

LIVESTOCK SECTOR BRIEF

THAILAND

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	62.2 million
Population density on total land	121.7 persons/sqkm
Annual growth rate (1990-2000)	1.1 %
Population in agriculture	29.5 million
As proportion of total population	47.4 %
Total land area	510,890 sqkm
Agricultural land	201,670 sqkm
As proportion of total land	39.5 %
Land under pasture	8,000 sqkm
As proportion of total land	4.0 %
Irrigated area	49,570 ha
Agricultural land per 100 people	32.4 ha
Agricultural land per 100 people in agriculture	68.4 ha
Agricultural population density on agricultural land	146.1 persons/sqkm
GDP ¹	184,863 million US\$
GDP annual growth rate (1990-2000)	3.6 %
GDP per capita/year ¹	3,000 US\$
GDP per capita annual growth rate (1990-2000)	2.8 %
Agriculture, GDP	19,064 million US\$
As proportion of total GDP	10.3 %
Livestock, GDP ¹	4,188 million US\$
As proportion of agricultural GDP	22.0 %
Human development Rank	76 Ranking ²
Human development index	0.768
Poverty incidence ³	
Total	13.1 %
Urban	10.2 %
Rural	15.5 %

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

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

- Thailand is a lower-middle income economy with livestock accounting for about 2.5 percent of GDP. GDP growth rates of 9% from 1985 to 1995 were among the highest in the world; however, speculative pressure on Thailand's currency in 1997 led to a crisis that uncovered financial sector weaknesses. The economy plunged into negative growth, but has been recovering since when the government has: 1) placed a high priority on stabilizing the currency and the financial system; 2) implemented an expansionary fiscal policy in order to stimulate the economy; 3) supported village economic activities at the community level; 4) accelerated the

development of small- and medium-scale entrepreneurs and promoted forward and backward linkages with large-scale enterprises; 5) reduced its intervention in market functioning.

Human population trends

Values expressed in 1,000

Population segment	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Total	46,342	54,389	60,925	62,193	1.6	1.1
Rural	33,926	38,386	41,951	42,564	1.2	0.9
Urban	12,415	16,003	18,974	19,630	2.6	1.7

Source: FAO (2005a)

Trends in agricultural¹ land

Values expressed in sqkm

Land type	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Total	189,380	213,830	200,450	201,670	1.2	-0.6
Cropped ²	182,980	206,030	192,450	193,670	1.2	-0.7
Pastures	6,400	7,800	8,000	8,000	2.0	0.3

¹The sum of area under arable land, permanent crops and permanent pastures

²Arable and permanent crops

Source: FAO (2005a)

- There are four categories of land in Thailand: 1) private land (37.5 percent of all land) cultivated by landowners and tenants; 2) settlement land (17.2 percent), that is public land classified suitable for cultivation; 3) government land (9.4 percent), that is land for government use (such as army land) and most of which is squatted by private individuals; 4) forest land (35.9 percent), of which a large share has been destroyed, converted into farmland and other uses, and even distributed by the Royal Forestry Department to the squatters. The 1993 land reform law provides for the redistribution of large holdings in the central plains to a growing number of landless rural dwellers and for the issue of title deeds to squatters. This law is probably one of the largest land titling programmes ever implemented throughout the world. While distribution of forest and government land is proceeding rapidly, redistribution of private land is stalled. Today, over 30 percent of the 5.5 million households in the agricultural sector have insufficient land to derive a livelihood.

