

# LIVESTOCK SECTOR BRIEF

MALI

Food and Agriculture Organization  
of the United Nations • **FAO**

Livestock Information, Sector Analysis  
and Policy Branch • **AGAL**



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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	12.6 million
Population density on total land	10.3 persons/sqkm
Annual growth rate (1990-2000)	2.8 %
Population in agriculture	10.1 million
As proportion of total population	79.9 %
Total land area	1,220,190 sqkm
Agricultural land	347,000 sqkm
As proportion of total land	28.4 %
Land under pasture	300,000 sqkm
As proportion of total land	86.5 %
Irrigated area	1,380 ha
Agricultural land per 100 people	275 ha
Agricultural land per 100 people in agriculture	344 ha
Agricultural population density on agricultural land	29.1 persons/sqkm
GDP <sup>1</sup>	3,515 million US\$
GDP annual growth rate (1990-2000)	4.1 %
GDP per capita/year <sup>1</sup>	309 US\$
GDP per capita annual growth rate (1990-2000)	1.6 %
Agriculture, GDP	1,255 million US\$
As proportion of total GDP	35.7 %
Livestock, GDP <sup>1</sup>	522 million US\$
As proportion of agricultural GDP	41.6 %
Human development Rank	174 Ranking <sup>2</sup>
Human development index	0.326
Poverty incidence <sup>3</sup>	
Total	63.8 %
Urban	30.1 %
Rural	75.9 %

<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)

- Mali is a low income agro-pastoral economy, with agriculture accounting for about 35.7% GDP and 80% of employment, and the livestock sector account for around 15 % of GDP and 30% of employment. Since 1991 the government embraced economic reforms including price and trade liberalization; reform of business regulations; privatization of parastatals. In 1993 it passed a decentralization act (1993) that established new sub-national entities (regions, districts and townships), and drastically reduced the number of civil servants and real government wages.

## Human population trends

Values expressed in 1,000

Population segment	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Total	7,044	9,046	11,904	12,623	2.5	2.8
Rural	5,744	6,892	8,310	8,638	1.8	1.9
Urban	1,300	2,155	3,594	3,984	5.2	5.2

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	320,500	320,930	346,740	347,000	0.0	0.8
Cropped <sup>2</sup>	20,500	20,930	46,740	47,000	0.2	8.4
Pastures	300,000	300,000	300,000	300,000	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)

- Small-scale traditional farming dominates the agricultural sector, with subsistence farmers cultivating over 90% of the 1.4 million hectares under cultivation. Land has been traditionally under State ownership with farmers allowed access for a fee contingent on the quality of irrigation infrastructure. A 2001 land tenure law intends to increase tenure security for farm families and pastoralists so as to promote private investments in rural areas. It identifies four tenure systems: the annual production permit, the agricultural production permit, which confers land for a longer period and can be renewed as long as the farmer complies with specific rules, the short-term lease and the long-term lease.

## 2. LIVESTOCK RESOURCES

### Livestock populations

Values expressed in 1,000

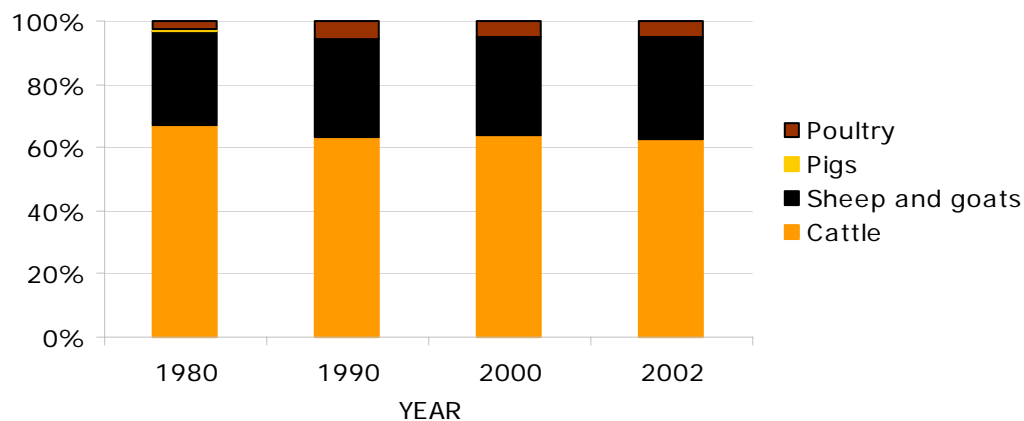
Species	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Cattle	5,850	4,996	6,620	6,893	-1.6	2.9
Sheep and goats	13,000	12,172	16,049	17,624	-0.7	2.8
Pigs	48	56	66	67	1.6	1.6
Poultry	12,000	22,000	25,000	28,000	6.2	1.3
Total LUs	4,355	3,946	5,178	5,502	-1.0	2.8

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

Source: FAO (2005a)

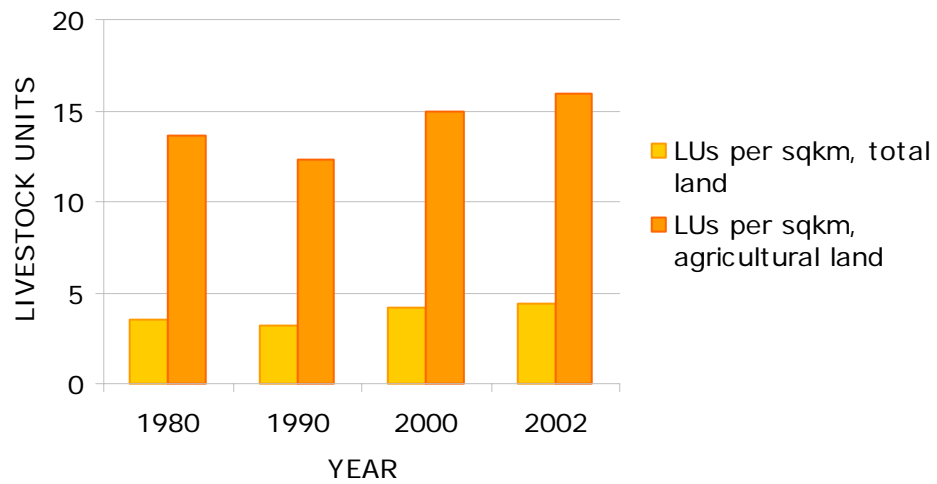
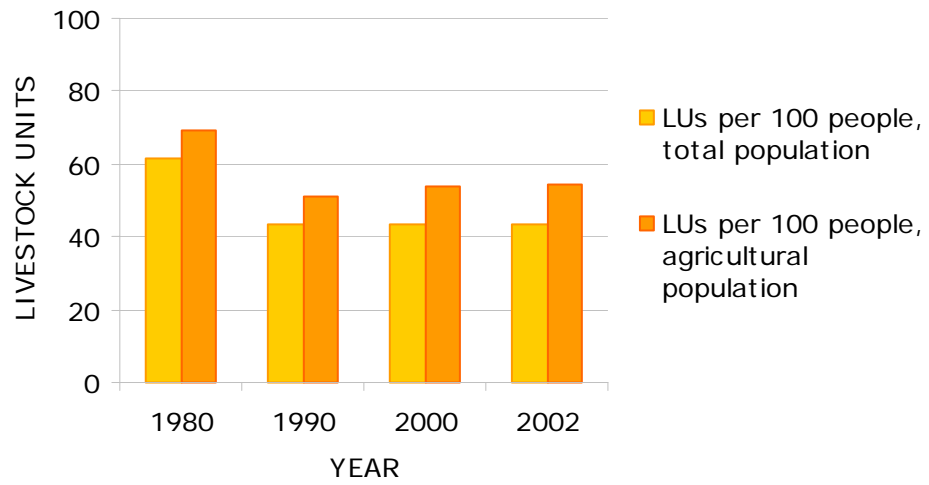
- Livestock are almost all in the hands of small livestock keepers, who raise mainly cattle, sheep, goats and chicken, taking advantage of the widespread availability of forage in the rainy season, of grazing land in the interior delta of the Niger during the dry season, as well as of crops residues. Livestock are used for producing meat, milk, draft power and manure and use agricultural by-products as feed.

