

Marshall, F., and E. Hildebrand. "Cattle before Crops: The Beginnings of Food Production in Africa." *Journal of World Prehistory* 16( 2002): 99–143.

## Farming: Tropical Forest Zones

The history of farming in Africa's tropical forest zones is a persistent research challenge. Direct archaeological evidence, especially of plant remains but also of animal bones, is rare, and many of the species of particular importance would be difficult to identify archaeologically even if they were present. As a result, our understanding of past farming in these zones remains extremely patchy and is inferred largely from indirect evidence, ethnographic models, and historical linguistics.

A number of important crop species are native to the forests or forest margins of Africa, and their modern distributions provide clues to their regions of origin. There are several tuber species, which have played a limited role in agriculture outside the forest or forest margin zones. African yams (*Dioscorea cayenensis* complex and *D. bulbifera*) are taxonomically complex and could have multiple domestications across Africa. Other tubers like the hausa potato (*Plectranthus exculentus*), yam pea (*Sphenostylis stenocarpa*), and piasa (*Solenostemon rotundifolius*) are all likely domesticates of the west-central Africa forest zone. In addition to possibly native yams, the forests of southwest Ethiopia provided early cultivators with ensete, cultivated for its starchy "stems." While guinea millet (*Brachiaria deflexa*) is native to the West African forest margin, other cereals cultivated in the forest zone, such as pearl millet and sorghum, were introduced from savanna agriculture. In Ethiopia, finger millet, tef, and the oilseed noog may have been domesticated in forest margin zones.

Important pulses of West Africa include cowpea, Kersting's groundnut, and Bambara groundnut, while in East Africa the hyacinth bean is a probable forest margin domesticate. Important tree crops include the akee apple (*Blighia sapida*), the oil palm (*Elaeis guineensis*), and the incense tree (*Canarium schweinfurthii*) in West Africa. Additional crops include okra (*Abelmoschus esculentus*) and the fluted gourd (*Telfaira occidentalis*). Both West Africa and Ethiopia also have native stimulant species, with cola nuts and robusta coffee in West Africa and arabica coffee and chat in Ethiopia. Many species important to the agriculture of this zone today have been introduced from overseas. Bananas and probably taro/cocoyam and Asian yams were introduced in antiquity from across the Indian Ocean, while cassava/manioc, the sweet potato, and peanuts/groundnuts were introduced in post-Columbian times from South America.

None of the livestock that are important in the forest zone are native but were introduced via savanna zones.

The ungulates (sheep, goat, and cattle) all show special adaptation to this environment through dwarfism, which can be identified through metrical analysis of archaeological bone, and provides an intriguing parallel to human pygmy groups in this zone. As with other parts of equatorial Africa, the presence of endemic tsetse flies in this zone creates a potential disease barrier to the successful colonization by pastoralists.

The origins of agriculture in the west-central African forests lie in the interaction between native hunter-gatherers and early savanna agropastoralists. Such interactions appear to be represented by the Kintampo archaeological culture of Ghana. Lithic traditions and distinctive artifacts known as "terracotta cigars" suggest development of this ceramic-using tradition from local precursors. The northern range of this tradition is found in the savannas of northern Ghana from the early second millennium BCE, where pearl millet was cultivated, as indicated at Birimi. Further south, in more wooded environments, archaeobotanical evidence points to use of wild fruits, including incense tree nuts and oil palm, as well as pulses, including cowpea. Kintampo sites have produced evidence for cattle and goats, and some of the goat remains have been attributed to a dwarf breed. Linguistic evidence suggests that among the early cultivators of these forest crops were Benue-Congo speakers.

It was a subsection of the Benue-Congo language, the Bantu languages, which appear to have been spread by the early cultivators in central Africa, a process which could have begun as early as the second millennium BCE, although hard evidence for dating this process is elusive. Anthropogenic impacts on vegetation in West Africa are more readily apparent from the early to mid-first millennium BCE, which suggests that food-producing populations had reached some critical mass. Bantu speakers spread in two directions: eastward along forest margins, where other language groups may also have practiced agriculture and millet cultivation was added to the tuber crops, while another direction was south and east in central Africa carrying yam cultivation and livestock, while practicing fishing and mollusk collecting. The northern savanna route brought them to the great lakes region, where savanna food-producers were probably already established, and where the addition of ironworking promoted more intensive food production.

