Prof Hamadi Boga at a past event. Photo Credit: Panagrimedia

Creating wealth through agriculture

By Prof Hamadi Boga

I grew up on a farm in Ukunda settlement scheme, Kwale County. We grew cashew nuts, coconuts, cotton, sesame, mangoes, citrus, and papaya. Production was rainfed, not well planned and our market was mainly traders and middlemen who showed up. Nothing was really planned in any meaningful way. We were not intentional about inputs (seeds, pesticides, varieties, fertiliser) or markets/value addition. There was no entrepreneurship, had zero weather or soil information and had minimal agronomic support or advice. If there was an agriculture system behind what the family was doing, we were largely unaware of it. For most African farmers, this is the experience. Farming is something you just do.

It is a stark contrast to Australia, for example, where farming is a profession; you choose and you go and train to be a farmer in a vocational college. I had a chance to talk to Stuert Baden, a Kenyan farmer of Australian origin, farming in Kenya's Machakos County. When you visit him, the conversations you will have are illuminating. He will tell you about soils, soil carbon, mulching, pests surveillance, access to certain varieties, yields per ha, fights with the Kenya Agricultural and Livestock Research Organisation (KALRO) and Kenya Plant Health Inspectorate Service (KEPHIS) about access to superior genetic resources (new hybrid varieties), agro-weather information, dry planting. This guy has no college degree, but he knows his stuff and he is in business. He is not doing farming as a cultural or survival exercise, which is what most smallholder farmers in Africa do.

Transforming the African smallholder farmer is therefore crucial for a robust food system. Not everyone can be a farmer. So with limited resources we have to figure out which farmers we wish to support to be farmers and where to direct social protection interventions. Most governments, because of a narrow interpretation of food security, scatter resources all over the map mostly driven by political considerations. Most investments go into one or two crops. In Kenya if you look at the national government or county government agriculture budget, it is mainly geared towards maize. And yet data shows that most maize farmers are net buyers of maize, that is they do not produce enough to feed themselves. With yields hovering around 1.5 metric tonnes per ha, a farmer on 2.0 ha harvesting 3.0 metric tonnes is assured of perpetual poverty. So what should we really be doing with the smallholder farmer who sits at the centre of our food system?

Farming as a career
Let governments make farming a profession or career. Let those who are farmers not fluke their way there or farm as a culture. At the age of 15 we should be channelling some youth into farming careers through proper education as do other countries and develop a career path for them.

Research and development
Let governments invest in robust agricultural research, development, education and extension systems. Studies have shown that every one dollar invested in a research, education and extension system will return 20 dollars. Most African governments invest peanuts in research, are starving their universities of resources and have horrible extension worker to farmer ratio (for Kenya 1:3000). Without this investment, farming will remain frustrating and unprofitable for the smallholder farmer in Africa.
Here are a few statistics that show that it is important to invest in agriculture in Africa:
Sixty percent of Africans work in the agriculture sector.

Africa is food insecure; we spend USD 40 billion to import food annually.

There are about 350 million food insecure Africans (25 percent) and 20 percent (282 million) are malnourished.

By 2030 there will be an extra 300 million more people to feed in Africa. Africa is the only continent that is growing and has a youthful population and by 2050 is projected to surpass China, India and the US. Nearly 75 percent of the population is below 35 years.

More than 400 million Africans live on less than USD 2 per day (below the poverty line).

Yet Africa sits on 60 percent of global arable land. Global demand for food will increase as the global population is projected to hit nine billion by 2050.
A climate crisis is threatening to cut down productivity.

Farmer organisation
Farmers must be organised into farmer groups, cooperatives or producer organisations according to value chains and geographies. A lonely farmer growing mangoes in one corner of the world will not attract secondary investments, will be exploited, will struggle to be profitable and will lack a voice.

Prof Boga flags off distribution of quality seeds and seedlings when he was the Principal Secretary, State Department for Agricultural Research in the Ministry of Agriculture. Photo Credit: File

Value chain
Smallholder farmers must be guided on value chain selection. On less than 2 Ha, horticulture makes more sense than growing maize. It is simply a matter of economies of scale. Maize or wheat are low value crops, and globally are produced in large scale farms which are more competitive thereby lowering the cost of production. In the USA, maize farmers produce anywhere between 8 to 12 MT ha, Europe 6 MT per ha and Asia 4 MT ha. This is why rice produced in Pakistan or maize produced in Mexico is more competitive than locally produced rice or maize. All effort should focus on competitiveness of the African production system by empowering the smallholder farmers.

What does it take to organise a functional efficient value chain? How many value chains do we have to think about? In which geographies? Who are the system actors? What binding constraints are they facing that hamper growth? What does the market demand? When? What are the standards?

Government responsibility
The primary responsibility for setting priorities for food system transformation and growth lies with the government. A capable government must understand and support the transformation and growth of its food system. It must recognise system actors in the various value chains, support and respect private investment and create an enabling environment for the system actors to do their part. For the systems to be inclusive they must be lifting smallholder farmers who form the bulk of our producers (80 percent), support the dignified involvement of youth and women and must be designed to uplift rural areas. Ultimately agricultural development is a major part of rural development and is a major driver of industrialisation.

Private sector
A food system is very complex. It includes such matters as land, production, transport and logistics, processing, marketing, food safety, health, nutrition and climate issues. The food system is therefore a set of interconnected and cross impacting initiatives that must be well thought, well designed and well executed. It presents the best opportunity for wealth and job creation through input production and retail, production (on farm), processing, trading and consumption. In Africa, the food system holistically could contribute nearly 50 percent of GDP combining production, logistics, manufacturing, hospitality sector.

Ultimately most activities in agricultural value chains are a private sector affair starting from the farmer, input suppliers as well as output suppliers or markets. The biggest favour that a government can do to its agricultural sector is to play the role of a neutral world class referee. They control and direct the game, but are not a player.

They referee the match and make sure that there are fair rules that every player understands and follows. The biggest challenge with African politicians is that they have been reluctant to let go of what the private sector is better placed to handle and ensure that government remains a neutral player. As a result of the inability to separate the roles between government and private sector, Government actions, red tape, corruption and poor policy choices have led to the death or stunting of most agri-value chains. In Kenya, where success is evident is where farmers and the private have been facilitated with an enabling environment to produce and act in the market.

The horticulture sector is an example of where smallholder farmers have done very well and are bringing into Kenya millions and creating jobs. The horticulture sector does not attract much politics, does not get much attention from politicians but it is thriving. Government has enabled it through laws, standards, airports, roads, electricity, warehousing facilities, trade agreements, regulatory and supportive institutions, financial institutions funding business, training for human resource and then stepped back to allow the private sector to take advantage of the opportunities.

When it comes to the political crops like maize, sugarcane, coffee, tea, and wheat, which ideally should be large-scale farmer-driven enterprises, governments have failed by allowing fragmentation of land into uneconomical viable units, failed to support research into genetics and agronomy, watched farmer organisations collapse, undertaken interventions that have distorted the markets like fertiliser subsidy programmes that are hurting the private sector and all this has been done to influence politics and to create conditions where corruption can thrive. That is why across Africa, there is always a sugar, maize or fertiliser scandal hanging around the heads of government officials and politicians.

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Smallholder farmers need to be guided on value chain selection. Photo Credit: