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Data contained in this Livestock Sector Brief are taken from official sources. Official sources are no guarantee for data accuracy and the figures reported in this brief should be taken as indicative and not be used for official purposes. The Food and Agriculture Organization of the United Nations assumes no responsibility for its accuracy, completeness and coherence.

## PREFACE

The Livestock Sector Briefs (LSB) are intended to provide a quick overview and an approximate outlook for the livestock sector of the respective country using figures and quantitative indicators originating from official sources. The LSBs are complemented by a synthesis of policy documents available in the public domain.

The majority of the data in the LSBs refer to the country as a whole and come from FAOSTAT, which is available on the internet (<http://faostat.external.fao.org/default.jsp>). FAO, as part of its mandate, compiles information and data on various aspects of food and agriculture from all countries. The data are analysed and interpreted to support FAO's programmes and activities and, in accordance with the basic functions of the Organization, they are disseminated to the public through publications, CD-ROM, diskettes and the Internet. The country level data are officially submitted to the Division for Statistics of FAO (ESS) by various ministries of the respective countries. For details of data collection procedures see <http://faostat.fao.org/abcdq/about.htm>. The figures submitted often display inconsistencies across ministries, for example reported meat production does not always match reported meat consumption when taking into account imports and exports. FAO tries to reconcile the figures, to the effect that FAO statistics may differ from those originally submitted.

The LSBs utilise FAOSTAT data from the following domains: human population, land use, agriculture production, food supply and agricultural and food trade. These are used to derive a standard set of indicators that can quickly be compared across the countries.

Data on the economy are from the World Bank's World Development Indicators CD-Rom, which is also available online <http://www.worldbank.org/data/> and is updated every year. Animal health data are taken from the Office International des Epizooties (OIE) HANDISTATUS II <http://www.oie.int/hs2/>. These are official data supplied by member nations.

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## 1. GENERAL INFORMATION

### Human population, land and socio-economics

Human population	36.3 million
Population density on total land	41.1 persons/sqkm
Annual growth rate (1990-2000)	2.6 %
Population in agriculture	28.0 million
As proportion of total population	77.3 %
Total land area	883,590 sqkm
Agricultural land	401,000 sqkm
As proportion of total land	45.4 %
Land under pasture	350,000 sqkm
As proportion of total land	87.3 %
Irrigated area	1,700 ha
Agricultural land per 100 people	111 ha
Agricultural land per 100 people in agriculture	143 ha
Agricultural population density on agricultural land	69.9 persons/sqkm
GDP <sup>1</sup>	7,287 million US\$
GDP annual growth rate (1990-2000)	4.0 %
GDP per capita/year <sup>1</sup>	207 US\$
GDP per capita annual growth rate (1990-2000)	1.3 %
Agriculture, GDP	2,965 million US\$
As proportion of total GDP	40.7 %
Livestock, GDP <sup>1</sup>	876 million US\$
As proportion of agricultural GDP	29.5 %
Human development Rank	162 Ranking <sup>2</sup>
Human development index	0.407
Poverty incidence <sup>3</sup>	
Total	35.7 %
Urban	na %
Rural	38.7 %

<sup>1</sup>Constant 1995 US\$ <sup>2</sup> The HDI rank is determined using HDI values to the fifth decimal point – from 177 countries, as compiled by the UNDP; <sup>3</sup> National poverty line; na: not available

Source: World Bank (2002); UNDP (2004); FAO (2005a)

- Tanzania is a low-income rural economy, with livestock contributing around 12 percent to GDP. In 1986 the country shifted from a centrally planned to a market-economy: trade, exchange and interest rates were liberalized and more than half of the 400 parastatals were closed down and/or privatised. The reform programme came to a halt in the mid-90s, and in 1996 the government embarked on second round of institutional and structural reforms, including efforts to further the transformation to a market economy, reform the public administration and invest in key development sectors (education, health, agriculture, water, roads). Such efforts

resulted in increased macroeconomic stability and growth levels averaging 4 percent during the last years.

### Human population trends

Values expressed in 1,000

Population segment	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Total	18,838	26,068	34,837	36,276	3.3	2.9
Rural	16,059	20,411	23,601	23,785	2.4	1.5
Urban	2,779	5,657	11,236	12,491	7.4	7.1

Source: FAO (2005a)

### Trends in agricultural<sup>1</sup> land

Values expressed in sqkm

Land type	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Total	390,000	394,000	400,000	401,000	0.1	0.2
Cropped <sup>2</sup>	40,000	44,000	50,000	51,000	1.0	1.3
Pastures	350,000	350,000	350,000	350,000	0.0	0.0

<sup>1</sup>The sum of area under arable land, permanent crops and permanent pastures

<sup>2</sup>Arable and permanent crops

Source: FAO (2005a)

- Land legislations and customary laws have been traditionally complex and somewhat conflicting. The 1999 Land Acts No.4 and No.5, which became operational in 2001, maintain that: (i) all land is public; (ii) existing rights in land and recognized long standing occupation are to be secured; (iii) access to land must be on an equitable base; (iv) land is to be used productively; (v) an efficient system of land adjudication is to be developed; (vi) the operation of land markets is to be facilitated.

