

Appendix table 5-27

**S&E articles in agricultural sciences, by region/country/economy: 1997–2011**

Region/country/economy	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	12,180.0	12,390.0	12,219.0	13,041.0	12,570.0	13,843.0	13,790.0	14,185.0	14,822.0	16,188.0	17,877.0	17,651.0	17,983.0	18,395.0	19,127.0
North America															
Canada	872.0	835.4	728.4	816.9	711.2	754.6	753.9	770.1	729.0	886.5	892.2	848.7	885.9	865.7	887.7
Mexico	66.5	76.2	61.0	87.1	103.7	118.3	116.5	120.8	125.9	147.4	169.5	139.6	161.2	174.1	186.5
United States	3,521.0	3,435.1	3,171.5	3,412.8	3,388.4	3,717.1	3,600.7	3,673.3	3,585.7	3,825.9	3,712.2	3,671.3	3,469.2	3,403.9	3,441.6
Central America/Caribbean															
Antigua and Barbuda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bahamas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Barbados	1.0	1.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Belize	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Costa Rica	5.5	6.3	5.4	5.1	4.6	6.7	3.9	3.3	8.8	4.6	4.6	5.5	4.0	6.9	4.4
Cuba	1.3	3.0	3.5	5.2	8.7	8.0	5.8	5.2	5.7	4.5	6.8	6.2	6.2	9.2	14.2
Dominica	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dominican Republic	0.3	0.5	0.3	1.8	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0
El Salvador	0.7	0.0	0.0	0.0	0.0	1.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Grenada	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Guatemala	0.0	0.3	1.6	0.3	0.0	0.0	0.3	1.8	1.2	2.2	1.0	0.1	0.0	0.0	0.0
Haiti	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Honduras	4.8	0.2	4.3	2.6	1.0	1.5	2.1	1.7	1.0	2.1	0.3	0.3	0.3	1.0	0.5
Jamaica	1.5	2.7	1.2	3.5	0.0	1.0	0.5	1.7	2.8	0.0	0.3	4.3	1.1	0.5	3.0
Nicaragua	1.5	0.0	0.3	0.0	2.0	0.0	0.6	0.4	0.9	1.0	0.5	0.5	1.0	0.4	1.3
Panama	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	2.2	1.6	0.9	1.3	1.9	4.0	1.1
St. Kitts and Nevis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Lucia	0.0	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
St. Vincent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Trinidad and Tobago	7.0	9.3	2.5	3.7	2.3	6.7	1.8	2.0	6.0	6.0	9.5	3.2	5.4	2.3	4.3
West Indies Associated States	0.0	0.0	0.0	0.8	0.0	0.0	0.5	0.5	0.0	1.0	0.0	1.0	0.0	0.0	0.0
South America															
Argentina	118.1	110.2	113.6	121.0	154.0	184.2	123.3	152.8	161.4	197.0	197.9	214.2	204.3	238.5	246.9
Bolivia	1.5	1.0	0.5	1.3	0.0	0.5	4.0	1.5	1.0	2.4	0.8	3.8	2.1	2.0	1.5
Brazil	95.1	126.6	111.0	130.4	138.6	216.1	209.1	214.3	273.8	311.6	368.0	372.4	445.1	462.8	608.3
Chile	16.8	10.5	19.3	15.4	17.1	33.7	26.2	44.3	43.3	44.5	56.6	51.0	73.1	52.7	76.5
Colombia	18.7	14.3	9.4	13.5	13.3	15.4	14.1	10.5	14.8	17.4	18.6	19.4	28.4	31.6	23.9
Ecuador	1.3	1.6	0.5	1.0	0.8	3.3	2.1	1.4	1.6	0.9	2.7	4.4	2.8	0.7	1.3
Guyana	1.8	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paraguay	0.0	0.0	0.0	0.5	0.8	0.3	0.0	0.2	0.0	0.3	0.3	0.0	0.2	0.5	0.8
Peru	4.7	2.3	4.0	3.8	7.3	3.8	15.2	4.7	4.7	4.4	7.4	3.5	11.2	8.9	8.8
Suriname	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uruguay	10.8	6.0	8.4	5.7	7.7	13.7	14.2	13.0	12.5	20.5	17.7	25.4	20.2	34.1	30.7
Venezuela	16.3	19.3	11.1	8.5	10.6	18.0	17.2	18.6	18.2	17.3	34.6	19.3	17.0	13.3	8.0

