

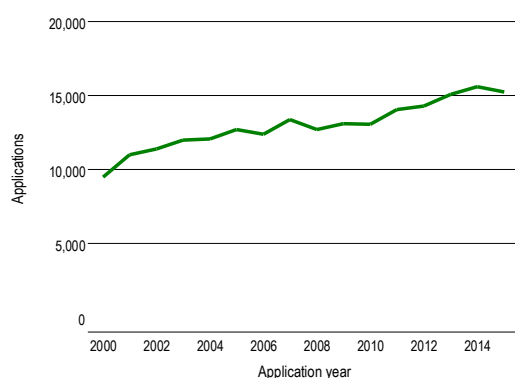
Plant Varieties

Highlights

Following four consecutive years of growth, applications declined by 2.3% in 2015

Around 15,240 plant variety applications were filed worldwide in 2015, down 2.3% on 2014. This is the first decline since 2010. The Community Plant Variety Office (CPVO) of the European Union and the office of the Ukraine accounted for most of this decrease.

Figure 21. Plant variety applications worldwide



Source: Standard figure D1.

Offices with the most plant variety filings

With 3,111 applications received in 2015, the CPVO remained the top filing office. China was the second-largest office in terms of plant variety filings with 2,342, followed by the United States of America (U.S., 1,634), Ukraine (1,075) and Japan (914).¹ Among these top five offices, China (+15.6%) and the U.S. (+4.3%) recorded growth, while the other three saw sharp declines – Ukraine (-25.7%), the CPVO (-14.2%) and Japan (-10.2%). Growth in China was driven by both resident and non-resident filings. For the U.S., growth resulted from a rise in resident filings despite declining non-resident filings. The decrease in filings at the CPVO and in Japan was due to a drop in both resident and non-resident filings. In contrast, Ukraine's large decline was driven entirely by a large decline in non-resident filings despite an increase in resident filings.

1. Throughout this section, U.S. data refer to a combination of Plant Variety Protection Act and Plant Patent Act data. However, separate data relating to each Act are given in statistical table D16.

The combined share of the top five offices' applications worldwide decreased slightly, from around 62% in 2014 to 60% in 2015, due to the declines experienced by the CPVO, Ukraine and Japan.

Eight of the top 10 offices received more applications from residents than from non-residents. Among these offices, China's resident share (89.2%) was the highest. Australia and Ukraine received more than half their filings from non-resident applicants.

Offices of high-income economies accounted for the largest proportion (60%) of plant variety applications received in 2015, down from 73.8% in 2005. Offices in the upper middle-income group saw their combined share increase from 19% in 2005 to 30.5% in 2015, mostly driven by the increase in filings in China. The share held by the lower middle-income group likewise increased, from 7.3% in 2005 to 9.5% in 2015.

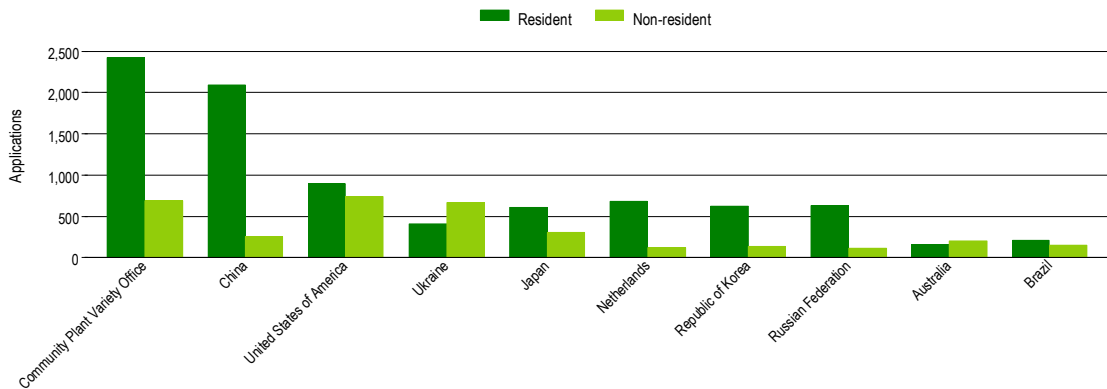
Offices in Europe received 42.9% of all plant variety applications in 2015, somewhat less than 10 years ago (45.8%). Asia saw its share increase from 24% in 2005 to 29.7% in 2015 at the expense of a five percentage-point drop in North America. The share held by Latin America and Caribbean (LAC) countries increased slightly on 2005, rising from 5.9% to 8.3%, driven by growth in filings in Argentina, Brazil and Mexico. Shares for Africa and Oceania were largely unchanged.

