

THE DIFFUSION OF MAIZE IN NIGERIA: A HISTORICAL AND LINGUISTIC INVESTIGATION

by

Roger M. Blench
Cambridge, England

Kay Williamson
University of Port Harcourt

and

Bruce Connell
University of Oxford

- 1 Introduction
- 2 The lexical evidence
- 3 Discussion of base forms
- 4 Conclusion: the spread of maize

Notes

References

1 Introduction

In conventional text books, the introduction of maize into West Africa is usually assigned to the Portuguese. Textbooks such as Irvine (1969:125) or Purseglove (1975:308) do not mention any possible routes to West Africa apart from the coastal one. Maize is undoubtedly a New World domesticate and the Portuguese are the logical carriers of maize to the coast of West Africa, where there is evidence of its early establishment. Portuguese ships certainly car-

ried maize to the Mediterranean region, where its early name "Indian corn" refers to a notional [West] Indian provenance. Maize seems to have been established along the North African littoral by the end of the sixteenth century.

For the West Coast of Africa there is, however, little historical documentation relating to the introduction of maize. Neither Portuguese nor Arab sources record the intentional introduction of these crops, and indeed some of the early West Coast travellers describe maize as if it was unknown to them. Dapper, however, writing in the late seventeenth century, remarks that maize was carried from the West Indies to Sao Tomé and taken thence to the Gold Coast (Dapper 1668:463). Indeed, in the Senegambian region terms such as "sorghum of Europeans" appear to confirm this historical scenario (Pasch 1980:54).

For the coastal regions of present-day Nigeria, however, there is less documentation of its passage. Nonetheless, by the time the first European observers reached Borno in the early nineteenth century, maize was already well-established. A possible reference to maize in eighteenth century Nigeria is quoted by Miracle (1966). Denham *et al.* (1828,II:159) refer to maize in Borno but do not make clear where it was sold and in what quantities. Baikie (1856:156) was served a "mess ... of Indian corn-meal" in Wuzu, south of Lau on the Upper Benue, and clearly did not regard this as remarkable. Barth (1862,II:174) was aware that maize was of American origin but observes that it was introduced to Central Africa by way of Egypt. Nachtigal (1879-89, II: 374) noted that it was the second most important crop after sorghum grown on the islands of Lake Chad.

Although an article by Stanton (1961) had pointed to the links between maize distribution and ethnic/language groups, the main historical review of the introduction and spread of maize is Miracle (1966). There are two comprehensive linguistic studies of the introduction of maize into Africa, Portères (1955, 1959) and Pasch (1980, 1983). The earlier studies assumed that maize was a Portuguese import, although Portères also noted the separate introduction of maize across the Sahara. Pasch (1983:211, Map 2) also shows maize being brought to the Lake Chad region from Tripoli and from further east. Terms in many languages of northern Nigeria and the Lake Chad region refer maize to "masar", i.e. Egypt. In West Africa, there is a clear distinction between the hard white flint maizes more suitable for flour and the soft yellow maizes that are boiled or roasted and eaten fresh. Burkill (1994:378ff) has recently reviewed the

origin, cultivars and uses of maize in West Africa and has also compiled a substantial list of vernacular names for both the plant itself and its cultivars.

In Tardits (1981), various researchers were asked to consider the historical evidence for the diffusion of certain crops in Cameroon. One of these was maize, and individual traditions of particular ethnic groups often recall the immediate source of maize. For example, the Vute have two separate types: a reddish type adopted from the Gbaya in the German period and a short-season variety that came from the Bamileke in the 1950s. Accounts such as that of Tardits are usefully assembled in chronological sequence, as they can illuminate the broader picture of diffusion.

At the macro-level, one writer has considered the historical evidence for maize in Africa in considerable detail: M.D.W. Jeffreys, who attempted to prove that maize in West Central Africa was a pre-Columbian introduction (Jeffreys 1971 and references therein). Jeffreys drew his arguments from a wide variety of types of evidence, both from oral tradition and linguistics, as well as Portuguese sources. Although there are very early Portuguese records of *milho zaburro* in Africa the identification of these with maize depends on assigning an exact meaning to a rather vague terminology. No unambiguous archaeological evidence or pre-Columbian illustration of maize has yet been unearthed.

Jeffreys believed that Arab navigators were trading with South America in the pre-Columbian period and apart from maize, also argued that the Muscovy duck and the Basenji (non-barking dog) were evidence of this trans-Atlantic traffic. Few scholars today support Jeffreys's ideas (see comments appended to his 1971 article in *Current Anthropology*) although it is appropriate to acknowledge his energy in searching sources for early references to crops and livestock. This paper will assume that the case for pre-Columbian maize in the Old World is unproven.

Maize has one unusual feature in terms of its ecology. The traditional cereal cultigens of Africa were confined to the subhumid and semi-arid regions and the peoples who lived in high rainfall areas did not grow cereals and were only familiar with them through trade. Their existing terminology was of necessity vague; for example, in the coastal regions of Cross River millet and sorghum were not consistently distinguished. Maize, like other cereals, can be used to make beer, but this seems to be very rare in Nigeria. However, it is common in parts of Cameroon, especially in the Grassfields bor-

dering Nigeria (Mveng Ayi 1981:590). Some maize cultivars are preferred for beer-brewing and the names for maize beer in Cameroon turn up as names for the crop itself in Nigeria. This suggests that the diffusion of maize types in Adamawa may have been partly driven by the needs of local brewing.

Whence the problem? The problem is that there is very little in the terminology of maize in West African languages to suggest widespread and significant introduction of maize by the Portuguese. There is a single case of an identifiable loan from Portuguese into a coastal language of southern Nigeria, the Isekiri term *imiyò*, from Portuguese *milho*. This term is isolated, however, and even the surrounding languages have a quite different lexical set. This is very much in contrast to a number of other crops and domestic stock types which have clear patterns of origin - most notably cassava, oranges and pigs.

Even the Yoruba, whose territories extend down to the sea and who were in contact with the Portuguese, have consistently denied receiving maize from them. Jeffreys (1971) cites Bowen in the mid-19th century recording the Yoruba tradition that maize came from the east, beyond the Niger. Bascom (1951:45) was "exasperated" by informants in Ife who "challenged statements that it had come from America and insisted that corn has always been grown and used by the Yoruba". If so, then it may be that the trans-Saharan introduction of maize was far more significant than the Portuguese introduction, even in coastal Nigeria. If so, we need to trace the routes by which maize travelled within Nigeria - in the absence of written documentation. Maize was very rapidly adopted into pre-existing cultigen repertoires and its origin forgotten as it spread from one farming community to another.

One writer who collected a significant body of data on maize and began an enquiry into the paths of its diffusion was Meek (1931:39). One of his observations was that the word for maize in many languages is a compound meaning 'guinea-corn of the Jukun':

"Thus among the Yukutare, Batu, and Nyam Nyam of the British Cameroons maize is *ajo Kwana* and *aku Kwan* and *Kwonga* respectively; among the Mbum it is *nang Kona*; among the Chamba of Donga it is *Kpankara*, i.e. 'the guinea-corn of the Akpa'; among the Kanakuru it is *Apwenen*; among the Hona *Panu*. Even as far north as Zaria Province we find among the Kagoro tribe that maize is *silok Akpat*, i.e. 'the guinea-corn of the Akpa'. It is but fair to add, how-

ever, that the people of Calabar were also known as Akpa, and that maize was probably introduced into the Benue valley from Calabar. Nevertheless the Jukun appear to have been the principal centre of distribution for North-Eastern Nigeria. It is probable also, as has already been indicated, that Kororofa and Calabar were in close communication, and it is even possible that the terms Kororofa and Akpa were general terms applicable not only to the Jukun, but to the peoples of the sea-coast."

Meek is clearly correct in suggesting that the first few terms indicate that maize was introduced from Kona, a Jukun settlement, to other communities to the (north-)west [?]. But among the Kagoro, Akpat now refers to the Hausa rather than the Jukun, thus suggesting a movement south from Hausaland rather than north from the Jukun. The suggestion that maize was probably introduced from Calabar presumably reflects Meek's assumption that it must have been introduced from the coast by the Portuguese and therefore have been transmitted from south to north. Jeffreys (1953:966), who believed maize was introduced from the Arab world, cites Meek but reverses the direction:

"My researches show that in Nigeria, as one progresses inland from the coast, the tribal names for maize indicate the route by which it migrated. Thus, the name for maize in tribe A is 'sorghum of tribe X', where X is found ultimately to be the name of a tribe east or north of the receiving tribe A. Meek (ref. 7, 1, 252, 253, 39) writing of the Hegi [sic], among whom the Kanuri language is widely understood, says that their name for maize is: 'The guinea-corn (Sorghum) of the Kanuri', while among the Jukun the name is 'the guinea-corn of the Pabir'. Among the Yakutare [sic] the name is *Ajo Kwona*, or the *Sorghum* of the Kwona, alias Jukun. Among the Hausa the name for maize is *dawar masara*, where *dawa* = *Sorghum* and *Masa* = *Egypt*."

The arguments of both writers are confounded by the relatively small number of terms analysed and their failure to realise that there are a number of soundalike terms that may well have been subject to multiple re-interpretation. The availability of a much larger regional dataset makes it possible to test these hypotheses in a more concrete, historical manner.

The core of this paper is a compilation of terms for maize in

Nigerian languages¹ and related areas and a series of hypotheses about the origin and spread of these terms. Languages outside the Nigerian region are only quoted where their terms are cognate with lexemes within Nigeria. The concluding section tracks the main base forms for maize, maps their extension and suggests a possible historical schema. A series of maps accompanies the paper showing main points of entry for maize into Nigeria (Map 1), main nuclei of diffusion with the country (Map 2), and location of principal maize names (Map 3).

2 The lexical evidence

Maize is relatively well documented compared with a number of other West African crops. Koelle (1854) included 'maize' as a gloss in his *Polyglotta Africana*. Pasch (1980, 1983) in a study of South American food plants in Africa compiled a valuable list of terms for maize covering the entire continent. The diffusion of maize in Cameroon was studied by the researchers contributing to a historical symposium (see summaries in Tardits 1981).