2. LIVESTOCK RESOURCES

Livestock populations

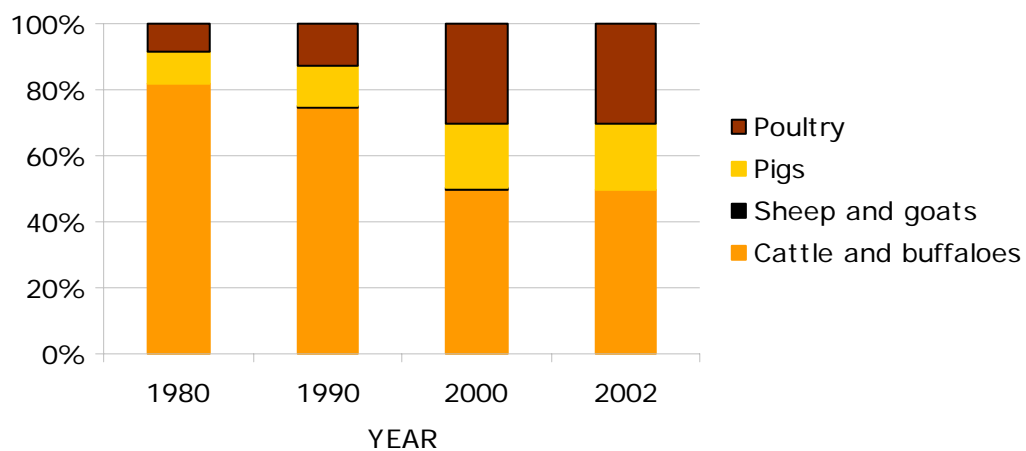
Values expressed in 1,000

Species	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Cattle and buffaloes	9,589	10,763	6,313	6,432	1.2	-5.2
Sheep and goats	77	283	182	217	13.9	-4.3
Pigs	3,021	4,762	6,558	6,879	4.7	3.3
Poultry	67,258	125,980	252,843	260,527	6.5	7.2
Total LUs	7,951	9,729	8,375	8,608	2.0	-1.5

LU: Livestock unit; **conversion factors:** cattle (0.65), buffalo (0.70), sheep and goats (0.10), pigs (0.25) and poultry (0.01)

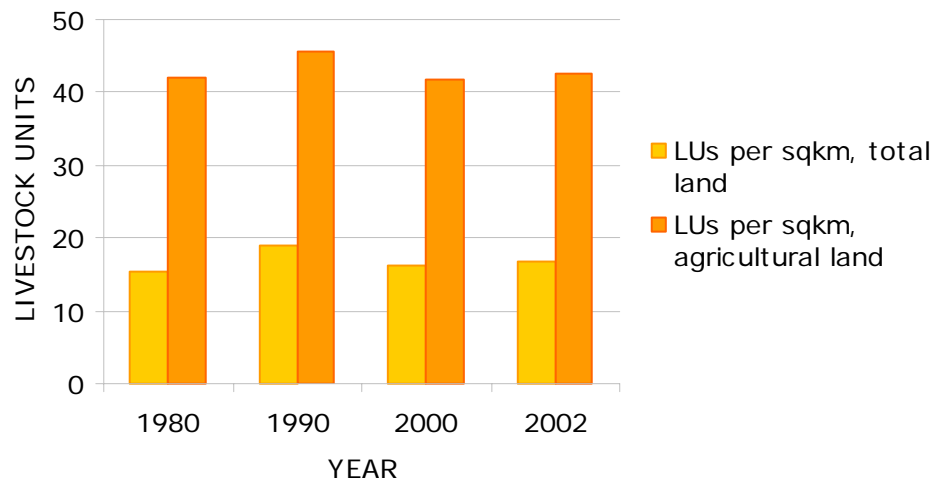
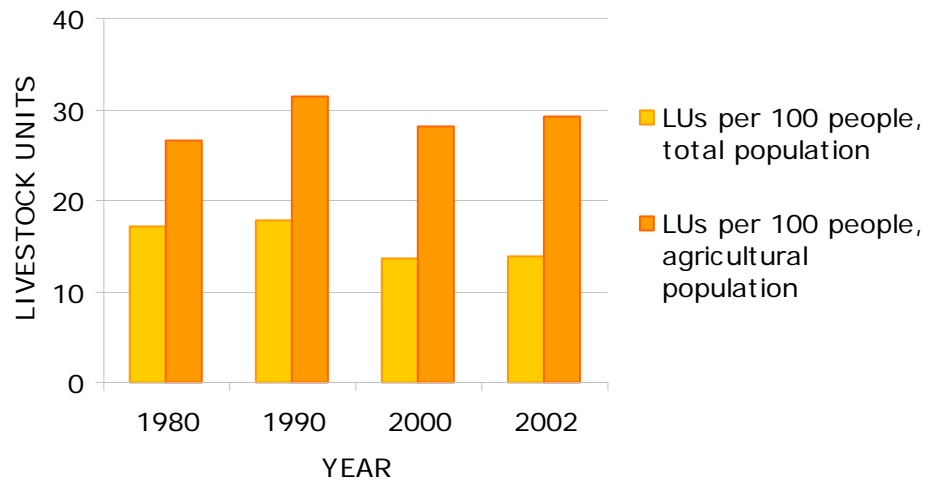
Source: FAO (2005a)

