Introduction

We are pleased to respond to the Committee’s Inquiry. In reviewing our evidence, we would like the Committee to bear in mind the heterogeneity of sub-Saharan Africa (SSA), with 48 countries of varying area and population sizes, political systems and approaches to the development of agriculture. Crop production and livestock keeping prevail across the region, although with different intensities and scales, including smallholder family farmers and large commercial farmers. With 1.1 billion people across the continent, agricultural development needs to respond to issues of food security, nutrition, livelihoods, environment, economic growth and development. Finally, it is also worth noting that some SSA countries are fragile and conflict prone, with implications for political, security, socio-economic and environmental stresses and vulnerabilities. Our reply aims to take into account such heterogeneities, although obviously cannot do them justice.

Our responses below draw primarily on our own work and that of colleagues and African partners working under the DFID-funded consortium Agricultural Policy Research in Africa (APRA). Relevant policy briefs can be found on the APRA website. We also draw on publications in scientific papers, including by international organisations like the UN Food and Agriculture Organisation, and data maintained by DFID.

1. How important is agriculture to Sub-Saharan Africa’s economic development?

Agriculture is the backbone of economies in SSA. It is the source of growth of their economies, jobs and livelihoods.

**Contribution to gross national product (GDP):** with a few exceptions such as mineral rich Botswana or South Africa, which is dominated by services and manufacturing sectors, agriculture-based activities generate over 15% of total GDP in SSA. Agriculture’s recent contribution to GDP in Ethiopia, Ghana and Malawi, three countries we have studied, was 35, 30 and 20 per cent respectively. The fact that agriculture continues to dominate GDP is indicative of the very limited transformation of many SSA economies to the manufacturing and services sectors.

**Contributions to wellbeing, livelihoods and jobs:** 60 or more percent of the population in SSA live in rural areas and are largely dependent on agriculture for their livelihoods. In 2018, agriculture’s contribution to
employment in Ethiopia, Malawi and Ghana was 70, 64 and 50 per cent respectively. With a rapid increase in the youth population, there is an ongoing need to create more rural employment in SSA, both on and off farms. While medium and large commercial farms have been growing, about 80 per cent of food and nutrition is provided by smallholder family farms operating on under 10 hectares of land. In Ethiopia, over 90 per cent of the food and nutrition supply is provided by 16 million such smallholders, including food produced for their own subsistence. However, as smallholder farmers largely operate rain-fed agriculture, they are vulnerable to erratic rainfall and drought, and every year, nearly a quarter of such smallholders face food and nutrition shortages.

**Contribution to export and foreign exchange earnings:** the exports of many SSA economies are agricultural commodities. For example, Ghana’s major export, cocoa, accounts for 20-25 percent of total foreign exchange earnings. Coffee in Ethiopia and tea in Malawi are also major sources of foreign exchange.

Thus, owing to the importance of agriculture to SSA’s development, many African leaders have prioritised it as a foundation for reducing poverty, reducing under- and malnutrition, a source of jobs and incomes, and an opportunity for business investment in agro-processing and rural non-farm activities. In a nutshell, agriculture is a means for delivering the Sustainable Development Goals – for example “no poverty”, “zero hunger” and “decent work and economic growth”.

2. **What can be done to support and improve the productivity of the agricultural sector in the region? What role should the private sector play?**

**Improving productivity in African agriculture**

On average, land productivity in SSA, understood as the value of production per hectare of crop, was less than US$800/ha in 2012/14. Labour productivity, or the output per hour worked, is also likely to be low. Contributing factors include low use of improved inputs, such as seeds, low use of farm implements or mechanisation, and lack of access to capital. For example, SSA is dependent on hoe cultivation and suffers from excessive shortages of farm power such as small pumps for irrigation. African farmers have 10 times fewer mechanised tools per farm hectare than farmers in other developing regions, and access has not grown as quickly as elsewhere.