The table below shows a compilation of terms for maize in Nigerian languages. Languages outside Nigeria are included where they mark the extension of a particular lexical term. Column 1 gives the language classification by phylum, family and branch. The data has been set out in this format for ease of location rather than to support any historical hypothesis - indeed the argument is that a recent introduction like maize easily crosses phylum boundaries. Column 2 gives the name of the individual language and sometimes a location where there are significant dialect variations. Column 3 gives the actual word for maize. Cultivar names are not cited, but on the rare occasions where languages distinguish "hard" from "soft" maize, both terms are cited. Column 4 shows the base forms, i.e. an idealised form extracted from surface attestations. These forms should not be treated as any form of reconstruction - they are essentially arbitrary assignments suggesting a nexus of related forms. Known borrowings are also marked in this column along with etymological parsing where the meaning of component elements is known. Individual base forms are discussed in the following section. Individual lexical citations are not sourced; all the published sources used are cited in the bibliography but the bulk of the data comes from the authors' individual fieldwork.

THE DIFFUSION OF MAIZE IN NIGERIA

Terms for maize can be usefully divided into two types; local formations, i.e. constructed within an individual language, and widespread base forms, usually borrowed across the boundaries of individual language families. Where a writing system already exists, subdotted letters have been used, following Nigerian orthographic tradition, rather than phonetic symbols: *i e o* and *u* are narrow vowels, and *n* immediately following a vowel represents a nasalised vowel.

Table. Vernacular Names for Maize in Nigeria.

Language: Phylum Family Branch	Language with location name	Term (plural affix follows in noun class languages)	Base form or etymology if known and comments
Niger-Congo			
<i>Benue-Congo</i>			
Yoruboid	Yoruba	àgbàdō	agba + do
		ìgbàdō	agba + do
		òkà àgbàdō	òkà + agba + do
		yòngon	cf. Malinke <i>nyon</i> 'cereal'
	Ijumu	àgbàdō	agba + do
	Ọba	òkà	òkà
	Ọra	àgbàdō	agba + do
	Ufe	ìgbado	agba + do
	Amusigbo	àgbàdō	agba + do
	Afo	òkà	òkà
	Ifira	òkà	òkà
	Ifẹ of Togo	bàfó	?
	Işekiri	imíyò	< Port. <i>milho</i>
	Igala	akagwa	akpà
		akpà, àkpákpà, à'ákpà	akpà (with redupli- cation)
Akokoid	Afa	ìgbàdō	agba + do
	Aje	àgbàdō	agba + do

	Arigidi	àgbàdō	agba + do
	Igashi	ìgbàdō	agba + do
	Oyin	àgbàdō	agba + do
	Oge	àgbàdō	agba + do
	Ojọ	asikàràho	?
Ayere	Ayere, Ahan	àgbàdō	agba + do
Akpes Ukaan			
Akpes	Akpes	icààdó	ica + do
	Ase	cado	ica + do
	Auga	ènik	?
	Daja	ìgbàdō	agba + do
	Esuku	ìgbàdō	agba + do
	Gedegede	ìicèdó	ica + do
	Ibaram	ucádó	ica + do
	Ikaram	icádó	ica + do
Ukaan	Ishe	úgbàdó	agba + do
	Akan	èjàndó	ica + do
Okoid	Magongo	ekpurakpa	? + akpa (but cf. Oruma)
Edoid			
Delta	Degema	ùmbiàkpá	Kalabari loan (q.v.)
	Egenē	á-kà	aka
	Epie	à-kà	aka
North-central	Auchi, Avbianwu	ò-kà (é-)	aka
	Aoma	òkà	aka
	Atte	akpa	akpa
	Edo	òkà	aka
	Ivbie N.	alakpa	ala + akpa
	Okpe	usi	? cf. ésé 'sorghum'
	Okulosho	umapa	in Busa probably reduced from forms like Igede
	Uneme	òò-kpà	akpa. Possibly a shortening of a reduplicated form
South-west	Urhobo	òkà (é-)	aka
	Uvbie	òkà	aka
	Isoko	òkà	aka
	Erwa	òkà (í-)	aka

North-west	Emalhe	ú-bakpa (í-)	akpa
	Ibilo	ù-ghbàdó	agba + do
	Iyayu	ogbado	agba + do
	Okpamheri	ugbado	agba + do
	Uhami	ó-ghbàdó	agba + do
	Ukue	ókà	aka
Nupoid	Nupe	kaba	kaba
	Bassa-Nge	kamba	kamba
	Asu	akaraba	aka + raba
	Dibo	akaraba	aka + raba
	Gupa	ayewù	? + 'sorghum'
	Kakanda	ayiwù	? + 'sorghum'
	Kupa	kaába	kaba
	Gbari-Sumwakpna	kambá	kamba
	Gbagyi-Kuta	yàwýì	? + 'sorghum'
	Gbagyi-Nkwa	wiyai	metathesis of Kuta form?
	Gade	gú-cúmpwá (í-)	'sorghum that goes pop!'
	Ebira-Okene	àpáápà	akpa + reduplication
	Ebira-Koto	aákpa	akpa
Idomoid	Agatu	akankpa	aka + akpa
	Idoma of Otukpo	igbanakpa	igbā + akpa
	Akweya	ikpanakpa	ikpā + akpa
	Yala of Ogoja	igu-maakpa	guuli + akpa
	Yala of Ikom	igù	guuli
	Igede	ambàkpà	a + mbi + àkpà
Igboid	Izii	àkpè	akpu + akpa
	Afikpo	àkpùkpà	(< Lower Cross)
	Onica (general), Aniocha, Egbema	ókà	aka
	Onica (town)	ògbàdú	agba + do (loan from the west)
	Ika	ókà	aka
	Ekpeye	ókà	aka
	Obolo Afọ	ókà	aka
		áz è zè	?
	Olu	òkhà	ka

	Owere	<i>ókàhà</i>	<i>òka</i>
		<i>úkwhà ó'nú</i>	cereal of Riverine Igbo
	Ọhụhụ (+ Riverine Igbo)	<i>úkwhà ó'nú</i>	cereal of Riverine Igbo
	Ukwuanj	<i>ókà</i>	<i>òka</i>
	Ikwere	<i>òbìkpà</i>	<i>ò + bì + àkpà</i> (cf. Lower Cross, Kalabari)
		<i>èkpà, ikpà</i>	<i>akpà</i>
	Ogbakiri	<i>òbìkpà, òbì'à</i>	<i>ò + bì + àkpà</i> (cf. Lower Cross, Kalabari)
Kainji West			
Lake	Reshe	<i>ri-masarə (a-)</i>	<i>masar</i>
	Laru	<i>dumagu</i>	?
	Lopa	<i>domaji</i>	?
Lela	cLela (= Dakarkari)	<i>k-hiù k-gana (c-, c-)</i>	'sorghum' + Hausa
	tHun (= Duka)	<i>ù-ma gana (è-)</i>	? + Hausa
	tKag	<i>əp-hyir bə r kəndi</i>	'sorghum' of Hausa
	tRor	<i>ət-hir kwundi</i>	'sorghum' + Hausa
	tJiir	<i>hir magana</i>	'sorghum' + ? + Hausa (? via Lela)
Basa	Gwamhi-Wuri	<i>ət-məsə lə</i>	<i>masar</i>
	Basa-Kwomu (Dekina)	<i>u-karábà (a-)</i>	<i>karaba</i>
	Korɔmba (= Basa-Gurmana)	<i>ə-məsə rə</i>	<i>masar</i>
Kamuku	Shama	<i>mɪsɪr</i>	<i>masar</i>
	Rɔgi	<i>məsər</i>	<i>masar</i>
	Səgəɪmuk	<i>məsər</i>	<i>masar</i>
	Cinda	<i>masər</i>	<i>masar</i>
	Rɛgi	<i>məsər</i>	<i>masar</i>
	Tiyal (= Kuki)	<i>masər</i>	<i>masar</i>
	Hungwɔrɔ (= Ngwoi)	<i>misil</i>	<i>masar</i>
Pongu	Pongu	<i>nù-məsərə (a-)</i>	<i>masar</i>
	Fangwa (Ura)	<i>məsələ</i>	<i>masar</i>
	Gurmana	<i>masara</i>	<i>masar</i>
Kambari	ciBangi	<i>vi-shina gana (i-)</i>	'sorghum' + Hausa
	Kambari (Salka)	<i>kkárábú (íkkárábú)</i>	<i>karaba</i>
	Kambari (Auna)	<i>kkàrèbì (àkàrèbì)</i>	<i>karaba</i>

	Kambari (Agaushi)	<i>kakárábú</i>	<i>karaba</i>
Kainji East	Tumi (= Kitimi)	<i>pi-rə(i-)</i>	?
	Kono	<i>bi-nmun-səri (i-)</i>	?
	Piti	<i>ɪ dal tɪb ɔ k</i>	'guinea-corn with a hat'
	Amo	<i>fè-məsərə</i>	<i>masar</i>
	Chawai	<i>dir kwɔzak</i>	'sorghum' + ?
	Mala	<i>idan yago</i>	'sorghum that carries a child'
	Gure	<i>piti gadin</i>	'sorghum' + ?
	Kahugu	<i>pɪ m sɪr</i>	'sorghum' + <i>masar</i>
	Kurama	<i>masarɪm</i>	<i>masar</i>
	Janji	<i>masiri</i>	<i>masar</i>
	Firan	<i>gur pat</i>	'sorghum' + Hausa
Platoid	Kadara	<i>kepro</i>	? perhaps cf. Eggon
	Kaninkon	<i>kpikpan</i>	? + Hausa
	Karshi	<i>nzakpad</i>	<i>nza</i> (= 'sorghum' in Aten) + Hausa
	Kulu (= Ikulu)	<i>àgbá nimbók</i>	'sorghum like a borasus palm sprout'
	Jili (= Koro of Lafiya)	<i>sisɛlɛ</i>	? The form suggests the reinterpretation of <i>miseri</i> as CV prefix + root
	Jijili (= Koro)	<i>a-miseri (u-)</i>	<i>masar</i>
	Ashe	<i>a-gu tama</i>	'sorghum' + ? Perhaps cf. PB * <i>tama</i>
	Zhire	<i>gúrí gyèku</i>	'sorghum' + Hausa
	Adun	<i>bvúr ibvur</i>	'sorghum' + 'sorghum'?
	Hyam (= Jaba)	<i>gu para</i>	'sorghum' + ?
	Kwyeny	<i>gùùr kpárù</i>	<i>guuli</i> + Hausa
	Angan (= Kamanton)	<i>gul koshan</i>	'sorghum' + ?
	Izere	<i>í-nyar 'gbá</i>	'sorghum' + 'musical horn'
	Gusu	<i>idi-manseri</i>	'sorghum' + <i>masar</i>
	Ayu	<i>ikuru</i>	= 'sorghum'?
	Gwanto	<i>kpawur</i>	Hausa + 'sorghum'
	Shall	<i>gungwaren</i>	'sorghum' + ?