Appendix table 5-27

**S&E articles in agricultural sciences, by region/country/economy: 1997–2011**

Region/country/economy	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Europe															
European Union															
Austria	47.6	40.6	55.8	51.3	55.4	59.1	49.9	42.6	54.2	80.9	72.2	67.5	78.6	98.9	84.0
Belgium	122.3	133.5	144.3	163.7	142.8	157.3	194.7	207.7	228.1	245.0	274.9	249.1	230.5	247.4	229.3
Bulgaria	22.3	12.0	16.5	12.9	8.7	8.7	11.6	9.5	14.2	17.0	14.7	13.5	18.2	13.9	15.6
Cyprus	2.3	1.0	2.0	2.3	0.5	1.5	1.3	2.0	1.8	0.1	2.3	2.5	4.4	4.6	2.6
Czech Republic	29.6	25.7	31.5	36.2	33.7	37.3	42.7	46.5	53.4	68.4	77.1	85.4	107.2	88.4	95.7
Denmark	157.3	186.4	187.3	208.4	225.3	194.6	233.2	250.0	229.8	228.1	289.3	233.1	198.6	244.9	239.4
Estonia	0.8	2.9	5.6	6.3	3.3	4.3	4.3	6.6	9.5	8.9	9.3	14.4	10.9	12.2	11.8
Finland	115.1	93.1	87.2	103.6	112.1	137.3	108.2	114.9	114.9	139.4	130.6	121.2	131.9	127.6	115.2
France	449.2	502.5	480.7	552.1	521.1	524.9	514.6	523.1	522.7	579.4	619.4	597.9	634.1	616.8	560.6
Germany	638.9	686.9	652.0	621.4	656.6	658.3	634.3	628.4	731.5	741.9	672.2	716.5	739.1	798.5	804.9
Greece	82.3	72.3	93.5	108.3	127.5	129.2	128.3	126.2	182.7	197.6	220.7	204.3	186.7	160.9	138.9
Hungary	23.7	43.1	35.2	39.8	25.4	40.0	48.0	28.2	66.0	50.7	36.1	31.3	67.2	36.3	41.1
Ireland	81.5	122.3	115.6	135.3	125.3	139.1	116.2	120.8	136.7	195.5	157.5	202.5	214.5	233.3	198.8
Italy	258.9	253.0	258.5	332.9	304.7	371.2	391.4	453.7	485.6	480.0	634.6	686.8	691.7	757.6	756.6
Latvia	1.0	0.0	0.5	0.0	1.0	0.0	0.0	0.5	0.0	1.8	0.1	4.0	2.2	3.0	3.5
Lithuania	2.5	4.8	2.0	3.3	7.7	5.6	9.2	4.5	7.7	12.2	11.5	8.7	7.5	4.5	17.2
Luxembourg	0.0	0.0	0.3	0.0	0.0	0.0	0.5	0.3	0.0	0.3	1.0	0.9	2.1	2.3	5.7
Malta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7
Netherlands	336.9	308.3	305.2	307.7	239.6	300.6	327.8	285.1	281.9	310.7	338.5	303.6	261.0	291.4	315.7
Poland	70.4	83.9	92.0	89.6	80.9	123.7	125.8	141.1	154.5	140.5	204.2	190.5	179.0	198.3	221.1
Portugal	45.9	60.7	63.8	72.0	67.8	78.3	83.3	83.0	93.6	144.7	165.9	156.2	166.8	174.5	216.8
Romania	2.6	5.0	2.5	4.5	2.1	2.3	2.1	2.8	3.6	3.4	3.5	5.9	4.7	8.7	12.2
Slovakia	13.7	15.5	12.7	10.7	17.1	17.9	13.4	15.8	13.2	18.5	18.5	23.1	23.5	24.5	17.8
Slovenia	5.6	6.6	7.2	7.4	11.7	7.0	18.6	15.7	15.1	19.7	31.9	41.6	37.7	39.4	56.7
Spain	550.1	563.9	633.0	619.2	592.4	719.8	762.7	827.4	918.2	1,019.3	1,203.9	1,164.4	1,262.6	1,186.1	1,246.7
Sweden	156.2	169.4	172.7	161.9	144.9	147.1	155.7	179.6	153.4	152.3	172.2	150.0	148.8	141.7	174.0
United Kingdom	838.5	864.4	790.5	847.1	717.8	733.6	679.7	584.3	610.0	584.2	649.2	594.9	549.5	533.0	507.8
Other Europe															
Albania	0.5	1.3	1.1	0.5	0.5	0.0	0.0	1.0	0.0	0.0	0.7	0.4	0.0	1.0	1.8
Andorra	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belarus	4.0	5.0	7.0	7.0	2.1	2.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Bosnia and Herzegovina	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.5	0.5	1.0	2.0	0.7	1.0
Croatia	5.0	6.3	7.8	4.3	13.1	11.8	18.0	21.6	24.9	30.5	38.7	30.1	34.2	39.1	41.5
Iceland	6.3	0.0	2.8	2.9	7.0	4.1	2.5	7.5	4.9	6.9	5.7	5.6	4.6	13.0	10.9
Kosovo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liechtenstein	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Macedonia	1.0	0.0	0.0	1.0	1.0	1.7	0.3	0.0	0.0	0.7	0.3	0.1	0.7	0.4	4.6
Moldova	0.8	3.5	2.0	0.3	1.1	0.8	1.3	0.0	0.3	0.0	1.0	1.5	0.3	1.3	1.2
Monaco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0	0.5
Montenegro	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0	0.0	0.6	0.0	0.0	1.3



