

# LIVESTOCK SECTOR BRIEF

# NEPAL

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	24.6 million
Population density on total land	172.1 persons/sqkm
Annual growth rate (1990-2000)	2.3 %
Population in agriculture	22.9 million
As proportion of total population	92.9 %
Total land area	143,000 sqkm
Agricultural land	50,310 sqkm
As proportion of total land	35.2 %
Land under pasture	17,370 sqkm
As proportion of total land	34.5 %
Irrigated area	11,350 ha
Agricultural land per 100 people	20.4 ha
Agricultural land per 100 people in agriculture	22 ha
Agricultural population density on agricultural land	454.5 persons/sqkm
GDP <sup>1</sup>	5,806 million US\$
GDP annual growth rate (1990-2000)	4.4 %
GDP per capita/year <sup>1</sup>	241 US\$
GDP per capita annual growth rate (1990-2000)	1.9 %
Agriculture, GDP	2,184 million US\$
As proportion of total GDP	37.6 %
Livestock, GDP <sup>1</sup>	654 million US\$
As proportion of agricultural GDP	30.0 %
Human development Rank	140 Ranking <sup>2</sup>
Human development index	0.504
Poverty incidence <sup>3</sup>	
Total	42.0 %
Urban	23.0 %
Rural	44.0 %

<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)

## Human population trends

Values expressed in 1,000

Population segment	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Total	14,881	18,625	23,518	24,609	2.3	2.4
Rural	13,906	16,959	20,298	20,994	2.0	1.8
Urban	974	1,667	3,220	3,614	5.5	6.8

Source: FAO (2005a)

- Nepal is a poor rural economy, with livestock contributing almost 11% to GDP. The country has been pursuing market-friendly economic policies since the end of the 1980s, but only after the 1990 restoration of democracy full-scale economic liberalization was implemented. In particular, the 1992 Eighth Development Plan intended to liberalize domestic and international markets, decentralize public services, promote private sector initiatives, and privatise state-owned enterprises.

## 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	42,100	41,520	48,850	50,310	-0.1	1.6
Cropped <sup>2</sup>	23,200	23,520	31,400	32,940	0.1	2.9
Pastures	18,900	18,000	17,450	17,370	-0.5	-0.3

<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)

- Inadequate access to land constrains the development of rural areas: (i) the average size of landholding is less than one hectare; (ii) the smallest 40 percent of agricultural households operate 9 percent of the total agricultural land area, while the top 6 percent occupy more than 33 percent of all agricultural land. In order to increase access of the poor to land and ensure effective utilization of natural resources, in the year 2000 the Ministry of Land Reform and Management launched a number of programs which include: (i) the preparation of integrated land use policies, guidelines and Acts to discourage keeping land fallow and further fragmentation of holdings, and to promote co-operative and contractual farming; (ii) the development of a national geographic land information system; (iii) the strengthening of land management through staff development and training programs.

## 2. LIVESTOCK RESOURCES

### Livestock populations

Values expressed in 1,000

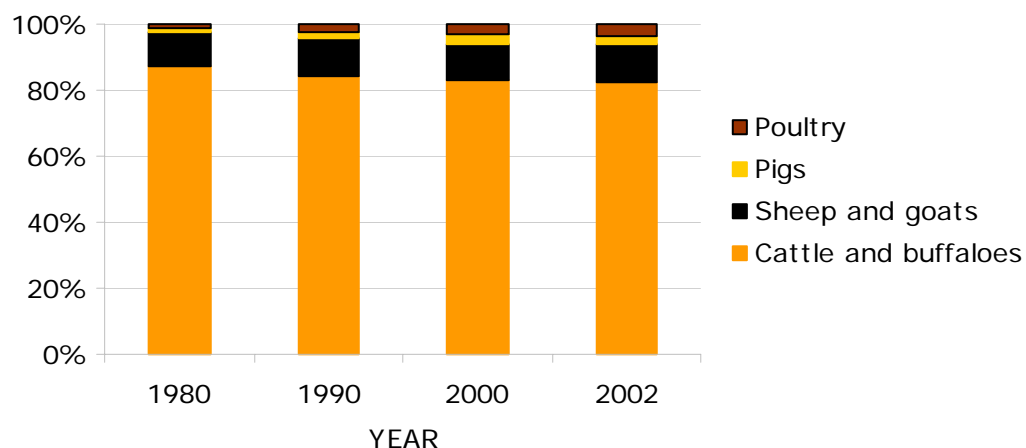
Species	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Cattle and buffaloes	9,400	9,293	10,549	10,680	-0.1	1.3
Sheep and goats	5,380	6,216	7,177	7,447	1.5	1.4
Pigs	375	574	878	934	4.4	4.3
Poultry	5,860	13,498	19,045	21,779	8.7	3.5
Total LUs	5,372	5,518	6,358	6,489	0.3	1.4

