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COMMITTEE ON COMMODITY PROBLEMS

INTERGOVERNMENTAL GROUP ON MEAT

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Livestock trade in Southern Africa: Major issues and potential for growth

CONTENTS

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I. INTRODUCTION

1. At the Group's Fifteenth Session, the Secretariat presented a paper analysing the meat economy of Japan, the first country study to be prepared for the IGG on Meat[1]. The Group strongly endorsed the preparation of further country studies and a number of delegates proposed that these should have a regional or sub-regional focus, thereby allowing several countries to be covered[2]. While the Secretariat was authorised to select the geographical areas for future studies, the Group requested that reports prepared by the Secretariat should concentrate on countries for which there was little general information available and on markets of potential interest to meat exporting developing countries.

2. In order to prepare a regional study in accordance with the Group's wishes, the Secretariat evaluated several regions. After due consideration, Southern Africa, specifically the Southern African Development Community (SADC)[3], was selected. The Secretariat contacted a number of institutions within SADC, with a view to collaborating in the preparation the IGG paper. After assessing potential institutions, the South African Meat Board was selected to undertake the background research for the study[4].

3. The absence of complete data series proved a serious limitation in the preparation of this study. The data used for the current period were compiled through questionnaires, direct contact with persons involved in the livestock sector and a review of the available literature; while the data used for historical analyses are those collated by FAO. Information collected in connection with this study will also be used to provide background documentation on the SADC livestock and meat sectors for delegates to a regional meeting of the International Meat Secretariat, which will be held in South Africa in September 1996.

II. SUMMARY OF MAIN FINDINGS AND CONCLUSIONS

4. The main findings of this paper are:

- There is a severe lack of comprehensive data on livestock herds, meat production and trade, which limits the analysis of trade in the region.
- Intra-regional trade in livestock and meat is currently confined to only a few countries, specifically members of the Southern Africa Customs Union (SACU).
- South Africa is the major regional market, although it is in itself an important exporter of livestock and meat to the region. Population and income growth is expected to increase demand for meat in the near future, which combined with limited potential for expansion of production, should boost net imports of meat.
- The division between foot-and-mouth disease (FMD)-free and non-FMD-free areas is an important factor in determining trade flows, especially for cattle and beef.
- Extra-regional imports are dominated by South Africa and Mauritius; meat imports from outside the region by other countries are negligible.

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[1] FAO. *The meat market in Japan: Recent developments and prospects*, Document CCP: ME 94/2, 1994, Rome.

[2] Regions suggested for study included western Africa, central and eastern Europe, and southern Africa.

[3] Members of SADC are: Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

[4] The reference report prepared by the South African Meat Board will be available (in English only) for consultation by delegates at the Sixteenth Session of the Group.

- Extra-regional exports are mainly by Zimbabwe, Namibia and Botswana under quotas agreed with the European Community (EC), highlighting the importance of the EC ACP (African, Caribbean and Pacific) preferential access scheme to the region.

- The technical requirements imposed for the export of beef to the EC and South Africa limit export trade in bovine meat to a small number of participants that have the capability to satisfy those requirements.

- In the near future, little change is expected regarding trade in livestock and meat within the region. Since the beginning of the decade, South Africa has become more open to extra-regional imports of meat, a situation which is expected to be maintained. Regarding extra-regional exports of beef, the conditions agreed for access to the EC under the Lomé Convention will be of vital importance in determining the volume of trade both within and outside the region. Any reduction in the Lomé preferential access quotas could lead to an increase in intra-regional trade.

- The reduction in government involvement in livestock and meat marketing is expected to continue, which should allow farmers' organisations or private companies to increase their participation in trade.

- The division within SADC between FMD-free and non-FMD-free areas will limit possibilities for further development of intra-regional trade. In addition, the exclusion of some members from sub-regional trade agreements acts as a disincentive to regional trade.

- The region has recently become a net importer of meat, and the potential to reverse this trend in the short-term (the coming 5 years) would appear to be limited, due to significant constraints on production of meat in the region. To the extent that these constraints are related to long term development issues, the region is not expected to recover its position as a net exporter of beef, even over the medium to longer-term; however, the type of access granted to the EC market after the current Lomé Convention expires in 1999 may be important in influencing developments.

III. OVERVIEW OF LIVESTOCK AND MEAT PRODUCTION AND CONSUMPTION IN SADC COUNTRIES[5]

5. With the exception of South Africa, Mauritius and Swaziland, all the countries included in the study are relatively poor and food insecure[6]. Because of this, the sector's contribution to certain economic aggregates at the national level, such as food production and consumption and international trade, appears to be relatively minor. For example, the contribution of meat products to average daily energy availabilities has been small at around 4.7 percent for more than a decade. There are, however, substantial differences in the contribution made by meat products to energy intake across the countries in the region: South Africa leads with 7.4 percent, while Namibia and Swaziland follow with 6.5 and 6.3 percent, respectively, at the high end; and Mozambique and Malawi are at the low end with 1.7 and 1.3 percent, respectively. Although this can in part be attributed to data problems, covering the important "informal meat sector" in most countries, the estimates are quite consistent with those obtained from other developing regions where the quality of the data is comparatively better[7]. The substantive reasons for such low average consumption

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5 A more detailed treatment of the subject is provided in the reference report.

6 Indeed, according to FAO's aggregate household food security index, these countries, i.e., Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe, are among the 30 least food secure countries in the world (see FAO, *Assessment of the current world food security situation and recent policy developments*, Document CFS:94/2, FAO, Rome, 1994, pp. 19-28).

