

# Cash-cropping: a vicious circle



JEREMY HARTLEY/ONFAM

Hard choices for Ndam Mor Fademba: vegetables are thirsty plants, and water is scarce; millet won't grow in the weed-ridden soil; peanuts will grow (for a time), but they don't pay — and they need fertiliser; fertiliser costs too much. More and more young people are leaving the village.

## A visit to a village

The village of Ndam Mor Fademba? 'Yes, it's over there, a few kilometres,' says the man in the Mickey Mouse t-shirt, standing beside his hut and gesturing across the dusty Sahelian landscape. There are scrubby thorn trees, but no sign of a road or track. 'I'll accompany you,' he adds with a smile, and climbs aboard the vehicle.

Ndam Mor Fademba is a community of about 600 people in the Kayar region of northern Senegal. As in thousands of other villages scattered across the country, its people grow cereals, peanuts and vegetables, and keep some animals; but their land has suffered severely from 20 years of recurrent drought and the pressure of human activities.

Founded 200 years ago, Ndam Mor Fademba was first settled by a family of *marabouts*, whose descendants are still dominant in village life. In the central square there is a mosque and a school, both with lighting from a solar panel provided by a US agency, as well as the family compounds of the village leaders. The village also has its own cemetery, a football field, and a peanut co-operative.

Near the blackboard in the schoolroom is a pile of exercise books containing the pupils' neatly-written dictations in French. One, on the subject of 'Our Village', notes that 'The big square has a large silk-cotton tree, where people meet in its shade.' The teacher admits there is a little historical licence here: sadly, the silk-cotton tree died some time ago.

Many species of tree — some of them valuable for food, medicines, or construction timber — have disappeared from the area as the climate has become more arid, or as a result of land clearance

for peanuts. But there has been some replanting in the village itself, making it an oasis of shade and greenery in an otherwise dried-up landscape.

Using water from a tube well, women cultivate potatoes, onions, aubergines, and cabbages. But when the motor pump lifting water from the well broke down some time ago, the American agency replaced it with a windmill, which the villagers complain gives a very inadequate flow. There are also three hand-dug wells, used mainly for watering livestock; but shortage of water, they say, is their biggest continuing problem.

Since the onset of the drought, most families, who previously relied entirely on crops, have taken to keeping some animals as well. Though they are almost all Wolof agriculturalists, they can no longer live from their crops. As one poorer farmer put it, 'In years of good rainfall, our harvest used to produce eight or nine months of food, or in average years at least five to six months' supply. But in the bad years like those at present, the harvest lasts only two or three months.'

#### See Naples, Ndiaye

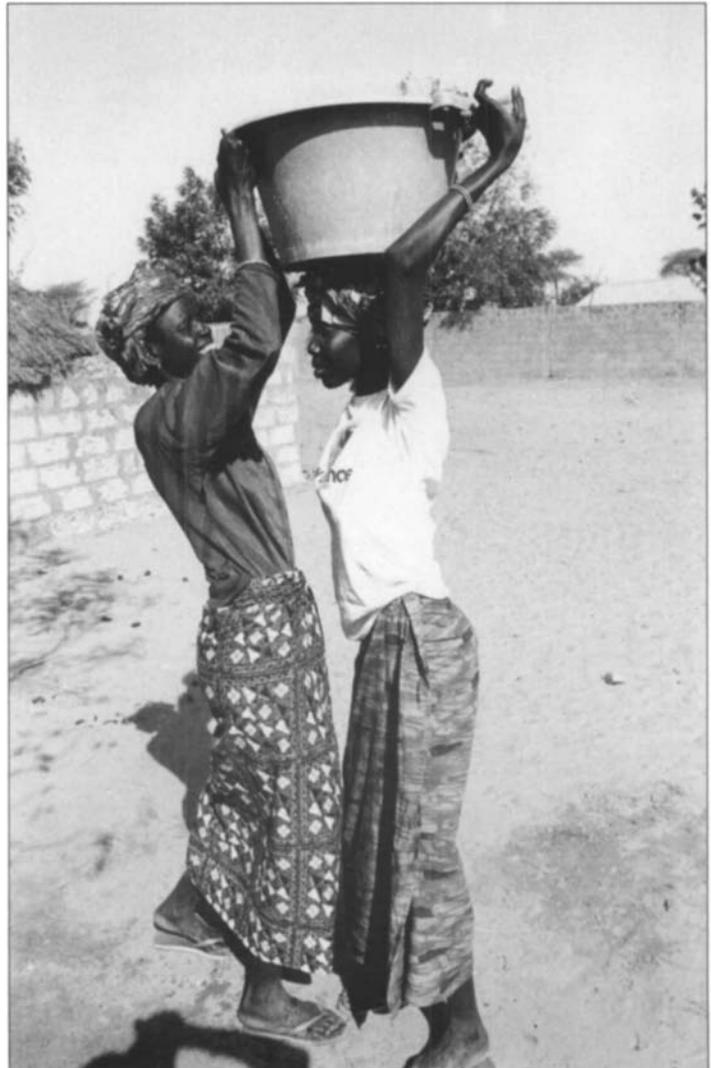
The village association of Ndam Mor Fademba now has at least one outpost in Italy, which has become a favourite destination for the village's young migrant workers. Some go to other European countries or to Dakar, so that the active people left in the village are mostly women and older men.