Contribution of different species to total livestock units



Source: FAO (2005a)

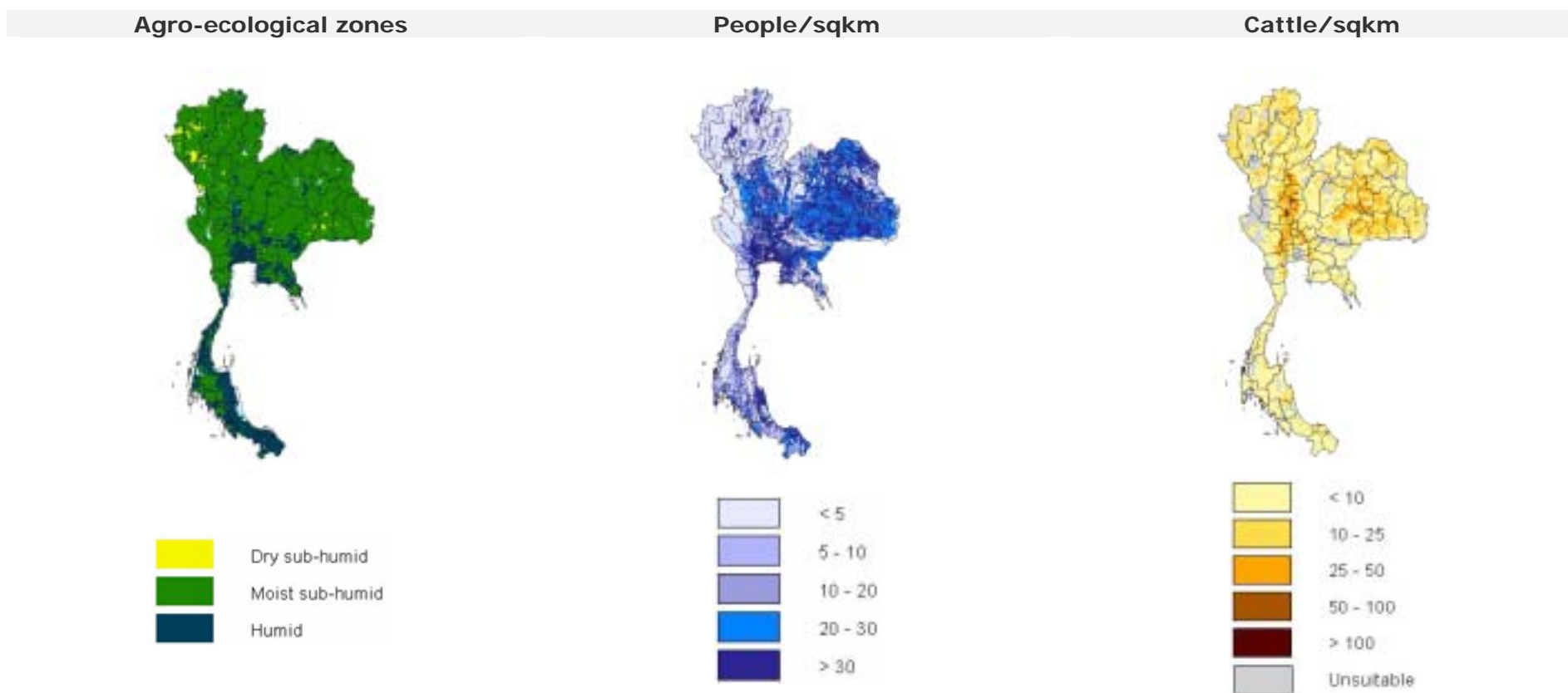
Selected indicators of livestock resources



Source: FAO (2005a)