### Contribution of different species to total livestock units



Source: FAO (2005a)

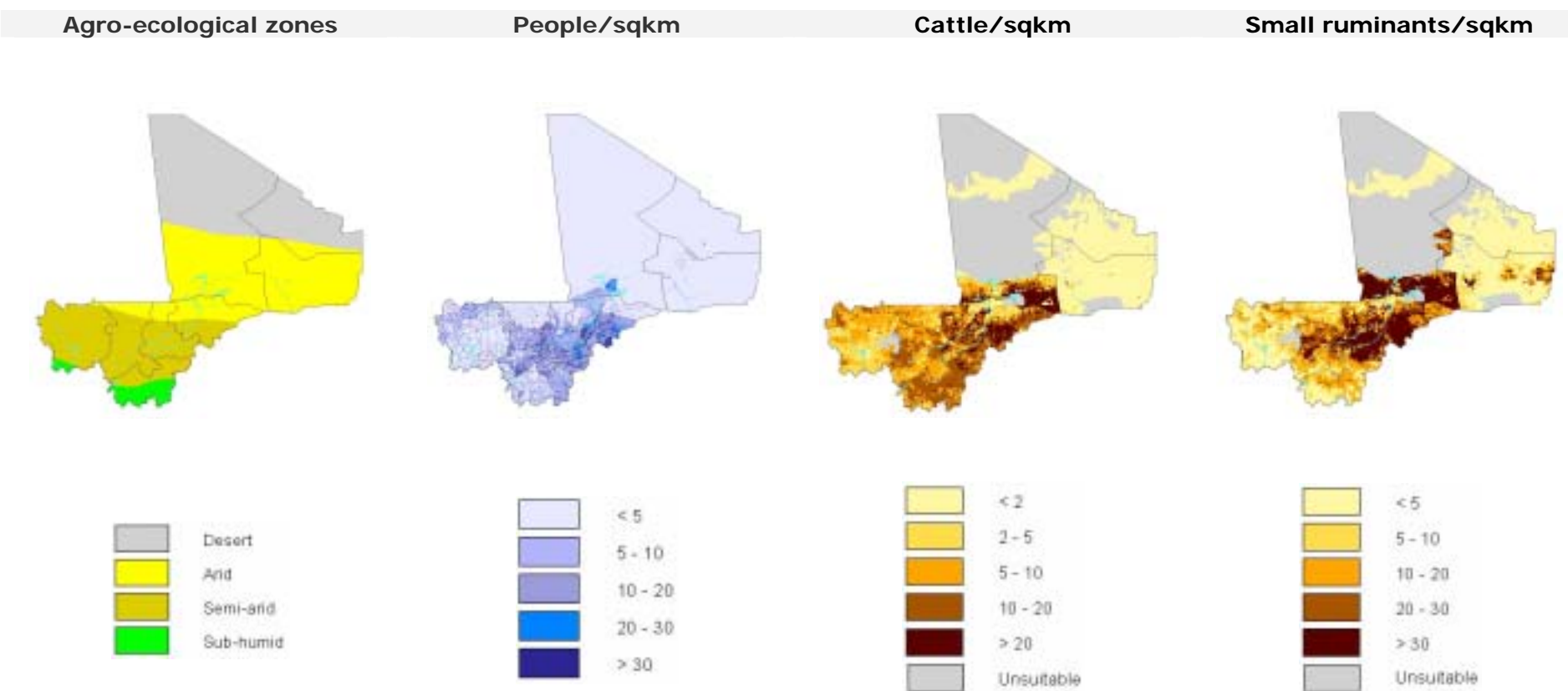
## Selected indicators of livestock resources



Source: FAO (2005a)

