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Africa, Food, and Agriculture



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Synonyms

[Climate change](#); [Crisis](#); [Farming](#); [Food security](#); [Gender](#); [Hunger](#); [Intergenerational justice](#); [Justice](#); [Poverty](#); [Subsistence](#); [Women](#)

Globally speaking, 216 million fewer people today than in 1990 are suffering from hunger (FAO 2015, 8). At the 1996 World Food Summit in Rome, world leaders pledged to reduce the number of hungry people in developing countries from a billion in 1990 to 515 million by 2015. Though this target was missed by 260 million, the population increase of 1.9 billion meant that almost two billion people had been freed from hunger (FAO 2015, 9). The global South continues by far to carry most of this hunger burden. Of the world's 795 million hungry today, 780 million (over 98%) are in the global South (FAO 2015, 8–9). 220 million (27%) are in sub-Saharan Africa (FAO 2015, 10), where a massive crisis in food security is well underway.

Research into African agricultural and food ethics focuses largely on commercial agriculture, concerning mainly genetically modified (GM) crops (e.g., MacDonald 2006; Powers 2006), but also animal rights and welfare, HIV/AIDS, land reform, biodiversity, medicinal plants, and agricultural science (e.g., van Niekerk 2010). This entry complements this work by prioritizing subsistence agriculture – the most common type of farming in Africa that affects the most people – in order to document Africa's rapidly growing humanitarian food crisis.

Issues including labor, food security, and nutrition are assessed in terms of environmental, gender, climate, and intergenerational justice as appropriate, with attention to distributive justice throughout, and culminating in assessment of postcolonial, neoliberal policies in global economics. First, however, overview of African agriculture is provided. South Africa and North African countries have established industrial economies; discussion of Africa herein means sub-Saharan African countries where families rely on agriculture for food security.

Sub-Saharan African Agriculture

Of the estimated 570 million farms worldwide, approximately 9% are in Africa; of these, over 41 million are family owned, small holdings less than 2 hectares (5 acres) in size (Lowder et al. 2016, 25) that together produce 80% of Africa's

food (FAO 2017, xi). Africa is fertile: in 2014, 42.1% of land in Africa was arable, compared to 37.5% for the planet as a whole (World Bank Group 2017). Commercial crops include coffee, cotton, cocoa, palm oil, sugar, tea, and tobacco, while subsistence farmers produce sorghum, millet, rice, cassava, yams, and sweet potatoes as staples (Mbabazi et al. 2015, 1) but also groundnuts, beans, and pecans and vegetables like tomatoes, peppers, and eggplant, as well as melons (Glazebrook 2011). Many smallholders keep animals, e.g., goats, cows, pigs, and guinea fowl, that provide eggs, milk, and dung for fertilizer or fuel for cooking fires, but are rarely eaten.

Subsistence farming is a livelihood strategy in which the main output is consumed directly. The farm is the family's principal source of income and typically involves some small-scale selling in local markets, often to buy schoolbooks or uniforms, cloth for making clothes, or pharmaceuticals. Agriculture is part of everyday life for many Africans. Half of the world's countries with greater than 80% rural dwelling are in Africa; Burundi is highest with 89% rural population. Agriculture supports livelihoods of 80% of Africans, though employing only 50% of the workforce and generating only 15% of the continent's GDP (Mbabazi et al. 2015, 1). Subsistence agriculture does not figure in GDP and GNP that measure marketed crops.

Ethical issues in African agriculture and food pertain to either commercial or subsistence agriculture, to both, or in some cases to the tension between the two, e.g., when weak land tenure rights leave subsistence farmers vulnerable to land grabbing by commercial development projects. Practices addressed in contemporary food ethics in the global North, e.g., meat intake, locavorism, slow food, and organic farming, are not active choices but necessities arising from field-to-table, production-preparation-consumption patterns in subsistence economies where meat and distance-grown or purchased, prepared foods are scarce. African issues in food and agricultural ethics are different from those in the global North.

