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BUILDING EBA-DRIVEN AGRICULTURAL COMPETITIVENESS BY HARNESSING CASSAVA VALUE CHAIN

Africa holds a significant global comparative advantage as the largest cassava producer. It is also the most inclusive sector – agriculture. Meaning maximizing its productivity stands to put more money in most pockets to orchestrate inclusive wealth. This crop is not only climate resilient - it fuels the lucrative allergen-free foods subsector generating over \$20 billion each year. This means, Africa could enhance its competitiveness and tap \$20 billion worth of income, jobs and enterprise opportunities each year. Entities thrive first and foremost on turning areas of comparative advantage into competitive edge, to pull ahead of competition and Africa will be no different. Reaping these benefits however calls for industrializing the sector. Where clean energy developments – an area where Africa also has yet another comparative advantage. This will however require innovative enablers in policy, finance and markets discussed in-depth in this issue.

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Inside

POLICY NEWS

Innovations for EBA-driven Agricultural value chains in Africa

The Cassava Strategy: The transformation needed

Cassava contributions

Strategies to deepen the Cassava industrialization

PROJECT NEWS

Smallholders farmers project Cassava agro-industrialization in Buganda Kingdom

EVENTS & CLIMATE WARNINGS



Innovations for Agricultural Value Chains in Africa: Enhancing the Cassava Value Chain

Cassava is an important staple crop in sub-Saharan Africa (SSA). Most cassava is produced on smallholder farms with family labour using hand tools and without use of external inputs. Across SSA, cassava is mainly used for human consumption. Cassava is Africa's second most important food staple in terms of calories consumed per capita and is a major source of calories for roughly two out of every five Africans.

Traditionally cassava was seen as a food security crop, but production has expanded rapidly in SSA in response to increasing demand (rapidly expanding and urbanizing population). Resembling a sweet potato, cassava is a starchy root crop that develops underground. The edible, tuberous root grows between 15 to 100 centimeters and ranges in mass between 0.5 and 2.0 kilograms. It holds the position as a primary food security crop in Africa due to its resistance to drought and disease, flexible planting and harvest cycle, and tolerance of low-quality soils. Cassava can remain in the ground for up to 18 months after reaching maturity (or more in the case of some varieties) and is well suited for a region that suffers both environmental and political hardships.

Total world cassava utilization is projected to reach 275 million tons by 2020 with some researchers estimating the number closer to 291 million tons.

Africa claims 62 percent of the total world production. Africa is the largest producer of cassava, with Nigeria leading the world with nineteen percent of global market share. In sub-Saharan Africa, cassava is cultivated on small farms often in fields to be set aside as fallow and often cropped on marginal soils, replacing crops that require greater soil fertility and cultivation. Cassava also is associated with mixed cropping systems. Cassava roots can remain in the ground for 18 months or more without spoiling; however once unearthed has roughly a two day shelf life without treatment. Over the past years, cassava production in sub-Saharan Africa has risen substantially, but most of the gains in overall production are attributed to an increase in the area of land cultivated rather than an increase in yield.

The form in which cassava is used and consumed varies across Africa. The majority of cassava is consumed either as fresh roots or as traditional processed products. Processing is important because of the perishability of the fresh roots, which limits marketing. Cassava consumption patterns vary between East and West Africa. For example, Ugandans consume 80 percent of their cassava crop largely in raw form (i.e., cooked fresh roots), while Nigeria uses most of its cassava in processed forms. The enhanced production of processed cassava products throughout sub-Saharan Africa is of significant interest because of the potential for increasing smallholder farmers' income (given cassava production patterns in Africa, which is concentrated among smallholders).

One of the major challenges for cassava producers and processors is access to markets and creating interest in new market opportunities. These include, for example: high quality cassava flour; improved and more convenient versions of traditional processed products; starch, sugar syrups; use in livestock feed rations; use for bio-ethanol production; and energy drinks. High quality cassava flour is of particular interest because it can be used as a substitute for 10 percent or potentially more wheat flour in pies, pastries, cakes, biscuits, and doughnuts and has some industrial applications. Cassava flour is also commonly converted into sugar syrups used to produce ethyl alcohol. High quality cassava flour has the potential to completely replace imported, starch-based adhesives. Livestock feeds rely primarily on dried cassava pellets and can be used domestically or exported. Use of processed cassava in these products, however, is highly dependent on quality and price, which relates significantly to processing efficiency and on farm yields.

Appropriate institutions and endowments are needed as well as 'getting the prices right' in order to induce market-based development. If cassava can be processed in a more efficient manner, it stands to gain in domestic demand as well as a potential export.



