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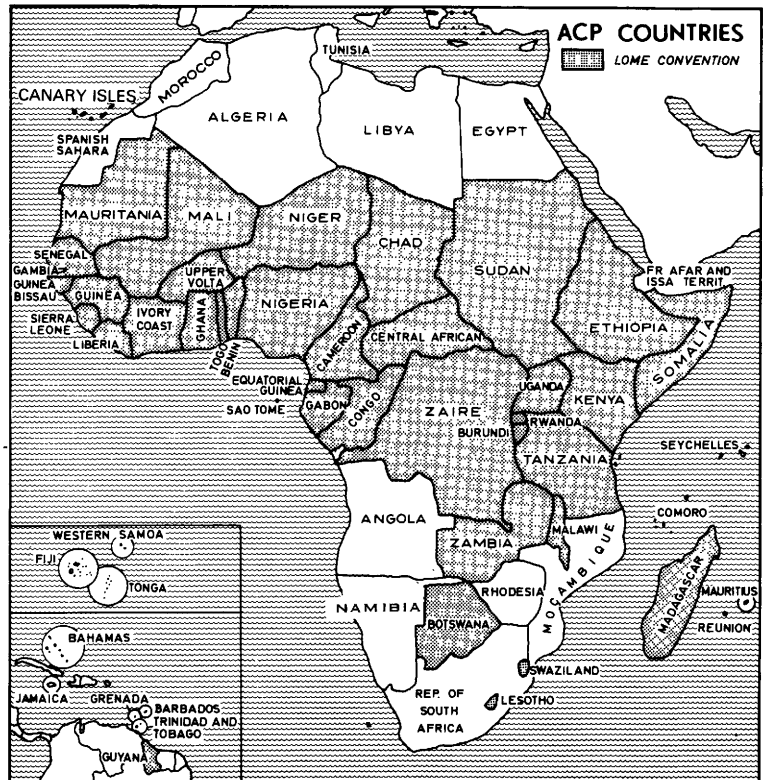
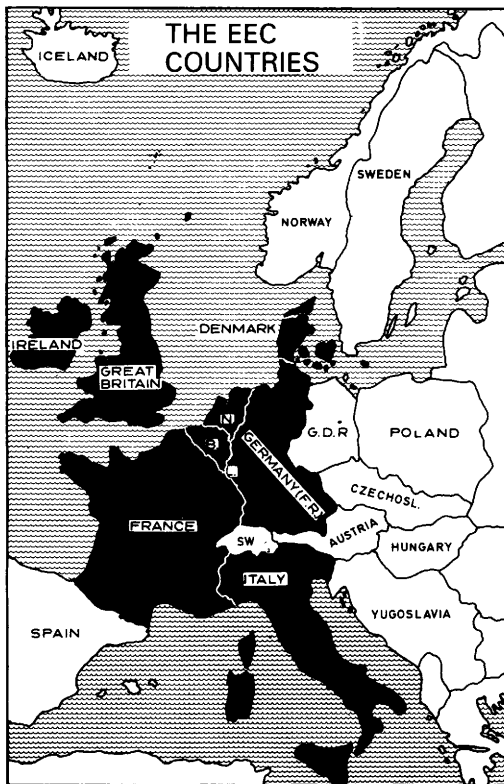
**ANIMAL  
HUSBANDRY**

## THE EUROPEAN COMMUNITY

BELGIUM  
DENMARK  
FRANCE  
GERMANY  
(Federal. Rep.)  
IRELAND  
ITALY  
LUXEMBOURG  
NETHERLANDS  
UNITED KINGDOM

## THE ACP STATES

BAHAMAS	GRENADA	RWANDA
BARBADOS	GUINEA	SENEGAL
BENIN	GUINEA-BISSAU	SIERRA LEONE
BOTSWANA	GUYANA	SOMALIA
BURUNDI	IVORY COAST	SUDAN
CAMEROON	JAMAICA	SWAZILAND
CENTRAL AFRICAN REP.	KENYA	TANZANIA
CHAD	LESOTHO	TOGO
CONGO	LIBERIA	TONGA
EQUATORIAL GUINEA	MADAGASCAR	TRINIDAD and TOBAGO
ETHIOPIA	MALAWI	UGANDA
FIJI	MALI	UPPER VOLTA
GABON	MAURITANIA	WESTERN SAMOA
GAMBIA	MAURITIUS	ZAIRE
GHANA	NIGER	ZAMBIA
	NIGERIA	



**The Commonwealth** — A time-honoured club for former British possessions or a dynamic force for world peace and progress? The modern Commonwealth includes a quarter of the human race and independent countries of every colour and degree of economic strength. Shridath Ramphal of Guyana, former minister, diplomat and negotiator of the Lomé Convention which brought so many Commonwealth countries into close contact with the European Community, describes the Commonwealth and its purpose today. **Page 3**



**Zaïre** — The Republic of Zaïre is one of Africa's biggest countries and its immense natural resources give it great potential economic power. Ten years ago General Mobutu Sese Seko took over a war-torn country and put it on the rails. The President of Zaïre describes his country's future economic prospects in this exclusive interview with the "Courier". **Page 6**

**Dennis Akumu** — EEC and ACP trade unionists met recently in Brussels to discuss the possibility of union cooperation for development and to see what could be done in this area under the Lomé Convention. With non-governmental organisations being increasingly brought into the aid picture, Dennis Akumu, Secretary-General of the Organisation of African Trade Union Unity, picks out the main lines of possible EEC-ACP trade union cooperation. **Page 13**



**Dossier** — Animal husbandry plays an important part in the economy of the ACP countries and offers great possibilities for development. The catastrophic Sahel drought has drawn attention to West African stock-raising, but there are many other areas of Africa which suffer from protein deficiency. African and European specialists look at a traditional activity that has come in for some wide-ranging new thinking. **Page 18**

**Sport** — At the 1972 Munich Olympics a number of problems arose about the organisation of sport in Africa and the conditions for the admission of independent African countries to the Games. Politics and sport — the Olympic spirit — before the 1976 Montreal Olympiad, Jean-Claude Ganga, Secretary-General of the CSSA (Conseil Supérieur du Sport en Afrique), gives a run-down on what the ACP can hope for and expect from this summer's Olympic Games. **Page 72**  
Filbert Bayi ▶



# THE COURIER

EUROPEAN COMMUNITY —  
AFRICA - CARIBBEAN - PACIFIC

No. 37 — May-June 1976

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## **“Solving problems is a lot easier than defining them”**

**W**hoever first said this was presumably a wit with a taste for paradox. When he said it, he was no doubt far from thinking about animal husbandry in the ACP countries, about which he probably knew nothing whatever. Yet his well-worn adage has been applied in this, as in other fields of development. Here it really doesn't fit the case. When it comes to cattle farming, everything is difficult—solution and problem alike.

The appalling drought in the Sahel countries has helped to start people thinking, served as a call for mobilising money and resources and, by giving us the inter-State Committee to combat drought in the Sahel, set the problem on a regional basis. This came none too soon. For years the experts have been arguing about the way cattle-raising could and should be developed to the best advantage in Africa south of the Sahara, and they are still arguing.

This is not surprising, for even the basic facts come from different sources and the information is different. If you want to begin by saying how many head of cattle there are, the best you can get is a very broad guess. You can find the number on which livestock tax was paid; how many were exported through recognised frontier posts and ports, on the hoof or as meat; statistics on slaughterings in the officially recognised abattoirs; or guidance from partial census figures compiled in connexion with health campaigns. The officials apply to each of these figures some form of corrective ratio, but even this is open to debate. In the end a figure emerges

which is probably not far from the truth, but, to quote another adage, “one man's guess is as good as another's”.

Added to the uncertainty about the facts are the diversities of geography and climate. In so wide a zone of reference as the ACP, these play a very big part. You cannot raise cattle without pasture and in Africa south of the Sahara natural pasture is often seasonal, so that husbandry is extensive and nomadic. In the north, on the desert fringe, the limiting factor is the sufficiency of rainfall in a normal year to produce adequate natural pasture on at least a seasonal basis. In the south the limits are set by excess of moisture which makes a breeding ground for microbes that can kill cattle. Even these limitations are not absolute. The suitability of an area, for example, may depend on altitude or other local factors.

A closer glance at relevant realities may be obtained from the 1970 comparison between the Sudan-Sahel region and the cattle-raising areas of Europe. In Africa the yields—which means the percentage which can be removed from the herd each year without changing its size or age structure—are very low by European standards. The figure is in the region of 8 or 9%, which compares with 21% in France, and is due to adverse comparisons of fecundity, earliness of maturity and, more especially, mortality. For beasts brought to market at the optimum age, the carcass weight might be over 150 kg (against 350 kg in France), but the effective average is only about 130 kg. To produce a given weight of

meat, seven head of cattle are required in the Sahel for every one in France; a similar comparison between the Sahel and the Netherlands would produce an even higher figure.

Moreover, the official livestock policies have not always been successful. Vaccines, wells and water-points have enabled more cattle to survive; but in doing so they have broken down the natural balance as it formerly existed. Intervention has resulted in healthier cattle and more abundant water, but it did not allow sufficiently for the scanty vegetation and low food potential of the Sahel countries. There has been over-pasturing, trampling of grazing areas and around water-points and, in general, the excess cattle population has brought large-scale destruction of the shrubby and herbaceous cover of the top-soil.

The market for meat in Africa is growing. This is a result of economic development in general, improved living standards and changes in patterns of consumption in recent years. It can already be foreseen that there will be a severe meat shortage in West Africa about 1980, and the recent drought will have made matters worse.

The above are some of the background factors which must be borne in mind in reading the Dossier in this issue, embodying the views of African and European specialists from both French and English-speaking countries. It is an area in which economic reality merges with the everyday life and traditions of big population groups, and we must learn the lessons of experience and make good use of the instruments modern technology has put into our hands to deal with the insufficiencies of nature. At the same time we might remember, in the words of the French author, Jean Fourastié: “There is nothing less technical than the causes and consequences of technical progress. Before that progress there is Man, with his prejudices, habits, and ways of feeling and acting; and after it there is Man, with his standard of living and his culture”. ■



Central Office of Information

# THE COMMONWEALTH

## Secretary-General Shridath S. RAMPHAL describes the Commonwealth today

► *The Commonwealth Secretariat runs the biggest club in the world. About one person in four on this planet belongs to the Commonwealth. What is the job of the Secretariat itself?*

— The word 'club' is not entirely right to describe the modern Commonwealth. Certainly, however, we constitute one of the largest associations of states and peoples in the world. But the secretariat itself is quite small, and it is in the character of the Commonwealth that it should be. Nevertheless, I am sometimes alarmed when I think just how many jobs our rather small organisation does have to do. First, and least tangible, the secretariat has a symbolic function. Because we belong to and are financed by all our 35 member states jointly, we symbolise the multilateral nature of the Commonwealth association. We are the one organisation at the service of all the peoples of the Commonwealth—as you say, almost a quarter of humanity.

The summit of our activities is, of course, the meeting of Commonwealth heads of government which takes place every two years in a different Commonwealth region, and is always a remarkable occasion. Nowhere else could you find so many world leaders exchanging views, in private and through the medium of a common language, with frankness and in friendship and equality around a table.

*Shridath Ramphal (Guyana) became the Commonwealth's second Secretary-General in July 1975. He heads the Commonwealth Secretariat, the central organisation for coordinating intergovernmental Commonwealth activity in an increasing variety of fields.*

*Mr. Ramphal, 47, sees the role of the Commonwealth not only in terms of relationships between member countries and expanding intra-Commonwealth cooperation but also in terms of its potential for helping to solve the wider problems of mankind.*

*As Attorney General, Mr. Ramphal helped write Guyana's independence constitution of 1966. In 1967 he became Foreign Minister and from 1973 he was also Minister of Justice.*

*He established Guyana's diplomatic service, fashioning it to serve a foreign policy which he helped to formulate.*

*Five settings provided the backdrop to Mr. Ramphal's international activities: Caribbean integration, the United Nations, the non-aligned movement,*

*the ACP-EEC negotiations and the Commonwealth.*

*He was centrally involved in the moves leading to the Caribbean Free Trade Area and the eventual establishment of the Caribbean Community.*

*At the United Nations, he led Guyana's delegation to each successive session of the General Assembly from 1967-74 and to the sixth special session in 1974 which called for a new international economic order. He was elected Vice-President of the Assembly in 1968 and 1973.*

*At the Lomé Convention negotiations, he was spokesman for the Caribbean countries and, on the trade arrangements for all the 46 ACP countries.*

*Mr. Ramphal believes "the Commonwealth is now in the forefront of the battle to establish a rational and equitable new international economic order".*

*He studied law in London and his wife is English. They have two sons and two daughters.*

And there are regular meetings, serviced by our secretariat, of ministers of finance, of education, of law, medicine, youth affairs, and so on, which guide our policies and keep everyone aware of each others' problems.

The secretariat organises contacts at a wide variety of levels between member countries on a continuing basis—ex-

changes of opinions and expertise that enrich the lives of all our nations.

And we have an especial preoccupation with the great economic inequalities of the world. We organise our own—relatively small and new, but fast-growing—Commonwealth Fund for Technical Cooperation, which puts resources and expertise from all member countries at

the service of the developing members. Our members include four highly developed industrial nations and 31 developing countries at all stages of development. We in the Commonwealth have been, perhaps, the world leaders in the "North-South" dialogue, which is now taking on a new intensity at the world level. Always, we are at the service not just of our members, but of the world community of which we form so large a proportion.

► *In the 1960s it seemed that the Commonwealth was undergoing some sort of an identity crisis—not surprisingly, in view of the great differences between its members. But in 1971 in Singapore, heads of Commonwealth governments drew up a set of principles. What is their significance?*

— The principles state a set of human values: a commitment, passionately strong, against racial oppression; a commitment to greater economic equality between and within nations; a commitment to solving the differences between nations by reasoned discussion and mutual understanding rather than by confrontation. Our shared history, and the English language which all our leaders use, make it easy for us as a group of friends to talk frankly about our differences, and to identify the surprising number of objectives on which we agree. In this sense we can claim to be a pathfinder for mankind. Certainly our principles do not add up to a common policy for all members—we do not seek that, nor think it possible. But they state certain propositions on which we can all agree, and on the basis of which we can move on to discuss from our different economic and political viewpoints the great issues before mankind in the last quarter of the twentieth century.

► *A Commonwealth proposal on the new international economic order was presented to the United Nations seventh special session last September. What became of it?*

— I think that if you read the proposal of our Commonwealth Group of Experts, which I transmitted to Dr. Waldheim last September, and then read the debates and conclusions of the seventh special session, you may well conclude that the Commonwealth report had a considerable impact. I think we both

helped to set the tone for the session and to point the way to practical conclusions. What happened was this: when Commonwealth heads of government met in Jamaica last May they conducted what was at that time the world's first real dialogue between developed and developing countries at the level of heads of government on the issues of economic change. At the end of it they called for "immediate steps towards the creation of a rational and equitable new international economic order". And they established an expert group to draw up a programme of practical measures for closing the gap between rich and poor nations, and instructed them to pay particular attention to a wide variety of specific reforms in international economic arrangements. It was an important commitment of political will by a major sector of the world community representing rich and poor alike.

The experts reported with great speed, and most constructively: the seventh special session proved that they were on the right lines. And that was an interim report, not the end of the experts' task. They held a further formal session in London in February this year. Their work is continuing, as a contribution to the formulation of policy both within national governments and within international groupings such as the UN Conference on Trade and Development, which opens in Nairobi (another Commonwealth capital) in May. This approach to the new economic order is central to the moral and political objectives agreed by all Commonwealth governments, and the group will continue its work for as long as may be necessary to discharge the mandate of Kingston.

► *When Britain joined the EEC in 1973 there was some alarm around the Commonwealth, and again at the start of the Lomé Convention negotiations the Commonwealth ACP countries seemed rather suspicious of an association with Europe. What is the state of EEC-Commonwealth relations now, and what role has Britain been able to play in improving them?*

— I believe that in 1973 most Commonwealth countries regarded Britain's membership of the EEC as both rational and legitimate, but there was genuine concern over the need to safeguard the interests of Commonwealth countries

that would be affected and, particularly, to secure satisfactory arrangements between the enlarged Community and Commonwealth developing countries. It was not surprising that at Kingston in May 1975 (after the conclusion of the Lomé Convention) all Commonwealth heads of government unanimously agreed that Britain's EEC membership was a positive source of strength for the Commonwealth.

On the Lomé negotiations, I can claim some special knowledge. As a minister from the Caribbean I tried to play some part in reducing the initial unfamiliarity between the Commonwealth ACP 'associables' and the mainly French-speaking 'associates'. We felt in the ACP group that solidarity was our strongest—perhaps our only really powerful—card. So we were determined to negotiate together, and did. And we were helped in that by some far-sighted European leaders, who saw that to have a genuine dialogue between rich and poor there must be that measure of unity on the part of the poor that gives them strength and makes negotiation meaningful.

The Lomé Convention was the result and it has served to create a valuable basis for EEC-Commonwealth relations. But the real value of the convention is in its potential and it is on the fulfilment of that potential over coming months that it will be judged. And there are other relations that remain to be adjusted. There is a specially urgent need for the EEC to establish with Commonwealth Asian countries a comparable regime of economic relations. And there are special problems affecting New Zealand that need to be approached by the Community with more understanding than has yet been apparent. I very much hope that the spirit which inspired the Lomé negotiations will continue to inform the Community's dialogue with these Asian states and with New Zealand.

Today, the Commonwealth has no hang-ups over Britain's membership of the Community. All Commonwealth nations belong to regional groupings of one kind or another. These relationships enrich our collective experience and are sources of strength to the Commonwealth. Both politically and economically the creation of the new Europe is a fact of overwhelming world importance. Both through Britain's membership of

# The Commonwealth

The Commonwealth of Nations is a voluntary association of independent sovereign States, each responsible for its own policies, cooperating in the interests of their peoples and in the promotion of international understanding and world peace.

It now has 35 members, ranging in population from India, with nearly 600 000 000, to Nauru, a dwindling island of phosphates in the Pacific, with 7 000. No country leads the Commonwealth, but its links traditionally centre on Britain, where the Commonwealth Secretariat is based, and Queen Elizabeth II is Head of State of 11 Commonwealth countries.

The evolution of the Commonwealth began with the independence of Canada, Australia, New Zealand and South Africa in the 19th century, and the modern Commonwealth began to take shape in 1947 when India and Pakistan became members. With the independence of so many countries in the last 20 years, the Commonwealth has grown to include about one thousand million people. The latest members are the Bahamas (1973), Grenada (1974) and Papua New Guinea (1975), and the Seychelles are expected to join when they become independent next month (June 1976).

Not all countries formerly under British rule have chosen to join the Commonwealth (e.g. Burma, Ireland and the Sudan), and two have left it: South Africa in 1961 and Pakistan in 1972.

The variety of the Commonwealth countries is immense. They cover the five continents and six oceans and every stage of economic development is represented. They are

held together by a common language and traditions rather than by an institutional framework, and all subscribe to a Declaration of Principles based on freedom and equality.

The principal Commonwealth forum is the Heads of Government meeting every two years (last year Kingston, next year London), where national leaders meet informally in private to exchange views. Nowhere else do the premiers of such a variety of countries meet regularly, and although the Commonwealth is anything but exclusive—practically all its members belong to other international groupings—it is characterised by a high degree of frankness. A particularly useful Commonwealth tradition is that member delegates to world conferences meet to discuss their standpoints, not with any view to establishing a Commonwealth policy but to hear each other's ideas, before world talks.

Commonwealth activities cover a wide field and although government cooperation is crucial, it is only part of the picture. In development assistance, telecommunications, science, education, health, youth work, the law, broadcasting, parliamentary institutions, professional organisations, social activities, sport and the arts, the Commonwealth is held together by an intricate and intimate network of relationships that provide not only an immense reserve of expertise but also the flexibility to use it.

Something of the character of the Commonwealth is conveyed by Jamaican Prime Minister Michael Manley's description of it in 1974: "We have rich nations and poor; our policies range from the libertarian through the authoritarian to the incredible—though you will understand that protocol prevents a specific identification of the last".

the Community, and through the association of so many Commonwealth ACP members with the Community through Lomé, the Commonwealth has a stake in the successful emergence of a new Europe—a new Europe, we all hope, whose links with the Third World will continue to develop along the creative, if still somewhat inchoate, lines laid down at Lomé.

► *What have been your personal contacts with Africa since you took office?*

— I have been several times to Africa, and I have had numerous meetings with African leaders in London. In my first months of office I managed to complete a round of the continents—visiting Commonwealth members in six continents in my first six months in office. Since then I have been in Africa again, and I must say that the affairs of Africa are right at

the centre of the Commonwealth's preoccupations, both in seeking economic advance for the deprived of the earth, and in the crucially important matter of promoting liberty and justice in Southern Africa.

On the political level, the Commonwealth has been able to support those who seek racial justice in Rhodesia and Namibia, where the situation has been so radically transformed by the liberation of the former Portuguese territories. I have had discussions with the Presidents of Tanzania and Zambia, two nations most sorely affected by the long-drawn-out Rhodesian drama. I have met and talked with the President of Uganda, the OAU's current chairman, and with the Prime Minister of Mauritius, where the next OAU summit will be held. Britain, with its historic and constitutional concern for the area, is—I need hardly add—among our members.

In the field of economic relations, one journey I particularly valued was in December, when the President of Malawi invited me to the meeting at which ministers from ACP countries carried on the work of consolidating their association. One of my last functions as Foreign Minister of Guyana had been to chair the ministerial meeting in Georgetown at which ACP ministers resolved to maintain their unity during the implementation of the Lomé Convention. In Malawi—although I unfortunately fell sick—I was able to reaffirm the Commonwealth's commitment to the success of the Lomé experiment.

The Commonwealth is well placed to serve both the political and the economic interests of its members, in Africa as elsewhere. I am proud to be able to play a full part in that endeavour. ■

Interview by  
BARNEY TRENCH

# ZAÏRE 1976

Zaire covers an area nearly five times that of France and is one of the biggest countries in Africa. Its natural resources are vast and its economic development over the past 10 years has been considerable.

Nevertheless, Zaire is now facing economic difficulties. The chief causes of these are the fall in the world price of copper, exports of which play a big part in the Zaire economy, and the difficulty of transporting it owing to the cutting of the railway line between Shaba (the copper area) and the Angola ports at Benguela and Lobito. Now that the conflict in Angola is over, the taking-off point for a fresh phase of Zaire's economic development may lie in the future Zaire-Angola cooperation and the first signs of economic recovery in the industrial countries.

General Mobutu Sese Seko, President of the Zaire Republic, met the editor of the "Courier" in Kinshasa to talk about the present economic position in Zaire and its future potentialities.



## Interview with General Mobutu, President of the Republique of Zaïre

► *President Mobutu, you have now been at the head of your country for 10 years and your name has been given to a new doctrine, "Mobutuism", which is characterised by its emphasis on what is "authentically" Zairois. What are its main elements?*

— You have to think back to the position the country was in 10 years ago. We were in a state of utter confusion with the civil war, and nothing was working right. I should say that Mobutuism, when I came to power, was not a philosophy thought

out in advance, but something which developed through the country having no real ideology of its own. When Zaire became independent in 1960, we were in the middle of a tug-of-war between East and West. The cold war was at its height, and we were being pulled in four directions—two western and two communist. This was a time when the Russians and Chinese worked together, and they did us a good deal of damage. The same Cubans who are now in Angola came into Zaire with Che Guevara; and there was also the business world, the money world, the financial powers. In the end we'd had



enough, and that's why we thought things out afresh. What we said to ourselves was: "We don't want to import ready-made ideologies and philosophies. We must, of course, get the hang of what we learn from the outside world, because our basic training was after all from the West, but what we have to do is to rediscover ourselves and be Zairois. That is how Mobutuism grew from the idea of what was authentically Zairois. It is not the result of deep research but merely the expression of a necessity.

► *And no doubt also a way of bringing the country along towards development in a state of national unity?*

— Yes, Africa still suffers from the same old evils, one of which is tribalism. As we saw it, our job was to fight the tribalism, not the tribe as such, not the region but the regionalism. And in fact through authenticity in this form, we have cultivated good nationalism, by which I mean nationalism which is decentralised. It was no part of our wish to force people into forgetting their tribal origins; but no more did we wish to leave them too much to their own devices in a sort of confederation which would not stand up to events.

► *In such a huge country as Zaïre this must have been quite a job.*

— It was indeed; and in carrying it through, my responsibilities were very big. When people talk about Mobutuism they often talk as though it were a personality cult. In actual fact the unifying of a country, even with the present-day equipment—the aircraft, the radio and mass communications—was not as easy as all that. There were five years of civil war, five years when in every tribe there was something like one death in every family in the Republic. Besides, I had to travel a lot and put a lot of myself into the work. Each year I travelled something like 10 000 km from one end to another of the country.

► *As in most countries, 1974 was an economic turning point for Zaïre. It was the year of dearer fuel, cheaper raw materials in many cases, more expensive capital goods*



**Copper production at Lubumbashi**  
*Copper is worth two-thirds of Zaïre's exports.*

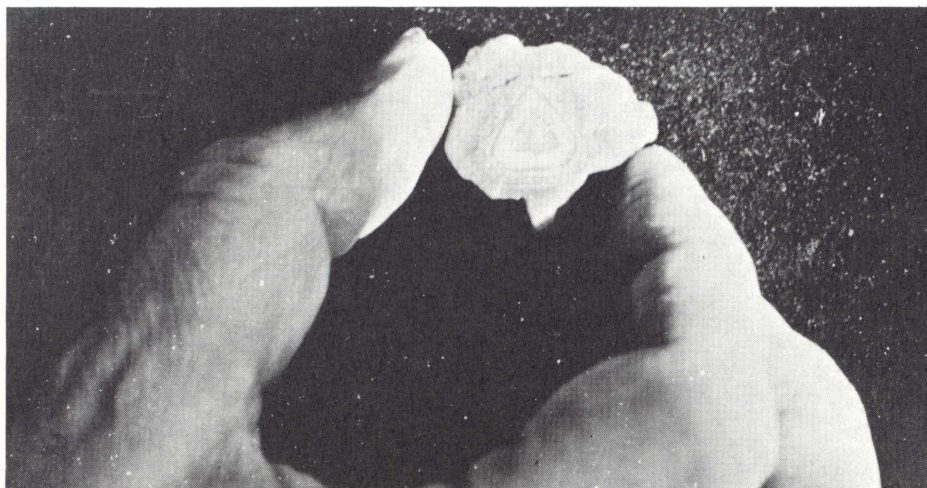
*and imported consumer goods. All this was happening concurrently, and it resulted in Zaïre's terms of trade deteriorating. What steps did Zaïre take to deal with the situation, based as it was on the international state of economic affairs?*

— I think Zaïre was the country which suffered most from this state of things, and with her, of course, Zambia. We produce many raw materials, and in 1975 almost every one of them was a falling market. Copper was not the only one. Others included tin, palm oil, cocoa, in fact everything which had in former days given us the protection of the law of averages. These were the times when, if something fell, something else rose and in the end there was some degree of balance. This time things worked differently. Everything fell in price; and added to this was the higher price we had to pay for oil and for the other goods we buy abroad. On top of this, especially for Zaïre and Zambia, there was the Angolan war. This was not the best moment to have a war on our very frontiers. Perhaps I ought to add a reminder that, though Zaïre is known as a seaboard country, 90% of its frontiers are land frontiers with other countries.

► *You have 37 km of coastline.*

— True, but in practice it only serves the western part of the country, the district known as Bas-Zaïre. For the rest of the country there is river transport, a lot of load-breaking, stretches of very difficult road and many other communications difficulties. What hit us worst, as you know, was the fact that the main mining area, Shaba, depends on the Benguela railway for more than 80% of its exports, so that the Angolan war meant 70% asphyxia for our economy for over a year. There had already been complaints that the price of copper was too low; but at least it had been possible to sell it. At present this is no longer true. The handicaps thrust upon us have been so great and export has become so difficult that the copper is practically unsaleable. Moreover, we are in arrears with our production programmes.

When I found myself confronted with such problems, I told myself great evils call for great remedies. That is why I set up the Stabilisation Committee. I am myself its chairman, and I have given it full powers. There are of course other organs of government, such as the political bureau and the executive council, but the Stabilisation Committee has been empowered to take



**Industrial diamonds**  
*Zaire is the world's biggest producer*

action at any time to seek solutions for the present crisis and eliminate most of the non-essential import trade. At the same time I set up a Production Committee, the task of which is to promote greater production, to take action in other fields and export as much as possible. We also took measures on the wages front, one of which has the effect of putting wages down. Through the Stabilisation Committee we have taken steps in many directions, some of which you will soon hear about, especially the results of our talks with the International Monetary Fund.

▶ *You have made a broad reference to Zaire's very important problem of mining and raw materials. The country is in fact the world's biggest producer of cobalt and industrial diamonds, the fifth largest of copper, the seventh of tin, and copper represents two-thirds of the value of all Zaire's exports. Since May 1974 prices have been falling seriously on account of the world recession. Do you think the recovery now beginning can be expected to bring us back to more normal prices?*

— Certainly. I should say at the outset that a statement of copper prices is brought to me every morning and every evening. We are very optimistic about the recovery, but it will be a slow one. For us 1976 is not going to be an easy year, and even 1977 will be difficult. We are expecting to see an improvement of about 20% in value over 1975, and it might even go further. We are now quite optimistic, because both in the West and in the world at large, one can feel the beginnings of a cer-

tain recovery. Moreover, the talks now in progress in the North-South conference, even though short-term results are not to be expected, are creating quite a good atmosphere.

▶ *With so much talk of energy, there are two figures worth remembering. Zaire has within its borders no less than 15% of the world's hydroelectric potential and 50% of that of the whole African continent. The central feature is the famous Inga complex and 1977 has been mentioned as the year for starting up Inga II and the interconnexion of the transmission system between Bas-Zaire and Shaba. How do these two projects stand?*

— Both are well advanced. Incidentally, Inga II will itself be a two-stage operation. It ranks as Inga II because Inga I came first, but there will be Inga II/I and Inga II/II. The former of these will be completed this year. Incidentally the people responsible for building the dam have already sent me an invitation for next June to see the filling of the inlet channel, which promises to be a very spectacular event.

▶ *So the work is ahead of schedule?*

— For Inga II that is certainly the case. The Inga-Shaba transmission line has been slightly delayed, but only by six months compared with the initial schedule. We think everything can be completed before the end of 1976, and certainly in 1977, for the line already runs far into the interior. As I expect you know, it is a line stretching for 1 800 km; and it is now getting into Shaba itself, and the pylons there

have already been erected. The remaining stage is to put up the transformer stations.

▶ *Then these projects are really doing well?*

— They are both essential and doing very well. Not only will Zaire be transformed, but so will Africa, and perhaps a good part of the world. Inga, as you know, is unequalled as a source of power. There is a 2 000 MW power station on the river Zambezi at Cabora Bassa in Mozambique, but the potential at Inga is over 40 000 MW. Now Cabora Bassa was built for the purpose of supplying South Africa and for practical purposes it is not possible to connect this up with Inga. There was indeed some difficulty in making the connexion between Inga and Shaba, because of the existing connexion between Shaba and Zambia, and the fact that Zambia is connected with Rhodesia. It is possible for Rhodesia and Mozambique to be connected up very quickly. With everything which is now going on in Southern Africa, where political events follow one another at such a pace, I think the psychological problems which have been preventing these inter-connexions will soon disappear. Lastly, we ourselves may be the force which will change the structure of South Africa, because they will have to rely on power from us, and as a condition we shall require a change in their policy.

▶ *In November 1975 Zaire became an oil producer. What is the state of prospecting in this connexion, and what are the prospects for the present year and the years ahead?*

— We left it rather late before we started prospecting for oil. In fact we are quite big producers of raw materials and minerals, and Zaire became known as a geological marvel. Moreover, with the prospect of Inga, there was a tendency to argue that there was no problem about our internal energy requirements. With the oil crisis, however, we felt we should take action in this field, and we have carried our prospecting a long way.

▶ *In an area, incidentally, where there have already been some big oil strikes?*

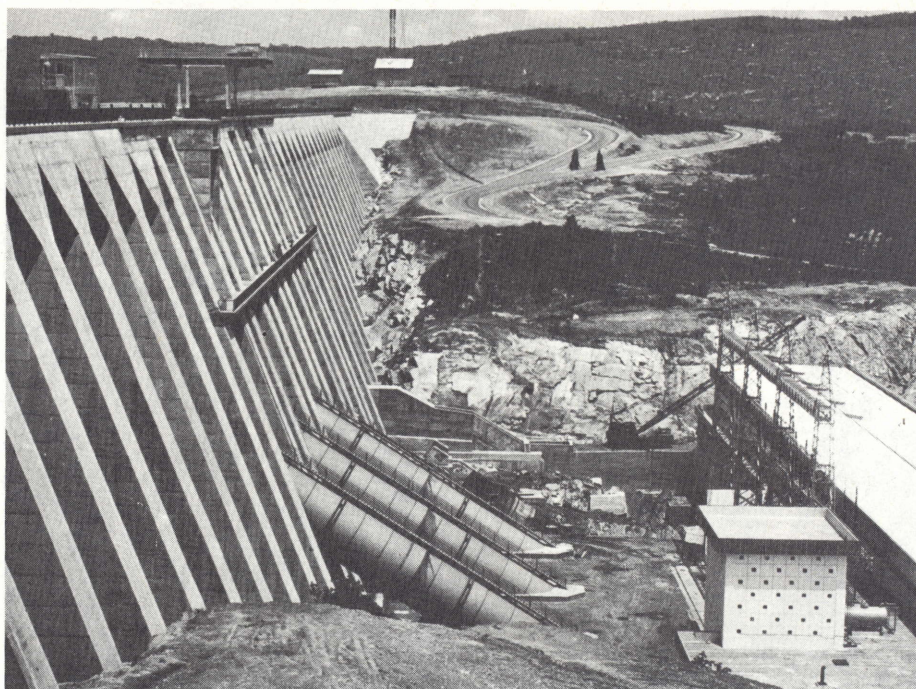
— Yes, that's true. Our present prospecting and production is offshore, looking rather as though it were a prolongation of →

the Cabinda and Angola oilfields. I am not saying that we have found big quantities of oil, but the prospecting still continues. You may be sure companies such as Gulf Oil do not commit themselves to such ventures unless there are good grounds for it. Up to the present everything looks to be going well; and in any case, in the first stages of the venture, we shall be covering our own consumption needs. In fact the production will be three or four times as much as we consume and that is itself rather a lot. Both on the coast and in the interior of the country, too, we have other prospecting in progress which promises very well.

▶ *Since the statement you made on November 30, 1973, we have seen the takeover by Zaïre nationals of the means of production which then existed in Zaïre. These measures are of obvious importance, both economically and politically. Would you tell us about the political objectives of "Zaïrisation" and "radicalisation"?*

— Various different words have been used, and economically they are unattractive. Both zaïrisation and radicalisation are summed up in a single act of philosophy on the economic side—the transfer of the Zaïre economy to the people of Zaïre. In the old colonial days Zaïre was a colony of economic exploitation and everything that was done came within the philosophy of the time. We cannot always be complaining about colonisation, and in any case it's over. What we have got to do is to adapt the economy of those days to what we think we should be doing now. On a number of occasions we have nationalised foreign properties and redistributed them to the Zaïrois, but as part of the policy we call stabilisation we also want foreigners to participate in the Zaïre economy.

It is our practice to talk about a "mixed economy"; but we are not thinking about a mixture of two, but of a mixture of three. We have to begin with the State of Zaïre, which is the driving force laying down the programme of action; for in any country there must be a programme coming from the State. It is the State which leads the economic system—or so we understand, for the old-style unbridled liberalism is over and done with. Secondly, private interests in Zaïre must be interested in the venture because, if everything is to be State controlled, we should end up by doing the job badly. Fundamentally State



#### Power

*Inga: building the world's biggest hydroelectric dam*

control is in practice an extension of the administration, and it is a short step from there to wastefulness. These are the mistakes the totalitarian countries have made, and they explain why the Soviets still have problems on the economic side, even though they have other successes in other fields. Thirdly, the projected venture must attract private business in other countries. We have found that the natural resources and the local labour is not everything. Over and above these factors we clearly need technology, capital and even markets, in the sense that these markets express a real reciprocity of interest.

▶ *Can we sum up by saying Zaïre is a country with a three-sided mixed economy where foreign capital is welcomed, provided it is invested for purposes laid down by the national authorities?*

— That is absolutely right, and it is a point on which we are very strict. When I say that what we really want is cooperation, I am talking about cooperation in the true sense of the word, which is to the advantage of all concerned. This is our present policy and it is a policy I have clearly defined. We are not thinking in terms of State totalitarianism. Nor are we thinking in terms of a laissez-faire policy governed by

the law of the jungle, and still less do we think we ought to say to the Zaïrois "do as you will, make your arrangements with anybody you like" without the State playing any part. Admittedly in matters of small importance the State does not intervene; but in businesses of medium size its participation is always very flexible, between 10% and 90%, or even up to 100%.

▶ *It seems that Zaïre has two main development centres—Shaba for mines and metallurgy and Bas-Zaïre and the Kinshasa regions for services and the processing industries. The two centres of course can and do lead the whole national economy along, in an induced development; but is there not a danger of imbalance between them and other parts of the country?*

— Yes indeed. This is a good question. To begin with, just after we had taken the country's destiny in hand, there was almost total concentration on Shaba, and there was thus a state of disequilibrium. Now that we are using and developing other natural resources, such as Inga, we have at least an axis which is one step better for the country. At the same time we have set up a new development area in the Upper Zaïre region at Kisangani. We have



**Brazzaville: February 25, 1976**

*A pledge of peace for Africa. Meeting of General Mobutu, Commandant Marien Ngouabi and Dr. Agostinho Neto, Presidents respectively of Zaïre, Congo and Angola*

already made big investments there, especially in textiles as it is close to the cotton-growing area. We also want to build a big dam for energy supplies in this region. The Shaba hydroelectric stations are on the river Zaïre, which does flow through Kisangani; but there are also important waterfalls in the region which could provide anything up to 1 000 MW. Moreover, we want to go further than this, for we are not out to set up over-centralised and rigidly defined development centres, but would rather create development areas. In Bas-Zaïre we have an 'industrialisation belt from the coast to Pamou, a distance of nearly 1 000 km. The development in this very extensive area is thus an attraction to the whole of Bas-Zaïre, to Bandoundou and as far as Kasai and the Equatorial Province. In the same way, the Kisangani development will have its secondary effects over the whole of the Kivu for agriculture, tourist development and other purposes.

