

**Table 8. Land use and agricultural productivity**

Economy	Land under permanent crops % of land area		Irrigated land % of cropland		Arable land Hectares per capita		Agricultural machinery Tractors per thousand agricultural workers		Agricultural productivity Agr. value added per agricultural worker 1995 dollars		Food production index 1989-91 = 100	
	1980	1997	1979-81	1995-97	1979-81	1995-97	1979-81	1995-97	1979-81	1996-98	1979-81	1996-98
	Albania	4.3	4.6	53.0	48.4	0.22	0.18	15	11	1,219	1,841	..
Algeria	0.3	0.2	3.4	6.9	0.37	0.26	27	41	1,411	1,943	67.6	129.4
Angola	0.4	0.4	2.2	2.1	0.41	0.27	4	3	..	123	91.9	130.0
Argentina	0.8	0.8	5.8	6.3	0.89	0.71	132	190	7,375	9,597	92.0	125.9
Armenia	..	2.3	..	51.5	..	0.13	..	68	..	4,886	..	76.8
Australia	0.0	0.0	3.5	5.1	2.97	2.75	751	700	20,880	30,904	91.3	130.4
Austria	1.2	1.0	0.2	0.3	0.20	0.17	945	1,567	9,761	16,070	92.2	102.3
Azerbaijan	..	3.0	..	74.9	..	0.21	..	33	..	776	..	60.6
Bangladesh	2.0	2.5	17.1	43.4	0.10	0.06	0	0	212	276	79.2	110.8
Belarus	..	0.7	..	1.8	..	0.60	..	124	..	3,666	..	65.9
Belgium <sup>a</sup>	0.4	0.5	1.7	3.8	0.08	0.07	917	1,156	18,192	34,929	88.5	113.0
Benin	0.8	1.4	0.3	0.8	0.39	0.26	0	0	311	534	63.5	140.6
Bolivia	0.2	0.2	6.6	4.1	0.35	0.23	4	4	..	..	70.9	134.1
Botswana	0.0	0.0	0.5	0.3	0.44	0.23	9	20	630	666	87.2	98.7
Brazil	1.2	1.4	3.3	4.8	0.32	0.33	31	57	2,047	4,081	69.5	125.7
Bulgaria	3.2	1.8	28.3	18.0	0.43	0.51	66	63	2,754	5,135	105.5	67.8
Burkina Faso	0.1	0.2	0.4	0.7	0.39	0.33	0	0	134	161	62.1	127.8
Burundi	10.1	12.9	0.7	1.3	0.22	0.12	0	0	177	141	80.3	95.8
Cambodia	0.4	0.6	5.8	7.1	0.29	0.34	0	0	..	408	48.9	130.6
Cameroon	2.2	2.6	0.2	0.3	0.68	0.44	0	0	866	1,054	83.0	120.2
Canada	0.0	0.0	1.3	1.6	1.86	1.53	824	1,642	..	..	79.8	117.7
Central African Republic	0.1	0.1	..	..	0.81	0.58	0	0	377	440	79.7	127.9
Chad	0.0	0.0	0.2	0.6	0.70	0.47	0	0	155	217	90.8	139.1
Chile	0.3	0.4	31.1	54.3	0.34	0.14	43	49	3,174	5,039	71.5	129.6
China	0.4 <sup>b</sup>	1.2 <sup>b</sup>	45.1	37.7	0.10	0.10	2	1	161	307	60.9	153.5
Hong Kong, China	1.0	1.0	37.5	30.2	0.00	0.00	0	0	..	..	97.4	25.9
Colombia	1.4	2.4	7.7	23.7	0.13	0.05	8	6	3,034	3,448	76.0	109.7
Congo, Dem. Rep.	0.4	0.5	0.1	0.1	0.25	0.15	0	0	270	285	71.7	95.9
Congo, Rep.	0.1	0.1	0.6	0.5	0.08	0.05	2	1	385	492	81.1	112.1
Costa Rica	4.4	5.5	12.1	24.7	0.12	0.07	22	22	3,160	4,409	73.0	128.6
Côte d'Ivoire	7.2	13.8	1.0	1.0	0.24	0.21	1	1	1,074	1,011	70.8	128.5
Croatia	..	2.2	..	0.2	..	0.27	..	14	..	8,521	..	59.4
Czech Republic	..	3.1	..	0.7	..	0.30	..	164	..	4,677	..	79.7
Denmark	0.3	0.2	14.5	20.5	0.52	0.44	973	1,116	21,321	..	83.2	103.0