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

Source: FAO (2005a)

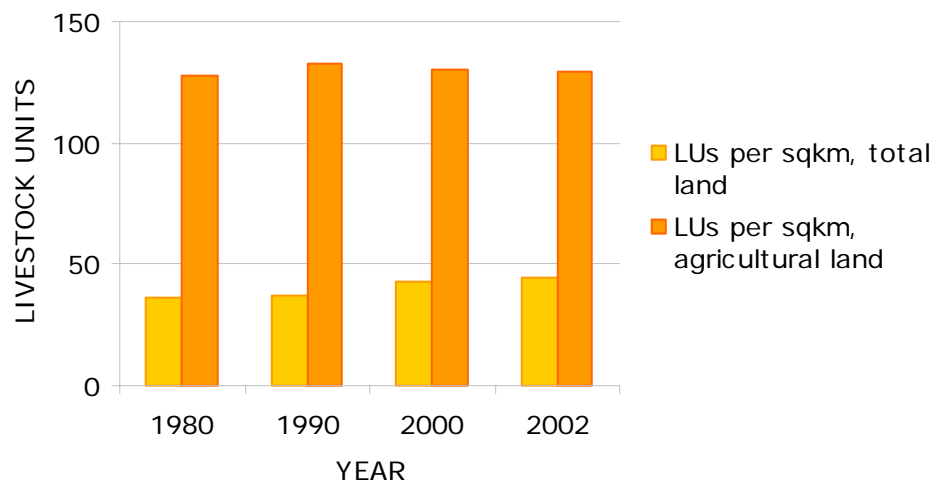
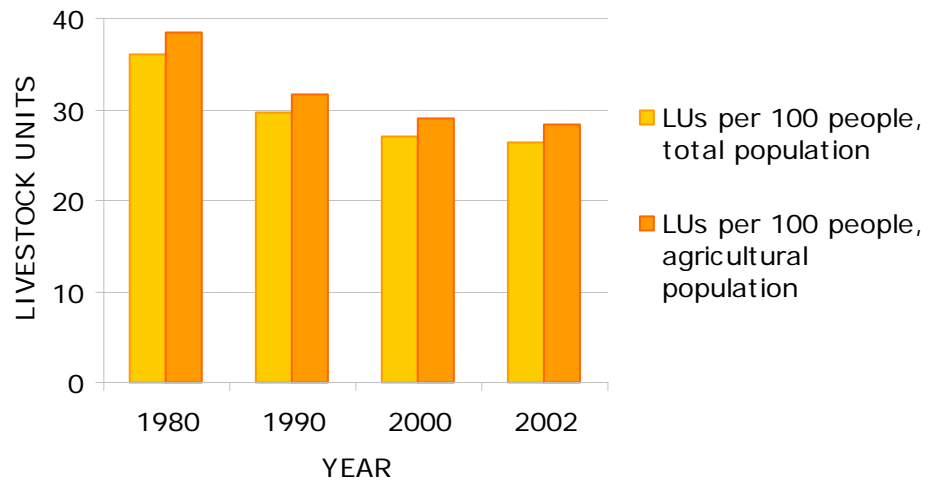
- Roughly 70 percent of households keep some type of livestock, including cows, buffaloes, pigs and chickens. Farmers with small landholdings of between 0.2 and 0.5 ha keep almost 25 percent of the livestock, while people who have either no land or own less than 0.2 ha own about 11 percent of the livestock. A pro-poor development of the livestock sector, therefore, could be a way to reduce poverty for a considerable number of poor and marginalized rural dwellers.