Food Security

The most pressing ethical issue is growing incapacity in Africa to maintain food security. In 2008, 21 of the world's 36 food-insecure countries were in Africa (Kabasa and Sage 2009, 21). This global disproportion has been steadily increasing: the proportion of the world's undernourished in Africa was 17% in 1990, but 27% by 2015 (FAO 2015, 10). In real numbers, undernourished Africans climbed from 169 million in 1992 to 212 million by 2005 (Kola-Olusanya 2012, 29). From 1990 to 2010, the number of African countries in food crisis doubled from 12 to 24, with 19 of them experiencing food crisis in 8 or more of the 10 years between 2005 and 2015 (FAO 2015, 27). Today, every fourth African is undernourished (FAO 2015, 12); 220 million Africans, many of them are children, do not have enough to eat (FAO 2015, 8). The 2017 African population of 1.2 billion is anticipated to reach almost 4.5 billion by the end of the century (UN 2017, 1). African food insecurity is accordingly doubly threatened by both population increase and decrease in agricultural yield.

Even without starvation, nutritional deficiency is a threat. In northern Ghana's Sudan savannah ecosystem, for example, women farmers are moving to rice rather than traditional crops of millet and groundnut as an adaptation to unpredictable rains. The latter are high in protein, and millet is also rich in calcium important for growing children and pregnant or lactating women; rice however contains primarily carbohydrates. The nutritional base is accordingly being sacrificed in a desperate measure simply to have something to eat. The Sudan savannah ecosystem stretches from Africa's west coast to East Africa's Ethiopian Highlands, so the Ghanaian experience is likely shared across the continent. It indicates gender injustice as women are disproportionately affected and intergenerational injustice as health impacts of childhood malnutrition have lifelong consequences.

Increasing food insecurity is in part due to land degradation: by 1992, Africa had the largest proportion of degraded land of any continent (Scherr and Yadav 2001, 134). More important, however,

are economic factors, e.g., supply bottlenecks, distribution complications, limited imports, as well as population displacement and extreme poverty (FAO 2008). Poverty and food production are deeply entangled. Poverty exacerbates food insecurity by affecting Africans' ability to remediate environmental damage, to purchase food when yields are inadequate, and to increase productivity by buying fertilizer and other extension services. At the same time, the World Bank suggests that 1% increase in crop yield in Africa could reduce the number of people living on less than \$1 USD per day by 0.72%, i.e., 1.5 million people (Aweto 2012, 187). In 2012, over 500 million Africans lived on less than \$2 USD per day (WHES 2016). The ratio of GDP growth against the number of farmers is lowest in the global South – gaps are expanding between food needs and crop yield. Mineral wealth, e.g., discovery of oil, can “crowd out” the agricultural sector (Sachs and Warner 1995); oil is exported for use mostly in the global North, with climate impacts on African agriculture detailed below.

Labor

For laborers, commercial production uses fertilizers and pesticides that generate health impacts, while mechanized equipment can risk safety. Weak or nonexistent minimum wage standards and government regulation of farmworker rights and corruption make labor easily exploitable, including sexually. Displaced farmers face worse conditions selling their labor than growing for themselves. In large-scale plantations, child labor reproduces slavery conditions, with minimal nutrition, education, healthcare, and protection from abuse. In Ghana and Ivory Coast, two million children perform unpaid hard labor in hazardous conditions in the cocoa industry (Fair Trade USA 2017).

Subsistence farming uses family labor. Food production is grounded in relations within and between households that affect decisions about crop selection, when to plant and harvest, as well as knowledge management and marketing. Keeping children out of school to help with farming

affects literacy and graduation rates. Taking daughters out of school in regions where women traditionally farm exacerbates gender inequities, but is hard to counter since families depend on crops for food security and some income. On rare occasions, nongovernment organizations provide funding to hire labor in the daughter's place.

Gender

Women in agriculture make up 70% of the world's farmers (Women for Women International 2010) and produce most of Africa's food. In Ghana, for example, they fill 87% of the national food basket (Social Coalition Watch 2010). Failure of traditional economics to recognize subsistence farming thus excludes women's livelihood in development, agricultural, and economic policy. Even more recent Genuine Progress Indicators fail to account for women's crucial contribution to food security that supports African economies (Glazebrook 2011). So women continue to face limited access to credit, machinery, labor, fertilizer, and agricultural extension services. Weak land tenure rights render women vulnerable to large-scale land acquisitions blocking local access and known to cause declines in production (Cotula et al. 2009). Agricultural ethics thus intersect with gender ethics in the form of distributive justice failures in workload parity and resource allocation, and recognition justice failures concerning women's role as food providers and economic agents.