7 For example, the share of meat products in average energy availability for the developing countries as a whole, according to FAO's AGROSTAT database which has been the source for statistics used in this section of the paper, is around 10 percent. Given the relatively lower income levels in the region compared to other developing regions, lower apparent consumption of animal products are not inconsistent with empirical studies undertaken on the subject elsewhere.

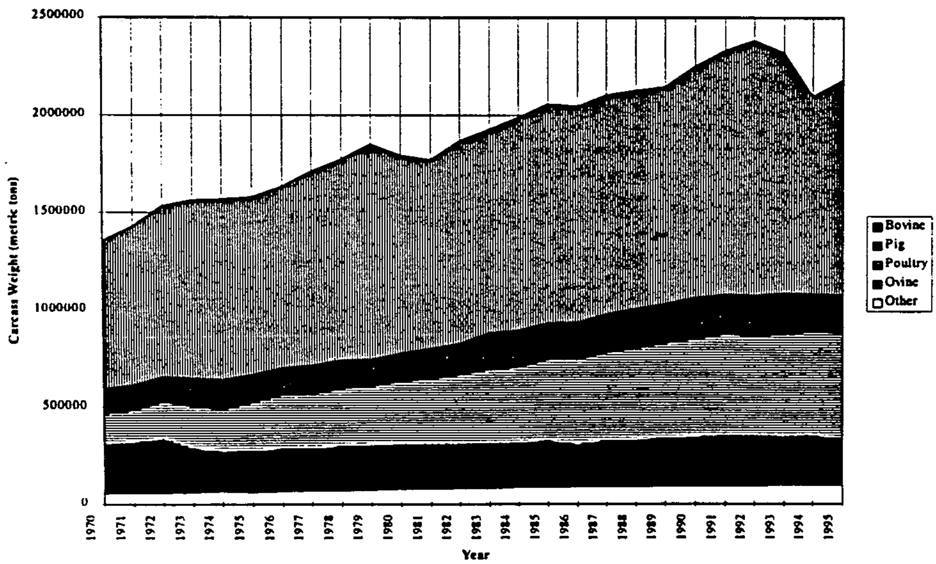
levels are also related to factors determining economic and social development and the structure of the livestock and meat sectors in these countries. Most livestock and meat products are superior goods consumed in greater quantities only at relatively higher levels of income. Thus, prevalence of low incomes and low economic and social development are important reasons for observing low consumption levels of livestock and meat products in the region.

6. On the supply side, the dominance of the communal or traditional livestock production systems also plays an important role in constraining demand for meat products. Communal production takes place on communally owned land, the use of which is normally governed by customary rules, and is often not conducted with the primary aim of producing meat. Animals may be kept for draft power, dung (important source of fertiliser and fuel), and as a form of capital asset, as well as being an important element in social prestige. Finally, the perishable nature of most livestock products, combined with relatively poor transport, processing, storing and handling facilities in the countries concerned may act as additional hindrances to the expansion of the market.

7. Livestock numbers within the region have not increased substantially over the past couple of decades. Indeed, the average growth rate over the 1980-1990 period was only around 0.6 percent per annum. The droughts which many countries experienced between 1991 and 1993, and again in 1994/95, have resulted in a substantial decline in regional cattle numbers since 1990, while the regional sheep and goat herds have remained stable as they are less affected by drought. The distribution of the livestock herd within SADC is summarised in Table 1.

8. Meat production, on the other hand, has increased faster than animal numbers, primarily as a result of rapid growth in the pig and poultry industries that rely on more intensive systems (Fig 1). In fact, the growth in overall meat production in the region during the two decades prior to 1990 averaged around 2.3 percent per annum, below the population growth rate of 2.8 percent. Poultry meat production during the same period grew by around 5.5 percent per annum; pig meat production by around 2.7 percent; bovine meat by 1.7 percent; and, finally, ovine meat production remained essentially unchanged.

Figure 1: Composition of meat production in SADC countries



9. A recurrent theme regarding meat production within the region is that slaughter-rates are generally low (Table 1). This can in part be attributed to data on slaughtering for most countries not including animals butchered in the "informal sector", i.e., not in registered abattoirs. Another important factor concerns the distinction between commercial and communal sectors. For reasons discussed above, slaughter rates in the communal sector, which typically accounts for the majority of the livestock herd in the SADC countries, are generally much lower than those prevailing in the commercial sector (Table 2).

