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Ethiopia, Factor 6
Ethiopia: Family Survival

Living in the land of plenty, we sometimes lose sight of the problems of other countries and the fact that many people do not have food. We do not think of the word "famine" and the problems that people have. When our parents say, "Eat all of the food on your plate because there are hungry children who would like to have," it does not have significance for us. As I researched the country of Ethiopia, I began to understand the impact of that statement.

Ethiopia is a landlocked country in East Africa. It is bordered by Eritrea to the north, Somalia to the east, Kenya to the south, and Sudan to the west. It is a poor country that relies on agriculture. In spite of frequent drought and poor cultivation practices, the agriculture sector accounts for half of gross domestic product, 85 percent of exports, and 80 percent of employment. Political instability has also kept Ethiopia from advancing economically. In 1991, the Ethiopian People's Revolutionary Democratic Front toppled a socialist regime in power since 1974. A constitution was adopted in 1994, and multiparty elections were held in 1995. In 2000, Ethiopia and Eritrea signed a peace agreement to end a border war that began in 1998 and impeded Ethiopia's progress. The agreement has re-energized donor efforts to restore the potential for long-term social and economic growth. The government and external donors are now reforming food security policies, and agriculture production is increasing despite the effects of the war and drought. (Ethiopia)

Ethiopia is heavily dependent on the agricultural sector which accounts for almost half of the GDP. About three quarters of the population are engaged in agriculture, mainly in subsistence and rain-fed farming and livestock production. Since 2000, the economy has been growing steadily, however, Ethiopia remains one of the poorest nations in the world, with almost a quarter of Ethiopians living with less than a dollar a day. Agriculture in Ethiopia is the foundation of the country's economy, accounting for half of gross domestic product (GDP), 60% of exports, and 80% of total employment. Ethiopia's agriculture is plagued by periodic drought, soil degradation caused by overgrazing, deforestation, high population density, high levels of taxation and poor infrastructure (making it difficult and expensive to get goods to market). Yet agriculture is the country's most promising resource. A potential exists for self-sufficiency in grains and for export development in livestock, grains, vegetables, and fruits. As many as 4.6 million people need food assistance annually. Agriculture accounts for 46.3% of the GDP, 83.9% of exports, and 80% of the labor force. Many other economic activities depend on agriculture, including marketing, processing, and export of agricultural products. Production is overwhelmingly of a subsistence nature, and a large part of commodity exports are provided by the small agricultural cash-crop sector. Principal crops include coffee, pulses (*e.g.*, beans), oilseeds, cereals, potatoes, sugarcane, and vegetables. Exports are almost entirely agricultural commodities, and coffee is the largest foreign exchange earner. Ethiopia is Africa's second biggest maize producer. Ethiopia's livestock population is believed to be the largest in Africa, and in 2006/2007 livestock accounted for 10.6% of Ethiopia's export income, with leather and leather products making up 7.5% and live animals 3.1%. (Agriculture in Ethiopia)

Of Ethiopia's total land area of 1,221,480 square kilometers, the government estimated in the late 1980s that 15 percent was under cultivation and 51 percent was pasture. It was also estimated that over 60 percent of the cultivated area was cropland. Forestland, most of it in the southwestern part of the country, accounted for 4 percent of the total land area, according to the government. These figures varied from those provided by the World Bank, which estimated that cropland, pasture, and forestland accounted for 13, 41, and 25 percent, respectively, of the total land area in 1987. Inaccessibility, water shortages, and infestations of disease-causing insects, mainly mosquitoes, prevented the use of large parcels of

potentially productive land. In Ethiopia's lowlands, for example, the presence of malaria kept farmers from settling in many areas. Most agricultural producers are subsistence farmers with small holdings, often broken into several plots. Most of these farmers lived in the Ethiopian Highlands, mainly at elevations of 1,500 to 3,000 meters. There are two predominant soil types in the highlands. The first, found in areas with relatively good drainage, consists of red-to-reddish-brown clayey loams that hold moisture and are well endowed with needed minerals, with the exception of phosphorus. These types of soils are found in much of the Southern Nations, Nationalities, and People's Region (SNNPR). The second type consists of brownish-to-gray and black soils with a high clay content. These soils are found in both the northern and the southern highlands in areas with poor drainage. They are sticky when wet, hard when dry, and difficult to work. But with proper drainage and conditioning, these soils have excellent agricultural potential. According to the Central Statistical Agency (CSA), in 2008 the average Ethiopian farmer holds 1.2 hectares of land, with 55.13% of them holding less than 1.0 hectare. (Agriculture in Ethiopia)