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

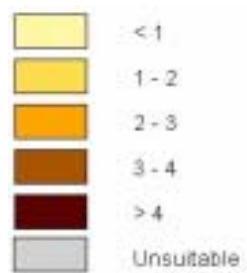
Density calculated on total land area¹



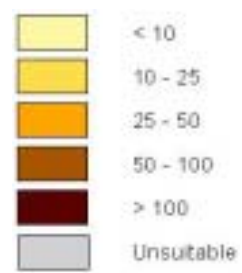
¹Densities for livestock populations and production is based on total land suitable for livestock production

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

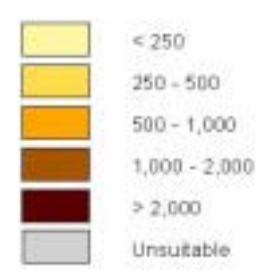
Sheep/sqkm



Pigs/sqkm



Poultry/sqkm



Source: FAO (2005b)

3. LIVESTOCK PRODUCTION

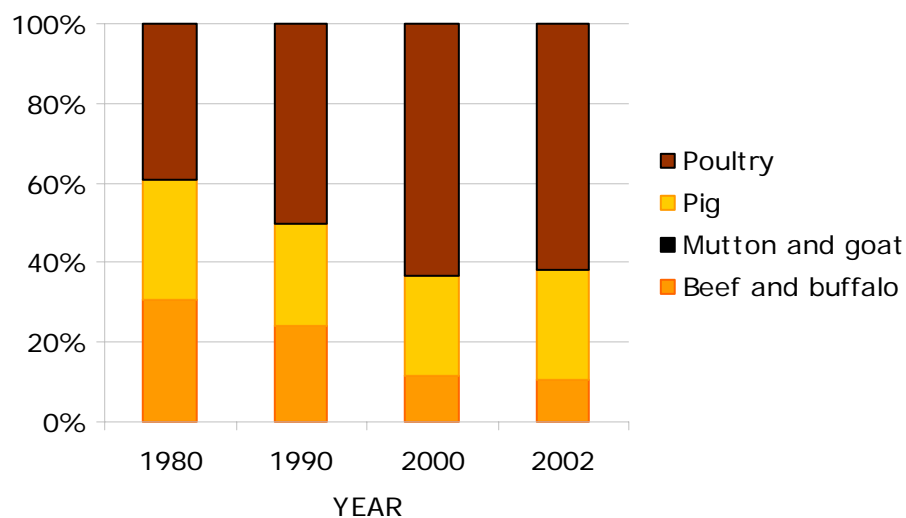
Trends in annual production of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	894.5	1,323.3	1,889.0	2,297.5	4.0	3.6
Beef and buffalo	275.6	316.7	219.2	236.5	1.4	-3.6
Mutton and goat	0.3	1.2	0.9	1.0	13.4	-3.4
Pig	267.0	337.5	474.7	646.1	2.4	3.5
Poultry	351.6	667.8	1,194.2	1,413.8	6.6	6.0
Milk, total	30.0	130.3	520.1	636.4	15.8	14.8
Eggs, total	425.5	725.1	807.3	842.0	5.5	1.1

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	200.0	200.0	200.0	200.0	15.7	15.9	18.2	18.5
Buffaloes	253.0	253.0	253.0	253.0	10.6	10.6	12.0	14.3
Sheep	15.0	15.0	15.0	15.0	30.0	27.8	37.5	38.1
Goat	15.0	15.0	15.0	15.0	30.0	30.0	30.0	30.0
Pigs	50.0	50.0	50.0	65.0	176.8	141.8	144.8	144.5
Poultry	1.3	1.3	1.2	1.3	389.4	398.1	379.5	402.5

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	2,000	2,931	2,588	2,767	0.4	0.8	4.4	4.8
Buffaloes								

Blanks represent no data

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	6.8	7.2	6.9	6.7	38.2	58.0	33.4	34

Source: FAO (2005a)