Money sent home by the migrant workers makes a vital contribution to family income. In addition, the group in Italy meets at least once a year to send a collective contribution for the annual religious festival. It also offers a 'welcome service' to new arrivals from the village, covering all their subsistence costs for three months until they get settled and find work.

For all their worries, the people of Ndam Mor Fademba are better off than many other rural communities, perhaps because of their maraboutic connections. In particular, the children have the chance to learn French, Wolof, or (at a Koranic school in one of the nearby villages) Arabic. The village has its own oil press and a mill for grinding millet into flour, donated by a foreign agency.

But the problem which haunts the farmers of Ndam is the sharply declining fertility of their soils. It has brought an invasion of the parasitic weed *striga*, which can devastate millet crops and has forced them to switch to growing peanuts.

Water is a precious commodity for villages like Ndam Mor Fademba



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## Housewives' choice

Unlike the farmers of Ndam Mor Fademba, peasants in other parts of Senegal are reducing their peanut fields and planting more of the traditional food crops: millet and sorghum. The reason is simple: they can't earn enough from the sale of peanuts to buy the food they need for themselves, so it's safer just to grow their own.

This, of course, has the effect of reducing exports, so the government has less foreign exchange with which to import food for the urban population or to help farmers increase their productivity. It is a vicious circle with no obvious way out. According to one authority, peasant peanut producers earned more for their daily labour in 1913 than in 1984, and things have got worse, if anything, since then. But with more than a million people dependent on it, there is no way the government can abandon the peanut economy; they will simply have to keep propping it up with costly price subsidies, just to prevent a total collapse.

Even with the subsidies, it is not economic for farmers to use the quantity of chemical fertiliser that would be necessary to protect the soil, nor to leave

land fallow to restore itself. So large areas of arable land are being 'mined' of their nutrients until they can no longer sustain a crop, and then abandoned. According to the UN's Food and Agriculture Organisation, if soil degradation in the Sahel is not controlled, the region will soon be able to feed only half the number of people which it used to be able to support.

The government's declared aim of reaching 80 per cent food self-sufficiency by the year 2000 would require the rural population to produce almost twice its own needs, in order to feed the towns. In fact, current production trends are almost all going in the wrong direction — and an official campaign which has been trying for several years to persuade urban consumers back to traditional cereals, in order to reduce imports of wheat and rice, has almost admitted defeat.

Rice and wheatflour are the city's convenience foods. Housewives tend to reject millet and sorghum, because they take too long to prepare and cook. Even in small provincial towns, the French baguette from a local bakery — as crisp and fresh as any in Paris — has become a symbol of modern living. Some may be made from food-aid wheat, but an increasing share of imports has to be paid for.

Macoumba Diop and his son raking over last year's millet stubble; this year they plan to try peanuts. But the soil's nutrients are exhausted, and, without government subsidies, they can't afford fertiliser.