THE CASSAVA STRATEGY: TRANSFORMING A TRADITIONAL TROPICAL ROOT CROP IN AFRICA

The vision for cassava in Africa is that if the cassava food system is improved,

it will enhance rural industrial development and raise incomes for producers, processors and traders. Cassava will contribute more to the food security status of its producing and consuming households, and will become an even more important cash crop that can promote rural development. Cassava is the basis of a multitude of products, including food, flour, animal feed, alcohol, starches for sizing paper and textiles, sweeteners, prepared foods and biodegradable products. The products are derived from a number of forms of cassava, ranging from fresh leaves and roots to modified cassava starch. The degree of processing and the technical requirements tends to increase from the fresh form to the modified starch form.

All of the above products represent potential market development opportunities for cassava.

While some cassava is sold as fresh roots or leaves, even these products usually receive some special post-harvest handling or treatment before they are consumed. As cassava normally requires some form of processing before it can be consumed or sold, processing becomes of central importance in the future of the crop. While the market potentials are great, it must be remembered that these opportunities are location- and time-specific. Because of the specificity of market opportunities it is impossible to develop a list of priority market opportunities. The following section, however, attempts to highlight some the benefits and challenges that might be encountered when attempting to develop different types of cassava markets.

Fresh roots and leaves are used primarily as human food. Because of their perishability, most roots are usually consumed or marketed close to the centres of production. Traditional methods for preserving fresh roots include packing roots in moist mulch or by removing leaves two weeks prior to harvest to prolong root shelf-life to two weeks. In Colombia, CIAT researchers found that preservative treatments such as dipping in wax or paraffin of fresh roots followed by storage in plastic bags reduced vascular streak and extended storage for three to four weeks. Roots can be peeled, chopped into chunks and frozen for specialized markets.

Cassava leaves can be eaten as a fresh vegetable, ground fresh and frozen in preservation bags, or dried and ground for sale. Leaves are more nutritionally balanced than the roots and can help to prevent certain deficiency diseases. Leaves, however, may be high in hydrocyanic acid, but the HCN can be reduced to safe levels in most cases when the liquid is squeezed out after grinding and through evaporation during cooking.

Potential for fresh cassava

Higher incomes and urbanization are associated with greater consumption of convenience foods and foods that are perceived as more desirable foods. Urbanization, in cassava-producing countries, represents an opportunity for producers to produce cassava for a larger consuming population. The implications are that cassava markets for fresh cassava can grow if products are convenient and in a more desirable form. Costa Rica has demonstrated that there is a

growing export market for fresh cassava (if it is packaged in an attractive and useful manner). The potential for fresh cassava in producing countries represents growth first through concentration although competition and innovation are important factors as well. The potential for fresh cassava in non-producing countries represents growth through competition and innovation.

Major strategy concerns: growth through concentration suggests needs to improve production, storage and processing technology, and improved infrastructure.

In this regard reducing pest and disease attack, particularly on sweet varieties, reducing HCN levels in roots and leaves, weed control, and lowering overall costs of production and processing are priority needs. Growth through competition and innovation requires input from various sectors in the supply chain. There will be a need to develop and adopt new processing techniques to maintain the freshness of cassava and promote the convenience of the product in fresh form. In many instances the need for promotion will be a key component to developing these markets. Finally, when developing and promoting markets for fresh cassava it will be necessary to factor in information on tradition and familiarity product characteristics, such as root form, colour of skin and flesh, ease of peeling, cooking time, aroma and taste..

CASSAVA CONTRIBUTION TO INCOMES IN SUB-SAHARAN AFRICA



Cassava is an important source of farm income in many SSA countries. The COSCA study showed that in both Ghana and Nigeria, cassava cash incomes were the highest in farms with access to mechanized cassava processing equipment for the preparation of gari. The contribution of cassava to farm incomes was found to be low in Tanzania and Uganda because the majority of farmers in both countries lacked access to improved cassava processing equipment. In cassava producing areas, food crops contribute about 40% of household cash income, industrial crops and non-farm activities about 25% each, while livestock contributes about 10%. About 26% of cash income from all food crops in cassava-growing households (91% of all household) was derived from sale of cassava. It is clear that in cassava-growing areas, where the most important source of cash income is food crops, cassava is the most important food crop generating cash income.