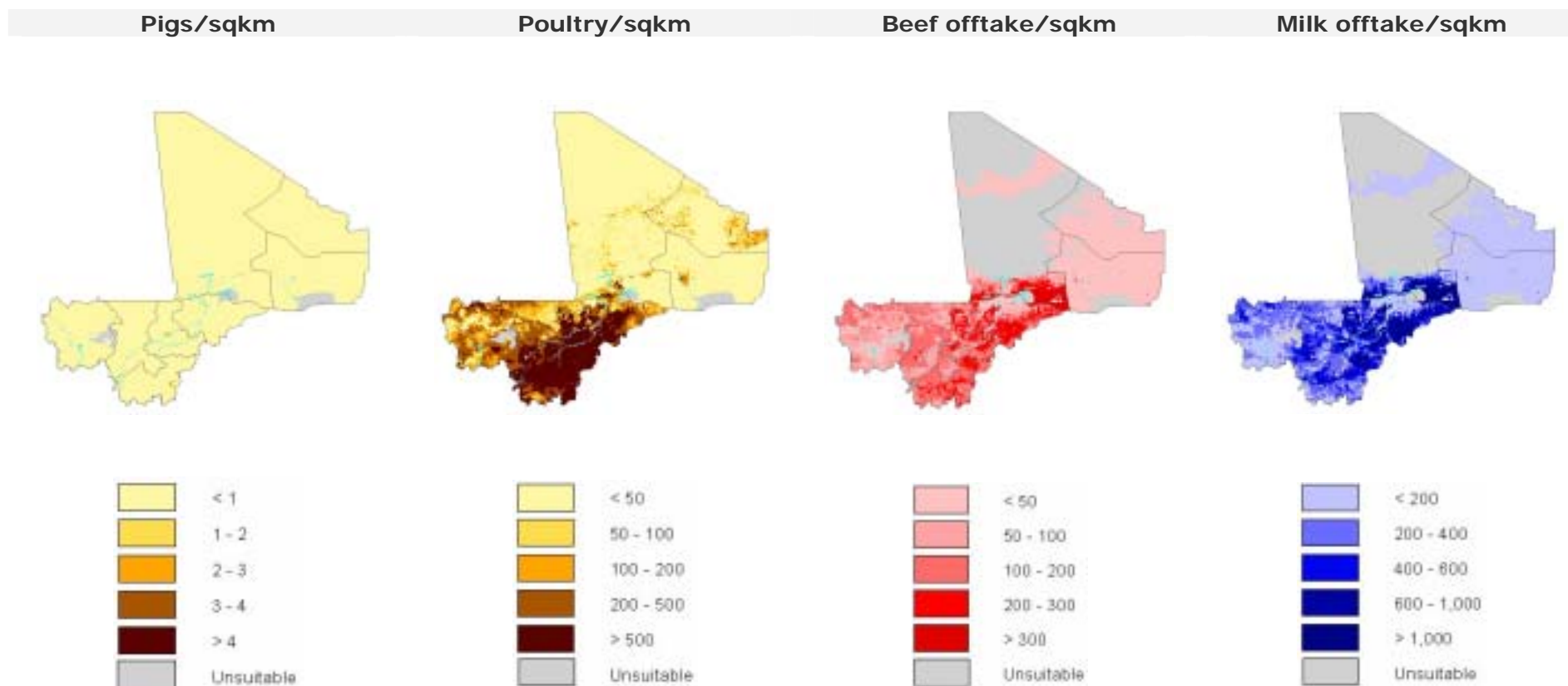
## Agro-ecological zones and densities of livestock species (2000)

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)

- Approximately 73% of the cattle and 55% of small ruminants are located in mixed cropping areas, with the remainder in pure pastoral areas or the interior delta. Different livestock production systems co-exist in the country: the nomadic pastoral system is found in the sub-desert zones in the north of the country (Adrar, Azaouad, Azaouak and Tilemsi) and in those of the northern Sahel such as the Gourma and the Hodh. Conversely, pastoralists take the herders from south to north at the onset of the rainy season to remove the herds from the agricultural areas or areas which are flooded (in the case of the Niger delta). The return south is timed to correspond to the progressive drying up of watering points and the depletion of the northern pastures. Mixed livestock production system is mainly found along the Niger river.