# Rice at a price

**W**ITHIN LIVING MEMORY, the Senegal River Valley was a very different place from today. The river was the main route for transport and travel; wildlife, including lions and hippopotami, abounded. Farmers grew millet on sandy upland fields, away from the river, and sorghum on the valley floor when it flooded after the rainy season. Farther away from the river, the dry Ferlo region was home to semi-nomadic pastoral communities, with their large herds of cattle, sheep, and goats. But now there is a tarmac road all the way from St Louis to Bakel. Much of the rich land of the flood plain is under threat. Most of the wildlife has gone. And irrigated rice fields, spreading along the river banks, bar the way to the herders' livestock, which used to be watered there in the dry season.

In recent decades the government has been developing irrigated rice schemes, managed by its parastatal agencies. But far more dramatic changes were promised with the building of two large dams to harness the river waters. In 1975 the three main countries on the banks of the river — Senegal, Mauritania, and Mali — formed the Senegal Valley Development Authority (OMVS) to finance, build, and manage the dams. By the time they were formally declared open in 1992, the massive Manantali dam in Mali and the smaller Diama dam near St Louis had cost close to \$1 billion — a monumentally misjudged investment which is unlikely to achieve any of its proclaimed objectives in the foreseeable future, and has cost the country a large slice of its foreign debt.

Manantali, it was promised, would produce enough hydro-electricity to keep Dakar lit up for 100 years. It would make

the river navigable as far as Kayes, in Mali, giving the Sahelian interior an important outlet to the sea; and it would permit irrigated farming on 350,000 hectares of land, two-thirds of it in Senegal.



Diama dam across the River Senegal between Mauritania and Senegal: one reason for Senegal's external debt, which totalled US\$3.7 billion in 1991 (the latest available figure)



A pump to irrigate rice fields along the River Senegal near Mbagam village. Irrigation used to be subsidised but now, under the government's structural adjustment programme, local farmers have to pay the full cost.

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## A dam without turbines

Some far-sighted critics objected in the early days that these dams were an extravagant mistake and that the people of the valley would be unlikely to benefit from them. But the hopes of wider economic gains, the persuasive arguments of dam-building contractors, the readiness of the international community to advance the money, and the enthusiasm of all three governments for this massive development package were enough to over-ride such objections and ensure that the scheme went ahead.

Well before the dams were finished, however, the Northern financiers were having second thoughts. Electricity generation, they then decided, would not be economically viable unless power-hungry bauxite and iron mines were developed in the region. But world market prices for these minerals made the plan uneconomic. So Manantali has no turbines installed and probably won't have for several years to come. For much the same reasons, the funding agencies declined to put up the \$300 million needed to make the river navigable. So the justification for the whole scheme came to hang on its promise of a new agricultural future, with modern irrigated farming to give the region a new lease of life.

## Dykes without drainage

To be economically viable, the scheme needs to expand the irrigated area by 8,500 hectares every year. In fact, progress is much slower; and for every thousand hectares brought into production, a large area is being lost, because the land is not drained and salt is building up on the surface as the water goes down. In the long term, the fertility of the soil is seriously threatened.

The problem is that farmers can't afford to pay for the proper upkeep of the irrigation system. The soil is so good that they are tempted not to bother with the measures essential to protect it: they just level the ground, build one dyke around it, dig a canal to the water source, and ignore the need for drainage. Until now, producers have generally paid less than half the true cost of irrigation; but in future, in accordance with the structural adjustment programme, they will have to pay for it all. As a result, they are likely to skimp even more on soil-protection measures. The chances are that production will stagnate, and the national budget will suffer.

## The price dilemma

Senegal already produces less than a quarter of the rice it eats (the rest is imported from South-East Asia). Farmers get a fixed government price, which is just over twice what it costs them to produce; but delays in government payments often oblige them to sell to merchants at lower prices, which give them little or no return for their labour. To maintain the official retail price for milled rice, production is massively subsidised. It is plain that the country cannot hope to produce rice competitively in the Senegal River Valley under present conditions. And unless the price structure can be radically changed, by cost-cutting and retail-price increases, there will be little room for a thriving private sector, which was supposed to be the goal of the brave new agricultural policy.