► *There have been some reserves, not to say criticism, about the concentration of investment in the industrial and mining sectors. In the stabilisation plan put forward in September, 1975, it is stated that agriculture is the first priority. What are the targets in agriculture?*

— I should like first of all to answer objections which accuse us of granting too many favours to the mines, to industrialisation in general and the processing industries in particular. This is both true and untrue. The country has many resources which are there on the spot, and which we must bring into use. At this stage there is much more point in processing the cotton we produce ourselves than in setting up manufacturing industries to work on imported raw materials. In the future, if we should extend the copper industry into the manufacture of finished goods, this will be quite normal and natural, because we possess the energy which this production requires. If, even today, we should set up a steel industry based on electro-steel production, we have cheap electric power for the purpose and again everything is right and proper. It is a fact, nevertheless, that Zaïre has not yet made full use of its farming potential. It is often forgotten that the economic power of Zaïre does not depend solely on such things as industrial diamonds, cobalt, copper and energy. There is also the fact that we have a lot of water. The Amazon is the biggest river in the world but the river Zaïre, which is the second biggest, is the better balanced of the two, because it passes twice across the Equator. Everywhere in Zaïre there are so

many waterways that nobody has ever yet managed to count them. Even here the city of Kinshasa itself is full of little streams. In other words, Zaïre is the land of water, and water means greenery. Why else do you suppose our flag is green? The real wealth of a country lies in its soil, in its farming and therefore in its vegetation. And Zaïre is a land of forests; in unexploited forest land, we are second only to the Amazon forest, nearly half the forest land of Africa—47% to be precise—is in Zaïre.

Moreover there's plenty of scope for better farming. Our cattle population, for example, is scarcely a million head, whereas surveys show we could perfectly well raise this to 30 million head without having to take any special action. We are importers of maize, but we could in fact grow much more than we do, and the same applies to rice. In every branch of farming Zaïre has big possibilities. Its greatest potential wealth is most certainly its farmland.

► *Wouldn't it be a good idea to make a special effort with rice and maize? Consumption is big in both cases and both have to be imported?*

— The three priorities in our farm policy are cereals—which means rice and maize most of all—cattle raising and sugar. Regarding rice, we have agreements with the Chinese to the effect that by 1980 we shall be able to produce nearly four times as much as we consume. Our plans for sugar are also being set on foot with bilateral cooperation, and for maize we are acting in much the same way.

► *About a quarter of Zaïre's budget is spent on education. The percentage is high, but one finds the same thing in a number of other developing countries. It is quite clear that a young community which is developing and wants to go on developing needs a special effort in training courses, especially technical training. Does training take its place as a priority in the years ahead?*

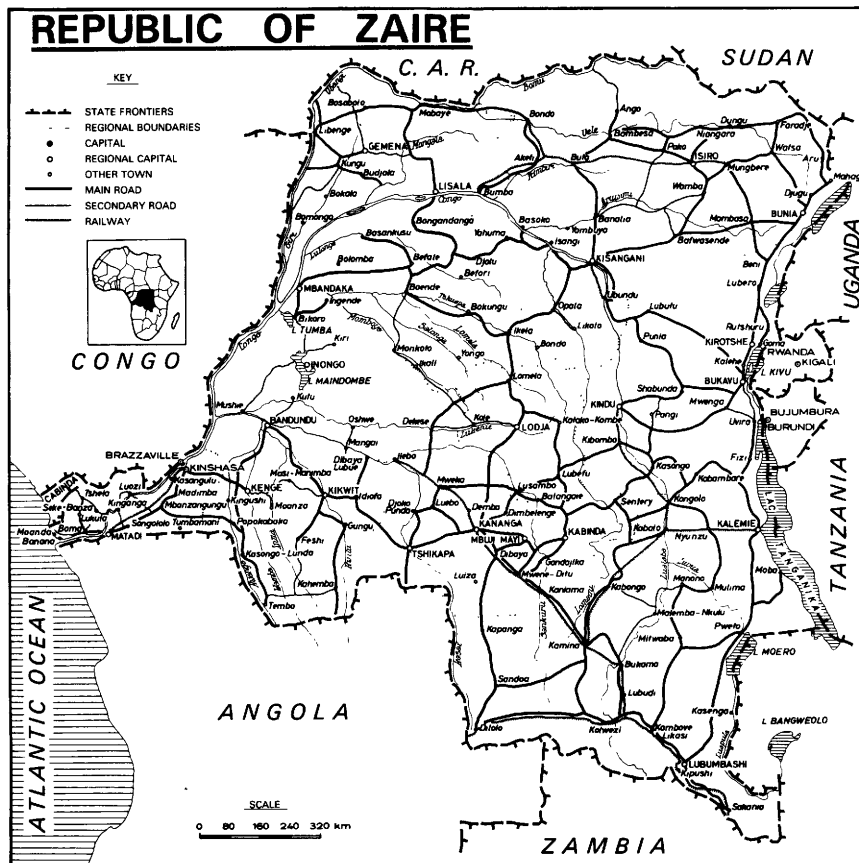
— Yes indeed. Training is the essence of development, even though its value as an investment usually escapes the calculations. We have made a number of reforms in our teaching system because of the im-

# ZAÏRE

The Republic of Zaïre, a former Belgian colony, has been independent since 1960. It owes its name to the river which runs across its territory from east to west, and its area of 2 345 000 sq. km, in the heart of the African continent, makes it the third biggest country in Africa, coming next after the Sudan and Algeria. It is a continental country with only 37 km of coastline on the Atlantic ocean and the 9 165 km of internal frontiers separate it from:

- the Cabinda enclave and the People's Republic of the Congo on the west;
- the Central African Republic and the Sudan on the north;
- Uganda, Rwanda, Burundi, Tanzania and Zambia on the east; and
- Angola on the south.

Zaïre has a number of remarkable geographical characteristics: it straddles the Equator; the river Zaïre is second only to the Amazon, with a flow of 40 000 cu.m. per second, while the length of the river basin (4 700 km) is the sixth largest in the world; there are countless lakes in all parts of the country, the biggest being Lake Tanganyika, which has a surface of 32 000 sq. m. and is 1 470 m. deep. The country has very considerable natural wealth in its minerals, its forests and its hydro-electric power. The main part of the country consists of an enormous wooded depression, covering an area of some 900 000 sq. km., drained by the river Zaïre and its tributaries, which form a network of 14 000 km. of inland waterways. The great central hollow is girdled by upland country, with plateaux at altitudes of 7 or 800 m. in the north; the Crystal Mountains (up to 1 000 m.) in the south-west and parallel with the Atlantic; the mountain ramparts of the Great Rift, where the lakes lie, rising to mean elevations of 2 or 3 000 m. with the Ruwenzori peaks at 5 000 m. and over; and a big area of steppe-plateaux in the south. The population was estimated at



24.84 m in 1975 and is divided into nine administrative regions, besides Kinshasa the capital, which has nearly 2 m inhabitants.

The climate is equatorial in the central hollow, tropical on either side of the central equatorial belt, temperate in the east and south-east, as in the plateaux of Kivu, Ituri and Shaba. With this diversity of climate Zaïre has a diversity of agriculture, the most important crops being coffee and palm oil. While the climate makes for diversity in farming, the wealth of the sub-soil makes the mining industry the most important economic sector. Apart from the socialist countries of the world, Zaïre is the biggest producer of cobalt and industrial diamonds, the fifth largest producer of copper, the seventh largest of tin, the eleventh of gold and twelfth of zinc. Mining and metallurgy account for a quarter of the gross internal product in 1973, with a total of 1 358 m Z. (1) at current prices; and more than 84% of the total value of exports in the same year and in which cop-

per (61% of the national total) is predominant. The effect on the Zaïre of the successive falls in the price of copper since the second half of 1974 is yet another instance of the need stabilising the receipts for raw material exports.

Zaïre began its career as an oil producer in November 1975, but its energy resources are not limited to the sub-soil. It has an enormous hydro-electric potential, estimated to be nearly 15% of the total available anywhere in the world. The production of hydro-electric energy has already called for big investments to equip the power stations Inga I and Inga II, where the cost price of electric power is exceptionally low.

Zaïre is a member of the Union of Central African States, the Organisation of African Unity (OAU) and an Associate of the EEC. ■

(1) Since the 40% devaluation on March 12, 1976, the Zaïre is no longer linked with the US dollar. The new parity is with 1 Special Drawing Right, or about \$US 1,17 on the date of the change of parity.

portance we attach to it. In the old days, for example, we used to have three universities—one Catholic, one State and one Protestant—following the Belgian pattern. Nowadays our system comprises quite a number of universities, but they all come under the same hat—they are all part of the “National University of Zaïre”, known as UNAZA. We have set them up all over the country, so that every region can have a university centre of its own, a seat of intellectual activity in the best sense, to help in the country’s development. Planning the teaching and education facilities is also one of our priorities.

► *What do you think about the aid your country has received from the EDF?*

— We specially appreciate the fact that the EDF seeks agreement with us about what aid it shall bring. We have priorities of our own; and we talk them over with the fund when one of its programming missions comes to Zaïre. The talks are a bit summary of course, because we are not the only country—there are 46 of us, and soon there may be many more. The atmosphere is very good and the EDF already knows a lot of our ideas about equipment, roads, energy, education, agriculture and so on. My view is that the things which have been done have been well done.

► *The Lomé Convention comes into operation on April 1, 1976. What do the Zaïre authorities think are the most important provisions?*

— The Lomé Convention goes much further than its two predecessors signed at Yaoundé. We ourselves have been associated from the first, and were therefore members both of Yaoundé I and Yaoundé II. There are two points in Lomé which we regard as outstandingly important. The first of these is the Stabex system for stabilising certain of the export receipts. Unfortunately the commodity with which we are most concerned is copper, not listed in Stabex; but maybe this will be put right some day.

The second point is the emphasis on industrialisation. Fundamentally this means technology transfers and investment. This

creates the feeling that the Lomé Convention has begun to give shape and form to the Eurafrika concept, for it gets us beyond aid and assistance and looks to a real community of interest.

► *Apart from Zaïre’s immediate difficulties, the country has some very good cards in its hand. Its equipment and economic infrastructure is well developed and it has an abundance and a variety of resources, only part of which have come into the commercial circuit as yet. Are you optimistic about your country’s economic future?*

Yes. This is a fundamental question and indeed I am confident about the future. Not only have we big resources, but also we have a big national market. I have undertaken to call an international meeting about the end of this year or the beginning of next, to discuss arrangements about the course of the river between Kinshasa and Matadi. This highlights an extraordinary state of things—for we shall be producing a huge quantity of energy at extremely competitive prices. This is far more than a normal advantage—and it makes us feel not only optimistic, but genuinely confident.

► *What role would you like Zaïre to play in the African regional planning of the future, and in the international set-up and the new world economic order currently being discussed in the North-South dialogue which began in December in Paris?*

— Zaïre is right in the middle of Africa, so that you see how central we are in regard to Africa’s problems. Moreover, it is laid down in our constitution that if we should give up any part of our national sovereignty, we must do so for the sake of African unity. For Africa’s regional development we are prepared to do everything in our power. This is why we have Central African meetings and others at the tripartite level—Zaïre, Rwanda, Burundi. Very soon there will be other tripartite meetings—Zambia, Angola, Zaïre—where we have other close affinities. There is already a West African Community and President Senghor would like it to extend as far as Zaïre. We are in all circumstances open to any advance in intra-African cooperation.

In Zaïre, you know, we believe very much in Africa. I think a great part of Africa shares our belief, and when you take a look at the negotiation of the Lomé Convention, you can see at once that the 46 countries were indeed acting in a spirit of close cooperation with Europe. Africa’s friendship for Europe is a reality. She has woovers on every side, but it is to Europe that she remains attached. Eurafrika is the expression of this, and should be a motive force in relations between the two continents.

As regards international relationships, what we want is justice. That is all. The theory of liberalism based on free competition cannot apply in its entirety except when you are competing on level terms. What we would like to see is a fixing of raw material prices on a sound basis. We are not asking for fancy prices, but only for stability and floor prices which are reasonable and do not have to be changed too often. We do not even want price-index adjustments. We believe all this can emerge from working together with real goodwill rather than through the confrontation of opposing standpoints. The part played by Europe in all this is at the very foundation. Admittedly the United States is a super power and Japan is ever present, but apart from the United States, Japan and Canada, the ten richest countries in practice are those of Europe. It is with the Europe of the Nine, with the Europe which is now being enlarged, that we are anxious to cooperate. We are reasonable people and reasonable countries. We know, as everybody knows, that there are demagogues among us, but it takes all sorts to make a world. We want to see a solution which is valid in itself, which will operate in the long term and can be re-examined and adjusted at regular intervals, and which in any case has its roots in fairness and justice. We have seen how, in this economic crisis which ought in theory to have affected everybody, it is we and not the developed countries who have suffered most. In many cases the industrial countries even improved their payments balances because the prices of raw materials fell and the prices of manufactured goods—their exports, for which it is they who fix the price—rose. All this is abnormal. Instead of waiting for a chance to fight it out in UNO, the better plan is to find for ourselves a solution which will be fair to everybody. ■

Interview by  
ALAIN LACROIX

## Development and the European and ACP trade unions

### EEC-ACP trade union cooperation: interview with J.D. Akumu, Secretary General of the Organisation of African Trade Union Unity



R. Heiderscheid

Trade unionists from ACP countries (Togo, Fiji, Barbados, Ghana) and Europe (France, Italy, Netherlands, West Germany, Denmark) recently met in Brussels to examine the possibilities of cooperating on economic development within and outside the Lomé Convention. At the meeting, organised by the Friedrich Ebert Stiftung with the participation of the EEC Commission, first steps were taken towards setting up a consultative mechanism between the trade union groups. Dennis Akumu, Secretary General of the Organisation of African Trade Union Unity, describes what is involved.

▶ *Mr. Akumu, would you tell us something about the OATUU?*

— The Organisation of African Trade Union Unity was founded in 1973 after nearly 15 years of search for unity by leading African trade unionists. This search involved many people and countries. It was difficult, because of a number of divisions — some ideological, even some religious — but on the tenth anniversary of the OAU in 1973 we were able to appeal to the trade unions to bury all their differences in the interests of Africa.

▶ *What is its structure and what does it do?*

— Basically, every country is supposed to accept one national trade union

centre. Unfortunately, there are still five or six countries which have a number of centres. We have achieved unity in Senegal, in Nigeria and possibly we will soon in Sierra Leone, Gambia and other countries. Each national centre is affiliated to us and has a seat in the general council. We coordinate activities with the OAU, the ILO, where we have consultative status and the UN Economic and Social Council, UNESCO and other institutions. We have been trying to standardise labour legislation throughout Africa.

We intervene when we think trade unions are being unfairly treated by governments and we represent them before African labour conferences every year, putting their case for better conditions and terms.



*At the EEC-ACP trade union conference (l. to r.): Heinz Vetter, Chairman of the European Confederation of Trade Unions (CES) and of the West German trade unions council, the DGB; Pierre Carlsen, Secretary-General of the CES; Nangbog Barnabo, Secretary-General of the Togo National Workers' Confederation; Peter Thelen, Brussels head of information for the Friedrich Ebert Stiftung; Klaus Wedel, Vice-director of the Friedrich Ebert Stiftung; and Frank Walcott, General Secretary of the Barbados Workers' Union*

► *How do you think trade unions can be involved in the implementation of the Lomé Convention?*

— The trade unions and other social institutions must be involved if the Lomé Convention is to achieve what it was set up to achieve which was to ensure that development filters down to the grass roots of the community. The only people who can definitely get in touch with the grass roots, the unemployed and so on, are the trade unions. In Africa today it could be said that we only represent 20 to 25% of the people, but we are the best organised and we speak for everybody.

How can we help in the implementation of Lomé? I think we should get consultative status by using articles 80 or 74 of the convention, and asking the Council of Ministers and the Consultative Assembly to create either an ad hoc or a special committee where trade unions from ACP countries and the EEC could discuss ways and means of implementing this. We also think that under industrial cooperation a special committee should be created where we could be represented. In the training area, we

know agreements have been signed but never followed up; we in the trade unions know how long training takes and what kind of training is needed and we feel we could play a leading part here. And in general, even as regards investments, we feel we are involved — because a minister will sign an agreement saying, we want a railway or a bridge or a dam, but he doesn't know whether the work will be labour intensive or capital intensive, whether or not it will generate employment — but the trade union on the spot knows. So if any institution should be actively involved in the implementation of the Lomé Convention it is the trade union.

► *What were the results of the joint ACP-EEC trade union meeting you have just attended in Brussels?*

— We are leaving happier than we came. We never expected it to be as good. It was more of a seminar, and we have drawn up certain conclusions which we are definitely going to use to lobby the ACP governments and to rally our affiliates. We hope our EEC counterparts will use them also to lobby the Eu-

ropean governments. We have done one important thing which has been difficult for the politicians and even the ambassadors to achieve: to get the trade unions — the strongest social institution outside governments in Europe — to declare that they fully support the implementation of the Lomé Convention in its entirety, and to agree that the Lomé Convention should be regarded as a step towards the new international economic order and that we call upon the UN proposals on the new order to be implemented. We think we are now in a position to demonstrate that our trade union counterparts in Europe genuinely agree we should implement the convention, and should phase out certain industries in favour of the ACP. This is a great achievement.

► *What kind of contact is being made between trade unions in Europe and in the ACP countries, and what do you see as the best way to set up a consultative mechanism under Lomé from the point of view of the institutions and the practical problems involved?*

— Trade unions in Europe and in the ACP have been in contact since they be-



gan; some of the European unions helped found unions in the ACP. But there are differences of approach, in that we have felt that the terms of trade were unfair to us, that apart from political colonialism there has been a remnant of economic colonialism, and we think Lomé and the new economic order are an attempt to correct this. We begin from there. For future contact, we have stipulated two formulae: in the long term, we hope that the negotiations to renew the Lomé Convention will specifically include trade unions and other such social institutions; it is sad that this has not been done. And until then, we want some interim measures. We have agreed on the set-up I have described. Outside the convention, we have agreed to periodical meetings and in fact we have already thought of holding a further consultative meeting in Africa, possibly in September, between the European and the ACP unions. We are already setting up a mechanism to investigate the areas where we can work together. We have agreed that we want to involve the ACP institutions that have similar aims to ours. We are getting together models of micro-projects that we want to put through our governments for EDF aid: these may not be very large or important, but they are what the local people see and they may be much more significant than the largest projects. And we have agreed that the European unions will get in touch with non-governmental organisations which have access to funds outside Lomé. We think this is also a considerable achievement.

▶ *A new international economic order means the adaptation not only of trade but of production and labour structures. There have been a few moves towards this in Europe, where the unions are sufficiently organised to promote this kind of adaptation. Would a joint ACP-EEC trade union grouping aim at changes at shop-floor level in the industrial countries, and if so, how would it go about this?*

— A joint approach would be good now that we are pressing for certain industries to be phased out in Europe and transferred to the ACP. In these cases, the workers would then be retrained. But we would not want to create unemployment in Europe. We think the European unions could look after the retrain-



R. Heiderscheid

#### Dennis Akumu with Barney Trench

*"We would not like to become 100% like the European trade unions, because some of them have become so much part of the establishment that they invest in the multinational corporations we are fighting"*

ing of workers in industries such as chocolates and textiles which get their raw materials from developing countries, and if we can do anything towards this together, so much the better. Back at home we may not have the same approach, because a chocolate factory, for instance, is highly mechanised, and we would have to change it to make it labour intensive.

▶ *Many non-governmental aid organisations give great importance to public information campaigns on development. Really to reach people in industrial countries, this sort of information might have to be made available in the schools and the factories. Do you see a joint ACP-EEC union organisation using the trade union structure in Europe to inform workers about development?*

— That is the big problem in Africa today: education and information. If a factory worker in Europe knew the conditions in which workers live in the ACP countries, his attitude would probably be different. At our next meeting I think we will definitively examine ways and means of popularising the problems we have in the ACP and publicising this meeting we have just had, so as to make Europeans more aware that we have the same objectives in common:

we aim to achieve better standards for workers, regardless of where they are.

▶ *Economic progress is never simply economic. It involves social change. In developing countries it can involve problems such as the displacement or separation of families, finding housing and schooling and so on. How could the unions help in the social framework of development?*

— This is a very serious problem. Except in a very few ACP countries, we are at a stage similar to the industrial revolution in Europe, where it is very difficult to mobilise labour without social problems; or else we have a sort of get-rich-quick capitalism which comes from the industrial countries and is more or less careless of social problems like pollution, for instance, and says, if you don't want us, we will go somewhere else; they then get concessions, and this aggravates the situation. This is a very serious problem; the unions are very concerned with this sort of social question, but there is nothing they can do immediately when we are faced with hunger and unemployment.

▶ *If you did succeed fairly soon in setting up a joint ACP-EEC trade union grouping of some sort, what would its first concerns be?*

— I think the first thing would be to ensure that three main lines of approach are really taken up. These are: to aim at a smooth transfer of industry that would not only benefit the multinationals but also the local people; to get support for micro-projects that would really filter down to the grass roots; and to agree on the type of training that would be best suited to these aims. And then we can play a very important role in determining what kind of worker participation there should be in these industries. There is a host of things we will discuss in the training field — exchange programmes, training our own trade union leaders, and so on. We have a long list of things to get on with.

▶ *Trade unions in Europe have had a long struggle for recognition and acceptance. How are the trade unions seen in Africa?*

— This is currently under discussion. It varies from country to country — there are some countries where trade unions are seen as threats to the government and are therefore constantly under surveillance. They are rarely at liberty and it is therefore a problem for us to harmonise them and persuade the governments that they can play an effective role in development. In other countries, they are accepted fully and the unions play a leading part in serving all the para-state bodies. There are a few countries where they are virtually in exile, and we are discussing this with the governments concerned. So we still have to iron out the problem of getting the unions fully accepted everywhere. Our role has been to harmonise trade unions with governments. But here we must also be careful, because in some countries this has been overdone, so that trade unions have become virtually absorbed by the governments and are crippled. This is not always so bad, because it means the workers are represented, at least. We would also not like to become 100% like the European trade unions, because some of them have become so much part of the establishment that they even invest in the multinational corporations we are fighting. Here again, we would like to be a little careful. ■

Interview by  
B.T.

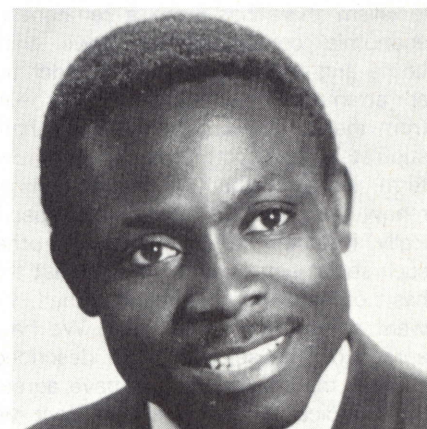
## The "Stabex" system

The "Stabex" system for guaranteeing the stabilisation of earnings from exports of commodities, as laid down in the Lomé Convention, is a landmark in the economic and commercial cooperation between industrial (EEC) and Third World countries (the 46 ACP signatories to the Lomé Convention). This is the first time any treaty or convention has specifically guaranteed the essential earning capacity of developing countries. The Stabex system is seen as one of the most convincing approaches to the negotiations for a new world economic order. It was a feature of the UN special session on raw materials in September 1975 in New York, and in the first discussions in the North-South conference in Paris.

How does it work? Basically, ACP countries depending on their exports of certain commodities can be compensated by the EEC if their revenue from those commodities falls below a certain reference level.

The Stabex list consists of 12 types of products, covering a total of 29 single commodities, which largely determine the export earnings of the ACP countries. The export receipts to which the stabilisation scheme applies must consist of items from the 12 main groups, exported by the ACP countries to the EEC market. This applies in every case except for five countries—Burundi, Ethiopia, Guinea-Bissau, Rwanda and Swaziland—which are to benefit from the guarantee irrespective of the destination of their exports.

The basic criterion in drawing up the list was the level of each ACP country's dependence on receipts from each of the Stabex articles, as a proportion of its total export earnings. The "threshold" level, above which Stabex can apply, is a percentage of total export receipts accounted for by one or more of the listed articles. The normal percentage taken is 7.5%; but for sisal it is 5% and for exports from the poorest ACP countries, or those which are landlocked or islands, the percentage is 2.5%. There are 34 countries in this class (Lomé Convention art. 24).



CARABIN

By LUCIEN PAGNI

### Reference level and reconstitution of the Stabex fund

The other criterion governing the application of the Stabex system is the reference level, which the ACP and the EEC work out for each ACP country and for each product. From this reference level the first compensatory financial transfers to any ACP country are calculated. It is computed as the average annual export receipts from sales into the EEC market of each of the products considered individually during the four preceding years. When the export receipts fall to the trigger-point for any individual product—i.e. the total is lower than the reference level by 7.5%, or in certain cases 2.5%—the country concerned has the right to ask for a transfer. These transfers are not charged interest, and the country which receives them may use the money in whatever way it wishes; but they are not made if the fall in export receipts is found to have been due to the fault of the ACP countries themselves, as might result from a discriminatory policy measure adversely affecting exports to the Community as such (Lomé Convention art. 19 para. 4). On the other hand a fall in the export receipts of an ACP country arising from action taken in virtue of world agreements (e.g. reduction of quotas) is not a pretext for non-intervention by Stabex. The ACP country which re-

ceives the transfer is nevertheless required (art. 20) "to inform the Commission each year of the use it has made of the funds transferred".

The reconstitution of the Stabex fund—repayment of the transfers—by the ACP countries when they enjoy better times was initially considered in the negotiations. This reconstitution, however, was not as easy as it sounds. Its machinery has been explained as follows by M. Jean-Claude Muller, head of the EEC "Stabilisation of export receipts" division:

"When it comes to reconstitution, we consider both the quantity element and the unit value element in the reference level. So if a country which received a transfer in year 1 produces at least as much in terms of quantity as the quantity reference level in the course of years 2, 3 or 4; and if the unit value is higher in a later year than in the reference period the country concerned should pay over to the Stabex system a sum resulting from multiplying the difference between the two quantities by the difference between the two unit values. There is of course an absolute limit to the reconstitution, in that the country will not be required to repay more than it received. In no case may a country be required to repay to the Stabex fund in respect of any product a sum exceeding what it has received in respect of that product in previous years".

M. Muller gives an example. It is based on a reference level for a specific ACP country of 10 000 in one year, i.e. the country has produced 100 units of quantity, multiplied by 100 units of value per unit produced. Suppose that the country received a Stabex transfer of 1 000 to compensate for a fall in export earnings in the previous year. Several things could happen from then on:

**Case 1.** The unit value rises to 120, but the quantity exported falls to 80. The export receipts are then  $120 \times 80 = 9\,600$ . The exporting country is entitled to ask for a further compensatory transfer.

**Case 2.** The unit value rises to 105 and the quantity exported remains at 100. The receipts are therefore  $105 \times 100 = 10\,500$ . In this case the country concerned will have to contribute

500 units of value to the reconstitution of the Stabex fund.

**Case 3.** The unit value reaches 120 and the quantity is still 100. We have export receipts of  $120 \times 100 = 12\,000$ . By comparison with the reference year, the country has earned a surplus of 2 000; but it will only have to repay 1 000 into the Stabex fund, i.e. the amount it previously received from the fund.

**Case 4.** The unit value is 100 and the quantity is 110, so that we have  $100 \times 110 = 11\,000$ . Here there has been no increase in the unit value and the exporting country will not be required to repay anything to Stabex.

As can be seen from these examples, the movement in the unit price of the product is the key factor for the reconstitution of the Stabex fund.

What happens if the money in the Stabex fund proves insufficient for all the applications for transfers during the Lomé Convention period? According to Jean-Claude Muller, the 375 m units of account making up the fund, and divided into five annual amounts of u.a.75 m, is a ceiling beyond which "it is not reasonable to suppose there will be any revision, unless, of course, the fund should be increased because of new members coming into the Convention". Nevertheless, if the problem were to arise, according to the head of the Stabex division, "the Commission, under Article 18 of the convention, would have to submit to the Council of the Convention a report on the situation, proposing the scaling down of applications for the year, in line with the total resources available for the same year".

### Strong and weak points of Stabex

There can be no doubt about the importance of the Stabex system for the future of ACP producers. Even if we think only in terms of the spirit of the convention, Stabex makes it clear that the negotiators—and Claude Cheysson most of all—were out to secure the guarantee for at least a minimum revenue to the producers of raw materials, whose incomes are most liable to suffer through the vagaries of production and the fluctuations of world markets.

This system of stabilising export receipts

is a very positive innovation in the relations between developed and developing countries. But it has nevertheless various weak points.

The first of these is that the 12 products covered are among those for which the development in ACP countries was linked to the requirements of the industries of the former colonial powers. In the present economic conditions of the EEC there is no longer any certainty that demand for these articles in the Community market will continue increasing. We thus see the possibility of markets and production fluctuating widely at the same time. Stabex is in effect an insurance scheme, and like others of the same type, cannot cover damage in excess of a certain total which, in this case, is U.A. 75 m p.a. for the 46 ACP. Moreover, there is nothing it can do to prevent the total damage exceeding U.A. 75 m. It follows that the progress scored by the ACP producers is still somewhat uncertain, because of the fluctuations of world markets which also affect the economies of Europe.

The second weakness is that the Stabex fund is made up of a fixed sum at present values. This means that the transfers will not be made in real terms. There will be a continuing loss for the ACP countries owing to the decline in the purchasing power of money, though this will put them at an advantage when it comes to reconstituting the fund.

The third and last objection is that Stabex will be channelling its efforts into the products listed for support, and may thus be an obstacle to diversification in the ACP countries.

Nevertheless, this system for stabilising the export receipts of ACP countries is a positive step forward towards new economic relationships, based on a smaller degree of inequality between those who supply the basic commodities and the industrial countries which buy them. Stabex is a product-by-product approach, and can thus be regarded as a necessary complement to the balance of payments approach, followed up to now by the International Monetary Fund. Moreover, the Stabex system is likely to grow and develop with the passing of time much more than the IMF approach. ■ L.P.

# Animal husbandry in the ACP

*Bororo cattle-raising in Niger*



Naud

The disastrous drought of recent years has focussed the world's attention on West Africa and more especially the Sudano-Sahel area, which is the country of the great cattle herds. This Dossier covers present conditions in the area. Two specialists give their views on present and future improvements and on approaches such as mixed farming and the more

extensive use of animal traction. The discussion, however, is not limited to this particular area. Central and East Africa are examined and the more basic question of whether there is a future for animal husbandry in developing countries in general is taken up.

A necessary note in this analysis was an assessment of the aid given by the EEC and mention of specific cases in which the EDF has intervened. The Dossier gives a number of examples, and it will be noted that most of the projects were concerned with raising beef cattle. They included the formation of ranches; facilities, such as cattle tracks, herd-pens and the vaccination corridors in Central Africa; cold-storage abattoirs at Bamako and Ouagadougou; the campaign to exterminate rinderpest in West and Central Africa; technical research centres, as at Kolda in Senegal; the school for veterinary helpers and assistant herdsmen at Niamey; and such projects as poultry-farming in Togo and even bee-keeping in Rwanda.

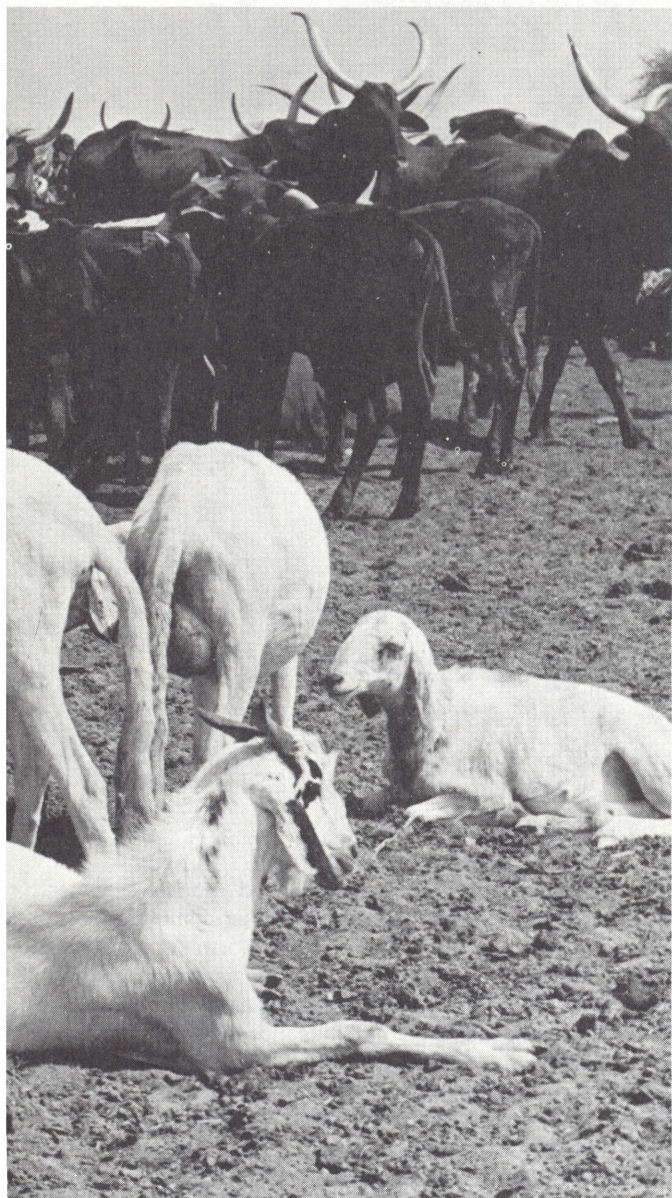
The Community has given emergency aid contributions for the Sahel countries, especially for reconstituting the herds. It is now anxious to provide aid on a broader scale for the livestock farming policies of the ACP countries themselves.

On the basis of past experiments in West Africa, many experts believe the future campaign should operate simultaneously in a number of directions. They include:

- transit facilities (cattle tracks);
- hygiene in reception areas;
- pastoral facilities;
- schools, dispensaries and other facilities for nomadic populations;
- development of combined arable and livestock farming.

Special mention must be made of the social aspects of a policy designed to transplant the cattle-raising industry which implies that nomadic herdsmen will become semi-settled.

A faster development of pastoral stock-raising is the only possible way of dealing with the growing demand for meat. It calls for a rationalisation of animal feedstuffs, by using sources of protein so far only kept for human food. This calls for bigger food crops to cover the substitution, involving irrigation, animal traction and other methods of raising the yields.





Neud

*Traditional stock-raising in Senegal*

## Is there a future for animal production in developing countries?

by Anthony SMITH (\*)

Domestic animals are not essential for mankind's survival and in fact man probably existed over five million years before he domesticated his first food animal, the sheep, 11 000 years ago. Although they are not essential for his survival domestic farm animals do add considerably to the quality of human life. They have provided man with a rich and varied diet, a source of power, and materials with which to make clothes.

It is often forgotten that domestic farm animals also com-

pete with man for food and serve as food modifiers rather than food producers. For example, it has been estimated that in high income areas of the world such as North America and Europe, the total grain consumption by animals is greater than the grain consumption by humans in India and China. Consequently, in the foreseeable future it is not unlikely that this competition between humans and domestic animals will result in fewer domestic animals being kept in the world. This development, if it occurs, may not be wholly undesirable because it can be argued that where this competition between man and domestic animals exists in developing countries, its effect is to turn poor man's food (grain) into rich man's food (meat, →

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**Table 1**

**Relative importance of four sources of animal protein in man's diet in different regions of the world**

Region	Daily per capita consumption animal protein (grammes)	Meat %	Milk %	Eggs %	Fish %
Far East	9.1	36	25	8	31
Africa	10.8	51	22	4	23
Near East	13.4	43	47	4	6
Latin America	23.4	56	32	4	8
Europe	41.6	44	40	7	9
North America	69.0	53	34	8	5
World	24.0	38	45	6	11

Source: FAO Yearbook 1968.

milk, eggs). Affluent people consume animal protein to satisfy their tastes rather than their nutritional requirements.

If it is assumed that an adult requires 65 grammes of protein a day, of which 10% should be of animal origin, it is clear that adequate supplies of animal protein are available in most parts of the world and that people in the developed world eat up to ten times more animal protein than they need to meet their basic nutritional needs (Table 1).

**Table 2**

**Yields of energy and protein per hectare by various domestic animals and crops**

	Energy (m.cal/ha <sup>2</sup> )	Protein (kg/ha <sup>2</sup> )
Sugar	60,000	—
Potatoes	24,000	420
Maize	25,000	480
Soya Beans	5,000	900
Dairy Cattle	2,500	115
Pigs	1,900	50
Laying Fowls	1,150	80
Broiler Fowls	1,100	92
Beef (intensive)	750	27

Adapted from W. Holmes 1971.

If affluent man could be persuaded to eat more plant products and less animal products, the earth should in theory be

able to feed a much larger population than at present, because field crops yield more energy and protein per hectare than do animals (Table 2).

**Table 3**

**Populations of farm animals, domestic poultry and humans in selected regions of the world (FAO 1970)**  
(in millions)

	Cattle	Buffalo	Ca-mels	Sheep	Goats	Pigs	Poul-try	Man	Total large ani-mals
Developing World	663	92	14	430	303	110	1698	1879	1612
Developed World	285	0.13	0.012	350	17	175	1603	745	827
Total World (*)	1150	124	15	1039	391	651	5637	3617	3370

Source: FAO Production Yearbook.

(\*) Includes figures for central economy (Communist) countries.

However, there is no guarantee that the effect of keeping fewer animals would be crop surpluses; a more likely effect would be a reduction of the acreage of cereals planted in developed countries because of surplus production and a fall in cereal prices. In any case the transport of grain from affluent areas to food deficit areas may in the long term be undesirable because it reduces the incentive for local farmers to produce food and undermines local marketing arrangements.

With the human population of the world increasing at a rate of 90 million a year, lack of land may eventually force man to reduce the domestic animal population, although, at present, land in many parts of the world is not a limiting resource. Population pressure has not yet forced farmers to reduce their herds and flocks on a global basis and FAO data indicates that the number of domestic farm livestock is increasing, although at a slower rate than the human population. At the present time there is approximately one large domestic farm animal (cattle, buffalo, camel, sheep, goat or pig) for each human on the earth and more of these animals are found in the developing than in the developed world (Table 3).

**Table 4**

**Regional production of some livestock products per head of animal population**  
Kg/product/head of livestock population

	Beef/Veal	Mutton/Lamb	Pork
USA/Canada	93	11	98
Latin America	36	3	16
Africa	15	3	29
Near East	17	4	12
Far East	4	4	24

Source Nestel 1974.



*Brahman cattle (Trinidad and Tobago)*

Unfortunately, in the developing world farm animals are not very productive and produce less usable livestock products per head than similar animals kept in developed countries (Table 4).

