

**Global Challenge: Making a Change with Our Fingertips***Derrick Bernard Hooks, Jr.*

Organizations across the nation are working endlessly to cease hunger and poverty. Several theories have been presented on how we can end world hunger. Some have been effective and others not, but one thing is certain, and that is that we must do something. According to CARE at [www.care.org](http://www.care.org), there's enough food in the world for everyone, but one person in eight goes hungry every night, and 2.3 million children die each year from malnutrition. Hunger and malnutrition kill more people each year than AIDS, malaria and tuberculosis combined. The article also mentions when there's drought or famine or food prices spike, entire communities can go without food. People suffer from hunger when conflict and disaster force families from their homes and cut them off from their farms, their jobs and their possessions. And gender discrimination can strengthen hunger's deadly grip, by leaving women (moms) without the means to feed themselves and their children. There are several countries that suffer from with food droughts. According to Relief Web [www.reliefweb.int](http://www.reliefweb.int), Chad, referred to as the "Dead Heart of Africa," has over four million people affected by food insecurity and malnutrition each year. Unable to meet their food needs, in a context where access to basic social services is extremely limited, their health and in particular their nutritional status can deteriorate rapidly.

Here's are some brief points about Chad. According to Africa.Com at [www.africa.com](http://www.africa.com), Chad is bordered by Sudan to the east, the Central African Republic to the south, Cameroon and Nigeria to the southwest, Niger to the west, and Libya to the north. It is landlocked and is in central Africa. It is often referred to as the "Dead Heart of Africa" due to its distance from the sea and desert climate. Chad has three geographical regions. These are the northern desert, the Sahe-

lian belt in the center, and the fertile southern Sudanese savanna zone. Lake Chad is the second largest in Africa and the largest in Chad. Emi Koussi is the highest peak. N'Djamena is the largest city and was known as Fort-Lamy. 200 ethnic groups reside in the country and Arabic and French are the national languages. The most heavily practiced religions are Christianity and Islam. There are political parties but President Deby and his party, the Patriotic Salvation Movement, control the country. Political violence and attempted coups plague Chad. Chad is one of the world's poorest and most corrupt countries. Most of its people are subsistence herders and farmers. Oil production has been the country's primary export since 2003. This current issue with Chad is the possibility of creating a viable solution for food sustainability. According to the Borgen Project at [borgenproject.com](http://borgenproject.com), in addition to poverty, Chad scores very low for many humanitarian indicators, suffering from environmental degradation, political instability and internal conflict. Chad ranked 186 among 188 countries surveyed in the United Nations' 2016 Human Development Report Agriculture is an integral part of the economy and of community life. Agriculture and livestock production accounts for more than one-fifth of Chad's Gross Domestic Product (GDP). The agriculture sector employs nearly eighty percent of Chad's working population. However, food shortages are widespread. Close to forty percent of Chadian children under age six suffer from chronic malnutrition. And while there are suggestions to end hunger and poverty, urban farming and access to education are the following ideas that will be discussed to address the hunger solution for the Republic of Chad.

Urban farming is growing or producing food in a city or heavily populated town to city. It can be easily mistaken for community gardens to subsistence farming. According to GREEN-GROWERS at [www.greensgrow.org](http://www.greensgrow.org), urban agriculture assumes a level of commerce, the grow-

ing of product to be sold as opposed to being grown for personal consumption or sharing. In community gardening, there is no such commercial activity. The article mentions not having to be a corporation to be an urban farm or have a large tract of land. An individual, a couple of friends, a nonprofit entity, or neighborhood group can start and run an urban farm. There is no one correct sales outlet for an urban farm. Food can be sold to restaurants or at a farmers market, given to a local soup kitchen or church, but the food is raised primarily to be moved (through some form of commerce) from the grower to the user. As more of us begin to understand our food system, more of us seek to have more input into how food is grown, how it is treated after being harvested and how it moves from one place along the food route to another. People have begun to understand how far food travels, and that they, as the consumer, have had no say in what is grown or how it is grown. Urban agriculture can change that and in doing so it can take a rightful place in the larger food system. Urban agriculture has become a means to increase access to locally grown food and a way of reintroducing the public to the many aspects of food that we have lost as a culture. How food grows, what grows regionally and seasonally are all important lessons and make a better informed urban consumer. Urban farms can be the front line of the food system ([www.greengrow.org](http://www.greengrow.org)).