### 3. LIVESTOCK PRODUCTION

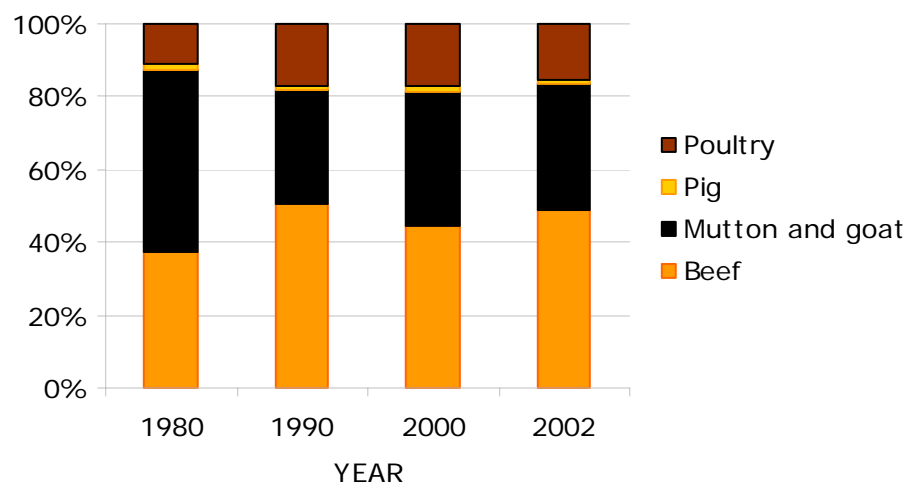
#### Trends in annual production of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	122.0	163.7	196.5	240.2	3.0	1.8
Beef	36.7	71.5	75.7	103.5	6.9	0.6
Mutton and goat	48.6	43.7	62.6	73.9	-1.1	3.7
Pig	1.5	1.8	2.1	2.2	1.6	1.6
Poultry	11.0	23.7	29.2	32.5	7.9	2.1
Milk, total	402.8	373.3	508.2	537.8	-0.8	3.1
Eggs, total	6.5	11.9	11.9	9.6	6.2	0.0

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	120.0	130.0	130.0	130.0	5.2	11.0	8.8	11.5
Sheep	14.0	12.5	12.5	12.5	27.4	27.1	33.9	35.8
Goat	13.0	14.0	14.0	14.0	28.1	27.1	26.4	28.6
Pigs	40.0	40.0	40.0	40.0	80.0	80.0	80.0	80.0
Poultry	0.8	0.8	0.8	0.8	115.0	134.5	146.0	145.0

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	245	245	245	245	10.0	10.0	10.0	10.0

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	1.8	1.8	1.8	1.8	30.0	30.0	26.4	19.1

Source: FAO (2005a)

- Meat supply witnessed positive growth; however, increased number of animals made up the entire level of growth of output, while productivity levels have not increased. Productivity levels (as defined by carcass/weight, offtake rate) are low, both with respect to developed and developing countries averages.
- The livestock development programs falls in the Rural Development Master Plan, which includes investments in infrastructure, capacity building and market development. In particular, the government has assumed that tradable livestock products can expand by 6% a year. This requires a combination of rapid growth in demand in the neighboring countries, technological improvement, and high priority on improving the domestic livestock feed industry, reducing transport costs, and market information dissemination.

## Estimated feed used for livestock production

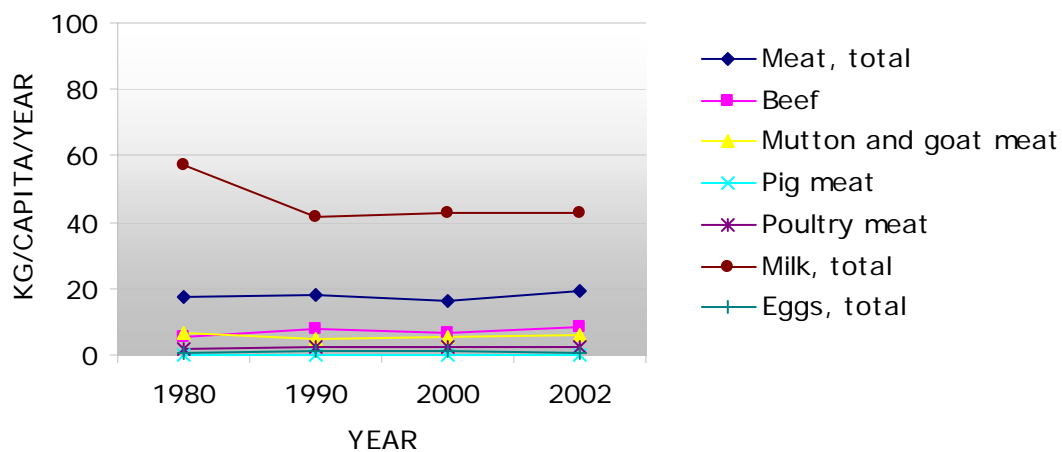
1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Maize						
Barley						
Sorghum						
Millet						
Wheat						
Brans	65.2	140.6	146.7	153.7	8.0	0.4
Rice Paddy, equivalent						
Roots and Tuber, dry equivalent						
Pulses						
Oil crops						

