the Challenges of Agricultural Development in achieving the Millennium Development Goals

Chair: Gabre-Madhin Eleni *Rapporteur: Irene Egyir*
1100 – 1115 A Discriminant Analysis Of Factors Associated With The Adoption Of Certified Organic Farming By Smallholder Farmers In Kwazulu-Natal, South Africa. **Maggie Kisaka.** University of KwaZulu-Natal
1115 – 1130 Evaluation de la diffusion et de l'adoption des variétés de riz NERICA en Guinée. **Aliou Diagne, Marie-Josée Sogbossi, Sékou Diawara, Abdoulaye Sadio Diallo et Alpha Bacar Barry.** ADRAO Cotonou
1130 – 1145 Gender Contribution and Constrains To Rural Agriculture and Household Food Security in Kenya: Case Of Western Province. **Joyce Omwoha.** Moi University
1145 – 1200 Measuring Irrigation Water Efficiency with a Stochastic Production Frontier: An Application for Citrus Producing Farms in Tunisia. **Boubaker Dhehibi, Lassaad Lachaal, Mohammed Elloumi And Emna B. Messaoud.** Institut National de la Recherche Agronomique de Tunisie
1200 – 1215 Non-Credit Services of Group-Based Financial Institutions: Implications for Smallholder Women Honey Income in Arid and Semi Arid Lands of Kenya. **Peter Shimon Otieno, Rose Adhiambo Nyikal and Fred Inuani Mugivane.** University of Nairobi
1215 – 1230 Heterogeneous Impacts of Cooperatives on Smallholders' Commercialization Behavior: Evidence from Ethiopia. **Tanguy Bernard, Eleni Gabre-Madhin and Alemayehu Seyoum Taffesse.** IFPRI
1230 – 1300 Discussion
Discussants: Sashi, IFPRI and Samuel Asuming-Brempong, University of Ghana
1300 – 1400 Lunch

Parallel session 15: Meeting Africa's Food and Nutrition challenges

Chair: Johann Kirsten *Rapporteur: Ketline Adodo*
1100 – 1115 Household Food Security in a Subsistence Economy: Application of Translog Cost Function to Cross-Sectional Data in Vihiga District, Kenya. **Philip Nyangweso, Odhiambo M.O., Odunga, and Serem A.K.** Moi University
1115 – 1130 Giving Chance to Indigenous Knowledge in Developing Sustainable Nutrition Improvement Interventions. **Kondwani Nanchukwa.** Foundation for Irrigation and Sustainable Development
1130 – 1145 Food Drying Production Plant. **Namuli M. Kasozi, William Mwegombi.** Tropical Horticulture Enterprises (U) Ltd
1145 – 1200 Investigating the Sources of Agricultural Growth in Africa: Factor Accumulation, Total Factor Productivity, and Technology Absorption. **Guy Blaise Nkamleu.** International Institute of Tropical Agriculture (IITA)
1200 – 1215 Designing Regional Systems of Biotechnology Regulation – A Transaction Costs Approach to Regulatory Governance **Regina Birner and Nicolas Linacre.** International Food Policy Research Institute (IFPRI)
1215 – 1230 Food Security and Poverty of the Rural Households in Kwara State, Nigeria. **Omotesho O.A., Adewumi, Olaniyi Matthew and Fadimula, K.S.** University of Ilorin
1230 – 1300 Discussion
Discussants: Ope Ayinde, University of Ilorin and Robert Nkendah
1300 – 1400 Lunch

Parallel session 16: Agriculture, Environment and Sustainable Development

Chair: Rashid Hassan *Rapporteur: Martin Odendo*
1100 – 1115 Growth Acceleration and Structural Transformation: Ghana's Options on the Way to Middle-Income Status. **Clemens Breisinger, Xinshen Diao and James Thurlow with Bingxin Yu.** International Food Policy Research Institute
1115 – 1130 Striga Management through Herbicide Resistance: A Public Private Partnership in Action. **Paul L. Woomer and Canon N. Savala,** FORMAT Kenya
1130 – 1145 Can Rural Institutions for Collective Action Overcome Market Imperfections for Farmers in

- Less-Favored Semi-Arid Areas? **Bekele Shiferaw**, *Gideon Obare and Geoffrey Muricho*. International Crops Research Institute for the Semi Arid Tropics (ICRISAT)
- 1145 – 1200 Perception de la Dégradation des Terres et Adoption des Technologies de Conservation des Eaux et des Sols au Nord du Burkina Faso : le cas du Zaï et des Cordons Pierreux. **Modeste L. Kinané**, *Michel Koné and Amadou Sidibé*. Food and Agriculture Organization (FAO)
- 1200 – 1215 Effects of EU Common Agricultural Policy Reforms on Eastern and Southern Africa's Trade with the EU under the EPAs. **Protase N. Echessah**
- 1215 – 1230 Structure, Coûts Des Transactions Et Intégration Spatiale Des Marchés Des Produits Alimentaires Au Togo
- 1230 – 1300 Discussion
Discussants: John Omiti, KIPPRA and Nkamleu Guy, IITA
- 1300 – 1400 Lunch**