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Dimar Dieri village: collecting rice from the huller, which removes the outer husk from the grain

# Our wealth is our animals

**Y**OLY IS A TINY COMMUNITY of semi-nomadic Peulh pastoralists, an oasis in the flat, sandy expanse of the Ferlo rangelands. From miles around, herds of long-horned zebu cattle, donkeys, sheep, and goats converge here in the dry season as their owners come to draw water from the village well. The water is 150 feet below ground. It is a tough haul to fill the buckets, and then to transfer the water to tractor-tyre inner tubes, for transport.

Chief Oumar Ba speaks for his people: 'Our wealth is our animals. Everything revolves around them. But animals are very demanding; often one has to be at the well all day to draw water for them. Recently cattle prices have dropped by

almost half. We've had poor rains in the past three years, so there is less pasture in the Ferlo, and much hardship. Many people have lost their herds and moved away to the south.'

A group of herders is sitting in the chief's fenced compound, surrounded by several round thatched huts. The traditional Peulh home is made of woven mats, with a straw roof supported by a central post. More modern ones with a self-supporting roof require about 25 sizeable tree limbs, nine or ten feet long, plus several shorter wall posts to support it. The chief's hut at Yoly has a decorative pattern of wooden slats between the rafters, with a shelf around the walls displaying large enamel platters, each with a cooking pot

Yoly village, Ferlo region: filling inner tubes with water from the well, for transport by donkey cart to far-off herds





JEREMY HARTLEY/OXFAM

and smaller plates in front. There are two large beds, stools for seating, a collection of framed photographs on the walls, and an embroidered panel of Mecca.

The discussion turns to cattle-raising in other countries, and the intensive systems of European farms, where animals are fattened in sheds under controlled conditions and rarely graze on pasture. One of the villagers, recently trained as an auxiliary vet, nods thoughtfully. 'That's the direction we need to go as well.' His face betrays the sadness of someone pronouncing the epitaph for a whole way of life.

But his words also contain hope: a readiness to consider change and even to look for it. The village president agrees with him, though he says that theirs is still the view of a minority. The first need is to find forage crops that can thrive in this arid climate. Unfortunately, a first experiment with some plants that do well in the Australian outback has not been successful, but they will keep on trying.

## Self-help in action

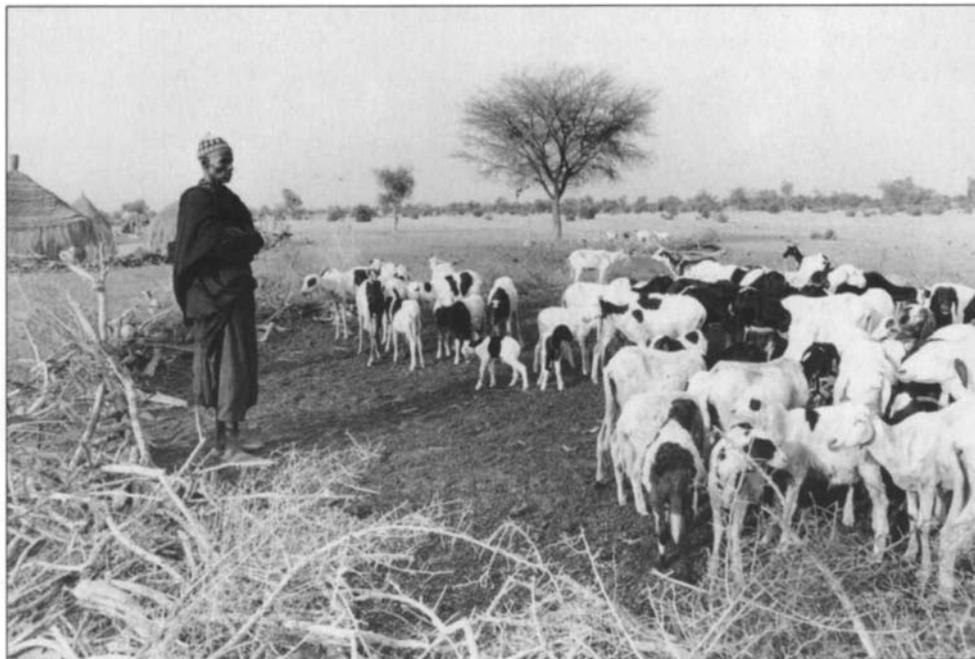
Peulh pastoralists do not sit around waiting for outsiders to solve their problems for them. Some young men from the village of Namarel, studying in Dakar, got together in 1989 to form a development association for Namarel, Yoly, and the surrounding villages. They called a village meeting at which five problems were singled out for attention: health, literacy, women's development, water supply, and animal health.

