

**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	1996	1979-81	1994-96	1979-81	1994-96	1979-81	1994-96	1979-81	1995-97	1979-81	1995-97
	Albania	4.3	4.6	53.0	48.4	0.22	0.18	15	10	1,193	1,717	..
Algeria	0.3	0.2	3.4	6.9	0.37	0.27	27	43	1,411	1,903	69.7	118.2
Angola	0.4	0.4	2.2	2.1	0.41	0.27	4	3	..	117	91.9	130.1
Argentina	0.8	0.8	5.8	6.3	0.89	0.72	132	190	12,195	13,833	94.9	121.9
Armenia	..	3.5	..	43.7	..	0.15	..	64	..	4,477	..	82.3
Australia	0.0	0.0	3.5	4.8	2.97	2.68	751	698	20,880	29,044	91.5	126.9
Austria	1.2	1.1	0.2	0.3	0.20	0.18	945	1,492	9,761	15,474	92.3	100.0
Azerbaijan	..	4.6	..	50.0	..	0.21	..	31	..	847	..	55.6
Bangladesh	2.0	2.5	17.1	39.1	0.10	0.07	0	0	181	221	79.2	106.0
Belarus	..	0.7	..	1.9	..	0.60	..	131	..	3,461	..	58.9
Belgium	0.4	0.5	0.1	0.1	..	..	917	1,130	..	..	88.4	114.4
Benin	4.0	4.1	0.3	0.5	0.39	0.26	0	0	302	504	63.4	129.5
Bolivia	0.2	0.2	6.6	3.7	0.35	0.27	4	4	..	..	71.0	126.7
Botswana	0.0	0.0	0.5	0.3	0.44	0.25	9	21	619	647	87.6	104.2
Brazil	1.2	1.4	3.3	4.9	0.32	0.32	31	51	2,047	3,931	69.5	122.2
Bulgaria	3.2	1.8	28.3	18.7	0.43	0.48	66	61	2,754	4,351	105.3	68.3
Burkina Faso	0.1	0.1	0.4	0.7	0.39	0.34	0	0	134	159	62.6	122.4
Burundi	10.1	12.9	0.7	1.3	0.22	0.13	0	0	177	139	80.5	96.4
Cambodia	0.4	0.6	4.9	4.5	0.30	0.37	0	0	..	407	51.1	124.8
Cameroon	2.2	2.3	0.2	0.3	0.68	0.45	0	0	834	958	83.2	118.7
Canada	0.0	0.0	1.3	1.6	1.86	1.53	824	1,683	..	..	79.9	112.7
Central African Republic	0.1	0.1	..	..	0.81	0.59	0	0	396	439	79.9	122.7
Chad	0.0	0.0	0.2	0.4	0.70	0.48	0	0	155	212	90.6	117.5
Chile	0.3	0.4	29.6	32.6	0.36	0.25	43	44	2,612	5,211	71.5	128.7
China	0.4	1.2	45.1	37.0	0.10	0.10	2	1	162	296	61.0	155.8
Hong Kong, China	1.0	1.0	43.8	28.6	0.00	0.00	0	0	..	..	97.4	56.7
Colombia	1.4	2.4	7.7	23.4	0.13	0.05	8	7	1,926	2,890	76.0	110.8
Congo, Dem. Rep.	0.3	0.4	0.1	0.1	0.25	0.16	0	0	270	285	71.9	104.9
Congo, Rep.	0.1	0.1	0.7	0.6	0.07	0.05	2	1	391	470	80.3	114.5
Costa Rica	4.4	4.8	12.1	23.8	0.12	0.08	22	23	3,159	4,627	73.0	128.4
Côte d'Ivoire	7.2	13.5	1.0	1.0	0.24	0.21	1	1	1,074	1,005	70.9	119.2
Croatia	..	2.2	..	0.2	..	0.24	..	14	..	7,144	..	57.7
Czech Republic	..	3.1	..	0.7	..	0.30	..	148	..	..	..	81.9
Denmark	0.3	0.2	14.5	20.3	0.52	0.45	973	1,088	21,321	46,621	83.2	102.5
Dominican Republic	7.2	11.4	11.7	13.7	0.19	0.17	3	3	1,839	2,454	85.1	109.1
Ecuador	3.3	5.2	19.4	8.1	0.20	0.14	6	7	1,206	1,764	76.6	136.9