Cassava as a source of foreign exchange

Virtually all of cassava production in SSA is used domestically, so cassava has not played any role as a foreign exchange earner, or in import substitution in the past. However, there now appears to be a window of opportunity opening up for export of cassava products, as the traditional Asian exporters appear to be having difficulties in satisfying demand particularly in the European Union market due to changes in the relative costs of production and comparative advantage ...[Read More](#)

AFDB ADVOCATES STRATEGIES TO DEEPEN INDUSTRIALIZATION OF CASSAVA



The African Development Bank (AfDB) is intensifying its financing for the production of crops with the highest potential for industrializing the African agriculture. Top on the list is cassava, which could be used to produce ethanol for industrial use and other frequently utilized home products, according to a Senior Advisor at the Bank. Martin Fregene, an Advisor to the Bank's Vice-President of Agriculture, Human and Social Development in Abidjan, Cote d'Ivoire, said the Bank's Feed Africa Strategy, which advocates for large-scale investment in the cassava crop and its rapid industrial processing, provides the best avenue for more farmers of the crop to benefit. Fregene made the comments at the 7th African Green Revolution Forum (AGRF) in Abidjan during a session on the "Rise of the African Food Economy: Cassava Value Chains", which took place on Thursday, September 7.

"Africa accounts for 50 percent of the cassava produced in the world and accounts for just 5 percent of all processed starch in the world. How is this possible and why shouldn't we achieve our goals of industrializing our crops," Fregene queried. Researchers, financiers, owners of cassava-processing factories

and contract farming organizations attended the session to discuss ways of reversing the cassava industrialization paradox. Fregene said through the Feed Africa Strategy, which focuses on building the cassava value chain, the African Development Bank has partnered with research and development organizations to create cassava varieties with higher ethanol content and longer shelf lives to reduce post-harvest losses during factory transportation.

Current efforts to grow the cassava value chain target 200,000 smallholder farmers in three countries with the mission of cutting US \$275 million worth of ethanol imports. According to Raja Rajasekar, Director at Allied Atlantic – a Nigeria-based alcohol distiller which produces 9 million litres of ethanol every year and boasts a daily production of 30,000 litres – the lack of proper road infrastructure in West Africa makes it much harder for cassava farmers to deliver raw materials to factories. Rajasekar said his factory runs just 60-80 percent of its capacity because it is not in a position to meet its 250,000 tonnes of cassava deliveries daily....[Read more](#)

10,000 SMALLHOLDERS TO BENEFIT IN NEW CENTRAL AFRICAN CASSAVA



Brazil to groom African youth in cassava processing

The African Development Bank (AfDB) and the Brazil-Africa Institute (BAI) have launched the Youth Technical Training Program (YTTP) – an initiative that aims to train young African professionals in research and technology transfer, contributing to local capacity development. The YTTP initiative is sponsored under the South-South Cooperation Trust Fund (SSCTF) and will consist of an array of professional development schemes to meet diverse needs of African countries by utilizing Brazil's technology, skills and knowledge. Focus areas include agriculture and rural development, health, education, information and communication, infrastructure, and the creative industry. As part of this initiative, both parties on Thursday, September 14, announced the commencement of training of African youth for rewarding careers in cassava processing.

The first batch of the YTTP training, which was flagged off at the AfDB headquarters in Abidjan, Côte d'Ivoire, targets 30 young African professionals (between the ages of 18 and 35) of the cassava value-chain selected from 14 countries. The trainees will receive a two-month training on the production chain of cassava at the Brazilian Agricultural Research Corporation (EMBRAPA) – a state-owned centre in Brazil. Additionally, the project will couple solar energy with agriculture, education and training, micro finance, food processing plants and other humanitarian projects that have had economic, spiritual, physical, social, cultural, civic, political and educational impact in the community. This will reduce migration to the cities in the search of opportunities. Consequently, this will mark a new era in the reduction of urbanization...[Read More](#)



PROJECT OVERVIEW

The Technical Centre for Agricultural and Rural Co-operation (CTA), together with the Regional Platform for Central African Producers Organisations (PROPAC) and the International Institute for Tropical Agriculture (IITA) has launched this week in Kinshasa a new project to unlock the economic potential in cassava value chains in both DRC and Cameroon.

10 cassava cooperatives (five per country) will be targeted with a combined membership of approximately 10,000 smallholder farmers. Expected outcomes include increased income, enhanced food security and employment opportunities for women and youth. With a growing urban population and increase in middle class income, cassava plays a critical role in achieving food security objectives but can also be the basis for innovative and sustainable business models especially for women and youth. For millions of Central African smallholders, the road to urban food markets leads through this nascent agricultural processing sector.

However, while the cassava sector continues to play a critical role in Central Africa in terms of income generation, food security and job creation for rural communities the industrial processing of cassava, although often described as a great opportunity for the local agro-

food industries, is not yet economically and financially sustainable. Industrial bakeries for example still rely to a great extent on imports of wheat flour.