Part of this low animal productivity is due to the use of more extensive methods of production in developing countries than in developed countries, but part is due to poor management, low annual offtake determined by social considerations and unfavourable environmental conditions. For example, large areas of Africa are unsuitable for livestock production because they are either too dry or because of the presence of tsetse flies. In addition, on this continent livestock production is very much influenced by the traditional attitudes of cattle-owning people. Domestic animals, particularly cattle, are kept primarily for non-commercial reasons. They are used as a form of portable wealth, for bride wealth payments and in religious ceremonies. The annual offtake is low because large numbers of old and unproductive oxen are kept. Also the output from individual animals is low due to overstocking and overgrazing. However, although the annual output is small by Western standards, farm animals and birds constitute an important source of food (milk, meat, blood, eggs) for the livestock-owning people of Africa. The value of this food to these people is difficult to overstate because frequently animals are either kept on land that is too dry or too poor to be used for cropping or they are used to convert crop residues into valuable

human food. In addition, in certain areas of Africa, Pakistan and India, the dung which animals produce is the only fuel available for cooking food. Also work oxen and buffalo constitute a major power source for cultivation and transport and is unlikely that an alternative power source will be found in these areas in the short or medium term. Thus, although animals often compete with humans for available food, they can, when correctly managed, add materially to the nutrition and standard of life of people in developing countries.

Therefore it is likely that there will be a considerable future for certain types of animal production in developing countries, but unless a developing country has ample spare land and capital with which to grow fodder crops, the development of intensive dairy cattle, poultry and pig enterprises is difficult to justify. While these intensive enterprises supply high quality food to the comparatively wealthy people in the towns of developing countries, they tend to decrease rather than increase the total food supplies available because of the relatively inefficient utilisation of plants by animals. Before such units are developed, careful consideration must be given to their effect on the poorer people in the country concerned.

At present most animal production takes place in sub-humid and semi-arid regions and there is limited scope for development in these regions because they are often already fully stocked or overstocked. This overstocking problem could be



## The West African herds after the drought

by Jean TYC (\*)

reduced if the structure of the traditional herds was changed to contain fewer non-productive animals. One way of encouraging such a development is the establishment of intensive feeding units in 'disease free' zones such as the one established at Nakuru in Kenya. However, this type of development should only be encouraged when there is a surplus of food grains and if the period during which the livestock is intensively fed is short. These units provide herdsmen with an outlet for their non-productive stock (which may be turned into high quality beef for export), and providing they have a use for the money obtained (i.e. to pay school fees, herd tax or to buy consumer goods) they may be willing to sell cattle. If this happens, the grazing burden will be reduced and more land will be freed for productive breeding stock.

Once the overgrazing problem has been overcome the productivity of herds in semi-arid and sub-humid areas can be further increased by improvement of nutrition in the dry season. This can be achieved by the provision of cotton-seed or urea to encourage cattle and sheep to eat 'standing hay' in the dry months of the year.

The place of non-ruminant animals in the dry tropics is more difficult to justify than that of ruminants. In these areas scavenger flocks of poultry and herds of pigs are often preferable to intensive units because they provide extra food for villagers with little or no physical or financial inputs. However, in the case of pigs the extra human food produced may be accompanied by an increased risk of parasite infection.

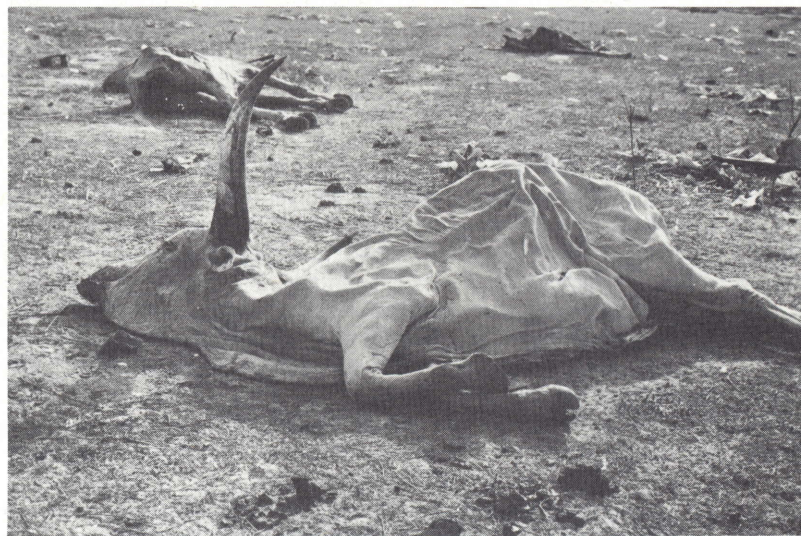
In the humid tropics there is, for a variety of reasons, less animal production than in the dry tropics. Consequently there is considerable scope for the development of animal production in rain forest areas. In particular there is scope for increased production of cattle, sheep and goats. This could be achieved either by allowing them to graze under tree crops such as oil palms or coconuts or by utilizing field and tree crop by-products. A further possibility is the production of high-yield crops such as sugar cane or cassava for livestock feeding. Such high-yield crops could also be used to feed non-ruminant animals such as pigs and poultry as well as cattle and sheep. The major obstacles to this development are disease (particularly trypanosomiasis in Africa), lack of transport and processing facilities, infertile soils and a dearth of farmers who are adequately trained in livestock production.

It is clear that the development of animal production in developing countries should not necessarily follow developments in the West, and in particular capital and energy intensive systems of animal production should be avoided. Attempts to change traditional systems should proceed with caution and lessons should be learnt from past mistakes. The developing world is littered with schemes aimed at improving animal production that have either, at best, been only partially successful or, at worst, been positively harmful, resulting in the disruption of traditional ways of life and in some cases the destruction of the environment by overgrazing. This does not mean that animal production should not be encouraged in developing countries, but it does mean that schemes aimed at increasing productivity should not slavishly follow systems developed in industrial countries. Systems should be developed that are fully integrated with crop production and should increase rather than decrease the total amount of food produced for human consumption. ■ A.S.

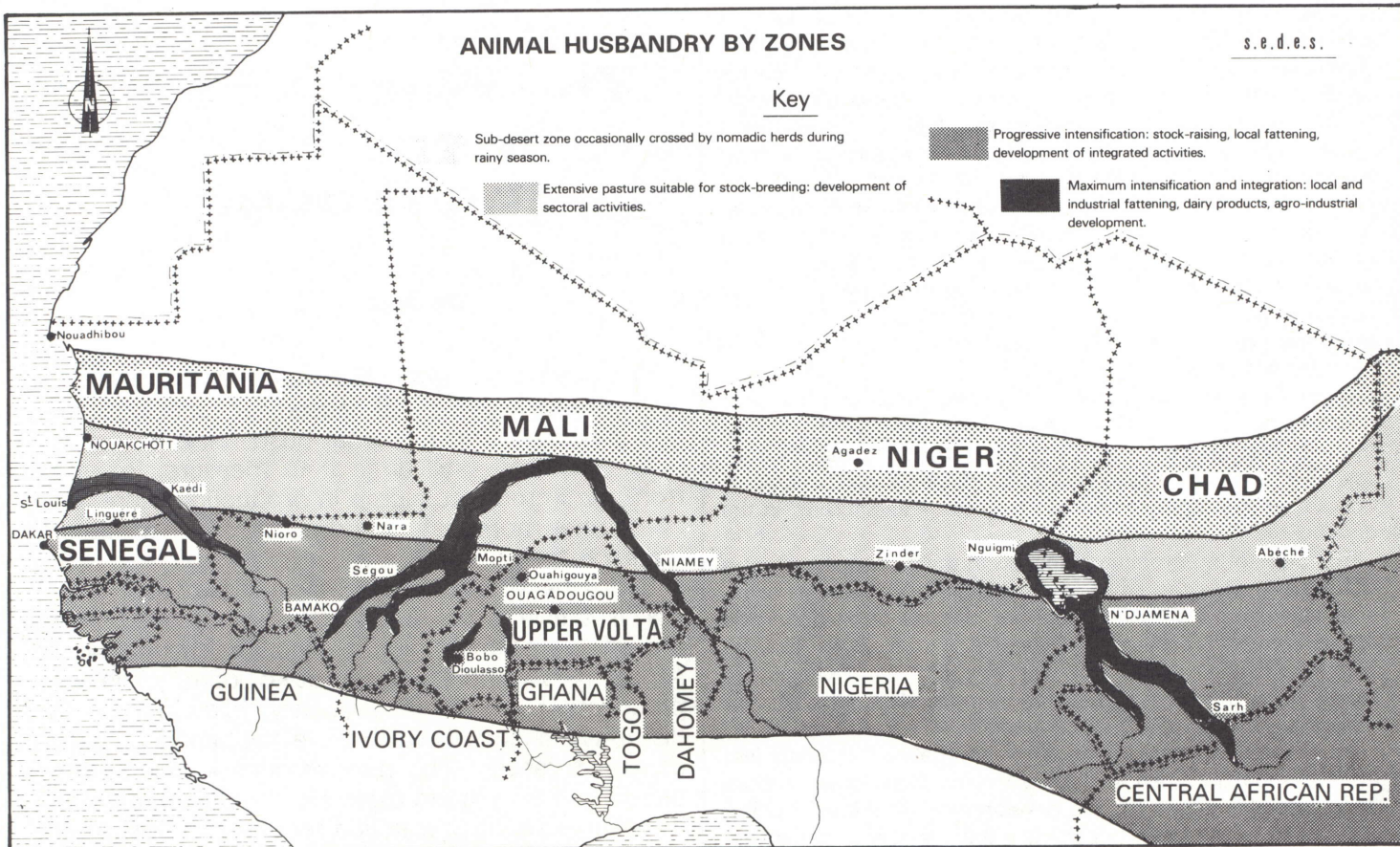
The recent drought which ravaged the Sahel for several years (1969-73) caused far-reaching changes in West African animal husbandry.

The impact is still difficult to measure, for apart from the immediate slump in production there have been other more lasting and perhaps irreversible effects, on the capital and other factors of production and on the way of life of the herdsmen.

This article is not intended as an assessment of the effects of the drought on animal husbandry in Africa. It is rather an attempt to identify the new prospects open to the industry, allowing for the disruptive changes which have happened or which can be foreseen. The new realities in animal husbandry are now quite clear. Herd reconstitution and the expansion of production require an effort of adjustment, both in planning and in action. After looking at the great varieties of different regional situations, the diagnosis must also make allowances for a number of new restraints and difficulties, many of which are common to all the countries concerned, in order to identify the main lines of development for animal husbandry in these countries.



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*Cattle map of West Africa*

## Regional differences

The six countries of the Sahel area — Mauritania, Senegal, Mali, Upper Volta, Niger and Chad — were not uniformly affected by the drought, and the herd losses were unevenly spread. In all the areas a lot of cattle died, but the death-toll was at its worst in areas where the Sahel (as opposed to Sudan) characteristics were dominant. Mauritania, Niger, eastern Mali and western Chad were particularly badly hit, while Senegal and Upper Volta, most of the territory of which is in the Sudanese area, were affected less catastrophically. The reasons were not entirely climatic, but owed a good deal to the big southern areas in both countries, in which large numbers of threatened cattle were able to find refuge, especially when these exceptional migrations were not left too late. This applied in Senegal, Upper Volta, central-southern Chad and western Mali.

The estimates of the losses are still only provisional and it is easy to see why, even in 1975, they differed considerably between one region and another. Thus:

- Western Mauritania will need more than 10 years to reconstitute the production potential it had before the drought;
- in Upper Volta, on the other hand, though the Sahel herd lost 40% of its cattle in three years, the fate of the Sudanese

and south Sudanese herds was much better and their numbers continued increasing through the drought period. Taking all the regions of Upper Volta together, the herd as it now stands is as big — at any rate in number — as it was estimated to be in 1970.

Broadly, the area falls into two main zones:

- first, the countries or regions of predominantly Sahelian character (Mauritania, Niger, western Chad and eastern Mali);
- and the countries with big Sudanese areas (Senegal, Upper Volta, central and southern Chad and western Mali), each of which has its own set of problems. The common characteristics of the two zones resulting from the drought can also be identified.

### Areas with predominantly Sahelian characteristics

Most of the animals died from hunger and not from thirst. The mortality resulted from the almost total lack of pasture, added to which there were already various diminution factors operating in this zone. These were:

- large-scale “de-stocking”, owing to many herd owners seeking to exchange their cattle for food products;
- two years of very low cattle births, owing to hunger, which meant the reproductive cycle could not function;
- southward migration of various degrees of permanence, often going beyond national frontiers.

For some proportion of the pastoral population, therefore, the drought resulted in a total loss of capital and production facilities, leading to the present problems of getting them back into the cattle business, or finding them something else to do.

Moreover, all the evidence suggest that the owners of the big nomadic herds were less afflicted than the small owners. In other words it was the smaller owners who suffered most. This point will be discussed further below.

In the herds which survived, there was a big change in the sex distribution. The males were allowed to go first and there is now an over-predominance of females.

## Sudanese regions

In these areas the consequences of the drought were in general more positive than negative. This assertion must of course be interpreted with some caution; for many of the problems present difficulties and are still unsolved. This is the more true for the fact that the search for solutions calls, in our view, for an overall rather than a partial approach, as is also the case in the Sahelian areas.

In the Sudanese zone the drought had three main effects:

The characteristics common to both areas are:

- First and foremost, there has been a complete change in the whole price system. For the first time the terms of trade have changed markedly in favour of the meat producers. This may be more than a transient feature, for the fall in productive capacity will doubtless continue well beyond the medium-term.
- Many producers, especially in the Sahel area, are turning over to supplementary foodstuffs. They now recognise the importance of these, not only to save their herds in the event of a disaster, but still more as a way of increasing the fecundity of their cows and avoiding loss of weight during the dry season.
- The third point is one of historic importance. In all the countries affected, decisions have been made to embark on hydro-agricultural development and the drought has made them irreversible. This involves, for example, the Senegal and Niger rivers and the Lake Chad basin; and it applies with equal force to food crops and to industrial crops. **Provided the necessary effort is made to promote livestock with arable farming**, the prospects are entirely new, and the consequences may be enormous. It is well known that from a hectare of irrigated

- the herds changed their location, so that the stock-raising area also changed;
- there were considerable changes in the structure of the herd;
- there was a notable fall in production, both in quantity and in quality.

There were three other changes:

- a large number of cattle changed hands. They were sold by Sahelian owners to farmers, merchants or civil servants;
- the local prices for cattle fell during the drought and rose sharply afterwards. The local farmers, who bought them cheap, are no longer so doubtful about keeping cattle as was formerly the case. The chief effect has been the considerable development in peasant cattle-raising, and a faster development in the use of draft animals;
- in the southern area, the number of cattle (Peuls) has risen and husbandry is increasingly taking the form of a semi-settled activity.

In Upper Volta the centre of gravity of the stock-raising industry has moved from the northern part of the country into the central and southern areas.

The changes which have taken place in the Sudanese zones are marked by increasing integration of stock-raising into the arable farms. An important threshold has been crossed in the turnover to conditions which will best suit meat production in West Africa.

But this is not the moment for hasty conclusions. Some of the factors are favourable, but this does not mean that all the problems of stock-raising have been solved. This applies especially to animal pathology, as sleeping sickness and the internal and external parasites are much more aggressive in the Sudanese zones than in the Sahel.

## Factors affecting both zones

cultivation — whether of rice and other food crops, or of sugar cane and other industrial crops — the yield in sub-products alone is 10 times greater than from a hectare of Sahel pasture land, without counting the intensive forage crops indispensable to a balanced rotation.

If these good results are to be attained, the projects must be designed with a view to the development of stock-raising as an integrated part of mixed farming, just as much as for the development of arable farming itself. Unfortunately this does not seem to be uniformly the case.

Emphasis will also be put on the proposal that each of the countries should be required to make **detailed progress reports**. The fundamental operation ought to be taken as a necessary preliminary to an adjustment of each country's stock-raising policy and the projects to be associated with it.

As part of the readjustment necessitated by the state of stock-raising after the drought, there are a number of points for consideration.

1. **The recent climatic disaster demonstrated the essential part played by species other than beef cattle (i.e. sheep, goats and camels).** Their present usefulness is to increase the



FAO Banoun/Caracciola

*Benin: a member of the Ayou agricultural club for young farmers takes cattle to pasture*

"drought resistance ratio" of the Sahel industry; and secondly, to provide an outlet for people who have lost all or most of their cattle. The reproduction/slaughtering cycle for small ruminants is appreciably faster than for cattle and this is at present the essential factor. The drought will at least have helped in calling attention to the economic value of small livestock, which had seldom in the past been the subject of any special study, either on the veterinary or breeding side.

## **2. The strategic reorientation of the projects must also allow for the changes which have taken place in the economic background of Sahel-Sudanese stock-raising.**

The meat scarcity has led to price rises which are in many instances bigger than the general price rise in industrial equipment and consumer goods. In some places (e.g. N'Djaména) the price of fattened cattle has risen four-fold in five years. A price upheaval on this scale adds to the profitability of some of the production operations, and brings new methods. The rise, in varying degrees of intensity, can be seen in the coastal consumption centres (e.g. Abidjan, Lomé, Lagos) and in the up-country centres (such as N'Djaména, Niamey and Mopti). Everywhere the rise in the price of cattle has been considerable and the current prices are between 2 1/2 and 3 times what they were in 1969-70.

The increase in prices appears, on a first analysis, to have been greater in the markets close to the production areas than at the points of consumption. This is helpful to the producers, who have suffered so much from the drought, and it is quite natural because the cost of bringing animals and meat to market has risen less steeply than the price of the animals themselves. Insofar as the price rises have effectively accrued to the producer (which seems to have happened in most cases) they should contribute towards the cost of reconstituting the herds

after the period of losses through which the producers passed, when prices fell with the drought and this was followed by the contraction of the herds.

A word may be said at this point about cattle export prohibitions. There is a danger that measures of this kind, enforced without discernment or discrimination, might have effects exactly contrary to what was intended. The export prohibition (or arbitrary taxation at the rate applicable to butchers' meat), if strictly applied, could not fail to check the rise in prices or even put it into reverse, and the first victims would be the stock-breeders.

The best way of reconstituting the herds is to keep the cows as long as they can reproduce and do everything possible to increase the number of calves they have. The breeder will not be able to act on these lines unless he has enough money for the purpose, and this can only accrue to him from high prices for the males he sends for slaughter.

## **3. High prices have checked the rise in meat consumption.**

The rise in family meat consumption in the towns, the only class on which there is information, has been halted everywhere, and in some cases there has been a fall. This confirms the very elastic relation between the consumption of meat and its price. Price targets and consumption forecasts, whether on the short term or the medium term, must be framed with some caution. In any forward calculations on the profitability of projects, account will have to be taken of the solvent demand, which differs considerably from the potential demand. Undue optimism about medium-term price levels should be avoided as household incomes have not risen fourfold in five years and the solvent demand will certainly tend to tail off.

On the west coast of Africa, the price of butchers' meat is at present close to the world market price or in some cases slightly higher. Several of the coastal countries which are big consumers have already gone to markets outside Africa to top up their supplies. Examples are Nigeria, Zaïre, Gabon and the Ivory Coast. In some cases they were able to obtain quota supplies of subsidised meat at low prices from the Common Market. This sets up a difficult competitive position for African meat. There is a danger that as the fall in world prices is probably connected with the general state of business, considerable price movements may well occur in an early future. Another point not to be forgotten is that when the coastal countries buy from their usual trading partners, there is a normal counterpart in the export trade; and reciprocity on these lines is much less certain when they import from Australia or South America.

## **4. The natural move towards mixed farming has not yet been taken up in the aid programmes.**

During the past 25 years, the development of stock-raising both in the Sahelian and the Sudanese zones has been considered very much on a single-industry basis. Work has mainly been done on countering infectious diseases and on pastoral water supply schemes. Animal husbandry and arable farming (essentially for industrial crops) were treated quite separately and for a long time the two types of farming were not regarded as complementary, nor were efforts made to bring them



*Bull calf of Goudali-Sokoto breed (Niger)*

together. A first form of integration, still far from complete, came with the development of animal traction; but though the ox contributed his pulling power, he did not in the early stages get much in return. Nevertheless, though there were a few disappointments, it can now be claimed that in many cases the development of animal traction has been a success.

Mali is the most spectacular example. In 1955-60 there were only a few hundred teams, but the number has now risen to 150 000 yoke of oxen (i.e. 300 000 head) and animal traction is now the biggest primary consumer of young oxen. In southern Chad things have been happening on the same scale, and there are almost daily reports of similar successes elsewhere. All this is more than just a good beginning.

In many cases, too, animal traction leads on to local fathening by the peasants, another promising form of integration of animal husbandry into rural development. The local fathening may or may not be linked with animal traction, but it is in itself a very productive system of stock-raising, well adapted to conditions in the Sudanese zone and valuable both for family farming and in the general economy of the herd.

The use of draft oxen properly understood is an excellent form of small-scale stock-raising. The buying of young beasts is not an undue strain for the peasant, and provided he does not overwork them under the yoke and limits their working life to, say, three years, he can be quite sure of selling them for a lot more than he paid. He must of course give them the extra food, the mineral supplement and the veterinary attention which is needed in any case for their working capacity, and his profit will also depend on the care bestowed on them in the final phase, when they will be resting in green pastures in the best season, and intensively fed with a basis of secondary products, until the dry season comes and it is time for the abattoir.

On the other hand, the desire to promote mixed farming must not be allowed to degenerate into the "fermette" or semi-amateur pattern on European lines, in which each peasant will have a head or two of reproductive cattle and would be growing a bit of everything. This kind of thing would fit very badly into the realities of Sudanese peasant life. There will have to be other approaches, which would include the →

farmers being supplied with the animals they need by "specialist suppliers". The stock-raising industry, whether in the Sahelian or the Sudanese zone, could then be on two levels, each completing the other. On the one hand would be the "specialist suppliers" and on the other the peasant, the former supplying the animals which it would be the peasant's task to use and eventually turn into money.

There are quite a number of agricultural development schemes in progress or on the drawing board, variously described as "development of virgin soil", or "improvement schemes for areas cleared of onchocercosis" or "hydro-agricultural improvement schemes along the great rivers". All such schemes for laying out agricultural land must be handled with a view to the problems of mixed farming, and not solely for the crop-planning or the sub-division of the land for specific uses. It is often found that such land allocation schemes, based on soil and water potentialities, often lead to the livestock farmers being left with the poorest land. This is a serious mistake. In many cases, it is true, livestock farming is the only branch of agriculture which can do any good with the poorer soil, but it cannot make do with this and nothing else. In fact, the herds of the area itself (and not those of the northern areas) must use these pastures at the times when their value is greatest which is, of course, in the rainy season. For the dry season the food available for them must be not only the forage of rich fallows and the sub-products of well irrigated land, but also the intensively grown forage crops.

Now that livestock products have become a decisive development factor in west and central Africa, it would be a foolish paradox for a product with so good a future to be given only the poorest soil with no access to anything better.

##### **5. Mutual dependence of the Sahel pastoral zone, the Sudanese zone and the big improvement schemes.**

Despite the recent difficulties, the Sahel is still a pastoral area, and its role as a breeding ground has been reinforced by the drought. The organisation of the northern areas has got to be put in hand, but always bearing in mind that they are climatically vulnerable. In the first instance, therefore, proposals for settled husbandry must be on cautious lines, and the behaviour of the herds themselves may provide some guidance.

The big herds, as we have already noted, suffered less from the drought than the small family units (1). The better resistance of bigger herds was due to their owners having a stock of animals ready for market, so that they could easily raise some ready cash when they needed it. The small men, by contrast, had to sell out their whole herds, including their calves.

One of the factors underlying the vulnerability of Sahelian wide-area stock-raising is the smallness of the herds, which are seldom more than a tenth of the normal size for extensive cattle farming in other countries, and sometimes barely even

(1) Many people think the Sahel drovers are owners of immense herds of cattle. This is a mistake. The average size of a herd of beef cattle is much nearer to 40 than 500 head. The practice differs from country to country and from area to area; but one can take the herd-owner as having an average of about 30 head, while a wealthy owner would have perhaps 60 head.

a hundredth of this. There are too many centres of decision; tracks cannot be properly planned and administered; and should the need arise, orderly liquidation of stock is not possible.

Whatever the social difficulties, the target must be concentration. Production units have got to be bigger, either under single ownership or as collective herds, which would be socially preferable.

In 1971-72 the Sahel herds still had quite a high proportion of males, and the area seemed to have reached saturation. This was partly because the wide pastures were used by the herd-owners for doing their own fattening, with all the extra length of career which this implies. The ground was thus very fully occupied, but the productivity was low. Owing to the drought, the position has changed and the Sahel is again confirmed as a breeding ground. This is a specialist task, however, and calls for organisation downstream to provide reception facilities for fattening preparatory to slaughter.

The really important thing for getting the Sahelian zone properly organised is to rationalise the use made of its resources.

A suggestion under this head would be form definite pastoral units. These would consist of land areas, each of which would have a collection of water points and dependent pastures; and they would be allocated in due legal form to specific groups of herd-owners. The latter would have to be trained gradually to manage their own territory; **for if those concerned are not going to cooperate, it would be vain to expect conformity to a set of rules aimed at preserving and improving the Sahel potential.** For practical purposes this is an absolute condition.

##### **6. Specialisation on the breeding side necessarily implies a new structure for the price system.**

Before the drought the finished product cost more than the raw material. In other words the cost per kg for a young animal was lower than the corresponding price for a mature beast ready for slaughter. This is just the opposite of what happens in developed countries. When the system of production is fully worked out, and all the technical factors are under control, the productivity of the birth is still less than the productivity of the grazing, so that one may well pay more for the lean cattle than for the fat. The problem of putting a value on the lean cattle depends on a number of complex factors which differ from one country and from one area to another. They include the availability and price of concentrated animal feed, the general level of meat prices, the types of market within reach, the cost of transport and much else. What is quite certain is that the present selling prices for meat (beef, mutton or goat) would enable all kinds of graziers to buy lean stock at prices very close to the ultimate price of resale. Only two years ago this would not have been possible.

The most urgent problem is therefore to establish various structures for putting a value on young lean cattle.

Once this machinery is in existence, and the fattening techniques are fully understood, the price per kg for the lean animals will go ahead of the corresponding price for the animal ready for slaughter. This will make a fundamental change in the economic background for the Sahel breeding grounds. →



*Workshop for peasant cattle-fattening in Magaria region (Niger)*

## The main lines of development

Now that the drought is over, the **main lines** for the development of animal husbandry in the Sahelian-Sudanese area can be summarised as follows:

**In predominantly Sahelian areas.** Organisation of production in pastoral units, initially with strict supervision but developing towards real management and administration by the producers themselves. Such an organisation would be inconceivable without genuine allocation of the land parcels in favour of pastoral groups specified by name.

— Specialisation of the area on the breeding side, and maintenance of the cattle population at a level compatible with the available forage resources. Formation of seasonal forage stocks.

— Health hygiene, zootechnical and subsequently genetic action affecting all the different species, including sheep, goats and camels which have proved their usefulness in hard times, and are a permanent insurance factor for maintaining the resistance to drought.

— Better marketing facilities, especially for young animals, so as to facilitate early liquidations. Guarantee to herd-owners of basic supplies (e.g. of cereals, medicine and mineral salts) at stable prices.

**In predominantly Sudanese areas.** Territorial improvement providing for animal husbandry as a prosperous branch of farming.

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- Replacement of unduly extensive planning by programmes aimed at intensification.
- Setting up machinery for working on the products from the Sahelian zone, by further grazing and intensive fattening. This needs special attention to the encouragement of peasant activities, since a more industrial approach is only possible if it is fully coordinated with the other stages of the process.
- Research and development on other types of Sudanese livestock — sheep, goats, pigs and poultry. Development of animal traction and maximum use of this to promote peasant feeding.
- Local processing of all available farming by-products, either at the farm or on local industrial lines.
- Supervision of the price system and better information about it.

**In favour.** The recent drought caused big losses and the Sahelian herd-owners suffered the worst damage, which was often catastrophic. This phase of hard times, nevertheless, may have good effects on animal husbandry. Some of these have been mentioned above and below is a brief summary:

- smaller numbers of cattle in the Sahelian zone proper, should facilitate the turnover to a less disordered production system;
- the collapse in production has led to radical changes in the systems of cattle and meat prices;
- many herd-owners now appreciate the value of supplementary animal feed in the dry season;
- the economic attraction of animal husbandry in the Sudanese zone (and even the Sudanese-Guinean) has become materially stronger. This applies at every level, from government offices down to the basic producer.
- the renewed incentive to work on the big hydro-agricultural improvement schemes should have major repercussions on meat and dairy production.

**Against.** The encouraging factors above suggest ambitious targets for animal husbandry in the Sahel-Sudan area. Such targets cannot be attained if various obstacles are not removed or overcome.

The essential points are the following:

- Health protection against the main contagious diseases must be not only certain, but continuous. This is not the case at present. The budgets covering the operations of the departments concerned are notoriously weak, necessitating recourse to "project finance", which is by definition inconsistent with any idea of continuity. Moreover finance from a number of external sources is inimical to purely national approaches to the standardisation of material or unity of conception.
- Applied research is in arrears. This refers especially to the zootechnical side (e.g. supplementary feed, fattening techniques); to forage crops whether rain-dependent or irrigated; and to the essential task of promoting mixed arable-livestock farming (e.g. by working out rotation schemes, including a forage break, and the rational use of sub-products).
- The methods of supervising the herdsmen are still at square one. This is an essential field of action and everything has yet to be tested and put into shape. The discussion of land ownership problems is only just beginning.
- The Sudanese zone type of stock-raising, which is semi-

pastoral and semi-settled is still not widely known. Yet it is one of the major potentialities for a good part of the Sahel countries.

— Almost everywhere there is a lack of coordination. An example is in the pastoral hydraulic work. Too often it happens that the well is sunk or the water point created solely on the basis of hydro-geological data, without taking into account the forage capacity, which is the factor conditioning the use of the new facility by the pastoral populations concerned.

There are also two points which we regard as essential:

- It is absolutely necessary that development in this sector be planned strategically, for it is the indispensable foundation for a stricter programme organisation.
- An adequate number of supervisory and technical workers must be trained in the new tasks awaiting them. They must be capable not only of doing the veterinary work, but also of handling the production side. This calls for a thorough overhaul of teaching programmes at every level.

The action needed for getting over the obstacles and letting the favourable factors make themselves felt is by no means out of reach. It may of course take some time to handle on practical lines, with full allowance for the characters and characteristics of the population in the regions concerned. This makes it difficult to reconcile with the urgency which is the other main requirement.

The reconstitution of the herds will happen of itself and it will not wait. This makes it important to intervene without delay in the process of recovery, which must otherwise collide within a few years with the obstacles just described. These would arise from a certain insufficiency of understanding of the fundamental conditions affecting the action taken on the social, physical, technical, economic and other sides; and this is so obviously important, that it needs no further emphasis. In our view, nevertheless, it should be perfectly possible to reconcile the time requirement—e.g. for carrying out the necessary surveys for real background knowledge—with the urgency factor.

In any country or region, as soon as a real development strategy for animal husbandry has been laid down in clear terms, simple pilot operations can be quickly designed and provided with immediate finance from national or external sources. In most cases it will be a matter of using agricultural development structures which are already there, broadening them to include the animal husbandry which is to be put to the test.

The surveys and actions of wide scope, which are necessary for a longer-term programme, would then be prepared for and benefit from the earlier results obtained from the pilot operations.

The lines of action sketched in above would bring animal husbandry in the six Sahel countries of West Africa into a new phase of development, marked by decisive and continuous progress.

Now that we have seen the disastrous effects of a recurrent drought on the Sahelian-Sudanese herds in their fashioned organisation, it would be a paradox—indeed a tragedy—if we did not learn the obvious lesson, that all those concerned with animal husbandry as in other sectors, must acquire a proper mastery of the means of production. ■

J.T.





*Ox-drawn ploughing: new to much of Africa*

## Animal traction and stock-raising in the Sudano-Sahel zone

by Robert GRÉGOIRE

Climate is the limiting factor in agriculture, and it has always been the farmer's task to come to terms with it. This applies as much as anywhere south of the Sahara, and it is the rainfall which matters most. The different types of agriculture can be quite simply identified from the meteorological map by following the isohyetal lines, linking areas of equal rainfall.

### The ecological environment of the zone

Where the rainfall is less than 250 mm annually, there can be no question of cultivation. People in these areas must depend for survival on cattle, which are mobile and able to find grass wherever chance rainfall has let it grow. The human being thus became a nomad herdsman, and this is the general rule of life in the Sahel. There are a few exceptional places where there is permanent water apart from the violent but intermittent rains and this makes some degree of settlement reasonably possible. Examples are the oases at Tagant in Mauritania and Air in Niger.

With rainfall between 250 and 500 mm, traditional farming methods are possible but very unreliable. This can be no more than a supplement to an economic life still centered on the cattle, but the regularity of rainfall shortens the journeys which have to be made in search of pasture. Big areas of permanent surface

water, such as Lake Chad or the river Niger, can provide satisfactory grazing for herds in the dry season. This explains the partial settlement of populations in this Sudano-Sahel region.

Where the rainfall is more than 1 500 mm, its quantity and regularity is enough to produce abundant vegetation; but unfortunately the health of man and beast alike is endangered by parasites transmitted by the tse tse fly and the sand fly. It is here the herbaceous potential is highest, but the cattle tend to grow listless, and stock-raising is only possible by creating a rather artificial environment which calls for special cattle farming techniques.

Between these two extremes there are millions of hectares where there is adequate rainfall, though limited to a few months each year, enabling populations to settle and various types of agriculture to be developed in line with the local sub-ecology. The rainfall is still the determinant and is more important than the population or the quality of the soil.

Here we find populations in the process of settlement, such as the Peulhs at Verlo (Senegal) and others which have settled recently like the Ouassoulou Balé Peulhs in Mali; and skilled cultivators such as the Bambaras and the Senoufo in Mali. And here, too, are populations with strong farming traditions like the Serères in Senegal and the Bouzous in Niger, who have combined cultivation and animal husbandry and created real farming areas.

For the most part these types of cereal-based agriculture only use the cattle as a kind of insurance against bad years. The animals supply a little milk and some poor quality manure and can

tackle a few jobs like carrying loads or soil treading, but apart from this the herd's position on the farm is marginal. The herdsman will usually be somebody who has found his way into the settled farming community, who looks after the beasts and scrapes up the dung in exchange for gleaning rights after harvest. Exceptional cases have been found of cattle brought closer into the farming, pasturing in the fallows and tied up at night in the cornfields of tomorrow which they are so busily manuring.

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This has been the general framework for the development, when farming conditions were good, of the big cash crops, such as cotton and groundnuts. These crops are a source of profit for a whole world of farmers, intermediaries and traders, and thus indirectly for the State. They provide the principal income of the grower, and they have quickly caught the attention of public authorities who have made determined efforts to intensify their cultivation. Crop yields considered satisfactory in past decades, and obtained through long periods of fallow, are now regarded as inadequate by political and economic authorities and by farmers out to improve their standards of living. The farmer extended his cultivated area by diminishing his fallow land and the regeneration of his soil; and in doing so, he used animal traction to expand the scope of the human effort.

This was in fact an attack on a labour bottleneck. Without much attention being given to other kinds of farming, the light dry groundnut soils of Senegal had to be sown and the heavier grassland of Mali needed ploughing for groundnuts and cotton. The race for more planted area, solely motivated by profit, led to much ground becoming sterile. Intensification was judged wholly by the total tonnage of the crop and not by the yield per hectare, which was still no more than moderate.

In recent years this process has been speeded up by the growth in population. In the oldest and most populous of the farming areas, fallow land no longer exists. For the cattle this has had two consequences:

— though they represent the savings of the villages, of the farmers and of herdsmen in the process of becoming settled, the cattle have been driven away from the cropping areas and the mutual dependence broken.

— they are used for traction to enable more land to be cultivated today, and still more tomorrow, to cover the needs of increasing numbers of mouths to be fed, both in the village itself and in the towns, and to satisfy the aspirations of rural communities towards progress.

Another factor working in the same direction has been the planting out of alluvial plains, with irrigation and full water control. This makes cultivation possible through the dry season and keeps the herds away from their usual dry season pastures in the swamps, such as those at Oualo on the river Senegal, keeping them in their rainy season pastures by a network of artificial water points (e.g. Liptako N'Gourma in Upper Volta and the fallow desert in Senegal). The process has been encouraged, both technically and administratively, by the fact that animal husbandry and agriculture are in the hands of separate departments. The combination of all these factors is taking these regions further away each year from the mixed arable-livestock farming generally considered to be a rural balancing factor.

The only exceptions have been a few areas using animal traction, such as the rice-growing area in the central delta of the Niger, and still smaller areas where there is traditional grazing, such as at Touba Toul in Senegal.

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Five years of drought in the Sudano-Sahelian and Sahel have had an effect not unlike that of a photographic developer. They have provided a forceful, and sometimes tragic, picture to remind the sorcerer's apprentices of aid and other technicians that the ecological balance in these regions is very unstable. It has been made more so by heavy-handed intervention, concentrated in specific sectors, unduly successful in terms of men and machines, veterinarians and agronomists.

On the other hand, this drought period brought out the resistance capacity and its tendency to increase with the rainfall in the farming area between 500 mm and 1 500 mm annual rainfall, and with the level of animal traction in farm units where peasant grazing is practised. Moreover, though the crop yields during the drought were necessarily poor, the traditional grazing in this area saved the lives of many head of cattle, especially in Niger, when herdsmen saved their own lives and those of the beasts by leaving them behind.

We thus have the foundations of new relationships between the herdsmen and the farmers, embodied in a form of agriculture combining animal husbandry and cropping at farm level.

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The good effects of animal traction in Sudanese farming were in line with expectations. They were inherent in the technique itself, in which both the possibilities and the limitations are clear.

## The possibilities of animal traction

The useful part of the rainy season is from the first rain in which sowing is possible to the last which has a positive effect on crop productivity. In terms of rainfall this often corresponds with optimum satisfaction of the plant water requirements. The important thing, therefore, is to get the best advantage from it. In the working of heavy soil, such as the ricefields, soil preparation is the bottleneck and the work is done 10 times faster with oxen than with a hand plough. In light soil or rain-based cultivation, the ploughing facilitates the valuable accumulation of water in the ground, and in practice it is only possible by using draft animals, though these may be light ones, such as the donkey or horse. It is necessary to start sowing quickly, as soon as the first useful rainfall begins, and a horse-drawn sowing machine for groundnuts (for example) does the job five times as fast as can be done by hand.

The next important operation is to stem the competition between the sown crop and the grass, so that the former gets full advantage from the water in the soil. This is the point of the frequent hoeing and dressing, which again can be done 10 times faster by animal traction than by hand.