They called their association ADENA, and within three years it had 3,000 members. It began with a network of 37 veterinary auxiliaries and a literacy programme. The latest plans include a community health programme, a network of forestry volunteers to protect the natural environment, a revolving fund for cattle marketing, the purchase of a grinding mill for village women, and a theatre group to stimulate debate on community issues through song, dance, and drama.

*Facing page:* Yoly village: in the house of Chief Oumar Ba (seated right)

Namarel village: arithmetic class organised by ADENA





### **Pastoralism under siege**

Pastoral communities are besieged from many sides. The crisis they face today has been gathering for 100 years and is impelled by many forces, notably the growth of towns and the expansion of agriculture, which have forced herding communities back into the most arid and marginal zones. The process continues, and — apart from their daily struggle to protect themselves against an increasingly erratic climate and the threat of famine — they are under pressure from farmers, who are appropriating more and more of their traditional grazing lands for agriculture.

Pressure also comes from the government in Dakar. In 1991 a Presidential decree handed over to the powerful Mouride brotherhood 45,000 hectares of what was supposed to be a protected forest in the centre of the country. Six thousand herders and 100,000 animals grazing there were forced off the land. In a matter of weeks, the forest of Khelkom had been flattened by teams of the Mouride faithful from all over the country. Five million trees and bushes were uprooted in what was one of the last remaining forests of Senegal's degraded heartland. Some foreign donors, officially

committed to helping to protect the country's environment, and whose objections might have had some effect, chose instead to turn a blind eye.

On the first anniversary of this event, a national 'Khelkom Support Committee' issued a statement asserting that the forest's destruction was not an isolated phenomenon, but 'the result of policies of the Senegalese government which often lead to violent confrontations between farmers and pastoralists'. The government made no reply.

In one rural community over a ten-year period, the Mourides put in six per cent of the applications for land grants, but they received 62 per cent of the land allotted, much of it classified for grazing or forest. Herders are on a hiding to nothing when it comes to seeking land rights. Applicants have to show that the land will be put to 'productive use' — and, by the official definition, pasture is simply not considered productive.

The Khelkom peanut fields may produce an annual crop worth \$2 million — for a few years. After that, the soil is exhausted and blown away, and likely to be reduced to desert.

*Facing page:*  
Inoculating cattle in  
Loumbol village,  
Ferto region



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# The harvest of the sea

**O**N THE SAND DUNES of the Tongue of Barbary, a thin strip of land extending across the mouth of the Senegal River, the fishermen of St Louis long ago made their cemetery. Looking out over the sea where many men have met their fate, the simple graves are draped with fishing nets and other seafarers' mementoes.

These days, for the mourning families who come here, grief is often mingled with anger. As competition for a declining catch gets fiercer, local in-shore fishermen are being killed along the coast of Senegal at the rate of almost one a week, their *pirogues* — large canoes — smashed in collisions with industrial boats poaching at night inside the prohibited six-mile zone. Occasionally the captains of intruding boats are taken to court, but they have political influence and good lawyers, and they are seldom punished. If the crew of the *pirogue* survive such a collision, they are probably out of business: a new boat would cost them about £2,000.

## Big fish, big business

Senegal's 33,000 independent fishermen have many hazards to face. Although they account for about three-quarters of the annual catch and 40 per cent of fish exports, they get no say in Senegal's agreements with the European Union. The 1991/92 agreement gave 86 European vessels the right to fish in Senegalese waters, for which they paid about £15 million a year. For 1993/94, a new agreement extended the EU's fishing rights — including a 59 per cent increase in the quota for deep-water species — while their payment to the government of Senegal was raised by 11 per cent. In the

long run, fishing stocks will be exhausted, but in the short term the government in Dakar needs the revenue, so the authorities are not keen to rock the boat when it comes to a few accidents or a bit of poaching.

