



Tropentag 2014:

Bridging the gap between increasing knowledge and decreasing resources

September 17 - 19, 2014, Prague, Czech Republic

Traditional Agricultural Knowledge vs. Modernity Changing Cultivation Practices and Generational Conflict in Northern Togo

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Introduction

For a long time, African agricultural practices have been considered by European agronomists as irrational and ecologically unfavourable. From the 1970s, a revaluation had taken place and African cultivation methods were recognised as agricultural knowledge. At this time, the “traditional” agricultural practices, however, were increasingly replaced with new cultivation techniques such as the ox plough introduced by development projects. The evaluation of these changes by agronomists oscillated between praise for successful agricultural modernisation, the concern about the ecological impacts of the innovations and incomprehension regarding the decline of “traditional” knowledge.

In the Région des Savanes, the most northern of the five Togolese regions, this agricultural change accelerated during the 1990s under the influence of the expansion of cotton cropping. This paper argues that this must be seen in the context of a generational conflict and the quest for modernity by the young men: By staging a successful revolt against the authority of the elders, many young men obtained economic independence and were now able to make their own agricultural decisions. Therefore, they aimed at distinguishing themselves from the elders through the expansion of cotton and maize cropping and new cultivation practices which they regarded as modern such as the ox plough and the use of chemical fertilisers. The young men neglected the questions of the ecological impacts of the new cultivation methods or sustainability in favour of short term high income and social prestige. “Traditional” local knowledge no longer met with their aspirations. The elders regarded the new cultivation practices as harmful but were unable to convince the young men to readjust their agricultural methods.

Materials and Methods

The data used for this paper has been collected within the context of the project “Agrarian crisis, structural change and peasant strategies in northern Togo” run by the Institute of Geosciences and Geography at the Martin-Luther-University of Halle-Wittenberg, funded by the DFG (German Research Council) between May 2008 and October 2011. The data collection process encompassed a timeframe of four periods of fieldwork amounting to 20 months in total. In collaboration with students (geographers, sociologists) of the universities of Lomé and Kara 1.591 theme-centred guideline-based interviews were conducted in 15 villages covering nearly the whole of the Région des Savanes. In the 15 villages all 15 year-olds or older persons were interviewed by Togolese grammar school pupils using standardised questionnaires (3.841 quantitative interviews in total). Additional information has been drawn from observations and trips through the fields of the study villages during the rainy seasons from 2007 to 2010 and PRA (Participatory Rural Appraisal)-sessions with the farmers dealing with questions of agricultural practices and food security.

Traditional Agricultural Knowledge in Northern Togo

“Traditionally” the northern Togolese farmers possessed an extensive agricultural knowledge and their land use practices could be classified as resource-conserving. Table 1 rates them with the help of a list of criteria developed by KRINGS (1991, 241-242) on the basis of the concept of site-specific eco-farming (EGGER, 1984, GLAESER, 1984, KOTCHI et al., 1989).

In the past, northern Togolese people practised hoe-farming and constructed 1 m wide and 50-80 cm high planting walls at the beginning of the rainy season, which they aligned in the direction of the slope to allow the rainwater to drain off a feature made possible due to the slightly undulating relief of the Région des Savanes. However, in order to reduce its erosive power, the farmers blocked the ditches developing between the planting walls every 1-2 m with low barriers of earth. This cultivation technique allowed for a loosening of the soil, enabling the cereal plants to develop better than in flat cultivation, and propagated a better concentration of soil nutrients and some green manure by incorporating organic material (sod, cut savannah grass, small twigs and leaves) (ADJIOU, 1987, 305-307, LARÉ, 1999, 111, 115).

The northern Togolese farmers used a relatively large amount of plant species and varieties, making a reduction of a risk of crop failure due to unfavourable rainfalls or pest infestations possible: The basis of the agrarian systems and food security constituted millet and sorghum, of which the farmers cultivated different varieties with a three or six-month growing cycle. The cereal cultivation was supplemented by various types of beans, peanuts – since the 1930s also as a cash crop – African vegetables (gombo, bissap, sorrel and gourds) and yams and sweet potatoes (DE HAAN, 1993, 94, 106, REY, 1979, 553-570). After World War II young northern Togolese men, who had worked in southern Ghana for several years, introduced the cultivation of rice and yellow maize.

All “traditional” crops were cultivated in mixed cropping, which implied several agronomic advantages such as the optimal use of soil nutrients, high water absorption and retention capacity, a reduction of pest infestation and weed growth or hydric erosion by ensuring a largely closed vegetation cover and nitrogen supply to the soil through the cultivation of beans. Furthermore, mixed cropping allowed for an optimisation of the manpower use and a general risk minimisation by hedging against total crop loss (ADJIOU, 1987, 313-314).

Strictly speaking, northern Togolese farmers did not practice crop rotation, however, they varied the individual cereals and the complementary cultures, to mitigate the negative effects of perennial cereal monoculture on soil fertility (ADJIOU, 1987, 317, 320, REY, 1979, 583-585).