Dominican Republic	7.2	9.9	11.7	17.2	0.19	0.13	3	4	1,839	2,599	85.2	105.4
Ecuador	3.3	5.2	19.4	8.1	0.20	0.13	6	7	1,206	1,795	77.4	143.6
Egypt, Arab Rep.	0.2	0.5	100.0	99.8	0.06	0.05	4	11	721	1,189	68.0	139.7
El Salvador	11.7	12.1	13.7	14.5	0.12	0.10	5	5	1,925	1,679	90.8	111.3
Eritrea	..	0.0	..	7.0	..	0.11	..	0	..	..	..	114.6
Estonia	..	0.4	..	0.3	..	0.77	..	495	..	3,519	..	47.0
Ethiopia	..	0.6	..	1.8	..	0.17	..	0	..	..	..	123.7
Finland	..	0.0	..	3.0	0.50	0.42	721	1,147	16,995	28,231	93.5	90.7
France	2.5	2.1	4.6	8.5	0.32	0.31	737	1,236	14,956	36,889	93.8	105.4
Georgia	..	4.1	..	43.3	..	0.14	..	29	..	2,120	..	85.2
Germany	1.4	0.7	3.7	3.9	0.15	0.14	624	991	..	22,759	91.2	92.3
Ghana	7.5	7.5	0.2	0.2	0.18	0.16	1	1	670	542	68.7	144.1
Greece	7.9	8.5	24.2	34.5	0.30	0.27	120	277	8,804	..	91.2	99.0
Guatemala	4.4	5.0	5.0	6.6	0.19	0.13	3	2	2,143	2,075	69.7	124.1
Guinea	1.8	2.4	7.9	6.4	0.16	0.13	0	0	..	271	96.3	137.4
Haiti	12.5	12.7	7.9	9.9	0.10	0.08	0	0	578	396	101.3	94.4
Honduras	1.8	3.1	4.1	3.6	0.44	0.29	5	7	694	1,018	88.2	113.0
Hungary	3.3	2.5	3.6	4.2	0.47	0.47	59	156	3,390	4,771	90.8	76.3
India	1.8	2.7	22.8	32.4	0.24	0.17	2	6	275	406	68.1	119.9
Indonesia	4.4	7.2	16.2	15.5	0.12	0.09	0	1	610	749	62.8	120.4
Iran, Islamic Rep.	0.5	1.0	35.5	37.7	0.36	0.29	17	40	2,570	4,089	61.1	144.7
Ireland	0.0	0.0	..	..	0.33	0.37	606	978	..	..	83.3	106.2
Israel	4.3	4.2	49.3	45.5	0.08	0.06	294	322	..	..	85.4	107.0
Italy	10.0	9.0	19.3	24.9	0.17	0.14	370	913	9,993	20,031	101.4	101.2
Jamaica	9.7	9.2	13.4	12.0	0.06	0.07	9	11	894	1,291	86.0	120.1
Japan	1.6	1.0	62.6	62.8	0.04	0.03	209	637	15,698	31,094	94.0	95.2
Jordan	0.4	1.5	11.0	19.5	0.14	0.06	48	34	1,176	1,431	57.3	152.5
Kazakhstan	..	0.1	..	7.2	..	1.95	..	91	..	1,450	..	57.2
Kenya	0.8	0.9	0.9	1.5	0.23	0.14	1	1	262	228	67.7	104.9
Korea, Rep.	1.4	2.0	59.6	60.6	0.05	0.04	1	41	3,800	11,657	77.6	122.2
Kuwait	..	0.1	..	75.4	0.00	0.00	3	14	..	..	93.2	161.2
Kyrgyz Republic	..	0.4	..	77.3	..	0.29	..	39	..	..	..	102.0
Lao PDR	0.1	0.2	15.4	18.6	0.21	0.17	0	0	..	548	70.8	126.7
Latvia	..	0.5	..	1.1	..	0.70	..	312	..	2,505	..	48.1
Lebanon	8.9	12.5	28.3	36.0	0.07	0.04	28	100	..	27,409	59.2	138.2
Lesotho	..	..	..	..	0.22	0.16	6	6	723	533	90.0	111.1
Lithuania	..	0.9	..	0.3	..	0.79	..	263	..	3,245	..	69.2
Macedonia, FYR	..	1.9	..	8.7	..	0.31	..	381	..	2,215	..	97.0
Madagascar	0.9	0.9	21.5	35.0	0.28	0.19	1	1	197	186	84.4	108.7
Malawi	0.9	1.3	1.3	1.6	0.20	0.16	0	0	102	138	91.1	109.7
Malaysia	11.6	17.6	6.7	4.5	0.07	0.09	4	23	3,275	6,061	55.4	125.2