In Chad, eighty percent of the population relies on subsistence livestock and farming to survive. Local climate determines the crops that are grown with the most fertile land is in the south. The article supports that Sorghum (super grain is high in protein, rich in antioxidants and naturally gluten-free) and millet (a group of small-seeded grasses mainly grown in developing countries, cultivated for human consumption) are grown in this area. Most of the population is concentrated in the central and southern regions of Chad, where extreme climate conditions, from drought to flooding, have made the region inhospitable. Other challenges to sustainable ag-

riculture in Chad are poor infrastructure and environmental degradation. It is difficult for farmers to restore the productivity of the degraded land, as there is limited access to agricultural services and other productive resources, knowledge and technology ([borgenproject.org](http://borgenproject.org)).

Macon County is considered a “food desert.” Although there are several urban farms located in Macon County to assist with this issue, Alphonso (Al) Hooks’ Produce located in Shorter, Alabama takes center stage. According to the USDA National Resource Conservation Service Alabama ([www.nrcs.usda.gov](http://www.nrcs.usda.gov)), in 2006, as an NRCS producer featured in a farmer magazine, Mr. Al Hooks said, “I started farming full-time in 2002, and I’m just a small operation.” Back then his “Pick Today and Use Today” philosophy of marketing more than met his planting and harvesting needs. At that time Hooks said, “I don’t have enough produce to meet the needs of the community.” The articles notes that Mr. Hooks said that NRCS helped him develop a farm plan, and he has stuck with it, and that NRCS has been a very good partner and are doing what they promised. He said that he is also implementing his plan as promised. Mr. Hooks needed to grow more produce for the local markets and he needed a better way to grow them. He heard that NRCS has a program through the Environmental Quality Incentives Program (EQIP) to help producers finance Seasonal High Tunnels, or hoop houses. He applied and received financial assistance to construct a hoop house. The hoop house allows him to start producing crops earlier in the spring and harvest later in the season than traditional methods. He is so impressed with the hoop house that he wants to add two more to his operation ([www.nrcs.usda.gov](http://www.nrcs.usda.gov)).

According to the Borgen Project at [borgenproject.com](http://borgenproject.com), research supports the recent development of sustainable agriculture in Chad has progressed. For example, farmers have adopted a sustainable rainwater harvesting technique, called Zaï, to overcome desertification and increase productivity. Though Zaï is labor intensive, it could help Chad achieve food security and safe-

guard it against a changing climate. Additionally, in 2016, the government of Chad unveiled its national development plan addressing the need for increased agricultural production and industrialization. By developing new or enhanced techniques for sustainable agriculture, like Zai, the country is taking practical steps toward achieving a goal that will improve the resilience of agriculture for food security and economic growth ([borgenproject.com](http://borgenproject.com))

However, in order to continue to provide agriculture for local urban areas, education is the key to acquire the necessary knowledge to increase agricultural production and the income of small farmers, especially women and indigenous peoples, while respecting the environment, the biodiversity and the resources of each region, according to United Nations Educational, Scientific and Cultural Organization (UNESCO) at [www.en.unesco.org](http://www.en.unesco.org). This organization provides information by providing access to school materials and activities. These lessons begin with the early childhood stages and extend to the secondary level to assist with identifying healthier food options such as fruits and vegetables, thus making healthier choices, and allowing them to serve as role models within their schools and their surrounding communities later in life. Each level provided pedagogical resources, classroom activities, multimedia resources and hands-on activities to get students inspired with team building activities.

Participate Learning at [participatelearning.com](http://participatelearning.com), offers four reasons to teach the Sustainability Development Goals. They are as follows:

**1. Students need to learn about the world.** Children who are in school now will grow up to be adults in an increasingly interconnected and multicultural society. Students need to be aware of cultural norms and differences around the world so that they can succeed and thrive. ([www.participatelearning.com](http://www.participatelearning.com)).

