

Chronic Hunger Still an Issue in Sub-Saharan Africa despite increase in Crop Production

Over the last ten years, African cereal crop production has increased by 26.0 percent reaching 167.1 million tonnes in 2012, compared to the global average increase of 22.8 percent. Over this same time frame, the contribution of African cereal crop production to global figures has risen slightly from 6.3 percent to 6.5 percent. Despite this growth, and continued food imports, there are millions of people still suffering from chronic hunger—especially in Sub-Saharan Africa (SSA), *writes Carolyn Krynauw, Chemicals Materials and Food Senior Industry Analyst at growth consulting firm, Frost & Sullivan.*

One in Four People are Affected by Chronic Hunger in Sub-Saharan Africa

Globally, progress has been made over the past 20 years to decrease the number of people suffering from chronic hunger from 1.02 billion people (1990-1992) to 842 million (2011-2013), according to the Food and Agriculture Organisation (FAO).

In sub-Saharan Africa, 1 in 4 people suffer from undernourishment; globally this is 1 in 8.

However, SSA stands in stark contrast showing an increase in absolute numbers (173.1 million to 223 million) and contribution to the global number of undernourished citizens (now 26.5 percent compared to 17.0 percent from 1990 to 1992). Progress has been much slower than in other regions of the world. Undernourishment in SSA now affects one one in four people; whereas globally the figure is one in eight.

Reduced Hunger Easier Said than Done

Various suggestions have been put forward to alleviate or mitigate this chronic hunger and food shortage. These include: increasing farmer education; avoiding the use of counterfeit crop protection products; using genetically modified (GM) seed to improve crop yield (although this is a controversial topic); increasing the use of irrigation, as opposed to rain-fed crop production; and improving agricultural policies and market access. The implementation of these suggestions, however, is easier said than done, especially when faced with droughts and floods, climate change, and fluctuating commodity prices (across cities, let alone countries).

It is not just a matter of growing sufficient food, but also preserving it along the rest of the supply chain. The concern of pre- and post-harvest losses is critical when considering the number of undernourished people in SSA, let alone the African continent as a whole. It is estimated that \$4 billion worth of food is lost in SSA annually. The exhibit below outlines where food is lost in the process between farm and fork.

Food Wastage and Loss Occurs:

In the Field



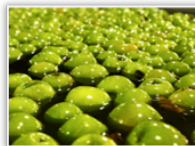
- Premature harvesting / methods
- Pests and diseases, climate change
- Artificially high quality standards.

Postharvest

- Lack of infrastructure, poor storage facilities and far distances to market
- Farmers receive 10% - 20% of the price due to transportation costs and losses



Processing & Packaging



- Lack of capacity to process and preserve farm produce in line with demand.

Retail & Consumption

- Lack of suitable storage facilities, unsanitary and crowded markets, and lack cooling equipment.



Source: Frost and Sullivan

Certain types of produce are more prone to post-harvest losses in developing countries, such as fruit and vegetables (in the region of 50 percent), and roots and tubers (30 percent to 40 percent). Cassava, a tuber, is Africa's most prolific crop both in terms of volume (149.1 million tonnes in 2012) and value (\$15.55 billion in 2012), according to FAO statistics. However, it needs to be processed within a few days after harvesting, otherwise it spoils. The lack of transportation or reliable transportation, and poor road infrastructure pose real obstacles and can render a farmer's crop useless. In light of this, recent research has focused on creating improved varieties of cassava to provide higher nutritional values, longer lasting produce, and to endure high-density growing environments.

Even when crops finally make it to the market, price fluctuations jeopardise the profitability of farmers. This problem is heightened when an estimated 70 percent of incomes are derived from crop production, notes Frost & Sullivan.

Price Volatility and the Need for Grain Storage

Maize crops in Africa are useful examples to illustrate price volatility. There are various factors that impact the final price of domestic maize in various African countries. Generally, these include international prices (Chicago Board of Trade); local stock exchanges; input costs; transportation costs; fluctuating exchange rates; import tariffs; and intermittent import or export bans implemented on an ad-hoc basis.

In addition to the above there are country nuances. In Ethiopia and Tanzania, the government (via a food agency) buys and sells maize at a set price, which can be pegged above or below the international price, depending on the state of food security in the respective country. Maize prices are lower in surplus maize-producing regions within a particular country than in other areas that don't produce maize or run a consumption deficit. For example, the Ministry of Industry and Trade in Tanzania maintains a record of maize wholesale prices in twenty two different markets, each charging a different maize price. As such, prices fluctuate within one country depending on the supply and demand for maize.

As a result of these differences, the average dollar price per tonne of maize in 2012/2013 marketing year was \$240 in South Africa, \$377 in Nigeria, \$472 in Egypt, and \$295 in Ethiopia. For the 2013/2014 marketing year, substantial price fluctuations are expected in certain countries, notably Nigeria (\$420) and Ethiopia (\$325). This is mostly due to a mismatch between supply and demand caused by droughts, floods, and similar issues with trading partners. Unfortunately, due to the limited amount of grain storage, farmers sell their crops when there is a surplus, receiving lower prices than could be achieved later on in the season when supply wanes and demand rises.

Africa is Abounding with Innovative Opportunity

Africa, especially SSA, faces numerous challenges regarding poverty, hunger, and infrastructure. But there are golden opportunities in between the challenges.

One example is Amiran Kenyan Limited. They began operating as an equipment manufacturer and supplier in the horticultural and floricultural sector in 1963. The constant perseverance to enhance the lives of those involved in subsistence farming through research resulted in an innovative product kit called Amiran Foundation Kit (AFK) packages. These packages are small-scale versions of the greenhouses and equipment used in large-scale farming. Included in these kits are seeds for high-value, short-season crops such as cucumbers, tomatoes, peppers, and sweet corn. Since the official launch of the AFK packages in 2009, a variety of alternative packages, such as Amiran Acre Kit (AAK) have been designed. The AAK packages are meant to be used on one acre of land and include a 500m gravity-fed irrigation system, hybrid seeds, water soluble fertilizers, water tank, pesticide sprayer, nursery set for seedling development, and pesticides. More comprehensive packages have a greenhouse (8 m x 15 m).

However, the most successful kit by far, called a minimal pack, is a derivative of the AAK package, excluding the greenhouse. It has the essentials for a farming start-up including an instruction manual on how to operate the various pieces of equipment and how to plant the seeds included inside. The minimal pack kit costs USD \$190 - \$200 and is intended to cover approximately one eighth of an acre and it includes seeds for easy-to-grow crops such as onions, carrots, and tomatoes.

Frost & Sullivan concludes that grassroots initiatives like these are valuable examples of how simple ideas can have a long-lasting impact in many communities, slowly reducing poverty and hunger. Perhaps one should turn the concept that "Africa is riddled with challenges" on its head. Africa is abounding with innovative opportunity.

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