Raising productivity will therefore require these factors to be addressed, including through supporting greater access to and appropriate use of improved inputs (e.g. improved seeds), greater access to mechanisation
options that raise labour productivity and/or reduce postharvest loss, use of better and more appropriate agronomic techniques and technologies, supported by access to extension services and other forms of agronomic knowledge (e.g. digitally enabled). Doing so sustainably means using techniques that ensure that resources like water and inputs like seeds are used in targeted and effective ways, avoiding natural resource mismanagement that undermines longer term sustainability.

Simply improving access to a standard set of inputs and technology is insufficient, however.

First, given the diversity of crops and farm systems across the region, there is no standardised solution. The focus needs to be on innovations that can be adapted to in response to these different contexts. Formal public or private sector research and development (R&D) will play a role, but this will need to be accompanied by more bottom up experimentation by farmers and farmer organisations.

Second, other more structural bottlenecks and barriers to improved productivity need to be addressed. In different countries or regions these may include poor access to finance, high transaction costs, inadequate returns for investing in improvements (e.g. due to high transport costs for inputs or produce) and high risks (e.g. due to variable harvests, inadequate land tenure security or market price volatility). In particular, small-scale farmers with low incomes and few savings have limited capacity to adopt new approaches unless some risks can be mitigated.

Third, farmers will only invest in productivity improvement if there is a ‘pull’ in terms of growing market demand for their produce. While it is true that population growth, urbanisation and increasing affluence in SSA are creating demand, for many farmers these opportunities are dampened by poor market access due to a lack of roads and high transaction costs making opportunities less profitable. Taking lessons from experiences in Asia and Latin America, the combination of public investment in infrastructure and private enterprises organising value chains and so reducing transaction costs will be needed.

Finally, farmer investment in productivity enhancing technologies and inputs will require sufficient access to capital and financial services. Yet commercial finance for agriculture is often unavailable, unaffordable or offered under inappropriate terms for all but the largest and most well-connected farmers. Financial services could include not just credit, but also remittances and savings, as well as insurance to help mitigate risks. Other risk mitigation measures include adequate support networks, via government or cooperative arrangements, and sufficient legal protection.

**The role of the private sector**
Much of the investment and innovation that will be required to improve agricultural productivity will inevitably come from the private sector, that is to say: individual farmers and farming families, farmer cooperatives, small and medium-sized enterprises, and large companies (domestic and foreign). However, market and institutional failures mean that many of the enabling conditions for investment are insufficient, or are only slowly developing. Overcoming these failures will require public action. The need for infrastructure is already discussed. Other examples include R&D, improving land tenure security, providing training and improving access to information. In other areas, where business interests align with developmental goals, private action is needed. Two areas in particular stand out: (1) value chain coordination linking farmers to input and output markets; and (2) access to financial services.

**Value chain coordination.** Value chains are the chain of activities ‘from farm to fork’, including sourcing of inputs, farm production, post-harvest activities, trading, processing, distribution and sales. Stronger linkages between farmers and agri-businesses involved in trading and processing can improve market access and is often accompanied by some elements of access to improved inputs, provision of financial services and/or knowledge transfer. Examples include particularly contract farming and outgrower arrangements, but also joint ventures and other partnerships between agribusinesses and farmers, as well as farmer-owned business. Unfortunately, research has produced conflicting results regarding the effectiveness of these arrangements at improving productivity or bringing other benefits to farmers. Results vary depending on factors such as the local policy environment, the nature of the crop, and the characteristics of the local economy. Where meta-analyses have been undertaken looking across different research studies, contract farming has generally been found to support some improvement in productivity and incomes of farmers, and can also be the source of new technologies. Where these technologies are sufficiently small-scale, affordable and labour-intensive, they can also have important spillover benefits, in terms of being adopted by other farmers for improving the production of other crops.

**The role of medium-scale farms.** Policies to encourage agribusiness investment as a means of raising productivity in SSA have typically focused on larger and foreign investors, often producing export crops. However, recent research points to the increasing importance of domestic investors from urban areas in SSA setting up medium-scale farms. These medium-scale farmers are sometimes experimenting and innovating with new models of input supply, finance and marketing, which can involve

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1 A system in which a buyer of agricultural produce, such as a processor or exporter, also supports small-scale farmers through providing services, typically inputs provided on credit and extension support.
2 Similar to contract farming, but the buyer is a processor which operates its own large plantation, as well as buying throughput for the processing facility from smallholder farmers called outgrowers.
small-scale farmers. Where these medium-scale investors work with surrounding farmers to improve production of domestic or regional food crops using intermediate-scale technologies, it can offer a more viable and less risky route for smallholder commercialisation, as well as important local food security benefits.

**Access to financial services.** There is currently a very substantial gap between the agricultural finance offered by commercial providers in SSA and what is needed by farmers. According to the African Development Bank, the share of commercial loans going to agriculture varies from 3% in Sierra Leone, and 4% in Ghana and Kenya, to 8% in Mozambique and 12% in Tanzania. Donors have sometimes filled this gap, e.g. through challenge funds. However, these are often limited in scale and divert resources from other needs. Addressing this finance gap, particularly for SMEs and smaller-scale farms, is likely to require support from more concessional sources, including impact-oriented investors, foundations and international finance institutions, working with commercial banks to reduce the cost and risk of making appropriate financial products available. Development finance institutions such as CDC in the UK also have a role here, although the minimum investment sizes required mean that this finance is not appropriate for smaller businesses and farms. Other innovative arrangements have included warehouse receipt financing, where farmers, producers, and traders access bank loans secured on the basis of receipts for agricultural commodities deposited in a warehouse for future sale. Such arrangements may be provided through private commodity exchanges, such as the Ethiopia Commodity Exchange.

3. **Are there countries or regions in Sub-Saharan Africa which have successfully improved land use and agricultural productivity? What has worked and why?**

Our research has not primarily focused on country-level comparisons regarding agricultural productivity. However, what we can say, based on APRA research on “Agricultural Growth Trends in Africa”, is that land productivity is on the rise in SSA. It has grown by roughly 50 percent overall since the early 1990s, reaching nearly US$800 per ha in 2012/14; although this remains roughly 1/5 that of East Asia. Countries with higher increases include Malawi (102%) and in Ethiopia (89%).

In this same period labour productivity has also been rising, typically between 30-60 percent. Countries with higher increases include Ghana and Malawi where labour productivity more than doubled.
4. What is your assessment of the level of priority afforded to agricultural programmes in Sub-Saharan Africa by the Department for International Development?

Our experience is that DFID has been according reasonably high priority to agriculture in SSA. Underpinning DFID’s commitment is the recognition that agriculture is the engine of inclusive economic growth and job creation in SSA. DFID’s efforts are directly related to the fulfilment of global and Africa-wide commitments such as delivering on SDGs, and it links its support to creating new trade relations and supporting UK businesses operating in the region. DFID’s support is channelled at multiple levels:

**Country programmes:** seven out of the ten top DFID country programmes in the world are in SSA, including the two most populous countries, Nigeria and Ethiopia, but also Tanzania, Sierra Leone, Kenya, Uganda and South Sudan. These programmes are focused on reducing poverty, creating jobs and incomes, particularly for the most vulnerable young people and women. While some of the country level investment is allocated to agriculture, we noted that a significant component of it goes to non-agriculture activities, such as tackling corruption, fighting human trafficking or promoting UK-recipient country trade.

**Cross-country programmes:** DFID undertakes a number of cross-country programmes to catalyse development in SSA agriculture. Examples include:

- A £281.5 mn investment programme funding the African Agriculture Development Company (AgDevCo). The programme provides long term capital and technical assistance to build profitable businesses that contribute to food security, drive economic growth, create jobs and income in rural areas and contribute to farmers’ resilience to climate change. It operates in Sierra Leone, Ghana, Rwanda, Malawi, Mozambique, Tanzania, Uganda, and Zambia.
- Africa Food Trade and Resilience programme (£31.6 mn) to stimulate an increase in regional food trade in SSA, and contribute to satisfying growing food demand through regional food production, processing and trade, and generating more rural jobs, climate resilience and income for farmers.
- Commercial Agriculture for Smallholders and Agribusiness Programme (£31.6 mn) to increase opportunities for smallholder farmers by demonstrating the viability of businesses with significant smallholder supply chains and attracting investment into these businesses.
Continental programmes: this effort involves working with international organisations, such as the World Bank, United Nations and international non-governmental organisations supporting agricultural development at the Africa level. A typical example is DFID’s contribution to the Comprehensive Africa Agriculture Development Programme (CAADP), Africa's policy framework for agricultural transformation, wealth creation, food security and nutrition, economic growth and prosperity. Similar investments have been made in the Partnership For Inclusive Agricultural Transformation in Africa (PIATA), to deliver on the Malabo Declaration commitments and the SDGs, for example.