Appendix table 5-27

**S&E articles in agricultural sciences, by region/country/economy: 1997–2011**

Region/country/economy	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Eritrea	0.0	0.0	0.0	0.0	4.0	1.5	0.0	0.0	0.3	0.0	0.0	0.5	0.0	0.0	0.0
Ethiopia	22.4	16.2	17.2	12.9	7.7	18.2	16.0	17.8	11.6	17.6	19.6	25.3	22.9	15.0	24.8
Gabon	0.0	0.0	0.0	0.0	1.5	0.5	0.5	0.3	0.5	0.3	0.3	0.0	0.0	0.0	0.3
Gambia	1.6	1.5	0.3	0.5	0.0	0.0	0.5	0.3	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Ghana	12.7	10.6	10.2	11.5	9.3	13.1	10.0	13.6	6.9	11.1	13.8	10.7	10.4	14.4	10.5
Guinea	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Guinea-Bissau	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kenya	24.9	21.9	24.9	25.7	25.6	29.4	32.9	26.3	31.0	33.0	33.7	36.6	30.2	30.2	31.6
Lesotho	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4	0.3
Liberia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Libya	0.5	1.0	1.0	0.0	0.5	0.0	0.3	0.0	1.0	1.0	0.3	0.0	1.0	1.5	0.0
Madagascar	0.5	1.0	1.0	0.0	0.0	0.1	1.0	0.3	0.3	0.5	2.5	1.6	3.6	1.4	1.5
Malawi	5.7	5.6	4.3	3.5	3.2	2.4	3.1	1.0	0.6	3.6	4.1	2.2	1.3	2.7	3.5
Mali	0.5	2.8	2.7	1.8	1.1	1.7	4.7	4.0	3.7	2.2	2.6	1.3	1.5	1.2	1.9
Mauritania	0.0	0.0	0.0	0.9	0.0	0.0	1.1	0.0	0.0	0.8	0.0	0.0	0.0	0.5	1.5
Mauritius	0.0	1.0	6.5	1.8	0.0	1.5	0.9	0.3	0.7	0.0	1.5	0.0	0.5	3.2	1.3
Morocco	8.3	8.1	10.3	6.2	9.1	15.6	6.9	9.9	12.7	14.7	10.2	16.8	8.1	6.5	8.4
Mozambique	0.3	4.3	2.0	0.3	0.8	1.3	1.3	0.7	0.8	1.8	1.1	1.3	0.7	1.3	0.5
Namibia	0.0	0.0	0.5	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.9	0.0	0.5	1.8	0.0
Niger	8.3	9.7	3.0	7.4	2.2	8.4	2.8	2.8	5.7	3.8	0.9	2.1	1.4	0.9	4.1
Nigeria	82.1	85.3	96.0	69.2	66.4	78.0	84.5	81.7	61.1	68.4	80.1	71.3	55.9	66.2	51.0
Rwanda	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.3	0.6	1.0	1.1
São Tomé and Príncipe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Senegal	6.2	8.2	5.7	6.2	7.5	10.1	8.4	7.3	4.5	2.9	5.9	4.4	4.4	3.3	4.0
Senegambia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Seychelles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Sierra Leone	0.0	1.7	1.0	0.3	0.0	0.3	0.0	0.5	0.0	0.0	2.5	0.0	0.5	1.2	0.5
Somalia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
South Africa	56.2	55.6	46.0	53.7	47.5	64.8	72.3	68.3	84.6	78.3	89.1	92.0	89.5	110.2	112.2
