

# **Agricultural Development in Sub Saharan Africa**

Seminar on December 16, 2014

## **Introduction**

***by dr. ir. M. Wessel, emeritus professor Tropical Crop Science, WUR, chairperson***

In the previous SKOV seminar Kurt Lindijer gave an historical review of developments in Sub Saharan Africa during the last 50 years, starting with the African socialism and selfreliance approach of Julius Nyerere in Tanzania in the 1960's and the rise of capitalism in countries like Nigeria since the 1990's. Nigeria's minister of agriculture, in Wageningen on November 4, highlighted this capitalistic approach: agriculture should be seen as a business enterprise which needs foreign investment and not as a tool for economic development. The 2008 World Bank Development Report on the other hand states that agriculture in Sub Saharan Africa has to play a key role in economic growth, realising food security and reducing poverty and, that governments had not given priority to agriculture. The report concludes that a productivity transformation of smallholder farming is therefore needed.

*Today we will review the principal resources and constraints for agricultural progress in Sub Saharan Africa: the physical environment and socio-economic conditions and we are lucky that we have today three highly qualified speakers to introduce these subjects.*

## **African Population Dynamics, Economic Growth & Labour Perspectives**

***by dr. Akinyinka Akinyoade, African Studies Centre, Leiden***

*You need to look into current population dynamics to understand what is going on in African agriculture. Africa's (total) population has grown fast from about 0.5 billion in 1980 to 1.1 billion today in 2014 and projected to increase to 2.4 billion in 2050. Sub Saharan African population grows with over 3%, the fastest in the world. Urbanisation will increase from some 40% now to 60% in 2050, with Sub Saharan Africa at a relatively lower percentage. 'Africa moves from a continent of states to a continent of cities'. The largest city conglomerates are Cairo, Lagos, Kinshasa and Jo-burg. Even with declining birth rates, Sub Saharan population will continue to grow at a fairly rapid pace after 2050 and it will still be quite youthful.*

*World food demand will rise significantly, fastest in Sub Saharan Africa, the world's poorest region. Dry lands are vulnerable, particularly in the Sahel. The rapid urbanisation requires rapid adaptation in agriculture and food logistics. Agricultural entrepreneurs are active in urbanising regions, they can be considered drivers of change. Key factors are: production enhancement, market development, social security policies and, governance efficiencies.*

## **Soil, Water and Climate Constraints**

***by dr. ir. Bert Jansen, Plant Production Systems, WUR***

*It is low soil fertility that hampers agricultural development in Sub Saharan Africa.* There is scientific consensus that the low fertility of the soil, especially in N and P, is often much more a limiting factor than the low and irregular rainfall. And costly fertilisers can hardly be afforded by Sub Saharan farmers to replenish nutrient-depleted soil. This explains that cereal yields per hectare are 5 to 6 times smaller than in The Netherlands: differences in soil fertility, climate and farming systems. Geology explains a lot. Most African soils are developed on weathered Precambrian rock and lack minerals. Naturally rich soils are scarce and limited to patches of loess, volcanic, marine and fluvial deposits. This is aggravated by the fact that large river systems rarely reach the sea to form a delta, different from Asia where large alluvial delta's were built up in shallow waters. Water in African rivers evaporates before it reaches the sea and if it reaches the sea, sediment loads are dispersed into deep water. Only volcanoes are sources of fertile sediment. Rivers mostly carry sand, not clay, and if clay is transported and deposited it mostly is poor in minerals, except when from volcanic origin.

*Therefore the overall conclusion for Sub Saharan Africa is that it is "endowed" with large areas of Precambrian rock, whose soils are extremely poor in nutrients and sometimes have physical constraints too, which makes them not responsive in delivering minerals plant need: 'the unlucky fate of Africa'.* Volcanic soils often are situated on slopes and easily prone to erosion, while more fertile clay deposits often are too heavy for manual tillage. A large part of SSA is landlocked, making demand and supply costly, due to high costs of logistics. Making food available in sufficient quantity and quality in SSA therefore never will be easy.

## **Agricultural Development and Food Security in Sub Saharan Africa; observations from the field**

***by ir. Elisabeth Visser, entrepreneur Strawberries Foundation***

In many African countries agricultural development is expected to jumpstart economic growth and reduce poverty. But that is not necessarily so, agriculture can also be seen as a business instead of a development program. The rural population is poor and food insecure and the majority is subsistence farmer, smallholder. A smallholder has a small acreage, limited or no use of inputs and, low labor productivity. He or she is self-sufficient in both food and seed, grows cash crops for cash expenditures and is trapped in a vicious circle of indebtedness.

An often proposed remedy is that smallholders should become commercial and should invest in production. In so doing they would generate more revenues, resulting in less poverty.

*My observation, however, is that subsistence farmers are already market oriented and work economically sound but, that the volatile environment they work in calls for risk aversion.* They make rational decisions and give priority to secure their own food, only selling food crops in last resort. They have a weak negotiation position due to urgent cash requirements; cash crop prices are even more volatile than food crop prices.

*Fair trade and fair prices for cash crops can be very helpful and subsidised inputs combined with input insurance can be an effective instrument. The link between research and dissemination to the field is still very limited and more specialised information on constraints in particular farming systems is*

*necessary at field level. Donors and NGOs are often disappointing in searching for new and customised approaches.*