5. How will climate change affect the Sub-Saharan African agricultural sector?

The impacts of climate change on agriculture in SSA are expected to be severe. Over the coming decades, temperatures will rise across SSA and rainfall patterns will change, leading to reduction in cereal crop productivity. Changing rainfall patterns are particularly important as much of African agriculture is rain-fed, and crops are highly vulnerable to both drought and to excess rainfall, particularly in terms of seasonal changes that affect crop growth as well as post-harvest processing and storage. By changing environmental parameters, climate change affects the types, distributions and viability of crops and livestock farming, and which crops can grow where.

While climate change affects all countries, it is notable that the impacts of climate change are differently distributed amongst regions, generations, age classes, income groups, and occupations noted that climate change-driven impacts often act as a threat multiplier, compounding other drivers of poverty and food insecurity. Many vulnerable and poor people are dependent on activities such as agriculture that are highly susceptible to temperature increases and variability in precipitation patterns. Thus, even modest changes in rainfall and temperature patterns can push marginalized people into poverty as they lack the means to recover from shocks. Extreme events, such as floods, droughts, and heat waves, especially when they occur in combination, can significantly erode poor peoples’ assets and further undermine their livelihoods in terms of labour productivity, housing, infrastructure, and social networks.

It is important to note, however, that any projection of how climate change will affect agriculture is fraught with deep uncertainty, and as a result, they are a poor guide for decision making in the short to medium term. Thus, rather than planning for specific climate change scenarios, the focus should be on planning for flexibility, robustness and resilience in

3 The Malabo Declaration is a set of goals to achieve the vision of shared prosperity and improved livelihoods for Africa.
the face of a range of possible future climates, and gaining a clear sense as possible of existing adaptive capacity and vulnerability of African farmers in the face of historical and contemporary forms of climate variability. It is crucial to attempt to understand the differentiated implications based on gender, age, class and ethnicity, for those involved in agricultural activities. Only in this way can we start to grasp the implications of climate impacts for agricultural productivity and rural poverty of different groups, as well as food security and nutrition implications.

6. Are there other issues you would like to draw to our attention?

1. Agriculture and employment of young people in SSA: SSA is the most youthful continent in the world with 60% or more of its 1.1 billion people under 25 years of age. Three-quarters of young people in SSA are either unemployed or underemployed. The informal sector is the dominant employer, and the majority of those within it are poorly paid. Despite significant growth in recent years, African economies have failed to transform and create more jobs with better working conditions, particularly for the young. Within the agriculture sector, there is a need to identify and provide support to growing segments (farms, agro-processing, services, etc.), where decent jobs are being created.

2. Building an enabling environment for agriculture in Africa. The success of any particular measures to improve productivity in SSA will be either significantly constrained or significantly bolstered by the quality of the business environment. Although the environment for agricultural investment varies considerably across SSA and is improving, it presents constraints in many cases. The World Bank’s ‘Enabling the Business of Agriculture’ report, for example, finds that poorly-designed regulations undermine agricultural productivity and trade, as well as SSA’s competitiveness on global markets. In an effort to compensate for these weaknesses, African governments have put in place a number of tax breaks and related fiscal incentives. However, recent research with investors shows that these although these incentives benefit businesses, they have failed to attract new investment and tend to be applied arbitrarily and sometimes with considerable delays. Policy incentives would be better focused on supporting public goods such as infrastructure development (transport, electricity, storage), and addressing finance gaps, which together would lower the cost of production and improve the competitiveness of African agriculture. These improvements will also deliver wider benefits across the sector, rather than supporting particular companies only.

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