

# Africa's Geography: Vast Food Potential

by Marcia Merry Baker

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The maps show selected features of the physical geography of Africa, giving an idea of the vast agricultural potential. There is a notable absence of rugged mountain chains; most of the continent is an upland plateau, with an elevation of 660-3,000 feet in the north, and 3,000-6,000 feet in the south, edged all round by a coastal strip, and no piedmont.

There is extensive arable land. Out of a total land area of 2.13 billion hectares, an estimated 970.2 million is potentially useful for agriculture—172.3 million hectares of arable and permanent cropland, and 797.9 million hectares of permanent pasture. For comparison, South America's total land area is 1.753 billion hectares, with 116.2 million hectares of arable and permanent cropland, and 447.3 million hectares of permanent pasture.

**Figure 1** shows the relative amounts of rainfall. The Sahara and the Somali-Ogaden Deserts stand out prominently in the north for "almost no" precipitation, along with the Namib Desert in the far southwest. However, under much of the Egyptian and Libyan deserts, and also in the western Sahara, are water deposits of significant quantities, some dating back to riverbeds of 5,000 years ago. Remote sensing from satellite overflights has located many such potential aquifers. Though much of the water is "fossil water," and not being replenished by rainfall, still the natural underground reservoirs could have a role in a transition period, probably 50 years or less.

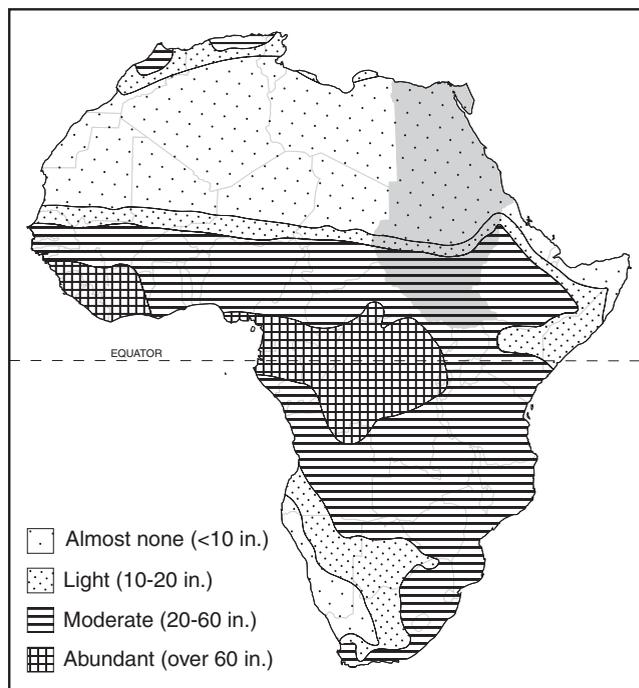
A broad band of moderate rainfall of 20 to 60 inches sweeps across west Africa, to central Africa and southward. Depending on the terrain and seasonal distribution of the precipitation, these amounts are favorable to a wide variety of rainfed crops.

Finally, this moderate rainfall zone is banded by lighter rainfall along the north, northeast, and southwestern edges, and in the center, shades into the heavy rainfall belt in the heart of Africa—the huge Zaire (Congo) River basin.

**Figure 2** shows the dominant natural vegetation types and gives a profile of agriculture in each region.

Lookin at the rivers and lakes of the continent we see that, in volume, the Zaire River ranks second only to the Amazon River. Africa has 4,184 cubic meters of total run-off, of which only about 3% is "withdrawn" for various uses, for an average

FIGURE 1  
**Relative Rainfall in Africa**



Source: George F. Deasy, et al., *The World's Nations*, New York: J.B. Lippincott, 1958.

per capita utilization rate of 244 cubic meters annually. In contrast, North America has a total run-off of 6,945 cubic meters, with about 10% withdrawn for utilization, giving an average per capita use rate of 1,692 cubic meters. Except for the lower Nile River, very little of the other African river systems have been developed to their potential for productive use.

## Four Agricultural Powerhouses

Reflecting these geographic features, there are four main economic regions on the continent: the rain forest in the west, extending to Kenya in the east; the African shield, rich in rainfed farm potential as well as mineral wealth; the northern coastal regions, bordered by the Sahara on the south; and the Sudan-Sahelian region, extending into the Horn of Africa.