### Contribution of different species to total livestock units



Source: FAO (2005a)

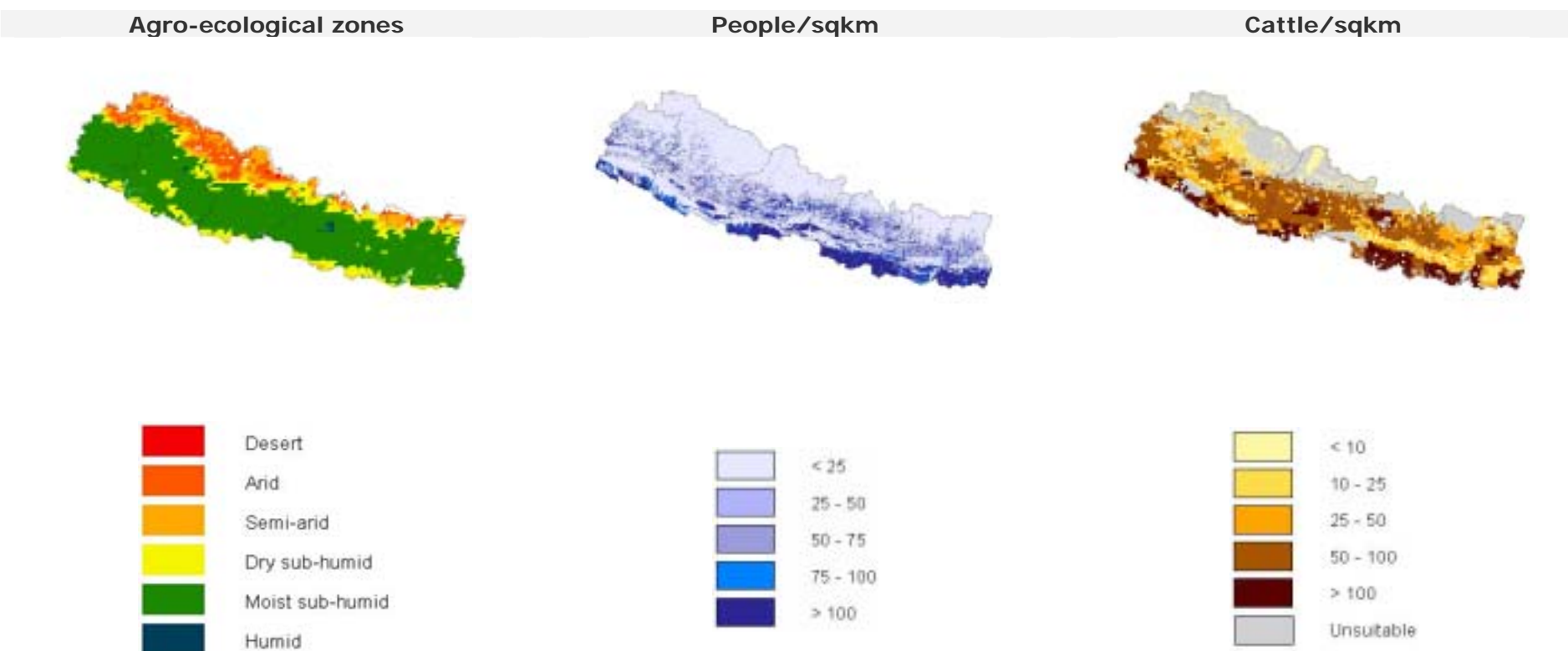
## Selected indicators of livestock resources