Applicants from the Netherlands filed the most worldwide

Applications received by offices from resident and non-resident applicants are referred to as office data, whereas applications filed by applicants at a national/regional office (resident applications) or at a foreign office (applications abroad) are referred to as origin data. Here, plant variety statistics based on the origin of the residence of the first-named applicant are reported to complement the picture of activity worldwide. Note that for applicants domiciled in EU member states, filing at the CPVO regional office is also regarded as a resident filing.

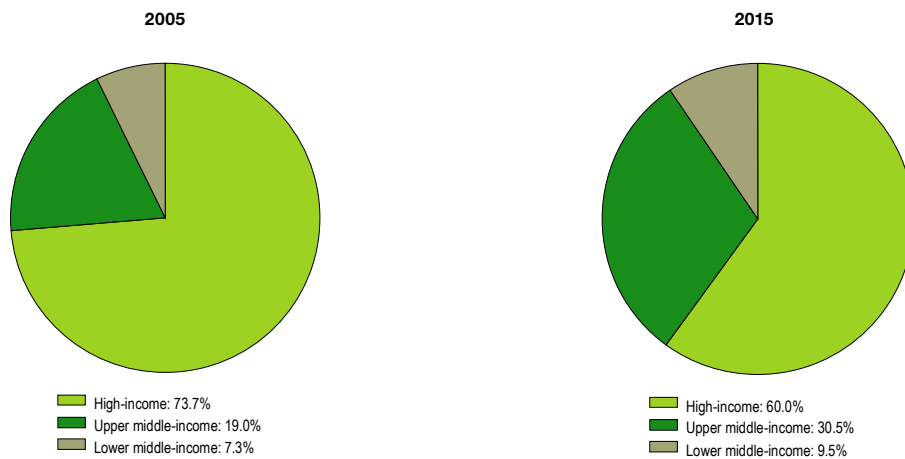
Applicants from the Netherlands remained the most active applicants in the world in 2015, filing 2,720 plant variety applications at various offices. They were followed by applicants from China, who filed 2,100 plant varieties applications, overtaking the U.S. (2,027) to

Figure 22. Plant variety applications for the top 10 offices, 2015



Source: Standard figure D5.

Figure 23. Plant variety applications by income group



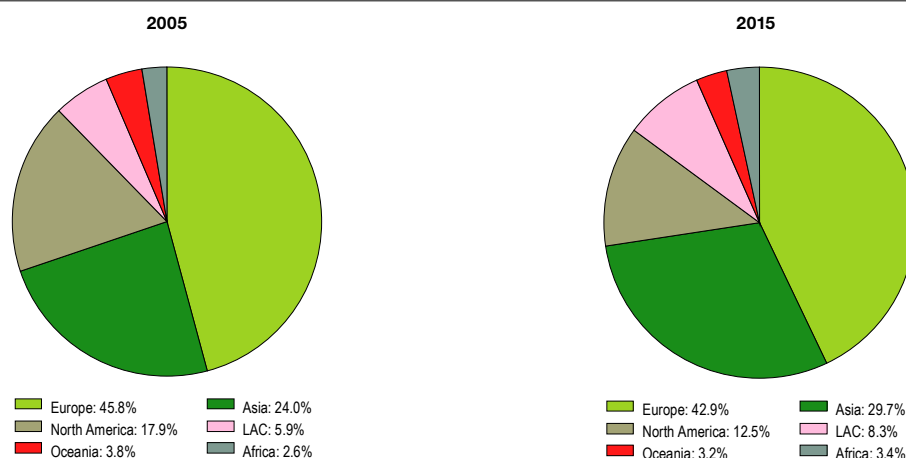
Source: Standard table D3.