During the Iron Age, characterized by Urewe ceramics into the first centuries CE, the vegetation in this region registers the impact of widespread agriculture. Here perhaps in this period dwarf, humped cattle may have been adopted, which included genetic input from Indian zebu. The dispersal in the forest zone is thought to have followed river corridors, the west coastal zone, and possible savanna corridors favored for forest margin cultivation. Population densities are likely to

have been limited in part due to disease factors, and symbiosis of specialized hunter-gatherer groups may have been important. The minimum age for dispersal may be provided by the Ngovo tradition, with ceramics and groundstone axes, known from the lower Zaire River south of the central Africa rainforest, and dating from the end of the first millennium BCE, although present faunal data lacks livestock. Further south in Namibia and Zimbabwe to the east, livestock may have been adopted by Khoesaa-speaking communities in the last centuries BCE. Among the widespread words in Bantu languages are words for banana and possibly taro/cocoyam. Evidence for banana in the form of archaeological phytoliths comes from Nkang, Cameroon, from the mid- to late first millennium BCE. This indicates that bananas had spread westward from the East African coast by this time.

Early farming in equatorial Africa was a complex mosaic and raises important issues about the interaction between different systems of food production, persistent hunting and gathering, and between different cultural traditions. Developments drew on traditions from the African savannas, as well as species introduced to Africa via long-distance Indian Ocean trade

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### Further Reading

- Blench, R. M., and K. C. MacDonald, eds. *The Origins and Development of African Livestock: Archaeology, Genetics, Linguistics, and Ethnography*. London: UCL Press, 2000.
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- Sutton, J., ed. "The Growth of Farming Communities in Africa from the Equator Southwards." *Azania*, journal volumes X Nairobi: British Institute in Eastern Africa, 1996.

**Fatagar:** *See Ethiopia: Muslim States, Awash Valley: Shoa, Ifat, Fatagar, Hadya, Dawaro, Adal, Ninth to Sixteenth Centuries.*

**Fatimid Caliphate:** *See Egypt: Fatimid Caliphate.*

**Fatimid Empire: Maghrib, 910–1057**

Early in the tenth century, Abu Abdallah, a Shi'ite propagandist, instigated an uprising against Ifriqiya's Aghlabid rulers. After defeating them in 910, he gave

his support to Ubaidallah al-Mahdi, a messianic figure whose goal was to establish Shi'ite control throughout the Muslim world. By claiming the title of caliph (successor to Muhammad), Ubaidallah openly challenged the legitimacy of the Abbasid family, which had held the position for over a century. To stress their descent from Fatima, Muhammad's daughter and the wife of Ali, whom the Shi'a acknowledged as Muhammad's true heir, Ubaidallah and his family called themselves Fatimids.

The Kutama Berbers who had formed the nucleus of Abu Abdallah's army fell out with the Fatimids when the new rulers refused to allow the plundering of the province. Other Fatimid practices also disillusioned potential allies. The taxes needed to finance a large army proved burdensome, and the new regime's insistence on such Shi'ite tenets as the primacy of the descendants of Ali irked the egalitarian Berbers. Their disillusion boiled over into open revolt when Ubaidallah ordered the assassination of Abu Abdallah in 911.

Other opponents of the Fatimids—among them merchants aggrieved by the dynasty's acquisition of control over their lucrative trade routes and an Aghlabid pretender in Sicily—joined the rebels. Ubaidallah quelled the uprising with the assistance of Berbers whose loyalty was bought with promises of looting. The ensuing sack of the religious center of Qairawan, whose leaders had shown no inclination to renounce Sunni traditions, assured the Fatimids of the enduring enmity of that city. Nor did Shi'ite Islam make significant gains among the population at large. The hostility of Qairawan and the Fatimids' desire to carry their revolution beyond Ifriqiya explain Ubaidallah's decision to construct a new capital, Mahdiyya, on a peninsula on the province's eastern coast. Thus the Shi'ite rulers replaced Qairawan, originally founded to facilitate expansion farther west, with a coastal city looking eastward to the Muslim heartlands where the Fatimids hoped to organize their ideal state.

Nevertheless, the Fatimids did not ignore the lands to their west. Campaigns to bring other areas of the Maghrib under their rule provided an outlet for the militancy of Ifriqiya's Berbers and enhanced the Fatimid economy by securing control over additional North African termini of the trans-Saharan trade in the mid-tenth century. But the determination of the Umayyad rulers of the Iberian peninsula to halt Fatimid expansion turned much of the Maghrib into a battlefield contested by Berber proxies of both the Fatimid and Spanish Umayyad dynasties.

A resurgence of Kharajism, an egalitarian Muslim doctrine that had earlier attracted considerable support in North Africa, coincided with this period of Fatimid expansion. A populist figure named Abu Yazid led a Kharaji insurrection in the vicinity of Tozeur shortly