Blanks represent no data

Source: FAO (2005a)

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



Source: FAO (2005a)

## 4. CONSUMPTION OF MEAT, MILK AND EGGS

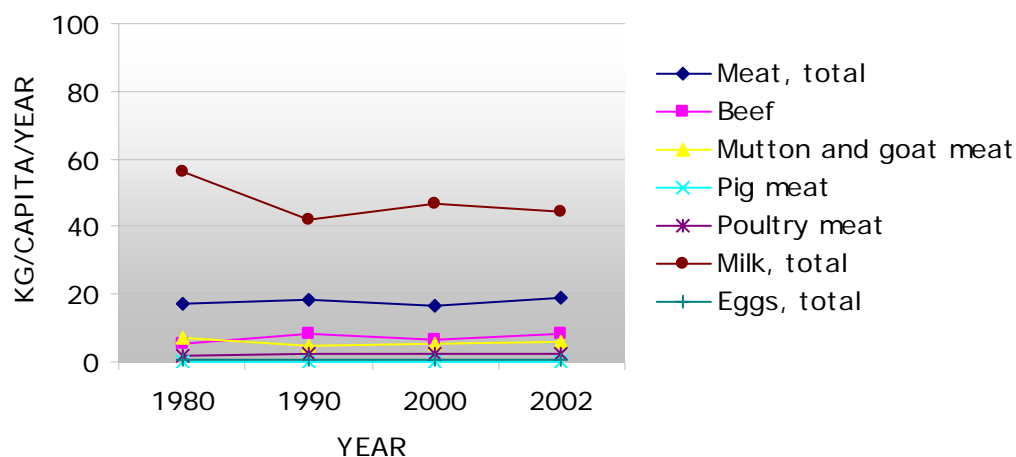
### Trends in annual consumption of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	122.3	164.8	196.7	240.4	3.0	1.8
Beef	37.0	72.6	75.7	103.6	7.0	0.4
Sheep and goat	48.6	43.7	62.6	73.9	-1.1	3.7
Pig	1.5	1.8	2.2	2.2	1.5	2.0
Poultry	11.0	23.7	29.3	32.6	7.9	2.1
Milk, total	395.6	378.3	559.5	562.1	-0.4	4.0
Eggs, total	4.0	7.3	6.9	4.9	6.1	-0.6

Source: FAO (2005a)

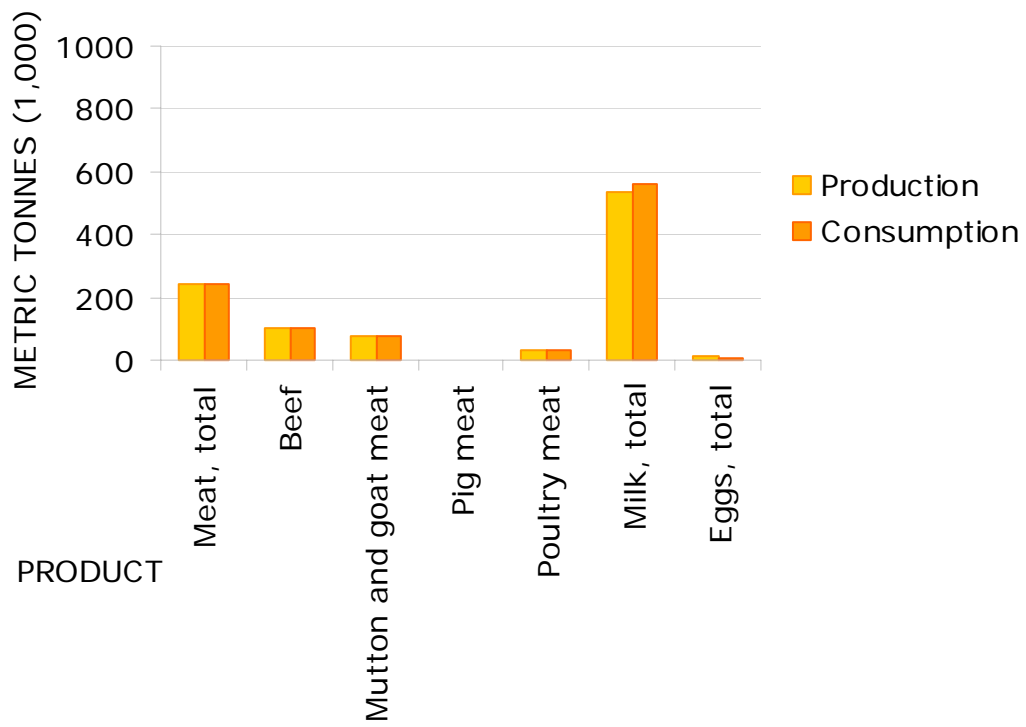
### Trends in annual per capita consumption of meat, milk and eggs