Egypt, Arab Rep.	0.2	0.5	100.0	100.0	0.06	0.05	4	10	721	1,163	68.4	129.8
El Salvador	8.0	10.5	14.8	14.2	0.12	0.11	5	5	2,013	1,705	90.8	109.5
Eritrea	..	0.8	..	5.4	..	0.12	..	1	..	..	..	102.3
Estonia	..	0.4	..	..	..	0.76	..	475	..	3,342	..	49.3
Ethiopia	..	0.6	..	1.6	..	0.20	..	0	..	..	..	90.2
Finland	..	..	..	..	0.54	0.49	721	1,301	16,995	28,296	92.8	92.4
France	2.5	2.1	4.6	8.2	0.32	0.31	737	1,189	14,956	34,760	93.7	103.6
Georgia	..	4.7	..	42.2	..	0.14	..	28	..	1,838	..	74.6
Germany	1.4	0.7	3.7	3.9	0.15	0.14	624	954	..	19,930	91.0	90.9
Ghana	7.5	7.5	0.2	0.1	0.18	0.16	1	1	663	533	73.5	147.7
Greece	7.9	8.4	24.2	33.8	0.30	0.28	120	267	8,804	12,611	91.2	98.4
Guatemala	4.4	5.1	5.0	6.5	0.19	0.14	3	2	2,110	1,902	69.9	114.0
Guinea	0.9	1.2	12.8	10.9	0.11	0.09	0	0	..	262	96.5	129.2
Haiti	12.5	12.7	7.9	9.7	0.10	0.08	0	0	578	407	105.5	90.5
Honduras	1.8	3.1	4.1	3.6	0.44	0.30	5	7	697	1,018	88.2	104.7
Hungary	3.3	2.4	3.6	4.2	0.47	0.47	59	54	3,389	4,655	91.0	76.8
India	1.8	2.4	22.8	32.0	0.24	0.17	2	5	253	343	68.4	117.1
Indonesia	4.4	7.2	16.2	15.0	0.12	0.09	0	1	610	745	63.5	122.4
Iran, Islamic Rep.	0.5	1.0	35.5	38.0	0.36	0.30	17	39	2,533	3,831	60.9	136.8
Ireland	0.0	0.0	..	..	0.33	0.37	606	978	..	..	83.3	106.2
Israel	4.3	4.2	49.3	45.3	0.08	0.06	294	336	..	..	85.7	114.1
Italy	10.0	9.1	19.3	24.9	0.17	0.14	370	867	9,994	19,001	101.5	99.7
Jamaica	5.5	6.1	13.6	14.0	0.08	0.07	9	11	892	1,294	86.0	117.9
Japan	1.6	1.0	62.6	62.7	0.04	0.03	209	593	15,698	28,665	94.2	96.9
Jordan	0.4	1.0	11.0	18.2	0.14	0.08	48	42	1,447	1,634	55.3	157.3
Kazakhstan	..	0.1	..	6.9	..	2.04	..	106	..	1,477	..	68.5
Kenya	0.8	0.9	0.9	1.5	0.23	0.15	1	1	262	230	67.7	102.9
Korea, Rep.	1.4	2.0	59.6	60.7	0.05	0.04	1	34	3,957	10,962	77.9	119.1
Kuwait	..	..	..	..	0.00	0.00	3	14	..	..	98.9	139.3
Kyrgyz Republic	..	2.7	..	76.8	..	0.23	..	44	..	2,917	..	123.8
Lao PDR	0.1	0.2	15.4	20.3	0.21	0.17	0	0	..	526	71.2	112.4
Latvia	..	0.5	..	..	..	0.68	..	284	..	3,125	..	49.8
Lebanon	8.9	12.5	28.3	28.4	0.07	0.05	28	77	..	..	57.8	117.6
Lesotho	..	..	..	..	0.22	0.17	6	6	498	319	89.4	104.4
Lithuania	..	0.9	..	..	..	0.79	..	239	..	2,907	..	69.8
Macedonia, FYR	..	1.9	..	9.4	..	0.31	..	323	..	1,528	..	95.9
Madagascar	0.9	0.9	21.5	35.0	0.28	0.19	1	1	198	180	82.1	105.3
Malawi	0.9	1.1	1.3	1.6	0.20	0.16	0	0	100	122	91.2	105.3
Malaysia	11.6	17.6	6.7	4.5	0.07	0.09	4	23	3,279	6,267	55.4	124.0

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