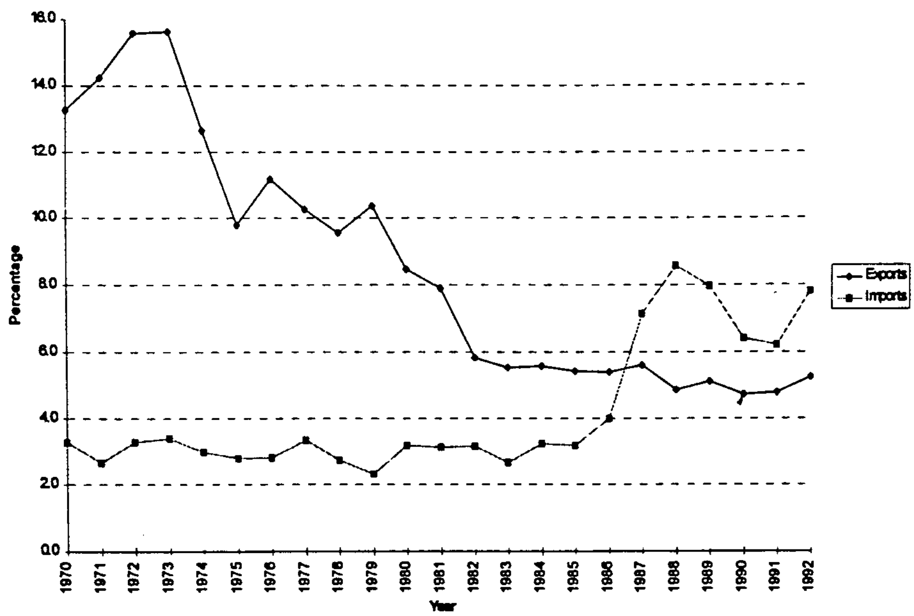
10. The poor performance of the bovine meat sector in many countries in the region reflects, in addition to the factors noted above, environmental constraints and poor land management, in particular: high susceptibility to periodic droughts, prevalence of arid lands, overstocking and range degradation. For example, only 20 percent of Botswana's land area is suitable for grazing due to lack

of water. In South Africa, the largest meat producer in the region, bovine and sheep and goat meat production is not expected to increase beyond current levels as the carrying capacity of natural pastures is fully utilised. Similarly, in Namibia bush encroachment and desertification are reported to be serious constraints to the expansion of livestock farming. For a small group of countries - Angola, Mozambique and Zambia - there would appear to be a substantial scope for expanding meat production. This would reflect large herd reductions during the period of civil war in Angola and Mozambique, and in Zambia a large dependence of the economy on mining and an underdeveloped farming sector with considerable scope for agricultural production increases.

IV. LIVESTOCK AND MEAT TRADE IN SADC COUNTRIES

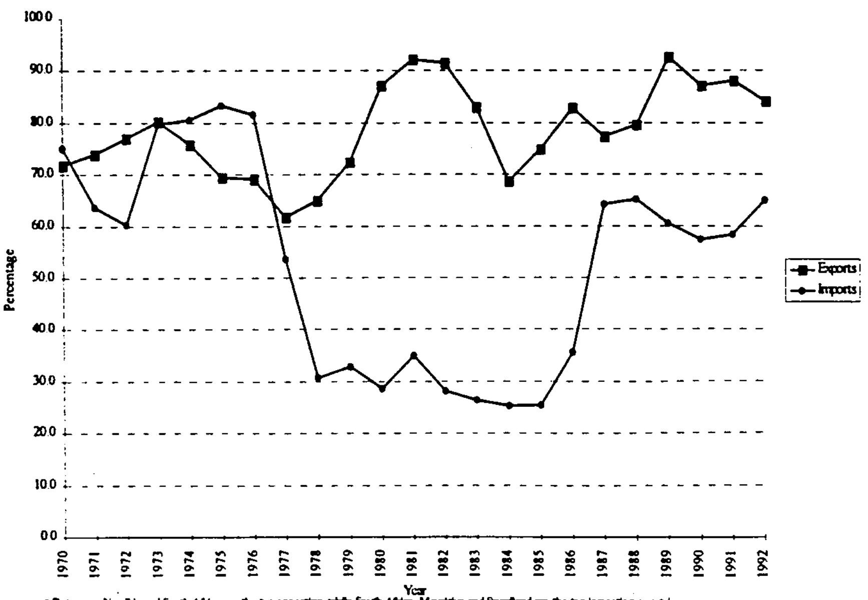
11. The structure of the livestock markets in the countries of the region has been an important determinant of historical developments in trade patterns in the region. Figure 2 illustrates that the share of meat exports in domestic production from the countries of the region, including intra-regional trade, have gradually declined to less than 6 percent at the beginning of the 1990s, from about 14 percent at the beginning of the 1970s. The reverse is true for the imports of the countries concerned, and the SADC region as a whole changed its status from a net exporter to net importer in the mid-1980s.

Figure 2: Share of meat imports and exports in production in SADC



12. These trends are influenced to a great extent by developments in a small number of countries, because trade in the region is highly concentrated. The principal meat exporting countries in

Figure 3: Three-country* concentration ratios of imports and exports for meat in SADC



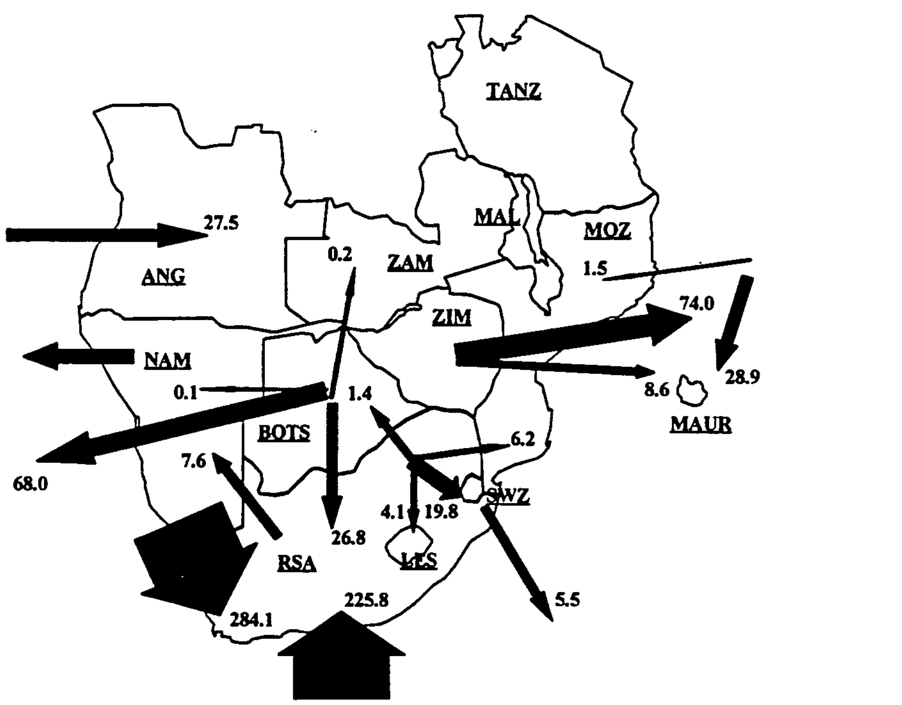
* Botswana, Namibia and South Africa are the top exporting, while South Africa, Mauritius and Swaziland are the top importing countries.