Plenary session 3: AAAE Awards including Fellows, MSc & PhD Thesis Presentations

Chair: Clifford B.N. Tagoe, Vice Chancellor, University of Ghana

Rapporteur: Nadedjo

Bigou-Lare

1400–1530 AAAE Awards including Fellows, MSc & PhD Thesis Presentations

1530 – 1550 Tea break

1550–1720 AGM and Closing

1900 – 2100 Conference Dinner

About African Association of Agricultural Economists (AAAE)

African Association of Agricultural Economists (AAAE) was established at its inaugural symposium on 6-8 December 2004 in Nairobi, Kenya and registered in Kenya on September 19, 2005. The meeting brought together over 80 representatives of African universities, research and development institutions, business and the public sector from 24 countries in Africa and the rest of the world. The association has over 451 registered members working in over 100 subjects in agricultural and resource economics as well as in other social sciences, spread in over 24 African countries and Diaspora. Membership is open to interested social scientists for US \$30 and \$15 for professionals and students respectively, over a two year period or until the next AAAE international conference. New Membership registration can be conducted through the association's regional and national representatives, the secretariat and online on Paypal. The key objectives of the Association are:

1. To improve liaison between agricultural economists with an interest in African issues at the regional and international levels
2. To promote training, research, policy dialogue and interest in Agricultural Economics on the continent of Africa
3. To contribute to broad-based rural development, poverty reduction, food security and sustainable use of natural resources in the continent of Africa

The Executive Committee. The committee is made up of the President, Vice-President, Past President, Secretary and four regional representatives from Eastern, Western, Northern and Southern Africa; and Chief Editor of AfJARE Journal. The Secretary is non-elective post. The committee holds office for a period of about two years and new officer bearers elected at the next General Meeting of the Association. The inaugural executive committee was elected during the launch of the Association in December 2004, in Nairobi, Kenya. The second AGM was held at the Second international conference during 20-22 August 2007 in Accra Ghana and new executive committee elected to run the Association until 2010 conference in Cape Town, South Africa. The Association is continuously developing a database of national representatives in order to mobilize members and coordinate Association activities in individual African countries and Diaspora.

Regional Demarcation. The regions represented in the committee covering the whole of Africa were renamed and constituted as follows: Western Africa (including Cameroon, Central Africa republic and Gabon); Eastern Africa (including Congo, Democratic Republic of Congo, Madagascar and Mauritius); Southern Africa and Northern Africa.

AAAE Secretariat. The Executive Committee of AAAE has mandated FORMAT to host the Secretariat and conduct all its businesses. The secretariat manages the affairs of the association on a day-to-day basis. These include fundraising, program management, administration, conferences and committee meetings, networking, publication of the African Journal of Agricultural and Resource Economics (AfJARE) and annual reports, among other duties. The secretariat mobilizes agricultural economists in various countries to work closely with governments in order to realize effective reforms in agriculture, improved agricultural productivity and mitigate against negative impacts from globalization and climate change. It also facilitates improved access to scientific publications and career development opportunities for members through its website. The AAAE Secretariat can be reached at the contacts address below:

Association Website, www.aaae-africa.org. The site is updated regularly with information contributed by members and friends. The site has been visited by over 56000 users for the last four years. The website announces new training and scholarship

opportunities for members, upcoming conferences, publications and other online resources useful to members. The website disseminates the AAAE journal, AfJARE and contact details of all its members. The proceedings of the Inaugural symposium have been disseminated through the website. The site is also assisting in registering new members.

AAAE Journal. African Journal of Agricultural and Resource Economics (AfJARE) publishes and disseminates research findings on issues affecting the productivity, sustainability and poverty alleviation contributions of African agriculture. The journal is available over the internet at <http://www.aaae-africa.org/afjare>.

How the association benefits members. All these is explained by the objectives of the association, the purpose of e-newsletter, the role of the AfJARE journal and, AAAE-organized and collaborative conferences such as IAAE. Members need to pay registration and annual subscriptions to realize the following benefits:

- all members and their full contact addresses are available online, exposing them to opportunities and peer contacts
- receive the AAAE journal, AfJARE
- discounted registration fees for AAAE organized conferences
- receive regular issues of AAAE e-newsletter
- recommendation for sponsorship to attend events organized by partner associations
- invitations to AAAE events
- publication of your research findings in AAAE journal