Environmental Justice

Environmental injustice is rampant in Africa's agricultural sector where most farmers have few resources, political and social tools, or empowerment to respond. Land grabbing enables large-scale, mechanized, capital-intensive, monoculture production of food or biofuel crops for export, but increases lived poverty by displacing locals, depleting local water resources, and contaminating the area with chemical fertilizers and pesticides or GM organisms that outcompete

traditional crops. When development projects fail, appropriated land can lie empty yet frustratingly inaccessible for locals who used to farm it.

Pollution brings health issues. Resource extraction industries, i.e., mining and oil, poison land and water by dumping tailings and leaving spills unchecked. In Nigeria, for example, this caused 60 years of resistance culminating in the hanging of the Ogoni 9 for their leadership in protesting Shell's activities in the Niger Delta. The Ogoni Women activist group subsequently blocked attempts to drill on Ogoni land for 10 years, causing Shell's lease to expire because of inactivity (Glazebrook and Kola-Olusanya 2011). Yet Shell was not required to compensate livelihood losses or remediate contaminated land and water – locals remained obliged to give their family contaminated food and water. Distributive justice was doubly breached as those who paid the health and livelihood costs of Nigeria's oil development were denied the benefits of this multi-billion dollar industry.

Control of water also generates environmental injustice. In 2007, when floods wrought havoc in Burkina Faso, dams were opened to relieve local impacts. The ensuing swell exacerbated flooding in downstream neighbor Ghana. Dozens died, over 300 thousand were displaced, and many lost their entire annual crop (Glazebrook 2011). The majority of farmers impacted were women supporting extended families separated by urban migration and already devastated by AIDS; the most vulnerable with least resources were most strongly affected.

Elsewhere, trans-boundary water issues drive war, conflict, and confrontation, e.g., between Egypt and Ethiopia, as upstream dam development reduces flow across borders downstream. Subsistence farmers who depend solely on rains experience less impact from trans-boundary water control than corporate farmers whose water use in agriculture includes irrigation, though their lives may be affected in other ways, e.g., water availability for daily family needs.

Climate Justice

The factor most impacting African agriculture is global climate change that intersects with the issues detailed above and is predicted to exacerbate and accelerate existing agricultural challenges. In 2007, the Intergovernmental Panel on Climate Change (IPCC) projected that by 2020, 75 million to 250 million people in Africa would be exposed to increased water stress due to climate change, and that decreased yields from rain-fed agriculture could severely compromise agricultural production and food access (IPCC 2007, 50). By 2080, production is expected to experience catastrophic declines in grain number, size, and quality of 20–30%, with declines as high as 50% in Sudan and Senegal (Cline 2007). By the twenty-first century, only 3.7% of arable land in Africa was irrigated, while fertilizer consumption was the lowest globally, averaging 9 kg per hectare against the average of 109 in the global North and totaling only 1% of global usage (NEPAD 2002). Many farmers fertilize only through collection of animal dung (Glazebrook 2011), and 60% of Africans depend for survival on livestock to provide this dung, as well as occasional protein in the diet and other resources for various uses. Climate change impacts will mean less forage and feed crops, and less water for animals. Subsistence agriculturalists simply cannot usually afford agricultural extension services like fertilizers or expensive inputs like GM seeds. South Africa produces only 1% of the world's GM crops, and the rest of Africa combined produces well under 1% (UN 2008, 21). African agricultural communities thus suffer severe damage from climate change.

Changes in rainfall patterns have already been making it harder for farmers to know when best to sow, cultivate, and harvest (Jennings and Magrath 2009). Decreased yield has been correlated to the global temperature increase. Rice, for example, undergoes 10% decline for each 1 °C rise (Peng et al. 2004). The IPCC's 5th Assessment Report (AR5) notes the special vulnerability of marginalized groups to climate change that exacerbates other livelihood stressors, e.g., decreasing crop yield, for people living in poverty (IPCC 2014,

6–8). AR5 projects with high confidence that a global mean surface temperature increases by 2 °C will put African crop productivity near *medium risk* by 2030 and well into it by 2080, even with adaptation. Models show *very high risk* to African agriculture for a 4 °C rise (IPCC 2014, 21).