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 is based on total land suitable for livestock production

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

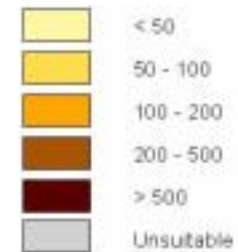
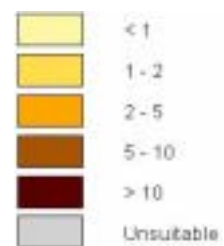
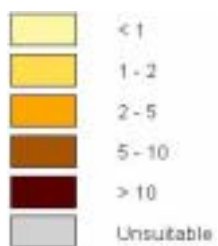
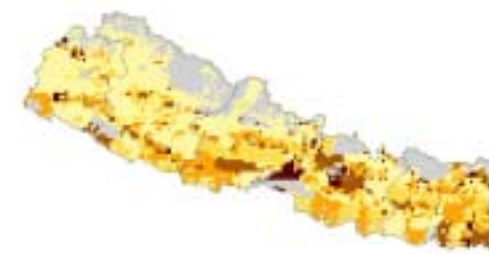
- Over half of the cattle, buffalo, goats, and sheep are kept in the hills, and about one third in the Terai. Transhumant ruminant production is practised in the temperate, sub-alpine and alpine regions; extensive ruminant production prevails at the lower altitudes of the mid-hills (900 - 1000 m) utilizing the available forage in and around the villages; semi-intensive ruminant production is found mainly in the low to mid-hills (400 - 900 m) and in peri-urban areas. Poultry production is characterized by traditional smallholder farms (100-300), and about 80 percent of commercial poultry farms are concentrated in Kathmandu, Pokhara, and Chitwan valley.



Sheep/sqkm

Pigs/sqkm

Poultry/sqkm



Source: FAO (2005b)

### 3. LIVESTOCK PRODUCTION

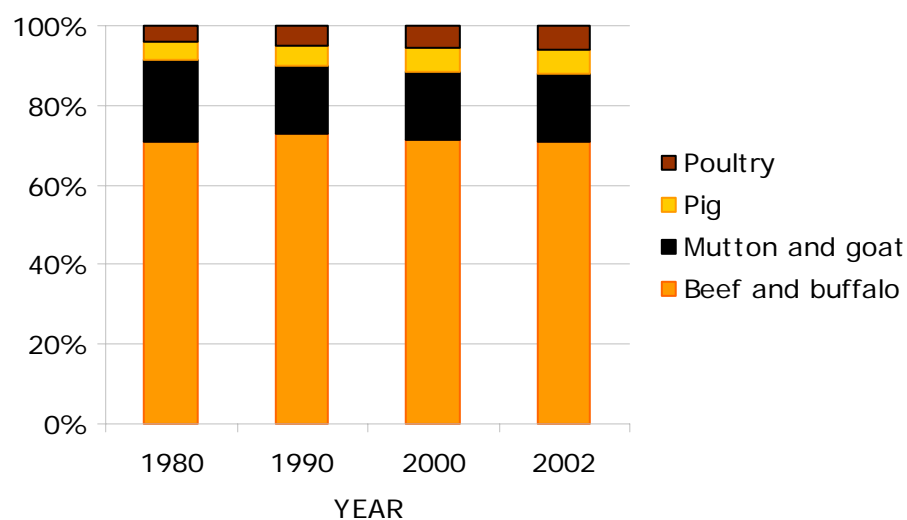
#### Trends in annual production of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	127.4	186.5	237.2	246.1	3.9	2.4
Beef and buffalo	90.5	135.6	169.8	174.7	4.1	2.3
Mutton and goat	25.9	31.9	39.8	41.4	2.1	2.2
Pig	5.8	9.9	14.6	15.6	5.5	4.0
Poultry	5.3	9.1	13.0	14.4	5.6	3.6
Milk, total	746.7	922.1	1,170.7	1,235.6	2.1	2.4
Eggs, total	14.5	18.0	23.4	26.1	2.2	2.6