Estimated feed used for livestock production

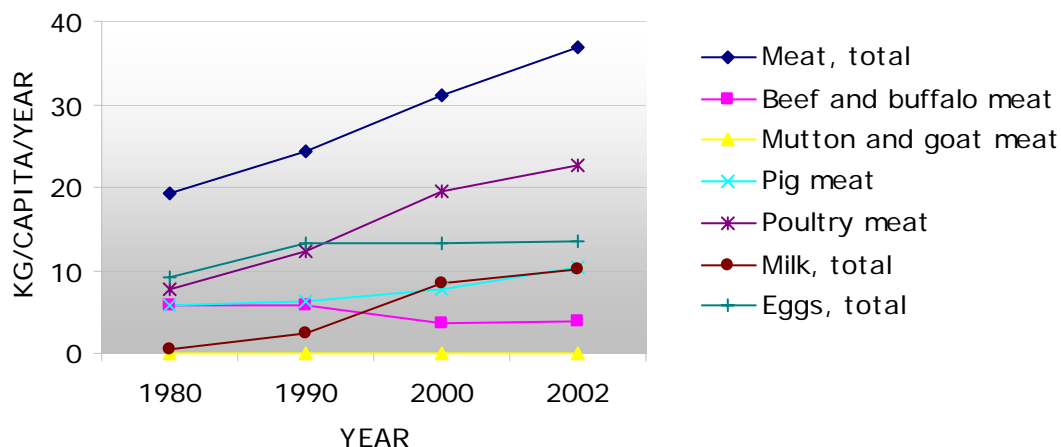
1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Maize	418.0	2,086.3	4,221.3	3,565.2	17.4	7.3
Barley						
Sorghum	24.6	159.4	143.2	140.2	20.5	-1.1
Millet	0.6	0.6	3.5	1.8	-0.1	19.4
Wheat						
Brans	1,506.2	1,489.6	2,365.8	2,325.1	-0.1	4.7
Rice Paddy, equivalent	868.4	859.7	1,292.2	1,280.5	-0.1	4.2
Roots and Tuber, dry equivalent	0.0	0.1	0.0	0.1	19.9	-5.7
Pulses						
Oil crops	0.0	0.4	1.4	1.3		12.7

Blanks represent no data

Source: FAO (2005a)

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



Source: FAO (2005a)

- Domestic meat demand is largely met by domestic production: Thailand imports small amounts of beef and pig meat, and at the same time is the fourth largest exporter of poultry meat in the world.
- Over the last 15-20 years farm sizes have increased significantly, and improved breeds, enhanced feed technology, housing, farm management, and contractual arrangements are a common element in livestock production. The livestock industry

has grown in close proximity to Bangkok, and heavy concentrations of animals in peri-urban areas are causing environmental damage.

- The land tax rate is 12.5 percent of the assessed annual rental value of the property. Allowances are granted for land utilized for personal dwellings, for raising of livestock and cultivation of crops by the owner. Thai producers are also levied a 7 percent VAT, but there are exemptions for sale or import of agricultural products, livestock and agricultural inputs.
- The agriculture finance system in Thailand is served by the governmental Bank for Agriculture and Agricultural Cooperatives (BAAC) and by commercial banks. The BAAC does not make profit, is exempt from taxes and receives government guarantees on its debt instruments. The BAAC provides credit to approximately 4 million of Thailand's 5.5 million farm households, or approximately 77 percent of all households in the agricultural sector, while the remaining households depend wholly on the informal credit sector.
- Thailand is unique in Asia for its development of a highly successful forage seed production industry. Forage seed production programmes in Thailand have evolved through research, pilot projects and a government supported village seed production enterprise. Village farmers were guaranteed purchase at a predetermined price for seed which was produced and cleaned on farm. Factors contributing to the success of the programme were favourable climate for seed production, extensive preparatory research, intensive initial supervision, realistic price incentives, and good market demand.

