Between 2005 and 2014, the average annual machinery growth rate in Nigeria was two percent, while the average agricultural output grew by 1.2 percent. According to the African Union’s Biennial Review Report in 2018, Nigeria is currently not on track toward achieving the Malabo commitment target #3.1, “Access to agriculture inputs and technologies,” with a score of just 0.37 out of a minimum of 5.53. The overall commitment category score is 10. Nevertheless, it is encouraging to note that the Government’s institutional and programmatic reforms are beginning to show signs of progress and a renewed interest in the use of new technologies and machines to optimize potential along the agriculture value chain can be seen.

INSTITUTIONAL COMMITMENTS

Between 2011 and 2016, the Government of Nigeria began to reform the agriculture sector through the Federal Ministry of Agriculture and Rural Development’s (FMARD) Agricultural Transformation Agenda (ATA), with the aim of increasing the income of smallholder farmers and rural entrepreneurs engaged in the production, processing, storage and marketing of selected commodity value chains.

FMARD prioritizes the transformation and growth of value chains where Nigeria has comparative advantage, to create much-needed employment opportunities within them. To achieve this, the ministry seeks out partnerships with a variety of key stakeholders, including the private sector, and through inter-ministerial collaboration.

Based within FMARD, the Federal Department of Agriculture (FDA) has a division dedicated to engineering and mechanization in the agriculture value chain. The FMARD also introduced several fiscal policies to stimulate the uptake of mechanization:

- Increased tariffs on commodities that Nigeria can produce (rice, starch, sugar, wheat etc.) to promote domestic production and local content;
- Zero tariffs for import of agricultural equipment and agro-processing equipment;
- Tax breaks for investors developing processing plants in staple crop processing zones; and
- Incentives for investors for blending plants for ethanol.

Furthermore, in 1990, the National Centre for Agricultural Mechanization (NCAM) within the FMARD was established to accelerate the pace of mechanization in the agricultural sector. A focus was on the need to develop locally adapted and developed machinery and technology to increase agricultural production and productivity, enhance farmers’ income, reduce food imports and increase food exports. In 2003, the Agro-Industrial Development Unit (AIDU) of FMARD was merged with NCAM, and the centre was restructured into eight departments. Of these, six technical departments focus on processing, storage, farm power and machinery, land and water management, and agro-industrial development and extension services. NCAM also offers specific services on agricultural machinery development, machine and equipment hiring, testing and certification and training on how to operate, maintain and repair machines.

POLICY AND PROGRAMMATIC COMMITMENTS

In 2016, the Government introduced the Agricultural Promotion Policy (APP), which will run until 2020 and seeks to build an agribusiness economy capable of delivering sustained prosperity by meeting domestic food security goals, generating exports, and supporting sustainable income and job growth. In terms of mechanization, the APP seeks to support a National Agricultural Research System (NARS) to generate and commercialize new agricultural technologies that meet local needs, while improving infrastructure such as roads, railroads, and irrigation systems that are currently either insufficient or, when available, not cost-competitive.

Therefore, the one of the goals within the mechanization policy will be to support private mechanization services. The private market is the largest source of rented tractors, providing close to one-third (North Central and South zones) to almost half (North-East and North-West zones) of tractors rented in 2010. Although the provision of mechanization services by owner-operators is rising, the sector is still in early stages. Companies such as Hello Tractor are focused
on increasing smallholder farmers’ access to timely tractor services and eventually other farm inputs. Moreover, initiatives such as the Cassava Mechanization and Agro-processing Project (CAMAP) run by the African Agriculture Transformation Agency (AATF), have increased the adoption of mechanization for crop production among farmers by providing cassava planting and harvesting machines to farmer clusters in Ogun, Oyo, Osun, Kwara, and Kogi states. In addition, IITA has introduced local processing technologies across the cassava value chain that are driving the processing of cassava into value-added products such as garri (a type of flour), ethanol, and industrial starch.

To address persistently high levels of post-harvest losses, Coldhubs Nigeria introduced solar-powered cold stations for storage and preservation in major Nigerian markets such as the Relief Market in Owerri, Imo State. The cold stations extend the freshness of perishable foods from two to 21 days and reduce post-harvest losses in markets and farms by up to 80 percent. Moreover, in 2014 the Africa Exchange (AFEX) and the Government introduced the Electronic Warehouse Receipt System (e-WRS) to facilitate the storage of agricultural products. Farmers and distributors are able to store products in certified warehouses, which provide quality storage facilities, reducing post-harvest losses. Warehouse receipts are eligible as collateral and can be used to access finance from banks. By 2016, the scheme had engaged 60,000 farmers across eight states, with plans in place to develop mobile warehouses.

Furthermore, the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) was launched in 2011 and incorporated in 2013 by the Central Bank of Nigeria (CBN) in the form of a US$500 million public-private initiative to define, measure, price, and share agribusiness related credit risk. NIRSAL is designed to enable the flow of affordable financing to all actors along the agriculture value chain. It has a range of financing products, including agricultural machinery, irrigation, aggregation and storage and processing. In the area of mechanization, the NIRSAL through the CBN guarantees up to 75 percent of banks’ loans to the sector that individual farmers and entrepreneurs can borrow to finance the import of tractors for sale in the domestic market.

Targeted government and private-sector-led initiatives and policy interventions over the past year are showing signs of progress and are advancing the uptake of mechanization along the agriculture value chain. However, as the recent Biennial Review Report has shown, much progress remains to be made to meet national and international targets, including the Malabo commitment of ending hunger by 2025. The real issue seems to be the capacity to transition from pilot ideas to broad based interventions to reach a critical mass of actors in key value chain segments.
