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Zimbabwe, Sustainable Agriculture

### **Sustainable Agriculture in Zimbabwe**

The landlocked nation of Zimbabwe once relished in the reputation of being the “breadbasket of Africa,” but in just over a decade it has gone from being one of the biggest exporters of crops to being a major recipient of international food aid. Under Robert Mugabe's dictatorial government, smallholder agriculture was neglected by the state and productivity fell. As the country went through years of economic crisis, sustainable agriculture in Zimbabwe has stagnated. Modern Zimbabwe can no longer provide basic food to its citizens (“Time for Sustainable Agriculture in Zimbabwe.”) In the Gokwe district, southwest of the capital Harare, the majority of the population lives on the proceeds of its lands or income from the cotton plantations. There is almost no security in food and nutrition. Consequently More than 40% of infants' are chronically malnourished (Bandsom, Kerstin.)

### **Family Characteristics**

Out of the 16.53 million people in Zimbabwe 67.79% live in rural areas while 32.21% live in urban areas (“Economic Indicators: List By Country.”) Average families in Zimbabwe have 4 people living in one household. However it is common for polygamy, having more than one wife or husband, to exist in the household. In Zimbabwe many families do not have a reliable source of food (“Zimbabwe.”) Many family's diets consist of cheap dried foods that are able to last long periods of time, Sadza which is a stiff, flavorless maize meal porridge eaten with meat or stew that is filling as to make the meal last, and game meat that is often hunted and harvested by the family.

Families in Zimbabwe live differently in housing from one another, depending on their property and residence. Urban homes are harder to acquire therefore poorer neighborhoods have a larger population. In these poor neighborhoods, one-room shacks, wood and/or plastic and covered with corrugated steel are the most common houses of the population. Communities like these share boreholes, which are similar to wells, or a water tap and toilets. The poorest families live in rondavels, one-room huts made of mud, and roofs of dry vegetation. The family home would consist of numerous huts, each serving a different purpose. Most homes have a fence around the property that is made of tree branches, and rarely

use electricity (Fruchey, Aly.)

The people of Zimbabwe farm on the 162,000 square kilometers of land that is cultivated. Tobacco, maize, cotton, wheat, sugarcane, peanuts, and coffee are the main crops grown in this area. The average farm size for an A1 farm is 37 acres and the average A2 farm size is 318 acres (“Living Wage Series - Zimbabwe - January 2018 - In Zimbabwe Dollar, per Month.”) Farming is different in every part of Zimbabwe due to climate and geography. Zimbabwe has a mild climate, but temperatures decrease as the altitude increases. Also, there are many different land types such as plateaus, mountains, kopjes, rivers, forests, and waterfalls. These varying climates and land types make sustainable agriculture almost impossible.

### **Challenge and impact**

“It would seem efforts by the government and other stakeholders to make available inputs in a desperate bid to boost the agricultural sector in the country have all but gone to waste.” Contemporary farming in Zimbabwe today requires total engagement of the farmer and the nation at large. Information and education are prerequisites for the final agricultural yields. Smart farming hinges on the precision of timelines according to the environment, soil, water and the requisite chemicals required by the farmer for the crops in question. Getting agriculture moving in Zimbabwe is not a small, simple task.

Farming practices such as slash and the burning of agriculture have harmed the soil, as well as an excessive dependence on pesticides and other chemicals. Recent rainfall patterns have shifted from their historic schedules, rendering ancient knowledge obsolete. Rains can be overly abundant or followed by long dry periods of intense heat. The lack of crop diversity is problematic; if a family grows only one crop, such as wheat or millet, they cannot be used if the drought reduces the crop (“Time for Sustainable Agriculture in Zimbabwe.”)

It is continually becoming clear that simply providing agricultural inputs will not be enough to secure food security in the country. What is clearly required to save this country from an altogether agricultural downfall is a proper turnaround strategy (Masara, Chipso.)

According to the Commercial Farmers’ Union (CFU), the body that used to represent white farmers but is now open to all commercial farmers in Zimbabwe, up until 2001, a year after the launch of the “fast track” land reform, small-scale farmers produced the bulk of the country’s maize harvest. “Of the average 2 million tonnes of maize that used to be produced, more than half was grown by the [black] small-scale farmers,” says Richard Taylor, a CFU spokesperson. In 2001, small-scale farmers produced 1.2 million tonnes while the mostly white large-scale commercial farmers produced 800,000 tonnes. Over the years

the commercial farmers' contribution was consistent, as they irrigated their land, while that of the small-scale farmers depended on the vagaries of the weather (Mafundikwa, Ish.)