the region are Botswana, Namibia, South Africa and Zimbabwe. The first three accounted for nearly 90 percent of exports by volume at the beginning of the 1990s, up from around 70 percent at the beginning of the 1970s (see Figure 3). The major importers are Mauritius and South Africa. These two countries, along with Swaziland, accounted for about three-quarters of meat imports into the region by volume at the beginning of the 1970s. Between 1978 and 1985, just prior to the implementation of structural adjustment programmes in many of the countries due to macroeconmic imbalances, the imports were less concentrated. But by the beginning of the 1990s the same three accounted for around 60 percent of regional imports.

A. Current trade flows

13. Much of the international trade flows take place between the countries of the region, with extra-regional trade accounting for about one-third of both total imports and exports. For cattle and beef, the main **intra-regional** trade flows are from Namibia and Botswana to South Africa, and from South Africa to Swaziland (Figure 4). The composition of trade (cattle versus meat) varies significantly between these countries, reflecting to a degree the availability of slaughtering infrastructure and other cost advantages. Exports from Namibia to South Africa are composed of 65 percent live animals (some of which are for fattening) and of 35 percent in the form of beef. Botswana's exports to South Africa are 96 percent in the form of meat and 4 percent live animals. Exports from South Africa and Swaziland are mainly (85 percent) in the form of cattle. The current patterns also reflect specific conditions in the countries concerned, such as South Africa's attempts at post-drought herd rebuilding.

Figure 4: SADC - Cattle and bovine meat trade flows - 1994 (1000 carcass units)



14. As regards **extra-regional imports** in bovine meat, South Africa's current imports of 226 000 carcass units has had the effect of turning the region from being a net exporter of bovine meat into a net importer. This was in part due to the liberalization of that country's import regime. About 99 percent of South Africa's and 70 percent of Mauritius' extra-regional imports of beef currently come from the EC, at subsidised prices. **Extra-regional exports** of beef from SADC are destined almost entirely to the EC under the Lomé Convention's ACP scheme[8],

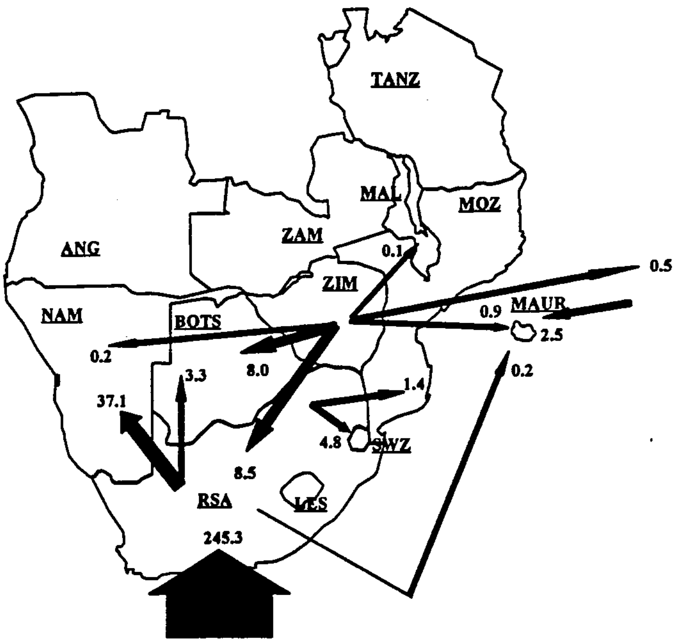
[8] In total, this quota scheme is valid for 52 100 tons of beef (boneless equivalent) annually for all Africa. The countries that benefit are Botswana, Namibia, Kenya, Swaziland, Madagascar and Zimbabwe, their quotas are respectively: 18,916; 13,000; 142; 3,363; 7,579; and 9,100 metric tons. In cases where countries do not fully utilise their quota, the EC can agree, for the same or the following year, to allocate the quantities concerned (up to a limit of 30 000 tons) to the other states in the scheme. The table below contains the actual exports from the African countries benefiting from the Convention for the period 1992-95.

Year	Botswana	Namibia	Madagascar	Swaziland	Zimbabwe	Kenya
1992	16,001	9,201	1,276	128	8,327	15
1993	14,740	10,260	1,739	703	9,145	-
1994	12,425	11,087	2,087	642	16,242	-
1995	13,521	12,369	4,024	720	10,512	-

(Source: Meat and Livestock Commission, U.K.)