Accelerating Innovative and Sustainable Cassava Business Models for Women and Youth in Central Africa

The 'Accelerating Innovative and Sustainable Cassava Business Models for Women and Youth in Central Africa (Manioc21)' project will fine-tune and accelerate innovative and new business models that create market linkages and promote added-value activities to be scaled-up at the regional level. Starting in DRC and Cameroon for a period of two years, the goal is to gradually increase the number of cooperatives to be supported across Central Africa..

Groundwork for the project was laid at the CTA-PROPAC-IITA convened Regional Forum on Cassava in Cameroon in December 2016 which identified local innovations that, combined with new skills can trigger the development of new business models that will eventually improve the economic performance of cooperatives around cassava value chains and lead to job creation and business opportunities in particular for women and youth....[Read more](#)

KENYA FARMERS INCREASE CASSAVA YIELDS AND INCOME



Hundreds of farmers groups in Kenya have seen both yields and incomes from the production and sale of cassava increase over the past two years. A recent survey of cassava groups involved with a Gorta-Self Help Africa project, backed by The Walmart Foundation and the European Union, showed the positive impacts of a scheme that has been supporting 28,000 smallholder farmers and farmer cooperatives since 2016.

Responding to a growing demand for quality cassava products in the East African country,

The project supported both the distribution and planting of improved cassava cuttings, together with the promotion of a range of improved farming practices. A study of farmers and farmer groups involved in the scheme found that 76% of farming households that had received improved cuttings had increased their yields by an average of 30%, while cassava production cooperatives involved in processing the tuber and trading chipped cassava had increased their incomes by nearly 140%.

Approximately 320 of the 400 farmer groups that the project worked with had successfully improved governance and management structures, while four out of five new farmers cooperatives involved had developed new business plans for the production, processing and marketing of chipped cassava products, which earned a higher price in local markets than raw tubers... [Read More](#)

OFFSHOOTS FROM EBAFOSA UGANDA CASSAVA AGRO-INDUSTRIALIZATION IN THE BUGANDA KINGDOM



On 9th and 10th August 2018, the EBAFOSA Uganda organized a progress assessment on key EBAFOSA pillars critical to catalyzing a country-led, demand driven transition to the low emissions development pathway. Accordingly, the assessment focused on three key pillars – the clean energy & Ecosystem Based Adaptation-driven agriculture amalgamation pillar, the market incentives pillars & the policy coherence pillar. These combine policy & operational aspects crucial to drive climate actions from an opportunities perspective- where the result is expanding economies, ensuring food security & creating multiple income opportunities – which remain the leading priorities of countries. And by this, catalyze a demand driven, country led transition to the low emissions development pathway. In line with section 5 of the Paris Agreement, EBAFOSA Uganda has built extraordinary partnerships at both policy and operational level as exemplified in progress under each of these pillars. This is against a backdrop of the urgent need to accelerate implementation of Uganda's economic blue-print – the vision 2040 – while meeting the country's objectives under the Paris Climate Change Agreement as enshrined in its Nationally Determined Contributions (NDCs).

Key achievements

EBA/clean energy amalgamation pillar: under this pillar, working through the Ministry of Land, Environment and Agriculture in the Buganda Kingdom which has secured cassava supply contracts for its farmers with the Uganda Breweries worth \$5 million, EBAFOSA Uganda is convening necessary partnerships to ensure this supply chain is stabilized. Cassava is a critical raw material used in beer production. EBAFOSA is responding to the raw material shortages the brewery faces. Accordingly, through EBAFOSA Uganda, EBA approaches known to be climate resilient are being adopted as the preferred method to produce the cassava and ensure yields can be enhanced under the changing climate. In addition, clean energy actors have been mobilized to partner with the farmers & supply various clean energy interventions critical to maximizing productivity. Among critical systems are solar powered micro-irrigation to enhance yields & solar driers to preserve surplus and buffer the supply chain. Accordingly, a total of 10 acres under cassava have been developed in Ssentema, Busiro county.s... [Read more](#)