## ENVIRONMENT

Economy	Land under permanent crops % of land area		Irrigated land % of cropland		Arable land Hectares per capita		Agricultural machinery Tractors per thousand agricultural workers		Agricultural productivity Agr. value added per agricultural worker 1995 dollars		Food production index 1989-91 = 100	
	1980	1997	1979-81	1995-97	1979-81	1995-97	1979-81	1995-97	1979-81	1996-98	1979-81	1996-98
Mali	0.0	0.0	2.9	2.1	0.31	0.42	0	1	241	271	77.9	114.5
Mauritania	0.0	0.0	22.8	9.7	0.14	0.21	1	1	285	433	86.5	104.7
Mexico	0.8	1.1	20.3	22.8	0.34	0.27	16	20	1,882	2,164	83.8	120.2
Moldova	..	12.1	..	14.1	..	0.41	..	85	..	1,474	..	53.2
Mongolia	..	0.0	..	6.4	0.71	0.53	32	21	932	1,151	88.1	88.5
Morocco	1.1	1.9	15.2	13.1	0.38	0.33	7	10	1,146	1,836	55.9	107.2
Mozambique	0.3	0.3	2.1	3.4	0.24	0.18	1	1	..	127	100.1	130.9
Myanmar	0.7	0.9	10.4	15.4	0.28	0.22	1	0	..	..	87.7	138.1
Namibia	0.0	0.0	0.6	0.9	0.64	0.52	10	11	862	1,233	107.4	123.5
Nepal	0.2	0.5	22.5	38.2	0.16	0.13	0	0	162	189	65.9	117.2
Netherlands	0.9	1.0	58.5	61.0	0.06	0.06	561	631	21,663	..	86.5	99.0
New Zealand	3.7	6.4	5.2	8.7	0.80	0.42	619	437	..	..	90.7	124.6
Nicaragua	1.5	2.4	6.0	3.2	0.39	0.54	6	7	1,620	1,821	117.0	122.7
Niger	0.0	0.0	0.7	1.3	0.62	0.53	0	0	222	195	101.4	127.8
Nigeria	2.8	2.8	0.7	0.7	0.39	0.25	1	2	414	624	57.9	142.5
Norway	..	..	..	..	0.20	0.22	824	1,276	17,044	32,600	92.1	100.9
Pakistan	0.4	0.7	72.7	80.8	0.24	0.17	5	13	394	626	66.4	136.2
Panama	1.6	2.1	5.0	4.9	0.22	0.19	27	20	2,122	2,512	85.6	99.6
Papua New Guinea	1.1	1.3	..	..	0.01	0.01	1	1	716	798	86.2	107.8
Paraguay	0.3	0.2	3.4	2.9	0.52	0.44	14	25	2,618	3,448	60.6	120.0
Peru	0.3	0.4	32.8	42.0	0.19	0.15	5	3	1,348	1,663	77.3	140.5
Philippines	14.8	14.8	14.0	16.3	0.09	0.07	1	1	1,347	1,352	86.0	125.8
Poland	1.1	1.2	0.7	0.7	0.41	0.37	112	281	..	1,751	87.9	88.2
Portugal	7.8	8.2	20.1	21.8	0.25	0.22	72	208	..	..	71.9	97.0
Romania	2.9	2.6	21.9	31.3	0.44	0.41	39	84	..	3,101	112.8	95.9
Russian Federation	..	0.1	..	4.0	..	0.86	..	106	..	2,476	..	64.4
Rwanda	10.3	12.2	0.4	0.3	0.15	0.12	0	0	371	249	89.7	79.1
Saudi Arabia	0.0	0.1	28.9	42.3	0.20	0.19	2	12	2,167	10,742	26.7	78.8
Senegal	0.0	0.2	2.6	3.1	0.42	0.26	0	0	341	320	74.2	100.4
Sierra Leone	0.7	0.8	4.1	5.3	0.14	0.11	0	0	368	411	84.5	99.5
Singapore	9.8	..	..	..	0.00	0.00	3	18	13,937	41,673	154.3	31.8
Slovak Republic	..	2.6	..	12.5	..	0.28	..	92	..	3,378	..	74.7
Slovenia	..	2.7	..	0.7	..	0.12	..	3,082	..	26,517	..	100.3
South Africa	0.7	0.8	8.4	7.9	0.45	0.38	94	68	2,899	3,958	92.6	100.8
Spain	9.9	9.7	14.8	18.1	0.42	0.38	200	546	..	13,499	82.1	110.1