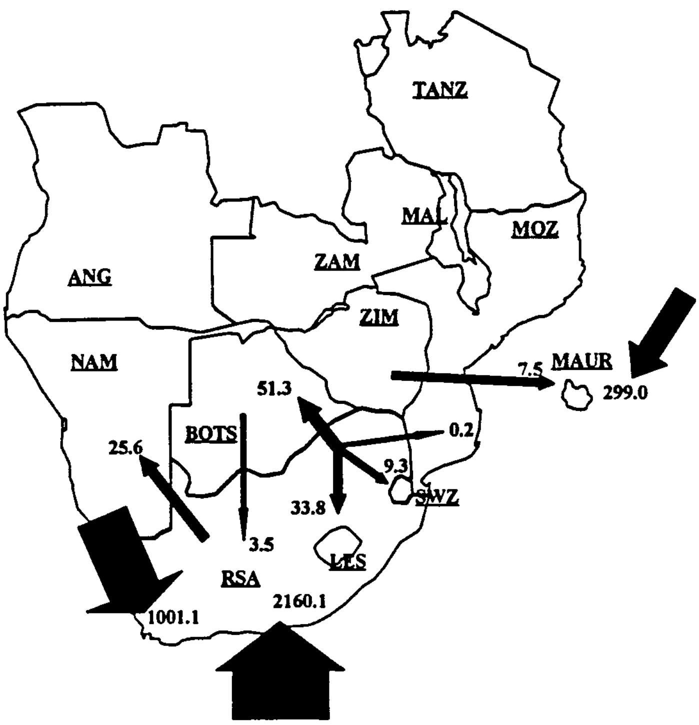
because returns are relatively higher there. An additional aspect of the ACP quota is that its highly specific requirements regarding the type of beef which can be exported - hind quarters - may mean that parts of the carcass which cannot be traded under the scheme are exported at subsidised prices within the region, possibly to the detriment of producers in the importing countries.

Figure 5: SADC - Pigs and pig meat trade flows - 1994 (1000 carcass units)



15. Unlike for beef, there is no extra-regional export trade in sheep and goat meat (Figure 5). The main exporting countries within the region are Namibia, South Africa and Botswana, while the main importing countries are South Africa, Botswana, Lesotho and Mauritius. South Africa is the principal importing country with regional supplies coming from Namibia (98 percent live animals; 2 percent meat) and Botswana (all meat). South Africa is also an exporting country (55 percent meat; 45 percent live animals). Zimbabwe's trade with Mauritius is exclusively in live animals for slaughter. Mauritius and, because of the liberalisation of its import regime, more recently South Africa, import substantial amounts of sheep meat from outside the region, almost exclusively from Australia and New Zealand.

Figure 6: SADC - Sheep & Goats - live animals and meat trade flows - 1994 (1000 carcass units)



16. The current patterns of trade in pig meat reflect similar changes as those observed for sheep and goat meat (Figure 6). Most importantly, South Africa became a net importer of pig meat, with supplies coming mainly from Canada and the EC. This was associated with a decrease in South Africa's production of pig meat and the liberalisation of that country's import regime. Despite the substantial increase in its imports, South Africa still remains the region's largest exporter of pigs and pig meat. The volume of trade is equally divided between live animals and meat.

17. Unlike the other meats, there is virtually no intra-regional trade in poultry, although South Africa is reported to export some 5 000 tons, within SACU (see below). Extra-regional imports have

traditionally come from the EC, with the United States being a more recent entrant into the market. The two main import markets within SADC are Angola and South Africa. In the case of South Africa, imports have risen substantially during the 1990's, reflecting production shortfalls associated with drought and high feed prices together with the lowering of tariffs on certain cuts of poultry meat over the period.

B. Trade agreements

18. Much of the observed pattern of trade in meat in the region is also conditioned by trade arrangements between the countries of the region and by bilateral arrangements with countries outside the region. The region as a whole has yet to achieve its goal of establishing a unified customs area[9]. There are, however, several sub-regional groupings. The most important customs grouping within the region is the SACU, which was established in 1910 and currently numbers Botswana, Lesotho, Namibia, South Africa and Swaziland amongst its members. For livestock and meat, trade between member states is tariff-free. The agreement is administered by South Africa, which gathers customs duties on imports from outside the SACU area and then redistributes them to member states[10]. The role of SACU for intra-regional trade in meat is obvious from the discussion in the previous section.

19. Besides SACU, there are two bilateral trade agreements which have implications for livestock and meat. Firstly, Namibia and Zimbabwe have a free trade agreement allowing duty-free trade in primary products, including livestock and meat, between the two countries. Secondly, a trade agreement was signed between South Africa and the then Southern Rhodesia (Zimbabwe) in 1964. This provides for preferential duties on trade in a range of products, including cattle, meat and meat products, subject to the granting of import licences. Trade under this agreement lapsed in 1980. Negotiations are currently in progress to establish an annual quota for the export of beef from Zimbabwe (which is not a member of SACU) to South Africa; if approved, this could be implemented within the context of the bilateral agreement signed in 1964.

20. The most important external arrangement is the Lomé Convention. An ACP quota has been established for imports of beef into the European Community from certain African countries. Quota imports are free of customs duty and only 10 percent of the import tariff is applied. Overall a preferential access quota of 52 100 tons of beef (boneless equivalent) annually has been granted. SADC members, i.e., Botswana, Namibia, Zimbabwe and Zimbabwe, account for 85 percent of the Lomé quota.