The most important cash crop in Ethiopia was coffee. During the 1970s, coffee exports accounted for 50-60% of the total value of all exports, although coffee's share dropped to 25% as a result of the economic dislocation following the 1974 revolution. By 1976 coffee exports had recovered, and in the five years ending in 1988/89, 44% of the coffee grown was exported, accounting for about 63% of the value of exports. Domestically, coffee contributed about 20% of the government's revenue. Approximately 25% of Ethiopia's population depended directly or indirectly on coffee for its livelihood. Ethiopia's coffee is almost exclusively of the arabica type, which grows best at altitudes between 1,000 and 2,000 meters. Coffee grows wild in many parts of the country, although most Ethiopian coffee is produced in the Oromia Region (63.7%) and in the SNNPR (34.4%), with lesser amounts in the Gambela Region and around the city of Dire Dawa. The amount of coffee inspected in the fiscal year 2007/2008 by the Ethiopian Coffee and Tea Authority (ECTA) was 230,247 tons, a decrease of almost 3% from the previous fiscal year's total of 236,714 tons. About 98 percent of the coffee was produced by peasants on smallholdings of less than a hectare, and the remaining 2 percent was produced by state farms. Some estimates indicated that yields on peasant farms were higher than those on state farms. In the 1980s, as part of an effort to increase production and to improve the cultivation and harvesting of coffee, the government created the Ministry of Coffee and Tea Development (now the ECTA), which was responsible for production and marketing. The ten-year plan called for an increase in the size of state farms producing coffee from 14,000-15,000 hectares to 50,000 hectares by 1994. However, beginning in 1987 the decline in world coffee prices, reduced Ethiopia's foreign-exchange earnings. In early 1989, for example, the price of one kilogram/US$0.58; of coffee was by June it had dropped to US$0.32. Mengistu told the 1989 WPE party congress that at US$0.32 per kilogram, foreign-exchange earnings from coffee would have dropped by 240 million Birr, and government revenue would have been reduced by 140 million Birr by the end of 1989. Before the Ethiopian Revolution, pulses and oilseeds played an important role, second only to coffee, in the country's exports. In EFY 1974/75, pulses and oilseeds accounted for 34% of export earnings (about 163 million Birr), but this share declined to about 3% (about 30 million Birr) in EFY 1988/89. Three factors contributed to the decline in the relative importance of pulses and oilseeds. First, the recurring droughts had devastated the country's main areas where pulses and oilseeds were grown. Second, because peasants faced food shortages, they gave priority to cereal staples to sustain themselves. Finally, although the production cost of pulses and oilseeds continued to rise, the government's price control policy left virtually unchanged the official procurement price of these crops, thus substantially reducing net income from them. In EFY 2007/2008, the CSA reported that 17,827,387.94 quintals of pulses were produced on 1,517,661.93 hectares, an increase from the 15,786,215.3 quintals produced on 1,379,045.77 hectares. In the same fiscal year, 707,059.29 hectares under cultivation produced 6,169,279.99 quintals of oilseeds, an increase from the previous year of 4,970,839.57 quintals grown on 741,790.98 hectares. In 2006/2007 (the latest year available), exports of oilseeds accounted for 15.78% of export earnings (or million 187.4 Birr) and pulses 5.92% (or 70.3 million Birr). Ethiopia's flower industry has become a new source for export revenue. The industry began