Only the permanently cultivated fields close to the compounds profited from a systematic organic fertilization. In the more distant cultivation zones, the plots were farmed for seven to eight years before allowing fallowness of a minimum of ten years to restore soil fertility. By using the non-farmed remoter areas during the rainy season and leaving the harvested fields during the dry season as pastures for sheep and goats, a certain organic fertilization of these arable lands took place (ADJIOU, 1987, 320, LARÉ, 1999, 105-106, REY, 1979, 572-574).

When clearing the land, the northern Togolese farmers left a large number of trees (especially shea butter tree, but also néré and baobab) standing in the fields, the fruits, leaves or bark of which they used for nutritional or medicinal purposes. The farmers were very conscious of the agronomic advantages of trees in the fields (erosion control, amelioration of the microclimate, roots as groundwater and nutrient pump).

Table 1: Ecologically appropriate elements (in the sense of the ecofarming concept) in the agrarian systems in northern Togo in past and present

ecologically appropriate elements	realized in the past	realized in the present
agroforestry	+++	++
intensive soil work (planting walls)	+++	+
mixed cropping	++	++
crop diversity	+++	+++
Variety diversity	+++	+
crop rotations	++	++
organic fertilizing	++	+
mulching	+	+
cultivation of nitrogen providing plants	++	++
integration of agriculture and husbandry	–	–

+++ very pronounced ++ pronounced + schwach pronounced – not realized

Source: own research (2007-2010)

The Actual Agricultural Practices (cf. table 1)

Since the 1990s, agricultural practices in northern Togo have changed significantly. Seen from the perspective of eco-farming, the changes can be assessed as unsustainable.

The farmers continue to construct planting walls in their fields. However, since they generally use the ox-plough for this purpose, these are narrower and lower than the manually constructed plant walls and the distance between them is less than it was before. To economize time, the farmers abstain these days from the blocking the ditches with barriers of earth, which results in an increased hydric erosion.

While the diversity of cultivated crops has been increased further through the introduction of cotton, white hybrid maize and soy, species diversity has declined in cereal cropping. As maize has replaced millet and sorghum as the main cereal, farmers use only parts of the “traditional” millet and sorghum varieties. Maize cultivation is mainly limited to the variety *Ikenné*. In the case of maize, the hybrid sorghum variety SORVATO (*Sorgho Variété Togolaise*) and soy, farmers use improved seeds, which they obtain from the state owned agricultural extension services or private traders.

On the fields close to the compounds, the northern Togolese farmers continue to practise organic fertilisation. Because of the decline of livestock, on the one hand, and the agronomic needs in cotton and maize cropping, on the other hand, the use of chemical fertilizers has become widespread. It mainly affects the distant fields, but focuses primarily on cotton, white maize and SORVATO. To a lesser extent, chemical fertilizers are also used in rice, yellow maize and peanut cultivation. However, only the cotton plants and sometimes beans are treated with insecticides. Almost all northern Togolese farmers continue to practise mixed cropping. The only exceptions are cotton, rice and peanuts. Even, white maize is often cultivated in association with soy or sorghum.

Explaining Agrarian Change in Northern Togo: Social Change and the Quest for Modernity

Since the 1970s, the state extension services propagated the “modernization” of agriculture by promoting the use of ox ploughs, the cultivation of cotton and white hybrid maize and the use of chemical fertilizers for cash-crops such as cereals. However, until the early 1990s, farmer were little interested in these proposals and the elders as a the decision-makers opposed many innovations.

At this time, the local societies in northern Togo experienced deep structural conflicts between the old men, who made the economic decisions for their extended families and controlled the key resources (land, crops, women and mobilization of outside workers), and the young men, who had to subordinate themselves to the old men and work for them and the families. By practising a marital system of reciprocal exchange of women, the elders were able to delay the socio-economic

emancipation of the young men. This local social constellation resulted in a perennial labour migration of many young men to Ghana and Côte d'Ivoire (PILON, 2000, REY, 1979).

Finally, encouraged by the democracy movement in the capital, Lomé, as fought in the early 1990s, young men revolted against the gerontocratic social order. By rebelling against the previous system of having their wives selected by the elders and entering arranged instead of "love marriages", they gained the right to form their own nuclear families, the right to move out of their paternal compounds and obtain an allocation of arable land. All this happened in accordance with local norms, which they converted in their favour. This economic independence enabled them to make their own agricultural decisions.

They desired to distinguish themselves from the elders: They opted for the expansion of cotton cultivation – which became very lucrative because of price incentives granted by the Togolese government – at the expense of cereal production. They used the thus generated high income to realize long-cherished consumer desires such as the construction of mud brick buildings with corrugated iron roofing, the purchase of bicycles or beautiful clothes, etc. Therefore, they considered cotton cropping as a symbol of their modernity. They also interpreted the cultivation and consumption of maize rather than millet and sorghum in the same way, as maize had originally been the staple food of city dwellers. Likewise, they rejected many "traditional" agricultural practices as backward and were therefore very sensitive to the modernisation proposals of the agricultural extension services. Subsequently, they adopted especially the use of such practices as the ox plough and chemical fertilisers. The young men neglected questions regarding the ecological impacts and the sustainability of the new cultivation methods in favour of short term high incomes and social prestige. The elders regarded the new cultivation practices as harmful but were unable to convince the young men to readjust their agricultural methods.

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