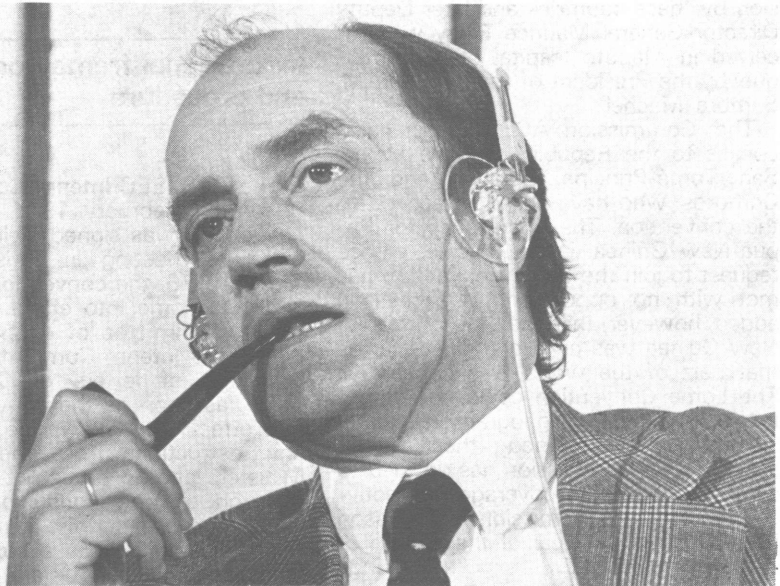
## THE LOMÉ CONVENTION

The ACP-EEC Lomé Convention, signed on 28 February 1975 in Togo, officially came into force on 1 April 1976.

Claude Cheysson, EEC development commissioner, held a press conference recently to explain the procedures involved in implementing the convention and in the prospects it offers. M. Cheysson first expressed his pleasure at the interest shown in the agreement by all the signatories—it had been ratified by the nine Member States of the Community and the 46 ACP States before 1 April—and went on to stress the importance of the programming missions in the ACP countries. This, he said, was the first time that high-level discussions on how the aid was to be used had taken place between the various partners in a cooperation agreement before it had actually come into effect. M. Cheysson pointed out that the aid provided under the Lomé Convention was distributed among the various ACP countries according to their level of development and potential wealth, and the poorest countries (24 in all) would, therefore, be the most favoured.

M. Cheysson was careful to emphasize that the ACP countries were completely free to decide how the aid should be distributed. He was, however, extremely satisfied at the priorities that the ACP countries had so far listed for the financial aid provided. He said that, on average, somewhere near 40% of all Community aid would go to the rural

## Entry into effect — 1 April 1976 Press conference by Claude Cheysson



*“Every black African State that is independent or that becomes independent has a vocation to join the Lomé Convention”*

sector, “which is quite remarkable”, as against the 9% or 10% of bilateral aid from Member States in the same sector. Some countries, like Burundi and Mali, are devoting as much as 60-65% of Community aid to agriculture and water supplies for agriculture. However, the land-locked countries (Upper Volta and Niger) are using a high percentage of aid (41-45%) to open up communications.

### Requests to accede to the Lomé Convention

As regards the “coherence” and “logic” of new signatories to the Lomé Convention, the development commissioner said the position of the African group of countries in the ACP, and that of the Community, was that any State that was independent or which gained its

The Republic of Equatorial Guinea, the Republic of Zambia and the Kingdom of Tonga were the last countries to ratify the Lomé Convention and forward the instruments of ratification to the general secretariat of the Council of the European Communities in Brussels. The ratification procedure of the convention between the 46 ACP States and the nine Member States of the Community is now complete.

A reminder: the Lomé Convention contains:

- Provisions on trade cooperation, with the aim of promoting trade between the EEC and ACP countries and opening Community markets to almost all ACP products.
- A section on export earnings from commodities, from the point of view of the stabilization of ACP export earnings.
- Provisions on sugar, enabling the ACP sugar-producing States to keep access to their traditional markets in the Community.

- A series of measures to bring about effective industrial cooperation.
- The implementation of financial and technical cooperation, involving more than 3000 m European units of account and intended to correct the structural imbalance in the various sectors of the economy of the ACP States.
- Provisions relating to establishment, services, payments and capital movements.
- Provisions on institutions.
- General and final provisions.

The convention is due to expire in five years from the date of signing, i.e. on 1 March 1980. There are plans for negotiations to look into the provisions which will afterwards cover relations between the Community and the Member States, on the one hand, and the ACP States on the other.

independence had a "vocation" to join the Lomé Convention. This, he said, everybody recognized—provided the ACP countries themselves recommended accession. This, M. Cheysson explained, was why the Commission had made it clear right from the start that Mozambique and Angola were welcome in the convention. Tanzanian President Julius Nyerere was the first to welcome accession by these countries and later Deputy Director-General Maurice Foley was received in Maputo (capital of Mozambique) by the President of the Republic, M. Samora Machel.

The Commission/ACP position also applies to the Republic of Cape Verde, San Tomé-Príncipe, Surinam and the Comoros, who have asked to accede to the convention. The same goes for Papua-New Guinea (in the Pacific) whose request to join the Lomé Convention has met with no opposition. M. Cheysson added, however, that the case of Papua-New Guinea was an exception as far as that part of the world was concerned. The Lomé Convention could not be extended without any geographical limits.

He also mentioned the Stabex scheme. The Commission has decided to extend Stabex fund coverage retroactively to 1975. Commissioner Cheysson feels that the first year of the system of stabilization of ACP export earnings should prove extremely interesting in view of the fact that it is a completely new system which has never been tried anywhere else.

M. Cheysson ended by repeating his conviction that cooperation was in the interests both of the peoples of Europe and of the ACP countries. He also spoke of the Community's responsibility in the search for peace in southern Africa.

L.P.

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## ● Getting the convention going

The Lomé Convention was signed on 28 February 1975 and came into effect on 1 April 1976, after being ratified by the 46 African, Caribbean and Pacific States and the nine EEC countries.

This period—necessary for the successful completion of the ratification procedure—was far from being lost time as far as relations between the Community and the ACP States were concerned. As early as 1 July 1975, the trade provisions of the convention were fully implemented, in anticipation. Similarly,

the provisions on sugar were applied in 1975. Moreover, the 14 months that have passed since the signing ceremony have only just been enough for the successful implementation of the various instruments of cooperation and of the institutional provisions of the convention.

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## Institutional framework and procedure

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The ACP/EEC Interim Committee, set up on 28 February 1975, the day the convention was signed, held its seventh and last meeting in Brussels on 29 March 1976, the convention itself being about to come into effect.

The **Committee of Ambassadors** replaced the Interim Committee set up by exchange of letters on 23 February 1975, as soon as the convention came into effect. Its task will be to carry out any instructions from the Council of Ministers and, in particular, to supervise the work of the various sub-committees. It will come under the joint Council of Ministers and will be a sort of permanent body for dialogue and cooperation.

The first annual meeting of the **Council of Ministers** is fixed for June and the ACP countries have proposed that it take place in Fiji from 1 to 12 June. It should be noted that the proceedings of the Council are only valid if half the members of the EEC Council, one member of the Commission and two-thirds of the accredited representatives of the ACP States are present (Article 70(3)). The Council has already drawn up its rules of procedure and will finalize its agenda—mainly dealing at policy level with a review both of the interim period and of the first two months of implementation of the convention, on the basis of a report from the Interim Committee (now the Committee of Ambassadors.) This examination will lead to the adoption of resolutions and/or recommendations and maybe to some decisions taken by joint agreement (in the cases provided for in the convention). One of the questions that will, in all probability, be submitted for discussion will be the applications to accede to the Lomé Convention. Independent countries whose formal application to accede has been favourably received by both the Community and the ACP States are: Cape Verde, San Tomé-Príncipe and Papua-New Guinea. Similar requests have also been received from overseas countries and territories, and territories on the way to independence—Surinam and the Comoros.

**The Consultative Assembly**, which meets at least once a year, is due to hold its first session in Luxembourg from 31 May to 4 June 1976. At a preparatory meeting in November 1975, draft rules of procedure were produced, mainly dealing with composition—two representatives per ACP State, i.e. 92 altogether, and an equal number of representatives of the European Parliament, giving a total membership of 184.

The chairman of the European Parliament, Georges Spénale, said how important this ACP-EEC meeting was and stressed that it was vital for this first meeting of the body set up by the convention—"the most modern expression of international solidarity today"—to succeed.

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The preparatory work has also involved setting up the bodies that the convention provided to deal with industrial cooperation so that, at its first meeting, the Council of Ministers will be able to decide on the composition and operating methods of the Committee on Industrial Cooperation and the Centre for Industrial Development.

The period of preparation has also given the two sides time to work out certain internal procedures and regulations. On the Community side, for example, this has meant that the financial regulations for the 4th EDF and the rules of procedure of the EDF Committee have been produced.

Finally, the Commission has appointed delegates in most of the ACP countries. These appointments must be approved by the countries in question.

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## Trade arrangements

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The trade arrangements were implemented in anticipation, on 1 July 1975. It should be remembered that these guarantee free access to Community markets for 99.2% of imports originating in the ACP countries.

The Lomé Convention does not force the ACP States to grant reciprocal treatment to EEC products. Each ACP State is therefore free to adopt or to retain a preferential system or to opt for a non-preferential scheme—provided, however, the EEC is accorded most-favoured-nation treatment and there is no discrimination between the various Member States. Most ACP countries, in fact, apply a non-preferential system, either →

because such a system was already in operation or because the preferential system which operated in favour of the United Kingdom or the Community was dropped.

### Special cases

— **Beef and veal.** Special measures for four beef and veal exporting countries (Botswana, Madagascar, Swaziland and Kenya) were introduced in July 1975. In spite of the entry into force of the safeguard clauses, these countries were guaranteed an import quota, with a 90% reduction on duties. This arrangement, initially introduced for 1975, has been extended for a further period of six months.

— **Rum.** Here again, implementation of the protocol on the import arrangements for rum led to a Community quota being fixed for the second half of 1975 and then for the first half of 1976. A similar system has been introduced for the overseas countries and territories (Council decision of 20 January 1976).

### Stabilization of export earnings

The technical preparation for implementing this new instrument was carried out particularly carefully. Statistical data will have to be collected regularly from both the ACP and the EEC countries if the system is to work properly.

**This system will apply, retroactively, to 1975** and any requests should have been sent in before 14 April so that the transfer agreements can be signed before the end of May.

### Special arrangements for sugar

The special arrangements laid down in the protocol on sugar (including a reciprocal commitment to buy and supply agreed quantities of sugar at a guaranteed minimum price) have been in application since 1975.

For the next year, initial consultation with the ACP States concerned took

place before the Commission transmitted its proposals on Community sugar prices to the Council. The decisions have been taken and the Council should now invite the Commission to negotiate with the ACP with a view to reaching agreement by May 1976.

### Financial and technical cooperation

Now the convention has come into effect, the funds provided for financial and technical cooperation can be allocated. The overall amount of financial aid to the ACP countries (EDF: 3000 million u.a. (1), including 375 million for Stabex; EIB: 390 million u.a.) is for the period to 1 March 1980 and will thus be spread over nearly four years.

The initial phase of financial and technical cooperation, in fact, got under way very soon after the convention was signed. The convention laid down that: "At the beginning of the period covered by this Convention, Community aid shall be programmed, in conjunction with each recipient State, in such a way that the latter can obtain as clear an idea as possible of the aid, in particular as regards the amount and terms it can expect during that period, and especially of specific objectives which this aid may meet. **This programme shall be drawn up on the basis of proposals made by each ACP State, in which it has fixed its objectives and priorities.** Projects or programmes already identified on an indicative basis may be the subject of a provisional timetable as regards preparation."

Missions consisting of representatives of the Commission and the European Investment Bank have already been to 35 ACP countries to carry out this programming and the last missions are due to go out in April/May. In most cases, a draft indicative programme has been drawn up. One thing emerges—priority is most commonly given to rural development projects which, on average, account for somewhere in the region of 40% of the total. Interest has also been shown in micro-projects—one of the new features of the Lomé Convention—and in regional projects (for which a maximum of 10% of the financial aid has been reserved). ■

(1) Value of the unit of account on 23 March 1976: \$1.22.

## ABEDIA

### Financing for six projects is approved

Khartoum (Sudan). The Arab Bank for Economic Development in Africa has agreed to finance the following projects:

**Zambia:** the Kitwe-Ndola highway: \$10 million; 4% interest over 25 years.

**Gambia:** Integrated rural development project: \$4 million; 2% interest over 25 years;

**Mali:** Sélingué dam: \$10 million; 2% interest over 25 years.

**Kenya:** Integrated rural development project: \$20 million, 4% interest over 25 years.

**Sierra Leone:** Electricity power station; \$5 million; 4% interest over 15 years.

**Rwanda:** Integrated rural development project; \$5 million; 2% interest over 25 years.

The fifth session of the ABEDIA is due to take place in Mauritius on 21 and 22 June, just before the summit conference of the Organization of African Unity. ■

## COUNCIL

### Food aid

The Council of Ministers of the Community has drawn up the 1975/76 implementation plan for commitments by the Community and the Member States under the food aid convention.

These commitments involve a total of 1 287 000 metric tons of cereals per year—of which 708 000 t (55%) will be provided as Community aid proper and the rest included in bilateral schemes.

Aid from the Community and the Member States will be sent to 38 countries and six international organizations. It will be distributed as follows: →

**Implementation Plan 1975/1976** (in '000 metric tons)

Recipient countries or organizations	Total	Community schemes	National schemes
<b>I. Countries</b>			
<b>Latin America</b>		token entry	—
Bolivia	12	9	3
Haiti	7	7	—
Honduras	3.5	2.5	1
Peru	—	—	—
<b>Sahel</b>			
Senegal	—	—	—
Mali	—	—	—
Mauritania	5	—	5
Chad	—	—	—
Niger	10	—	10
Upper Volta	—	—	—
Gambia	—	—	—
Special reserve	30	30	—
<b>East Africa</b>			
Ethiopia	21	—	21
Kenya	2.5	2.5	—
Mauritius	8	5	3
Somalia	46	25	21
Sudan	7	7	—
Tanzania	2	2	—
Rwanda	2.5	—	2.5
<b>West and Central Africa</b>			
Sao Tomé and Principe	1.5	1.5	—
Benin	1	1	—
Guinea Bissau	5	5	—
Cape Verde	6.5	5	1.5
Zaire	—	token entry	—
Central African Republic	1.5	1.5	—
<b>Middle East</b>			
Egypt	64	24	40
Jordan	14	14	—
Lebanon	8	—	8
Yemen	12	6	6
Syria	5.5	2.5	3
<b>Asia</b>			
Bangladesh	228.2	150	78.2
India	231	175	56
Indonesia	18	—	18
Pakistan	55	35	20
Sri Lanka	32	15	17
Philippines	6.5	2.5	4
<b>Other Countries</b>			
Malta	6.5	—	6.5
Tunisia	20	—	20
Portugal	5.59	—	5.59
<b>II. Organizations</b>			
WFP	123	50	84
UNICEF	17.5	15	2.5
UNRWA	31.5	25	6.5
ICRC	10	10	—
LRCS	5	5	—
UNHCR	5	—	5
<b>III. Reserve</b>	206.71	75	131.71
<b>IV. Total: Aid from the Community and the Member States = 1.287 millions metric tons</b>			

The Council has adopted the rules for the 1976 aid programme (milk products—supplies will be in the form of butteroil) in the various languages of the Community.

Supplies, amounting to a total 45 000 metric tons, are to be sent to 19 countries and five international organizations as follows:

Country or organization	Metric tons
<b>Latin America</b>	
Haiti	1 500
Honduras	1 000
Peru	500
<b>East Africa</b>	
Kenya	100
Mauritius	200
Tanzania	500
Somalia	1 100
Ethiopia	1 500
<b>West Africa</b>	
Cape Verde	100
Upper Volta	750
Mauritania	350
Guinea Bissau	350
<b>Middle East</b>	
Egypt	2 000
Jordan	1 000
Yemen	700
<b>Asia</b>	
Afghanistan	250
Bangladesh	4 300
Pakistan	3 500
Sri Lanka	160
WFP	16 000
UNICEF	2 400
UNRWA	3 400
LRCS	500
<b>Reserve</b>	3 640
<b>Grand Total</b>	<b>45 000</b>

The Council has adopted regulations covering the emergency aid operation for the populations of Angola and for Angolan refugees in Zaire. This aid involves 100 t of skimmed milk powder for Angola, to be delivered to the port of disembarkation via the ICRC, and 2000 t of cereals, 150 t of skimmed milk powder and 100 t of butteroil—including 50 t of skimmed milk powder to be sent by air, the other quantities being delivered to the port of disembarkation—to be sent to Angolan refugees in Zaire via the UNCHR.

## Aid for Guatemala and Cyprus

The Council has approved the provision of 500 000 u.a. Community aid for reconstruction in Guatemala, to be supplied via the LRCS.

This aid is in addition to an initial amount of emergency aid—200 000 u.a.—which the Community sent to Guatemala after the earthquake.

In view of the continuing need for aid, the Council has drawn up regulations on granting emergency food aid—via the UNHCR—for the people of Cyprus who were hit by the 1974 events. This will involve the Community supplying:

- 650 t of butteroil
- 10 000 t of cereals.

## Special aid to Zaire and Zambia

The EEC has agreed to grant special aid of the order of 25 million u.a. (\$30 million) to Zaire and Zambia in view of their being associated with the Community under the Lomé Convention. This is intended to enable these countries to cope with the difficulties caused by the events in Angola and the boycotting of Rhodesia.

The EEC has also decided to coordinate its bilateral aid to Angola and Mozambique—countries which have not so far acceded to the Lomé Convention.

## 200-mile economic maritime zones

The Council has discussed the problems facing the Community in the fisheries sector which would result from setting up the 200-mile economic zones proposed at the United Nations Conference on the Law of the Sea.

Within this framework, the Council has given particular attention to the provisions of the convention being drawn up by the Conference on the Law of the Sea, with a view to Community jurisdiction in the matter.

The Council has instructed the Committee of Permanent Representatives to actively continue with the work on problems of substance and asked the various delegations to give the appropriate instructions so that progress can be made in this respect.

## GATT: Community offer on tropical products

Acting on a proposal from the Commission and following completion of the procedures laid down by the Lomé Convention and the Association agreements

with Greece (which agreed to the offer planned in respect of raw tobacco under the terms of the Athens Agreement) and with Turkey, the Council has put forward the Community offer on tropical products as part of GATT, the multilateral trade negotiations. This offer involves both tariff concessions for a large number of products which fall within chapters 1-24 of the CCT and which are of

## MICHEL HAUSWIRTH

### the new Deputy Director-General for Development

Michel Hauswirth, an administrative officer at the French Ministry of Economic Affairs and Finance, has been appointed Deputy Director-General for Development at the Commission of the European Communities. He takes over from Jacques Ferlandi, whose departure was announced in the "Courier" of March/April 1976. M. Hauswirth will be in charge of coordinating programmes and projects, EDF finance and administration and the secretariat of the financing committee.

Michel Hauswirth, 54, is a law graduate, holds a higher degree in political economy and is an ex student of the Institute of Political Studies in Paris and the National School of Administration (where he was in the same year as Félix Eboué, a former governor of French Equatorial Africa). When he left the NSA, he was appointed administrative officer at the Ministry of Finance and Economic Affairs (Directorate-General for Taxation).

He was head of cabinet under François Bénard, the Under Secretary of State for atomic energy and, in 1960, moved to the cabinet of Valéry Giscard d'Estaing, who was then Secretary of State for Finance. He remained with him as head of mission and later as technical adviser when Giscard d'Estaing became Minister of Finance and Economic Affairs (1962-66).

He became technical adviser to the Debré cabinet at the Ministry of



J.C. Debaize - CCE

Economy and Finance (1966-68), then at the Ministry for Foreign Affairs in June and July 1968.

In September 1968, he was head of the directorate for relations and financing at the State Secretariat for Cooperation and then, from 1969-74, Director of Aid to Development for the French-speaking States of Africa (south of the Sahara), Madagascar and Mauritius. Since November 1974, he has been assigned by the Ministry for Economic Affairs and Finance to coordinate the work on adapting the monopoly of the SEITA (Service d'exploitation industrielle des tabacs et allumettes—the tobacco and match industrial exploitation department) to the demands of Common Market rulings.

In Michel Hauswirth we clearly have a top official well versed in economic and financial matters and with experience in the field of development to run and coordinate a vital sector of Community aid.

particular interest to the developing countries, and provisions on quantitative restrictions and will shortly be lodged with GATT in Geneva. The Community proposes that these concessions enter into effect on 1 January 1977.

By this decision, the Council met the commitments made in the ministerial statement in Tokyo when it undertook to treat tropical products as a special priority sector. Henceforward, the Community is in a position to take an active part in the negotiations for this type of product.

## Mediterranean policy

At its session of 5 and 6 April, the Council approved the result of the Commission's negotiations with the three Maghreb countries—Algeria, Morocco and Tunisia—on the conclusion of global cooperation agreements.

It was decided that the Council would sign these agreements, at ministerial level, in Tunis on 25, Algiers on 26 and Rabat on 27 April.

The Council has also produced a number of guidelines for the new financial commitments which the Community is proposing to make in respect of a number of Mediterranean countries. It has invited the Committee of Permanent Representatives to put forward specific policies based on these guidelines, particularly as regards distribution between the various recipient countries. ■

ment for a lime quarry in Tabligbo, near Lomé in Togo.

The loan has been granted to the CIMAO (Ciments de l'Afrique de l'Ouest—West African Cement Company), which was set up by an international treaty concluded in December 1975 between the Republics of Togo, the Ivory Coast and Ghana. These three countries each hold 30% of the capital.

The production capacity of the plant will be in the region of 1 200 000 t per year and the treaty provides for the three countries concerned to buy the whole output, which will be sold at a fixed price to clinker crushing plants in the various countries.

The overall cost of the CIMAO project—which also includes industrial investments that will be owned by the company, the railway, port and energy transport infrastructure involved in the exploitation of the clinker plant, all of which are to be financed by the Togo government—is estimated at CFAF 56 100 million (215 million u.a.).

This project, in which the production and marketing of commodities essential to the economic development of the three States concerned will be closely integrated, will create important new patterns of trade between them and is the first regional industrial achievement in West Africa. Togo, the least developed of the three States, will reap the greatest benefits, since the project will help improve the structure of the economy by providing new resources which are vital to the balance of trade and the balance of payments.

By making the best use of a local asset, Togo and its partners will make themselves less dependent on imports of clinker from the industrialized countries.

The loan—to be repaid over a 15-year period—is being granted by the EIB according to the provisions of Yaoundé II and as part of the transitional measures prior to the entry into force of the Lomé Convention.

Yaoundé II stipulated that the Bank could allocate a maximum of 90 million u.a. from its own resources for the financing of projects to help economic development in the signatory countries. With the granting of this last loan, the ceiling has been reached.

Another particular provision is that the World Bank, the Central Fund for Economic Cooperation, the Arab Bank for Economic Development in Africa and the CIMAO company itself will also contribute to the financing of the industrial side of the project.

This financing draws on the last of the Bank's resources for loans from its own funds under Yaoundé II (90 million u.a.). On 1 April, the Lomé Convention—providing EIB financing of a maximum of

390 million u.a. for the ACP countries—came into force.

## • Nickel production in New Caledonia

The EIB has also granted a loan of five million u.a. (approximately FF 26.1 million) to help finance extensions to the SLN (Société Métallurgique de Nickel) in New Caledonia.

The loan has been granted within the framework of decisions taken by the Council of Ministers of the EEC, on 29 December 1970, on the association of overseas countries and territories (OCT)—corresponding to the Yaoundé II Convention—and as part of the transitional measures introduced prior to the entry into effect of the Lomé Convention and the new decision on the OCT attached to it.

The CCCE (Caisse Centrale de Coopération Economique—the French central fund for economic cooperation) has been granted the loan at 9.5% over 12 years. It will be used for the partial financing of the FF 150 million loan that this body has granted for the project.

The CCCE is an official body with the job of helping to finance development in the French overseas countries and territories and in any Third World countries with which France has cooperation links.

The SLN is the second biggest producer of nickel in the western world, working a 170 000 hectare area in New Caledonia, a French overseas territory in the south Pacific. It has a factory producing the ferro-nickel products used in the iron and steel industry and coarse metal (nickel-rich sulphur mixtures) which is, for the most part, processed in the SLN factory in Le Havre in France.

New Caledonia's economy is highly dependent on its mineral resources. The project will help the SLN's production potential keep pace with the forecast increased demand for nickel between now and 1980.

## • 800 million u.a. for new EEC financial cooperation schemes in the Mediterranean

Brussels—The board of directors of the European Bank has said the EIB has approximately 800 million u.a. for new EEC financial cooperation schemes in the Mediterranean. This is in addition to →

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## EIB

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### Loan for an industrial project concerning Togo, the Ivory Coast and Ghana

The European Investment Bank has granted a loan worth 5 925 000 u.a. (some CFAF 1550 million) to help finance a clinker plant and provide equip-



the financing already decided upon for schemes outside the Community. The situation is as follows:

**1. Allocations already made:** Under the Lomé Convention, 390 million u.a. for the ACP countries and 10 Million for the OCT. Portugal (emergency scheme) 150 million. Algeria 70 million. Morocco 56 million. Tunisia 41 million. Malta 16 million. Total—733 million u.a.

**2. Commitments planned:** New financial protocols with Greece and Turkey. Protocol with Portugal. Possible protocols with Egypt, Jordan, Syria, Lebanon and Israel. Participation in the financing of projects of joint interest in Yugoslavia. Total possible commitments, 800 million u.a. ■

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## UNCTAD IV

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**Nairobi, 5-28 May**

Four years after Santiago the 4th UNCTAD Conference will take place in Nairobi, Kenya (5th to 28th May). These four years have witnessed a number of important developments in relations between developed and developing countries. At its 6th Special Session the UN adopted its Declaration of a New International Economic Order; a few months later the World Food Conference met in Rome; in March 1975 the 2nd UNIDO Conference adopted certain objectives on industrial development; in September the UN's 7th Special Session adopted Resolution 3362, and in January of this year the Conference on International Economic Cooperation opened in Paris. Much of the work undertaken by the UNCTAD Secretariat, e.g. on commodities, has been undertaken in response to the 6th and 7th Special Sessions of the UN General Assembly, and the preparations for the conference have been undertaken—on all sides—against the background of these other developments.

In addition to the evolution of the international debate the international economic situation has been the subject of considerable change. The OPEC countries quadrupled the price of oil, the exporting countries of other raw materials experienced at first a boom, and subsequently a decline in many commodity prices, and the Western countries entered their worst period of industrial

recession and monetary instability for several decades.

In order to focus the work of the 4th UNCTAD on a manageable list of subjects, the Secretary General has been selective in the issues included on the agenda. Foremost among these is the question of commodity trade, but the problems of indebtedness, of the further development of international trade, of the transfer of technology, and of co-operation not only between developing countries but between countries of different social systems will also figure large. The Group of 77 have elaborated their demands at some length in the Declaration and Programme of Action prepared in January/February in Manila, where the ACP were fully represented. The common front established by the Group of 77 (including the 46) has been maintained by 19 developing countries represented at the CIEC. There is general recognition on both sides that the dialogue being conducted in the CIEC and UNCTAD is the same, and that the two conferences must contribute to each other's work. The Member States of the Community are now wholly committed to this view.

It is against this background that the Community has been preparing the policies to be adopted at Nairobi. Whilst participating fully in the discussions in the CIEC it has worked in UNCTAD to achieve a constructive main Group B (1) position on the commodity question, and it will be responding to the ideas put forward by the 19 on this in the forthcoming meetings of the four Commissions of the CIEC towards the end of April. This will enable it to go to Nairobi with a clear position on the major elements involved. The Community's actions in the areas of trade relations, including general preferences, speak louder than any number of paper proposals, and it will be seeking in Nairobi to win acceptance for its approach to preferential methods in this field. It has already played a full part in elaborating the Group B position on the transfer of technology, and it will be trying to find a reasonable consensus with the Group of 77 which protects its fundamental principles. The Commission has put recommendations to the Council on the strategy which it believe should be adopted and in the weeks now remaining before the conference opens will be attempting to set out in greater detail

(1) Groups: A=all the African and Asian countries (but not Japan) plus Yugoslavia; B=all the industrialized countries with free market economies (Europe+Australia, Canada, the USA, Japan and New Zealand); C=Latin America+the Caribbean; D=USSR and the other socialist countries of East Europe. China is represented but does not belong to any group.

how it believes progress can be achieved on each one of the major elements in this strategy.

A.R.

### UNCTAD in brief

UNCTAD was established as an organ of the General Assembly of the United Nations Organization in December 1964 by Resolution 1995 (XIX). It is a worldwide organization in which 153 countries are represented. Its aim is to draw up a coordinated set of policies to be adopted by all governments with a view to speeding up the economic development of the developing countries. In working towards this goal, it deals with the whole series of measures introduced in both developed and developing countries which can affect trade and external payments and the economic progress of developing countries.

At the first session of the conference, held in Geneva from 23 March to 16 June 1964, it was recommended that the General Assembly make UNCTAD a permanent body. The second session was held in New Delhi in February/March 1968 and the third in Santiago in April/May 1972. The fourth conference is due to take place in Nairobi in May of this year.

Between conference sessions, UNCTAD's activities are run by the Trade and Development Board in collaboration with its various committees and other subsidiary bodies. The UNCTAD Secretariat is headed by Gamani Corea, the Secretary General. M. Corea (from Sri Lanka) took up his position in April 1974. His predecessors were Raúl Prebisch (1964-69) and Manuel Pérez Guerrero (1969-74).

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## CEAO

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### Passports for livestock?

On 16 to 18 March 1976, a sub-regional conference on "passports" for livestock and on cooperation in the field of animal health was held in Bamako. It was run by the Office communautaire du bétail et de la viande (OCBV—community cattle and meat office) of the

CEAO (Communauté Economique de l'Afrique de l'Ouest—the West African Economic Community). It was attended by representatives from the States belonging to the organization (Benin, Ivory Coast, Upper Volta, Mali, Mauritania, Niger, Senegal and Togo) and from Ghana, from all the inter-state health and livestock organizations and from the UDEAC (Union douanière et économique de l'Afrique centrale—Central African Customs and Economic Union), the CILSS (Comité Inter-Etat de lutte contre la sécheresse—Inter-State Committee to combat drought in the Sahel), the Liptako-Gourma integrated authority (involving Upper Volta, Mali and Niger) and aid organisations such as the UNDP and FAC.

The CEAO communiqué says that the livestock "passport" planned by the OCBV will be a written document to accompany herds on the move and will contain a certain number of details required by breeding services and statistical departments. It should make it possible to:

- control the state of health of exported animals so as to avoid spreading contagious diseases;
- ensure that both breeders and exporters respect the laws on animal health;
- calculate the rate of export of sub-regional livestock;
- organize better routes for the movement of livestock.

The second aim of the Bamako meeting was to decide on specific schemes for cooperation in the field of animal health. Cooperation in this field has deteriorated considerably since the various countries became independent. ■

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## ZAÏRE

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### Aims and programme of the Stabilization Committee

A communiqué from the Stabilization Committee provides details justifying the recent measures introduced by President Mobutu to bring the currency of Zaire into line with the SDR (see the interview with President Mobutu on pp. 6-11) and sets out the aims of the measures taken under the stabilization programme:

"The economic structure of Zaire has proved particularly sensitive to the com-

bined effects of recession and has been hard hit by world inflation. Imbalance has appeared:

- between the supply of and the demand for goods and services, with a resulting shortage of consumer goods;
- in public finances, where the deficit is becoming more structural in nature;
- in external payments—where the deterioration of the terms of trade and the increase in interest rates, combined with difficulties in selling export products, have had a considerable effect on our ability to make currency payments."

Over and above the redefinition of the currency, the stabilization programme lays down an austerity programme to reduce the budgetary deficit, a revision of credit, wages and price policies and a reduction of the balance of payments deficiency.

- The aim of pegging the currency of Zaire to the SDR is to ensure a transfer of resources to the export sector and to adjust public and private consumption, in real terms, to the supply of goods and services.

- The programme fixes a ceiling for State expenditure so as to limit the budgetary deficit. Severe restrictions have thus been imposed on expenditure involving actual currency and any non-priority expenditure has been reduced or cancelled. The 1976 budget is thus an austere one and only covers what is essential to keep the State machinery turning and to continue with any vital investments.

To keep down the amount of money in circulation, a ceiling has been fixed for the expansion of bank credit to both private individuals and firms.

- "The buying power of the working class will be protected by a 20% wage increase on 1 April."

- Agricultural production will be boosted by raising prices paid to the producer. A sub-committee on prices has been set up for this purpose. It includes representatives of the Stabilization Committee, the Department of National Economy, the Association of Zaire companies (AN-EZA) and the Union of Workers (UN-TRA).

- As far as external payments are concerned, the programme aims at the gradual reduction of the balance of payments deficit. Savings made by cutting down on State expenditure and any receipts from increased exports will go, as a matter of priority, to pay for imported supplies of essential goods such as food products, pharmaceuticals and spare parts and the raw materials needed to relaunch production.

"The programme's revision of the external debt policy aims at gradually covering short-term debts and organizing coordinated multilateral negotiations in respect of medium- and long-term

debts, with a view to reducing charges in 1976 and, if possible, in the coming years." ■

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## SAHEL

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### Founding an international club to combat drought in the Sahel

Dakar—A club of "Friends of the Sahel" has been set up in Dakar to help the eight member countries of the CILSS to wage long-term war on drought.

Its members are the rich countries of the OECD (Organization for Economic Cooperation and Development) and the CILSS (Permanent Inter-State Committee for Drought Control in the Sahel) countries—Cape Verde, Gambia, Upper Volta, Mali, Mauritania, Niger, Senegal and Chad, covering 27 million people.

Leopold Sedar Senghor, President of the Republic of Senegal, and Moktar Ould Daddah, President of the Islamic Republic of Mauritania, opened the club in the presence of a large number of political figures, including Jean de Lipkowski, the French Minister for Cooperation.

President Senghor's main pronouncement was in favour of founding a European/Arab/African association—of which he considered the Lomé Convention to be the first step—with a view to solving the problems of the African countries, particularly those of the Sahel.

"The complementary nature of our resources and cultures means that we must opt for mutual help and cooperation, without which it would be impossible to establish the new world economic order that we are hoping will be more human, more reasonable and more just", said the Senegalese Chief of State.

President Senghor also emphasized the fact that the African States had begun to reorganize their solidarity into sub-regional groups and this would make it easier both to have early warning of drought and to organize irrigation and a rational system of agriculture that would enable them to make double use of the land, and gradually to abolish the food shortfall in the region.

President Ould Daddah explained that 12% of regional and 25% of national projects had been completed in the Sahel anti-drought programmes. →

The Mauritanian President—the present chairman of the Inter-State Committee for Drought Control—said that if aid to the Sahel was to be effective, it should be combined with aid for national and regional projects. However, he stressed the need to work out a development strategy which would make the best use of natural and human resources so as to reduce the dependence of the Sahel economy on the hazards of climate.

The need for a fresh approach to international cooperation was also emphasized by M. Van Lanef, the Secretary-General of the OECD, in a statement in support of the Friends of the Sahel.

He concluded by saying that the OECD would help ensure the success of the club with the close cooperation of other international bodies, the United Nations and its specialized institutions in particular.

M. de Lipowski pledged France's support to the Friends of the Sahel, in the hope that the organization would retain its attitude of equality among members and its pleasant atmosphere, informed character and open-door approach.

Resources of land and water exist, as do technical solutions. They must now be adapted to new techniques and the weight of habits and outlooks overcome so as to bring about a psychological revolution and create conditions in which the zone can be developed, the minister said. He concluded that the accent in the Sahel must be on getting the best out of the land and on training its people.

## ● 100 000 dead in the Sahel drought 1968-74<sup>(1)</sup>

Dakar—While the "Club of Friends of the Sahel" was forming at a meeting here in April, experts both from within and outside Africa have been trying to define what Maurice J. Williams, the chairman of the OECD Development Aid Committee, calls "the new approach" to the drama of the Sahel countries.

The reports of recent years on this drama have provided enough information to estimate the consequences of the catastrophic drought from 1968-74 which hit the eight Sahel countries (Gambia, Upper Volta, Cape Verde, Mali, Mauritania, Niger, Senegal and Chad). One of the most instructive documents is the voluminous synthesis drawn up by Elliott Berg for the economic development research centre of the University of Michigan.

Mr. Berg makes the distinction between the irreversible consequences of the drought and those that can be attenuated. The first include the loss of life, the permanent physiological damage and the irreparable ecological changes. The second include the effects of the drought on agricultural production, on the livestock and on the level of economic activity of the countries involved and on their budgets and balances of payments.

The loss of human lives is generally put at 100 000, but the figure is contested and it is practically impossible to distinguish those who died of starvation from those whom malnutrition made vulnerable to illness at a time of epidemic diseases. A large number of under-fed children would appear to have suffered serious psychological illness, especially among the nomadic peoples such as the Tuaregs of Mali and Niger. There were many cases of kwashiorkor in southern Mali.

The most important irreversible ecological change has been the destruction of the top-soil, which has turned arable land to dust. Most of the vegetation has been seriously reduced in the majority of the Sahel States. In Senegal and Mauritania, for instance, thousands of acacias have been lost, ruining production of gum arabic.

### One third of the livestock lost

Since there is very little agreement on the counts made before 1968 as well as since 1974, the loss of livestock is one of the most strongly contested consequences of the drought. The general opinion is that one third of the livestock was wiped out in the Sahel, mainly in 1972-73. The herdsmen of the zone suffered all the greater loss as the drought also reduced their chances of reconstituting their livestock, particularly the sheep and goats.

Agricultural production fell off considerably, in particular between 1970-74. Cash crops such as groundnuts and cotton plummeted, especially in Senegal and Chad.

### The financial repercussions

Mr. Berg calculates that "the loss in agricultural production and in gross domestic product in 1973 seems to be of the order of 12-21%, an exceptionally severe loss for so poor a population". Agricultural production in Niger fell by 30% in 1974 compared with the previous year, as did the rice harvest in Chad. In general, 1974 is considered to have been worse for the Sahel countries than 1973. ■

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## ACP EMBASSIES

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The European Communities have approved the appointment by the Government of the Republic of Ghana of Kweku Bapruai Asante, Ambassador extraordinary and plenipotentiary, as head of that country's mission to the EEC, Euratom and the ECSC, to replace Eric Christopher Djamson.

The European Communities have approved the appointment by the Government of the Republic of Chad of Paul Ilimoko-Djel, Ambassador extraordinary and plenipotentiary, as head of that country's mission to the EEC, Euratom and the ECSC.