Sri Lanka	15.9	15.8	28.3	30.7	0.06	0.05	4	2	649	726	98.3	109.1
Sweden	..	..	..	..	0.36	0.32	715	958	..	..	100.1	100.8
Switzerland	0.5	0.6	6.2	5.8	0.06	0.06	494	627	..	..	95.8	95.8
Syrian Arab Republic	2.5	4.1	9.6	20.5	0.60	0.33	29	66	..	..	94.2	148.7
Tajikistan	..	0.9	..	79.7	..	0.13	..	38	..	396	..	59.0
Tanzania	1.0	1.0	3.8	3.8	0.12	0.10	1	1	..	174	76.9	100.0
Thailand	3.5	6.6	16.4	23.9	0.35	0.28	1	7	634	932	80.4	112.6
Togo	6.6	6.6	0.3	0.3	0.76	0.49	0	0	345	539	77.0	135.9
Tunisia	9.7	12.9	4.9	7.6	0.51	0.32	30	39	1,743	2,959	67.6	121.4
Turkey	4.1	3.4	9.6	14.7	0.57	0.42	38	58	1,860	1,858	75.8	111.3
Turkmenistan	..	0.1	..	..	..	0.35	..	82	..	..	..	101.7
Uganda	8.0	8.8	0.1	0.1	0.32	0.26	0	1	..	345	70.4	107.1
Ukraine	..	1.7	..	7.4	..	0.65	..	89	..	1,454	..	52.3
United Kingdom	0.3	0.2	2.0	1.7	0.12	0.10	726	883	..	..	92.0	99.7
United States	0.2	0.2	10.8	12.0	0.83	0.67	1,230	1,484	..	39,001	94.5	117.9
Uruguay	0.3	0.3	5.4	10.7	0.48	0.39	171	173	6,821	9,826	86.9	130.8
Uzbekistan	..	0.9	..	88.3	..	0.19	..	59	..	2,113	..	109.8
Venezuela, RB	0.9	1.0	3.6	5.7	0.19	0.12	50	59	4,041	5,036	80.3	114.4
Vietnam	1.9	4.7	24.1	31.0	0.11	0.08	1	4	..	230	63.8	140.5
Yemen, Rep.	0.2	0.2	19.9	31.3	0.16	0.09	3	2	..	338	75.0	120.7
Zambia	0.0	0.0	0.4	0.9	0.89	0.57	3	2	328	209	74.0	104.5
Zimbabwe	0.3	0.3	3.1	4.7	0.36	0.27	7	7	307	347	81.9	101.9
<b>World</b>	<b>0.9 w</b>	<b>1.0 w</b>	<b>17.8 w</b>	<b>19.2 w</b>	<b>0.24 w</b>	<b>0.24 w</b>	<b>18 w</b>	<b>20 w</b>	<b>.. w</b>	<b>.. w</b>	<b>75.7 w</b>	<b>130.3 w</b>
<b>Low income</b>	1.0	1.4	19.9	25.5	0.22	0.19	..	..	..	..	71.3	124.3
<b>Middle income</b>	1.0	1.0	23.9	19.4	0.18	0.23	..	..	..	..	71.8	143.8
Lower middle income	1.1	0.9	32.1	22.3	0.14	0.21	..	..	..	..	69.8	151.1
Upper middle income	1.0	1.2	10.1	11.4	0.32	0.29	..	..	..	..	79.1	118.5
<b>Low and middle income</b>	1.0	1.2	21.9	21.9	0.20	0.21	4	8	..	568	71.6	134.7
East Asia & Pacific	1.5	2.6	37.0	36.3	0.11	0.11	2	2	..	..	67.0	152.1
Europe & Central Asia	3.2	0.4	11.6	10.4	0.14	0.60	..	101	..	2,186	..	..
Latin America & Caribbean	1.1	1.3	11.6	13.5	0.32	0.28	25	35	..	..	80.4	123.9
Middle East & North Africa	0.4	0.7	25.8	35.5	0.29	0.21	12	25	..	..	70.1	138.0
South Asia	1.5	2.1	28.7	39.7	0.23	0.16	2	5	265	356	70.4	122.1
Sub-Saharan Africa	0.7	0.9	4.0	4.2	0.32	0.25	3	2	418	379	78.8	124.3
<b>High income</b>	0.5	0.5	9.8	11.2	0.46	0.41	520	906	..	..	93.1	107.5

Note: For data comparability and coverage, see the Technical Notes. Figures in italics are for years other than those specified.

a. Includes Luxembourg. b. Includes Taiwan, China.