Taylor blames a lack of financial support for the sector's poor performance. He suggests the introduction of a scheme for small-scale farmers whereby they can borrow what they need from seed or fertilizer companies. "The farmers can pay back when they sell their crop and the loans should be guaranteed by the government." He also sees land rights as an answer. "Farmers should have security of tenure so they can use their land as collateral when they apply for loans." (Mafundikwa, Ish.)

Many factors played an important role in seeing the agricultural sector collapse, some factors natural and beyond the control of farmers, while others created them. It is now undeniable that the climate has really changed, which has given much credibility to climate change and the phenomenon of global warming. In what many scientists believe is the culmination of the phenomenon, there has been a major shift in the country's rain patterns, something that has left many farmers unsure as to when exactly to start planting. When the rains finally arrive, they are usually followed by long dry periods characterized by intense heat, which in most cases devastates the plantations, making replanting a necessity. And there are times, as is happening today in most areas, when rain is very abundant and damages crops in the end (Masara, Chipso.)

In addition to natural disasters that made agriculture a huge task, most farmers did not make it easy. Many of them, mainly due to clear ignorance, do not practice good agricultural methods ("Time for Sustainable Agriculture in Zimbabwe.") These farmers are at fault for not practicing good agriculture methods, but they are also not in an area where they can get an education and learn about these practices. There are some organizations that are working with the farmers in Zimbabwe to educate them about these practices. One of those organizations is Welthungerhilfe. Welthungerhilfe teaches people the modern methods of cultivation that protect the soil and still produce a larger crop. With the help of natural fertilizers and ecological protection, the environment is protected over the long term. Smallholders will become familiar with drought-resistant crops during training sessions. In addition to corn and millet, they now grow climate-friendly vegetables such as sweet potatoes, nuts and tomatoes in their fields. They are able to harvest almost all year round which makes their diet healthier and more diverse (Bandsom, Kerstin.)

While this organization is helping the people of Zimbabwe understand what they need to do better, there are also more ways to get Zimbabwe to the point of having Sustainable Agriculture. One way is to adopt conservation agriculture methods. The adoption of conservation agriculture can be a game changer in agriculture for Zimbabwe. "Once farmers pass the initial labour intensive, start-up seasons, their conservation agriculture techniques cut down on waste of inputs and thus reduce their costs. While only five percent of Zimbabwe's maize-growing area is currently under conservation agriculture, those farmers who have adopted it have been able to harvest more from their small plots, averaging around two tonnes per hectare for maize, which is nearly triple what they produced under conventional agriculture."

Conservation agriculture has been described as "any system or practice that aims to conserve soil and water using surface cover (mulch) to minimize runoff and erosion and improve conditions for plant establishment and growth" (Masara, Chipo.) "Sustainable agriculture, in simple terms, is the production of food, fibre, or other plant or animal products using farming techniques that protect the environment, public health, human communities and animal welfare." This form of agriculture enables us to produce healthful food without compromising future generations' ability to do the same (Monda, Tony.)

Conservation agriculture is a system designed to use soil cover to reduce soil erosion and degradation, reduce soil temperature and conserve moisture for plant growth, increase organic matter levels and improve structure and soil fertility. (Masara, Chipo.) Irrigation is also essential to boost production in dry land areas, especially given the current increased variability in rainfall patterns due to climate change, although this should not involve expensive, large-scale schemes only. (Monda, Tony.)

This aims to achieve viable and sustainable productivity. This is the main goal of conservation agriculture.

It also includes components and practices such as no-till, agroforestry, alley cultivation, integrated pest management, organic agriculture, crop and pasture rotation and contour agriculture, among many others (Masara, Chipo.)

Zimbabwe has the potential to not only revive the agricultural sector and ensure food security for all its people, but to become the breadbasket of southern Africa and beyond again. The Government of Zimbabwe supports the idea of conservation agriculture because of its success in mitigating the adverse effects of climate change and in conserving soil and water resources.

What is needed is for farmers to realize that it is no longer as usual and that, with a change in strategy, they can make current conditions work for them. They need to get off their high horses and realize that doing nothing isn't going to work anymore. "With the universal drive to adopt sustainable agricultural practices, Zimbabwe needs to adopt sustainable agricultural practices in order to attain food security."

Conservative agriculture is the light at the end of the tunnel for the people of Zimbabwe. It is time to adopt sustainable farming practices. If we do not do these things and help the people of Zimbabwe, then soon enough there won't be any people left to help.

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