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	85.0	85.0	85.0	85.0	6.9	7.7	8.0	7.9
Buffaloes	133.3	209.1	208.2	216.9	15.0	15.0	16.6	15.9
Sheep	10.0	9.1	9.0	9.0	33.3	36.6	37.3	37.4
Goat	9.0	11.1	11.3	11.3	56.2	49.0	51.7	51.7
Pigs	29.1	34.5	31.8	31.8	53.1	50.0	52.4	52.4
Poultry	0.8	0.8	0.8	0.8	111.9	80.5	83.0	82.6

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	325	371	401	413	8.5	11.0	12.0	12.2
Buffaloes	800	808	834	842	25.0	24.8	25.8	25.9

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	4.0	4.2	3.9	3.9	63.2	30.9	30.4	30.2

Source: FAO (2005a)

## Estimated feed used for livestock production

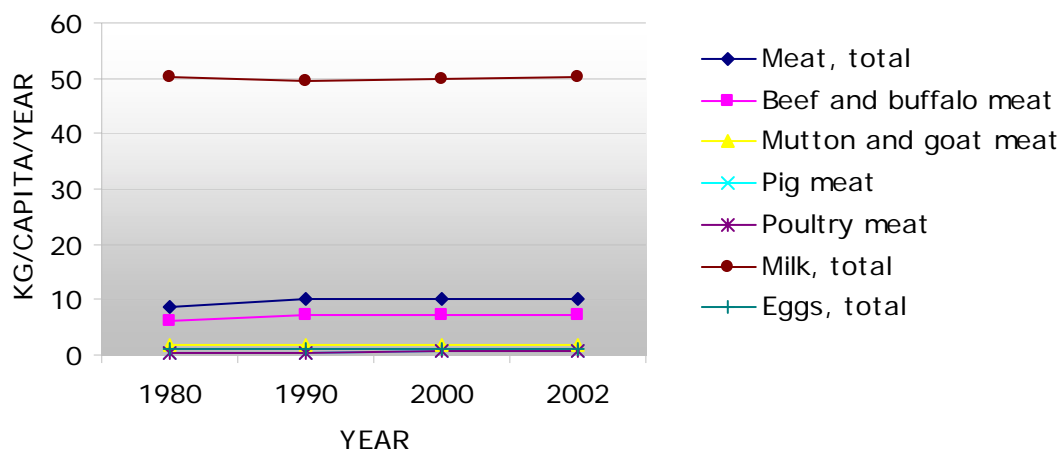
1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Maize	61.5	12.2	238.4	306.2	-14.9	34.6
Barley						
Sorghum						
Millet						
Wheat	12.4	10.9	4.2	4.5	-1.3	-9.1
Brans	180.5	254.0	292.4	334.2	3.5	1.4
Rice Paddy, equivalent	16.5	25.8	29.6	32.8	4.6	1.4
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)

- In the last two decades, growth in animal numbers contributed a significant proportion to output growth, while productivity levels have not significantly increased and to date are below developing countries' average. Nevertheless, the livestock sub-sector has been one of the fastest-growing sub-sectors in agriculture during the 1990s, averaging around 2.4 percent growth annually, accelerating from 1.6 percent during the first half of the 1990s to 3.6 percent in the second half.

- The Agriculture Perspective Plan (1997-2017) identifies livestock production and productivity as an engine for growth in agriculture, and the Tenth Plan (2002-2007), which is the main planning document for the medium-term, gives special emphasis to livestock as a strategic means to reach poor communities and to meet poverty reduction targets.