	Mada	<i>mkpumkpà</i>	'sorghum' + Hausa ?
	Ninzam	<i>isaŋ kpa</i>	'cereal' + Hausa (? cf. PB *- <i>cangu</i>)
	Eggon	<i>agulu ebro</i>	'sorghum' + ?
	Dakana (? Eggon dialect)	<i>ku buru</i>	'sorghum' + ?
	Nungu	<i>lebro</i>	Contraction of Eggon form?
	Berom	<i>yara kàpas</i>	?
	Kagoro	<i>silok akpat</i> <i>solak akpat</i> (Meek)	'sorghum' + Hausa
	Jju (Kaje)	<i>ya kpat</i>	'sorghum' + Hausa
	Morwa	<i>tša kpat</i>	'sorghum' + Hausa
	Tyap (= Kataf)	<i>suwa kpat</i>	'sorghum' + Hausa
	Atakat	<i>sura kpat</i>	'sorghum' + Hausa
	Dò	<i>zibra</i>	?
?			
Jukunoid	Ashuku	<i>kū-kpa</i>	<i>kum</i> + Jukun?
	Kente	<i>ki-kpà</i>	<i>kim</i> + Jukun?
	Kente	<i>kùm-kpa</i>	<i>kum</i> + Jukun?
	Kpan	<i>fānpà</i>	<i>fa</i> + Jukun (for <i>fa</i> cf. Mambiloid forms)
	Etkeywan (= Icen)	<i>kùm-kpà</i>	<i>kum</i> + Jukun?
	Kuteb of Lissam	<i>māpwà</i>	<i>ma</i> + Jukun?
	Kuteb of Bika	<i>mgbà</i>	? shortened form of Nama, i.e. deletion of initial <i>ku</i> -
	Nama	<i>kū-gba</i>	? <i>kum</i> + Jukun?
	Kporo of Akwenko	<i>kūlu-kpā</i>	<i>kulu</i> + Jukun?
	Kona	<i>za keim</i>	? + <i>kim</i>
	Mbembe	<i>za-kim</i>	? + <i>kim</i>
	Kona of Gwana	<i>za-kim</i>	? + <i>kim</i>
	Jukun of Pindiga	<i>zaa-kim</i>	? + <i>kim</i>
	Chomo	<i>mì-kì</i>	? + <i>kim</i>
	Jiru	<i>a-cim</i>	- <i>kim</i>
	Jiru of Wuyar	<i>á-shim</i>	- <i>kim</i>
	Jiru of Kir	<i>yì-cim</i>	- <i>kim</i>
	Tita	<i>gangweē</i>	?
Tarokoid	Tarok	<i>kwòndòŋ</i>	<i>kom</i> + ? contraction of Dalong
	Pe (= Pai)	<i>ì-dàlòŋ</i>	Place-name Dalong

	Torɔ (= Turkwam)	ε- <i>kùrakpa</i>	'sorghum' + Hausa
	Arum-Cesu	<i>a-krùfi</i>	'sorghum' + ?
Cross River			
Bendi	Bokyi	<i>ñkùrùŋ</i>	<i>kuuli</i>
	Bette	<i>ù-kúl (i-)</i>	<i>kuuli</i>
	Bette of Obudu	<i>ì-kùléghí, ù-kwól (i-)</i>	<i>kuuli</i> + ?
	Alege	<i>kóliŋ</i>	- <i>koli</i> (o)
Upper Cross	Abini	<i>ejama</i>	- <i>caam</i>
	Agoi	<i>ansam</i>	- <i>caam</i>
	Agwagune Etuno	<i>esut</i>	?
	Agwagwune	<i>ejama</i>	- <i>caam</i>
	Bakpinka	<i>anjām</i>	- <i>caam</i>
	Doko	<i>ansam</i> or <i>arasham</i>	- <i>caam</i>
	Ikom	<i>ì-gù (rà-)</i>	<i>igu</i> applies to any cereal
	Iyoniyong	<i>anjām</i>	- <i>caam</i>
	Korɔp	<i>ŋkwi</i>	? <i>kuuli</i>
	Legbo	<i>nzana</i>	- <i>caam</i>
	Le Yigha	<i>nsaŋe</i>	- <i>caam</i>
	Lokaa	<i>é-saamā (n-)</i>	- <i>caam</i>
	Lubila	<i>nsam</i>	- <i>caam</i>
	Mbembe	<i>óghàk-kpà</i>	<i>akpà</i>
	Nyima	<i>akpe</i>	<i>akpà</i>
	Olulomo	<i>è-gù</i>	<i>igu</i>
	Olulomo Ikom	<i>ì-gù(ru)</i>	<i>igu</i>
	Ubaghara (Bia- kpan/Ikun)	<i>akpakpa</i>	<i>akpà</i> with redupli- cation?
			Borrowed from Lower Cross
	Ubeteng	<i>ekpoi</i>	? <i>akpà</i>
	Ufia	<i>ìgùrùgùrù</i>	<i>iguru</i> with redupli- cation
	Ukpet	<i>ekpai</i> or <i>ekpoi</i>	<i>akpà</i>
	Umon	<i>akpoi</i>	Applies to any cereal
	Uzekwe	<i>éggwà, íggwù</i>	<i>igu</i> presumably primary form
Lower Cross	Anaang	<i>à-kpàkpà</i>	<i>akpà</i> with redupli- cation
	Ebughu	<i>m-bòkòxò</i>	<i>mbokoro</i>

	Efai	<i>í-yákp'ró</i>	? <i>mbokoro</i>
	Efik	<i>ì-bì-kpòd</i>	<i>bi + kpòd</i>
	Ekit	<i>à-bòkpà</i>	? + <i>akpà</i>
	Enwang	<i>à-pàpà</i>	<i>akpà</i> . <i>kp > p</i> is a regular correspondence in Lower Cross
	Etebi	<i>à-bàkpà</i>	<i>akpà</i>
	Ibibio	<i>à-bàkpà</i> or <i>àkpòkpà</i>	<i>akpà</i>
		<i>àkpàkpà</i>	
	Ibino	<i>àbàkpà</i>	<i>akpà</i>
	Ibuoro	<i>àkpòkpà</i>	<i>akpà</i> with reduplication
	Iko	<i>àbàkpà</i>	? + <i>akpà</i>
	Ilue	<i>idìkpòd</i>	<i>dì + kpòd</i> ? cf. <i>dì</i> 'cereal' in Platoid
	Itu Mbuso	<i>àkpòkpà</i>	<i>akpà</i> + reduplication
	Obolo	<i>àkpà, àkpàkpà</i>	<i>akpà</i> + reduplication
	Okobo	<i>ńtòkòd</i>	? - <i>kpòd</i>
	Oro	<i>ńmòkòrò</i>	<i>mbokoro</i>
	Uda	<i>ààpà</i>	<i>akpà</i>
	Ukwa	<i>ibòkpòd</i>	- <i>kpòd</i>
	Usakade	<i>úsàn</i>	- <i>caam</i>
Ogoni	Kana	<i>kpàkpà</i>	<i>akpà</i> + reduplication (< Lower Cross)
	Ken Kana	<i>kpààkpàà</i>	<i>akpà</i> + reduplication (< Lower Cross)
	Gokana	<i>kpákìrà</i>	<i>akpà</i> + ?
	Eleme	<i>akùkùrì</i>	? <i>kuuli</i>
Central	Abuan	<i>ò-biàkpà (i-)</i>	cf. Kalabari, Nembe, Ikwere
Delta	Ogbia (E)	<i>à-biàkpà (i-)</i>	<i>à + bi + akpà</i> ; cf. Kalabari, Nembe, Ikwere
	Ogbia (W)	<i>obukpa</i>	<i>ò + bi + akpà</i> ; cf. Kalabari, Nembe, Ikwere
	Kugbo	<i>o-biaakpa (i-)</i>	<i>akpà</i>
	Odual	<i>àkà</i>	<i>àkà</i>
	Bukuma	<i>ò-biàkpà (i-)</i>	<i>ò + bi + akpà</i> ; cf. Kalabari, Nembe,

	Obulom	<i>òbìàkà</i>	Ikwere <i>ò + bì + àkà</i> ; cf. Kalabari, Nembe, Ikwere
Dakoid	Lamja	<i>yélèkàà</i>	'sorghum' + <i>kpara</i> (= maize beer) ? shortened version of Taram form
	Samba Daka	<i>kài</i>	? shortened version of Taram form
	Nnakenyare	<i>kàáy</i>	? shortened version of Taram form
	Taram	<i>ka yiri</i>	<i>kpara</i> (= maize beer) + 'sorghum'
	Tiba	<i>apigèra</i>	? but cf. 'sorghum' <i>acera</i>
Mambiloid	Mambila of Atta	<i>ngwaam</i>	<i>kom</i>
	Mambila of Warwar	<i>kom</i>	<i>kom</i>
	Mambila of Kuma	<i>taap</i>	? no link with 'sorghum'
	Mvano	<i>fuan</i>	? unless cf. <i>punu</i> . Also cf. Kpan
	Mbɔnnɔ	<i>fan</i>	? unless cf. <i>punu</i>
	Somyɛwɛ (= Kila)	<i>mu buba</i>	? no link with 'sorghum'
	Vute	<i>minon</i> (soft) <i>tikpere</i> (hard)	? ?
	Kwanja Sundani	<i>gumbà</i>	<i>gombi</i>
	Ndoola (= Ndoro)	<i>(a)-kwana</i>	<i>kom</i> or Jukun (Kona)
Buru	Buru	<i>ékwan</i> , pl. <i>bàékwan</i>	<i>kom</i> or Jukun (Kona)
Tivoid	Tiv	<i>ikyúlèké</i>	<i>kuuli + ke</i>
	Abon	<i>agumana</i>	'sorghum' + ?
	Batu	<i>aku kwan</i>	'sorghum' + Jukun (Kona)
	Batu Afi	<i>ngúgun</i> <i>aku-kwèn</i>	<i>gu</i> + reduplication? 'sorghum' + Jukun (Kona)
	Batu Angwe	<i>ákwèn</i>	'sorghum' + Jukun (Kona) with contraction?
	Batu Kamino	<i>ńjùg^wàn, acúgu</i>	?
	Esimbi	<i>éé-ngi (òó-)</i>	?