## 2. LIVESTOCK RESOURCES

### Livestock populations

Values expressed in 1,000

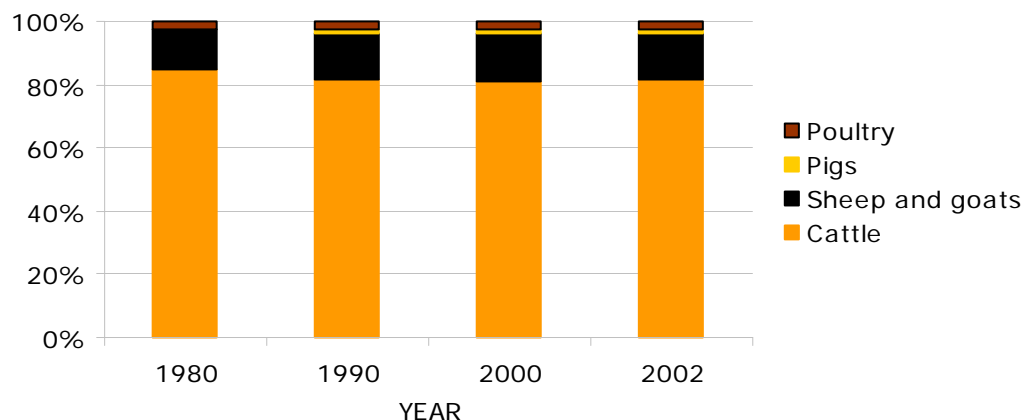
Species	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Cattle	12,578	13,047	16,713	17,367	0.4	2.5
Sheep and goats	9,437	12,083	15,390	15,839	2.5	2.4
Pigs	160	320	450	458	7.2	3.5
Poultry	18,100	21,700	29,048	30,320	1.8	3.0
Total LUs	7,445	8,013	10,276	10,662	0.7	2.5

**LU:** Livestock unit; **conversion factors:** cattle (0.50), sheep and goats (0.10), pigs (0.20) and poultry (0.01)

Source: FAO (2005a)

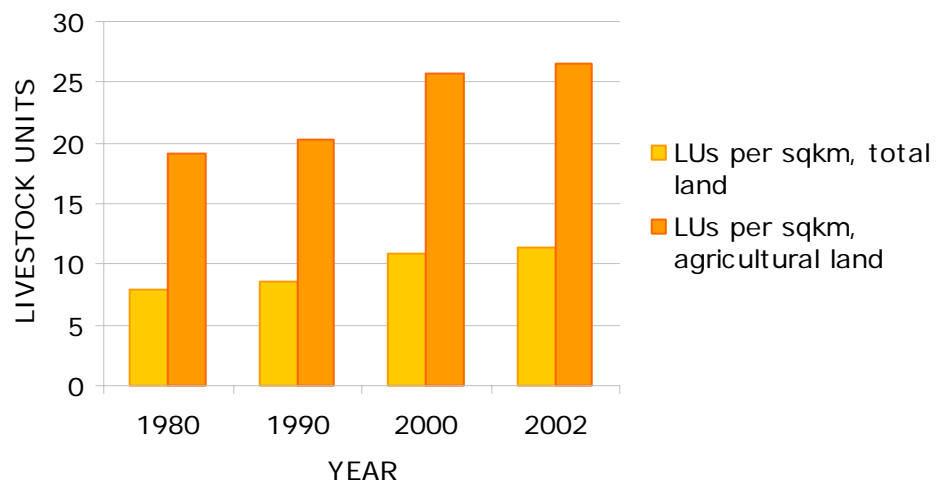
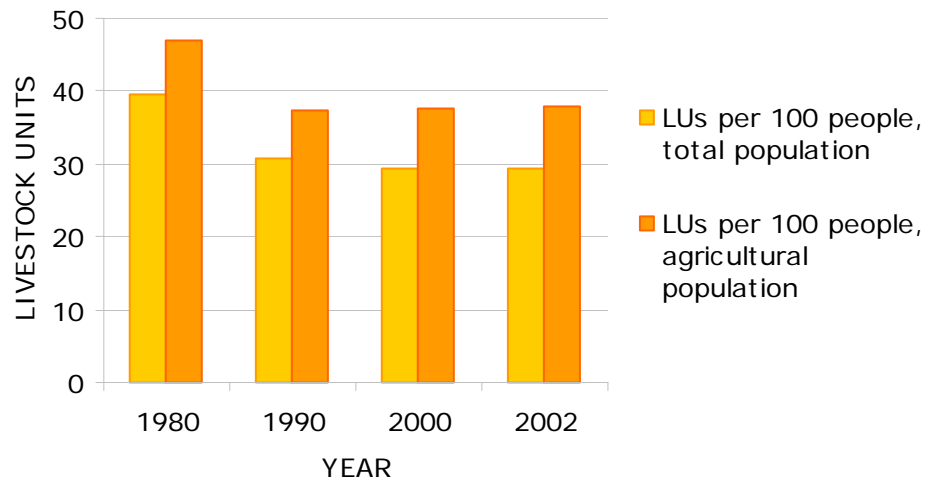
- Approximately 99 percent of the livestock belongs to traditional (small) owners (63.2 percent of the poor own livestock), with big ranches and dairy farms constituting the remaining 1 percent. The development of the livestock sector, therefore, could contribute to reducing poverty level substantially.