## 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	1996	1979-81	1994-96	1979-81	1994-96	1979-81	1994-96	1979-81	1995-97	1979-81	1995-97
Mali	0.0	0.0	2.9	2.3	0.31	0.37	0	1	225	241	79.7	118.7
Mauritania	0.0	0.0	22.8	10.3	0.14	0.20	1	1	301	439	86.1	103.2
Mexico	0.8	1.1	20.3	23.1	0.34	0.27	16	20	1,482	1,690	84.9	120.6
Moldova	..	12.5	..	14.1	..	0.41	..	82	..	1,473	..	58.3
Mongolia	0.0	0.0	3.0	6.1	0.71	0.54	32	22	727	1,085	88.2	81.6
Morocco	1.1	1.9	15.2	13.0	0.38	0.33	7	10	1,117	1,593	55.9	94.9
Mozambique	0.3	0.3	2.1	3.4	0.24	0.19	1	1	..	76	99.2	119.5
Myanmar	0.7	0.9	10.4	15.9	0.28	0.22	1	1	..	..	87.8	133.5
Namibia	0.0	0.0	0.6	0.8	0.64	0.51	10	11	876	1,235	107.4	118.8
Nepal	0.2	0.4	22.5	30.6	0.16	0.13	0	0	162	187	65.1	113.5
Netherlands	0.9	1.0	58.5	61.5	0.06	0.06	561	646	21,663	43,836	87.0	106.1
New Zealand	3.7	6.4	5.2	8.9	0.80	0.43	619	451	..	..	90.8	120.3
Nicaragua	1.5	2.4	6.0	3.3	0.39	0.54	6	7	1,334	1,407	117.9	123.7
Niger	0.0	0.0	0.7	1.4	0.62	0.53	0	0	222	190	101.4	118.4
Nigeria	2.8	2.8	0.7	0.7	0.39	0.27	1	1	370	541	57.7	134.2
Norway	..	..	..	..	0.20	0.22	824	1,251	17,044	31,577	91.8	99.7
Pakistan	0.4	0.7	72.7	80.2	0.24	0.17	5	12	392	585	66.4	130.5
Panama	1.6	2.1	5.0	4.9	0.22	0.19	27	20	2,122	2,463	85.6	102.5
Papua New Guinea	0.9	1.1	..	..	0.01	0.01	1	1	717	827	86.1	106.8
Paraguay	0.3	0.2	3.4	3.0	0.52	0.45	14	25	2,506	3,295	60.6	116.7
Peru	0.3	0.4	32.8	41.8	0.19	0.16	5	3	1,349	1,619	78.4	131.5
Philippines	14.8	14.4	14.0	16.7	0.09	0.07	1	1	1,348	1,379	86.4	120.6
Poland	1.1	1.2	0.7	0.7	0.41	0.37	112	277	..	1,647	87.9	84.8
Portugal	7.8	8.2	20.1	21.7	0.25	0.22	72	203	..	5,574	71.9	99.8
Romania	2.9	2.4	21.9	31.4	0.44	0.41	39	80	..	3,170	112.7	100.5
Russian Federation	..	0.1	..	4.0	..	0.88	..	122	..	2,540	..	69.5
Rwanda	10.3	12.2	0.4	0.3	0.15	0.13	0	0	307	201	89.7	76.9
Saudi Arabia	0.0	0.1	28.9	38.7	0.20	0.20	2	11	2,167	10,507	31.0	90.8
Senegal	0.0	0.1	2.6	3.1	0.42	0.27	0	0	341	321	74.5	109.1
Sierra Leone	0.7	0.8	4.1	5.4	0.14	0.11	0	1	368	404	84.5	94.7
Singapore	9.8	0.0	..	..	0.00	0.00	3	16	13,937	39,851	154.3	37.9
Slovak Republic	..	2.7	..	13.4	..	0.28	..	100	..	3,347	..	74.4
Slovenia	..	2.7	..	0.7	..	0.12	..	2,762	..	26,006	..	100.9
South Africa	0.7	0.7	8.4	8.1	0.45	0.38	90	69	2,465	3,355	92.8	97.5
Spain	9.9	9.8	14.8	17.7	0.42	0.39	200	513	..	12,022	82.1	99.4
Sri Lanka	15.9	15.5	28.3	29.2	0.06	0.05	8	9	648	732	98.4	113.0