<i>Ekoid</i>	Ejagham	<i>ncham</i>	- <i>caam</i>
	Ejagham Ekin	<i>nsam</i>	- <i>caam</i>
	Ekparabong	<i>m-búkpà (bo-)</i>	<i>akpà</i>
	Balep	<i>é-wákpà (ŋ-)</i>	<i>akpà</i>
	Bendeghe	<i>ŋ-kúl</i>	<i>kuuli</i>
	N. Etung	<i>ŋ-kúi/ŋ-kùi</i>	<i>kuuli</i>
	S. Etung	<i>ŋ-kúi/ŋ-kùi</i>	<i>kuuli</i>
	Efutop	<i>m-màkpà /á-</i>	<i>akpà</i>
	Nde	<i>é-gù /a-</i>	<i>gu</i>
	Nselle	<i>ē-gù /a-</i>	<i>gu</i>
	Nta	<i>ē-gù /a-</i>	<i>gu</i>
	Abanyom	<i>é-gúbákpá /a-</i>	<i>igu + ba + akpà</i>
	Nkim	<i>í-kùl /ŋ-</i>	<i>kuuli</i>
	Nkum	<i>í-kòl /ŋ-</i>	- <i>koli(ɔ)</i>
	Nnam	<i>ŋ-kíl /a-</i>	<i>kuuli</i>
	Ekajuk	<i>é-l-kál /ŋ-</i>	- <i>koli(ɔ)</i>
<i>Bantu</i>			
	Jarawan		
Grassfields	Kantana	<i>gu gurán</i>	'sorghum' + ?
	Mbula	<i>m₁ sa kono</i>	<i>masara</i> + Kona
	Jar	<i>m₁ bálwá</i>	<i>balbo</i> (cf. Chadic)
	Yamba (= Kaka)	<i>gòmbì</i>	<i>gombi</i>
	Limbum	<i>kwá-</i>	? contraction of - <i>kwana</i> (see Ndoro), i.e. Kona
	Bali	<i>ngàfút</i>	<i>ngaful</i>
	Bangangte	<i>ngòfúl ó</i>	<i>ngaful</i>
	Dzodzinka	<i>kwâ</i>	? contraction of - <i>kwana</i> (see Ndoro), i.e. Kona
	Bafut	<i>ànsán</i>	- <i>cangu</i>
<i>Ijoid</i>			
Ijò	Nkòròp	<i>àkpùkpà</i>	cf. Ibibio (Lower Cross)
	Ibanj Kalabari	<i>mbiàkpà</i> <i>ìmbiàká</i>	<i>mbi + akpa</i> <i>i + mbi + ɔka</i> . Prob- ably a reinterpretation as <i>kp → k</i> is not regular

	Okrika	<i>ìpiàmgbà</i>	cf. Nembe if a shift of nasality has occurred
Izon	Nembe	<i>ìmbiàkpá</i>	<i>akpà</i>
	Akaha	<i>agbodo</i>	<i>agba + do</i>
	Western Delta	<i>àgbòdò</i>	<i>agba + do</i>
	W. Olodiana	<i>àgbòdó</i>	<i>agba + do</i>
	Bassan & other	<i>àgbódó</i>	<i>agba + do</i>
	Oiyakiri	<i>àká</i>	<i>ɔká</i>
	East Tarakiri	<i>àká</i>	<i>ɔká</i>
Inland Ijò	Ikibiri & other	<i>àká</i>	<i>ɔká</i>
	Mein	<i>àká</i>	<i>ɔká</i>
	Oruma	<i>ìkpù</i>	?
	Akita (Okordia)	<i>ákâ</i>	<i>ɔká</i>
Kwa	Biseni	<i>ákâ</i>	<i>ɔ kâ</i>
	Gun	<i>gbado</i>	<i>agba + do</i>
	Fon	<i>gbade</i>	<i>agba + do</i>
Mande	Bisa [this is not the Busa dialect, see Prost 1953]	<i>kampana</i>	<i>kaba</i>
	Boko	<i>agbado</i>	< Yoruba?
	Busa	<i>agbado</i>	< Yoruba?
	Kenga	<i>maïshe</i>	?
	Sorko	<i>manyimo</i>	? but cf. Bambara <i>manyoma + nyo</i> 'big sorghum'
			<i>kaba</i>
West Atlantic	Dyula (vehicular)	<i>kàbà</i>	<i>kaba</i>
	Fulfulde (Fouta Djalón)	<i>kaba</i>	<i>kaba</i>
	Fulfulde (Sokoto)	<i>kaba</i>	<i>kaba</i>
	Fulfulde (Adamawa)	<i>butali</i>	elsewhere a name for 'bulrush millet'
Adamawa Vere-Duru group	Samba Leeko of Donga	<i>kpankara</i>	Jukun + <i>kara</i> perhaps from Cameroon <i>kpara</i> 'maize beer'
	Samba Leeko of Balkosa	<i>kaara</i>	? cf. above
	Wom (= Perema)	<i>dutu-ra (-vəro)</i>	?

	Nyongnepa (= Mumbake)	<i>ishutu-ra (-fa)</i>	?
	Koma 1	<i>biti</i>	?
	Koma 3	<i>rosey</i>	?
	Momi (= Vere) of Yadiim	<i>re sara</i>	? not connected with 'sorghum'
	Mom Jango of Karlahiri	<i>ri pun</i>	?
	Pere (= Kutin)	<i>dəram</i>	?
Trans-Benue			
Waja group	Yebu (= Awak)	<i>kwalkwalí</i>	<i>kuul</i> reduplicated?
	Tula Wange	<i>kwàkwálé</i> <i>túkum</i>	<i>kuul</i> reduplicated? cf. Tsobo <i>kutú</i> for 'sorghum' (by meta- thesis?)
	Tula Baule	<i>kwàkwálé</i>	<i>kuul</i> reduplicated?
	Tula Yiri	<i>túkún ɛm</i>	cf. Tsobo <i>kutú</i> for 'sorghum' (by meta- thesis?)
	Waja	<i>ligámè</i>	? cf. <i>jamà</i> for 'sor- ghum' unless a loan from Tera <i>likam</i>
		<i>ligámè kwanàà</i> (short type)	as above
	Waja Deruwo	<i>likámè</i>	as above
	Bangwinji	<i>buk shánè</i>	? unless cf. 'sorghum' <i>sam</i>
	Kamo	<i>shangúm</i>	'sorghum' + ?
	Tsobo (= Lotsu-Piri)	<i>máákum</i>	? not like sorghum words
	Cham Dijim	<i>butali</i>	< Fulfulde
		<i>mínkèṃ</i>	? but perhaps cf. Kyak
	Cham Bwilim	<i>jàám kuṇáárám</i>	'sorghum' of Kona?
	Dadiya	<i>jaṇa fim</i>	'sorghum' + ?
Kwa	Ba (= Kwa)	<i>makum</i>	cf. Tsobo
Bikwin	Burak	<i>yáá bóo</i>	'sorghum' of mucus [or 'evil spirit']
group	Mak (= Panya)	<i>yèra kwán</i> (R.M.B.)	'sorghum' + Kona people

THE DIFFUSION OF MAIZE IN NIGERIA

	Munga Leeláú	<i>yìrà kwân</i> (U.K.) <i>mun kwoi</i>	'sorghum' of Kona people
		<i>mom Kwae</i> (Meek)	
	Kyak	<i>mún kùnàà</i>	'sorghum' + Kona
	Mọọ (= Gwomu)	<i>mun kuna</i>	'sorghum' + Kona
	Maghdi	<i>búbànè</i>	?
Jen group	Dza (= Jen)	<i>ihwe</i>	? no link with 'sorghum'
Kam group	Niyiom (= Kam)	<i>muro</i>	? unless link with <i>muri</i> , Fulfulde for 'millet'
			<i>kuuli</i> + ?
Yungur	Bəna of Dumne	<i>kə l bog-ra</i> , pl. <i>kə l bokta</i>	
cluster	Roba	<i>kom rima</i>	<i>kom</i> + ?
	Lala of Yang	<i>kur gima</i> (R.M.B.) <i>kwir gimá</i> (U.K.)	<i>kuuli</i> + ?
	Gəna (= Mboi)	<i>fa tima</i> (R.M.B.) <i>fademá</i> (U.K.)	? no connection with other cereal names
	Kaan (Libo)	<i>kwaṇ ufa</i>	<i>kom</i> + ?
Mumuye	Pugong	<i>záa kin</i>	'sorghum' + ? food
cluster	Zing	<i>záa gin</i>	'sorghum' + ? food
Yendang	Yendang	<i>si kon</i>	? + 'sorghum'
group	Waka	<i>dze ki</i>	? not connected with 'sorghum'
	Teme	<i>ko fa</i>	'sorghum' + <i>fa</i>
	Kumba	<i>sopa</i>	'sorghum' + <i>pa</i>
	Gengle	<i>som kiva</i>	'sorghum' + ?
	Kugama	<i>som kiva</i>	'sorghum' + ?
	Balo (= Bali)	<i>sem kwabá</i>	'sorghum' + ?
Longuda	Longuda of Guyuk	<i>apɛ nwa</i>	? <i>punu</i> (see Chadic languages)
	Longuda of Gwaanda	<i>yákám jùla</i>	'sorghum' + ?
Mbum	Mbum	<i>nàn kúnà</i>	'cereal' + Kona?
Gbaya	Gbaya	<i>gba-fón</i> <i>mbongo</i>	<i>gba</i> + <i>fón</i> ? + 'sorghum' (< Ewondó)