### Contribution of different species to total livestock units



Source: FAO (2005a)

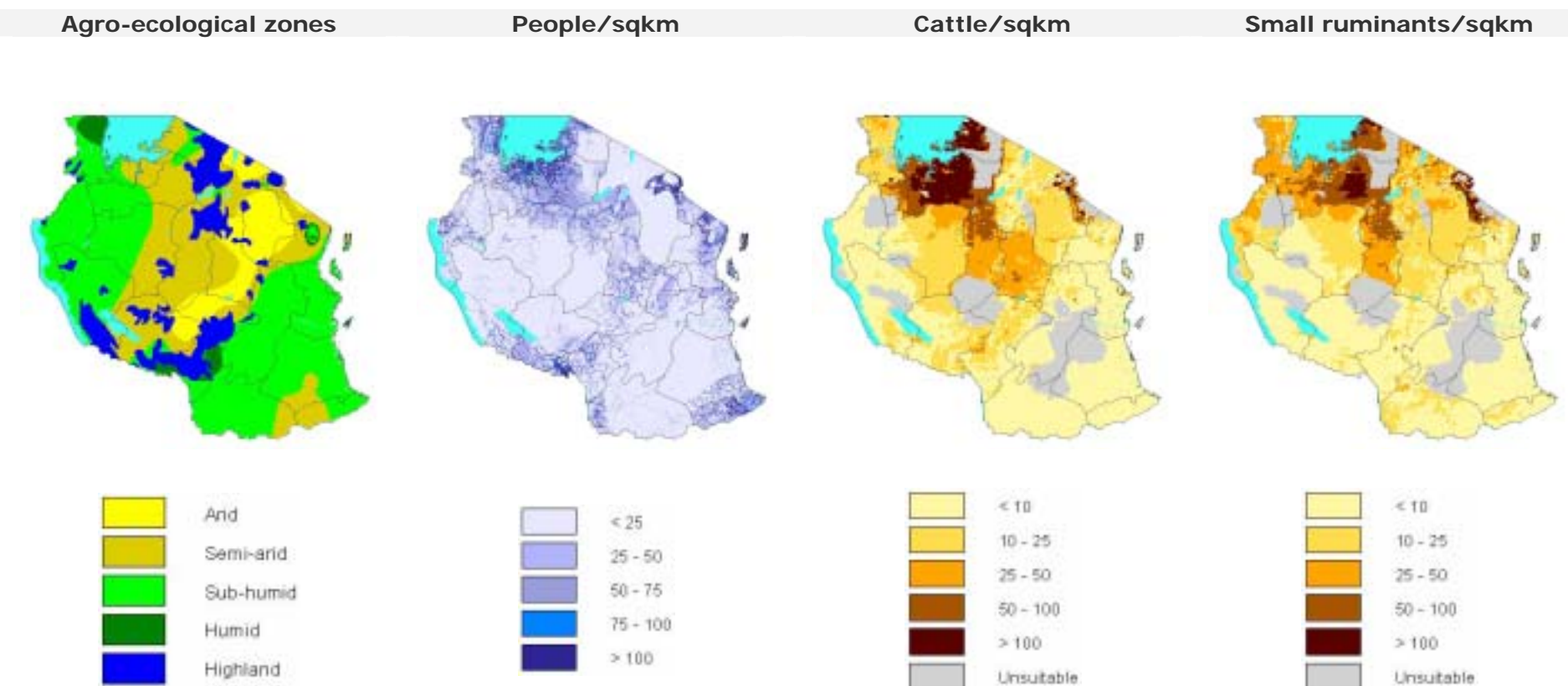
## Selected indicators of livestock resources



Source: FAO (2005a)