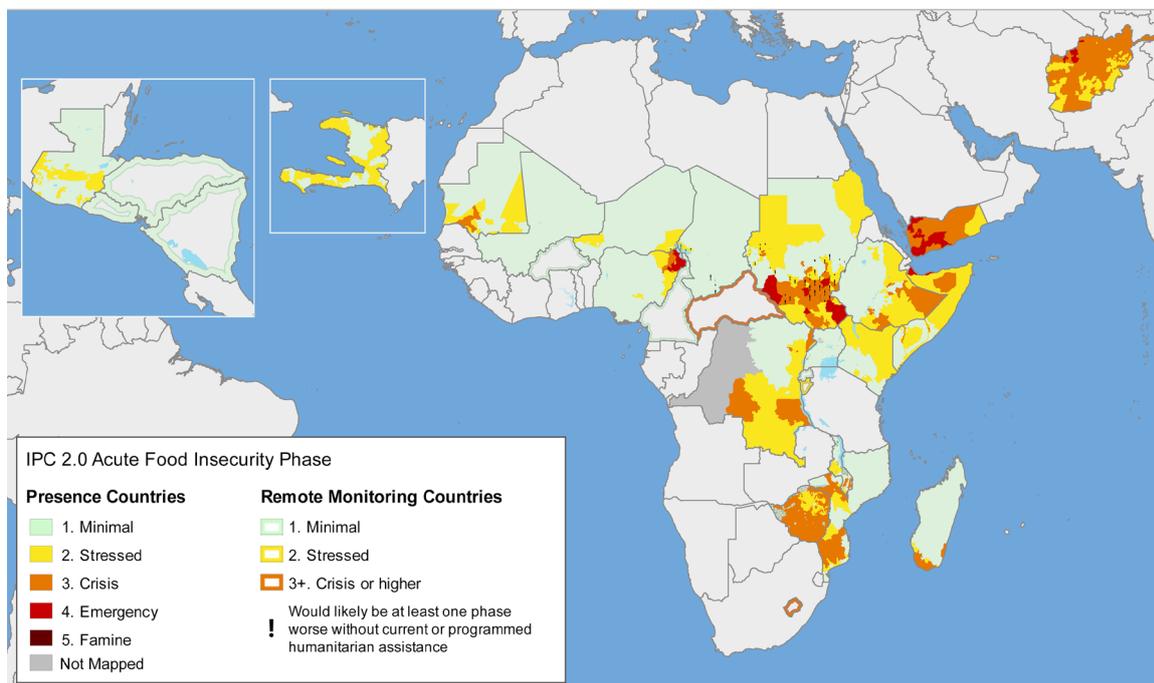
EVENTS

OCTOBER	<p>05 NEW YORK, US</p> <p>73TH Session of UN General Assembly (UNGA)</p>	<p>05 INCHEON, KOREA</p> <p>48TH Session of IPCC</p>	<p>05 BANGKOK, THAILAND</p> <p>5TH Green Industry Conference for Sustainable Development</p>	<p>05 ESCHBORN, GERMAN</p> <p>Closing the Financing Gap for Water in line with SDG ambitions</p>
NOVEMBER	<p>07 CAIRO, EGYPT</p> <p>Joint Scientific Advisory Panel on Environmental Outlook</p>	<p>05 QUITO, ECUADOR</p> <p>30TH Meeting of the Montreal Protocol</p>	<p>05 STOCKHOLM, SWEDEN</p> <p>8TH Meeting of the Inter-Agency Group on SDGs Indicators</p>	
DECEMBER	<p>02 SLASKIE, POLAND</p> <p>Climate Change Conference (UNFCCC COP 24)</p>	<p>03 NAIROBI, KENYA</p> <p>Water Security & Climate Change Conference</p>	<p>05 GLOBAL</p> <p>World Soil Day</p>	

CLIMATE WARNINGS

Acute Food Insecurity: Medium Term (October 2018-January 2019)

Acute Food Insecurity: Medium Term (October 2018 - January 2019)



PUBLICATIONS

Social implications of the development of the Cassava post-harvest systems in Africa

Understanding the linkage of urban and rural markets of cassava products in Nigeria

Innovations for Agricultural Value Chains in Africa

Scaling up Cassava value chains in Africa

Regional analysis of Cassava value chain in West Africa

Regional analysis of Cassava value chain in West Africa: A case of Sierra Leone

Financing Agricultural Value Chains in Africa

Tanzania to improve cassava in Africa with NextGen Cassava project

A value chain and market integration analysis of the cassava market in the Democratic Republic of Congo

RECENT RESEARCH

Cassava Intergrated value chain

Value chain and marketing margins of Cassava_

Gender dynamics in cassava leaves value chains: The case of Tanzania

A crop of one's own? Women's experiences of cassava commercialization in Nigeria and Malawi

Cassava Value Chain Analysis in the Niger Delta

Sustainable production intensification and value chain development in Africa

Building Competitiveness in Africa's Agriculture

Cassava value chain and its products in Morogoro rural district, Tanzania



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