Nilo-
Saharan

<i>Songhai</i>	Songhay (kaado)	<i>kólgótí</i>	<i>kolikoti</i>
	Songhay	<i>kotikoli</i>	<i>kolikoti</i>
	Zarma	<i>kolikoti</i>	<i>kolikoti</i>
	Dendi	<i>kotokoali</i>	<i>kolikoti</i>
<i>Saharan</i>	Kanuri	<i>másár(mi)</i>	<i>masar</i>
	Kanembu	<i>massar</i> (Barth)	
	Daza	<i>masomia</i>	<i>masar</i> + ?
	Teda	<i>wome</i>	
		<i>massarmi</i> (Barth)	
Afro- Asiatic			
<i>Semitic</i>	Arabic (Shuwa)	<i>masar</i>	<i>masar</i>
		<i>umm abat</i>	?
	Arabic (other)	<i>dura Shami</i>	'sorghum' + Syria (Portères 1955:223)
	Arabic of Tunis	<i>engafuli masri</i>	<i>ngaful</i> + <i>masar</i>
<i>Berber</i>	Ghat	<i>eljafuli</i>	<i>ngaful</i>
	Tripoli	<i>ghaful masri</i>	<i>ngaful</i> + <i>masar</i>
	Tamachek	<i>tifsut</i> or <i>tifsi</i> or <i>tesut</i>	?
	Tamachek (Ahaggar)	<i>engafoulé</i>	<i>ngaful</i>
<i>Chadic</i>			
<i>West</i>			
<i>Hausa</i>	Hausa	<i>(daawàr) masàraa</i>	<i>masar</i>
<i>Bole-Angas</i>			
<i>Angas</i>	Angas	<i>balwo</i>	<i>balbo</i>
	Maghavul		
	Goemai	<i>saŋ kwá</i>	Probably a loan from Plateau languages. Cf. Ninzam <i>isaŋ kpa</i> 'sorghum' + ?
<i>Ron</i>	Kofyar	<i>swapas</i>	? cf. Mala (Platoid)
	Bokkos	<i>yagôn</i>	<i>idan yago</i>
			<i>masar</i>
	Daffo-Butura	<i>másara</i>	?
	Kulere of Ambul	<i>'asu kpúú</i>	<i>balbo</i>
	Fyer	<i>bálbo</i>	< H. (lit. 'cassava flour
<i>N. Bauchi</i>	Pa'a	<i>gàrin dāw-a (-i)</i>	

<i>S. Bauchi</i>	<i>Buli</i>	<i>guum áñ</i>	of sorghum')
			'sorghum' (in Plateau languages) + ?
	Dot	<i>wulé</i>	?
	Geji	<i>wookúdu</i>	'sorghum' + ?
	Polci	<i>buŋware</i>	?
	Zul	<i>okudu</i>	resembles <i>-kuru</i> form in Plateau languages
<i>Bole</i>	Karekare	<i>damasar</i>	? + <i>masar</i>
	Galambu	<i>bâu</i>	<i>balbo</i>
	Bole	<i>damasar</i>	? + <i>masar</i>
	Ngamo	<i>masar</i>	<i>masar</i>
		<i>haigm</i>	?
	Kutto (= Kupto)	<i>àfinòŋ</i>	?
	Kholok	<i>kʰóómò</i>	<i>kom</i>
	(= Widala, Kode)		
	Kushi	<i>kóómò</i>	<i>kom</i>
	Pero	<i>kóómò</i>	<i>kom</i>
	Nyam	<i>zekhim</i>	< Jukun
	Tangale	<i>yaŋyau</i>	? not like 'sorghum'
	Dera (= Kanakuru)	<i>ápónò</i>	<i>punu</i>
		<i>apwɛnɛn</i> (Meek)	
	Ngizim	<i>másáŋm-i (-àmin)</i>	< Kanuri
	Boghom	<i>angvilon</i>	?
<i>Central</i>			
<i>Tera</i>	Tera	<i>likám</i>	? + <i>kom</i>
	Pidlimdi (= Hinna)	<i>pmodi</i>	<i>punu</i> + ?
	Jera	<i>likam</i>	? + <i>kom</i>
	Ga'anda	<i>puno</i>	<i>punu</i>
	Gabin	<i>puno</i>	<i>punu</i>
	Hwana	<i>ùpùnú</i>	<i>punu</i>
		<i>pənu</i> (Meek)	
<i>Bura-Higi</i>	Bura	<i>pənu</i>	<i>punu</i>
		<i>pneu</i> (Meek)	
	Kyibaku	<i>apnau</i>	<i>punu</i>
	(= Chibbuk)	<i>masar</i> (Meek)	<i>masar</i>
	Huba (= Kilba)	<i>hí bəgò, hí bəkou</i>	? 'sorghum' + ?
		<i>hi biku</i> (Meek)	
	Ngwaba	<i>gobwus</i>	cf. Gudu
	Margi (s.l.)	<i>khiya masere</i>	'sorghum' + <i>masar</i>
	Margi Babal of	<i>masar</i>	<i>masar</i>

	Lassa		
	Margi of Minthla	<i>apanəu</i>	<i>punu</i>
	Kamwe (Fali of Kiria)	<i>xa vwa</i>	'sorghum' + Kanuri
	Kamwe (Higi) of Moda	<i>xa vwa</i>	'sorghum' + Kanuri
	Kamwe (Higi) of Bazza	<i>harəvwá</i>	'millet' + Kanuri
Mandara	Mandara	<i>xi masere</i>	'sorghum' + <i>masar</i>
	Glavda	<i>x ia babra</i>	'sorghum arranged in rows'
	Taghwa (= Zələdvə)	<i>xia masara</i>	'sorghum' + <i>masar</i>
	Vizik, Woga	<i>babır</i>	? probably from Pabir, the Islamised Bura
	Xədi (= Hide, Tur)	<i>búrbùr</i>	?
	Mafa	<i>gágár</i>	?
	Sukur	<i>xlábir</i>	? not a sorghum root but perhaps cf. Glavda
Bata	Bacama	<i>dawa</i>	Hausa word for 'sorghum'
	Bata of Zumu	<i>mapinawo</i>	<i>punu</i>
	Bata of Malabu	<i>dawəi</i>	Hausa word for 'sorghum'
	Gude (= Cheke of Mubi)	<i>ngule</i>	? <i>gunli</i> (a loan from BC languages)
	Gude Dərebəš	<i>nguliya</i>	? <i>guuli</i>
	Uroovin (= Fali of Vimtim)	<i>ngulya</i>	? <i>guuli</i>
	Bahuli (= Fali of Bahuli)	<i>ngwuliya</i>	? <i>guuli</i>
	Madzarin (= Fali of Muchella)	<i>jekovan</i>	? + Kanuri
	Urambwiin (Fali of Bagira)	<i>jekovan</i>	? + Kanuri
	Ulan Mazhilvən (Fali of Jilbu)	<i>zakovwan</i>	? + Kanuri
	Gudu	<i>gau buzə</i> (Kumbi <i>zəkzək</i> dialect)	'sorghum' + 'Buzu'?
	Holma	<i>mapuna'a</i>	<i>punu</i>

	Njanyi	<i>mapinawln</i> (Meek)	
		<i>ma'puna'o</i>	<i>punu</i>
		<i>map inawe</i> (Meek)	
Kotoko	Afadə	<i>babra l sad</i>	'millet' + Lake Chad
Yedina	Yedina (= Buduma)	<i>masarmi</i>	< Kanuri
		<i>má'ār</i>	< Hausa ?

By setting out terms for maize by language group it becomes apparent that maize is an intrusive crop. In no case is a particular root found throughout a language group - the mixture of terms marks the geographical spread of names clearly and suggests that maize is of no great antiquity in West Africa.

There is very little evidence for significant lexical distinctions between 'hard' and 'soft' or 'yellow' and 'white' maize. Vute is the only clear attestation. It may be, however, that this is an artefact of elicitation; on most wordlists, maize is a unitary category. It is possible that the co-existence of *okà* and *àgbàdò* among the Yoruba originally reflected a distinction of maize cultivars, now neutralised.

3 Discussion of base forms

The following section lists the base forms proposed in column IV of the Table and suggests either etymologies or starting points for their diffusion.

agbado

This is the normal Yoruba form and has spread eastwards along the coast to the western part of the Niger Delta and through the Edoid area into some Igboide-speaking areas as far as to Onitsha. The same word is found to the west of Yoruba as far as the Gbe cluster, e.g. Fon *gbade*. Prost (1953:120) records *agbado* for the Mande languages Boko and Busa spoken to the north-west of Yoruba. Portères (1959:86f) claims that this is a compound, *agba* + *do*. He identifies *do*, *dé* or *di* as 'sorghum' in Bariba and Fon, claiming that it is of Gur origin. He also identifies *Agba* with the Yoruba subgroup Egba, thus claiming that the form means 'sorghum of the Egba'. The term would thus have been formed in the territory of the present-day Republic of Benin or Togo and spread, he suggests, through influence of the Kingdom of Abomey.

The term certainly appears to be an old compound, and does not seem to have any obvious etymology in Yoruba. Portères's etymology depends upon establishing:

- (a) that *do* means 'sorghum' in one or more languages to the west or north-west of Yoruba,
- (b) that the first element refers to the Egba,
- (c) that the supposed language of origin of the compound has the word order modifier-head.

The first element cannot possibly be Egba, which has the tone pattern LH, whereas *agbado* is LLM in Yoruba. The low-toned *gbà* corresponds much better to the root *-kpà(t)*, discussed below. The word order modifier-head is found in Gbe but not in Yoruba. Hence if the elements are correctly identified as 'the *do* of the Agba' (and not 'the *agba* of the *Do*'), the compound cannot have been formed in Yoruba, but could have been in Gbe, which places the modifier before the head. It thus seems likely that the compound was formed in a language which used *do* or *de* for 'sorghum' and had modifier-head word order. It was then borrowed as a whole into Yoruba and spread eastwards from there.

An alternative derivation is that the head is *àgbà*, a form of *akpà(t)*, and that the modifier is *Àdó*, 'Edo, Benin'. This is unlikely to have been formed in Yoruba, since it would yield a final H and not a final M tone. The meaning also poses some problems, since it would be 'the *àgbà* of the Edo', implying that *àgbà* was some earlier-known type of cereal, whereas where it is used alone we have found it referring only to maize. The only real supporting evidence in favour of this derivation is the forms in Ukaan-Akpes, apparent compounds of *ica* + *do* or *ado* (unfortunately there is little consistency in the tones recorded in our sources), where *ica* could perhaps be the *caam*-root. In this case compounds would have been formed in the minority languages of the area between Edoid and Yoruboid, *ica* + *Àdó* or *àgbà* + *Àdó*, with the latter being borrowed into Yoruba and spreading thence to the west. An objection to this is that the general spread of maize seems to have been from north and west to south and east, and that this general picture is confirmed by the basic role played by maize in Yoruba agriculture and food preparation, where it is ground and used in many dishes rather than being just boiled or roasted and eaten plain as to the east.

akpà(t)

This is the single most common and most problematic base form for maize. It is found in many parts of south-central Nigeria (Map 3), sometimes reduplicated, but often with an additional form compounded initially. Some of the Idomoid forms seem to compound *akpa* with the *kuuli(l)* base forms common in the Middle Belt. The confusion may arise because there are two distinct sources for the *-kpa* element which may be compound and re-interpreted.

akpà(t) has a widespread primary meaning as a qualifier referring to other ethnic groups. In the Plateau languages, *-kpa(t)* nowadays refers to the Hausa, although it probably originally meant 'Northerner' in general. Further south, as among the Idoma, it is used to refer to the Jukun. In Cross River, it means 'Northerner' in general. The *akpa* forms in some Upper Cross languages, such as Ubaghara, are probably late borrowings from Lower Cross. Whether these base forms are also related to the term for Kanuri *vwa* that appears in some Central Chadic languages is open to question, but not an unreasonable hypothesis.