## Agro-ecological zones and densities of livestock species (2000)

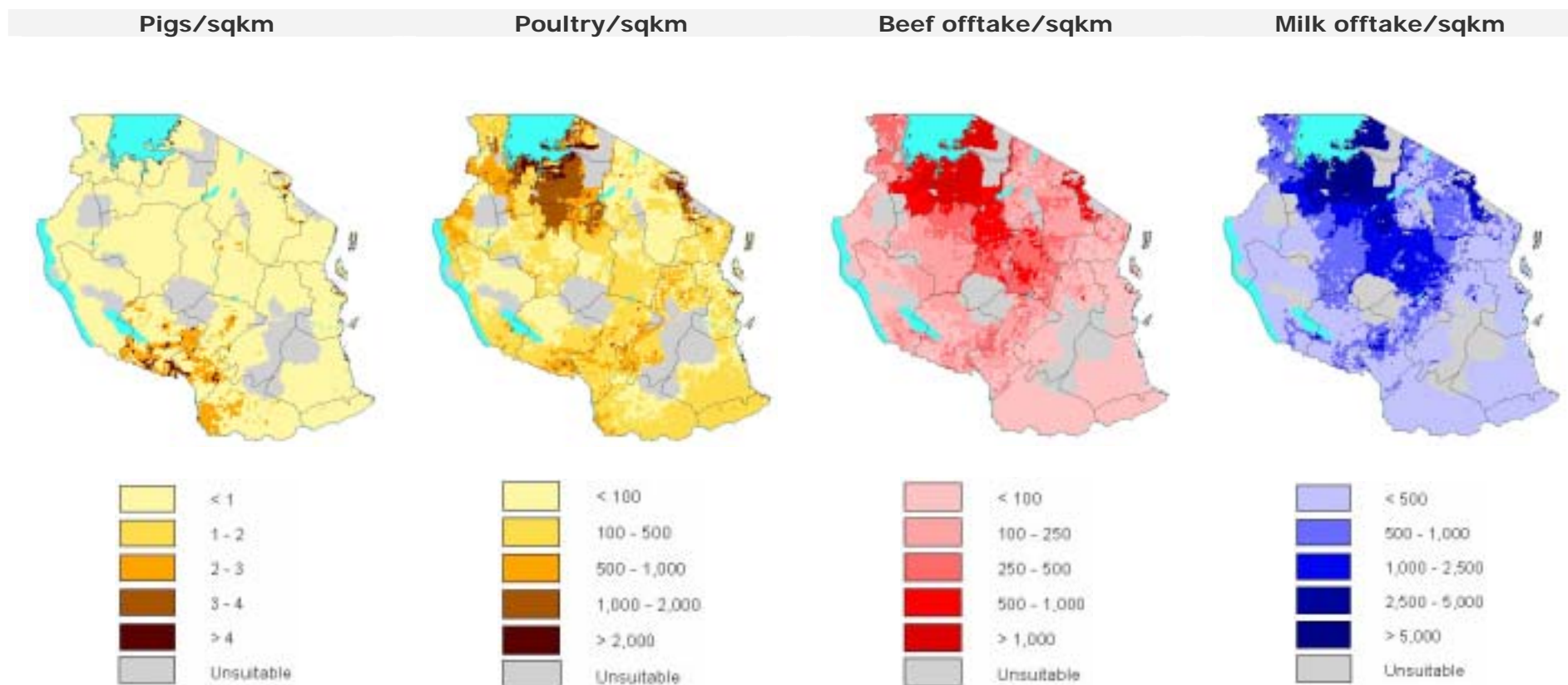
Density calculated on total land area<sup>1</sup>



<sup>1</sup>Densities for livestock populations and production are based on total land suitable for livestock production

Source: FAO (2001); LandScan (2002), FAO (2005b)





Source: FAO (2005b); FAO (2003)

- Pastoralism is concentrated in the Northern plains grazing areas where climatic and soil conditions do not favour crop production. Agro-pastoralism is found in low rainfall areas of Western (Shinyanga and Tabora) and Central zones (Dodoma and Singida), where shifting cultivation of sorghum is practised. Smallholders dairy production system include cattle under coconut systems in coastal regions, stall fed cross-bred dairy cattle, and peri-urban farming on a part time basis. Commercial ranching accounts for about 7 percent of the milk marketed, and it is practised mainly by the National Ranching Company (NARCO), now in the process of being privatised.

### 3. LIVESTOCK PRODUCTION

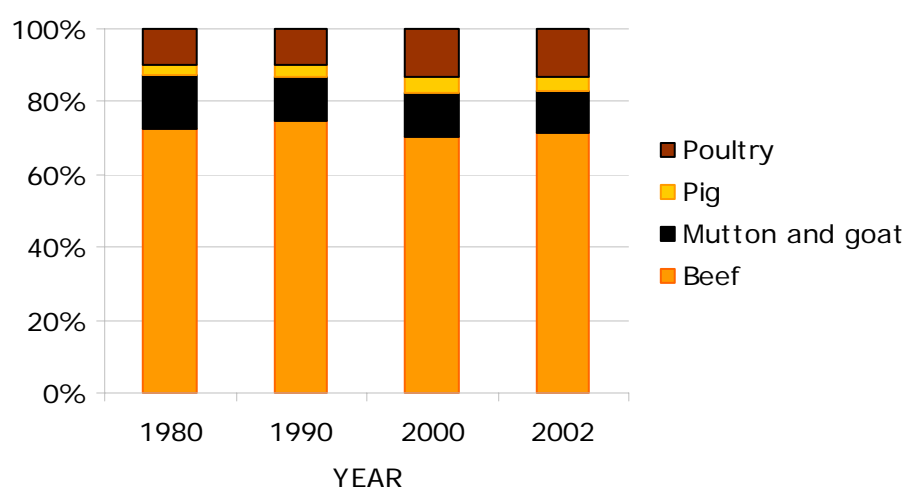
#### Trends in annual production of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	178.7	272.9	333.6	360.5	4.3	2.0
Beef	123.7	195.2	225.0	246.3	4.7	1.4
Mutton and goat	25.6	31.3	39.6	40.9	2.0	2.4
Pig	4.4	9.0	12.6	12.9	7.4	3.5
Poultry	16.6	25.2	43.1	45.4	4.3	5.5
Milk, total	417.7	596.8	805.6	935.0	3.6	3.0
Eggs, total	28.5	31.2	35.4	35.4	0.9	1.3

