

The Impact of Bantu Migration on Agriculture in Sub-Saharan Africa

Jia Liu

College of History, Geography and Tourism, Chengdu Normal University, Chengdu, 611130, China

ABSTRACT. *From the 1st to 19th centuries AD, Bantu migrated in sub-Saharan Africa on three routes: west, East and south, and formed three agricultural economic types. On the western front, after arriving in the Congo Basin, Bantu mainly engaged in simple agricultural economy. On the Eastern Front, Bantu learned animal husbandry from the Nilots and Kushts, and developed a mixed farming and animal husbandry economy. As Bantu continued to migrate southward, they taught the indigenous Koisans how to graze, which directly contributed to the origin of animal husbandry in South Africa. During the thousands of years of Bantu migration, a variety of crops, livestock, agricultural technologies (especially iron farming tools) spread in sub-Saharan Africa, greatly promoting the development of agriculture in sub-Saharan Africa.*

Keywords: *Bantu; Migration; Sub-Saharan Africa; Agriculture; Impact*

1. Introduction

Early in man's history, ethnic migration was normal, which could promote agricultural exchange and development. Bantu migration was one of the most striking and impressive because of its large number, long time and far-reaching impact. In addition, compared with other regions of the ancient world, sub-Saharan Africa had limited communication with the outside world, and then its internal agricultural exchange was particularly important.

Immigration was one of the important ways to promote the exchange of ancient agricultural civilization. Bantu migration ran through a wide range of sub-Saharan Africa's agricultural regions with different levels of development and diverse structures. In these agricultural regions, there were not only advanced terrace irrigation agriculture in East Africa, but also backward gathering and hunting agriculture in Central and Southern Africa. The exchanges and collisions of various agricultural types promoted the widespread use of iron in African agriculture, as well as the spread of various crops and livestock, which greatly increased the agricultural productivity in Africa.

Scholars at home and abroad generally focus on the origin of Bantu, migration routes and so on, based on linguistic data. There is less discussion on the relationship between the migration of Bantu and agricultural exchange and development in Sub-Saharan Africa. This paper will focus on the types of agricultural economy formed by Bantu expansion and the important impact of Bantu migration on agricultural development of Sub-Saharan Africa.

2. Bantu migration

In sub-Saharan Africa, Negroes are dominant, so it is called "Black Africa". Among them, Bantu Negroes are dominant, followed by Sudanese Negroes. The Bantu are widely distributed in Central Africa and parts of East, West and Southern Africa. This distribution pattern, dominated by Bantu, is closely related to the thousands of years of migration in Africa. The name of the Bantu comes from the Bantu language. In the late 19th century, when European linguists studied African languages, they found that most of the languages in eastern, southern and central Africa were very similar in terms of vocabulary, sentence structure and grammar, thus presumed that they were closely related. [1] Scholars then referred to Bantu-speaking African tribes as Bantu.

There are several hypotheses about Bantu origins. One view holds that the Bantu originated near the Great Lakes region of East Africa; the other holds that their homeland was in the Congo River Basin; and the third holds that the origin of the Bantu should be the Cameroon Plateau in West Africa, which is now the border between Nigeria and Cameroon. [2] At present, the third view is more popular. The reasons for Bantu migration were also quite complicated. It is generally believed that the Bantu living in the Cameroon Plateau were deeply influenced by the development of agriculture in the tropical forest areas along the Gulf of Guinea. They mastered the technology of iron smelting very early, and used the favorable conditions of rainy equatorial tropics to develop hoeing agriculture and cultivated bananas, yams and so on. With the improvement of productivity and the rapid expansion of population, it was necessary to open up new living space. In addition, some scholars believe that the migration of Bantu was caused by the continuous southward migration of various ethnic groups in northern Sudan, encroaching on the places where Bantu lived, forcing Bantu to spread outward. [3] One French scholar pointed out: "Nigeria was overpopulated in the last centuries of BC because a large number of Saharan Neolithic people were forced to migrate from 2500 to 500 B.C. due to the drying up of the desert. It was during this period that the original Bantu migrated to the south." [4]

3. Bantu's Migration and the Formation of Three Agricultural Economies

Linguistic evidence shows that Bantu mainly engaged in agricultural cultivation and fishing at the beginning of migration. [5] In the process of migration, Bantu absorbed and learned from the local agricultural technology, and finally formed

three kinds of agricultural economic forms: pure Agricultural Economy, mixed agriculture and animal husbandry economy and pure animal husbandry economy. The formation of these three agricultural economic structures mainly depended on the local natural ecological environment and the level of agricultural development.