become the second-largest filer. France (1,038) and Germany (942) were the fourth and fifth largest origins of applications. Among the top five, China was the only origin to experience growth (+8.4%) in filings on 2014. The other four origins saw declines, with the Netherlands recording the sharpest drop (-10.4%). While applicants from the other top five origins filed most of their applications abroad or at the regional office, those from China filed almost exclusively at their home office. Similarly, applicants from the Republic of Korea, the Russian Federation and Ukraine also filed mostly at their home offices, reflecting lower interest in seeking protection internationally.

Equivalent count

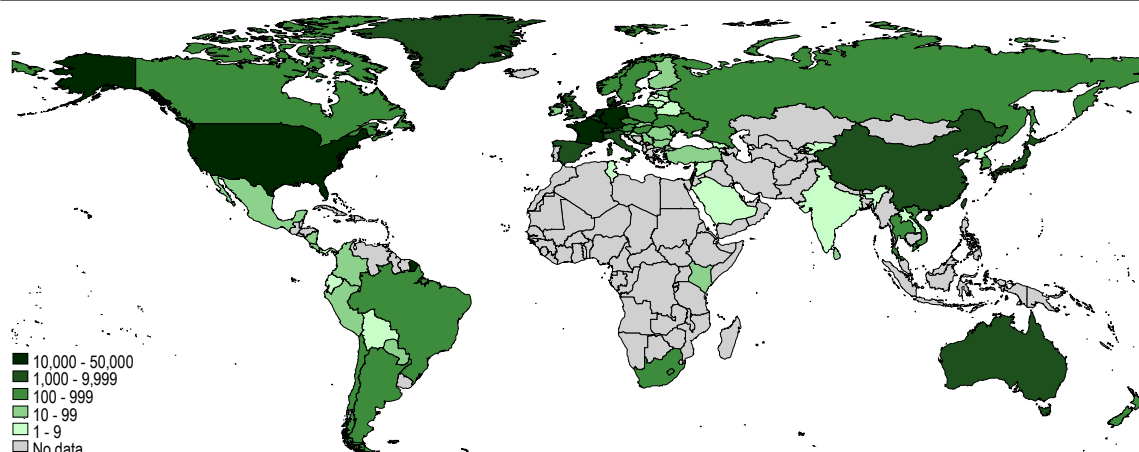
Origin data are compiled using two different counting methods – absolute counts and equivalent counts. The difference between the two lies in the treatment of regional office (CPVO) data. For absolute counts, an application received by the CPVO is counted only once. For the equivalent count, a single application filed at the CPVO is equivalent to multiple applications. To calculate the number of equivalent applications at the CPVO in 2015, each application was multiplied by the corresponding number of member states. If the applicant resided in one of the 28 EU member states in 2015, the application was counted as one resident filing and 27 filings abroad. If the applicant did not reside in an EU member state, the application was counted as 28 filings abroad.

Figure 24. Plant variety applications by region



Source: Standard table D4.

Map 4. Equivalent plant variety applications by origin, 2015



Source: Standard figure D9.

Since equivalent counts take multiple members at the regional office into account, one would expect to see those country origins whose applicants filed intensively at the CVPO to move up the ranking when applying this counting method. Not surprisingly, European countries and the U.S. topped the list of origins based on equivalent counts. Applicants from the Netherlands remained number one, with 29,315 equivalent applications filed worldwide. They were followed by applicants from France (13,674), Germany (13,497) and the U.S. (10,181). China (2,127) is the only other non-European country among the top 10 origins despite the fact that only 2% of its applicants' filings were equivalent filings abroad. This is in marked contrast to the Netherlands, for which the share was 94%.