Source: FAO (2005a)

#### Composition of total meat production



Source: FAO (2005a)

## Carcass weights and percentage slaughtered by species

Species/year	Carcass weight (kg/animal)				Percentage slaughtered/year			
	1980	1990	2000	2002	1980	1990	2000	2002
Cattle	99.8	103.2	107.1	107.1	9.9	14.5	12.6	13.2
Sheep	12.0	12.0	12.0	12.0	22.6	23.0	24.3	24.5
Goat	12.0	12.0	12.0	12.0	22.6	21.0	20.6	20.7
Pigs	40.0	40.0	40.0	40.0	69.0	70.0	70.0	70.3
Poultry	0.7	0.9	0.9	0.9	123.8	129.0	162.7	164.3

Source: FAO (2005a)

## Milk yields and proportion of dairy animals

Species/year	Milk yield (kg/year)				Percentage milked			
	1980	1990	2000	2002	1980	1990	2000	2002
Cattle	160	169	174	174	18.0	23.4	24.4	27.6

Source: FAO (2005a)

## Egg yields and proportion of laying birds

Species/year	Eggs (kg/year)				Percentage laying			
	1980	1990	2000	2002	1980	1990	2000	2002
Chicken	2.6	2.6	2.6	2.6	61.8	56.1	46.8	44.8

Source: FAO (2005a)

## Estimated feed used for livestock production

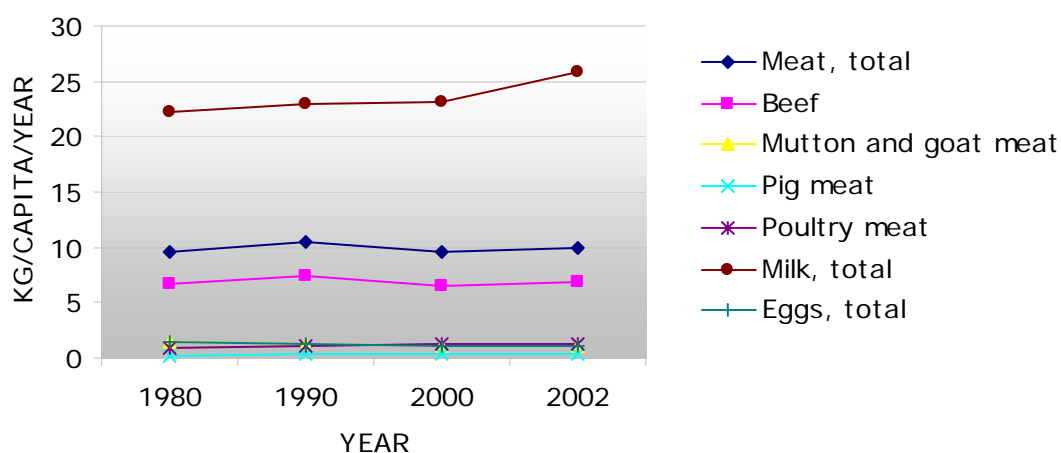
1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Maize	140.0	140.0	100.0	120.0	0.0	-3.3
Barley						
Sorghum	10.2	9.3	13.3	16.7	-0.9	3.7
Millet	6.8	4.0	4.4	6.0	-5.2	0.9
Wheat						
Brans	103.6	154.4	210.7	213.8	4.1	3.2
Rice Paddy, equivalent						
Roots and Tuber, dry equivalent	10.5	15.0	21.0	21.0	3.6	3.4
Pulses						
Oil crops						

Blanks represent no data

Source: FAO (2005a)

## Trends in annual per capita production of meat, milk and eggs



Source: FAO (2005a)

- The above tables and figures display growth in meat output, attributing the role of increased numbers of animals and productivity (carcass weight) to output growth. In the last two decades, growth in animal numbers contributed a significant proportion to output growth, while productivity levels have not significantly increased.
- The governmental development strategy to increase livestock production and productivity sector falls into the broader National Strategy for Agricultural Development. The underlining principle is the promotion of a market-driven

livestock sector able to support the income levels of the poor livestock keepers (and farmers).

- To date the development of the livestock sector is supported/constrained by thirteen different laws which concern livestock products and by-products and deal with a variety of issues, such as land access and dairy processing. Their implementation is responsibility of a number of Departments, including the Ministry of Water and Livestock Development, the Ministry of Lands and Human Settlements Development and the Ministry of Agriculture and Food Security.