(1) Pure Agricultural Economy

The region with pure agricultural economy mainly distributed in the tropical rain forest area of Central Africa and the surrounding grasslands. Bantu who migrated along the western line mainly planted yams, banana and other crops introduced from Southeast Asia in tropical forest areas, and sorghum, millet and other food crops in tropical grassland areas. From the 16th century, cassava, maize and other American crops began to replace traditional crops and gradually became the most important food crops in Central Africa. [6] The formation of this agricultural economic structure was closely related to local natural conditions. There were many rivers, hot and humid, a great number of tropical diseases, especially the extractive fly, which were all extremely unfavorable to the survival of cattle and sheep. Then Bantu living here were mainly engaged in pure agricultural economy.

In Central Africa, Bantu cut down forests, and then burned them. After several days of cultivation, the soil fertility declined and the land was exhausted, so they abandoned them and searched for new places to cultivate. [7] If it was difficult to find suitable land nearby, they would migrate far away. Farming tools were also relatively simple, mainly iron hoes, supplemented by wooden sticks, forks and so on. The soil in the tropical rainforest area was not suitable for deep cultivation, and the livestock such as cattle and sheep had a low survival rate, so they could not be used for labor. Therefore, the Central African region had been hoeing agriculture for a long time. Irrigation system was also very simple, with stone building canals, water running down from above for irrigation. [8]

It should be noted that before the arrival of the Bantu, the short Pygmies were indigenous residents of Central Africa, living a life of gathering and hunting. After the arrival of the Bantu, some of them were assimilated and some of them hid deep in the forest. Pygmies were skilled in hunting and fishing. Then Bantu learned these techniques from them and engaged in some fishing and hunting to supplement their daily diet. In view of the limited development of animal husbandry and the lack of protein in Central Africa, a certain fishing and hunting economy was particularly important.

(2) Mixed Agriculture and Animal Husbandry Economy

In Eastern and southern Africa, Bantu were engaged in a mixed agricultural economy combining agriculture and animal husbandry, which was also the main agricultural economic form of Bantu. Ethiopia was one of the origins of agriculture in Africa, where sorghum and millet were the staple food. When the Kushts living

here migrated southward, they brought farming techniques to Kenya, Tanzania and other places. In addition, these areas were located in the plateau, and the climate was dry, without fly infestation, suitable for the development of animal husbandry. After contacting the Kuchts and Nilots, the Bantu who migrated along the eastern route learned to grow millet, sorghum and other crops on the one hand, and to raise livestock on the other. Animal husbandry could bring milk, meat and fur to Bantu. In this way, the settled Bantu farmers gradually formed a mixed economy of farming and animal husbandry, which combined planting a variety of grains with grazing cattle. This "plateau agriculture model" enabled them to settle down in East Africa and gradually expanded around. [9] After the 16th century, the introduction of maize, cassava and other American crops changed the local diet, but this mixed farming and animal husbandry had long been the main mode of agricultural development in East Africa. [10]

Then Bantu in East Africa continued to migrate south with their crops and livestock, bringing this mixed farming and pastoral economy to southern Africa. According to the different proportion of agriculture and animal husbandry, it could be subdivided into mixed economy of animal husbandry and agriculture, and mixed economy of agriculture and animal husbandry. It was worth mentioning that around 2nd Century and 3rd Century, in the northern part of Botswana and Caprivi, Namibia, some Bantu met with the Koisans who were gathering and hunting. [11] Thus, the Koisans acquired livestock from the Bantu and developed animal husbandry.

(3) Pure animal husbandry economy

The pure animal husbandry economy mainly existed in a few areas of East and Southwest Africa. The formation of this agricultural economy was mainly influenced by natural conditions. Serious drought or barren soil prevented Bantu migrants from engaging in farming, or after several years of severe drought, farmers had to abandon farming temporarily, so they specialized in animal husbandry (mainly cattle). For example, after entering the arid areas of Namibia, the Bantu-speaking Hereros specialized in cattle nutrition because the local ecological conditions were not suitable for the development of farming. [12] However, Bantu had rich farming experience, once conditions improved, they would soon re-cultivate crops, developing a mixed farming and animal husbandry economy.