The European Communities have approved the appointment by the Government of Barbados of Cecil Beaumont Williams, OBE, Ambassador extraordinary and plenipotentiary, as head of that country's mission to the EEC, Euratom and the ECSC, to replace J. Cameron Tudor, CMG. ■

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## BRUSSELS TRADE FAIR

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As usual at the Brussels trade fair, the ACP stands are the big attraction. At this year's fair, the 49th, from April 24-May 9, 13 African ACP countries are represented. Newcomers Ghana and Mauritius have joined Benin, Burundi, the Central African Republic, the Congo, Mali, Mauritania, Niger, Rwanda, Senegal, Somalia and Upper Volta in putting on a vivid display that has literally brought a taste of the exotic to the fair's numerous visitors.

The tropical foods and craftwork are of high quality and cover a wide range, from deep-frozen fish and gum arabic to rugs and jewelry. The Congo is promoting timber and Mauritius has brought textiles, toys and flowers.

At a time when international trade is the subject of so many laborious conferences, the Brussels fair is a reminder of how simple trade is in principle—what is familiar in one country can be strange and delightful in another, and "tis distance lends enchantment to the view". ■ →

(1) From "Le Monde", April 1976.

## OECD

### More than 14 thousand million dollars worth of aid for the underdeveloped countries in 1976

Official aid from the most highly industrialized to the less developed countries should rise by 4.5% this year, in real terms, to some 14.4 thousand million dollars. This is the estimate just produced by the OECD's Development Assistance Committee which includes the main providers of aid. Official aid is aid granted directly to the less developed countries, on particularly favourable terms.

In spite of this increase, the rich countries' efforts will prove to be of much the same order as in the past since the percentage of their national product given in aid will only be 0.35% (as against 0.33% in 1974). It should be remembered that one of the aims was to bring aid up to 0.70% of the GNP.

Although as far as aid is concerned the United States is still in the lead with \$4 200 million, followed by France with \$2 100 million, one of the most interesting points is the remarkable increase in aid from Sweden, the Netherlands and Norway. Official aid from these countries will be in excess of 0.70% GNP (0.90% for Sweden, 0.79% for the Netherlands and 0.73% for Norway). Another group of countries—Australia, Belgium and Canada (due to give more than \$1 000 million) and New Zealand—will be increasing their aid. Aid from France will still be around 0.60% of GNP.

The best-off do not always make the best effort, paradoxically. The richest countries do not seem anxious to do more. Germany's contributions will therefore continue to drop to \$1 300 million, no more than 0.30% of German production. Japan's aid is going up but will not be more than 0.28% of its production. Aid from the USA will still be 0.25% of GNP. In a difficult study, of aid in and around the '80s, the OECD reveals that this year's trends should increase. In other words, a first group of countries including the Netherlands, Sweden and Norway should bring their aid to 1% of GNP. A second group of countries, of which France is one, should reach 0.7%. However, contributions from Germany, the United States and Japan would be something like 0.3% of GNP. Aid from the industrialized countries should, taking a medium estimate, total somewhere in the region of \$17 300 million, or 0.41% of GNP. ■

## GABON

### Steering a new economic course : "democratic concerted progressivism"

On becoming independent in 1960, Gabon seemed to be one of the rare new African States with a promising and even enviable future; a small country with only some 800 000 inhabitants, it had enormous and scarcely-exploited natural resources (timber, oil, manganese, iron, uranium, etc.).

When President Bongo took over from the first President of the Republic, Léon Mba, in 1966, he aimed to base the country's development on an economic policy of "planned and controlled liberalism", which the single political party, the Gabonese Democratic Party (PDG), would serve as "an instrument of stimulation". Planned and controlled liberalism was to be a dirigiste economic policy allowing and encouraging the development of both foreign and national investment throughout the country, under the government's indicative plans. The policy was intended to include everyone living in Gabon in the country's development, and foreigners—which was rare—especially Europeans, were given "the same civil and social rights, etc." as Gabonese nationals. Foreign residents are familiarly described as "Gabonese by adoption".

In a speech on March 11, President Bongo drew up a balance-sheet of eight years of this "planned and controlled liberalism" and drew some initial conclusions on the future development of the Gabonese economy.

Emile Kassa-Mapsi, the Gabonese ambassador in Brussels, took this up in a press conference on April 22. In a general look at economic and social development over the eight years, he explained what President Bongo meant by denouncing "uncontrolled capitalism" and introducing the new development policy of "democratic concerted progressivism".

The overall economic results over this period had been positive, but not without unfortunate consequences, the Gabonese ambassador said. Foreign investments, for instance, had been concentrated on the mineral sector (oil, manganese, uranium, etc.) and in real estate, continuing a type of colonial exploitation at the expense of vital sectors such as agriculture, forestry, fisheries and stock-



J.L. Debatte - CCE

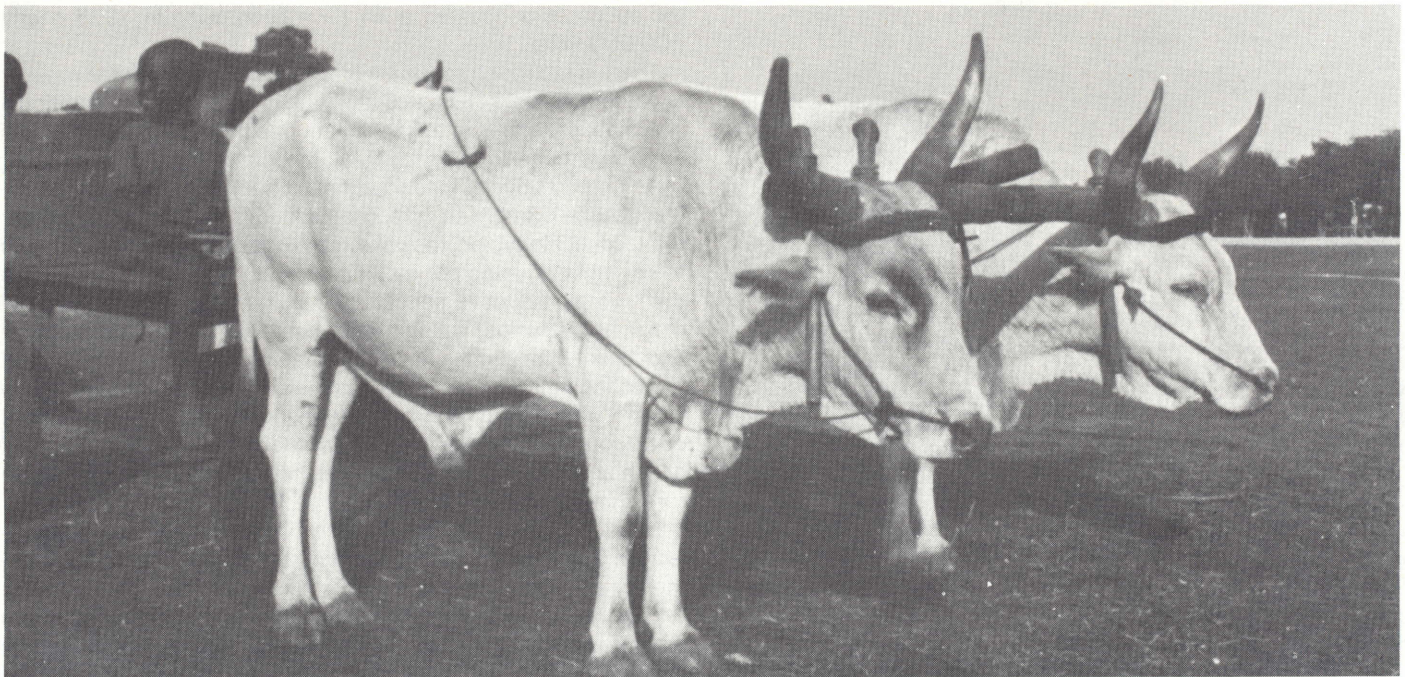
Emile Kassa-Mapsi

raising. This had kept the Gabonese economy dependent on the outside world, creating an "extroverted economy" which had reduced the possibility of the country's becoming self-sufficient, particularly at the agricultural level, rather than promoting its overall development. It was noticeable that a considerable proportion of the national income went to buying agricultural imports.

At the social level, this growth had been accompanied by a feeling of "frustration" among the Gabonese people and had resulted in a general disequilibrium because of migration towards the towns.

"Democratic concerted progressivism" was primarily intended to give Gabonese nationals the chance of controlling and participating in the economy at all levels, M. Kassa-Mapsi said. It did not call economic liberalism into question. To achieve this aim, permanent "concertation committees" had been set up at company level and "regional planification commissions" had been created at regional level in order to bring local communities into development plans and avoid the "submission to development" the Gabonese people had undergone in the past, the ambassador said. ■

L.P.



*Yoke of N'Dama/Zebu crossbreds*

When it comes to harvesting, the right moment passes very quickly and choosing it is important both for the quality of the crop and its conservation. An animal-drawn raiser for groundnuts will harvest five times as much in a given time as lifting by hand.

Animal traction is useful for transporting produce for processing. This is the case with the *dâh* in Mali, which is often grown some distance from the ponds used for retting it (1). Again it can be used to carry produce out of the way of thieving and weather damage, which often result in the loss of 20 or 30% of crops. A cart can take anything from 10-24 cwt., depending on the animal used; but the load for a man, again depending on the distance, cannot be much over one cwt. The farmer is, after all, primarily a transporter, and an ordinary farm will have to transport 5 or 10 tonnes of produce each year and often more; and on top of this is the daily task of fetching water, which may call for a trip of several kilometers in the dry season.

The trace animal, fed and stabled or at least tied up at night, is a provider of manure. The amount will be between 1-3 tonnes annually per beast, depending on how long it is left in the stable. The African soil is for the most part very poor, and often dries up quickly, so it can be appreciated how valuable 10 or 15 tonnes of organic manure per ha will be, associated with a phosphate dressing.

Though mineral fertilizers are important aids to productivity, their cost is high and becomes prohibitive if they are not backed

up by organic manure and by the agricultural methods permitted for animal traction.

Animal traction is therefore an indispensable aid to intensified production. It can enable the farmer not only to produce for his own subsistence, but also to feed the trace cattle and perhaps pasture others. In Senegal experience has shown that a farmer in Haute Casamance or eastern Senegal can till between 0.6 and 0.8 ha if he works manually, but 1.5 ha if he uses animal traction.

Inasmuch as the yield has risen by 50 or 100%, it is a fair estimate that animal traction will treble the output of the traditional family farm. It is this extra production which pays for feeding the draft cattle, fattening the young bull calves and replacement animals.

### Limits of animal traction

The idea of additional production from using animal traction is often neglected or passed over. The first year of animal traction is a hard one for the farmer. It often includes the loss of 10 or 20% of the animals, who will have had to work in an underfed condition because the farmer was not able to provide, with a single pair of hands, the reserves of food needed for his trace animals. This is one of the first limitations—the animals have to be fed. It sounds elementary but in practice it is often difficult.

Another limiting factor is the health of the animals, which often does not allow for any effort beyond a life of idleness. It has been found, for example, that the Taurins-Zébus cross survive in areas slightly infested by the tse-tse fly but die of trypanosomiasis as

(1) A steeping process used for separating textile fibres by butylic fermentation set up in water by the bacillus amylobacter.



Grégoire

*Donkeys in harness*

soon as they are made to work without adequate food. On the other hand, if they are fed properly and given proper health care, they stand up to everything and work well.

In fact, therefore, the area where animal traction is used is smaller than that in which idle cattle can survive; in the north there is too little food and in the south too many parasites.

A third limiting factor is the strength of the animal, which is partly determined by its build. This is particularly true of the N'Dama ox, which is smaller than the Zebu Gobra—270 kg against 400 kg—so that the weight it can pull is less. Because of this the Yanfolila farmers in Mali and those of Boundou in eastern Senegal have crossed the N'Dama with the Zebu in the hope of fixing a stronger type, which will be better suited to a working life. Unfortunately these cross-breeds are more vulnerable to trypanosomiasis than the pure-bred N'Dama, which can resist the tsetse up to a point.

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In spite of all these limitations, there are some million hectares in Africa which could be turned over to animal traction without major problems. The total area must be about 10 m ha. Taking a yoke of oxen as working on the average 6 or 8 ha a year, there ought to be a million yoke on this work, without counting the horses and donkeys of more limited capacity. On this basis, and with the estimate that a yoke, with two or three years' training, can work for about five years before being put to grass, the theoretical supply requirement is over 400 000 head annually, while a similar number will be turned over to fattening for slaughter. The Sudano-Sahel herds could easily satisfy such a requirement, despite the death toll of the drought and the demand for meat direct from the abattoirs, or through the industrial graziers.

This is not quite borne out by the realities. In 1965 it was estimated that, taking French-speaking West Africa by itself, the number of trace oxen was about 50 000 yoke. To these must be added some 100 000 trained horses and donkeys. Apart from the horses and donkeys which, incidentally, are growing fewer, all

the countries concerned must have been using in 1975 nearly 400 000 yoke (1).

There is still much scope for an increase, but in fact the present or potential market is already weighing upon the traditional breeding, especially in the Sahel, and the more so since attempts are being made to intensify it.

As noted above, it was found necessary in the light of the effects of the drought to take into account the delicate balance of the local ecology and to make the biggest possible reduction in the number of cattle per ha. All that must be kept, therefore, are the highly productive animals, the best males and the best females at ages most suitable for procreation; all the rest must be liquidated—the surplus males, the superannuated females and all the young bull calves. As regards the bull calves, there must be a transfer into rural fattening or to working, and this must be carried out through the big ranches, in which they will live in the right health and diet conditions and then be put in a satisfactory state for fattening or traction work.

In Senegal, Mali, Mauritania and Niger there are several projects or surveys on these lines which have been financed by Community aid at the request of the African countries. They are putting into practice the conclusions of the expert working party on stock-raising problems in Sahel countries severely affected by the drought (Profs. Hubu, Compère, Catinot, Boeckh, Dumon and Bremaud) which investigated the problem at the turn of 1973-74. According to this committee: "the function of the Sahel as a breeding ground will be made the easier by early liquidation of the males, better protection of the cows and calves and a raising of the price of young lean stock"... "in the southern areas (Sudano-Sahel) peasant fattening is regarded as the most effective method of initiating and modernising the production of meat. The investment costs are small and it helps in the diversification of peasant activities, the use of animal traction to modernise the farm, the use of organic manure, the profitable application of agricultural waste and a growth in the cash income per family".

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\* \* \*

The impact of animal traction will thus have helped replace the low yielding nomadic agriculture, leading to more intensive production based on realistic agricultural land allocation; and it will make for a modernisation of the pastoral economy, both through the Sahel herds which provide its supplies and the fattening and slaughter which is the ultimate outlet for the superannuated beasts.

It presupposes various requirements regarding the condition, growth potential and strength of the cattle, and remunerative prices. In this way animal traction will be helping to make a reality of what is still no more than a hope at the level of decision centres—a breeding herd well balanced with its background—and it will be doing this by creating the economic conditions needed to ensure that the Sahel herd shall no longer be merely a way of life for the nomad herdsman, nor a harvest home for producers of butchers' meat, but a factor of real importance in the Sudano-Sahel countries. ■

R.G.

(1) Estimate. Exact figures not available.

## Stock-raising in Burundi and the uplands of central Africa



Burundi is a highland country with altitudes between 770 and 2 700 m. and it is one of the most densely populated countries of central Africa, with a total of some four million inhabitants and a density of between 152 and 233 inhabitants per sq. km. In Burundi, as in all the countries in this part of Africa (Rwanda, Kenya and Tanzania), agriculture and stock-raising are the principal activity, occupying more than 80% of the population. In Burundi they cover respectively, 36% and 32% of the area — totals of 10 000 and 9 000 sq. km.

The following examination of animal husbandry in this area is an extract from an article by Prof. R. Compère, Associate Professor of Zootechnology in the Agronomic Sciences Faculty at Gembloux (Belgium).

### The Burundi herds

Burundi has a large animal population. Besides the 756 000 beef cattle, there are 913 000 sheep and 427 000 goats. In terms of the "tropical beef unit" (TBU, an average weight of 250 kg), this makes a total of 696 520 TBU. The 900 000 ha of natural pasture is mostly poor, broken ground, increasingly impoverished by fires and over over-grazing. The average of 0.8 TBU per ha of pasture appears excessive for an irrational stock-raising system. With well-tended pastures, the maximum should be 1 TBU/ha in the wet season and 0.5 TBU/ha in the dry. The cattle are managed in very small herds, in the hands of small-scale and very traditional farmers, and are badly fed and badly looked after. The production is as bad as might be expected.

The types of herd movement define the three different methods followed. There are cattle which are settled and kept near the farm (Buyenzi, Bweru, Kirimiro and Buyogoma); there are others in the low-lying country which remain settled but receive seasonal visitors (Imbo, Mumirwa and Mosso); and there are those which move from pasture to pasture because of the food shortage in the dry season in the high-altitude grazing areas (Mugamba and Bututsi).

For the small saver, the ownership of a herd is the natural consequence of having become a capitalist. The production system is very rudimentary and the owner scarcely interferes at all. The animals are simply kept and protected. They are always privately owned, but the grazing grounds are collective property.

From the health standpoint, the Burundi cattle are extremely vulnerable. The veterinary laboratory at Bujumbura is not particularly effective and the animals are constantly under threat from the endemic contagions of the African continent. Rinderpest and peripneumonia having completely disappeared, the chief maladies are theileriosis, foot-and-mouth disease, tapeworm and gastro-intestinal parasites, brucellosis, trypanosomiasis and anthrax.

The amount of mixed arable-livestock farming is definitely insufficient, especially when it is remembered that, in many of these regions, the continuity of the farm depends on the soil being organically manured, while the production of animals also depends on a forage supplement. The dry strawless manure is inadequate in quantity and quality for the local requirements and mineral fertilizers are too costly; the forage supplement is still only at the demonstration stage; the sub-products of the farming are not very abundant and are entirely used up; the byproducts available from the agriculture-based industries are scarcely 1400 t. a year; and the working strength of the oxen is still unused.

The reasonably elaborate cattle supervisory service is modelled on the system in developed countries, and is of the ordinary ver-

tical type. It was inherited from the days of the Belgian mandate and does not necessarily cover the present needs of Burundi animal husbandry. There are plenty of people involved — one man to every 1 000 cattle. There are plenty of buildings and equipment — one centre per 185 sq. km. of 5 600 cattle and one disinfectant bath per 174 sq. km. or 5 250 cattle — but the equipment, modest though it is, suffers from lack of maintenance. The complete lack of movement facilities is an important factor in the paralysis of the whole service. The Animal Production and Health Department has a comparatively small operating budget of 10 m Fbu annually (1) and it limits its work on the health side to annual vaccinations against anthrax and dispensary consultations. The personnel is isolated and unsupervised and does not undertake any real action to promote livestock production.

The zootechnical experimental work is in the hands of The IS-ABU (Institut des Sciences agronomiques du Burundi), which is partly financed by Belgium. It is carried out in well-equipped centres and is directed partly to the improvement of food for the cattle and partly to improving the genetic strains. Recently this institute has carried out popularisation campaigns over limited areas in an attempt to offset the shortcomings of the local supervision.

There are three bodies providing an agricultural training, which is too expensive and too theoretical. These are the ITAB (Institut Technique agricole du Burundi) at the technical level; the EPA (Ecole Professionnelle agricole de Kazuri), giving a course for teachers; and the CCM (Centre de Cooperation pour moniteurs de Gitega), giving crash courses for teachers.

(1) 1 Fbu = ± 0.01 u.a.

The difficulty about marketing meat in Burundi stems from the great number of very small producers who are not accustomed to attending markets, and from the fact that money incomes are extremely small. The internal consumption of meat and poultry per inhabitant per annum is 3.9 kg of meat (Fbu 60-100 per kg) and 0.12 kg of poultry. The internal market for good quality meat is small, consisting of 81 t. per annum from the stock-raising centres and stations and 65 t. imported, principally from Kenya. There is no export trade in meat, and a very small trade into Zaïre of cattle on the hoof.

The consumption of milk per inhabitant per annum is estimated at 6.4 litres. The dairy product requirements of the capital are not covered by the producers in the neighbourhood, and an annual deficit of 691 t. (between 1 500 and 1 600 litres milk equivalent per day) is covered by imports.

The current five-year development plan is providing the livestock industry with Fbu 734.6 m in internal aid and Fbu 45 m in government aid. It is acting on the following lines:

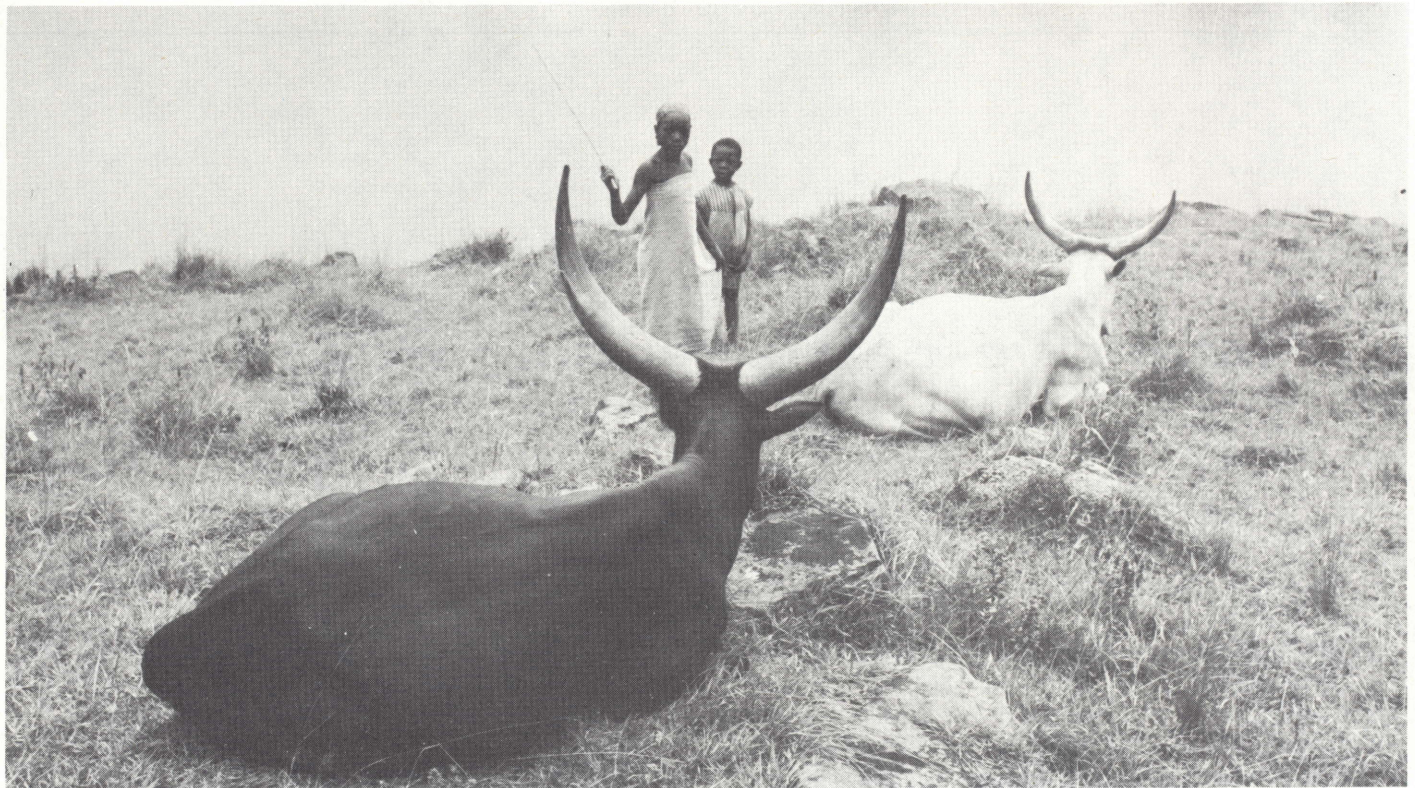
- national campaign against cattle ticks to reduce impact of theileriosis on cattle productivity;
- promotion of stock-farming in Bututsi-Mugamba breeding area;
- development of intensive dairy farms. It is nevertheless a matter for regret that nothing is being done about the agricultural and pastoral improvement of the colonisation areas (Busoni, Muyinga, Cankuzo and Mosso), liquidation of replacement animals, stock-fattening at industrial and peasant level, promotion of small live-stock raising in densely populated areas, encouragement of marketing for cattle and meat, processing of hides and leather, credit facilities and a reorganisation of the supervisory machinery.

*Practical courses at the Agricultural Technical Institute, Kitega (Burundi)*



FAO - A. Defever





*Responsibility comes early for these young Rwandan cowherds*

## Rationalising the livestock policy

It is important that the country should have a more effective and more operational supervisory system, in line with the current development requirements of various rural activities. Rationalisation and decentralisation would bring the different areas out of their present stagnation, strengthening the contact and control, and providing more dynamic leadership. These decentralised structures, better adapted to regional requirements, would be set up by degrees after putting the present personnel through a more effective training period.

The choice of strains, and other herd improvement techniques, should be made by reference to environmental conditions and the extent to which they are changing. In the breeding area, where the animals are subjected to severe conditions, the genetic work would consist of getting rid of the unproductive elements and choosing sires to be kept in the herds. In the low-lying districts where there is good natural pasture, the crossing of Ankole with the Zebu improvement strains (Sahiwal) will not be undertaken unless the health and hygiene conditions are fulfilled (especially in regard to theileriosis). The raising of high-performance dairy strains will be confined to the specially suitable districts, where there are small intensive farms with permanently irrigated forage crops and full health protection; and the degree of stock improvement will not go beyond the technical capacities of the stock-raisers, who would be beginning with the Jersey-Sahiwal cross. In densely populated areas, where beef cattle cannot find adequate

pastures, the improvement of small stock farming is imperative, particularly for that all-purpose animal, the goat.

The problem of securing a full yield from the total herd can best be tackled by regional specialisation. It would involve encouragement in breeding on small farms with intensive manure production in Bututsi-Mugamba, where the grass is weak and irregular; industrial and peasant fattening facilities for young male cattle at Mosso; the collective cattle ranch in the pastoral area at Busoni and Imbo; intensified dairy production in the area irrigated by the Lower Ruzizi; development of the raising of locally-bred goats in the densely populated areas of Buyenzi-Kirimiro; and in all other areas the promotion of small mixed farms.

In the first phase a careful choice should be made of the priority technical themes to be propagated among producers.

Before setting up the supervisory service in its new regional structure, it is important that there should be adequate personnel training at all levels — from the regional technical team at the top right down to peasant level, and bringing in the general-service supervisors. The training should be at a practical level and deal essentially and effectively with technical themes. The best place for it would be in a pilot establishment at regional level. The present Community work, organised by those in charge of the national political party, can quite well be used for initiating the peasantry into modern production techniques.

If, the stock-raising promotion is to be a real success, there will also have to be measures to improve the marketing facilities for livestock products. ■

R.C.

# Intensive-cattle feeding in Kenya

by J. Mulder

A consequence of the rapid population increase in many developing countries is that traditional forms of agriculture have to make way for a more intensive approach, not only in growing of grain for human consumption, but also in cattle raising.

In the past the sole diet of cattle in developing countries was grass. Although the amount and quality varied considerably throughout the year, the problem was solved by moving with the various seasons to parts of the country where grass was abundant. Now the developments of the last decades have made that way of grazing impossible. More and more land has to be used for growing crops for people, while the plains also now occupied by these roaming herds of cattle have become overstocked, making it difficult to put land to the best use. A possible way of adjusting to these changed circumstances is described below.

The author has worked for five years in Kenya on a UNDP/FAO Beef Industry Development Project and the experiences of this project can, in his opinion, be considered as being applicable in other countries in Africa.

## Environmental conditions in Kenya

About a quarter of Kenya can be considered as high potential agricultural land, with high fertility and rainfall of more than 700 mm per year. Cattle are kept here, especially dairy cattle, which have increased rapidly in the recent past, not least because of the introduction of artificial insemination. The various breeds include Friesian, Ayrshire and Guernsey, in various degrees of purity. Depending on management, in general 0.5 ha of land can produce enough grass for one animal per year.

In the rest of the country, the rainfall varies between 200-700 mm, and although once in a few years it is possible to grow crops, rain in general is insufficient to ensure regular production. It is more cattle country, especially for beef cattle.

Depending on the yearly amount of rain in these drier areas, different types of cattle are kept here.

In the areas with a very low rainfall, the most common breed of cattle is called the NEP-Boran (North Eastern Province Boran), an indigenous Zebu type. It is still kept by nomadic tribes, and can withstand dry conditions better than any other.

## The introduction of intensive beef cattle-feeding in Kenya

When the UNDP/FAO Beef Industry Development Project was established in 1968, the situation was roughly as described: most of the beef produced at that time was fed on grass and the cattle were kept under various circumstances in different parts of the country. As a consequence, the amount as well as the quality of beef produced varied considerably throughout the year.

At that time it was already apparent that beef production in this way could not keep up with the rising demand of the increasing population. The amount of land available for grazing was decreasing and it was unlikely that the demand for high quality meat could be maintained throughout the year on grass alone.

The project had to look for ways to meet the demand for higher quantity and quality of beef. As experiences in other countries, especially in the United States, had shown, the answer could be a stratification of the beef industry, making use of the grass in the low rainfall areas as well as of crops and byproducts of the agricultural industry in the high-potential areas. The idea is that cattle should be raised in the former areas, while the finishing, the preparation for the final delivery to the slaughterhouse should take place in the latter. Here cat-  
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*One of the intensive feedlots in Kenya.*

tle could be kept in confinement, in a feedlot, and all the food would be carried to them instead of the animals selecting their own food.

A farm of about 1 000 ha was selected in the high-potential agricultural area, with easy access by rail to a place where the fat cattle would be marketed, in this case the abattoir of the Kenya Meat Commission in Nairobi.

So, in cooperation with the Kenya government, a beef research station was established.

### **The development of intensive beef cattle-feeding in Kenya**

Initially a feedlot was set up to contain up to 400 head of cattle. Later, when the initial trials were successful, the capacity was extended to approximately 2 400 head.

Once the cattle entered the feedlot, they remained there until they were ready for sale.

The feeding took place mechanically. An electronically-equipped feeder wagon enabled the man in charge to weigh exactly the amount of each ingredient of the ration, as well as the total amount of a certain ration given to a certain group of animals, after all the components had been thoroughly mixed mechanically in the same feeder wagon. It was necessary to feed cattle in this way since, when the same components of the ration were mixed by hand, the growth rate declined.

The research station was situated in an area where cattle had been vaccinated against various diseases for a number of

years. Therefore special care had to be taken in ensuring that cattle entering the feedlot were disease-free. An outbreak of a contagious disease in a feedlot so densely occupied by cattle could be fatal. For this reason was it seldom possible to bring NEP-Borans straight from the place where they were raised to the feedlot. However, this was also not necessary, as an excellent cooperation could from the beginning be established with the Livestock Marketing Division of the Ministry of Agriculture. This organisation purchased cattle in various parts of the country and kept them for approximately half a year in holding grounds, vaccinating the cattle and testing if this vaccination was effective. After this all cattle purchased from this organisation could safely be moved to every part of the country. No disease of any kind has been an obstacle in developing the feedlot in Kenya.

In the beginning the main ingredient in the rations was maize. Maize was used in the form of grain as such, usually ensiled by adding water to the crushed grain, and in the form of maize silage. In this case the whole plant was harvested at a certain growth stage by a forage harvester and ensiled, without any additives, immediately afterwards. Another ingredient which was available in large quantities was molasses. Molasses as such is high in energy but low in protein; to compensate for this, urea can be added, which can be transferred into amino acids in the digestive system of ruminants and then finally in proteins. Besides urea, molasses can serve as a carrier for other important ingredients in a cattle diet as well, such as vitamins, trace minerals and phosphoric acid. At the Beef Research Station a small mixing unit was built where all these



*Promoting dairy products in Kenya*

components could be mixed as desired. In the end there was such a demand for this molasses/urea mixture that the whole production was finally taken over by a commercial company. A better distribution of the product all over the country was thus ensured.

Other products used were cotton-seedcake and maize germ and branmeal, a byproduct of the sifted maize-meal production for human consumption. From the pyrethrum industry, another interesting product could be used. The flower, after the insecticide had been extracted from it, proved to be a roughage comparable in feeding value with maize silage itself.

Finished animals were sent by rail to the abattoir of the Kenya Meat Commission in Nairobi, about 180 km from the feedlot at Nakuru. The commission paid the beef producers according to the quantity as well as the quality they delivered—an essential condition for a feedlot enterprise.

Under these conditions it has been possible to fatten cattle successfully. The emphasis in investigating the response of cattle fed in this way was laid from the beginning on the NEP-Borans, as this was the most numerous beef cattle breed in Kenya. Later on, when the project progressed, every available breed in Kenya was put in the feedlot to observe its response to intensive feeding. There was a marked difference in response on various rations between these breeds.

The conclusions that can be drawn from this are extremely important. In the first place, the indigenous cattle are in no way inferior to their European counterparts for beef production. In the second place, it meant that as long as a roughage in the form of maize silage is cheaper than concentrates, which is usually the case, an indigenous animal is cheaper to feed, as long as the price per kg of the finished product is the same as that of the crossbreds.

In general, NEP-Borans of all ages entered the feedlot at a weight of approximately 250-270 kg, coming either straight from the LMD holding ground or from improved pastures near the feedlots where they had been 'backgrounded' until they reached the required weight for entering the feedlot. In the feedlot these cattle were fed for about 60 to 80 days and then, weighing 320-350 kg, they were ready for slaughter. In the meantime the amount of edible meat on the carcass had increased by 50-60%.

The crossbreds entered the feedlot at a weight of about 320-350 kg and were ready for slaughter after having been in the feedlot for 90-110 days, growing at about 1.2 kg per day.

In this way, the stocking rate in the high potential area could be increased to 10-20 head per ha per year, if agricultural by products were combined in the right way with roughage grown in the area.

Economically as well as technically the results were good enough to justify the recommendation of the system in Kenya. The response was not slow. Three to four years after the start of the project, twelve other feedlots were in production with a total yearly output of about 40 000 head. Together they were responsible for the production of 60 to 70% of the high quality meat delivered to the Kenya Meat Commission in Nairobi.

In later experiments, other roughages which could replace maize silage were investigated. It was, after all, not inconceivable that all the maize produced in the country would be needed just to feed the increasing population.

One of the crops which was investigated in this respect was sugar cane. This crop is relatively easy to cultivate and has an enormous dry matter yield per ha per year. Initial trials with sugar cane replacing maize silage in beef cattle fattening rations were successful. The crossbreeds did just as well on rations based on sugar cane as on rations based on maize silage, although NEP-Borans showed so far unexplained declines in growth rates.

At present the station is investigating various sorghum varieties. Although their feeding quality has yet to be investigated, the yields per ha look increasingly attractive. Under dry conditions these varieties are able to produce higher dry matter yields per ha than maize under the same circumstances, so if the feeding trials are also successful, new prospects are opening up for the feedlot industry. It will then not be necessary to situate feedlots in the areas with the highest agricultural potential; the more marginal areas can be considered as well.

## Applications for smallholders

In the development of the feedlot industry described, the areas on which the fodder crops were grown amounted to at least 100 ha. Not every farmer in Kenya owns a piece of land that size.

For this reason investigations started as to how the principle of intensive feeding in confinement could be beneficial to smallholders in the high-potential areas. Smallholder-type feedlots were built, constructed from locally available materials at several places in the country. The set-up was simple and cheap. It was sometimes only a fenced area, partly covered, with a fodder trough inside.

The cattle to be fattened were bought in the neighbourhood and fed on products which could be grown locally or were otherwise easily available. In this respect, emphasis was placed on high-yield grass such as napier grass (elephant grass) and on maizestover, the dry stems of maize left over after the grain has been harvested. With the concentrates mentioned already, rations were composed similar in feeding value to the rations used in the large-scale feedlots.

Despite this, animals fed in this way did not grow as well as the animals in the large-scale feedlots. There was on average a 25% difference. This, combined with the fact that in local butcheries payment was not according to quality, made fattening beef cattle in small units an uneconomic proposition for the time being.

When this became apparent another sideline was explored. How would dairy cattle react to confined feeding throughout

the year. With the same ingredients, dairy cattle rations were composed and available dairy animals, with known previous milk productions on grass, were chosen to enter the feedlot.

The response in production of these dairy animals was extremely encouraging. Compared with their previous milk production on improved grassland, sometimes with supplementary feeding of concentrates, production in the feedlot increased by about 20-25%. More animals per unit of land could be maintained: with animals grazing most of the year it is usually possible to keep 2-3 animals per ha per year, but by cutting napier grass from the field and by using maizestover in the right combination with concentrates, and by feeding this to animals kept in a feedlot, approximately 8 animals can be maintained per ha per year.

It was economically and technically a viable enterprise, provided certain conditions were met. Feeding cattle in this way is labour intensive and therefore sufficient labour must be available in and around the farm. Also, the supply of concentrates must be ensured throughout the year; and finally the milk price should be attractive enough to justify the labour input as well as the high input of concentrates.

However, the project concentrated mainly on the large scale feedlots, as its main purpose was exploring new means of economic beef production. The research with dairy cattle was left to the dairy research stations in Kenya.

**Conclusions.** Naturally there are advantages and disadvantages in this system of producing high quality beef in large-scale feedlot operations. It would seem that the advantages outweigh the disadvantages.

One disadvantage is that the whole enterprise is capital intensive. A high investment is necessary and the management should be of a high standard. The feeding system as such is costly and a considerable part of the variable cost cannot be influenced by the individual producer. To keep it economic, an increase in variable cost has therefore to be accompanied by an increase in the price of high quality beef. As beef production from grass does not involve the purchase of large quantities of food, etc, this form of production is in this respect less vulnerable.

### The advantages are considerable:

— By removing grown cattle not necessary for reproduction from the arid pastoral areas to places where they can be fattened in feedlots, the remaining animals have more food at their disposal. This not only prevents starvation, but also enables the animals to remain in a better condition so that the reproduction rate is improved.

— A considerable increase in the production of high quality beef is possible. Together with the improved quarantine conditions, this can open up lucrative markets.

— Production of high quality meat is not influenced by seasonal fluctuations, as would be the case on grass, and is therefore possible throughout the year.

— The whole feedlot operation is, despite the advanced mechanisation, labour intensive, especially as far as skilled labour is concerned. This is attractive for developing countries where unemployment of school leavers is a problem.

— A better integration of the economy in the country concerned is made possible. ■ J.M.

# The French Institute for Tropical Stock-raising and Veterinary Medicine

by M. LACROUTS (\*)



The Institut d'Élevage et de Médecine vétérinaire des Pays tropicaux (I.E.M.V.T.) was formed in 1948, but its work continued that of its predecessor, the "Institut de médecine vétérinaire exotique", which was formed as part of the Ecole d'Alfort in 1920. The latter was the first post-university course on the health problems of tropical livestock, and the 1948 Institut has consistently maintained a very active teaching and training faculty.