**2. Students must be active participants in the world they live in.** To solve the world's biggest challenges, we must encourage students to be active participants in their local and global communities. ([www.participatelearning.com](http://www.participatelearning.com)).

**3. Students learn empathy and compassion.** When students learn about SDGs such as those about poverty, hunger and high-quality education, they begin to understand the unique challenges facing communities all over the world that they may not have known about before. Students need empathy to develop healthy relationships throughout their lives. Building compassion in children leads to passionate, engaged adults. ([www.participatelearning.com](http://www.participatelearning.com)).

**4. Students and teachers are inspired to take action.** Teachers do not need to be experts in topics such as responsible consumption or clean energy to teach the SDGs. They can learn and explore these issues alongside their students, and plan ways to take action together. Once students have an understanding of the SDGs and why they are necessary, they will be inspired to make positive changes, in big and small ways.

According to Sustainable Development Goals at [www.un.org](http://www.un.org), the reasons for lack of quality education are due to lack of adequately trained teachers, poor conditions of schools and equity issues related to opportunities provided to rural children. For quality education to be provided to the children of impoverished families, investment is needed in educational scholarships, teacher training workshops, school building and improvement of water and electricity access to schools. The article at [www.edujusuit.org](http://www.edujusuit.org) mentions the following:

*Agricultural activity is full of knowledge gained by practice. It is not easy to train a farmer only at school; it is part of a learning of techniques but also a learning of uses and habits which can be only achieved by living in rural areas.*

*The education plays a critical role here because it has to be able to identify, recognize*

*and transmit the knowledge that has been preserved in an informal way through generations. Aspects more related to techniques than to cultures.*

Every school in the Macon County School District have school gardens. The school district has developed a strong partnership with Tuskegee University's School of Agriculture where students and professors volunteer instruct students at every level of matriculation about rural sustainability. Students receive hands on experience by starting from ground zero with gardening projects. Many of the schools have school garden clubs where students are engrossed with advanced lessons that consists of designing their garden, testing the soil, preparing the area, caring for the garden, pesticides, harvesting vegetables and preparation and cooking.

The Food and Agriculture Organization of the United Nations at [www.foa.org](http://www.foa.org), discusses educating the local farmers of Chad on the practice of organic farming and diversification of agricultural production in Chad by giving the beneficiaries on the fields support in the form of tools, agricultural equipment, and certified seeds. With a training in making organic fertilizer (compost), in producing biopesticide (simple and complex) from extracts of locally available plants, and in hydro-agricultural operations, beneficiaries now have tools for a better horticulture plants production, so as to supply locally produced food and increase their income. Thus, since the time they have received these trainings, the beneficiaries of the project in Chad are putting into practice what they have acquired and continue to tell their experiences on the advantages of these good practices which reduce the impacts of chemicals on the environment. In Moundou, the second city chosen for the project in Chad, compost pits are prepared on three sites (Koutou, Taye and Torojo). The beneficiaries have realized the benefits of using compost to replace chemical fertilizers. Thus, they make savings by replacing mineral fertilizer with organic one. Al-

ready, 34 compost pits have been prepared in the city of Moundou and the compost obtained is used as fertilizer in gardening plots.

According to the article, Mr. Florent, an organic cabbage producer in Taye made the following statement:

*I have been away when the training on compost making was given, but I saw the results with other producers and I would like the Project Coordination Team to put the necessary documentation at my disposal so that I make compost myself rather than continuing to buy green manure for my cabbage production.*

According to Feeding America at [www.feedingamerica.org](http://www.feedingamerica.org), Even in the world's greatest food-producing nation, children and adults face poverty and hunger in every county across America. 40 million people struggle with hunger in the United States, including more than 12 million children; a household that is food insecure has limited or uncertain access to enough food to support a healthy life; children are more likely to face food insecurity than any other group in the United States; and 58% of food-insecure households participated in at least one of the major federal food assistance program — the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps); the National School Lunch Program and the Special Supplemental Nutrition Program for Women, Infants and Children (often called WIC).