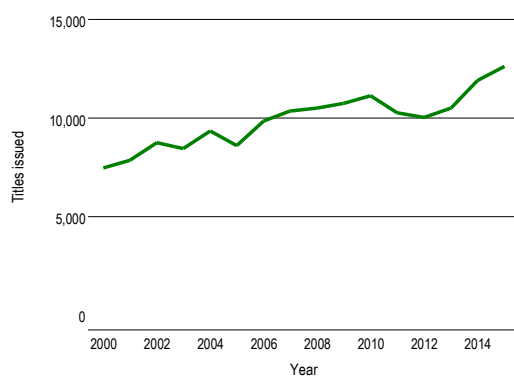
The number of titles issued increased for the third consecutive year

The total number of plant variety titles issued rose by 6.1% in 2015 to reach 12,620. China accounted for most of this growth, with titles issued increasing by 60%. However, the CPVO issued the largest number of titles (2,844). It was followed by the offices of the U.S. (1,595), China (1,589) and Ukraine (946). Along with China, other offices that saw large increases in titles issued were Brazil (+31.7%), the Republic of Korea (+28.4%), the Russian Federation (+27.7%) and the Netherlands (+14.2%). Three of the top 10 offices issued fewer titles in 2015 than in 2014 – the U.S. (-18.2%), South Africa (-14.7%) and Japan (-1.9%).

HIGHLIGHTS

The grant or registration process takes time, so fluctuations in volumes of granted plant variety titles may reflect changes in processing capacities or procedural delays.

Figure 25. Plant variety titles issued worldwide



Source: Standard figure D2.

Plant varieties in force grew steadily

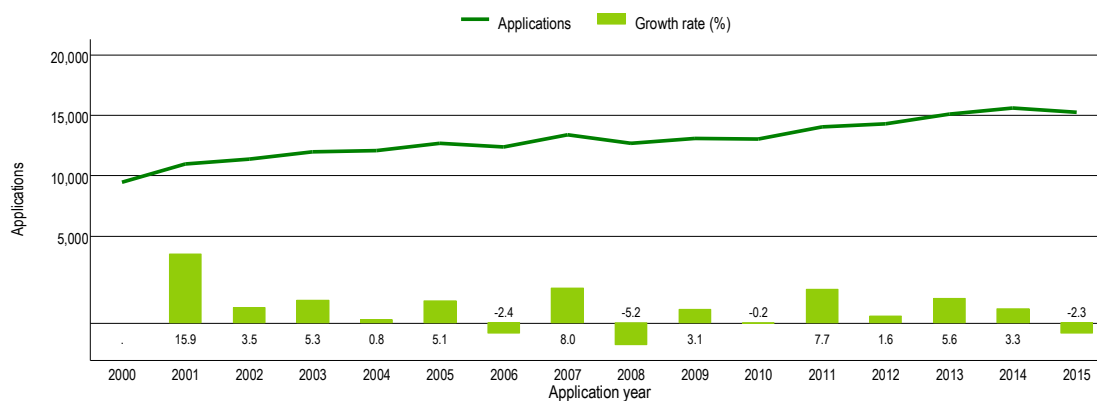
Around 111,180 plant variety titles were in force at the end of 2015, up 4.1% on 2014. The CPVO (23,771) and the U.S. (23,523) were the two offices with the highest numbers of plant variety titles in force. Other offices maintaining at least 4,000 active titles included Japan (8,231), the Netherlands (7,719), China (4,816), the Russian Federation (4,407) and the Republic of Korea (4,353).