4. CONSUMPTION OF MEAT, MILK AND EGGS

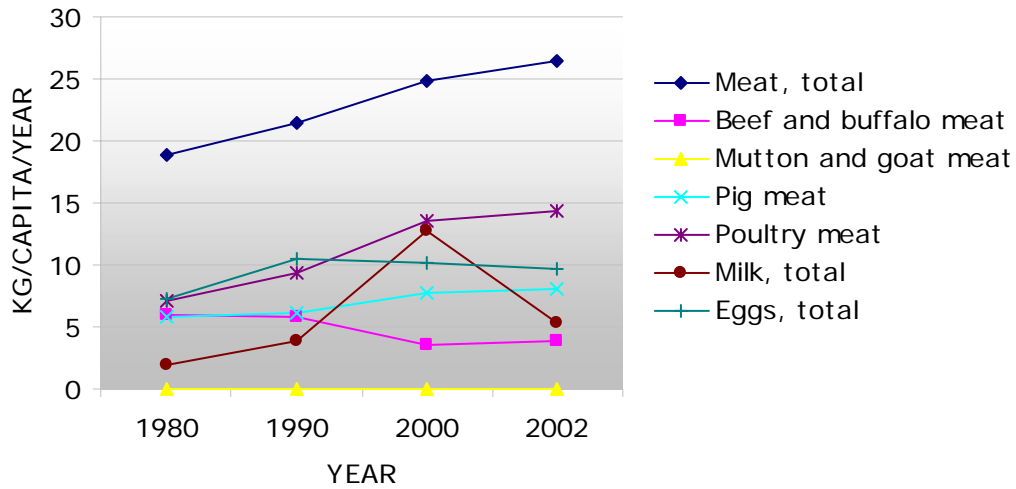
Trends in annual consumption of meat, milk and eggs

1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	869.8	1166.5	1512.6	1639.4	3.0	2.6
Beef and buffalo	275.2	315.8	216.0	234.7	1.4	-3.7
Sheep and goat	0.4	1.3	1.0	1.3	13.8	-2.5
Pig	266.9	336.0	473.3	505.7	2.3	3.5
Poultry	327.3	513.3	822.3	897.7	4.6	4.8
Milk, total	87.8	208.1	780.5	338.5	9.0	14.1
Eggs, total	332.4	571.0	614.6	599.0	5.6	0.7

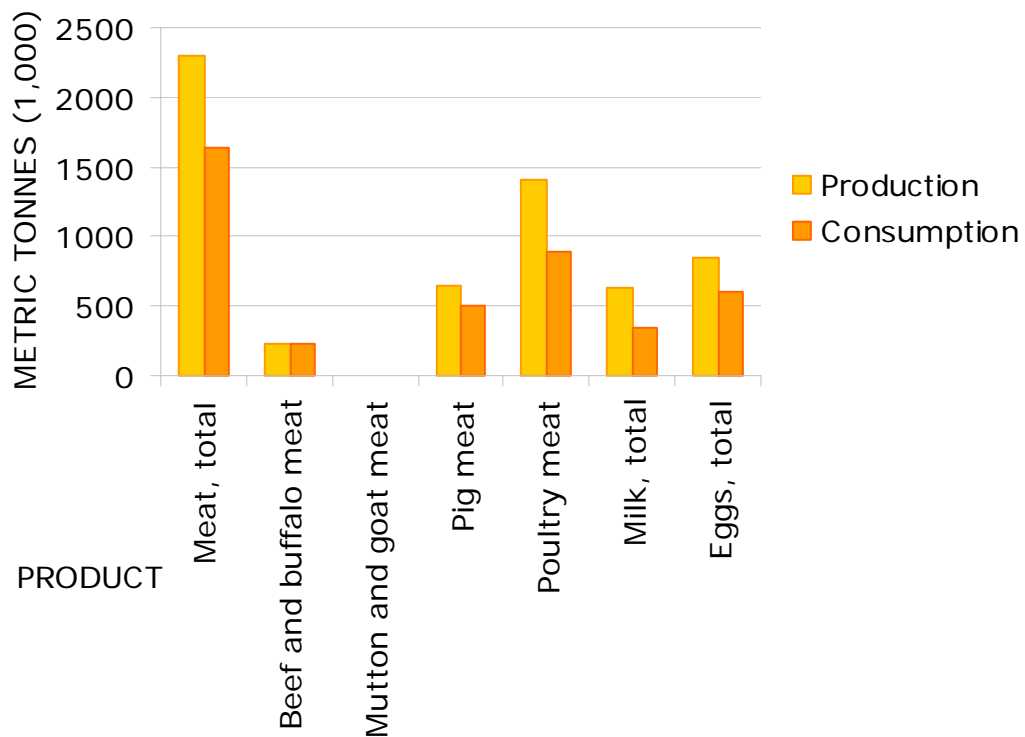
Source: FAO (2005a)