Sudan	9.0	10.2	9.8	6.5	5.2	8.0	7.6	5.5	8.5	3.0	5.5	5.6	4.5	8.9	4.2
Swaziland	0.0	1.0	0.0	0.0	0.3	0.0	0.5	0.0	0.3	0.0	0.3	1.8	0.5	1.3	0.3
Tanzania	12.4	14.6	6.5	2.2	4.2	6.1	7.3	2.5	5.1	8.9	12.6	11.6	7.7	7.6	8.7
Togo	0.3	1.0	0.0	0.5	0.5	0.3	2.8	2.8	3.7	2.9	1.4	1.3	0.2	4.4	0.3
Tunisia	4.7	1.8	3.9	3.8	6.9	6.6	7.5	9.5	14.0	16.9	41.9	43.3	61.5	77.7	72.3
Uganda	3.2	6.9	5.1	4.9	6.5	2.9	10.4	8.8	7.7	7.7	4.8	8.6	8.6	8.5	9.4
Zambia	4.2	2.2	1.9	2.2	4.0	1.0	2.0	5.1	4.7	3.7	2.0	2.7	0.7	0.5	0.3
Zimbabwe	18.6	7.5	12.0	13.2	14.2	15.1	11.5	7.7	12.9	10.6	9.2	11.9	7.5	11.7	8.7
Asia															
Afghanistan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.8
Armenia	1.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.2
Azerbaijan	0.0	0.0	0.0	0.5	0.5	0.0	1.0	0.0	0.0	0.8	1.3	0.0	0.0	0.0	0.6
Bangladesh	10.5	11.6	10.7	5.3	11.2	7.9	8.2	9.3	11.0	5.7	10.0	8.6	17.2	12.5	8.8



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**S&E articles in agricultural sciences, by region/country/economy: 1997–2011**

Region/country/economy	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Tonga	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tuvalu	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vanuatu	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.7	0.4	0.0	1.2	0.8	0.5	0.7

NA = not available; country did not exist as such.

NOTES: Article counts are from the set of journals covered by the Science Citation Index (SCI) and Social Sciences Citation Index (SSCI). Articles are classified by their year of publication and are assigned to a region/country/economy on the basis of the institutional address(es) listed in the article. Articles are credited on a fractional-count basis (i.e., for articles with collaborating institutions from multiple countries/economies, each country/economy receives fractional credit on the basis of the proportion of its participating institutions). Detail may not add to total because of rounding.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics, and The Patent Board™, special tabulations (2013) from Thomson Reuters, SCI and SSCI, [http://thomsonreuters.com/products\\_services/science/](http://thomsonreuters.com/products_services/science/).

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