However, the article from the Food Tank at [www.foodtank.com](http://www.foodtank.com) informs us about the amazing efforts of hundreds of urban farms and gardens to grow organic produce, cultivate food justice and equity in their communities, and revitalize urban land. Urban agriculture not only contributes to food security, but also to environmental stewardship and a cultural reconnection with the land through education. The Urban Food Policy Pact (UFPP), addressed the potential of cities to contribute to food security through urban agriculture. A technical team of 10 members



organized physical and virtual workshops with many of the 45 cities participating in the Pact, and drafted a Framework for Action that includes 37 provisions covering the themes of governance, food supply and distribution, sustainable diets and nutrition, poverty alleviation, food production and food and nutrient recovery.

It is evident that we (as a world) are making significant progress to address the global challenge of food sustainability. Several worldwide projects are being implemented to assist farmers with building a strong business, to become experts in the field, and to provide resilient food systems for their communities. Alabama is the nation's seventh poorest state. Nearly 900,000 Alabamians, including 300,000 children, live in poverty according to a new analysis released today by Alabama Possible, a statewide nonprofit organization that works to reduce systemic poverty and its root causes across the state. The citizens in Tuskegee, Alabama are located in a food desert. There is limited nutrition education in the classroom, and the youth and families in Macon County lack access to resources and healthy choice programs. This evidence notes that we need to focus on projects that develop food literate leaders that build a strong connection between the food and the land.

## REFERENCES

(CARE, 2019) *Facts About Hunger and Poverty in America*. (2018). Retrieved from <https://www.feedingamerica.org/hunger-in-america/facts>

Edujesuit. (2019). *Sustainable Development Goals: Education for Zero Hunger Goal - Edujesuit*. [online] Available at: <https://edujesuit.org/education-for-zero-hunger-goal/> [Accessed 11 Jul. 2019].

Encyclopedia Britannica. (2019). Africa | People, Geography, & Facts. [online] Available at: <https://www.britannica.com/place/Africa> [Accessed 11 Jul. 2019].

Food and Agriculture Organization of the United Nations. (2019). Food and Agriculture Organization of the United Nations. [online] Available at: <http://www.fao.org/home/en/> [Accessed 11 Jul. 2019].

Food Tank. (2019). 28 Inspiring Urban Agriculture Projects. [online] Available at: <https://foodtank.com/news/2015/07/urban-farms-and-gardens-are-feeding-cities-around-the-world/> [Accessed 11 Jul. 2019].

Greensgrow. (2019). *What is Urban Farming?* | Greensgrow. [online] Available at: <https://www.greengrow.org/urban-farm/what-is-urban-farming/> [Accessed 11 Jul. 2019].

Nrcs.usda.gov. (2019). Al Hooks Produce Expands Beyond Local Market | NRCS Alabama. [online] Available at: [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/al/newsroom/stories/?cid=nrcs141p2\\_022971](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/al/newsroom/stories/?cid=nrcs141p2_022971) [Accessed 11 Jul. 2019].

Participatelearning.com. (2019). [online] Available at: <https://www.participatelearning.com/blog/4-reasons-to-teach-the-sustainable-development-goals/> [Accessed 11 Jul. 2019].

ReliefWeb. (2019). ReliefWeb - Informing humanitarians worldwide. [online] Available at: <https://reliefweb.int/> [Accessed 11 Jul. 2019].

The Borgen Project. (2019). The Borgen Project | Downsize Poverty. [online] Available at: <https://borgenproject.org/> [Accessed 11 Jul. 2019].

Unesco.org. (2019). Culture and Development | United Nations Educational, Scientific and Cultural Organization. [online] Available at: <http://www.unesco.org/new/en/culture/themes/culture-and-development/> [Accessed 11 Jul. 2019].

Weeks, Caroline, *4 Reasons to Teach the Sustainable Development Goals*, October 23, 2018, <https://www.participatelearning.com/blog/4-reasons-to-teach-the-sustainable-development-goals/>