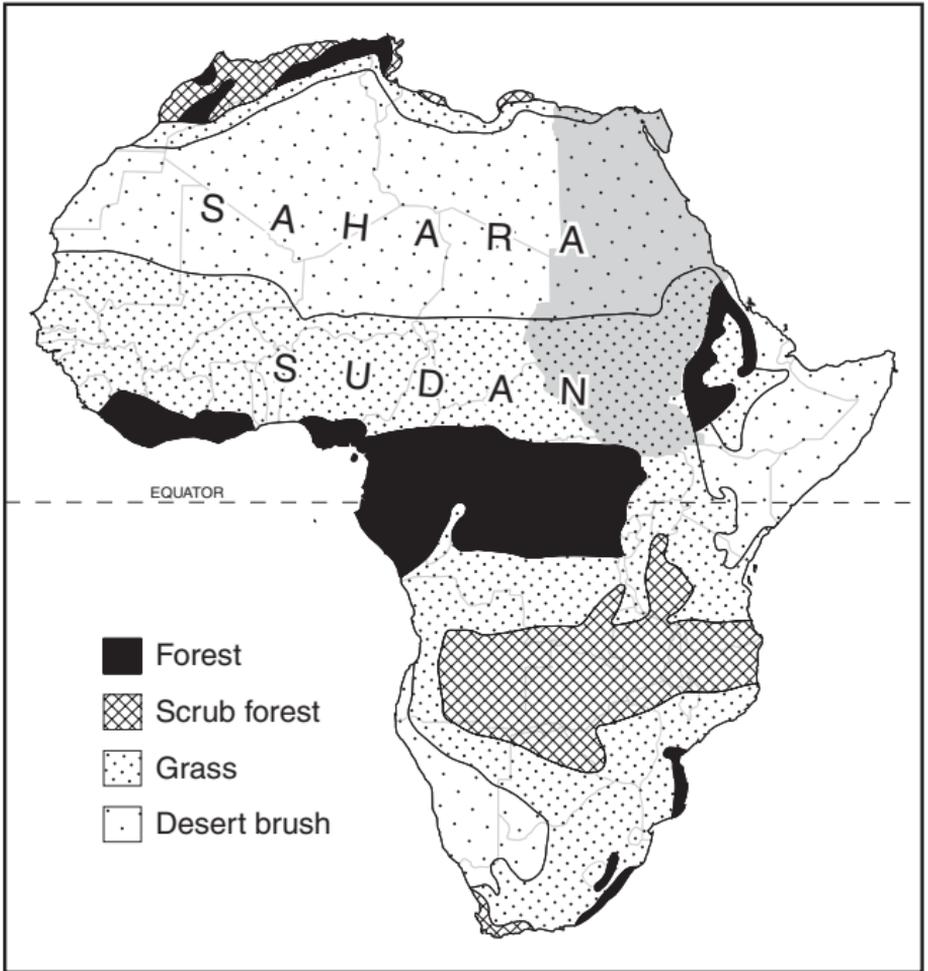
With state-of-the-art infrastructure, these regions are each world powerhouses. The following are just some of the agricultural aspects of the development potential.

- *The west-central, heavy rainfall area.* This area could boast one of the world's richest rice bowls, with water management and soil enrichment. In the past, the region was looted for cash crops like cocoa, bananas, palm oil, coconuts, and rubber.

- *The African shield.* Much of this grass and brushland area is known as the southern African corn belt, and with added inputs per hectare, the region is a natural for grain production.

FIGURE 2

## Types of Dominant Natural Vegetation in Africa



Source: George F. Deasy, et al., *The World's Nations*, New York: J.B. Lippincott, 1958.

- *Northern coastal regions.* The Mediterranean littoral is already famous for its output of citrus, dates, olives, winter vegetables, and similar crops, with wheat and small grains in the drier inland regions toward the desert. With additional water, the region can develop as one continuous garden.

In 1992, Libya “turned on the tap” of its national water project, the “Great Man-Made River,” to bring water pumped from under the Sahara, via a giant underground pipeline, to the coast, to relieve the water crisis where saltwater is invading the coastal aquifers.

However, even cheaper and more plentiful water supplies can come from nuclear-powered seawater desalination plants along the Mediterranean. The cost per 1,000 gallons from such a plant, producing a million gallons a day, is less than \$2. These nuclear-desalting plants will never run dry!

- *Sudan-Sahelian region.* This extensive area, characterized by grasslands, has the potential of being the foremost grain and grazing belt of the world. What is required is infrastructure for reliable water, transport, and mechanization. The area is the perfect locale for “man-made” rivers and lakes from a combination of geographic engineering and nuclear-powered desalination, as recommended in the “Oasis Plan” approach outlined by Lyndon LaRouche, for development of the Mideast.