Women and children are extremely vulnerable to incremental climate impacts on food and agriculture, though they have the least political, economic, and social resources to recover (Peacock et al. 1997; Morrow 1999; Bang 2008). Politically and economically marginalized women lack access to government or other aid through loans and grants. They often cannot relocate when growing conditions deteriorate as they do not have the resources to move and may be constrained by other barriers, e.g., language. They are the primary medical caregivers in many families, so water-vector, insect-carried sicknesses like malaria, anticipated to be more common with climate change, increase their workload in the home and in the field when sick family members cannot contribute their labor, as well as threatening the woman's health. Children facing climate-induced food insecurity can suffer nutritional deficiencies that have developmental and lifelong health impacts on brain, bone, and organ function. Climate change accordingly has differential impacts across groups with varying vulnerability; climate justice and food justice intersect with gender justice and with food security and intergenerational justice.

At the same time, African production of the greenhouse gases causing global climate change is negligible in comparison with heavy emissions from industrialized countries. Poverty prevents farmers from accessing fossil fuel-hungry technologies, and they typically farm with a handhoe. The majority of African farmers accordingly have a small carbon footprint and are ill-prepared and under-resourced to adapt to environmental factors like drought and flood or less dramatic but nonetheless destructive climate impacts like unpredictable and sporadic rainfall that lead to crop failure and large postharvest losses (FAO 2008). Principles of distributive justice are thus doubly breached when those making the least contribution to climate change and reaping least

of its benefits are bearing its costs disproportionately.

Global Issues in Agricultural and Food Ethics

Observed declines in agricultural yield are the result of multilayered problems including climate change, rainfall and weather events, decline in soil fertility, increase in pests and diseases, change and delay in cropping activities, decline and poor adoption of external inputs to enhance productivity, and limited individual property rights – all major impediments to investment in African agriculture (Amponsah 2009). The International Institute of Tropical Agriculture also points to lack of microcredit, minimal value-adding crop-processing activities, poor storage, food preservation, pricing, high poverty among farmers, and inconsistent agricultural policies (IITA 2007).

Causes of African food insecurity and lack of food sovereignty in the global South are not however driven only by regional environmental, political, economic conditions: neoliberal, postcolonial globalization also plays a role. Critics attribute its food crises to decades of interventions from the global North, i.e., Green Revolution projects, structural adjustment programs, regional free-trade treaties, and World Trade Organization agricultural subsidies in developed countries (Holt-Giménez 2008, 5–6). Others point to neoliberal policies of trade liberalization and foreign debt repayment, indiscriminate privatization of public services and goods, and the logic of capital at work in agriculture and food models (Vivas 2010). Typically, when commercial farming development projects displace subsistence farmers, for example, the latter seek employment by the former whose large-scale, mechanized production systems grow food intended for consumers in the global North – African workers go hungry producing food they cannot afford to buy. Issues in African agricultural and food ethics accordingly cannot be resolved without addressing inequities in North-South global relations.

Conclusion

The celebration of food and agriculture is common across African countries, religions, and cultures due to its importance in historical and intergenerational continuity and its role in ethnicity and ethnic identity. African food production is a significant livelihood strategy, and most agriculture is subsistence, largely practiced by women who manage the process from planting to harvesting with minimal inputs and do their own processing from field to table.

Culturally rich and distinctive food traditions in Africa have been undermined by postcolonial, neoliberal global politics and economics that have disrupted Africa's resource base and introduced large-scale, industrialized, monoculture-favoring, capital- and technology-intensive, corporate farms. Ill-conceived, if well-intentioned, development programs have led to poorly managed commercial agriculture that has damaged local environments. Global climate change increasingly exacerbates this damage, and Africa at present is in a state of agricultural and food crisis that is unlikely to improve and is already erupting into a humanitarian emergency that is globally unprecedented in scale and severity.

African issues in agricultural ethics involve labor, including child labor; gender issues, including social inequalities, weak land tenure, and limited access to resources; environmental justice issues including distributive, recognition, and intergenerational justice; and climate justice as Africa suffers disproportionate impacts from climate change while generating comparatively small amounts of the greenhouse gases that are causing it. Increasing population, decreasing yields, and socioeconomic, political, and post-colonial issues have placed African countries on a spectrum ranging from food insecurity to the full-blown crisis currently being experienced in South Sudan. The most pressing issue in ethical assessments of African food and agriculture is mass starvation.

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