Another puzzling question is the relationship between *akpa* and the *agba* element found in Yoruba *àgbàdō*. No convincing etymology for this word has yet been proposed and therefore has the appearance of a borrowing, although this would not explain the *-do*. One possibility is that this is a meaningful compound in a northern Edoid language and this form was borrowed into Yoruba from the northeast. Some support for this idea is provided by forms in Akpes-Ukaan, such as *èjándó*, where a *-do* element has been compounded with a different stem.

A related ambiguity is found in the Gudu term for maize, *gau buzə*, which apparently refers to the Buzu, a common name for the ex-slaves of the Tuareg. Although there are no Buzu² in this region today it may be that they were confused with nomadic northern raiders from present-day Niger at the time of the introduction of maize. The Kanuri are less often identified as the transmitters of maize although the Kamwe (Higi) refer to maize as 'sorghum of the Kanuri'.

balbo

A base form found in a number of West Chadic languages, such as Angas and Fyer. It has also been loaned into the adjacent Jaranwan Bantu forms.

-cángú

This is a Guthrie-derived reconstruction for 'cereal' in PB and is probably ultimately connected with the *-caam* forms widespread in eastern Nigeria. More directly it shows up in the Grassfields as *-sán*.

-caam, nsam

A base form notably found in Cross River, Jukunoid and Ekoid languages, spreading into the grassfields of Cameroon but probably originally a loan from trans-Benue (Adamawa) languages, where it is standard for 'sorghum' in the Waja group. It also occurs in Plateau, for example in Tyap [Kataf] meaning 'porridge'. Koelle (1854) records it for 'guinea-corn'. The Lower Cross language, Usakade, attests this form in contrast to the rest of the group. Maize would have been introduced to this region after the Usakade split off from the main body of Lower Cross and settled in their present location (Connell & Maison, this volume). Trade connections between the Usakade and either the Ekoid or Grassfields Bantu speakers, via the Akpa Yafe river, probably explains the different term.

Portères (1955:85) and Pasch (1980:44) argue that this base form is connected with the second element in *dura Shami* (i.e. 'sorghum of Syria'), a widespread Arabic form from the Nile Valley and certainly attested as far as Lake Chad. Although there are a potentially convincing series of geographical links via northern Cameroon, the early attestation of these forms for 'guinea-corn' makes it possible to rule out this explanation.

dawa

dawa is the common Hausa term for 'sorghum' or 'guinea-corn'. Originally, the Hausa called maize *dawan Masar*, 'sorghum of Egypt' (Barth 1862, II:174) but this was soon shortened to *masará*. However, it probably spread in this form to other Chadic-speaking peoples such as the Bata and Bacama, who had quite a different name for sorghum. The qualifier was then deleted, leaving *dawa* with the meaning maize.

fan

This base form is attested in a scatter of languages in Adamawa, most notably Teme *ko fá*, Kpan *fànkpà* and Mb-ɔŋn-ɔ *fan*. It almost certainly spread from Cameroon, where these forms are common, for example, Yamba *pón*, Maka *foán*, Ewondo *fón*. Mveng Ayi

(1981:590) identifies the source language as Gbaya, where *fón* is applied to sorghum, but Blanchard & Noss (1982) note this as an Ewondo loan.

gumbi

This is a form found locally near the Mambila Plateau, for example in Kwanja *gumba* and Yamba *gòmbi*. Both are probably connected with Mambila of Atta *ngwaam* but are probably separate from the *kom* root, also occurring in Mambila.

ka(a)

ka is confined to the Dakoid languages and is probably not connected with other similar-looking base forms such as *ɔka*. It may also be the second element in the word for 'bulrush millet', *maka*. The source of this may well be the Chadic base form *xa* meaning 'sorghum' found in nearby languages such as Kamwe (Higi). Dakoid shows other Chadic loan-words. Since Fulbe in the region have also generated a term for 'maize' from the (quite different) Fulfulde term for 'millet', the analogy is an areal feature. Whether this in turn is connected with the *ka* for 'cereal' in some Mande languages (see discussion under *ɔka*) is unknown.

ka(m)(ra)ba

This base form is most widespread among the Nupoid languages in Nigeria and it is absent only where it is replaced by a local coinage derived from 'guinea-corn'. It is also found in West Kainji and other languages in northwestern Nigeria. However, it is also attested in vehicular Dyula, in Tukolor and in the Fulfulde spoken in Guinea and Senegambia and also in Bisa *kampana*. This suggests that it was brought to this part of Nigeria via the northwestern route, either through Fulbe or Dyula traders. The infix *-ra* in Kambari, Asu and Dibo cannot be original as there is no trace of it in the Senegambian source languages. If so, it is unlikely that there is a connection with the widespread *ɔka* base form for 'maize' in southwestern Nigeria (see below) if the last syllable has been deleted. Monteil (1964:227) quotes a Songhay form that is not elsewhere attested, *masara kama*, i.e. 'Egyptian wheat'. If this is genuine, the link with the Arab term for 'wheat' could provide a source for the *kamba* forms.

kom

This term for 'sorghum' is most widespread in Adamawa languages but seems also to have spread as far south as Mambila. It is similar enough to both the *cim* forms in Cross River and Jukunoid and even to the *kuuli(l)* forms in central Nigeria to propose that these may all be interconnected. It has also spread into several Chadic languages, such as Pero and Kushi, in close proximity to Adamawa languages. It is also similar to the *kona* base form (see below) and the two cannot always be distinguished.

kona

This does not appear in isolation, but usually compounded with 'sorghum' and seems to refer to the Kona people, a branch of the Jukun who today live between Jalingo and the Benue River. To judge by the number of attestations in the Muri Mountains region, the Kona were active diffusers of maize at some point. The *-kwa* forms in Grassfields languages such as Dzodzinka and Limbum are probably shortenings of this base form, as it appears as *kwana* in neighbouring languages.

-kpod

This root only shows up in Lower Cross languages, usually compounded with a variety of first elements. It might be related to the *mbokoro* base form (q.v.) although the sound correspondence *kp* ~ *k* is not otherwise attested in Lower Cross.

kuuli(l)

This is undoubtedly an ancient Benue-Congo root for 'sorghum'. It appears in regions such as the Cross River, where guinea-corn is not grown. It is frequently shortened to *ku(u)* or voiced as in *gu(u)*. It has also spread to some adjacent Adamawa languages, e.g. Lala *kur*. Adamawa forms for 'maize' such as Yebu *kwalkwali* may represent reduplications of this form. It is also loaned into some Chadic languages, such as the Fali cluster and Gude, in a voiced form *guuli-*. The analysis of the base form is made complex by its antiquity and the consequent difficulty of knowing at what point it became shortened.

masar(mi)

Portères (1955:223) was the first to point out that the *masar* forms are developed from a supposed Egyptian provenance of maize. This form is very widespread in northern Nigeria (Map 3). Versions of the base form *masar* are commonly derived from the Hausa *masará* as the Hausa have been the most active in spreading maize during the twentieth century. However, if maize came across the desert at an early period, then it is likely to have first reached Borno, and the Kanuri form *masarmi* would have precedence. This term appears to have diffused on a small-scale in the region (e.g. to Ngizim) but to have been less significant than the reduced form. Since Kanuri itself is being re-lexicalised from Hausa and *masar* is now common in Borno this process may have also occurred in some of the intervening languages.

mbokoro

This term shows up only in Lower Cross languages, in a variety of forms, but its origin is unclear. The root, *-koro* may be connected with *kona* forms, or (less likely) with *kuuli(l)*.

ngaful

This term is found in North Africa and appears to have spread across the desert via the caravans. Forms are found in Tunis, Tripoli and in Cameroon among the Grassfields Bantu languages Bali and Bangangte where it surfaces with a final dental (Pasch 1980:43, Elias *et al.* 1984). A strikingly similar form has also been recorded among the Nalu of Guinea-Bissau, presumably suggesting a small-scale independent introduction by Barbary mariners.

ka

This may be a very old root for 'sorghum' or 'millet' if Prost (1953:165) is right in interpreting Bambara *ka-ba*, 'maize' as 'millet'. We have already noted there is another *ka* root in Adamawa that may be connected. The form *ka* is found in Yoruba as 'cereal', qualified with *bàbà* for 'sorghum' and *àgbàdō* for 'maize'. Unfortunately, we do not have the Baatonun (Bariba) form to see if these words could have entered Yorubaland from the north-west; *ka* *bàbà* 'sorghum' looks very like the Bambara *ka-ba*, 'maize' of Prost.

ka is also found widely in Edoid for 'maize', particularly outside the north-west area. If it is a loan from Yoruboid, it was

probably borrowed before the spread of *àgbàdō*, which would then have partly replaced it in the north. In Igboid, it is the chief form, although as we have already noted under *akpà(t)*, it has possibly replaced other forms across the centre of the Igboid area. However, the Igboid forms look like a source of the base form, because the lects which normally preserve the nasal vowel or aspiration which developed from nasality (Owere, *Ọlụ*, *Ọhuhu*) show it here, whereas those which lose it (*Èkpèyè*, *Ọnịcà*, *Ụkwuani*) do not show it. The only unexpected form is Ika, which normally preserves nasality but does not have it here. This suggests that the root was originally nasal, lost nasality as part of a regular sound change, and was then borrowed into Yoruboid, Edoid, and Ika without nasality. This interpretation rather seems to contradict the implications of the spread of *àgbàdō*. *àkà* has largely been replaced by *àgbàdō* in everyday Yoruba, but the existence of a qualified form *àkà àgbàdō* suggests that a descriptor has become a substantive.

punu

A base form common to a number of Central Chadic languages in north-eastern Nigeria. Apparently not derived from a sorghum term. It has also spread to at least one Adamawa language, Longuda. This is similar to the *fan/pon* forms found in Cameroon (see above) and further south in Nigeria. The two base forms may be part of a single set, although the immediate geographical linkage is missing at present.

vwa(n)

In some Chadic languages, such as Higi and Fali in north-eastern Nigeria, this is found as a suffix apparently meaning 'Kanuri' or simply 'Northerner'. It corresponds to the *-kpa* base forms in the centre of the country and buttresses the otherwise slender evidence for the diffusion of maize by the Kanuri people.