4. The Impact of Bantu Migration on Agricultural Development in Africa

(1) Promoting the Spread of Advanced Agricultural Civilization and the Use of Iron Farming Tools in Africa

At the beginning of the Bantu migration, they had formed advanced iron hoeing agriculture. Before the arrival of the Bantu, the Pygmies in central Africa and the Koisans in southern Africa were still in the transition period from the Stone Age to the Iron Age, mainly engaged in gathering and hunting. As a result, the arrival of Bantu brought advanced agricultural concepts and technologies to these regions, promoted the origin of planting and animal husbandry in Central Africa, and

expanded the region of African agricultural civilization. On the other hand, in East Africa, Kushts and Nilots had developed advanced mixed farming and animal husbandry economy for a long time. With the arrival of Bantu, different farming cultures converged, and more advanced agricultural civilization was bred. With the successive migration of Bantu, it spread to the vast area of sub-Saharan Africa.

More importantly, Bantu migration directly contributed to the spread of iron in Africa. Archaeological evidence shows that the distribution of early Iron Age sites in many parts of eastern and south-central Africa (in the early and mid-1000 AD) coincided with the distribution of modern Bantu ethnic groups, suggesting that Bantu migration was associated with the spread of iron. [13] The production and diffusion of iron farming tools were of great significance to African agricultural development. The introduction of iron farming tools, such as shovels, hoes and shovels, was conducive to cutting down forests and opening up new lands, greatly improving the utilization of land in Africa and promoting the growth of the local population. As Engels said, "Iron makes it possible to cultivate larger areas of farmland and reclaim vast forest areas." [14]

(2) Promoting the spread of crops and livestock

At the beginning of their migration, Bantu mainly ate root crops. When they migrated to central and Western Tanzania, they learned how to grow and eat grain. Then during their migration to the south, many crops from East Africa were introduced to Southern Africa. For example, sorghum, which originated in Ethiopia in 5000 BC, was brought into East Africa by Kushi people when they moved to Tanzania and Kenya. [15] Then the Bantu brought sorghum from East Africa to southern and central Africa during their expansion. Botanical evidence suggests that sorghum in central and southern Africa is genetically more closely related to Sorghum in eastern Africa. [16]

In addition, the Bantu also introduced cattle and sheep and other important livestock into southern Africa during their expansion to the south. In the 2nd and 3rd centuries, the Bantu who went down to search for pasture met the Koisans who went up north to gather and hunt. So the Koisans got large-tailed sheep from the Bantu. While in the late tenth Century and early eleventh Century, hunters hunting in northern Botswana got cattle from the Bantu at the border between Zambia and Angola. [17] The introduction of cattle and sheep was of great significance to the development of southern Africa. Most parts of southern Africa were located in arid and semi-arid tropical grassland climate, which was not suitable for planting, but suitable for animal husbandry, especially large-tailed sheep. Therefore, the arrival of Bantu had transformed parts of Southern Africa previously inhabited only by hunter-gatherers into rich pastures. In this way, the ancient indigenous Koi people had finally completed the transition from the hunting economy to the livestock economy.

5. Conclusion

Linguistic evidence shows that Bantu began to use iron at the beginning of their

migration. Perhaps it was because of the use of iron that the Bantu's agricultural productivity had been enhanced. [18] Under the pressure of the population, they began to migrate for thousands of years. On the western front, after arriving in the Congo Basin, Bantu mainly engaged in simple agricultural economy. On the Eastern Front, Bantu learned animal husbandry from the Nilots and Kushts, and developed a mixed farming and animal husbandry economy. Bantu continued to migrate southward after a slight pause in East Africa. In the process, they taught the indigenous Koisans how to livestock, which directly contributed to the origin of animal husbandry in South Africa. During the thousands of years of Bantu migration, crops, livestock, agricultural technologies and so on also spread in sub-Saharan Africa, thus promoting the increase of local farming area, the improvement of agricultural production efficiency, and the emergence of the country.

In a word, the migration of Bantu was the process of the early tropical hoe farming spreading to the south of the equator, which greatly promoted the development of agriculture in sub-Saharan Africa. In this process, Bantu's own agricultural economy also transformed from the original exclusive agriculture to a mixture of agriculture and animal husbandry, supplemented by fishing and hunting. Perhaps it was Bantu's strong adaptability and learning abilities that had enabled them to expand rapidly and surpass some of the ancient tribes of Africa.

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