In 55 years the Institut has had 1 617 pupils and trainees of 69 nationalities, a little more than half of them being French and 450 of the foreigners coming from French-speaking countries. The pupils were qualified veterinary surgeons and agronomists, holders of university-level higher education diplomas and livestock technicians.

Since 1920 the scope of the teaching has developed. It was originally designed to make veterinary surgeons familiar with the disciplines of the tropics, but today it provides training for economists, deep-sea fishery specialists, research workers in many branches of science, agro-pastoral specialists and technicians in many aspects of animal husbandry.

Work in the field has now led to the teaching being rather differently angled, with a distinction between the pathological section, livestock production and a number of highly special-

ised courses, including those on trypanosomiasis, for the training of campaign leaders or development projects.

It is proposed to organise in the early future retraining programmes on poultry and pig-breeding, on pasture and special techniques in the veterinary, economic and breeding fields.

## Livestock improvement

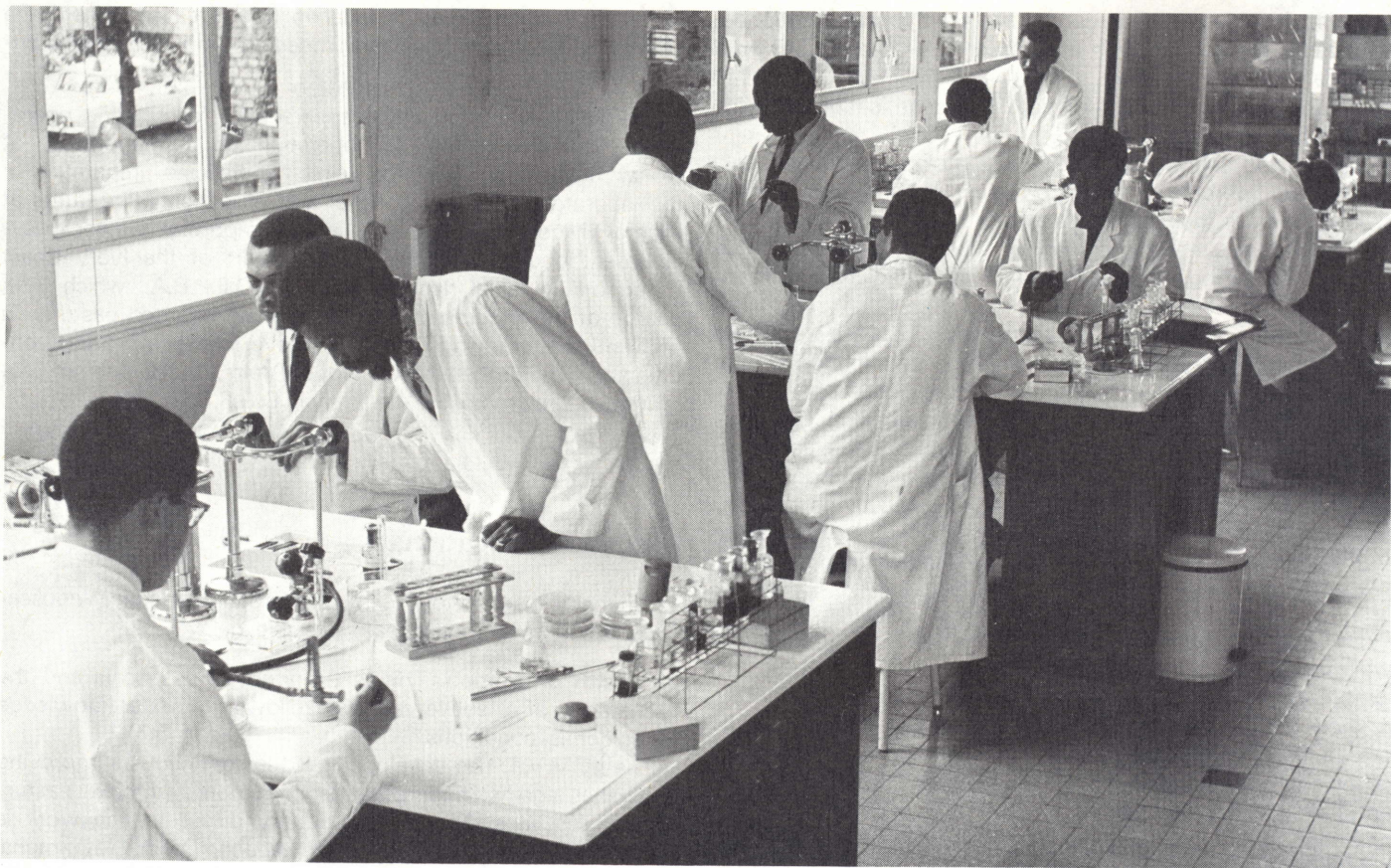
The I.E.M.V.T., working under the Ministry of Cooperation, has not confined its activities to a narrow interpretation of its task. It has played an active part in developing and improving livestock production and the animal industries in tropical and equatorial areas.

For this purpose the institute put in hand a number of research programmes in the widest sense of the term, carrying them out at its headquarters and in the veterinary stations and laboratories in Africa and Madagascar.

The consistently high level of the research facilitated the task of developing the other activities. These included training research workers, scientific and technical documentation, development project surveys and the preparation of vaccines and biological products generally.

Over the 1960-75 period there have been changes in the conditions under which research programmes are handled in the French-speaking countries of Africa and Madagascar.

(\*) Deputy Director General of the I.E.M.V.T.



M. Petit

*Laboratory work for IEMVT students (Maisons-Alfort, Paris)*

In 1960, the French authorities entered into a general convention with a considerable number of African countries, covering the advancement in their territories of applied agricultural research. The fundamental reason for seeking these agreements was that the countries concerned had research stations and laboratories, but lacked the personnel and funds needed for keeping them at work.

The French institutes — among which the I.E.M.V.T. handled the animal husbandry section — made the necessary arrangements for financing, in equal shares, the management responsibility and the secondment of competent research workers. This made it possible for the scientific work to continue and develop in the best possible conditions.

This system was more particularly suitable for a transition period, and in course of time it was superseded. The countries with the necessary money and high-level technicians have now set up their own departments for running cattle stations and laboratories. Institute participation in local research programmes now mostly consists of seconding competent research workers, supporting the programmes by senior scientific missions, making analyses in specialised laboratories and making available its incomparable documentation facilities.

Since 1962, and in parallel with its research programmes, I.E.M.V.T. has carried out a number of survey studies. These are mostly connected with development projects, and are aimed at defining from the outset the conditions affecting their

execution. On a number of occasions the institute has been commissioned to carry out entire projects, such as the river Chari (Chad) tse-tse fly extermination, the animal parasite campaign in Madagascar, and the three-year experimental campaign against peripneumonia in Togo.

This survey work has taken on a more advanced form through the drawing of pasture maps, by which it is possible to discuss on various scales not only the best position for pasture-land in any country or province, but also the pasture system in any specific ranch. For this work the institute had recourse to air photography, agro-pastoral prospecting at ground level and drawing specific maps. Food value analyses are carried out to ascertain the merits and demerits of pastures studied, and to estimate the density of the cattle population they can feed.

### **Establishments in Europe and Africa**

The institute's own establishments are the following: — in France, at Maisons-Alfort—the central headquarters containing the administrative departments, documentation and data-processing, the teaching facilities and the specialised laboratories (virology, bacteriology, biochemistry, nutrition, agronomy and entomology). These are all engaged in studies of highly topical problems:



- mycoplasmoses and tissue cultures for the first-mentioned,
- gamma globulin analysis and research on blood constants in trypano-tolerant animals,
- computerised treatment of data for identification of field-studied breeds and strains,
- cattle-food analysis and membership of a food data bank,
- work on improvement of natural pastures and development of methods for their better utilisation,
- breeding of tse-tse fly of various types for development of methods for biological attack through irradiated males (breeding facility for over 50 000 flies).
- at Bobo Dioulasso, a laboratory financed by the D.G.R.S.T. (1) for research work on the extermination of the tse-tse, especially by using methods developed at the central establishment. West Germany also participates in this programme, which may be developed throughout the savannah area of West Africa, where trypanosomiosis is rampant. The value of this establishment should be increased by its association with a school to be set up there to train personnel for the anti-tse-tse campaign. This is to be jointly financed from French and German funds.

The I.E.M.V.T. hopes to expand the work of this centre, while still keeping in touch with others working on the problem of attacking the vectors of the sickness and engaged in research on the causes of trypano-tolerance in certain specific breeds of African livestock. In many countries trypanosomiosis is still the main obstacle to the development of domestic animals and new cattle herds.

In addition, the institute is commissioned to run two research organisations:

- the zootechnical research centre at Bouaké-Minankro (Ivory Coast) where the work is concerned with the study of local strains and natural pastures. Future improvements are planned by the use of forage plantings in the fallows, the crossing of local cattle strains with one another and the introduction of high productivity breed stocks;
- the Farcha cattle laboratory at N'Djaména (Chad) which has always been in the front line in combating the great cattle epidemics, such as rinderpest, peripneumonia, anthrax (symptomatic and bacterial), pastorellosis and parasite-induced illnesses.

In addition, the I.E.M.V.T. is taking part in current research programmes as follows:

- in the laboratory at Debré Zeit near Addis Ababa, which manufactures all Ethiopia's vaccine requirements, and is beginning work on foot and mouth disease and experiments for producing anti-aphthous vaccines, suitable for local conditions.
- in the laboratory at Dakar Hann (Senegal) in bacteriology, virology, nutrition, natural pastures and zootechnics;
- in the laboratory at Niamey (Niger), especially on animal pathology, mostly for small ruminants;
- in the research stations at Wakwa and Bambui (Cameroon), on zootechnics and more especially the study of local Zebu cattle strains and their crosses with American Brahmen; and problems arising in the pasturing and fattening of cattle;

- in the laboratory at Tananarive (Madagascar), where the I.E.M.V.T. participation is now limited to work on pasture improvements.

The I.E.M.V.T. also provides personnel for specific operations—for advising on the operation of the laboratory at Nouakchott (Mauritania); for helping in vaccine preparation in the laboratory at Tunis; for trial and utilisation of pastures at Niamey (Niger); for assisting in a very important livestock development operation in the northern part of the Ivory Coast based on an initial nucleus, with S.O.D.E.P.R.A., which is in charge of the programme; for developing irrigated pastures in Thailand; for studying how to improve livestock grazing conditions in the Sahel (Niger, Upper Volta, Mali); and in programmes drawn up by the French D.G.R.S.T.

## Practical applications

All the research work is required to find practical applications in Africa with the least possible delay:

- **health protection.** This is the work of diagnosis and the preparation of effective vaccines, following a better knowledge of epidemic conditions.

The I.E.M.V.T. has developed, and is continuously improving vaccines against rinderpest, peripneumonia, anthrax, pastorellosis, Teschens disease and poultry diseases. The work is done in its laboratories at Addis Ababa, Dakar, N'Djaména, Niamey and Tananarive. The vaccine requirements for protecting cattle in these areas are growing rapidly.

The rinderpest vaccine is a good example of the way things have advanced in this technique. Barely 25 years ago the vaccine used was taken from infected steers, using a formol-killed virus. Since then the work has passed through the stage of the pre-lyophilised vaccine taken from goats, followed by one taken from eggs and finally from cells, thus obtaining a living virus which is attenuated as required. This vaccine, industrially lyophilised, is now associated with that against peripneumonia, so as to ease the task of the vaccination teams. Recent work has raised the hope that in the final phase of using the vaccine it may be possible to avoid the expensive process of conservation with ice.

For the campaign against parasite-induced maladies, the I.E.M.V.T. has often been asked by pharmaceutical companies to test out new medicines, determining as effective a posology as possible suitable for local animals.

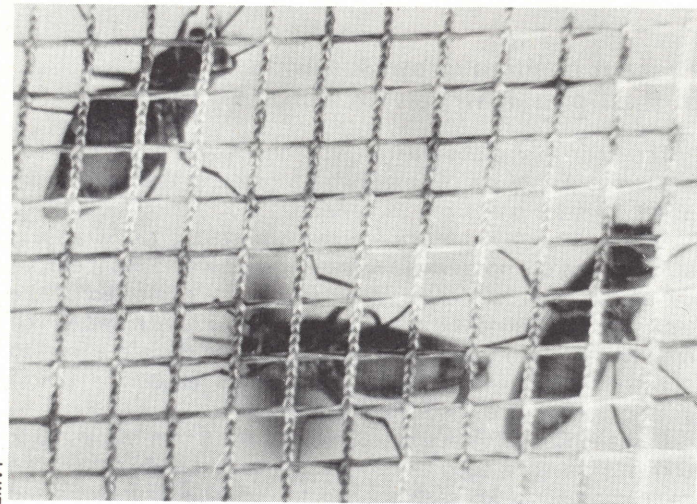
- in **animal production** some remarkable achievements have been made in the selections of African cattle strains of high quality for crossing with improvement strains. Those dealt with included Gobra from Senegal, N'Dama from the Ivory Coast, Malagasy Zebu, Cameroon Peul; and the improvement strains were Jersey, used in the Ivory Coast, Charolais and Limousin in Cameroon, Frisonne Pie Noire in Madagascar, American Zebu Brahman in Cameroon and Madagascar, Sahiwal Zebu in Madagascar and Senegal; and in Madagascar a new three-strain animal was produced, known as the RENI-TELO (Malagasy Zebu, Afrikander and Limousin).

(1) Délégation Générale à la Recherche Scientifique et Technique.





*Hatching out the tse-tse fly*



*Tse-tse flies in their cage*



*Feast of rabbits' blood for the tse-tse*

In future years all these crosses can be used for breeding, provided the funds are available and integrated programmes are adopted. The research has provided models and defined the conditions for propagating the improvement strains. The second phase of the work will be extremely difficult, and will have to be accompanied by research programmes specially designed for popularising these types of animals as instruments of better production.

— **in improving raising conditions**, the primary requirement is to work out the methods of using natural pastures and to bring them into application as widely as possible, especially in the Sahel area. The research, after providing knowledge about the areas and the problems involved, must define the procedures for getting maximum benefit from the pasture. This must be consistently linked with the development programmes and refer particularly to the available water supplies and methods to be used in settled farming for improving the fallow land for the benefit of the animals.

In all this work the I.E.M.V.T. possesses a great quantity of documentation. It has also set up a herbarium, which is a unique instrument of reference in relation to west and central Africa, containing no less than 4 300 species and at least 22 000 specimens.

All the work of the institute is focussed on developing production techniques and providing better protection for the herds. To this end it must always keep ahead of the matters of immediate concern to the local authorities.

It is also its duty to make available the results of its researches and the knowledge it has acquired. High-level papers are regularly printed in its **Revue d'élevage et de médecine vétérinaire des pays tropicaux**, which is now in its 29th year of publication. Dossier plans and other documents developed for educational purposes are at the disposal of anybody concerned in plans for publications and reports. In addition nine manuals have been issued for people actually working in the field, dealing with such questions as pasture, herd hygiene and buildings and facilities for poultry and pig-rearing.

\* \* \*

For the past three years I.E.M.V.T. has been a member of G.E.R.D.A.T. (1), an economic group comprising seven other French institutes specialising in applied tropical research on forestry and various aspects of agricultural production.

The institute is thus able to maintain its individual structure and organisation while being more closely linked with those working on other branches of the task of improving farming in developing countries.

The future certainly calls for better coordination of progress achieved in connected branches and for the integration of research as part of coherent development programmes. ■

M.L.

(1) Groupement d'Etudes et de Recherches pour le Développement de l'Agronomie Tropicale.

# Cattle-raising and the EDF in the Central African Republic

by André GOMBAKO (\*)

It was only relatively recently that stock-raising was introduced into the Central African Republic. In 1925 the Bororo herdsmen from Cameroon and Chad established themselves on the plateaux in the Bouar region in the north-west, a part of the Central African Republic practically free of sleeping sickness.

Health and hygiene measures taken by the livestock department, coupled with the laying out of additional stock-raising areas, enabled the Bororo herds to settle and develop in two important regions:

— on the west in the administrative areas of Nana-Mambéré and Ouham-Pendé, with extensions to Ouham, Ombella-M'Poko and Haute-Sangha;

— on the east in the Ouaka, Basse-Kotto and Haute-Kotto areas.

There are now about 800 000 head of cattle in herds of this type.

The introduction of trypano-tolerant cattle into the Central African Republic, on the other hand, came less than 20 years ago. The distribution of Baoulé cattle to cross-breeding farms had in the past been regarded as a good system worth further expansion. Experiments in the same field showed that cattle-raising can be successfully introduced into tse-tse infested areas where there is a settled population that has not previously carried out this activity.

Despite all that has been done to secure a rapid expansion in cattle production, the Central African herds do not cover the country's meat requirements. The Central African Republic still depends on imported meat and cattle for slaughter, chiefly from Chad and the Sudan. Production from the whole of the country's cattle industry is only about 5% of the gross internal product.

## Present position of stock-raising in the Central African Republic

The stock-raising potential is quite considerable. A large part of the territory consists of savannah pasture and there are many possibilities for producing cattle food.

On the other hand, there are major obstacles to developing stock-raising on more intensive lines. The most important are pathological; enormous areas of pasture-land are infested by the tse-tse fly and cannot be used for cattle of the Zebu breed, which are very prone to trypanosomiosis. Big herds therefore tend to concentrate in the limited tse-tse free areas, resulting in a rapid deterioration of the pastures.

Cattle in Central Africa are also under the threat of the major endemic diseases, such as peripneumonia and rinderpest, while the commoner sicknesses (such as tuberculosis, brucellosis and the various forms of parasitosis) do a lot of damage.

The dry season lasts between four and five months. This makes it unavoidable for most of the cattle to be moved to other pastures, pending the introduction of forage production and techniques of rational use of the natural pastures.

Most of the Central African cattle are Zebu, which are concentrated in the two big stock-raising regions in the north-west and east-centre.

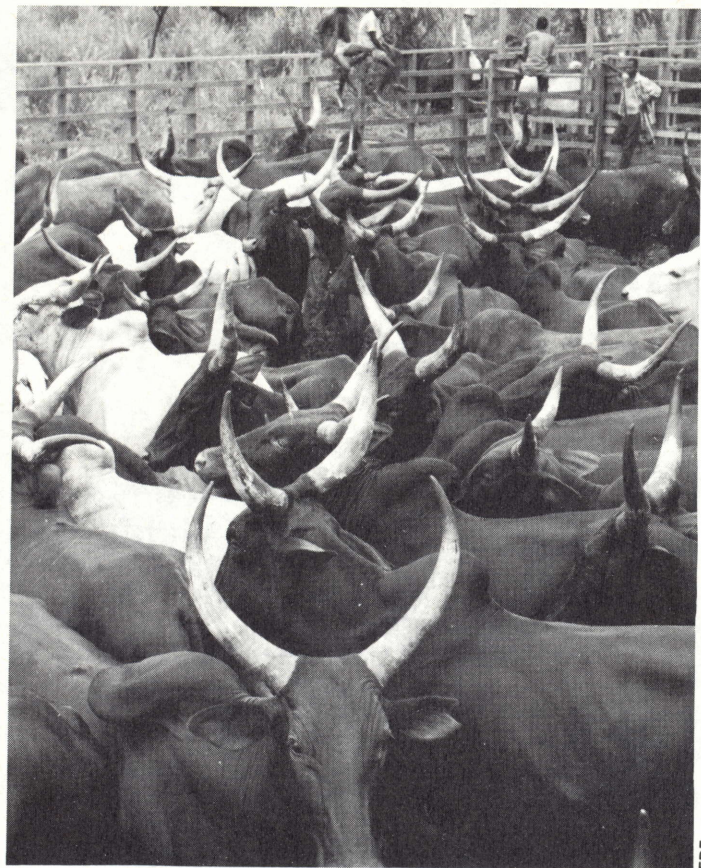
The trypano-tolerant breeds are not yet much in evidence. They consist for the most part of Baoulés from West Africa, a limited stock of N'Dama and a few head of Laguna.

## The cattle population

Zebu cattle: there have been no recent cattle censuses but it is estimated that there are about 800 000 head of M'Bororo, of which 600 000 are concentrated in the western area and the remainder in the east-central prefectures.

Trypano-tolerant cattle: between 1965 and 1970 there was an increase in the number of these from 8 400 to over 16 000 head. They are to be found in cross-breeding farms throughout the territory and are mainly Baoulé and to a lesser extent N'Dama.

(\*) Director-General of agriculture and livestock in the Central African Republic.



*Vaccination pens in Central Africa*

EDF

## Production

The 1974-75 production of beef was 15 000 tonnes, three-quarters of the total meat produced in the country. Production from the Central African herds is worth over F-CFA 3 000 m annually, or about 4.5% of GDP.

To cover local consumption the central African Republic imports both live cattle and meat. In 1974 the imports of cattle from Chad and the Sudan were estimated at about 56 000 head. The scale of these imports has been comparatively steady for the past 10 years. Imports of meat ready for consumption cover only a small proportion of requirements, amounting to only a few hundred tonnes.

## Stock-raising development policy

### Objectives

The primary aims for the expansion of stock-raising is to increase the production of meat and thus reduce the imports from neighbouring countries.

The priority instrument for this increase is beef, which represents three-quarters of the country's animal production, and there are plans to increase the beef cattle herds and make them more productive. At the same time there will have to be some diversification, especially through promoting poultry-keeping etc. near the main consumption centres.

**Methods.** A number of measures are under consideration for overcoming the effective obstacles to an expansion in cattle production.

The first target is structural efficiency at all levels. This will include the strengthening of the supervision system, the improvement of the health and hygiene controls, setting up additional production areas and the adaptation of national legislation to the development targets.

On the technical side, the key measures will probably be improvement in animal health protection, scheduling of new pasture areas and the development of better techniques for using the pasture.

In view of the importance of stock-raising to Central Africa, and the scale of the prospective outlay, external finance is a necessity. In the past there has been both bilateral and international aid and the sources concerned are still cooperating both financially and technically.

## Aid from the European Development Fund

The stock-raising industry has always been one of the important items financed by the EDF.

— One of the first projects was to bring trypano-tolerant cattle into the rural districts, with a view to converting a population of arable farmers into a population of mixed arable-pastoral farmers.

— In the principal stock-raising area in the west, the fund helped in setting up the necessary facilities for the better management and better health control of the cattle. More than 500 km of cattle tracks were laid down, a number of veterinary centres were built and the technical stock-raising college at Bouar was built and brought into operation.

— The M'Bali grazing ranch was laid-out over 24 000 ha and completed in 1973. It is close to Bangui and its primary purpose is as a reception centre for cattle which have come on the hoof from their areas of origin and are often in very bad condition. It is also designed to serve as a transit and dispatching centre to keep the Bangui market regularly supplied with animals of good quality.

— The EDF is also intervening in an important project at the next stage of the production line. This consists of a cold-storage abattoir at Bangui. It will be able to deal with 250 cattle per day, in excellent hygienic conditions, so that it may ultimately help in promoting a meat export trade. Work on this project has been in hand since August 1974 and completion is scheduled for the end of 1976.

Another operation started in August 1975 is of special interest to the second stock-raising area in the eastern-central part of the country. It is meant to improve the hygienic condition for Bororo cattle concentrated in this area, which lies around Bambari. The necessary infrastructure is being put up for regular and effective examination of the herds. A second section provides for a supply of medicines and anti-parasite products and the development of pastoral techniques which will make it possible for both herds and pastures to be better handled.

The total investment covered by these interventions is F-CFA 2 780 000 m. Taken together they constitute an integrated development plan which has had a considerable effect on stock-raising in Central Africa and on its importance as a motive force in the country's social and economic development. ■

A.G.

## EEC animal husbandry projects

The European Development Fund has committed some UA 86.2 m to animal husbandry projects, in a wide sense of the term, in 18 countries.

Of this, EDF I (figures up to the end of 1974) provided UA 31 241 000; EDF II (up to mid-1975) UA 37 023 000; and EDF III (mid-1975) UA 17 938 000.

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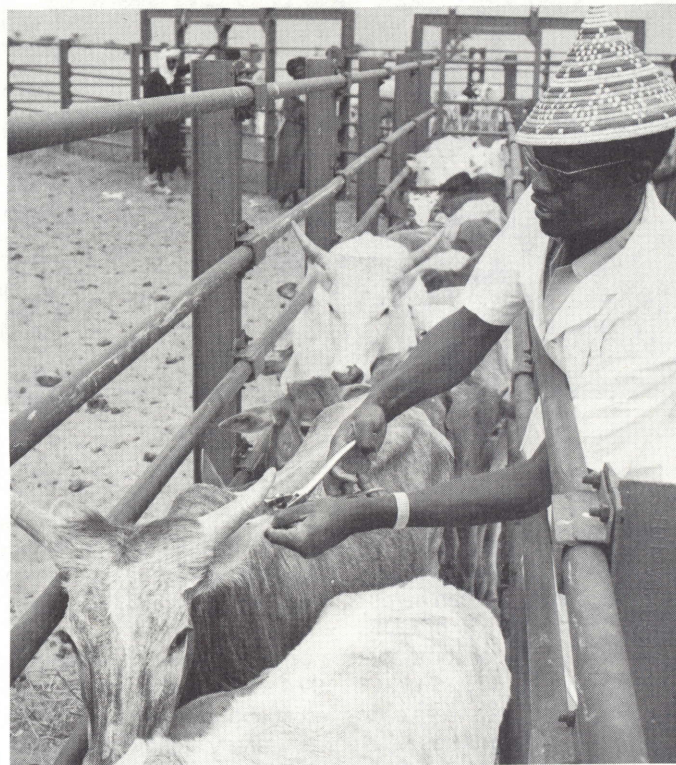
Much the biggest single activity in this field under EDF I and II has been supplying water in Sahelian countries and others hit by the recent drought. The wells dug in these countries (Niger, Chad, Mali, Mauritania, Senegal, Cameroon, Somalia, Benin, Ivory Coast) have usually served to provide for both man and beast, but are included here as animal husbandry projects. This action was taken in reply to an obvious priority and nearly half the commitments of EDFs I and II went towards providing water. At the same time, a wide-ranging campaign against cattle pest was being supported by the fund in Chad and Mauritania, in cooperation with USAID in a number of English-speaking countries.

The second major area for EDF investments has been improving production, which has absorbed well over a quarter of the commitments and included a good deal of research projects, among them a general study of stock-raising in the Sahel countries.

The massive veterinary action taken in the '60s has allowed the developing countries to take over new responsibilities, and attention has swung towards modern animal husbandry methods and away from the traditional sector.

The infrastructure for a modern meat industry began to be laid down, at least in its essentials, by EDF II for the most part, with the financing of abattoirs in several countries and commercial studies. The trend from short-term to long-term action has been confirmed under EDF III, where more than two-thirds of the Fund had been committed, by mid-1975, to improving production through the introduction of new breeds, examining feeding and stock-raising techniques, setting up cattle ranches, etc. Veterinary training has continued and EDF projects have included the construction of schools as well as veterinary posts.

The table on the next page sets out EDF commitments to animal husbandry schemes up to mid-1975 (end of 1974 for EDF I).



*Cattle immunisation centre at Bogué (Mauritania)*

### Water

The immediate purposes of the water-supply projects were generally:

- to provide more water at shorter distances;
- to make new pasture available;
- to improve the quality of the water.

Longer-term objectives were to increase the numbers and weight of the cattle and to improve their health. These aims were self-evident. What was not obvious at the time was that the success of the wells could have negative consequences. Herds tended to collect around them, destroying not only the existing pasture but the soil by sheer weight of numbers. Moreover, the clean water they might find at the wells could not compensate for the parasite-ridden water they were likely to drink elsewhere. The lessons drawn from this experience were learned for the future.

## Health

The veterinary measures taken under EDFs I & II included UA 1.3 m for constructing veterinary centres and posts in outlying areas, and UA 6.0 m for the Inter-State campaign against cattle pest.

The EDF financed the latter action in seven countries (Came-

ron, Upper Volta, Mali, Mauritania, Niger, Senegal and Chad), while other donors continued it in other countries.

The campaign, from 1962-69, covered different geographical zones in three phases:

- **1st phase:** Cameroon, Niger, Nigeria, Chad;
- **2nd phase:** Ivory Coast, Benin, Ghana, Upper Volta;
- **3rd phase:** Ivory Coast, Gambia, Guinea, Liberia, Mauritania, Sierra Leone, Senegal, Chad.

### EDF animal husbandry projects (commitments)

UA'000

	Supplying water	Veterinary measures	Improving production	Constructing abattoirs	Teaching, research, studies	Commercial structure	TOTAL
EDF I (end '74)	19 788	5 497	1 727	1 782	2 447		31 241
EDF II (mid-'75)	11 198	2 340	10 126	9 438	1 862	2 059	37 023
EDF III (mid-'75)	1 716	130	12 683	2 823	586		17 938
TOTAL	32 702	7 967	24 536	14 043	4 895	2 059	86 202

Source: EDF — bi-annual report, Office for official Publications of the European Communities.

*A side of beef from the anatomical point of view—veterinary school at Niamey (Niger)*



During it, 81.5 m vaccinations were carried out on an estimated 32 750 000 head of cattle, which amounted to a coverage of 84.4%. It was reckoned at the time that 80% coverage would eradicate the disease. The number of outbreaks at the end had fallen from several hundred annually to less than a dozen on average in each zone by 1969, and deaths from an annual average of 17 000 before the campaign to 500 odd in 1969.

The campaign was therefore remarkably effective. Soon after it ended, however, new outbreaks appeared to be on the increase. The developing countries involved undertook to carry out the necessary follow-up action after the campaign and the importance of this became apparent.

### Production

Measures to improve production, including the establishment of breeding, stock-raising and feeding stations and the introduction of new breeds, have become by far the most important EDF animal husbandry activity.

The main projects are:

- Two ranches in the Central African Republic, one for cross-breeding and the other for feeding;



**Abattoir at Bamako (Mali)**  
*one of the most up-to-date in black Africa*

- two cattle-raising stations in the Niari valley, Congo;
- a cattle-raising ranch in Gabon;
- a programme to improve the health and quality of cattle in Somalia;
- a breeding station for N'Dama cattle in Mali;
- an animal husbandry programme in south-east Mauritania;
- a cattle programme in the Senegalese brush;
- the Maraoua ranch in Ivory Coast;
- technical assistance and research, including a general study of animal husbandry in the Sahel.

One project of particular interest, as it was practically the only one in the traditional rather than the modern sector, was the introduction of Baoulé cattle into an area without previous experience of cattle-raising, in the Central African Republic. The reason there were no cattle there before was, of course, sleeping sickness, and the Baoulé is resistant to this disease.

An initial delivery of 3 200 head grew to 8 400 in 1965, of which 7 600 were on hire to the local farmers, and by 1970 the herd had grown to 16 000 head. It was estimated that the country should have around 130 000 head of Baoulé by 1985, allowing an annual slaughter of some 7 500. The project was strictly supervised and, after a slow start, has clearly been enthusiastically and successfully received by the local farmers.

An example of a project in the modern sector is the Niari valley scheme in the Congo, which aimed at establishing a relatively dense cattle population in 22 000 hectares of good pasture developed over five years. Senegalese N'Dama cattle were chosen for their resistance to sleeping sickness. Delays in the project highlighted the importance of certain general aspects, mainly the shortage of trained technical staff; the difficulty of obtaining and transporting the cattle, due partly to the poor organisation of the markets; and the fact that however resistant to sleeping sickness special breeds may be, they are not impervious to constant attack by the Tse-tse fly.

## Abattoirs and commercial structures

Some UA 14 m has been committed to building abattoirs, in Bamako (Mali), Ouagadougou (Upper Volta), Tananarive (Madagascar), Saint-Louis and Thiès (Senegal) and Bangui (Central African Republic). A study has been made on building an abattoir in Curaçao (Netherlands Antilles).

The Bamako abattoir has been in operation since 1965 and was the most modern in West Africa, with a capacity of 9 000 tons of meat a year. An abattoir on this scale requires careful integration into the commercial structure of the region and the EDF has financed work on this problem. In the more open areas of West Africa, transport on the hoof is the cheapest way of distributing meat and importing countries make use of this advantage, while cheap, lower-quality meat is generally preferred to better but more expensive cuts. In Central Africa, where transport on the hoof is more difficult, a proportionally larger facility for freezing and exporting meat might be required.

The EDF has financed some work on sales structures, covering markets, cattle trails, frontier controls, etc. An example is the study on the trail between the Niger frontier and Parakou in Benin. A programme of cattle trails was carried out in the Central African Republic.

## Teaching, research, studies

The bulk of EDF investments here have been committed to veterinary or other forms of technical schools at various levels in the Central African Republic, Niger and Chad and the construction of a research centre at Kolda in Senegal.

Other projects have covered technical assistance and a number of studies, including a general examination of the stock-raising situation in the Sahel. ■

# New approaches to African cattle-raising

## A commentary by the head of the animal husbandry service at the EEC Commission

► *Mr Overzee, some futurologists have suggested it would be possible to turn certain parts of Africa into meat-producing areas on a par with Latin America. How plausible is this?*

— This comparison is sometimes made, usually with reference to West Africa, but it really isn't very plausible because the climatic, ecological, sociological and sanitary conditions are fundamentally different. For example, sleeping sickness is one of the main problems in West Africa but it does not affect Argentina. Altitude is another difference which poses problems of another kind in many parts of Africa.

In Argentina, animal husbandry is primarily a large commercial enterprise, while in Africa it is still first of all a means of subsistence. The gap between these two types of production is huge. On the one hand there is a lot of capital and the thoroughly commercial management of big business; on the other there is no capital—just the herdsman and the few animals he owns. On one side there is investment and speculation—the investments could go into something else. On the other there is no question of speculation, just of life pure and simple, and that involves considerations which make no commercial sense and are sometimes pretty astonishing; for instance, the nomads often keep old animals in their herds which, from a commercial point of view, they would be better off without, but just because these animals have survived hard times before they are kept on as a kind of insurance against the constant risk of drought and epidemic.

This said, I certainly don't consider the prospects for animal husbandry in Africa as negative. Already under the present conditions there are some very concrete development possibilities, for instance in stock-raising ranches, fattening ranches, feedlots, and in getting the local peasants to fatten the cattle with their own means. But we must go carefully, without disturbing too much, because development must be kept in line with the material possibilities.

► *What is the present thinking behind EDF animal husbandry projects?*

— EDF projects automatically take account of existing difficulties and they will be oriented, according to the short and medium-term prospects, towards making animal husbandry a real economic activity. They require a lot of caution. The long-term

perspective cannot be taken as a basis except insofar as it constitutes the extension and logical consequence of the shorter term objectives. And these of course will have to be achieved in practice before we go any further.



*Cattle-raising is of fundamental importance in the sparsely populated eastern region of Niger*

The idea behind some projects is to encourage the nomads, who are stock-breeders par excellence, to sell their steers as young as possible. The nomads mostly use the milk from their herds and eat very little meat, not because they don't like it but because beef is too expensive for them. When they do eat meat it is usually mutton or goat. The steers sold by the nomads ought then to be taken over by the settled farmers in the Sudano-Sahel zone, or sent to ranches, to be raised and fattened either in other ranches or in feedlots. These ranches would mean additional forage would have to be provided, and this seems pretty well impossible without there being processing industries for agricultural produce in the area. The waste products from these industries, which are often of high nutritional value, would provide the additional rations for the livestock.

Something else should be mentioned here: the increase in purchasing power in some regions, along the coast of West Africa for instance, has resulted in a higher demand for meat and two or threefold rises in its price to the consumer. Such a big price rise should make it possible to provide better returns to the producers. In other words, it becomes possible to spend more on meat and milk production, on giving supplementary feed to the livestock and even on using better land for animal husbandry, either for forage cultivation or simply better pasture.

► *How far has the thinking behind EDF projects been influenced by the Sahel experience?*

— It might sound cruel, but the recent drought in the Sahel was not the first and will not be the last. And the inhabitants of the region are well aware of the fact. Only this time, the modern media and means of communication brought it home to the industrial countries, so that the West was deeply disturbed.

Obviously everyone concerned with animal husbandry in Africa, above all the herdsmen, is anxious to learn from what happened during the recent drought. There are lessons there which should lead to a new policy, perhaps even a new conception; but whatever they are, and whatever theories are thought up, they must be applied with plenty of flexibility, bearing in mind that the herdsmen can accept certain changes in their customary methods more easily than before. Drought is a natural hazard and development programmes in future must aim at a better balance between the animal population and the available grazing, instead of being limited, as so often in the past, to the animals' health and watering.

This means that the Sahel zone should no longer carry out all the stages of animal husbandry. Since the nomads are excellent cattle-raisers, as I've said, the Sahel's basic vocation should be to breed and raise calves. The young animals should then be sent south to better-watered areas. This idea has been generally accepted. It would mean a much closer economic association between the Sahel and the adjacent Sudano-Sahel zone, preferably involving several countries.

As far as health conditions are concerned, it goes without saying that the development of animal husbandry depends on veterinary care. For the watering, most experts consider that too many water-points were provided in the past. But others

think it was because there were not enough that during the drought the herds were too concentrated around these wells. One thing is certain at any rate: the size and mobility of the herds can only be controlled by the siting and the capacity of the water-points, and this is essential to the balance between the animal population and the available grazing. So in future every water supply programme must be prepared according to the available grazing.

✳ *What are the main EDF animal husbandry projects at the moment?*

— In the context of the drought we've just been talking about, I would only like to mention the Ferlo project in Senegal, which should lead the way for other more or less identical operations in other areas if it works. This project represents a new approach to cattle-raising in the Sahel, by which the traditional herdsmen would become breeding specialists. The young bull-calves go almost immediately to a cattle-raising ranch, where they develop good bones, and then to an intensive feeding station or a feed-lot. This project is being followed with close attention both here in Brussels and in the other Sahel countries. Success would be very encouraging, and if it is only partially successful the lines that work will be followed up in Senegal and elsewhere.

✳ *The EDF has financed various studies on animal husbandry recently, which suggests that certain aspects of this field in the developing countries are still not very well known. What will these studies lead to?*

— The EDF has financed studies when a country benefitting from the fund has asked for them. These studies have been done in part on the general conditions of developing animal husbandry in a given country and in part on specific questions, such as the possibility of starting a ranch in a particular area in the ACP countries, which might get financial backing from the Community.

A special effort was made at the request of the associated Sahel countries in 1974. The Commission brought together an international group of experts on African animal husbandry to study the position of stock-raising in the Sahel zone and the protective measures that might be taken in the light of the drought. The results of this study were presented by these experts to a conference on stock-raising in the Sahel, which the Commission organised in Brussels in June 1974.

✳ *What are the difficulties in marketing meat inside and outside Africa?*

— It should be recognised that the existing marketing circuit has done a very good job for the traditional animal husbandry. It has been the cheapest way of moving out the animals the herdsmen wanted to get rid of. The traditional marketing circuit has also enabled the supply to the consumer to be evened out to some extent, taking into account the fact that the herdsmen tend to sell more animals in the dry season.