The agreements stipulate that European vessels should have an observer on board, respect quotas, and sell a portion of their catch in Senegal. But, according to the small fishermen, these terms are not enforced and there is no control on their dumping of the unwanted, lower-quality fish they catch. Some estimate that the industrial boats dump back in the sea as much as 40 per cent of their catch.

To campaign for fairer treatment and better conditions, the artisanal fishermen have formed themselves into West Africa's first fishermen's union, the CNPS. The union is demanding that the in-shore zone reserved for them be extended from six to 12 miles. CNPS wants the European boats to be equipped to detect *pirogues* in the dark, and to be clearly identified, so they can be traced if they infringe the rules. Otherwise there's no chance of catching them: Senegal has only one coastguard vessel and one aircraft to police 700 km of coastline.

Declining fish stocks are affecting fishing communities and consumers alike. High-value fish once commonly eaten in Senegal are now routinely exported, or bought only by the elite in Dakar. And all the time, cheaper fish are becoming less abundant.

At the old Lébou fishing village of Yoff, outside Dakar, a prominent buyer on the beach recently was an Egyptian businessman, accompanied by a team of workers packing newly-landed fish into ice-boxes for shipment to the USA. Once mainly a



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local industry, fishing has become big international business. In St Louis, competition comes not only from the Europeans, but also from Korean pick-up boats. These vessels can take on board as many as 40 *pirogues* and their crews. They transport them to well-stocked waters farther down the African coast — sometimes as far as Gabon — and there act as mother ship for a month or more, while the *pirogues* do their fishing for them.

The CNPS union alleges that conditions for the fishermen on these boats are inhuman, with water and food rationed. But Maguatte Sangharé, the head of a family fishing cooperative in St Louis which has worked on the pick-up boats, has no such complaints. Without them, he says, a lot of fishermen would have no hope, whereas they can come back from a six-week trip with 3-4 tons of fish per

*piroque*. They are paid 175 francs a kilo for 'European' fish such as sea bream and 125 francs for 'African' species, which are sold locally. Since they live on the boats, the fishermen have few costs. Eight pick-up boats now provide work for about 200 *pirogues*. The Korean boats are actually based at Las Palmas in the Canary Islands.

Even without intruding trawlers, the *piroque* crews working from the shore are often dicing with death when they set out. For two or three months a year the Atlantic rollers are so violent that crossing the bar becomes virtually impossible. Even under better conditions the *pirogues* toss alarmingly as they plough through the breakers, and from the safety of the beach the helmsman standing at the stern in his oilskins can be seen lurching up and down like a tiny yellow yo-yo.

### **Spécialités de la maison**

The art of the kitchen has a place of honour in Senegalese life. The original national cuisine is flavoured by a taste of Arabic, French, and other African dishes.