4 Conclusion: the spread of maize

The most surprising but clear result of the investigation of maize names in Nigeria is that, in contrast to elsewhere in West Africa, maize was not adopted from the Portuguese. In the south of Nigeria, there is almost no trace of a Portuguese introduction, although other sources confirm that this happened elsewhere in West-Central

Africa. Excluding the single case of Işekiri, all names for 'maize', even those on the sea-coast, refer directly or indirectly to a northern origin. This also suggests that Portères's distinction in routes between hard and soft maizes does not apply to Nigeria and that both types almost certainly came from the north.

Two processes have been at work contributing to the spread in Nigeria: diffusion from farmer to farmer and long-distance trade. Farmers, seeing the new crop, constructed names that reflected its similarity to plants they already knew, most commonly sorghum. Some of these names are descriptive, but often they attribute maize to some rather ill-defined group such as 'Northerners' or 'Jukun'. Peoples of the humid zone grew no cereals in the pre-Portuguese era. They tended to have a generalised word for cereal that was applied to grains that came to the markets through trade, which was then applied to maize. The scattering of the Hausa loan-word *ma-sara* is an example of the complementary process of trade. Maize would have been brought in as a "new" crop to markets as part of the trade networks.

There were apparently two major and three minor routes by which maize reached Nigeria: (1) major northern routes a) via Borno, b) via the Niger river; (2) minor southern routes, a) from Benin Republic [?], b) from the Cameroon Grassfields, c) Portuguese introduction to Işekiri. These routes are shown schematically on Map 1.

The Borno route was the most important, to judge by the linguistic evidence. Forms such as *kaba*, which link Nupoid and West Kainji terms to the Senegambia are confined to a small area of west-central Nigeria. From northern Nigeria, maize seems to have "funnelled" through the centre of the country, spreading from the southern Zaria peoples throughout the Benue valley. Crossing the confluence, it then spread southwards to the sea-coast and south-east to the Cross River area. Some traces of the *-kpa* base forms occur among northern Edoid speakers, arguing that there was also a minor diffusion south-west of the confluence.

Maize certainly reached Yorubaland from the north-east and may also have come east from the present-day Benin Republic. It was assimilated linguistically to the sorghum traditionally grown in northern Yorubaland and spread down to the sea-coast. Maize then spread eastward to the Niger Delta and also into the Benin and Edoid-speaking area. The Işekiri example shows a trace of Portuguese contact on the south-western coast. The *fan* roots in Ada-

mawa probably point to maize spreading into Nigeria from the Bamileke region of Cameroon.

Conventional historical schemas are often adopted by historians in the absence of written documents to fit their own preconceptions. The linguistic investigation of maize has made clear that accepted opinion is incomplete and in some cases actually wrong. This suggests that a wide variety of other topics could be investigated to illuminate this type of unwritten history.

NOTES

1 The core material of the linguistic data came from the fieldwork of the three authors. However, a number of other researchers have assisted us by providing maize names from unpublished fieldwork. The greatest number came from Ulrich Kleinewillinghöfer, but we would also like to thank Rudolf Leger, Rob Koops, Norman Price and Carl Follingstad for additional words. We are grateful to Professor Herrmann Jungraithmayr for a chance to try out some of these ideas on the African Languages Department in Frankfurt in a lecture on the 5th of June 1992. Humphrey Burkill of the Royal Botanic Gardens, Kew kindly commented on a draft of the paper and was also able to incorporate some of the linguistic data into the Families E-I Volume of the *Useful Plants of West Tropical Africa*.

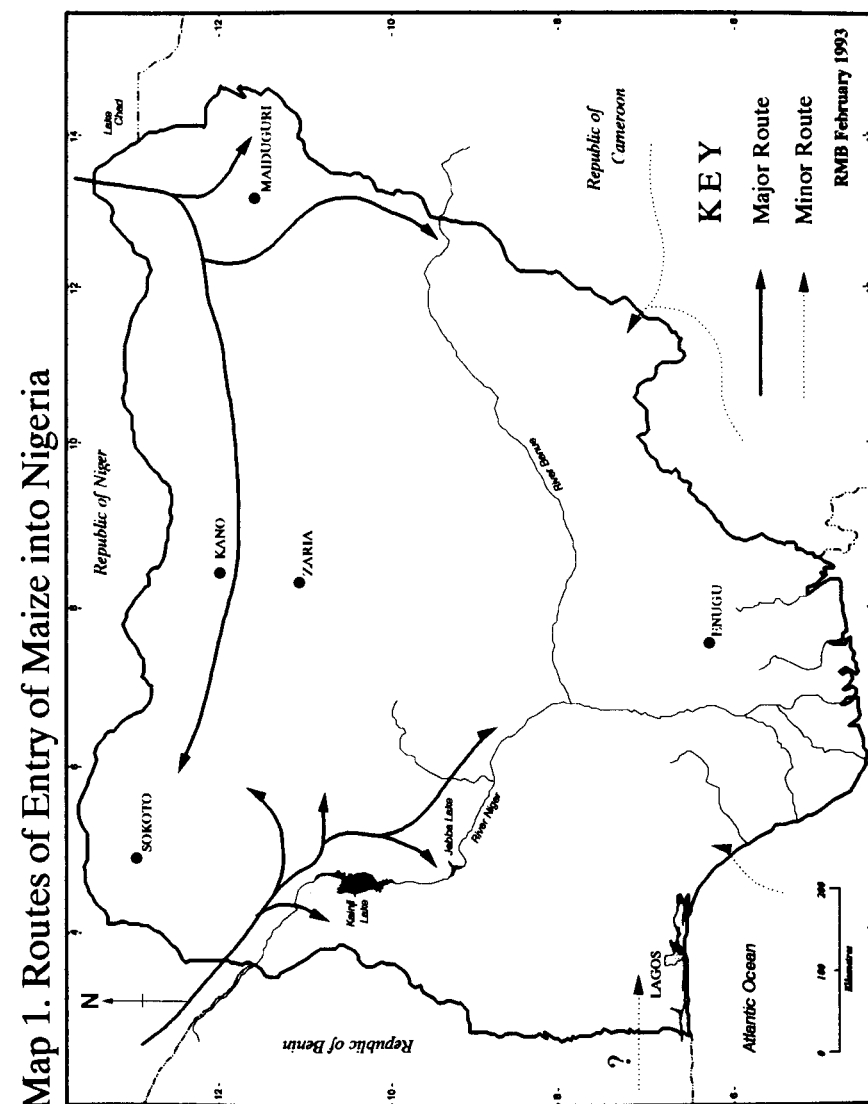
2 In general. However, in 1992, migratory Buzu were seen in the region of Maiduguri (R.M.B.).

REFERENCES

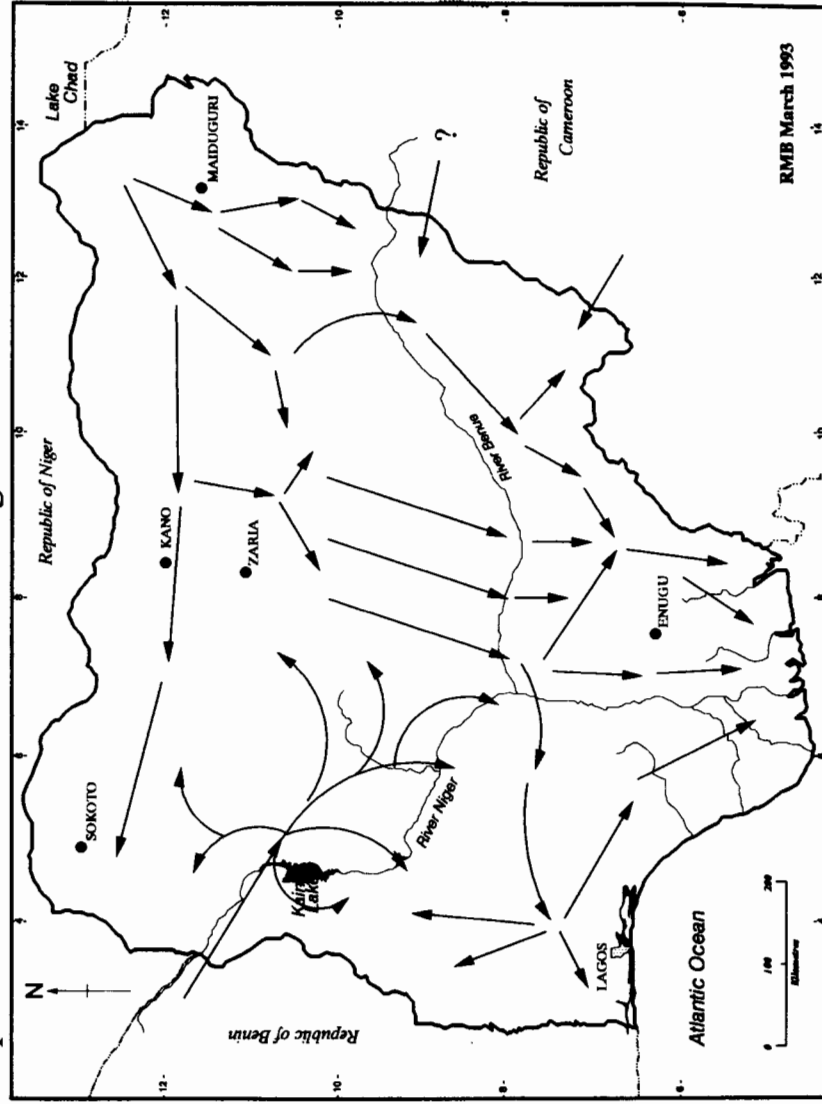
- Baier, S. 1980. *An Economic History of Central Niger*. Oxford: Clarendon Press.
- Baikie, W.B. 1856. *Narrative of an Exploring Voyage up the River Kwo'ra and Bi'nue*. London: John Murray.
- Barth, H. 1857-58. *Travels and Discoveries in North and Central Africa: Being a Journal of an Expedition undertaken under the Auspices of HGM's Government in the Years 1849-1855*. 5 vols. London: Longman.
- Barth, H. 1862. (New ed. 1971.) *Collection of Vocabularies of Central African Languages*. Gotha: Justus Perthes.
- Bascom, W.R. 1951. "Yoruba Food and Cooking," *Africa* 21: 41-48.
- Blanchard, Y. & P.A. Noss. 1982. *Dictionnaire Gbaya-Français*. Meiganga: Centre de Traduction Gbaya.
- Blench, R.M. 1989. "The evolution of the cultigen repertoire of the Nupe of