All the same, it should not be forgotten that there is a distance of anything between a few hundred and 2 000 kilometres between the stock-raising areas and the main centres of





*Benin has more than 400 000 head of cattle, mainly concentrated in the north*

consumption, and some of the animals sent to the abattoirs in the coastal area still cover this distance on the hoof.

So it seems like a sensible idea to encourage the slaughter of the animals near the production or fattening areas. This means certain facilities have got to be available—refrigerated transport by rail or road, and plenty of storage space in the abattoirs and/or in refrigerated warehouses supplying the main consumer areas.

If the peasants themselves fattened their cattle it could provide an appreciable increase to their family budgets, but this is only a secondary activity at present; the stock-breeders who could do the fattening are often scattered and have little idea of the cash value of a fattened animal. The answer here might be a collective contribution system of some sort, perhaps organised by cooperatives or para-State bodies.

While describing the new ideas about animal husbandry in West Africa, I said it would be a good thing if the nomads could get rid of their steers as young as possible. They are used to selling animals when they are several years old, and the question is whether they would be able to get a good price for a young calf. If this could be managed it would at

least help towards restoring the pastures, and if the present marketing system does not allow it some measures might perhaps usefully be taken, although these have still to be worked out.

As far as the problem of marketing outside Africa is concerned, this is a question of sanitary controls and the agricultural policies of the importing countries.

▶ *How much of EDF 4 will be taken up by animal husbandry projects?*

— Under the three previous EDFs, animal husbandry only received modest allocations. But there is now an "animal husbandry, fisheries and fish farming" unit among the services of the EEC Commission's directorate-general for development, which starts operating when EDF 4 comes into action. This is proof of the Commission's interest in speeding up the development of animal husbandry in Africa and in the ACP in general. ■

Interview by  
B. T.

## Some examples of EDF-backed projects

### UPPER-VOLTA

#### The Ouagadougou cold-storage abattoir

The cold-storage abattoir at Ouagadougou came into operation in December 1975. This is an important agro-industrial investment which required a number of economic surveys and financial participation on a large scale by the EDF. The investment cost was about F CFA 800 m, equivalent to FF. 16 m; and an installation on this scale in a country with only a small population, and ranking among the countries economically poorest in the world, naturally gave rise to a number of anxieties and even doubts as to whether the new capacities could be used and would be profitable. A partial reply was given at the opening ceremony by Mr. Josef Haffner, the EEC Commission delegate in Upper Volta. "The criticism is good common sense", he said, "and at first sight it looks well founded; but remembering the severe restrictions imposed by meat-importing countries, it is quite clear that slaughter which is not carried out under the strictest hygienic conditions, avoiding unnecessary handling as much as possible, would never secure approval in the international meat market".

The Ouagadougou abattoir is up-to-date and automatic, expressly designed for meeting all the requirements of the international meat trade. Upper Volta is a pastoral country and is already the chief meat supplier to neighbouring countries, especially the Ivory Coast.

But there are some doubts about whether this new complex can be run at its full capacity. Mr. Sitta Barry, a veterinary surgeon and the director of the abattoir, explained that the difficulties encountered in this first phase at Ouagadougou are due to the reluctance of the inhabitants to "abandon their traditional methods of slaughter in favour of modern procedures for the processing and marketing of meat" which this abattoir makes possible. "The opposition was somewhat outspoken from the butchers, for they had until then been slaughter-retailers, most of them working wholly for their own account. Their attitude is easily understood", Mr. Barry continued. "But in reality the biggest difficulties are those created by the distance from the cattle market and the fact that the workers have not yet grown accustomed to night work".

It was also noted that meat prices rose considerably just after the cold-storage abattoir had come into operation, and the



*Dressing carcasses at the Ouagadougou abattoir*

inference made was that this was due to high slaughtering and processing costs. Mr. Barry said this was not the case. The rise in meat prices in the markets of Upper Volta was "linked with supply difficulties" and with the international inflation, he said.

The rate of utilisation of the abattoir six months after starting up is "25 % of its ultimate capacity and 50 % of its initial capacity". This is still on the low side, thinks Mr. Barry; but he made the point that "the intake of small ruminants, which had been scheduled at 300 head per day by 1980, has already reached saturation, with a daily average of 317 head". The director said the installations were expected to reach full capacity operation quite quickly, but for this both the upstream and the downstream organisation servicing the abattoir should be made to ensure good handling of the live animals and the meat.

# **IVORY COAST**

## **The Maraoué ranch**

The ranch project in the Maraoué in the Ivory Coast was given a subsidy of u.a. 3 331 m in 1974. The aim is to have a herd of 10 000 beef cattle in some 40 000 ha of savannah by the end of the seventh year of the project. The young cattle of selected breeds, produced on the ranch, are intended for stock-raising firms in rural areas and for peasant stock-raisers. The meat produced is for the home market. The Community finance will cover fences, cattle tracks, fire-fighting equipment and wells for up to 42 000 ha of pasture, including buildings, equipment and technical assistance. The Ivory Coast will defray the expenditure on staff and operations on the ranch and supply the cattle for the basic herd. The Ivory Coast contribution is estimated at u.a. 2.614 m, or more than 40 % of the total amount needed.

The project can be extended at a later stage to take in an

extra 40 000 ha and a further 10 000 beef cattle, provided the ranch is by then able to provide its own finance, or to raise it on its own account in the Ivory Coast or elsewhere. The effect of the ranch is expected to be very important. It is hoped the local beef requirements will be covered (1), the national cattle population increased and improved, productivity increased and additional incomes created for the small rural cattle farmers.

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(1) At present the Ivory Coast has a big meat deficit. Production covers only about 35 or 40 % of consumption and this figure will have come down to 30 % by 1985 if nothing is done to improve matters. Moreover, the prices of locally produced meat are expected to be 20 or 30 % lower than imported meat. If all the current stock-raising projects are brought to fruition, the saving in the country's foreign currency expenditure would be about F-CFA 6 000 m by 1985.

# **CONGO**

## **The Niari ranch <sup>(\*)</sup>**

There were two stages in the establishment of the Niari ranch, the first of which was put in hand in 1966. The project was aimed to deal with the Congo's meat deficit, estimated in 1972 at 90 % of consumption (i.e. deficit of 4 300 tonnes out of 4 700 tonnes consumed). The same problem affects many countries in Africa, and though it is only lately that it has really come to light it has been under consideration by a number of finance organisations, especially the World Bank. It is a problem which cannot be solved solely as a concern of French-speaking Africa, for the deficit is too big to be covered adequately by the countries which are normally exporters, particularly since their own national consumption is growing.

The EDF aid, amounting to u.a. 2.7 million, was used to set up two stock-raising farms covering a total of 20 000 ha at Louila and Louboulou in the Niari valley. In the first phase the herd was to be about 8 500 head, which compares with a national cattle population in 1969 of 36 000 head. They are at present handled entirely on ranches, and are earmarked either for the meat trade or for the selection of heifers for breeding, so as to create a nucleus of cattle for subsequent distribution to peasant farmers. The aid covered the farm equipment—the laying out and fencing in of the pastures, health equipment for the cattle, cattle tracks, water-points and growing extra forage crops. It also covered the purchase of heifers for breeding, herds of trypano-tolerant breeds, the necessary material and supplies and technical assistance through two successive five-year periods to continue at least until after the 1976-77 season.

Though no time was lost in setting up the ranches and buying the stock, the pace had to be materially slower than had been anticipated. The original timetable for buying the heifers for breeding could not be carried out because the supplying countries were not able to do so owing to their diminishing export surplus, and part of the purchase had to be made in the Congo itself. For technical reasons, too, the site chosen for one of the farms was abandoned in favour of another (1); thirdly the survey bureau handling the technical assistance was obliged to make several successive changes at the level of project director. This had repercussions in the planning at different stages, and the counterpart Congolese directors scheduled to take over from the expatriate experts proved difficult to recruit.

The profitability thresholds and the rates of normal operation of the ranches will therefore be reached at a later stage than was originally planned.

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A project of this type leads to a number of general conclusions.

To begin with, the Niari experiment confirms the difficulties which stand in the way of stock-raising projects carried out in countries where stock-raising is a new activity (2). These difficulties fall into several classes. The technical ones are con-

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(1) At the Lhoma site the forage potential was not very high; but the Congolese authorities at this time were anxious to keep the best land for arable farming. Subsequently, with the growth in the country's meat deficit, this policy was reserved and the new Louboulou site found for the ranch had a much bigger forage potential.

(2) In the Congo stock-raising was first introduced in the '50s.

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(\*) Extract from a study entitled "Fonds Européen de Développement, 1960-75 — 15 years of development cooperation" by Marie-Hélène BIRINDELLI.

cerned with finding an adequate number of cattle with the desired qualities and characteristics; deciding on the best way of running a herd in the region concerned and dealing with the very important problems of health and hygiene. The personnel problems include recruiting and training the small staff needed in a country which has no tradition of animal husbandry; and the economic difficulties are connected with bridging the gap until the herd reaches the profitability stage. Secondly, the Niari project highlights the long interval needed before the problems of ranching are fully mastered, more especially those of personnel training, whether for workers at the lower levels or for medium-grade supervision, or most of all the management personnel who are to deal with the technical aspects and the general administration of the ranch.

These problems were more or less known before the EDF

undertook its commitment to the Niari valley scheme, and it was on this account that it chose to begin on a small scale, which could not be expected to yield more than a small proportion—1 000 or 1 300 head of fatstock annually, or nearly 150 t.—of the meat needed to solve the country's problems. The initial EDF intervention, however, was intended as a guide for subsequent schemes.

More recently the World Bank group has also been tackling the same problems. In 1973, US AID accepted a commitment on much more ambitious lines, for a ranch on the Dihesse, to cover 35 000 ha and a herd of 35 000 head. Completion is scheduled for 1981, and its handling has taken into account some of the lessons from the Niari project, including the forage problem, the supply of heifers for breeding and the employment of personnel trained on these same ranches.

## **MALI**

### **EDF aid for animal husbandry**

In 1972 Mali had five million beef cattle and 10 million sheep. Stock-raising was (and still is, despite the drought) Mali's chief traditional source of wealth and its primary source of foreign currency. The 1972 exports amounted to 12 000 m Mali francs, or 35% of the total exports during the year.

The development of the Mali cattle industry ranks as a strengthening of a traditional activity in some parts of the country, while in others it is a diversification of the agricultural economy.

In the Sahel zone, extensive nomadic stock-raising is among the few forms of activity which are possible in this region. The essential problems are the health of the herds and their water supplies.

In southern Mali, on the other hand, the stock-raising is associated with the arable farming, which facilitates both animal traction and meat production. The development of this system, however, is obstructed by the prevalence of the tse-tse fly.

These are the basic elements which have determined the official livestock policy of the Mali government and the aid given to it by the European Community through the EDF.

Up to 1972 the Community aid to the stock-raising industry consisted mainly of water supply arrangements and health and hygiene measures.

The first intervention by the EDF dates back to 1960, and was connected with rural water arrangements. It covered digging 45 water-points (20 in the Nara district, 20 in the Gao neighbourhood and 5 near Niafunké) and re-digging 16 ponds along the three principal cattle tracks linking the Macina and Sahel zones. These aroused keen interest among the herdsmen, and they are still very well frequented. In addition, the Community financed an attack on rinderpest throughout West Africa, involving the beef cattle in three systematic vaccination campaigns.

The Community was also out to improve the marketing of the cattle and the meat supplies to the capital. To this end it financed the building of an abattoir at Bamako, which has been in operation since 1965. Its equipment is complete and

well adapted to the conditions in which it works, but there have been various difficulties about the upkeep of the mechanical and electrical equipment. In 1970, therefore, the Community took to its own charge the technical assistance and the material needed for putting the apparatus in order and training the Mali maintenance teams.

Since 1973 the Community aid has been aimed at direct encouragement of beef cattle production, based on projects put forward by the Mali government. Outstanding among these is the Yanfolila project.

This is a region where there has long been a stock-raising industry, using beef cattle of the N'Dama strain, which is trypano-tolerant. For this reason the Mali authorities seeking to develop the cattle-raising took steps to make it the cradle of the pure N'Dama breed, so that it would be able to supply both sires and working animals. This region can in fact supply breeding stock to several West African countries which would like to secure a quick development of trypano-tolerant beef herds, but are having difficulties in setting up an initial nucleus of pure stock in first-class health and hygiene conditions. Moreover a growing number of working animals are needed in nearby regions (Bougouni, Silasso, Ségou and others), where rice and cotton-growing and other industrial crops are being developed.

The Yanfolila project is a 6-year operation. It includes:

- setting up an N'Dama breeding station to improve the beef cattle population in Mali and promote animal traction;
- carrying out a health and hygiene campaign on all beef cattle in the Yanfolila area, consisting largely of regular vaccination;
- an operation to curtail or eliminate onchocercosis, a human malady which prevents all development action in the areas close to rivers.

The community is also helping Mali in its preparations for the next stages of livestock development. This includes, for example, finance for technical surveys, such as that covering grazing and fattening possibilities at the Niono ranch. ■

## The Maghreb agreements

by Yves RENIER

The cooperation agreements with the Maghreb countries, which are shortly to be signed, are the culmination of a process which dates right back to the formation of the European Economic Community. The principle of an association between the Community and the independent countries of the French franc area, including Morocco and Tunisia, had been the subject of a declaration of intent appended to the Treaty of Rome. The Community was to have implemented this declaration of intent by association agreements with both these countries, to be finalised in 1969. The scope of these agreements, however, had been limited to trade matters and their provisional character was therefore recognised from the outset by their being given a duration of only five years. It was agreed in principle that they should then be followed by agreements drawn on a wider basis. The cooperation agreements now awaiting signature are the fulfilment of this principle.

In 1963 Algeria had just become independent and had stated a wish to open negotiations on an agreement with the Community. These negotiations, however, were not to begin till much later — at the same time as those with the other two Maghreb countries — after the EEC summit conference at Paris in October 1972 and had laid down the overall external policy.

The cooperation agreements with the Maghreb countries, together with the agreement with Israel, are a landmark in

the Community's Mediterranean policy, which is currently being carried further by the negotiation of agreements with the Machrak countries.

The Maghreb agreements, like the Lomé Convention, are based on the principle of comprehensive cooperation and the combination of different lines of approach which will contribute to the economic and social development of the countries concerned, whether in relation to economic, technical and financial cooperation, trade or manpower. The

agreements are of unlimited duration, which enables this comprehensive kind of cooperation to be given a forward-looking perspective making it possible for problems to be handled on the basis of long-term prospects.

### Economic, technical and financial cooperation

The section in these agreements providing for economic, technical and financial cooperation is the most dynamic, in that it not only provides for the Community to contribute financially to the cost of general economic equipment in the three Maghreb countries, but also lists a number of other fields in which the measures taken will depend on what is done on both sides to make the cooperation effective. These measures are as follows:

- help towards marketing and sales promotion of products exported by the Maghreb countries;
  - industrial cooperation, especially by promoting contacts between industrialists on both sides to facilitate the acquisition of patents and other industrial property on favourable terms, and working towards the elimination of non-tariff and non-quota obstacles to access to one another's markets;
  - encouragement of private investment, consistent with the mutual interest of the two sides;
  - cooperation on science technology and in environmental protection;
  - cooperation in the fisheries sector;
  - exchanges of information on the economic and financial position on each side;
  - (for Algeria and Tunisia) cooperation in relation to energy, encouraging participation by EEC firms in prospecting, production and conversion programmes and the good management of long-term delivery contracts for oil products.
- The measures listed in the agreements are certainly far from being the only ones. It will be for the parties to the agreement to make use of the institutions (the Council and the Committee of Cooperation) for setting up a wide system of cooperation, conforming to the interests of each and consistent with

MAGHREB STATISTICS	Algeria	Morocco	Tunisia
— Population (1972) million	14	15.8	5.3
— incl. agriculture %	57	52	58
— GNP (1972) u.a. million	5 637	3 924	1 879
— GNP (per head) u.a.	396	249	350
— Annual growth-rate, 1965-1972 %	3.5	3.0	3.7
— GDP (1972):			
● agriculture %	8.9	28	23.7
● oil and gas %	18.2	25	24.9
● industry %	25.6		
● services %	47.3	47	51.4
— External public debt (1972) (\$ US million)	1 517.8	852	1 272 (1973)
— EEC imports from (1974) u.a. million	2 031	869	404
— EEC exports to (1974) u.a. million	1 961	751	526

the wishes expressed in the agreements. The results of the cooperation ultimately depend on the measures each party decides to adopt on its own initiative and within its legislative and administrative competence, and also on the extent of the cooperation by other economic bodies, which, so far as Europe is concerned, means those which have the technology and general know-how. Against this background the institutions set up under the agreements can be regarded as supplying the drive in matters of development and cooperation.

### The financial side

In each of the agreements there is a finance protocol laying down the amount of the Community's financial contribution to the cooperation with the three countries, and the manner in which

it shall be allocated (see table below). The funds provided are to be used within five and a half years after signature of the agreements. They are intended for financing investment projects for productive or infrastructure purposes, for promoting industrialisation and the modernising of agriculture, for technical cooperation in investment projects and for training schemes.

The scale of the Community contribution must also be evaluated in terms of the three-sided cooperation, the other side being the oil-producing Arab countries. The Community contribution will become the more effective through this triangular cooperation and should therefore also be regarded as a catalyst for the flow of funds from external sources.

### Trade

The agreements with the Maghreb countries provide free access to the Community market (free of duties and quota restrictions) for all raw materials and all industrial products originating from the Maghreb countries. There are only two temporary restrictions — cork products and oil refinery products, for which the Community has retained the right, up to the end of 1979, to impose customs duties in the event of imports rising above predetermined ceilings.

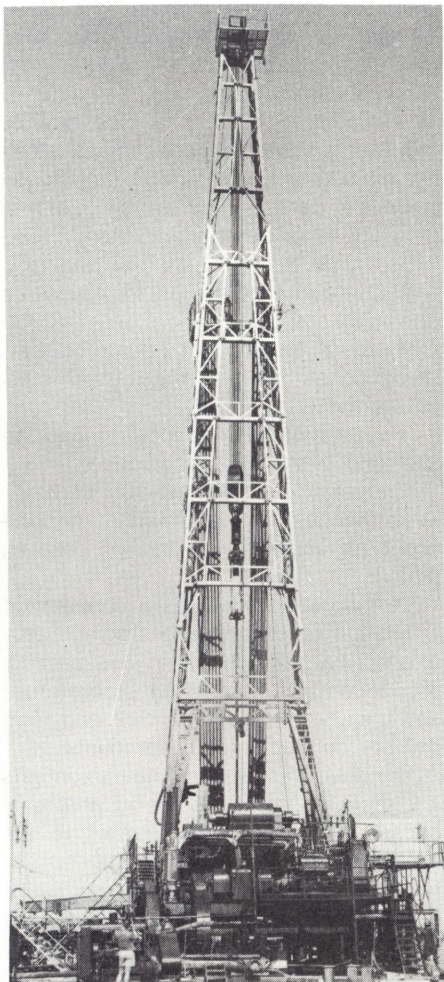
Apart from a few exceptions, Morocco and Tunisia have already been taking advantage of this system since the association agreements of 1969.

For agricultural produce the approach has been more pragmatic, and the concessions were fixed in respect of lists of



... wine presses in Algeria

Drilling for oil and...



Pierre

Hardouin

products, depending on the specific interests of each partner. The differences between the three lists of products and in the concessions granted are nonetheless relatively limited since the interests of the three countries are not widely different.

The main products on which concessions are made are those which account for the bulk of Mediterranean farm produce — citrus fruit, wine, olive oil, fresh and preserved fruit and vegetables (potatoes, tomatoes etc). Apart from olive oil, for which there is a rebate of the

million u.c.

	Algeria	Morocco	Tunisia
— Loans from EIB	70	56	41
— Loans on special terms	19	58	39
— Non-repayable aid	25	16	15
<b>Total</b>	<b>114</b>	<b>130</b>	<b>95</b>

— Loans on special terms are granted for periods of 40 years, with an initial delay of 10 years before inception of sinking fund payments. The rate of interest is 1%.

— Loans by the Bank from its own resources, and on its normal loan terms, usually receive interest rate rebates of 2%, financed from the funds provided for non-repayable aid.

price-equalising levy, most of the concessions consist of duty reductions of between 20 and 100%. The granting of the concessions, incidentally, leaves the common agriculture policy and its rules intact.

The chief difference between the treatment of the three countries is in respect of wine. For historical reasons, wine accounts for practically all the exports to the Community from Algeria, and the Algerian agreement accordingly provides for a five-year transition period during which the Algerian exporters will have special facilities.

The trading system thus defined for the agricultural exports of the Community's partners is an improvement on what was provided for Morocco and Tunisia under the 1969 association agreement. Owing, however, to the need for safeguarding the interests of European agriculture, the range of concession was inevitably limited, and it was not possible to eliminate the special system which France still applies to these countries in respect of some of their exports. It was therefore agreed outside the texts of the agreements themselves that the three countries can continue to have the benefit of preferential access to the French market for certain products. This is a

temporary measure, intended to give the Maghreb exporters time to spread over the wider Community market the sales which are at present concentrated in France, and so to secure maximum advantage from the Community concessions. The community idea is that this system shall come to an end at the beginning of 1979 — the date fixed for the entry into force of the new system resulting from a review of the agreements timed to begin on January 1, 1978.

The system laid down for agricultural produce gives concessions on the Community market to about 80% of the Maghreb agricultural exports.

The Maghreb countries have accepted the principle that the elimination of obstacles to trade between the partners shall be the ultimate target, subject to a proviso that this shall be without prejudice to their own economic development requirements. In practice the agreements do not impose upon them any immediate reciprocity requirement. All that is needed of them is to consolidate the existing system, but reserving the right to amend it at any time for one or more products, if this should be necessary for the purposes of their development. It is

provided that the ability of the Maghreb partners to take steps towards reciprocity shall be examined at a subsequent stage and for the first time in 1978 when the agreements come up for re-consideration.

## Migrant workers

Many Maghreb nationals are currently working in the Community, and, with the close links of cooperation being set up, it would have been impossible to avoid including stipulations about manpower in the agreements.

These agreements guarantee Maghreb workers equality of treatment with the workers of EEC countries in regard to conditions of work, pay and social security coverage.

A number of other provisions are also included. These give the right to accumulate the rights and advantages acquired in a number of EEC countries, and the right to transfer to the Maghreb workers country of origin certain specific advantages, such as pension rights and life insurance.

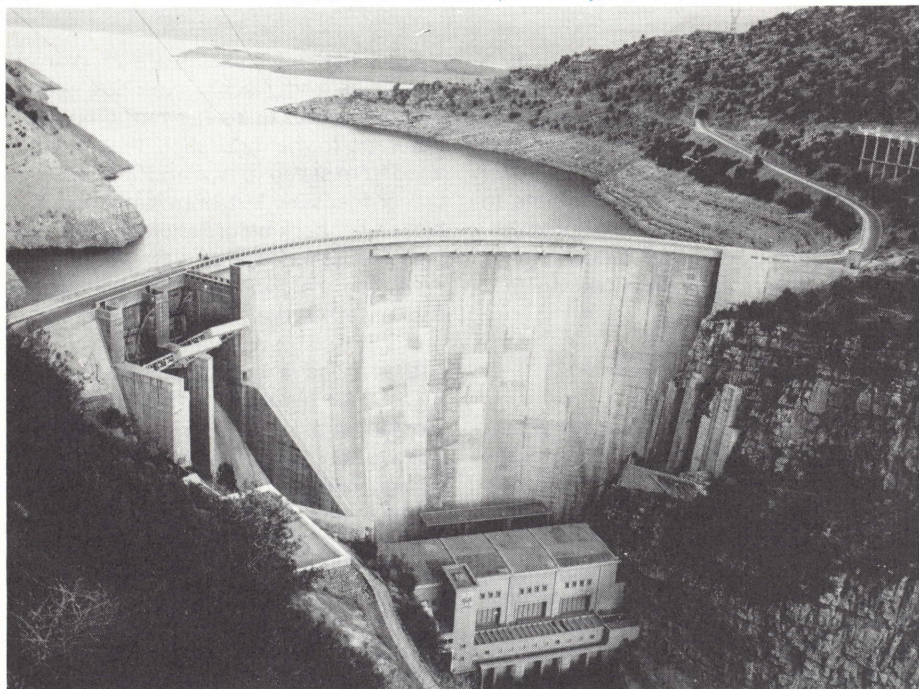
It is also specified that the partners shall exchange views on a number of questions, including those of a social-cultural character, affecting workers from the Maghreb countries.

\*  
\* \*

The cooperation agreements with Algeria, Morocco and Tunisia, though they embody a number of special features, come in the same category as the Lomé Convention. Both in structure and in content, they are clearly aimed at setting up real economic interdependence with full respect for the freedom of each side. In the preambles to all three agreements, the partners state their desire to bring into being a new pattern of relationships between developed and developing countries, and so contribute to establishing a more just and better balanced economic order. The agreements, though they are of unlimited duration, provide for general reexamination of their content at regular intervals, so that each may be regarded as an instrument which can be improved and which it will always be possible to adapt and readapt to the ends and objectives it defines. ■

Y.R.

*Dam at el Ouidane (Morocco)*



## Condemned to drudgery

### The prospects of women in rural areas in the developing countries

by Clio PRESVELOU

The contribution of women in rural areas to the economies of developing countries is enormous. Yet, not only in everyday life but also in development policies, they are still treated as "second class" citizens, says Greek-born Dr. Clio Presvelou, Professor of Sociology at the Catholic University of Louvain, who travelled in 1975 as a Consultant for the World Food Programme in six developing countries (1) to evaluate existing programmes for women in rural areas in developing countries.

Economic and social studies, mission reports and measures in favour of women have long been overdue to that half of the

(1) Mexico, Colombia, Indonesia, Pakistan, Tanzania and Tunisia.



*Back from the fields: Mexican women carrying their hoes and the firewood*

J.J. Halber

world's population which is affected, in different ways and in different areas, by low social status, discrimination and a lack of recognition of their role in structuring community affairs and everyday life. After International Women's Year it is time to make a survey and draw up appropriate plans for action, based on the experience of existing practices and policies.

#### Food producers without social status

Over three hundred million women in the Third World are food producers in the subsistence economies of their countries. They tend and prepare staple foods to feed the household or to market surplus crops, home-made foods and beverages to buy clothes for themselves and their children. Their daily schedule is crammed with strenuous activities closely associated with food production and child care.

Take Thabia for example, a 25 year-old Tanzanian from Nachingwea. She gets up before sunrise, tidies her hut, prepares a beverage for her household (four children aged from seven to two and her husband), breast-feeds her last-born infant and puts him on her back before taking her hoe and going off to tend her plot. On her way she joins the other women of her community and together they walk for an hour or more. She plants and weeds her allotment, gathers food and occasionally stops to breast-feed her infant or talk to the other women on the neighbouring plots of land. For five hours she works in the hot sun and in high humidity. On her way back she gathers wood to cook the one family meal of the day (the harvest was bad this year). Loaded with her baby on her back, her garden produce and wood, Thabia goes back home and from there she takes another 20 minutes walk to carry water from the well. Hers is a typical day. →



About 75% of the work related to food production is carried out by women. Traditionally, the men's involvement is limited to clearing new plots of land for cultivation. But things are changing. In Ujamaa villages, labour is more equally divided between men and women as a result of the Tanzanian government's policy to eradicate sex discrimination. During the afternoon hours women are trained in economic and community activities. They follow literacy classes and are instructed in how to run a brewery, keep poultry or manage a pottery shop collectively to increase their income.

The daily work schedule of a rural woman is inflexible in the sense that the subsistence of her entire family depends on her farming activities. Nothing save illness, childbirth or serious emergencies can force her to fail to meet her prescribed responsibilities. If she is unable to carry on her work, the other women in the neighbourhood will see to it that her parcel of land is tended, vegetables and wood gathered and brought home, food for the family cooked and her children taken care of. She must always be available, able to adjust to adversity and to new demands so that the socially necessary tasks can be accomplished without harm to the community.

Despite the huge amount of work they furnished both in the fields and in the household, the women's contribution is not recognised and their social status is not considered equal to that of men. The explanation lies in the intrinsic valuation of women's tasks. These are not considered as "exchange-value" commodities, i.e. commodities exchanged for money, but as services rendered to the family, without economic returns and hence considered as "use-value" commodities. Men either produce commodities for the market or receive wages for their work. Women, on the other hand, make up the unpaid labour force.

This non-economic relationship of women to agricultural production explains much of women's inferior social status. If the right of women to proper agricultural training for a market economy is not recognised and put into practice, the increase in awareness throughout the world of women as food producers will only legitimate their social exploitation (1). Yet not only are women not treated as equal to men; efforts to improve their lives and their children's are often impaired by inadequate development policies (2).

## Development policies for women too

Development plans must be drawn up with both men and women in mind. It has become obvious by now that the introduction and consolidation of development policies inspired by Western (and male) norms have increased the marginality of rural women. Still more dramatic is the discovery that the passage from a subsistence to a money economy has consistently been followed by a deterioration in the position of women. A few examples of the adverse effects on women of unplanned innovations and development policies will clarify this (3).

Before the introduction of literacy campaigns the educational status of men and women was equal. This is no longer the case. Statistics show that women lag far behind men in literacy. Furthermore, the importance put on the formal education of boys, defined by Western principles as the future family heads, together with the adoption of separate curricula for boys and girls — another practice of the West — give the former the benefits of technical

competence for income-earning activities and leave the latter to fend for themselves and their children with age-old traditional tools. Such policies utterly overlook local cultural patterns of "matrifocality" and →

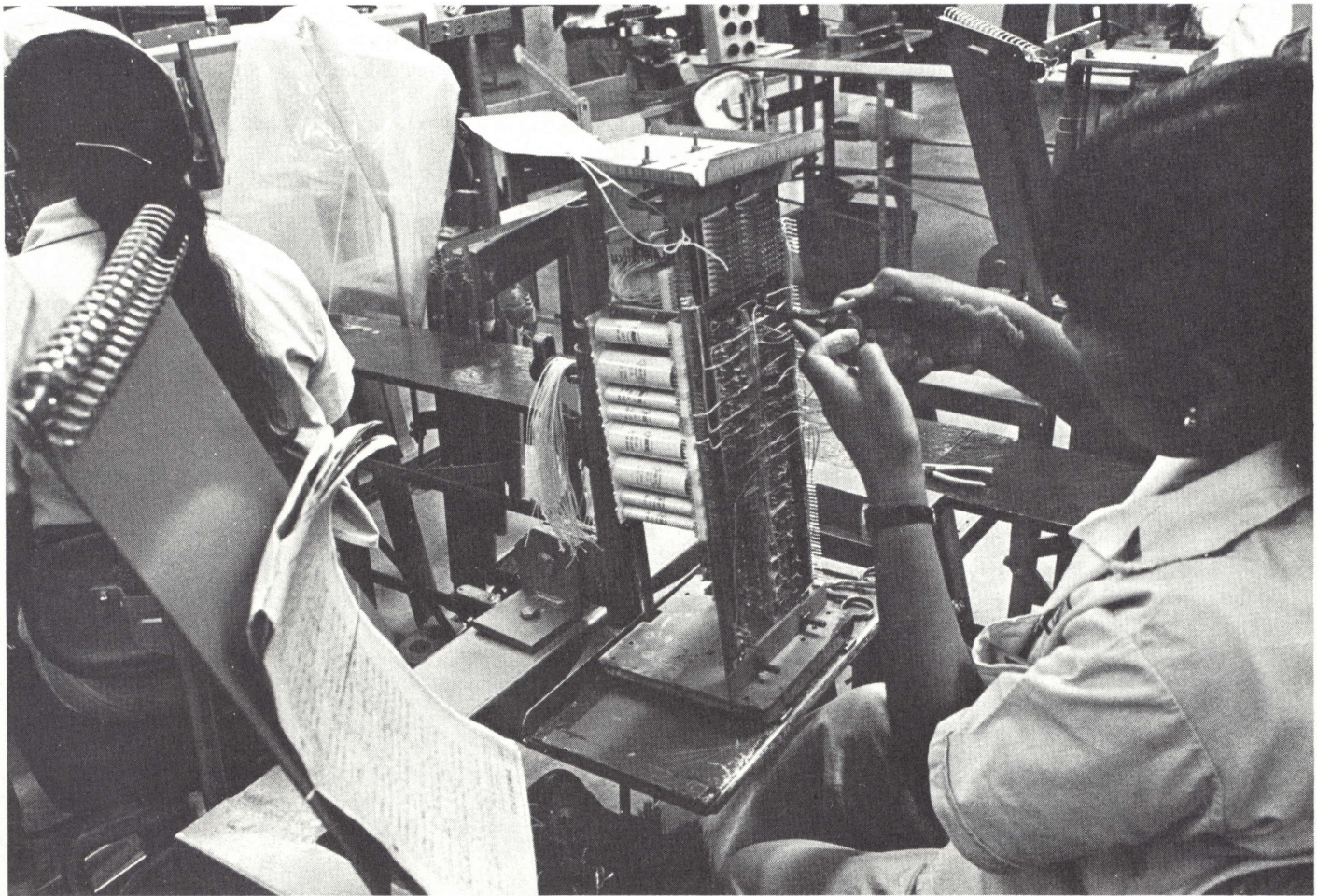
(1) For a systematic treatment of this point see my article "The Invisible Woman", *Cérés*, No 44, March-April 1975, pp. 50-53.

(2) Our analysis does not apply, of course, to women who have broken economic, professional, cultural barriers and thus hold leading and influential positions in their countries. Their professional competence, their grasp of situations and the power they wield are not only outstanding but often overshadow that of women holding similar positions in developed countries. These women, however, represent but a very small minority and any generalisations as to the social position of women as a whole only confuse the issue. It should not be overlooked that when equal rights and opportunities between the two sexes are discussed, it is not uncommon for men to point to the prominent careers that a very small number of women hold in their country, in other words to exceptions, to conclude that there is in fact sex equality. Hence such exceptional achievements, when isolated from a country's context, serve to legitimate the status quo, conceal the true nature and extent of inequality and retard needed changes in the situation of women.

(3) I have studied this point at length in the following publication prepared for FAO: "Status of Women, especially Agricultural Workers" UN/ECOSOC, E/CN. 6/583/Add.2, 27 December 1973, see especially p. 10 ff.

### *Young Indonesian mothers in a medical centre*





*Village girls learn a complicated job in an electronic goods factory in Toluca (Mexico)*

J. J. Halber

“matricentrality” in Africa, for example, where, south of Sahara, crop-rotation is in the hands of women; in Latin America, where, in several countries the proportion of common law marriages is very high, and women are the de facto family heads. This is not reflected in development policies.

In the area of professional training, boys and men were (and still are) taught how to deal with improved machinery, high-yield crops or animal husbandry; but women were (and still are) trained to be efficient home managers, competent child educators and family nutritionists. This specialisation of tasks according to sex makes women financially dependent on the family head and suggests women’s inferior professional abilities. But rural women have proved their capacity to respond to the requirements of technological training.

In Toluca (Mexico) for example, several hundred young girls from neighbouring villages have been trained as skilled workers in communications technology. From the wastelands of the countryside to the skilled work of the factory it only took a short time for women to learn their craft. Their salary not only eases the financial burdens of the kin group; it also prevents them from becoming servants in wealthy households or being forced to turn to prostitution, two alternatives to poverty and desperation of many a rural girl.

Similarly, policies of land ownership favour husbands who, according to Western postulates, are the main economic providers of the household. Women are stripped of ownership rights and their economic dependency upon their husbands increases. This kind of land reform, which

weakens the role of the community as provider for its members, and the concomitant increase in importance of the husband-wife partnership, does not enhance woman’s autonomy. On the contrary. It makes her and the children more vulnerable to adversities due to the husband’s unemployment, illness or desertion.

In the name of “progress” women cannot and should not be driven to bear the brunt of socially necessary tasks and unpaid labour. Nor should they be treated both in everyday life and in legal texts as “second-class” citizens and “third-class passengers”. For ages they have shared poverty and destitution, their common lot with men. The time has come for them to have a share of what they produce in an equitable, humane, social context. ■

C. PRESVELOU

## Breakthrough in food conservation

**Rotting food leaves more than a bad smell. It leaves people hungry.**

In the heat and humidity of most developing countries, food rots fast. Up to two-thirds of a catch of fish may be lost before it reaches the consumer. The traditional methods of conservation—drying, salting, smoking—are inadequate against bacteria and insects. Modern methods—canning and freezing—are expensive and technically complicated. The sterilization process in canning usually destroys vitamins, and cans are heavy compared to their contents and often look unattractive after a few months on a shelf. Freezing poses obvious problems in poor, hot countries; it has to be maintained from producer to consumer and one breakdown makes the whole cold chain useless.

Now an EEC company has come up with a new answer. Thanks to a special plastic developed in Germany and a method perfected over three years by a Belgian food company, fish, meat and vegetables can be kept cheaply for up to a year in hot climates without canning or refrigeration.

The technique is basically simple. Food is put into a vacuum-sealed plastic bag and sterilised by heat, i.e. cooked. In the special laminated plastic and sterilized under heat and pressure, food can be preserved in the simplest conditions for between six months and a year. It can be seasoned to local tastes during the process. And at the end of that time, it still looks good, tastes good and does you good.

The advantages of the new process are considerable. It is cheap and simple. It can be used on any scale, unlike canning and refrigeration plants which must handle relatively large quantities of food to be economically justified. The product retains all its food value, appearance and weight without any additives—only if it is left out in the sun for a long time does it suffer some discolouration, but no nutritional

change. It is visible, so shoppers know what they are buying. The plastic bags are easy to handle, light, tough and disposable (see photo). And the food is simple to prepare; it can be eaten straight out of the bag, heated in it, or fried.

The process has been tested and proved since 1973 and is now being offered as a package deal, complete down to aprons and cardboard boxes, with developing countries' fisheries particularly in mind. Trial costings, based on an output of between two and three tons of processed fish a day from a community of 70-100 fishermen, worked out at a price of around \$450 000 for an all-inclusive unit which could be installed practically anywhere. A freezing plant would require a much bigger output and cost about twice as much to build and three times as much to run. Costing based on the minimum investment for a profitable production unit in one country (Iran) showed that a canning factory would cost about 16 times as much to build.

The unit might be installed on a beach or quayside, or even on a barge which could do the rounds of coastal communities to

treat the catches as they came in.

Under the new process, the catch is taken to a cold room (not a deep-freeze) to allow the sorters time to clean and grade the fish. The cleaned fish then go into the plastic bags under vacuum and into a pressure-heater, which can be operated by one man with three months' training. They are sterilized by water heated to over 120°C, under pressure of about 3,5 kilos/sq. cm., in a simple but closely controlled process. The operator only has to follow a precise programme of heat, pressure and time, indicated on three dials. Any fuel can be used for the boiler. The fish in their bags are then cooled and packed for distribution.