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Plant variety applications and titles issued worldwide

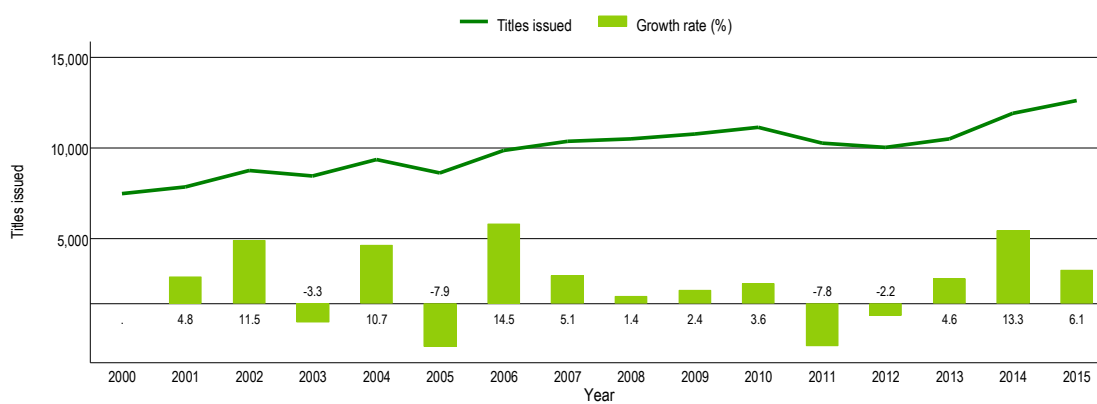
D1 Trend in plant variety applications worldwide



Note: World totals are WIPO estimates using data covering 68 offices.

Source: WIPO Statistics Database, October 2016.

D2 Trend in plant variety titles issued worldwide



Note: World totals are WIPO estimates using data covering 68 offices.

Source: WIPO Statistics Database, October 2016.

Plant variety applications and titles issued by office

D3 Plant variety applications by income group

	Number of applications		Resident share (%)		Share of world total (%)		Average growth (%)
	2005	2015	2005	2015	2005	2015	2005-15
High-income	9,362	9,141	62.8	68.4	73.7	60	-0.2
Upper middle-income	2,407	4,649	72.8	70.6	19.0	30.5	6.8
Lower middle-income	921	1,450	69.4	42.9	7.3	9.5	4.6
World	12,690	15,240	65.1	66.6	100	100	1.8

Note: Totals by income group are WIPO estimates using data covering 68 offices. Each category includes the following number of offices: high-income countries/economies (37), upper middle-income (21) and lower middle-income (10). The EU's Community Plant Variety Office data are allocated to the high-income group because the majority of EU member states are high-income countries.

Source: WIPO Statistics Database, October 2016.