in 2004, when the government made an aggressive push for foreign investments by establishing a presence at major international floricultural events. Since then, export earnings from this sector have grown to about US$65 million in 2006/07 and are projected to double over the next few years. Ethiopia is well positioned because highland temperatures make it ideal for horticulture, the average wage rate is US$20 per month (compared to US$60 a month in India), the price of leased land is about US$13 per hectare, and the government has tremendously aided the entry of new businesses into this sector in recent years. As a result, a number of Indian entrepreneurs are relocating to Ethiopia to develop its thriving flower industry which has led to gains in market share at the expense of neighboring countries. Another new source for export revenue is the production of khat, an amphetamine-like stimulant which is consumed both inside Ethiopia and in adjacent countries, and which is considered a drug of abuse that can lead to mild to moderate psychological dependence. In 2006/2007 (the latest year available), exports of khat accounted for 7.8% of export earnings (or 92.8 million Birr). Cotton is grown throughout Ethiopia below elevations of about 1,400 meters. Because most of the lowlands lack adequate rainfall, cotton cultivation depends largely on irrigation. Before the revolution, large-scale commercial cotton plantations were developed in the Awash Valley and the Humera areas. The Tendaho Cotton Plantation in the lower Awash Valley was one of Ethiopia's largest cotton plantations. Rain-fed cotton also grew in Humera, Bilate, and Arba Minch. Since the revolution, most commercial cotton has been grown on irrigated state farms, mostly in the Awash Valley area. Production jumped from 43,500 tons in 1974/75 to 74,900 tons in 1984/85. Similarly, the area of cultivation increased from 22,600 hectares in 1974/75 to 33,900 hectares in 1984/85. (Agriculture in Ethiopia)

Major issue in Ethiopia is the constraints to crop production. Some factors that contribute to this issue are water logging, weeds, pests, disease, and the shortage of improved inputs. Seasonal water logging is a general constraint in the Ethiopian highland vertisol areas. As a result yields of grain and crop residue are low. The reason for several cultivations before planting most cereals in the vertisol locations is to control weeds. In spite of several cultivations weed infestation is extremely high in these areas. The major weeds in the Ethiopian highland Vertisol areas are: 'asendabo' (*Phalaris paradoxia*), 'borecho' (*Scorpiurus muricatus*), 'wortebet' (*Plantago lanveolata*), 'wajema', (*Medicago polymora*) etc. Use of impure local seed largely contributes to the proliferation of weeds. The weeding operation that normally starts after the vertisols are drained off naturally in September/October is highly labor-intensive. It takes 28-35% of the labor required by the crops. Moreover, early manual weeding is difficult in waterlogged soils. Generally use of selective herbicide is limited. Sometimes a short dry spell following onset of the main rains, insects (mainly grasshoppers) attack crops in the lower and medium-altitude highlands such as at Debre Zeit and Ginchi. Insects such as aphids cause considerable damage to wheat even in high altitude vertisol areas. Faba bean is frequently attacked by the stalk borer. The main crop diseases are chocolate spot, rust and smut. The commonly used fertilizers: Di-ammonium phosphate (DAP) and urea are not widely used by farmers because of their unavailability, irregularity in their delivery and the financial inadequacy to purchase them. At the time of the survey fertilizer was sold to farmers in some Peasant Associations (PAs) mostly on a loan basis by the Ministry of Agriculture through Service Cooperatives (SCs). SCs required that all other farmers who took fertilizer loans should repay the cost immediately after their crop harvest in order to be eligible for the next loan. A farmer would not be eligible for a loan until all farmers in a given PA repaid their debts. This was reported to be a critical constraint to those farmers who regularly settled their debts promptly. (Farming systems of Vertisol areas in Ethiopia)

A great importance to the Ethiopian people is the composition of the soil. Some Ethiopian soil is vertisols which are dark-colored clays which develop cracks when expanding and contracting with changes in moisture content are widespread in Ethiopia. Ethiopian vertisols have a high content of clay. High clay content, type of clay minerals, unfavorable consistency and absence of pores make them difficult to work within both dry and wet conditions. A substantial amount of rainfall is need to wet a dry vertisol. Seedbed preparations are needed early and could be taught to the common farmers. Drainage systems to

help maintain water and to release water during the rainy season are needed. This would help with erosion or surface drainage. (Farming systems of Vertisol areas in Ethiopia)