The technological breakthrough is, literally, in the bag. Many plastics are poisonous to food, but the special bags are harmless under the heat, keep out air and bacteria and still work out cheap.

The technique is of special interest to developing countries not only on grounds of cost, scale and simplicity, but because it would allow fishing communities to sell their stock around the year, stabilising local economies, and make it possible to distribute high-value food over long distances to remote regions, where it could be simply stocked, without canning or freezing. And even deep-frozen food can seldom last beyond eight months.

The process could be particularly valuable in the fisheries, since fish is the cheapest and most widely available source of protein in many developing countries. Fish cost nothing to feed and village communities need no training in how to catch them. The new conservation process is equally effective for salt or fresh water fish.

The EEC Commission (1), the UN Food and Agriculture Organisation and a number of developing countries have expressed interest in the process, which is, however, still too new to have been brought into production. It looks like being able to live up to its promise. At the very least, any effective food preservation process that is cheaper and simpler than canning and the temperamental refrigeration chains must be a welcome example of the sort of technology that really can help developing countries. ■

B.T.



*Shrimps preserved under plastic by the new process*

(1) Further information about the process can be obtained from Mr Hans Bergschmidt at the EEC Commission, B 8/37, 200, Rue de la Loi, 1049 Brussels.

**NIGER****Extension programme for women**

In Niger, womens' extension courses are part of the general training scheme for the peasantry, based on the voluntary attendance of the population. They are aimed at bringing women into village development schemes, in parallel with the improvement in their living conditions.

These courses have gradually become an integral part of rural life. There was an initial experimental phase, which took place in 1966-68 in the area around Matameye, Maradi and Tillabery, and after this the scheme was broadened, with help from the EDF, in the areas in which there were already extension courses for men. At present 348 villages are working under the scheme. They include villages in all the administrative departments except Diffa.

The EDF participation began in 1969, with a commitment of F-CFA 69 053 043. This put at the Niger government's disposal, for a two-year period, the services of six advisers to collaborate in carrying out a womens' extension programme. The contracting party in the technical assistance was IRAM.

This contribution was continued by the renewal of the contract and a financing convention for F-CFA 149 686 000, which is now coming to an end.

**Organising the womens' extension scheme**

— At the village level, the work is taken in hand by local leaders who belong of the village itself and are chosen for the

purpose by the other women. They are given a short training course and subsequently keep in touch with the district extension service, but maintain their position as villagers. At the district level there are extension assistants who are appointed by the administrative authority and work under the head of the extension centre, in association with the adviser.

— At the departmental level the work is coordinated by a departmental officer who cooperates with the various technical services. The adviser works at this level as personal assistant to the departmental officer.

At the national level the development extension directorate lays down the objectives and the lines to be followed.

**The advisers**

The advisers, who are women, have a two-fold task which is laid down under the terms of their appointment. The first aspect is to provide training and refresher courses for the Niger extension scheme personnel, and the second is to take part in setting up the various womens' extension activities.

The number of these advisers will be reduced to three when the present convention comes to an end. They have played their part in setting up the personnel structure in the departments of Niamey, Tahoua, Zinder, Maradi and Dosso. One of them has always been stationed at Niamey at the headquarters of the service, so as to cooperate in the programming and in coordinating the different departmental operations.

The advisers stationed in the district centres have always had work to do in the field itself, and close contacts with the extension leaders in the villages,

where they meet in the company of the district assistants.

Sometimes these contacts are simple visits, sometimes they are prearranged meetings of women to discuss specific subjects. They give the advisers a thorough knowledge of problems arising in village communities and the potential reaction to solutions proposed. The advisers are thus always close to reality.

**Activities**

The activities vary, but their common point is bringing the woman's position into harmony with her traditional background

— Health and hygiene naturally come first.

— The improvement in living conditions is also a priority item. The approach to it is through the tasks that can be lightened and the handling of the most exhausting of womens' tasks.

— On questions of water supplies the extension officers notify the technical departments of the more urgent needs for digging wells, with a view to sharing facilities as much as possible.

— For pounding cereals a plan for setting up small mills (especially in the Zinder department) is now at an advanced stage and traders are beginning to deal with the demand. In three villages an experiment has been in hand since June 1975 by which the mills are worked cooperatively and managed by the women.

**Improvement of family incomes**

In general the woman keeps possession of the proceeds of what she sells →



*Extension course meeting in the village*

for the purpose of making certain purchases for herself and her children, especially on the eve of a festival.

For the most part this consists of the sale of poultry and garden produce. There is scope for development in this to improve the receipts. The extension service thought this should be considered.

As a result a diversity of operations have emerged, the importance of each varying from district to district.

— Operation "cock o' the roost" which consists of improving the poultry population by crossing strains, cooperating with the livestock department which supplies the stock.

— Operation "red goat", aimed at developing a more prolific strain.

— Operation "gardens", introducing fungicides and selected seed.

— Operation "baobab", providing means for planting the baobab tree which, traditionally in the Haoussa neighbourhood, is the property of the women and the leaves of which are highly esteemed in cooking.

— The improvement of family incomes is handled by bringing women into the development programmes and helping them to take part in the active aspects of village life. Also being studied with a view to improvement are the jobs normally put upon the women and from which they receive a direct return.

## Health and hygiene

Health and hygiene was the first task to be studied. It was most in line with the normal part played by the woman as traditionally understood, and it was an introduction to the extension programme on more general lines. The results were quick and spectacular.

— In the recruiting of village midwives, the figures for the first half of 1975 in the five departments concerned were:

- number of midwives registered 717
- number of midwives trained during the half-year 202
- number of midwives retrained during the half-year 151

The national health services take part in this training. Each midwife is given a kit-case as soon as the basic rules of hygiene have been mastered.

— An anti-malaria campaign, known as "operation Flavoquine", was successfully carried out.

— Mothers are given practical guidance on feeding young children.

— Under the hygiene headings, children's cleanliness is recommended and taught, and also cleanliness for the house and compound.

— The hygiene theme is also carried through into the building of hen roosts, making simple water filters and suchlike.

## Improvement of living conditions

By tradition, women are required to tackle the heaviest and hardest domestic tasks. It is they who bring in the wood, carry home the water and pound the millet. The extension schemes have endeavoured to make this work easier.

## Bringing women into the development projects

The part played by a woman in the rural world calls for her to take part in the regional development projects. When development is connected with production, the woman's participation can be in the form of a cooperative. An example was in the department of Zinder in the project known as "3 Ms". In this case the grain mills are managed by the women in the form of a cooperative, with supervisors from the extension service. In this department the groundnut oil production is marketed by the women.

Bringing the women into the picture increasingly leads to a wider participation in the more general development projects.

## The results

Human promotion on these lines is necessarily a long job. Results can be expected after a time through the slow change of habits towards a better standard of living, better hygiene, bigger incomes and better cooperation all round. On the other hand, it is hard to put any immediate assessment into figures.

Now that the scheme has been in progress five years, however, it is possible to measure some of the ground covered, and look forward to further improvements in the future if the scheme is continued.

— in matters of health and hygiene, success has certainly been conspicuous;

— improvements in living conditions are more difficult to assess and vary considerably from region to region;

— the same applies to the improvement of family incomes, on which attitudes differ from one village to another and are often conditioned by purely local possibilities;

— women are increasingly taking part in development and becoming a part of it. ■

C. SANZ

## The "3Ms" project How to get through to the local population

There are two ways of going about rural development: —

The normal method is to choose your bit of country and then dump upon it a whole new structure—you may call it "operation groundnuts", "rice" or "millet" or whatever. The usual thing is for the staff to be trained by a technical assistance team, using all the agricultural equipment necessary. To put it briefly, you are injecting into the system an organisation replacing all the old methods and the old, under-equipped system.

The other possibility is to make the best of what is already there—in other words, to make full use of the equipment already on the spot, co-ordinate the different branches and train people at every level to understand and operate the new methods.

For the rural development of Zinder it was the second of these methods which was chosen by the Niger government. The Zinder scheme became better known as the "3 Ms" project, because it covered the districts in the southern part of Zinder, Mirria, Matameye and Magaria.

This is an area of comparatively dense population, ranging around 25 people per sq. km, with figures as high as 70 in the frontier zones. Compared with the rest of Niger it is quite a good area for agricultural development. The rainfall is between 350 and 500 mm annually, there are always ponds and marshes and the soil, though in many places too exhausted for producing food, is nevertheless of sound structure.

The basic problem is the insufficient cultivable area, especially in view of the

number of people who have to live from it. The population increases each year; and each year the farmers must add to their cultivated area by cutting down their fallow land. This practice of course quickly exhausts the soil and diminishes the area which is really cultivated.

The only way of breaking the vicious circle is to secure a quick increase in the yield per hectare.

The aim of the "3 Ms" project was to raise the yield by an all-round improvement in farming methods. Now it would obviously be impossible to bring in a massive supply of fertilizers if the peasant himself was not ready for making

the best use of them, and of the other farming methods which would thus become limiting factors. Nor is it possible to improve the peasants' techniques without an adequate supervisory system ready for this kind of work and devoted to it.

The Zinder project started in February 1973, and was to cost F-CFA 521 m over a four-year period. Half the money was earmarked for strengthening the infrastructure—service roads and storage facilities, offices etc.—while the other half was for training and operating a system of information and bringing in the necessary farming material and fertilizers.

The first year was taken up with the formation and training of the information system. A management committee was formed by representatives of the different government departments (agriculture, credit and cooperation unions, stock-raising, extension schemes and literacy campaigns. This committee was

*The "3Ms" project: making the best of what is already there*



given instructions to run the project, and small sub-committees were formed at district level. With few exceptions, the personnel for the project was chosen from those already on the spot and others assigned to the project on a part-time basis. For popularising the scheme in the country, help was recruited from well disposed farmers, who had been through a training stage and acted as "peasant demonstrators". Most of these peasants engage in the popularisation task without pay.

The result of the first year's work, therefore, was the development and running in of this machinery. 1973 was marked by the notorious drought, which did not spare the territory affected by the project.

During the second year the technical themes chosen were gradually brought to the front. They were farming methods in the accepted pattern, but the proper application of which represented from the outset a more advanced form of farming (seed treatment, correct sowing, ploughing, etc). These were applied to each of the three most important crops—millet, sorghum and groundnuts—to which a subsequent addition was niébé, which did well despite the drought.

The popularisation work was helped by the existence of local cooperatives, which had been set up at village level and later formed into district groups. In the first instance they had been formed solely for the purchase and sale of farm produce and the granting of credits under collective guarantees. With the coming of the new project this structure took on a new dynamic form. The technical themes put forward were discussed at meetings of members who became increasingly a method of getting the new agricultural ideas through to the local farmers. The sale of fungicides for seed protection, traditionally handled by the supply department of the cooperatives, was considerably increased in this way. Though it is still too early for the large-scale introduction of chemical fertilizers, attempts have been made on a small scale, and this is another field in which the cooperatives will play a big part.

Another theme which caused a lot of discussion was the introduction of animal traction.

The experiments under this head were



*A yoke of oxen*

discouraging. The distribution of equipment for animal traction ran into the obstacles of local ignorance and the lack of animals and of any repair service.

Moreover, Niger is a country where farming and stock-raising are traditionally separate. The stock-raisers are normally nomads, making their regular treks between north and south according to the season, and the farmers maintain no herds except a few goats for family consumption. The farmers usually regard the nomads as a disaster, especially when they are forced, by climatic conditions, to swoop down on the farming area before the harvest.

This was a problem which obviously called for a generalised approach. For this reason three experimental technical improvement centres were opened during the second year of the project. They were on extremely simple lines, accommodating their pupils in mud-and-wattle huts with a wattle meeting hall and straw stables for the beasts.

Each centre accommodates 30 young farmers for six months. Under the eye of a farm supervisor they learn the methods of cultivation with animal traction, the training of the beasts and the best

rules for farming. Those with talent as craftsmen are taught iron forging, how to repair of agricultural machinery, and to make spare parts and carts.

The first years results were very encouraging. Pupils became "peasant-pilots" in their own villages, and the iron founders demonstrated their ability to put on after-sales service on proper lines for the agricultural material. About 120 carts have now been built by former pupils at about half the cost of imported carts.

Up to the present, six of these centres have been opened, so that 180 young people are getting the training each year. An interesting aspect of this popularisation project is that the structure built up on the spot is permanent in character, consisting of supervisory staff from the administration. There is no question of the artificially created superstructure set up under so many other projects, that lasts no longer than the actual financing of the project.

Another point of interest is that the project is going ahead without any technical assistance from abroad, apart from support missions of limited duration. ■

C. GOLA

## IVORY COAST

# Operation "rice-cotton"

## An experiment in modernising savannah farming

In April 1970 one of the steps taken under the diversification programme of the 2nd European Development Fund was the signature of a convention (1) with the Ivory Coast for developing cotton-growing in the northern and central parts of the country.

In addition, two accessory projects were foreshadowed in an agreement between M. Sawadogo, Minister for Agriculture and the EDF. One of these was to introduce plateau rice (which depends on rainfall) in the rotation of the cotton crop; and the other was for a campaign to promote animal traction in farming.

A cotton-growing programme had in fact been in progress in the Ivory Coast since 1963, and the scheduled plantation areas were 57 000 ha in 1970-71, 70 000 ha in 1971-72 and 85 000 ha in 1972-73. By comparison the targets for the rice-growing campaign integrated with the project were on a much smaller scale, with 1 000 ha scheduled for 1970-71, 2 000 ha in the following year and 4 000 ha in 1972-73. The "rice-cotton" and "animal traction" campaigns were to be undertaken only in certain specific areas which had expressed an interest in the project.

Cotton was regarded as a cash crop and its development in the Ivory Coast since 1963 had mainly been outside the normal rotation of the subsistence crops, which includes, depending on the local ecology, yams, rice, millet or sorghum and maize or groundnuts.

Both 1969-70 and 1970-71 were bad years. In some areas the growth in the area under cotton increased less rapidly, in others it did not increase at all and in some there was quite a decline. The 48 199 ha planted in 1968-69, fell in the following year to 33 345 ha and showed only a

small change to 35 867 ha in 1970-71. In 1971-72, however, it rose to 51 400 ha. The 1969-71 setback led to further consideration of the expansion in cotton-growing, and the objectives were defined afresh. A study was published in November 1971, pointing to various weaknesses in operation cotton, partly due to the crop being outside the normal subsistence rotation and partly to the limitations to the area which could be handled by the better farmers, because of the lack of up-to-date farming equipment. The minister for agriculture followed the line he had already taken, by starting the two accessory campaigns mentioned above. If the growth were to be got going again, he thought, a rational rotation for all the crops, based on the use of rice growing in the breaks, should be promoted by popularisation.

It was also found that the clearing of the specified areas for cultivation could not be handled without substantially more productive work, which would require mechanisation (i.e. animal or motorised traction).

With these conclusions as a basis, a new project was worked out. This was not really a rice project or a cotton project, but was drawn up from a wider viewpoint as a step towards modernising farms in the Savannah country. In the project for increased rice cultivation, financed from the 3rd EDF, it was classified as a production project under the title "Operation rice-cotton".

In a finance convention, signed in June 1972 (2) the EDF took over part of the cost of the Ivory Coast programme for developing rice cultivation over the period 1972-76. The technical and financial interventions were divided into four production operations and four schemes for productivity improvement for logistic purposes.

These various operations require only brief reference here:

The production operations in the north and centre of the country were known as "dams in the north", "rice cultivation improvements at Bouake-Nord" and "development of rice cultivation with flooding in the Odiene region"; and the further operation of particular interest in the present context was "development of plateau rice cultivation — rice-cotton association" or, for short, "operation rice-cotton".

The logistic and/or productivity schemes were concerned in one case with seed and supplies and in others with assistance in concomitant research, training technical personnel and participation in the management of the operation.

Soderiz (3), which had been formed in 1972, was appointed principal contractor for the project, but the actual operation of operation rice-cotton was put in the hands of the CFDT and subsequently CIDT (4). This was in accordance with instructions given by the minister, M. Sawadogo, who was anxious to avoid the multiplication of names and organisation at the point of contact with the peasant population.

The share of the European Development Fund in carrying out the various operations was F CFA 3 040 million in non-repayable aid, while the Ivory Coast contribution was F CFA 1 020 million.

It was laid down in the finance convention that part of the funds needed for this operation (F CFA 3 13.6 million, not allowing for contingencies) should be provided to the extent of F CFA 170 million from the unexpended balance of funds provided for the development of cotton cultivation as mentioned above.

The fundamental characteristics in this operation were the association of rice with cotton, careful steps towards mechanisation and the need to ensure stability in the cropping. The operation took over from another dating back to the beginning of the cotton project, and with the experience thus gained it was possible to define the 1972-76 targets on lines which appeared realistic. These were:

— Development of plateau rice cultivation by integrating it with the cotton rotation (improved manual cultivation over about 12 000 ha). In the areas with two rainy seasons (March/June and October/November) the introduction of groundnuts or maize into the cotton

(3) SODERIZ = Société pour le développement de la riziculture.

(4) CIDT = Compagnie Ivoirienne pour le Développement des Fibres Textiles. →

(1) Project 215/225.006.20 C.F. No. 595/CI: F-CFA 1 233 million by way of non-repayable aid; and UA 1 671 000 as a loan on special terms.

(2) Project 3100.633.08.06 C.F. No. 1079/CI — Commitment F CFA 2 870 million.





*Animal-drawn farming—ridging-up groundnuts in the Ivory Coast*

breaks, as previously, was also envisaged.  
— Introduction of new production methods by use of animal or motorised traction:

- motorised cultivation in the centre region (Mankono) covering 825 ha.
- animal traction in the area with two rainy seasons (department of Seguela) (1 000 ha) and in the area with one rainy season (northern cotton area) (2 000 ha) making a total of about 3 000 ha.

— Soil improvement and amalgamation of holdings. For motorised cultivation a farm unit would need about 75 ha actually in bearing out of 100 ha under rotation. For animal traction a traction unit could be justified for 3 or 4 ha. Farm amalgamation will therefore be looked for on the basis of about 25 farmers (c. 100 ha) in the case of GUMA (the utilisation group for farm implements) and 4 or 5 units (c. 16-20 ha) in the animal traction area.

Land clearance will be undertaken to assist the farm mergers, on the basis of 3 ha per unit. These were to be charged in toto

#### **Rice-cotton rotation areas (north and west)**

(Cotton areas abandoned and replanted with plateau rice, and rice areas awaiting cotton growing)

	Target	Effective
1972/73	north } west } 2 600 ha	north 1 651 ha west 2 380 ha <hr/> 4 031 ha
1973/74	north } west } 5 110 ha	north 1 662 ha west 2 724 ha <hr/> 4 386 ha
1974/75	north } west } 7 100 ha	north 2 284 ha west 3 338 ha <hr/> 5 622 ha

In the north district the rotated areas, though increasing, are only a small part of the cotton-growing area (5,6%, 6,0% and 7,5% in the three years mentioned). →

to the Ivory Coast contribution to the project. The basis is:

— for **motorised** clearance, including swathing, sub-soiling and spraying, in blocks of 75 ha for motorised cultivation and 20 or 30 ha for animal traction, with extension of the clearance by monkey (1) winch.

— alternatively clearance by monkey winch with a gang of labourers, and the peasant himself taking part on plots with a year or two-year manual cultivation and subsequent extension for the gradual bringing of the subsistence crops into the cotton rotation.

It was decided that the equipment credit for the animal traction cultivation should be awarded differently in the different intervention areas.

— In the north, with its stock-raising tradition, the peasant should procure the oxen himself, receiving credit for the material. Drivers paid out of the project are put at his disposal for training and working the draft oxen.

— In the centre-west, medium term credit is given to cover the material and a pair of oxen. The latter are purchased in the Touba region (west of the country), trained in the centre at Mankono and sold to the peasants on credit with insurance cover against losses during the credit period.

The instalments for repayment vary with the type of equipment and the length of the credit.

Operation rice-cotton relies for supervisory personnel primarily on the staff recruited for the cotton project, but it has an additional staff of its own, specialising in the introduction of animal traction, the modernisation of motorised farm units and personnel training.

Subsequently included in the operation was a promotion programme for village blacksmiths to look after the maintenance and repair of material in use.

Three seasons have gone since the signature of the finance convention. Operation rice-cotton is entering its fourth year of finance from the EDF and the first farm units set up are now in their fifth year of cultivation.

In general, targets have been attained and in some cases surpassed, especially for animal traction. Bringing in such results as are yet known about the present season, 2 752 animal traction units will have



*Ridging-up the cotton plants (Ivory Coast)*

## Development of animal traction

### 1. Number of traction units. Target: 1 100 yoke of oxen in 1975/76.

	Newly yoked		Total to date		Area (ha) cultivated	
	target	effective	target	effective	target	effective
1972-73	150	235	250 (1)	365 (1)	750	1 061
1973-74	220	338	470	691	1 410	2 108
1974-75	280	563	750	1 254	2 250	5 164
1975-76	350	1 498 (2)	1 100	2 752 (3)	3 000	±8 000

(1) Including 100 yokes previously at work.

(2) Including 1000 new yokes financed by EDF 1975/76.

(3) Including 2 254 yokes financed by EDF by end of the operation.

been put into operation compared with 1 100 provided in the project. Of those put to work, 2 254 were financed by the EDF, and 498 by the World Bank and the Ivory Coast.

The speeding up of the programme necessitated extra funds which were raised from the surplus from the original cotton project. These were about 28.9% of the net amounts provided in the project (F

CFA 404.2 million against F CFA 313.6 million, securing in the case of animal traction a 100% improvement on what had been expected from the EDF finance.

The following tables summarise the results secured in the first three seasons and the results or forecasts for 1975-76.

In the 1974/75 season, out of the 724 ha of useful agricultural area, cultivation was of:

(1) A winch with dogs and cables for manual clearing.

Maize	236 ha
Rice	234 ha
Cotton	483 ha
Yams	7 ha

960 ha (cultivated area per tractor: 186.70 ha)

It is probably too soon to draw any definite conclusions from this operation,

which is only the first step in an attempt to modernise old-fashioned farm units growing plateau rice in the Ivory Coast.

The feature will have been the interest taken by the peasantry in animal traction. This is renewed confirmation that in cotton the development of agriculture in the savannah country necessitates animal traction and improved peasant productivity.

Full motorisation of farms cannot at present be considered, except in an agro-industrial complex. Even the semi-motorisation discussed here cannot yet become general, unless considerable State aid is available. This is confirmed by the results, interesting and promising though they be, of a large-scale experiment conducted as part of this operation. They could possibly be envisaged as a fairly long-term possibility as an extension of animal traction for the farmers handling it most successfully.

The fact remains that the action taken by the Ivory Coast Agriculture Ministry and CIDT (with help from the EDF for nearly six years) seems to be on the right lines. It went through various phases which are, incidentally, more or less inherent to the problems. The first was the introduction of intensive cotton-growing, followed by farm mechanisation, beginning by the use of animal traction with semi-motorisation in suitable conditions and raising the production of marketable subsistence crops; and by intensified production of traditional food crops in association with stock-raising.

This limited experiment in modernising farming in the savannah country may appear to be on the small side as coming from a national economy which is not only agricultural but already highly diversified and responsible for production and exports which are large, both in volume and in value. It is an instance of the desire of the Ivory Coast government to raise the earnings of peasants in the northern part of the country as part of the national policy of correcting disparities. There are still problems to be solved if the success of the programme and its future are to be assured. Among them are:

- smooth integration of the traditional manual cultivation in the areas affected by motorisation or animal traction;
- coherent management of the GUMA, both technical (repairs and maintenance) and financial (depreciation and provision for renewals);
- organisation of cooperatives;
- finding outlets and organising markets for products not covered by purchase guarantees (maize, groundnuts, yams);
- generalised mechanisation for food crops by development of suitable tools and techniques (e.g. earthing-up yams). ■

COLLET

**Bibliography:** Annual reports of CFDT and CIDT; reports of the EDF delegation (agricultural projects in the Ivory Coast).

## 2. Cotton subsistence areas farmed by animal traction (ha)

	1972-73	1973-74	1974-75
<b>Cotton</b>			
Target	300	740	1 300
Effective	782	1 566	2 746
<b>Rice</b>			
Target	100	270	650
Effective	162	135	526
<b>Other food (maize, millet, groundnuts, sorgho etc.,)</b>			
Effective	203	764	1 733
of which: before traction scheme	(87)	(220)	(432)
<b>Total ha</b>			
Target	400	1 010	1 950
Effective	1 147	2 465	5 164
<b>Yoke of oxen used</b>	365	691	1 254

On the average a yoke of oxen tills 3.96 ha in the north and 4.49 in the centre-west.

### —Motorisation. Formation of GUMA groups (use of tractor and tools)

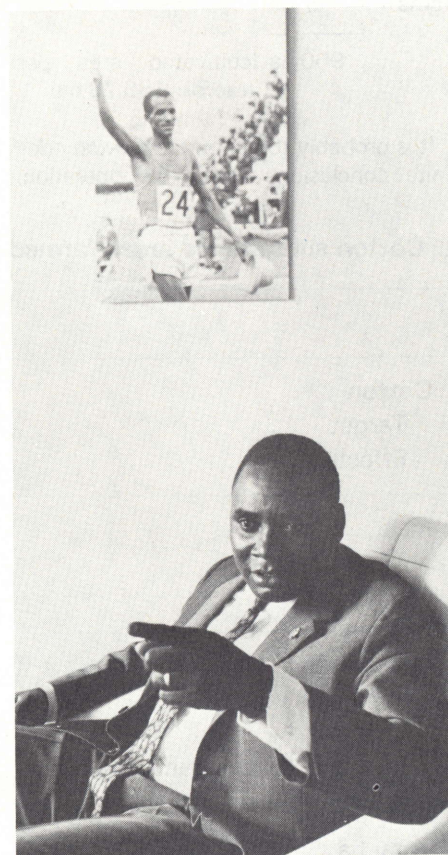
	Number of GUMA formed		Useful farm area to date (ha SAU)	
	Year	To date	Target	Effective
1972/73	3	3	225	231
1973/74	3	6	450	480
1974/75	3	9	675	724
1975/76	3	12	900	

## The Montreal Games Africa and the Olympic spirit

The Mayor of Montreal has won his bet; the Olympic Games will duly be held in his city next July. Many difficulties had to be overcome and enormous investments (a total of F-CFA 250 000 m, or \$1 000 m) had to be made, but the decision stands.

As in previous Olympiads, Africa will be represented especially in athletics which, by tradition, is Olympic sport number one. Moreover, athletics is the only sport in which the African countries can field their best representatives, including Bayi (Tanzania) and Boit (Kenya) in the 800 m. and 1 500 m., Aki Bua (Uganda) in the 400 m., and Lamotey and Daniels (Ghana) in the 200 m.

The sports organisation in Africa and its problem for each renewal of the Games have had many ups and downs; and so, at the Munich Games in 1972, did the question of the eligibility as competitors of independent African countries. With the build-up to Montreal we asked for a rundown on the subject from Jean-Claude Ganga, Secretary-General of the CSSA (Conseil Supérieur du Sport en Afrique), asking him what the African countries hope for and expect from the Montreal Games and the Olympic spirit in general.



Jean-Claude Ganga, Secretary-General of the CSSA

► *The CSSA was formed in 1966. What is it doing for African sport?*

— The Council was formed at Bamako on December 12-13 1966, following the first African Games, which took place at Brazzaville (Congo) in July 1965. It is an inter-State organisation of all independent countries in Africa and its membership marks it as the leading organisation for African sport. Its members include all the African sports organisations—the youth and sport ministries, the national Olympic committees, the national sport commissions, the African sporting confederations, the African members of the International Olympic Committee and the unions of African sports journalists. Its task is to promote, develop, coordinate and direct all sport-

ing activities taking place on the African continent. One of its specific tasks is to organise the African Games which take place every four years.

► *In Germany, at the Munich Olympiad, the African teams were not exactly very successful, any more than they had been in earlier meetings elsewhere. You yourself have been running the CSSA since it was formed 10 years ago. How do you explain the low ranking of African sport?*

— The African teams are young, and it is natural that their victories should be proportionate to their resources, which are very limited. It is common knowledge that all the African countries are coping with enormous difficulties, and

that the national Olympic committees have scarcely existed more than 15 years. Moreover there is a real shortage of the trainers and background organisations needed for making champions.

Sport in Africa is part of the general development of the individual countries and cannot be given a special status over such priorities as health, education and the economy. In spite of this the results obtained in the last Olympic Games seem to me very gratifying. Kenya is a case in point, a country which has been independent only a dozen years, but which obtained in the athletics section of the last Olympic Games more medals and places in the finals than European industrial countries with an old sporting tradition, such as France, Belgium or Italy.

► *The CSSA is considering the formation of a pan-African sports institute. What would be the point of this?*

— The pan-African sports institute will have as its main job the training of qualified instructors, who will be responsible for sports teaching in the various national institutes. In this way we want to set up a unity of resources for African sports promotion. It is our belief that games teachers and their assistants in Africa should themselves be Africans, specially trained for the purpose.

► *There is certainly a shortage of sports instructors in Africa; but don't you think the causes of the reverses suffered by African teams in international contests may lie in the fact that sport in Africa does not have the same social function as it does in the countries of Eastern Europe, and is not regarded as an economic or prestige activity as it is in Western Europe, the United States and the Soviet Union; and if so, does this not lead to a lack of interest?*

— In Africa sports came only quite recently. Our countries do not have a sporting tradition; but lack of a sporting tradition does not mean a lack of the sporting spirit. Africa is an enormous continent, where sport is only now finding a home among people and peoples who are engaged in many vital matters. The sporting spirit most certainly exists among the many sporting people, and it will grow in influence in the next few generations.

► *To get back to the July Olympiad at Montreal, do you think the African countries can do better than they did at Munich?*

— It is difficult to say whether Africa will do better or worse. As you know the Olympic level calls for resources in material, money and men such as no African country possesses. Individuals may, nevertheless, come to the top, especially in athletics and boxing.

If we look at the resources the African countries devote to getting ready for the Olympiad and compare them with the results obtained, Africa's score is almost certainly higher than that of the European countries. The one thing which is absolutely certain is that Africa's participation will be bigger than in the last Games, for, as you can see, the essential thing for us is to take part.



**Filibert Bayi**  
*Holder of the 1500 m. world record  
(3 min. 32.2)*

► *Which African athletes do you think have the best chances?*

— Many African athletes will get into the finals because they are naturally athletic and are beginning to adapt themselves to modern training methods. Among these are some who may seek and find the highest honours; but only a wizard can tell you who and in which event.

► *What have been the chief problems for the CSSA in connexion with physical and mental preparation of athletes for the Montreal Games?*

— Africa's problems are material. We still have less than enough skilled instructors, so that we have to depend on foreigners, which costs a good deal more money. Nonetheless, cases of individual excellence are emerging; and it is this which creates the impression outside Africa that we have reached the end of some of our difficulties.

► *In every Olympiad the problem of the gigantic scale of the games comes up, as does a certain fanaticism among the athletes. The CSSA, on the other hand, still calls for a spirit of modesty and generosity among the athletes, which was the very praiseworthy line taken by Pierre Coubertin. Do you not yourself think that in taking this line you are fighting something of a rearguard action at a time when, despite occasional efforts to the contrary, sport is becoming increasingly an instrument of politics?*

— We in Africa attach a special significance to sport, which we regard as an instrument of "rapprochement" between peoples and individuals. The definition explains our attitude and the battle we are fighting. To us sport is still a mode of expression and not an end in itself. This is no rearguard action; we are in the front line.

► *All the world remembers—especially with the next Olympics so close—the victorious battle the CSSA, and you yourself in person, fought against South Africa and Rhodesia at Munich in 1972. The CSSA-made one of the brightest stars in its banner the abolition of racial prejudice in sport. What would be the attitude this time among the 41 members of the CSSA if the International Olympic Committee were to act contrary to the Olympic Charter?*

— The International Olympic Committee is the guardian of the Olympic spirit. We do not think it is working to the detriment of the Olympic Charter. I agree, we did in the past have difficulties with the former IOC President, whose attitude was dictatorial, and his approach to sport somewhat open to question. His successor has not yet given us any reason for suspecting similar obstacles.

► *In conclusion, Mr Ganga, do you not expect victory. Africa, as you know, already place in future international contests, she will have to review her whole sports policy at the African Games?*

— The African countries are young. We cannot give sport a high priority, and we believe that sporting activities will develop in happy combination with the other sectors of our national life. Once again I



*Julius Sang of Kenya: gold medal for the relay in the Munich Olympics (1972)*

repeat, sport is a wonderful instrument of rapprochement between the peoples. You will excuse us for not thinking of it simply as a form of competition in which one has got to win by whatever means, and in which nothing counts except victory. Africa, as you know, already has a very honourable place in international contests. People who are in a hurry to see the Africans scoop up all the golds on account of their fantastic natural gifts will certainly have to wait a while. The level of training and the present-day practice of sport is now such that the resources we put at the disposal of our athletes are much less than they will need to take on their European and American adversaries on level terms.

When African sport is better endowed with first-class instructors, with infrastructure equipment on a sufficient scale, with sporting material which need not be too costly, you will soon see the immense progress our athletes will be making. Now, as always, it is in the human being that our real wealth lies, and as good our athletes are, they cannot yet command the resources which will enable them really to develop the astonishing gifts which nature has given them. ■

L.P.

## Athletics: the best hope for the ACP in Montreal?

Athletics is still the heart of the Olympic Games and every four years it is to the worlds' athletes that millions of spectators and television viewers give their closest attention. The best sprinters and distance runners on the planet will be at Montreal, as they were at Munich and Mexico. Again the Americans will be in the first rank, but the Africans could do well — unless a New Zealander like Walker sweeps the board.

The most exciting distances must surely be the sprinters' races, the 100 and 200 metres. Seven athletes currently hold the world Olympic 100 metres record at 9.90": Hines, Green and Smith of the USA in 1968; Hart and Robinson (both USA) in 1972; Williams (USA, 1974) and Leonard (Cuba, 1975) have also reached it.

The Olympic 200 metres record is held by Tommy Smith (USA, 1968), and Quarrie (Jamaica)

reached the same time in 1971. Quarrie also holds the record on electronic timing at 19.81".

All these athletes are black. Since 1932, 10 out of some 18 100 and 200 metres titles have gone to black athletes, among them the famous Americans Tolani (100 and 200 metres at Los Angeles in 1932) and Owens (100 and 200 metres at Berlin in 1936). It was Jesse Owens whose hand Hitler refused to shake at Berlin after his victory in front of all those fanatics of Hitler's racist doctrine.

So are the Africans' best hopes for Olympic medals in athletics, and principally in the sprints? With men like Filbert Bayi of Tanzania, the ACP are certainly in with a good chance on the track. And the other place to watch will be the boxing ring.

L.P.

# BOOKS

**The Profits of Doom** — War on Want report by Christopher Robbins and Javed Ansari: 25 pp., 50 pence, from War on Want, 467 Caledonian Road, London N7 9PE

"The Profits of Doom" is a tightly-researched examination of the economic and political structures of world food supply, that condemns the Rome World Food Conference for having failed to deal with the real issues of hunger.

These, say Robbins and Ansari, are basically: that food is produced for profit rather than need; that most developing country governments determine economic and political priorities to suit their own elites rather than the masses; and that governments are losing power to profit-motivated multinational companies.

The report makes the essential point that hunger depends not on how much food is produced but on how much is eaten. This in turn depends on what people can afford to buy and on the priority given to food rather than cash crops. "Poverty is the basic cause of malnutrition and hunger". "Hunger is fostered by greed and not by scarcity".

The argument, well and thoroughly presented here, has gained ground since it became clear that the 'green revolution' was compromised by social and economic factors. "The Profits of Doom" claims convincingly that "what is required is essentially a total reorientation of international and national economic policies and political structures".

But there may be a danger here of throwing the baby out with the bath water. More food is still required, and that means successful agricultural development. Was it only because of economic and political structures that US agriculture was able to provide 84% of world food aid in 1972, while Latin America, "with the largest amount of arable land of any continent", imported most of its food.

**Hommes et destins, Dictionnaire biographique d'Outre-Mer (Men and destiny, Overseas Dictionary of Biography)**, (247 biographical sketches). Travaux et Mémoires de l'Académie des Sciences d'Outre-Mer, 15 rue La Pérouse, 75116, Paris — 1975, 668 pp., FF 60.

This is the second number of the new series of **Travaux et mémoires de l'Académie des Sciences d'Outre-Mer**, and is really the first section of a new publica-

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tion which the Permanent Secretary, Robert Cornevin, hopes to issue once a year.

The origin of this undertaking was a press conference by the late General de Gaulle. When he was speaking of the great figures of the colonial period, "the Bingers, the Pontys, the Lyauteys"... some of his listeners were evidently embarrassed by not knowing who on earth he was talking about.

Biographical information is certainly to be found in the *Nouveau Dictionnaire National des Contemporains*. This is the French Who's Who, and in most cases the information was supplied by the people in it. It is, however, limited to people who are still alive, and there is no similar general collection dealing with past generations.

So it seemed urgent to compile a dictionary on these lines, to provide not only critical but factual information for research workers, including summaries of the careers of the people described, a list of their works and major articles about them.

It is not easy to squeeze into a dozen lines, or anything up to half a dozen pages, the main facts about the life of a man of outstanding achievements, in conquest, in resistance, in missionary work or medical research. Thanks are due to the 102 authors, including 68 members of the French Academy for compiling these 247 notes. Side-by-side

with the great names of the colonising and colonial period we find some dozens of personalities from Africa, Madagascar, Vietnam and the Antilles, who rank among the most convinced opponents of French colonial policy.

These 247 biographies are the work of authors from Africa, Madagascar, Europe, the Antilles and Vietnam, representing every political horizon. The result is an impressive work of value to all historians and research workers interested in the Third World in general and French-speaking countries in particular.

**La force des faibles (The strength of the weak)** by Paul-Marc Henry, Paris, Editions Entente, 1975, 156 pp. (collection "Vivre demain").

It is now a commonplace to say we live in a period of radical change in our economic ideas and relationships, and the present crisis is only a transient expression of this. The Third World and our relations with it are especially affected and it is this that gives full weight to the serious rethinking on the relations between the industrial countries, which have had the benefit of the technological revolution, and the underdeveloped countries, which are its victims. This book is such an analysis, giving a diagnosis of a suicidal confrontation between the wealthy peoples and the proletariat, and a general sketch of a "new international economic order" marked by equity, interdependence and fair shares.

Nobody could be better placed to attempt such a treatise than Paul-Marc Henry. His experience in his national administration, in the United Nations, and now in the OECD, gave him access to indispensable information and contacts for the work. His intelligent approach and lucid exposition make this a valuable book.

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