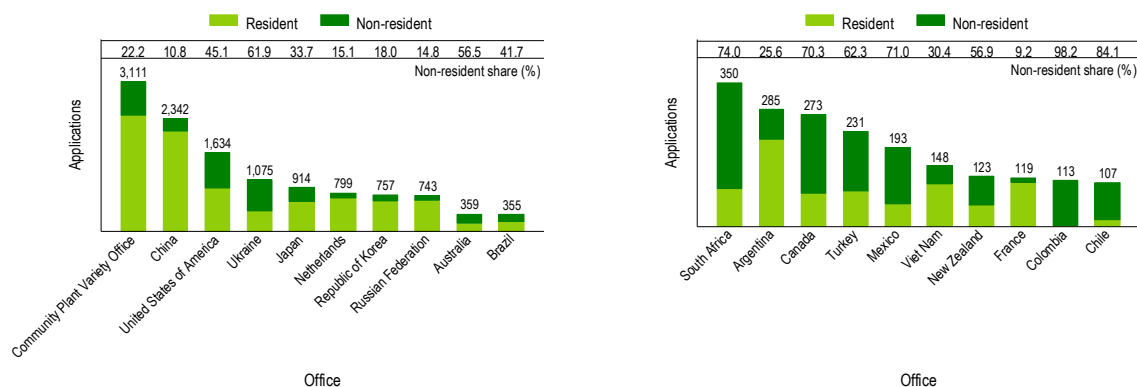
D4 Plant variety applications by region

	Number of applications		Resident share (%)		Share of world total (%)		Average growth (%)
	2005	2015	2005	2015	2005	2015	2005-15
Africa	325	515	39.7	24.3	2.6	3.4	4.7
Asia	3,040	4,529	73	79.4	24	29.7	4.1
Europe	5,823	6,537	78.6	71.7	45.8	42.9	1.2
Latin America & the Caribbean	751	1,270	37.7	43.2	5.9	8.3	5.4
North America	2,270	1,907	37.1	51.3	17.9	12.5	-1.7
Oceania	481	482	44.7	43.4	3.8	3.2	0
World	12,690	15,240	65.1	66.6	100	100	1.8

Note: Totals by geographic region are WIPO estimates using data covering 68 offices. Each region includes the following number of offices: Africa (4), Asia (12), Europe (33), Latin America & the Caribbean (14), North America (3) and Oceania (2).

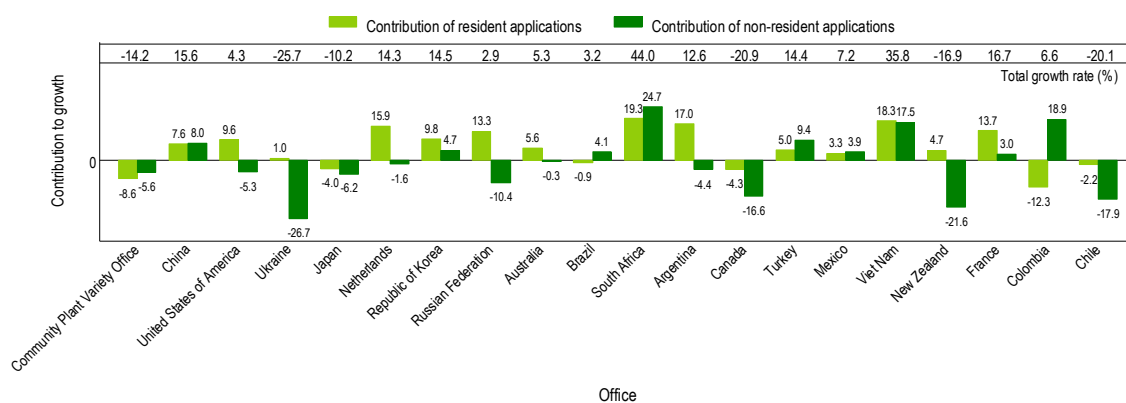
Source: WIPO Statistics Database, October 2016.

D5 Plant variety applications for the top 20 offices, 2015



Source: WIPO Statistics Database, October 2016.

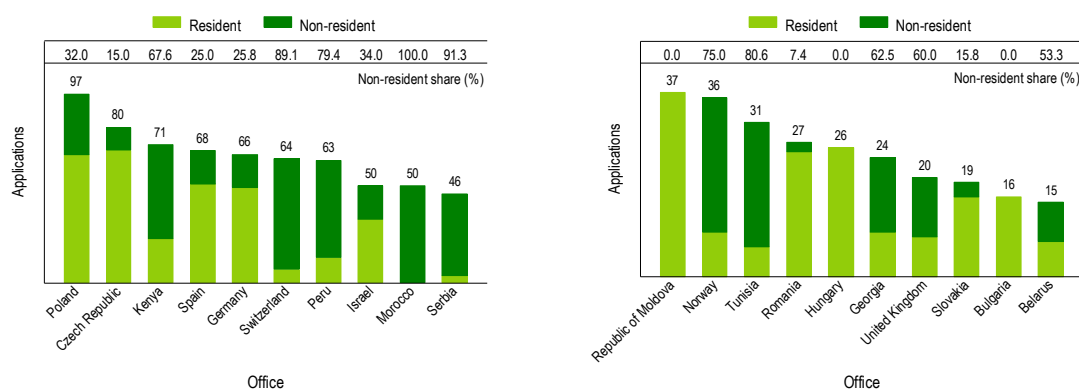
D6 Contribution of resident and non-resident applications to total growth for the top 20 offices, 2014-15



Note: This figure shows total growth in plant variety applications broken down by the respective contributions of resident and non-resident filings. For example, applications in China grew by 15.6%, and resident applicants contributed 7.6 percentage points to this total growth while non-resident applications accounted for the other 8.0 percentage points.