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 livestock¹ products

Values in million US\$

Product	Exports				Imports			
	1980	1990	2000	2002	1980	1990	2000	2002
Total	7,801	29,130	81,940	82,077	9,825	35,547	71,347	72,950
Agricultural	3,344	5,388	7,275	8,167	634	1,601	2,690	2,976
% agricultural	42.9	18.5	8.9	10.0	6.5	4.5	3.8	4.1
Livestock	54	338	833	1,198	75	305	420	432
% livestock	0.7	1.2	1.0	1.5	0.8	0.9	0.6	0.6

¹Total 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	2.11	11.06	21.36	24.61	0.02	0.09	0.16	0.18
Beef and buffalo	0.08	0.33	1.94	1.46	0.03	0.24	0.81	0.66
Sheep and goat	0.00	0.00	0.00	0.10	4.66	8.00	16.26	22.23
Pig	0.02	0.45	1.59	2.49	0.00	0.01	0.02	0.02
Poultry	5.28	21.53	33.13	39.05	0.01	0.02	0.04	0.11
Milk, equivalent	90.36	26.96	18.76	67.25	357.37	319.82	146.07	381.66
Eggs, total	0.18	0.85	0.62	0.24	0.00	0.00	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	2.09	10.98	21.23	62.87	0.00	0.00	0.00	0.00
Beef and buffalo	0.05	0.09	1.14	0.69	0.00	0.00	0.00	0.00
Sheep and goat	0.00	0.00	0.00	0.00	4.66	8.00	16.26	22.15
Pig	0.02	0.44	1.56	5.98	0.00	0.00	0.00	0.00
Poultry	5.27	21.51	33.10	156.72	0.00	0.00	0.00	0.00
Milk, equivalent	0.00	0.00	0.00	0.00	326.51	302.95	133.57	255.23
Eggs, total	0.18	0.84	0.62	0.48	0.00	0.00	0.00	0.00

Source: FAO (2005a)

- In 2002, Thailand's meat industries generated more than 1 US\$ billion of export earnings, much of which came from the poultry sector. While Thailand remains a net exporter (in value terms) of beef, pig meat and poultry, milk imports in 2002 were valued at 250 US\$ million.

- Thailand is a member of the Association of South-East Asian Nations (ASEAN), which is working towards the elimination of import duties so as to achieve a free-trade area by 2015. The first tariffs cut covers agricultural products including meat, fish, vegetables, fruits, and milk products. Thailand is also a participant in the Asia-Pacific Economic Cooperation (APEC) forum, formed in 1989. The objective of the agreement is to implement free trade among the member countries by 2020. Since 1 January 1995 Thailand is a member of the World Trade Organization (WTO).
- Tariffs on meat products range between 30-50 percent dependent on the product and the cuts. Meat product imports are not subject to quantitative restrictions; however, the competitiveness of the industry is constrained by border restrictions on inputs into the sector, e.g. certain product-specific surcharges continue being imposed on corn for animal feed, and soybean cake.
- Farms certified to export need to meet the Department of Livestock Development (DLD) standards and requirements, which are based on importing country standards. The DLD standard also addresses environmental and animal welfare concerns established by importing countries.

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
Quantities (count)												
Cattle and buffaloes	17,953	1,390	16,563	667	24,340	-23,673	1,778	145,419	-143,641	5,061	182,077	-177,016
Sheep and goats	0	40	-40	16,190	36	16,154	0	0	0	516	2	514
Pigs	1,000	621	379	30	1,161	-1,131	4,019	63	3,956	3,065	0	3,065
Poultry (1,000)	3,957	1,722	2,234	1,908	2,338	-430	5,101	600	4,501	4,596	145	4,451
Value (1,000 US\$)												
Cattle and buffaloes	4,836	95	4,741	100	14,609	-14,509	335	15,348	-15,013	708	17,413	-16,705
Sheep and goats	0	32	-32	599	13	586	0	0	0	15	2	13
Pigs	113	430	-317	16	1,164	-1,148	391	78	313	375	0	375
Poultry (1,000)	1,965	4,446	-2,481	1,604	10,767	-9,163	3,602	2,294	1,308	5,483	540	4,943
Total	6,914	5,003	1,911	2,319	26,553	-24,234	4,328	17,720	-13,392	6,581	17,955	-11,374