21. In order to qualify for access to the EC market, the states concerned must meet certain conditions regarding veterinary procedures, freedom from foot-and-mouth disease (FMD) and slaughter-house facilities. As the Lomé quotas offer guaranteed access to a high-price market, they constitute an important element in providing a stable outlet for exporters. However, the net benefits accruing to the region from the scheme are difficult to quantify, as access to the EC market is dependent on substantial infrastructural investments. In some countries, much of the associated costs are borne by the public sector.

C. Institutional arrangements for trade

22. Exports to the EC under the Lomé Convention are handled by either parastatals or producers' organisations[11]. Beef exported from Botswana, Namibia and Zimbabwe under the Lomé

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9 The Common Market for Eastern and Southern Africa (COMESA) was established in 1994 as a successor to the regional Preferential Trade Area (PTA), launched in 1981. All SADC countries, except South Africa and Namibia are also members of COMESA. COMESA aims to establish a regional common market; however, the failure of many countries to publish PTA tariff, has limited progress towards free trade (see Economist Intelligence Unit, *Country Profile: Zimbabwe*, London, 1996).

10 Meat of bovine animals, sheep and goats are subject to a 40 percent *ad valorem* import duty into SACU. The duty on meat of swine is 15 percent, while that on frozen whole fowls and cuts is 27 percent. Live animals are not subject to any duty.

11 **Botswana Meat Commission**, a para-statal, in Botswana; **Meat Corporation of Namibia** (Meatco), a private company owned by meat producers, in Namibia; **Swaziland Meat Industries** (SMI), a subsidiary of the Royal Swazi Sugar Corporation, para-statal, in Swaziland; **Cold Storage Commission**, a para-statal, in Zimbabwe.

Convention is marketed by the Botswana Meat Commission's London-based sales agency. The fact that these companies control the abattoirs which are certified for export to the EC, also means that they are the main exporters of meat within the region. The principal regional market, South Africa, requires similar certification of export abattoirs to that required by the EC.

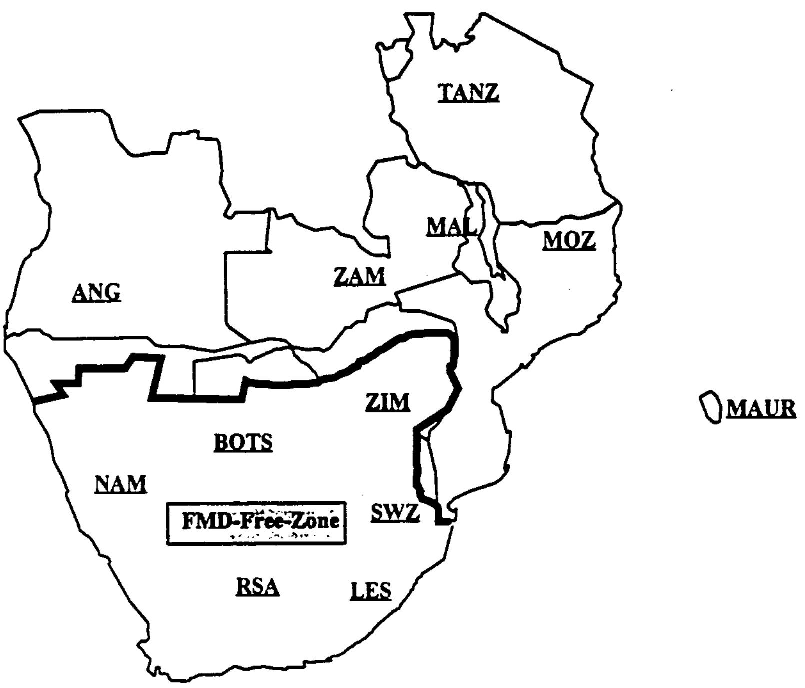
23. Trade in live animals for slaughter and fattening, which is important for all categories of livestock, is conducted mainly by private traders. Pigs and pig meat exports are limited to two countries: South Africa and Zimbabwe. South Africa's pig and pig meat exports are undertaken by the private sector, while Zimbabwe's pork exports are handled by a farmers' co-operative - Colcom. Private traders are the main importers of all types of meat from outside the region.

24. To an extent, the predominance of parastatals in the export of beef runs contrary to current government policy within several SADC countries, which seeks to move away from direct state involvement in the marketing of meat and to allow greater involvement by the private sector. For example, Zambia dissolved its agricultural marketing board in 1989. In Zimbabwe, prior to 1991, the slaughter of cattle and the marketing of bovine meat were controlled by the Cold Storage Commission; subsequently, a large number of private slaughter-houses have been established with a consequent reduction in the proportion of the national herd slaughtered by the Commission. A similar process also occurred in South Africa, where the Meat Board's control over the movement of meat and livestock was abolished in 1993.

D. Foot-and-Mouth Disease-Free Zones

25. The division between FMD-free and FMD areas within SADC is of fundamental importance in determining both intra- and extra-regional trade, as meat and livestock from the FMD areas cannot pass freely into the FMD-free areas. States with a complete FMD-free status on their whole territory are Lesotho, South Africa and Swaziland. Botswana, Namibia and Zimbabwe are only free of the disease in their central and southern regions (Figure 7). In the latter group of countries, a veterinary cordon fence divides FMD and FMD-free zones. In addition, game reserves, where buffaloes carry the disease, are fenced in all countries within FMD-free zones. Apart from fencing, countries within the FMD-free zone have a system of buffer zones on the inside of the cordon fence where compulsory vaccination is applied and where the movement of livestock is strictly controlled through a permit system and/or compulsory permanent branding of cattle indicating the area of origin.