## 4. CONSUMPTION OF MEAT, MILK AND EGGS

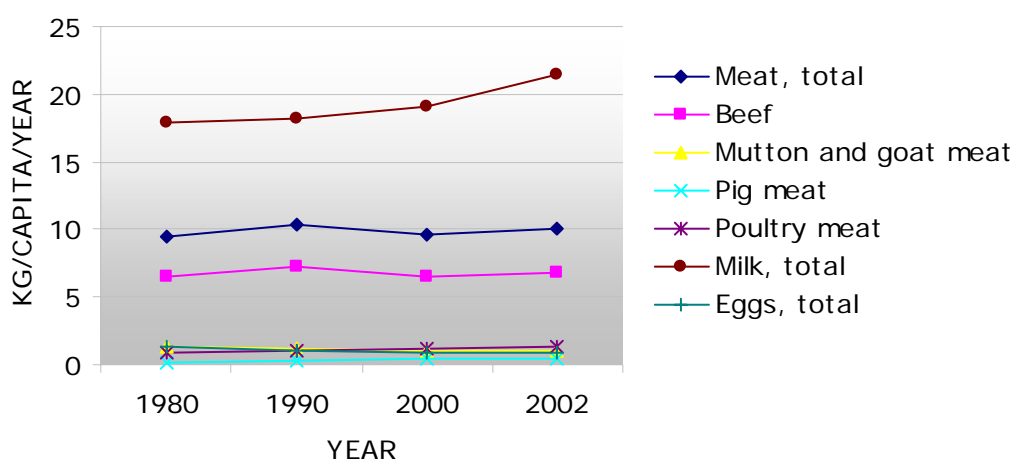
### Trends in annual consumption of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	178.4	268.7	334.1	361.4	4.2	2.2
Beef	123.4	191.0	225.2	246.5	4.5	1.7
Sheep and goat	25.6	31.3	39.5	40.9	2.0	2.4
Pig	4.4	9.0	13.1	13.3	7.3	3.9
Poultry	16.5	25.2	43.0	45.6	4.3	5.5
Milk, total	336.9	474.9	664.6	777.0	3.5	3.4
Eggs, total	25.9	28.2	32.6	31.1	0.9	1.5

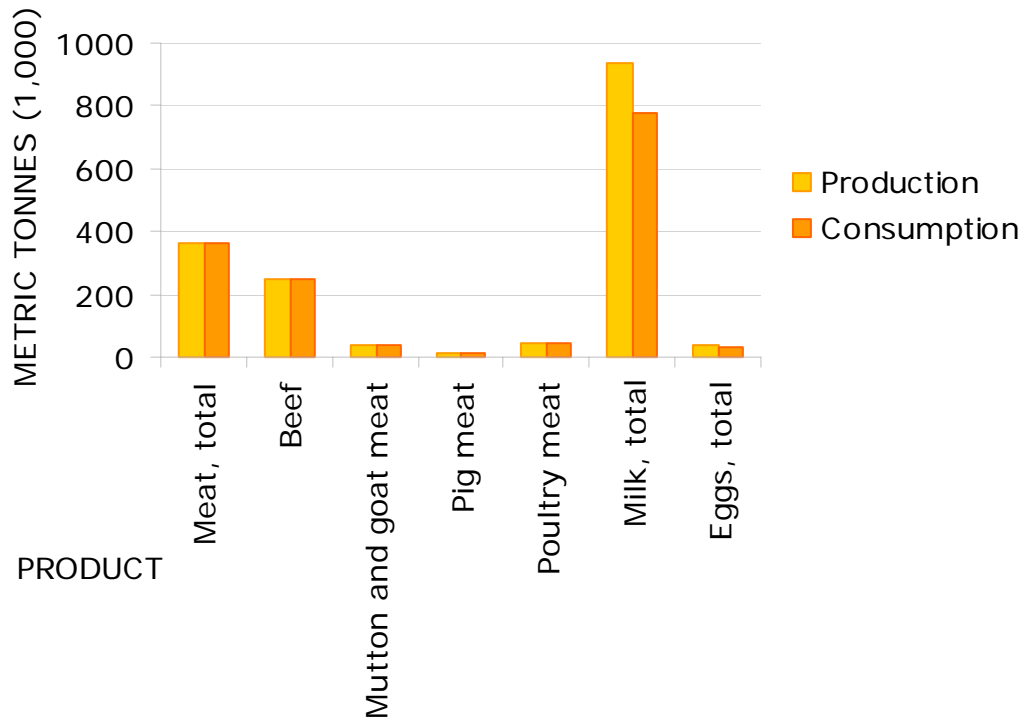
Source: FAO (2005a)

### Trends in annual per capita consumption of meat, milk and eggs



Source: FAO (2005a)

### Production versus consumption for meat, milk and eggs (2002)



Source: FAO (2005a)

## 5. TRADE IN LIVESTOCK AND LIVESTOCK PRODUCTS

### Trade in agricultural and livestock<sup>1</sup> products

Values in million US\$

Product	Exports				Imports			
	1980	1990	2000	2002	1980	1990	2000	2002
Total		537.5	1,306.9	1,562.9		1,595.1	2,063.9	2,218.4
Agricultural	406.4	279.0	478.4	338.0	164.6	77.9	326.7	250.3
% agricultural		51.9	36.6	21.6		4.9	15.8	11.3
Livestock	5.5	9.9	12.4	10.6	11.5	7.0	8.8	5.5
% livestock		1.8	0.9	0.7		0.4	0.4	0.2

Blanks represent no data

<sup>1</sup>Total trade in goods and services expressed in current US\$. Source: World Bank (2002)  
Agricultural trade refers to all agricultural products, while livestock trade refers to trade in livestock products and live animals. Source: FAO (2005b)