#### 4. CONSUMPTION OF MEAT, MILK AND EGGS

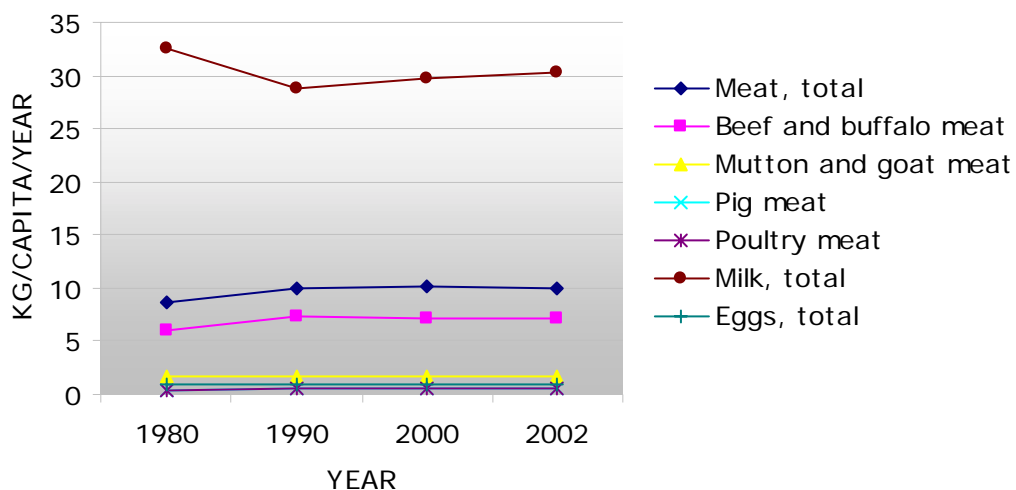
##### Trends in annual consumption of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	127.4	186.6	237.3	246.2	3.9	2.4
Beef and buffalo	90.5	135.6	169.8	174.7	4.1	2.3
Sheep and goat	25.9	31.9	39.8	41.4	2.1	2.3
Pig	5.8	9.9	14.7	15.6	5.5	4.0
Poultry	5.3	9.1	13.0	14.5	5.6	3.6
Milk, total	484.2	536.1	699.0	744.4	1.0	2.7
Eggs, total	13.6	17.3	21.4	23.9	2.4	2.2

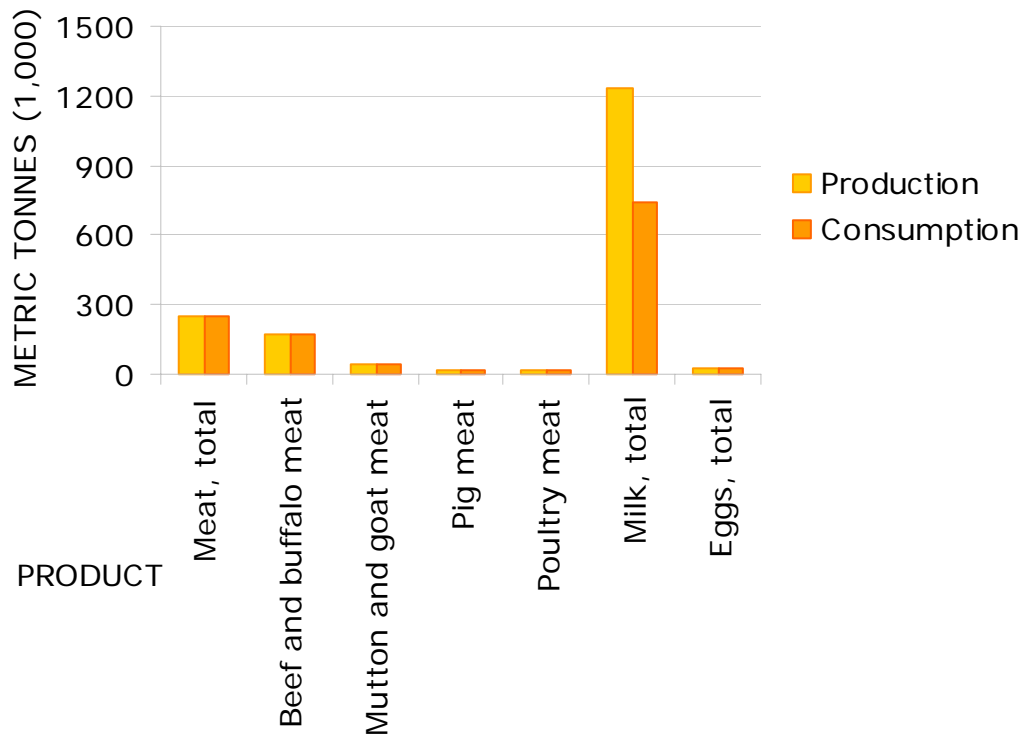
Source: FAO (2005a)