Source: FAO (2005a)

- In the last two decades meat consumption increased in aggregate by nearly 100 percent, but because of the high population growth rate, meat and milk per capita availability decreased. Opportunities exist for increasing meat consumption, given both growing population and per-capita income, and particularly given that consumption is well below developed and developing countries average.

## 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	263	415	649	1,086	520	817	954	1,366
Agricultural	192	252	265	265	75	115	110	162
% agricultural	73.0	60.6	40.9	24.4	14.4	14.1	11.5	11.8
Livestock	101	82	124	64	4	25	16	16
% livestock	38.3	19.7	19.1	5.9	0.8	3	1.7	1.1

<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	0.01	0.00	0.00	0.00	0.21	0.66	0.10	0.10
Beef and buffalo	0.02	0.00	0.00	0.00	0.66	1.43	0.05	0.09
Sheep and goat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig	0.00	0.00	0.00	0.00	0.22	0.14	2.80	0.53
Poultry	0.02	0.00	0.00	0.00	0.00	0.00	0.24	0.36
Milk, equivalent	0.00	0.00	0.00	0.00	4.45	13.78	11.88	6.80
Eggs, total	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.04

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	0.00	0.00	0.00	0.00	0.21	0.66	0.10	0.10
Beef and buffalo	0.00	0.00	0.00	0.00	0.65	1.43	0.05	0.09
Sheep and goat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pig	0.00	0.00	0.00	0.00	0.22	0.14	2.8	0.53
Poultry	0.02	0.00	0.00	0.00	0.00	0.00	0.24	0.36
Milk, equivalent	0.00	0.00	0.00	0.00	4.45	13.78	11.88	6.80
Eggs, total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: FAO (2005a)

- Mali runs a chronic trade deficit, as exports cover only about half of imports. The country has historically been a major exporter of cattle and small ruminants. Cote d'Ivoire, Ghana, and to a much smaller extent, Senegal, Algeria, and Nigeria, have been the main export markets for live cattle. Emerging markets include Guinea and Benin. Export is both by truck and on the hoof to both major assembly points or to the borders. While there have been several attempts to

export chilled beef by air, rail, and road, both within West Africa and to other African markets (Gabon, North Africa), these efforts have generally proved unprofitable. Major constraints to meat exports include the higher value placed on by-products in coastal markets (which make it more profitable to export live animals), the high cost of refrigerated transport, and the need for tight coordination in order to provide importers with a functioning cold chain.

- Mali is a WTO member since 31 May 1995. It is a signatory to the Agreement on the Global System of Trade Preferences (GSTP); it is a member of the West African Economic and Monetary Union (WAEMU), which includes Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Niger, Senegal and Togo and aims at the development of intra-african trade and the creation of a common market. It is also a member of the Economic Community of the West African States (ECOWAS) and of the Organization of the African Unity (OAU), and has ratified the Treaty establishing the African Economic Community (AEC); it participates in the 2003 Partnership Agreement between African, Caribbean, Pacific States and the European Union. Finally, it has signed several bilateral trade agreements.