Sweden	..	..	..	..	0.36	0.32	715	931	..	..	100.2	95.1
Switzerland	0.5	0.6	6.2	5.9	0.06	0.06	494	616	..	..	95.8	96.2
Syrian Arab Republic	2.5	3.9	9.6	20.4	0.60	0.33	29	65	..	..	94.5	136.7
Tajikistan	..	0.5	..	80.6	..	0.14	..	37	..	..	..	67.9
Tanzania	1.0	1.0	3.8	4.6	0.12	0.10	1	1	..	159	76.8	97.2
Thailand	3.5	6.6	16.4	23.2	0.35	0.29	1	7	630	928	79.9	107.2
Togo	6.6	6.6	0.3	0.3	0.76	0.50	0	0	345	510	77.0	129.9
Tunisia	9.7	13.1	4.9	7.5	0.51	0.32	30	39	1,743	2,750	67.6	108.3
Turkey	4.1	3.2	9.6	15.4	0.57	0.40	38	57	1,852	1,835	75.8	106.3
Turkmenistan	..	0.1	..	87.8	..	0.32	..	83	..	..	..	108.7
Uganda	8.0	8.8	0.1	0.1	0.32	0.26	0	1	..	326	70.5	107.7
Ukraine	..	1.8	..	7.5	..	0.65	..	92	..	2,259	..	69.9
United Kingdom	0.3	0.2	2.0	1.8	0.12	0.10	726	871	..	..	91.6	100.5
United States	0.2	0.2	10.8	12.0	0.83	0.67	1,230	1,452	..	34,727	94.7	113.7
Uruguay	0.3	0.3	5.4	10.7	0.48	0.39	171	172	6,822	9,384	86.8	128.8
Uzbekistan	..	0.9	..	81.6	..	0.20	..	59	..	2,085	..	100.7
Venezuela	0.9	1.0	3.6	5.2	0.19	0.12	50	58	4,041	4,931	79.6	114.0
Vietnam	1.9	3.8	24.1	29.6	0.11	0.07	1	4	..	226	64.0	132.7
Yemen, Rep.	0.2	0.2	19.9	31.3	0.16	0.09	3	2	..	305	75.0	115.5
Zambia	0.0	0.0	0.4	0.9	0.89	0.59	3	2	331	226	74.2	95.6
Zimbabwe	0.3	0.3	3.1	4.6	0.36	0.27	7	7	307	316	82.1	94.8
<b>World</b>	<b>0.9 w</b>	<b>1.0 w</b>	<b>17.8 w</b>	<b>18.8 w</b>	<b>0.24 w</b>	<b>0.24 w</b>	<b>19 w</b>	<b>20 w</b>	<b>.. w</b>	<b>.. w</b>	<b>76.0 w</b>	<b>128.2 w</b>
<b>Low income</b>	0.9	1.3	25.5	28.9	0.18	0.15	2	3	..	339	69.3	137.5
Excl. China & India	1.0	1.3	16.2	19.4	0.23	0.18	..	..	..	..	74.9	123.1
<b>Middle income</b>	1.2	1.0	15.8	14.1	0.23	0.36	25	46	..	..	80.1	118.4
Lower middle income	1.3	0.8	22.9	14.9	0.16	0.39	17	34	..	..	..	..
Upper middle income	1.1	1.3	10.3	12.4	0.34	0.30	37	71	..	..	78.6	116.7
<b>Low and middle income</b>	1.0	1.1	21.9	21.5	0.20	0.21	5	8	..	601	72.0	132.6
East Asia & Pacific	1.5	2.6	37.0	35.5	0.11	0.11	2	2	..	..	67.1	152.9
Europe & Central Asia	3.2	0.4	11.6	9.9	0.14	0.61	..	102	..	2,272	..	..
Latin America & Carib.	1.1	1.3	11.6	13.3	0.33	0.28	25	34	..	..	80.7	121.0
Middle East & N. Africa	0.4	0.7	25.8	35.0	0.29	0.21	12	24	..	..	70.5	128.5
South Asia	1.5	1.9	28.7	38.9	0.23	0.16	2	5	189	380	70.8	119.1
Sub-Saharan Africa	0.7	0.8	4.0	4.3	0.32	0.26	3	2	269	355	80.2	119.6
<b>High income</b>	0.5	0.5	9.8	11.1	0.46	0.41	520	877	..	..	93.1	105.2