##### 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	225	382	1,279	892	365	786	1,782	1,601
Agricultural	39.7	48.3	41.9	76.9	36.9	122.7	246.6	228.5
% agricultural	17.7	12.6	3.3	8.6	10.1	15.6	13.8	14.3
Livestock	5.9	4.0	4.2	6.0	17.1	12.9	7.2	8.1
% livestock	2.6	1.0	0.3	0.7	4.7	1.6	0.4	0.5

<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	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.05
Beef and buffalo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheep and goat	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.10
Pig	0.00	0.00	0.00	0.01	0.00	0.00	0.13	0.24
Poultry	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.37
Milk, equivalent	0.76	0.25	0.31	0.10	2.98	2.64	0.52	0.85
Eggs, total	0.00	0.01	0.00	0.00	0.00	4.61	0.00	0.00

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	0.00	0.03	0.03	0.05
Beef and buffalo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheep and goat	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.09
Pig	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.23
Poultry	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.37
Milk, equivalent	0.00	0.00	0.00	0.00	1.81	2.22	0.01	0.69
Eggs, total	0.00	0.00	0.00	0.00	0.00	4.60	0.00	0.00

Source: FAO (2005a)

- Nepal runs a deficit on its trade balance, even though agricultural trade records a positive balance. Main exports are carpets, clothing, leather goods, pulses, raw jute and jute goods, and handicrafts; main import items include petroleum products,

transport equipment and parts, chemical fertilizers, and raw wool. Nepal imports approximately half of its current meat and milk requirements. Livestock exports (animals and products) constitute 0.2 percent of total exports while livestock imports account for 1.1 percent of total imports. Major export markets are India, USA, Germany and the UK, while the principal import suppliers are India, Singapore, Japan and Germany.

- Nepal is member of SAARC (South Asian Association for Regional Cooperation), and in January 2004 signed a free trade zone agreement with Bangladesh, Bhutan, India, Maldives, Pakistan and Sri Lanka. Trade barriers between those countries will be reduced beginning in 2006. In April 2004 Nepal became a member of WTO, and has also signed a number of bilateral trade agreements such as with Poland, Romania, UK, USA, Sri Lanka and India.