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
Quantities (metric tonnes)												
Meat, total	18,843	132	18,712	146,304	1,000	145,304	403,394	2,407	400,988	565,327	2,986	562,340
Beef and buffalo	216	77	140	1,044	745	299	4,252	1,751	2,500	3,442	1,550	1,893
Mutton and goat	0	17	-17	0	106	-106	0	167	-167	1	293	-292
Pig	55	2	53	1,512	23	1,489	7,529	108	7,421	16,067	101	15,966
Poultry	18,571	26	18,545	143,763	121	143,642	395,647	346	395,301	552,014	1,023	550,991
Other	2	11	-12	-15	5	11	-4,033	34	3,999	-6,197	20	6,177
Milk, equivalent	27,108	313,919	-286,811	35,118	665,672	-630,554	97,565	1,140,017	-1,042,451	427,950	1,291,871	-863,921
Eggs, total	779	0	779	6,135	21	6,114	5,044	14	5,030	2,047	0	2,047
Hides and skins	663	3,100	-2,437	592	84,067	-83,475	1,001	112,073	-111,072	2,460	113,086	-110,626
Value (1,000 US\$)												
Meat, total	32,865	615	32,250	314,060	3,942	310,118	778,595	4,715	773,880	1,038,003	6,148	1,031,855
Beef and buffalo	205	459	-254	2,287	3,226	-939	6,107	3,318	2,789	4,549	3,628	921
Mutton and goat	0	49	-49	0	382	-382	0	248	-248	12	390	-378
Pig	152	7	145	3,324	83	3,241	15,878	430	15,448	26,629	234	26,395
Poultry	32,508	53	32,455	308,358	241	308,117	753,509	596	752,913	1,005,469	1,761	1,003,708
Other	0	47	-47	91	10	-101	3,101	123	-3,224	1,344	135	-1,479
Milk, equivalent	8,012	65,455	-57,443	11,572	165,853	-154,281	36,231	251,078	-214,847	139,685	243,988	-104,303
Eggs, total	655	1	654	6,638	134	6,504	4,779	117	4,662	2,570	30	2,540
Hides and skins	3,826	3,266	560	2,707	107,451	-104,744	2,227	146,127	-143,900	5,112	164,006	-158,894
Total	45,358	69,337	-23,979	334,977	277,380	57,597	821,832	402,037	419,795	1,185,370	414,172	771,198

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		-	-	-	-
Avian Influenza ¹	000	000	000	000	000	000	000
Bluetongue	000	000	000	000	000	000	000
BSE ²					-	-	-
CBPP ³	000	000	000	000	000	000	000
Classical swine fever	(1996)	(1996)	393/18	4,326/53	6,312/30	1,010/19	1,198/48
Foot and mouth disease	.../...	.../33	.../...	3,501/...	7,718/...	5,895/...	34,965/209
Lumpy skin disease	000	000		-	-	-	-
Newcastle disease	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)
Peste des petits ruminants	000	000	000	000	000	000	000
Rift Valley fever	000	000		-	-	-	-
Rinderpest	(1959)	(1959)	(1959)	(1959)	(1959)	(1959)	(1959)
Sheep and goat pox	000	000	000	000	000	000	000
Swine vesicular disease	000	000		-	-	-	-
Vesicular stomatitis	000	000		-	-	-	-

¹ Highly pathogenic avian influenza

² Bovine spongiform encephalopathy

³ 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)

- Animal disease is a major threat to the livestock sector with cross border smuggling and theft a constant concern to livestock holders. To ensure that livestock standards meet importer's requirements, the Department of Livestock Development (DLD) has established the regulation for the "standard farm" in 1999 for swine, poultry and cattle farms. These farm standards are based on "Good Agricultural Practice" (GAP) guidelines to maintain high quality of livestock products from the producer to consumer. The Government, attempting to eradicate foot and mouth-disease, has established a disease-free zone in three eastern provinces. However, illegal cattle smuggling is hampering eradication efforts. The National Institute of Animal Health (NIAH) serves as a reference laboratory to confirm diagnosis, and collaborates with other organizations on outbreak investigation and animal disease surveillance.

- The government has supported research and development of vaccines and manages a commercial-scale vaccine production unit in Nakorn Rachasima province.

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