### Export/import 'dependency' for livestock products

Product	Exports as percentage of production				Imports as percentage of consumption			
	1980	1990	2000	2002	1980	1990	2000	2002
Meat, total	0.13	1.58	0.10	0.03	0.07	0.04	0.18	0.21
Beef and buffalo	0.18	2.20	0.01	0.00	0.09	0.05	0.07	0.04
Sheep and goat	0.00	0.00	0.18	0.13	0.00	0.00	0.03	0.11
Pig	0.00	0.00	0.42	0.34	0.29	0.09	2.76	2.13
Poultry	0.01	0.00	0.42	0.00	0.00	0.00	0.18	0.51
Milk, equivalent	0.11	0.00	0.30	0.01	10.15	3.31	3.60	2.43
Eggs, total	0.00	0.00	0.01	0.00	0.03	0.00	6.48	1.90

Source: FAO (2005a)

Product	Net exports as percentage of production				Net imports as percentage of consumption			
	1980	1990	2000	2002	1980	1990	2000	2002
Meat, total	0.06	1.53	0.00	0.00	0.00	0.00	0.08	0.18
Beef and buffalo	0.09	2.15	0.00	0.00	0.00	0.00	0.06	0.04
Sheep and goat	0.00	0.00	0.15	0.02	0.00	0.00	0.00	0.00
Pig	0.00	0.00	0.00	0.00	0.29	0.09	2.35	1.80
Poultry	0.01	0.00	0.24	0.00	0.00	0.00	0.00	0.51
Milk, equivalent	0.00	0.00	0.00	0.00	10.01	3.31	3.24	2.41
Eggs, total	0.00	0.00	0.00	0.00	0.03	0.00	6.46	1.90

Source: FAO (2005a)

- Tanzania runs a surplus in its trade balance and agriculture contributes around 50% to export earnings. Exports are primarily agricultural commodities, the largest being coffee, cashew nuts, tobacco and cotton. Machinery, transportation equipment, industrial raw materials, and consumer goods constitute the major

portion of imported products. Livestock products and by-products are marginally traded. Main trading partners are the European Union, Japan, India, and Kenya.

- Tanzania is a member of two regional trading arrangements, the East African Community and SADC (Southern African Development Coordination Conference), and participates in the Regional Integration Facilitation Forum. It has been a member of WTO since 1995 and has signed bilateral treaties with Germany, Netherlands, Switzerland, the United Kingdom, Denmark, India, Italy, Norway, Sweden and Zambia.



## Trade in live animals

Species	1980			1990			2000			2002		
	Export	Import	Net trade	Export	Import	Net trade	Export	Import	Net trade	Export	Import	Net trade
<b>Quantities (count)</b>												
Cattle	810	100	710	0	20	-20	372	156	216	580	106	474
Sheep and goats	0	0	0	0	0	0	7	12,700	-12,693	35	5,588	-5,553
Pigs	0	90	-90	0	0	0	0	0	0	30	173	-143
Poultry (1,000)	0	876	-876	0	1,800	-1,800	2,877	272	2,605	3,187	1,225	1,962
<b>Value (1,000 US\$)</b>												
Cattle	250	58	192	0	14	-14	32	102	-70	64	14	50
Sheep and goats	0	0	0	0	0	0	5	283	-278	1	250	-249
Pigs	0	6	-6	0	0	0	0	0	0	3	42	-39
Poultry (1,000)	0	1,176	-1,176	0	1,500	-1,500	1,055	320	735	922	674	248
<b>Total</b>	<b>250</b>	<b>1,240</b>	<b>-990</b>	<b>0</b>	<b>1,514</b>	<b>-1,514</b>	<b>1,092</b>	<b>705</b>	<b>387</b>	<b>990</b>	<b>980</b>	<b>10</b>

**Net trade:** Exports less Imports

Blanks represent no data

Source: FAO (2005a)

## Trade in livestock products

Product	1980			1990			2000			2002		
	Export	Import	Net trade	Export	Import	Net trade	Export	Import	Net trade	Export	Import	Net trade
<b>Quantities (metric tonnes)</b>												
Meat, total	229	126	102	4,300	117	4,183	336	615	-280	102	750	-648
Beef	219	109	110	4,300	104	4,196	26	150	-124	1	107	-106
Mutton and goat	1	0	1	0	0	0	72	13	59	52	47	5
Pig	0	13	-13	0	9	-9	53	361	-308	43	284	-240
Poultry	1	0	1	0	0	0	182	79	103	0	232	-232
Other	7	4	-12	0	4	-4	3	11	-14	6	80	-86
Milk, equivalent	453	34,189	-33,735	0	15,700	-15,700	2,422	23,930	-21,508	135	18,863	-18,728
Eggs, total	0	8	-8	0	0	0	4	2,111	-2,107	0	591	-591
Hides and skins	2,510	0	2,510	2,751	0	2,751	7,130	13	7,117	11,053	9	11,044
<b>Value (1,000 US\$)</b>												
Meat, total	621	102	519	7,000	230	6,770	857	921	-64	157	935	-778
Beef	613	86	527	7,000	180	6,820	101	279	-178	1	189	-188
Mutton and goat	5	0	5	0	0	0	247	25	222	85	63	22
Pig	0	15	-15	0	50	-50	57	454	-397	57	335	-278
Poultry	3	0	3	0	0	0	377	133	244	0	258	-258
Other	0	1	-1	0	0	0	75	30	-105	14	90	-104
Milk, equivalent	137	10,145	-10,008	0	5,270	-5,270	521	5,234	-4,713	54	2,720	-2,666
Eggs, total	3	12	-9	0	0	0	18	1,917	-1,899	0	791	-791
Hides and skins	4,473	0	4,473	2,897	0	2,897	8,889	10	8,879	8,763	16	8,747
<b>Total</b>	<b>5,234</b>	<b>10,259</b>	<b>-5,025</b>	<b>9,897</b>	<b>5,500</b>	<b>4,397</b>	<b>10,285</b>	<b>8,082</b>	<b>2,203</b>	<b>8,974</b>	<b>4,462</b>	<b>4,512</b>