Figure 7: Southern African FMD-Free-Zone and External Veterinary Fence



26. Since the early 1990's, meat from certain areas to the north of the cordon fence in Namibia and Botswana can be sold in the rest of their national territory or exported to South Africa, provided that animals are quarantined for a period of three weeks prior to slaughter; all meat is deboned (this may only be done

once the meat has been allowed to mature for twenty-four hours); and the meat is stored for at least three weeks before sale.

27. There is a tendency for the commercial sector, rather than government, to bear more of the costs of the human and physical infrastructure necessary to maintain the FMD-free zones. For example, in the case of Namibia, producers pay for inspection services at abattoirs as well as for residue testing of meat. In addition, Namibian producers recently agreed to pay a levy on all stock slaughtered or exported (one Namibian dollar on cattle and 25 cents on small stock). The levy will be combined with funds available under an EC financed project and will be used in the prevention of disease outbreaks.

V. FUTURE PROSPECTS FOR THE DEVELOPMENT OF MEAT AND LIVESTOCK TRADE IN SADC COUNTRIES

28. At the sub-regional level, SACU has played an important role in promoting trade in live animals and meat, as instanced by the fact that most regional trade takes place between members of the customs union. Conversely, external tariffs have limited the potential for trade with members of SADC which are not members of SACU. Furthermore, the designation of FMD-free areas amongst the southern member states of SADC, which, with the exception of Zimbabwe, are all members of SACU, also acts as a sanitary barrier to trade in livestock and meat with those countries outside the FMD-free zones. This has prevented countries outside the FMD-free zone from exporting livestock and meat to the FMD-free zone. In addition, domestic trade is also constrained in those countries which are divided by a cordon fence.

29. It is expected that the situation prevailing in the mid-1990's regarding trade in meat and livestock will generally be maintained in the coming 5 to 10 years. In particular, intra-regional trade within SADC will continue to be concentrated amongst the southern member states, especially the members of SACU. For cattle, the region is currently in a phase of herd rebuilding following the 1991/93 drought. As a consequence, bovine meat production will not increase substantially until after 1998.

30. South Africa will remain the principal market for meat and livestock, drawing imports both from regional and extra-regional sources. As a result of growing internal demand, limited potential for expanding production and the abolition of government assistance to exports, South Africa could well see a reduction in the volume of meat and livestock it exports to neighbouring countries. Mauritius should also remain an important net importer of meat and livestock. Even though the prospects for an expansion in import demand for some meat products from extra-regional sources are rather limited, the EC commitments under the Uruguay Round Agreement to reduce subsidised meat exports may improve the prospects for other exporters to gain a wider share of the SADC meat markets over the next few years.

31. For **cattle and bovine meat**, Namibia and Botswana should maintain their role as the principal suppliers to the region. Should Zimbabwe gain access to South Africa's market through a bilateral quota currently under consideration, substantial trade in forequarter beef (a by-product of the exportation of hindquarter beef to the EC under the ACP scheme) could be expected. For extra-regional exports under the ACP scheme, the countries with quotas will attempt to meet as much of their allocation as possible. This, in itself, would limit the potential for substantial growth in regional trade over the next four years. However, the current Lomé Convention expires at the end of 1999 and it remains to be seen whether a subsequent agreement between the EC and the ACP countries will have the same components as in previous years. Should access for beef from SADC - ACP countries to the EC market be reduced after 1999, regional trade - with exports being mainly directed towards South Africa and Mauritius - could be expected to increase.

32. Regional trade in **small-stock and sheep and goat meat**, is likely to remain focused on exchanges between South Africa, Namibia and Botswana. At the same time, South Africa and Mauritius should continue to rely on exports from outside the region, unless international prices rise substantially. For **pigs and pig meat**, South Africa's exports could decrease following the abolition

of export subsidies. Conversely, relatively low prices for pig meat in Zimbabwe, when compared with a number of other SADC member countries, could act a stimulus for further export growth. South Africa's imports of pig meat from extra-regional sources are anticipated to remain substantial.

33. The reduction of state involvement in the marketing of meat and livestock is expected to continue. This could apply both to infrastructural support to the industry provided by government as well as to a diminution in the role of parastatal corporations. Regarding the latter, more emphasis may be placed on producers' organisations (as is the case in Namibia). For the regional trade, it appears likely that the number of abattoirs obtaining approval to export meat to South Africa will increase. In particular, this could apply to Namibia and, assuming a quota to the South African market is obtained, Zimbabwe. This would open up the possibility of more companies becoming involved in the intra-regional trade in meat.

34. Income growth in the countries of the region will be the most important constraint on the demand side. Meat products have relatively high income elasticities, and higher income growth is likely to be translated into more than proportionate increases in their demand. Given the importance of the economy of South Africa in the region, the performance of its economy will be the critical factor in this respect.