- west-central Nigeria," *Azania* 24:51-63.
- Bouquet, C. 1990. *Insulaires et riverains du Lac Tchad*. Paris: L'Harmattan.
- Burkill, H.M. 1985. *The Useful Plants of West Tropical Africa, Families A-D*. Kew: Royal Botanic Gardens.
- Burkill, H.M. 1994. *The Useful Plants of West Tropical Africa, Families E-I*. Kew: Royal Botanic Gardens.
- Connell, B.A. & K.B. Maison. 1994. "A Cameroon homeland for the Lower Cross languages?" (this volume).
- Cyffer, N. & J. Hutchison. 1990. *Dictionary of the Kanuri Language*. Dordrecht: Foris.
- Dalziel, J.M. 1937. *The Useful Plants of West Tropical Africa*. London: Crown Agents.
- Dapper, O. 1668. *Nankeurige Beschrijvinge der Afrikaensche Gewesten*. Amsterdam.
- David, N. 1976. "History of crops and peoples in North Cameroon to A.D. 1900," in: *Origins of African Plant Domestication*, edited by J.R. Harlan et al., pp. 223-268. The Hague: Mouton.
- Denham, D., H. Clapperton & W. Oudney. 1828. (3rd ed. in 2 vols.) *Narrative of Travels and Discoveries in Northern and Central Africa*. London: John Murray.
- Elias, P., J. Leroy & J. Voorhoeve. 1984. "Mbam-Nkam or Eastern Grassfields," *Afrika und Übersee* 67:31-107.
- Elugbe, B.O. 1989. *Comparative Edoid: Phonology and Lexicon*. (Delta Series, 6.) Port Harcourt: University of Port Harcourt Press.
- Harlan, J.R., J.M.J. De Wet & A.B.L. Stemler (eds.). 1976. *Origins of African Plant Domestication*. The Hague: Mouton.
- Irvine, F.R. 1969. *West African Crops*. London: Oxford University Press.
- Jeffreys, M.D.W. 1953. "Pre-Columbian maize in Africa," *Nature* 172:965.
- Jeffreys, M.D.W. 1971. "Maize and the Mande myth," *Current Anthropology* 12,3:291-320.
- Jungraithmayr, H. 1970. *Die Ron-Sprachen*. Tschadohamitische Studien in Nordnigerien. (Afrikanistische Forschungen, 3.) Glückstadt: J.J. Augustin.
- Koelle, S.W. 1854. *Polyglotta Africana*. London: Church Missionary Society.
- Kolawole, A. 1988. "Cultivation of the floor of Lake Chad: a response to environmental hazard in eastern Borno," *Geographical Journal* 154:243-250.
- Meek, C.K. 1931a. *Tribal Studies in Northern Nigeria*. 2 vols. London: Kegan Paul.

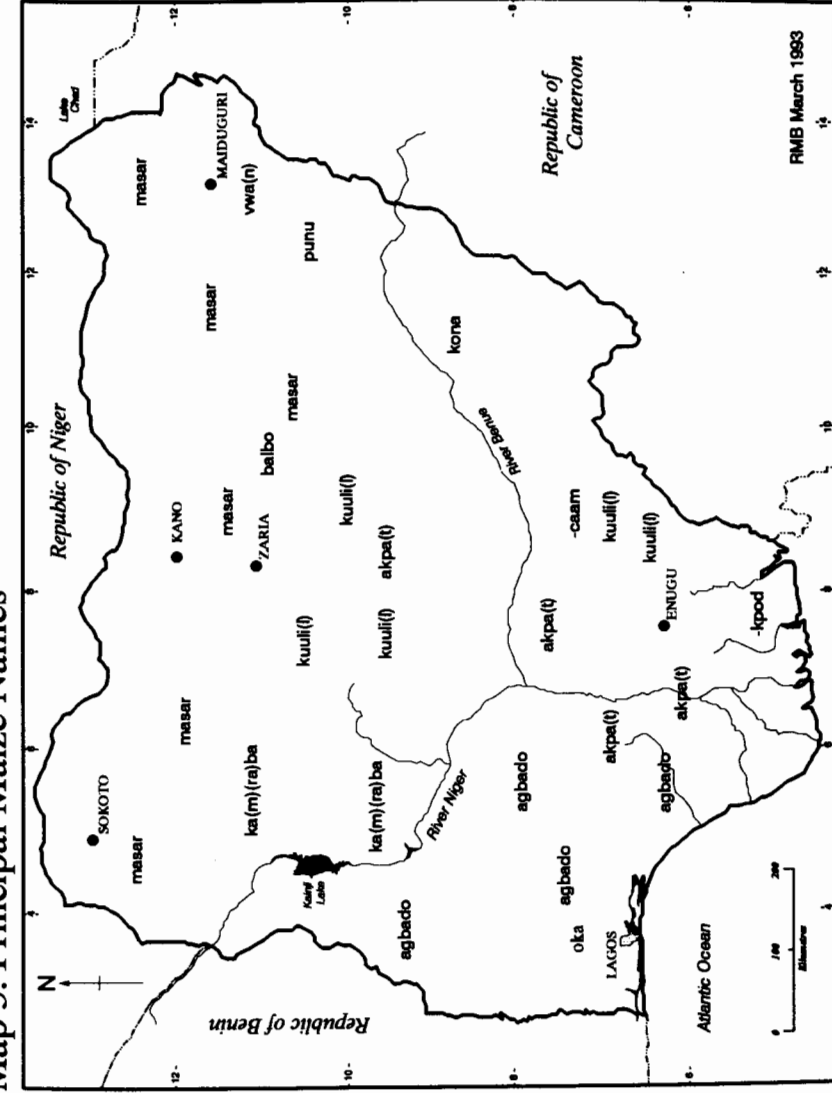
- Meek, C.K. 1931b. *A Sudanese Kingdom*. London: Kegan Paul.
- Miracle, M.P. 1966. *Maize in Tropical Africa*. Madison: University of Wisconsin Press.
- Monteil, V. 1964. *L'Islam noir*. Paris: Payot.
- Mveng Ayi, M. 1981. "Rapport de synthèse: échanges précoloniaux et diffusion des plantes au Sud-Cameroun," in: *Contribution de la recherche ethnologique à l'histoire des civilisations du Cameroun*, edited by C. Tardits, vol. II, pp. 587-591. Paris: Editions du CNRS.
- Nachtigal, G. 1980. *Sahara and Sudan*. Vol. II. Edited and translated by A.G.B. & H. J. Fischer. London: Hurst.
- Pasch, H. 1980. "Linguistische Aspekte der Verbreitung lateinamerikanischer Nutzpflanzen in Afrika." M.A. thesis, University of Cologne.
- Pasch, H. 1983. "Zur Geschichte der Verbreitung des Mais in Afrika," *Sprache und Geschichte in Afrika* 5:177-218.
- Portères, R. 1955. "L'introduction du maïs en Afrique," *Journal de l'Agriculture Tropicale et Botanique Appliquée* 2:221-231.
- Portères, R. 1959. "Les appellations des céréales en Afrique VII/VIII," *Journal de l'Agriculture Tropicale et Botanique Appliquée* 6:68-105.
- Prost, R.P.A. 1953. *Les langues Mandé-sud du groupe Mana-Busa*. (Mémoires de l'Institut Français d'Afrique Noire, 26.) Dakar: IFAN.
- Purseglove, J.W. 1974. *Tropical Crops. Dicotyledons*. London: Longman.
- Purseglove, J.W. 1975. *Tropical Crops. Monocotyledons*. London: Longman.
- Shimizu, K. 1980. *Comparative Jukunoid*. (Veröffentlichungen der Institute für Afrikanistik und Ägyptologie der Universität Wien, 7-9; Beiträge zur Afrikanistik, 5-7.) Vienna: Afro-Pub.
- Siran, J.-L. 1981. "Eléments d'ethnographie Vouté pour servir à l'histoire du Cameroun Central," in: *Contribution de la recherche ethnologique à l'histoire des civilisations du Cameroun*, edited by C. Tardits, vol. I, pp. 265-272. Paris: Editions du CNRS.
- Stanton, W.R. 1961. "The analysis of the present distribution of maize, sorghum and cowpea in Nigeria as an aid to the study of tribal movement," *Journal of African History* 3:251-262.
- Tardits, C. (ed.) 1981. *Contribution de la recherche ethnologique à l'histoire des civilisations du Cameroun*. 2 vols. Paris: Editions du CNRS.
- Williamson, K. 1970. "Some food plant names in the Niger Delta," *International Journal of American Linguistics* 36:156-167.



Map 2. Diffusion of Maize within Nigeria



Map 3. Principal Maize Names



ZUSAMMENFASSUNG

Nach landläufiger Meinung geht die Einführung des Maises in Westafrika auf die Portugiesen zurück. Obwohl dies mit großer Sicherheit auf die Region Senegambien zutrifft, liegt entsprechendes Beweismaterial für Nigeria nicht vor. Um die Diffusion des Maises dort weiter zu untersuchen, wurde eine Liste vernakulärer Bezeichnungen in einer Vielzahl nigerianischer Sprachen zusammengestellt. Das Ergebnis dieses Surveys legt die Annahme nahe, daß der Mais vorrangig über eine nördliche Route nach Nigeria kam, wahrscheinlich ausgehend von Tripolis durch die Sahara bis hin zum Tschadsee. Mit Ausnahme einiger Bezeichnungen aus der Küstenregion, referieren die meisten Vernakulärnamen für Mais auf "nördliches" oder "Hausa"-Sorghum oder andere ähnliche Kollokationen. Es ist deshalb wahrscheinlich, daß der Mais in Nigeria weitgehend nordafrikanischen Ursprungs ist.

RESUME

Il est généralement admis que le maïs a été introduit en Afrique de l'Ouest par les Portugais. Si cela semble être vrai pour la région sénégalienne, des doutes demeurent cependant en ce qui concerne le Nigéria. Pour suivre la diffusion du maïs au Nigéria, une liste de termes en langues vernaculaires a été recueillie dans beaucoup de langues de ce pays. D'après les résultats de cette étude, le maïs serait venu au Nigéria surtout par la route du Nord, probablement à travers le Sahara, de Tripoli jusqu'au Lac Tchad. Hormis quelques termes de la région côtière, la plupart des noms vernaculaires pour le maïs font référence soit au "sorgho du nord", soit au "sorgho haoussa", ou à des collocations similaires. Il est donc probable que le maïs au Nigéria soit, dans une large mesure, d'origine nord-africaine.