**Net trade:** Exports less Imports

Blanks represent no data

Source: FAO (2005a)

## 6. LIVESTOCK HEALTH

### Total number of cases/outbreaks of selected diseases reported in all susceptible species

Disease	1997	1998	1999	2000	2001	2002	2003
African swine fever	-	-	-	-	960/15	3/1	568/16
Avian Influenza <sup>1</sup>	000	000	000	000	000	000	000
Bluetongue			(1995)	(1995)	(1995)	(1995)	(1995)
BSE <sup>2</sup>	000	000	000	000	000	000	000
CBPP <sup>3</sup>	1,562/57	4,894/39	8,014/216	1,701/99	5,900/130	3,398/95	1,592/99
Classical swine fever	000	000	000	000	000	000	000
Foot and mouth disease	3,450/55	1,378/19	40,425/291	7,189/113	7,655/75	2,536/58	19,915/160
Lumpy skin disease	392/39	492/22	3,500/188	5,947/116	700/62	3,851/137	1,045/85
Newcastle disease	15,416/107	7,624/30	41,103/82	11,310/40	4,800/49	34,911/126	34,811/147
Peste des petits ruminants	000	000	000	000	000	000	000
Rift Valley fever		215/31	(07/1998)	(07/1998)	(07/1998)	(07/1998)	(07/1998)
Rinderpest	.../4	(06/1997)	(06/1997)	(06/1997)	(06/1997)	(06/1997)	(06/1997)
Sheep and goat pox	-	-	-	-	-	-	-
Swine vesicular disease	000	000	000	000	000	000	000
Vesicular stomatitis	000	000	000	000	000	000	000

<sup>1</sup> Highly pathogenic avian influenza; <sup>2</sup> Bovine spongiform encephalopathy; <sup>3</sup> Contagious bovine pleuropneumonia

no./no. number of cases/outbreaks, ... no information, - disease not reported, 000 disease never reported; (month/year) date of the last reported occurrence of the disease in previous years

Source: OIE (2004)

- Public disease controls (e.g. quarantine, vaccination, prophylaxis) clinical treatment and other services are inadequate, contributing to low production as well as high animal mortality. There have been in fact unclear policy positions as far as the provision of veterinary services in rural areas. The current government espouses a gradual approach to privatization of veterinary services and drug supplies, implying that animal health services delivery will continue to be provided by local authorities in the short term.

## 7. REFERENCES AND FURTHER READING

- Bosworth, J. (2002)** Land Issues and the National Development Strategy: The Tanzania Experience, paper delivered at the "World Bank Regional Workshop on Land Issues in Africa". Kampala, Uganda
- Ellis, F, Mdoe N. (2004)** Livelihoods and Rural Poverty in Tanzania, *World Development* 31(8): 1367-1384.
- FAO (2003)** Cattle and small ruminant production systems in sub-Saharan Africa: a systematic review. Food and Agriculture Organisation, Rome.
- FAO (2005a)** FAOSTAT data. Food and Agriculture Organisation, Rome.  
<http://faostat.external.fao.org/default.jsp> (accessed March, 2005).
- FAO (2005b)** Global Livestock Production and Health Atlas. Food and Agriculture Organisation, Rome. <http://www.fao.org/ag/aga/glipha/index.jsp> (accessed March, 2005).
- LandScan (2002)** Global Population Database. Oak Ridge National Laboratory, Oakridge. <http://www.ornl.gov/gist/>
- OIE (2004)** HANDISTATUS II. Office International des Epizooties, Paris.  
<http://www.oie.int/hs2/> (accessed March, 2005).
- Rutatora D.F., Matee A. Z. (2001)** Major Agricultural Extension Providers in Tanzania, *African Study Monographs*, 22 (4): 155-177  
**FAO (2001)** Agro-ecological Distributions for Africa, Asia and North and Central America, Consultants' Report. Food and Agriculture Organisation, Rome.
- UNDP (2004)**. The Human development Reports, United Nations Development Programme, New York. <http://hdr.undp.org/statistics/>
- United Republic of Tanzania (2001)** Poverty Reduction Strategy Paper, Dar Es Salaam
- United Republic of Tanzania (2001)** Agricultural Sector Development Strategy, Dar Es Salaam.
- World Bank (2002)** The 2002 World Bank development indicators CD-Rom. The World Bank, Washington DC.