35. Whether improvements in market signals will eventually trigger trade and production responses in the region will depend on the extent to which they are transmitted to the producers and on the nature of the supply adjustment processes in the livestock and meat sector. However, the supply response, especially in the traditional extensive systems, is likely to be limited for a number of reasons. Firstly, the majority of the traditional producers tend to be located away from the urban centres from where much of the demand emanates. Given the poor physical transport, communications and processing infrastructure in the countries of the region, only a part of the increased incentives is likely to accrue to the traditional livestock sector. Moreover, traditional livestock production is usually not the principal cash earning activity in mixed-farming systems, but constitutes an integral part of the food and social security systems of the producing households. In a harsh and uncertain environment, livestock production provides a significant nutritional supplement to the vulnerable, increases the resilience of the households during and after times of food security crises, and ensures the maintenance of traditional social safety nets that the governments cannot usually provide. Even if some of the increases in prices accrue to the producers, a production rise will only be generated if the cash resources required for setting it in motion can be more than met by increased market sales, and only if the resulting demand on household resources does not upset the delicate balance in the existing farming systems, endangering their food security. Thus, the bulk of the supply response is likely to come from intensive, commercial livestock systems located closer to the main urban centres. Intensive livestock systems in South Africa, Zimbabwe and, to some degree, Mauritius benefit from adequate infrastructure at their disposal, thus positively influencing the development of the livestock and meat trade in the region. The livestock industry in Namibia, Zambia, Lesotho, Swaziland and Malawi is limited by insufficient infrastructure; and Angola, Mozambique and Tanzania have severe infrastructural problems. In addition, while a country as a whole may have adequate infrastructure, this is generally inadequate in the communal areas.

TABLE 1: SADC - Livestock Herd - 1994

COUNTRY	TOTAL HERD (cu)	LOCAL SLAUGHTER* (cu)	HERD OFF-TAKE# (%)	AVG CARC MASS (kg)
CATTLE				
ANGOLA	3,280,000	56,090	12.0	142
BOTSWANA	1,619,625	36,166	11.9	190
LESOTHO	577,975	867	1.0	150
MALAWI	800,000	4,444	2.8	202
MAURITIUS	21,246	569	14.9	180
MOZAMBIQUE	240,687	987	2.7	150
NAMIBIA	2,036,000	47,408	19.9	220
SOUTH AFRICA	12,583,646	367,124	13.8	213
SWAZILAND	626,000	5,200	4.2	200
TANZANIA	13,315,632	133,900	9.8	103
ZAMBIA	2,191,000	31,610	9.0	160
ZIMBABWE	4,883,000	99,840	11.1	192
TOTAL	42,174,811	784,205		
AVERAGE	3,514,568	65,350	9.4	175
SHEEP & GOATS				
ANGOLA	1,825,000	5,290	29.0	10
BOTSWANA	2,133,000	160	0.5	14
LESOTHO	2,152,290	301	1.4	10
MALAWI	952,568	14	0.1	14
MAURITIUS	22,478	91	45.1	9
MOZAMBIQUE	269,256	30	0.9	13
NAMIBIA	4,259,000	3,604	25.8	17
SOUTH AFRICA	35,535,788	70,823	12.0	17
SWAZILAND	486,000	1,037	12.6	17
TANZANIA	11,333,937	12,000	8.8	12
ZAMBIA	689,000	2,856	29.6	14
ZIMBABWE	3,054,000	1,134	2.9	14
TOTAL	62,712,317	97,340		
AVERAGE	5,226,026	8,112	14.1	13
PIGS				
ANGOLA	820,000	22,500	54.9	50
BOTSWANA	17,000	600	70.6	50
LESOTHO	4,106	138	67.1	50
MALAWI	245,000	9,500	77.6	50
MAURITIUS	15,423	1,057	102.3	67
MOZAMBIQUE	143,020	902	10.5	60
NAMIBIA	18,000	710	70.5	56
SOUTH AFRICA	1,511,124	101,665	121.6	56
SWAZILAND	38,000	342	18.0	50
TANZANIA	430,000	1,400	0.3	40
ZAMBIA	295,000	9,460	72.9	44
ZIMBABWE	277,000	10,136	72.0	56
TOTAL	3,813,673	158,410		
AVERAGE	317,806	13,201	61.5	52

NOTE: cu = carcass units, carc = carcass
* = formal slaughter (excluding imported animals)
# = (slaughter from herd + live exports for slaughter + meat exports)/total herd

Source: South African Meat Board, based on personal communication; production yearbook, 1994, FAO; Economist Intelligence Unit - country profiles

TABLE 2: SADC - Livestock Herd Divided by Land Tenure and Slaughter Rate - 1994				
COUNTRY	Herd		Slaughter Rate	
	COMMERCIAL (%)	COMMUNAL (%)	COMMERCIAL (%)	COMMUNAL (%)
CATTLE				
BOTSWANA	14	86	38	
MOZAMBIQUE	26	75	13	
NAMIBIA	54	46	33	
SOUTH AFRICA	65	36	25	1
ZIMBABWE	28	72	20	
AVERAGE	37	63	26	
SHEEP AND GOATS				
BOTSWANA	6	94		
MOZAMBIQUE	6	95		
NAMIBIA	57	43	44	
SOUTH AFRICA	79	21	16	2
ZIMBABWE	5	95		
AVERAGE	31	69	30	1
PIGS				
BOTSWANA	2	99		
MOZAMBIQUE	10	90		
NAMIBIA	75	25	75	1
SOUTH AFRICA	80	20	160	5
ZIMBABWE	36	64		
AVERAGE	41	59	117	3

NOTE: Slaughter rate calculated from formal slaughter only
Source: South African Meat Board, based on questionaire responsses