The Ethiopian diet is mainly composed of cereals (maze, sorghum, teff), tubers and root crops (ensete, potatoes, sweet potatoes), pulses and oil seeds. Despite a large livestock population is especially low in rural areas, except in nomadic areas where milk is a major component of the diet. Environmental and man-made factors cause widespread and severe food insecurity. The dietary energy supply is not sufficient to meet population energy requirements and almost half of the population is undernourished. Besides being insufficient, food supplies also lack diversity. (Federal Democratic Republic of Ethiopia)

High incidence of infectious diseases and nutritional deficiencies, low immunization, coverage, and very low access to improved water sources and sanitation are the major factors contributing to high morbidity. Due to a shortage of skilled health personnel and health facilities, access to basic health care is still very limited. Severely affected by poverty, food insecurity and morbidity, rural populations are highly exposed to under nutrition and micronutrient deficiencies. (Federal Democratic Republic of Ethiopia)

The typical Ethiopian family consist of seven children per mother plus a father in the house hold. A typical family is the Getu family, consisting of five children. They live in a dwelling of 320 square feet, work 80 hours a week, make $123 per capita income, and value their oxen. Getu and Zenebu, his wife, believe that survival is impossible for the children if they continue to be farmers. Education is important, but the local school is inaccessible. The children are required to buy school clothes and supplies that would cost perhaps a third of the family's annual income. Fewer than a hundred children attend the Moulo village school in a catchment area of more than 10,000 people. The Getus depend heavily on cattle dung. Every morning, Zenebu collects fresh dung from the corral and mixes it with straw into a paste. Some of the paste is used to plaster the walls of the house. She flattens the rest into wide patties that are dried, broken into pieces, and used for fuel. At other times families scavenge the fields and bring home dried dung. Working with dung takes up much of Zenebu's time. Other tasks include attending to the children and preparing coffee for the men. Three times a day relatives congregate at each other's house, having a bit of coffee in a coffee ceremony. The strong, richly flavored coffee of Ethiopia is celebrated by coffee drinkers. Teff, a cereal grain in Ethiopia is one of Getu's most important crops. Farmers plant it twice a year and water the crop with pails fetched from a well. After harvest, farmers separate the sesame seek-seed seeds from their husks by marching cattle over the grain. Women toss the seed in baskets, letting the breeze blow away the chaff. For the future, the family wishes for more animals, a second set of clothes, better seed stock, farm implements, and peace. (Menzel, 1994)

The Ethiopians face major barriers to improving agricultural productivity, employment, earning a living wage, and gaining access to food markets and adequate nutrition. By developing and implementing sustainable agricultural practices (no-till, crop rotation, integrated pest management, etc.) to combat erosion, desertification and soil depletion and reduce pesticide/ herbicide use, better opportunities can be afforded to the Ethiopians. Farms backed by foreign investors are growing while native farmers live on food aid. It is a land of famine. By showing the small farmers methods of preventing soil erosion, having diversified crops, using fertilizer, and improving seeds and technologies, they can begin to support their families.

Through a joint effort with the World Alliances and the current government, small farm equipment could reach the isolated areas and provide a way for the typical families to work the soil. If the coffee and flower industry would reach out and take one family at a time and offer aide in buying fertilizer, pesticides, and plants, it could mean the difference in a family's survival. Civic organizations could help in supplying necessary equipment and supplies to remote areas. As an education endeavor, agricultural

students from other countries could as a part of their training go into the area and teach crop rotation, formation of gardens, and ways to prevent water problems.

In our country, the wealthy prosper. It is the same in Ethiopia. The large coffee growers who get foreign support prosper, but the small farmer experiences failure. One of the small solutions is to give support in the use of fertilizers, pesticides, irrigation, crop rotation, and crop production. If the large coffee owners would just take in a few of the smaller farmers and offer support, it would spread across the country and famine would be reduced. There can be hope in Ethiopia if adequate steps are taken.

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