## 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	396,000	0	396,000	185,000	0	185,000	279,000	0	279,000	107,000	7,100	99,900
Sheep and goats	307,000	0	307,000	460,000	0	460,000	450,000	0	450,000	450,000	1,406	448,594
Pigs	0	0	0	0	0	0	0	0	0	0	0	0
Poultry (1,000)	122	127	-5	5	600	-595	0	31	-31	0	3	-3
<b>Value (1,000 US\$)</b>												
Cattle	80,580	0	80,580	55,000	0	55,000	98,000	0	98,000	38,000	2,500	35,500
Sheep and goats	19,000	0	19,000	25,000	0	25,000	25,500	0	25,500	25,500	49	25,451
Pigs	0	0	0	0	0	0	0	0	0	0	0	0
Poultry (1,000)	233	40	193	12	300	-288	0	52	-52	0	3	-3
<b>Total</b>	<b>99,813</b>	<b>40</b>	<b>99,773</b>	<b>80,012</b>	<b>300</b>	<b>79,712</b>	<b>123,500</b>	<b>52</b>	<b>123,448</b>	<b>63,500</b>	<b>2,552</b>	<b>60,948</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	9	262	-253	0	1,083	-1,083	0	189	-189	0	242	-242
Beef	6	246	-239	0	1,040	-1,040	0	35	-35	0	96	-96
Mutton and goat	0	0	0	0	0	0	0	0	0	0	0	0
Pig	0	3	-3	0	3	-3	0	61	-61	0	11	-11
Poultry	2	0	2	0	0	0	0	69	-69	0	117	-117
Other	0	12	-13	0	40	-40	0	23	-23	0	18	-18
Milk, equivalent	0	17,585	-17,585	0	52,136	-52,136	0	66,475	-66,475	0	38,235	-38,235
Eggs, total		0	0		0	0		3	-3		2	-2
Hides and skins	306	0	306	710	0	710	190	24	166	411	511	-100
<b>Value (1,000 US\$)</b>												
Meat, total	7	498	-491	0	2,220	-2,220	0	155	-155	0	374	-374
Beef	1	467	-466	0	2,200	-2,200	0	27	-27	0	123	-123
Mutton and goat	0	0	0	0	0	0	0	0	0	0	0	0
Pig	0	19	-19	0	20	-20	0	63	-63	0	57	-57
Poultry	6	0	6	0	0	0	0	30	-30	0	166	-166
Other	0	12	-12	0	0	0	0	34	-34	0	28	-28
Milk, equivalent	0	3,712	-3,712	0	22,320	-22,320	0	16,141	-16,141	0	11,891	-11,891
Eggs, total		0	0		0	0		7	-7		11	-11
Hides and skins	733	0	733	1,360	0	1,360	200	27	173	873	675	198
<b>Total</b>	<b>740</b>	<b>4,210</b>	<b>-3,470</b>	<b>1,360</b>	<b>24,540</b>	<b>-23,180</b>	<b>200</b>	<b>16,330</b>	<b>-16,130</b>	<b>873</b>	<b>12,951</b>	<b>-12,078</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	-		-	-	-	-	-
Avian Influenza <sup>1</sup>	-		-	-	-	-	-
Bluetongue	-		-	-	-	-	-
BSE <sup>2</sup>			...			...	...
CBPP <sup>3</sup>	42/5	146/9	221/16	382/16	319/15	182/5	237/14
Classical swine fever	-		-	-	-	-	-
Foot and mouth disease	2,637/3	2,269/9	76,312/18	(11/1999)	1,087/18	820/3	275/1
Lumpy skin disease	(1995)		176/3	922/10	42/1	7/1	(10/2002)
Newcastle disease	.../...		298/2	251/1	(06/2000)	(06/2000)	(06/2000)
Peste des petits ruminants	(02/1993)	40/1	363/4	48/2	35/1	794/2	150/1
Rift Valley fever	000		-	-	-	-	-
Rinderpest	(09/1986)	(09/1986)	(09/1986)	(09/1986)	(09/1986)	(09/1986)	(09/1986)
Sheep and goat pox	57/2	15/1	80/1	32/2	81/4	1,300/3	65/3
Swine vesicular disease	-		-	-	-	-	-
Vesicular stomatitis	-		-	-	-	-	-

<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)

- The government has been traditionally the main suppliers of veterinary services, but insufficient human and physical resources have prevented the effective control/eradication/treatment of animal diseases, which continue to contribute to low livestock production and productivity. The economic reforms of the mid 1990s have allowed the private practice of veterinary medicine and the opening of private veterinary pharmacies. It appears to have improved access of farmers and herders to veterinary services in areas where there is strong effective demand; considerable concerns relate to whether liberalization has left remote areas with less access to veterinary services.

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