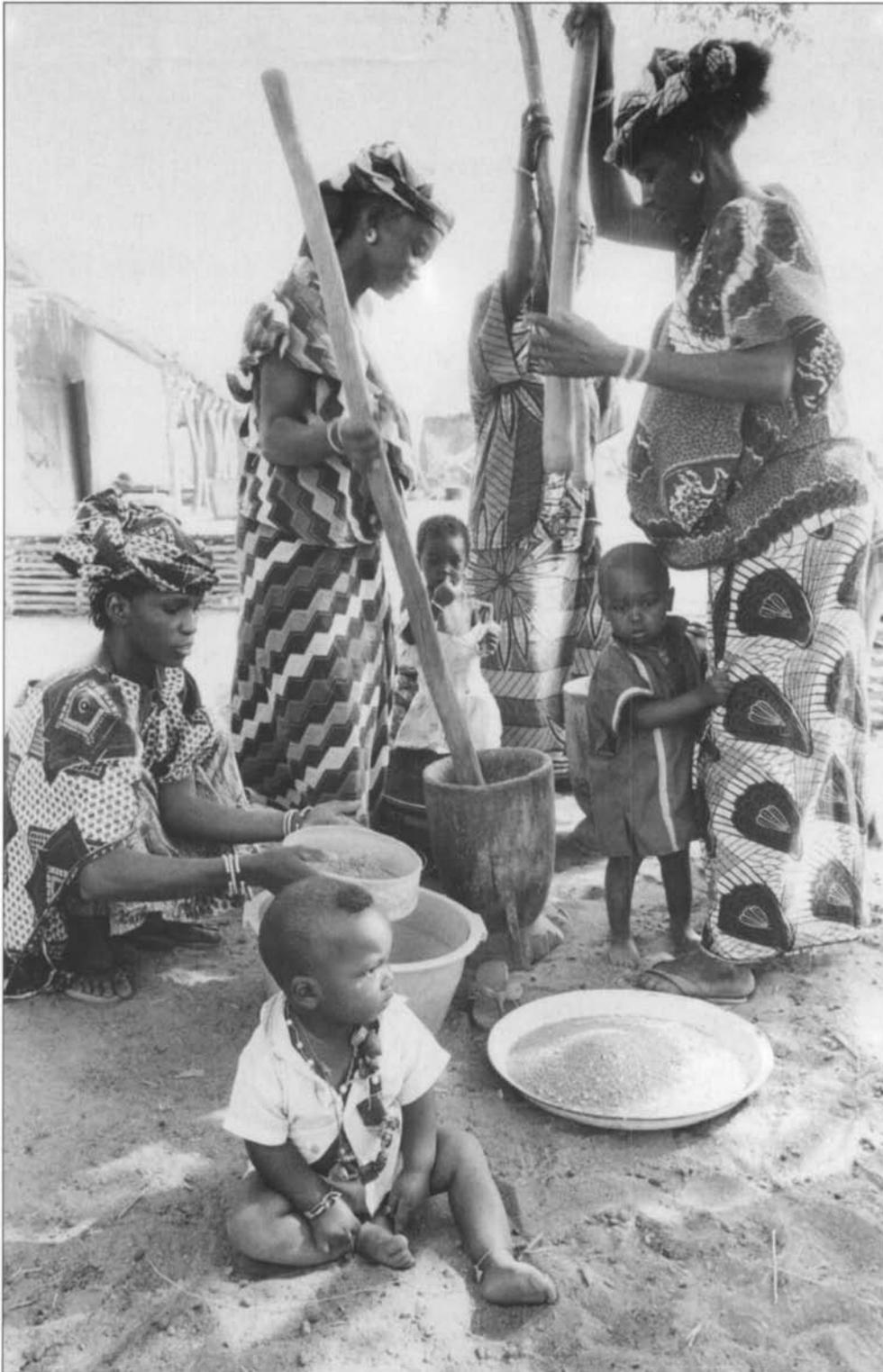
*Tiep-bou-dien* (fish-with-rice) is the centre-piece of Senegalese cooking, making best use of the Atlantic catch, which includes sea bass, tuna, mullet, Nile perch, swordfish, and many kinds of shellfish. The fish is cooked in oil and onion, accompanied by cabbage, carrots, tomato sauce, and rice, prepared in the fish and vegetable stock.

Other favourite dishes are *yassa*, which can be chicken, lamb, or fish marinated in lemon juice, red pepper, and onion and then charcoal-grilled; *maffé*, a sort of chicken or lamb stew with vegetables and peanut paste; and the national variety of couscous, made with millet and flavoured with baobab leaves.

The biggest feast of the year is *Tabaski*, the Muslim Feast of the Lamb, when every family sacrifices a sheep as a sign of faith, symbolically following God's instruction to Abraham to sacrifice his son. For this occasion, some 200,000 sheep are slaughtered each year and many families have to save throughout the year to buy one. Traditionally, they are killed by a member of the family, but many of the younger generation are losing the skill, and professional slaughterers can be called in. The skins of the animals are then stretched out on the ground, covered with ash. After three days they are dry and are then used as prayer mats.

Apart from meat, fish, and its staple cereals, Senegal has an abundance of tropical fruits. The mango season is eagerly awaited each year, while guava, tamarind, coconut, and pineapple are all used to make fruit juices or preserves.

Family meals are most often completed with tea: a green China tea with fresh mint. Elaborately prepared, the tea is brewed three times and served in small glasses, the first strong, the third milder and sweeter.



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Pounding millet for the evening meal, Mewell village