## 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 and buffaloes	11,100	36,000	-24,900	4,254	18,364	-14,110	2,000	8,300	-6,300	4,634	11,900	-7,266
Sheep and goats	0	93,600	-93,600	112,769	7,630	105,139	21,476	14,350	7,126	28,150	1,306	26,844
Pigs	12,000	38,000	-26,000	17,107	18,991	-1,884	9,754	0	9,754	9,432	0	9,432
Poultry (1,000)	0	0	0	21	110	-89	0	640	-640	0	1,159	-1,159
<b>Value (1,000 US\$)</b>												
Cattle and buffaloes	3,850	10,800	-6,950	783	6,184	-5,401	50	2,078	-2,028	415	2,982	-2,567
Sheep and goats	0	2,000	-2,000	1,243	184	1,059	170	425	-255	194	26	168
Pigs	240	1,800	-1,560	294	413	-119	125	0	125	112	0	112
Poultry (1,000)	0	0	0	18	30	-12	0	122	-122	0	312	-312
<b>Total</b>	<b>4,090</b>	<b>14,600</b>	<b>-10,510</b>	<b>2,338</b>	<b>6,811</b>	<b>-4,473</b>	<b>345</b>	<b>2,625</b>	<b>-2,280</b>	<b>721</b>	<b>3,320</b>	<b>-2,599</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	0	0	0	0	60	-60	0	76	-76	2	134	-132
Beef and buffalo		0	0		0	0		1	-1		3	-3
Mutton and goat	0	0	0	0	0	0	0	42	-42	1	40	-39
Pig	0	0	0	0	0	0	0	19	-19	1	37	-36
Poultry	0	0	0	0	0	0	0	15	-15	0	53	-53
Other	0	0	0	0	60	-60	0	-1	1	0	0	0
Milk, equivalent	5,656	14,440	-8,784	2,259	14,146	-11,887	3,600	3,648	-48	1,200	6,320	-5,120
Eggs, total	0	0	0	2	796	-794	0	0	0	0	0	0
Hides and skins	0	0	0	1,100	0	1,100	1,850	0	1,850	1,850	0	1,850
<b>Value (1,000 US\$)</b>												
Meat, total	0	0	0	0	112	-112	0	139	-139	4	172	-168
Beef and buffalo	0	0	0	0	0	0	0	44	-44	0	30	-30
Mutton and goat	0	0	0	0	0	0	0	43	-43	2	26	-24
Pig	0	0	0	0	0	0	0	32	-32	2	37	-35
Poultry	0	0	0	0	0	0	0	20	-20	0	77	-77
Other	0	0	0	0	112	-112	0	0	0	0	2	-2
Milk, equivalent	1,768	2,466	-698	311	5,330	-5,019	529	2,014	-1,485	164	2,005	-1,841
Eggs, total	0	0	0	2	550	-548	0	2	-2	0	1	-1
Hides and skins	0	0	0	1,330	7	1,323	2,265	0	2,265	4,798	0	4,798
<b>Total</b>	<b>1,768</b>	<b>2,466</b>	<b>-698</b>	<b>1,643</b>	<b>5,999</b>	<b>-4,356</b>	<b>2,794</b>	<b>2,155</b>	<b>639</b>	<b>4,966</b>	<b>2,178</b>	<b>2,788</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	000	000	000	000	000	000	000
Avian Influenza <sup>1</sup>	(1996)	(12/1966)	(12/1966)	(12/1966)	(12/1966)	(12/1966)	(12/1966)
Bluetongue	-	-	-	-	-	-	-
BSE <sup>2</sup>	000	000	000		...	...	...
CBPP <sup>3</sup>	-	-	-	-	-	-	-
Classical swine fever	874/30	188/18	234/39	35/5	41/12	70/31	114/15
Foot and mouth disease	46,264/482	166,024/447	7,858/203	25,146/...	51,003/1,904	7,261/546	57,076/2,078
Lumpy skin disease	000	000	000		...	...	
Newcastle disease	21,692/61	5,230/12	45,818/180	33,401/261	39,391/211	61,296/190	44,382/135
Peste des petits ruminants	1,156/26	2,219/18	8,300/76	18,740/344	59,916/1,037	11,127/366	4,470/293
Rift Valley fever	000	000	000		...	...	
Rinderpest	(1990)	(1990)	(1990)	(1990)	(1990)	(1990)	(1990)
Sheep and goat pox	-	-	-	181/23	1,245/34	104/12	213/14
Swine vesicular disease	-	-	-	-	-	-	-
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 available, - 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 Animal Health Directorate, under the Department of Agriculture of the Ministry of Agriculture, is responsible for all animal health activities in the country. It comprises seven divisions: one animal quarantine office, one central veterinary hospital, and five regional animal health laboratories. Current extension and animal health support services, however, are insufficient due both to lack of funds and sub-optimal use of inputs. The Department of Livestock Services (DLS) has been making efforts to render service provision more efficient. It has been experimenting with alternative approaches to address farming communities' needs with the active collaboration of local NGOs.

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