Source: WIPO Statistics Database, October 2016.

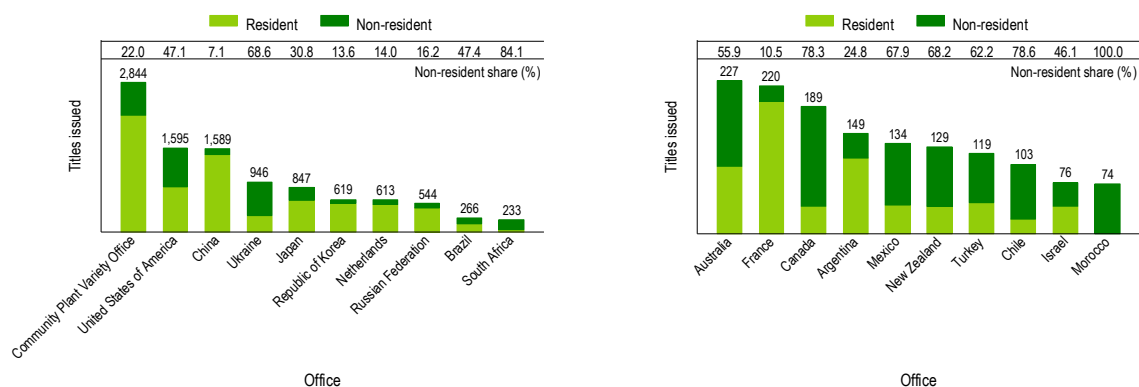
D7 Plant variety applications for offices of selected low- and middle-income countries, 2015



Note: The selected offices are from different world regions and income groups. Where available, data for all offices are in the statistical table at the end of this section.

Source: WIPO Statistics Database, October 2016.

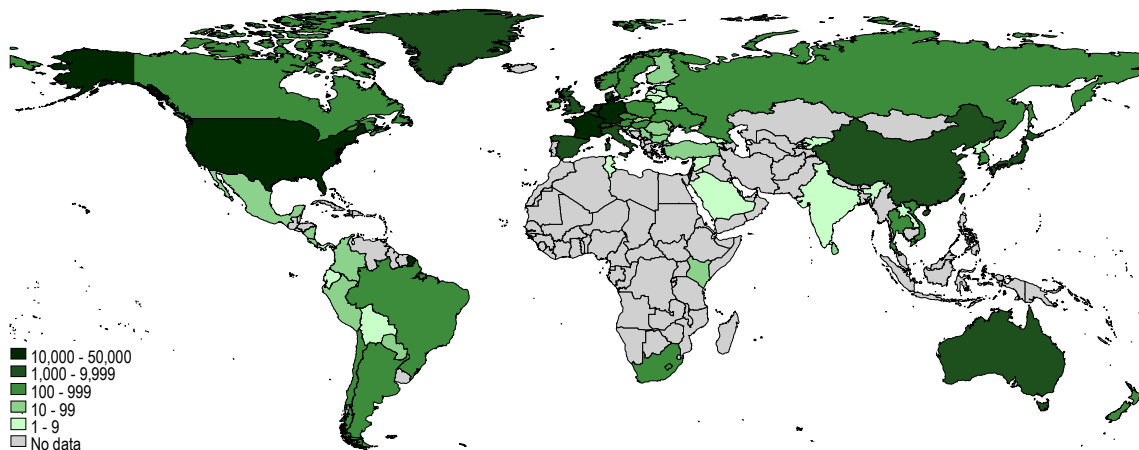
D8 Plant variety titles issued for the top 20 offices, 2015



Source: WIPO Statistics Database, October 2016.

Plant variety applications and titles issued by origin

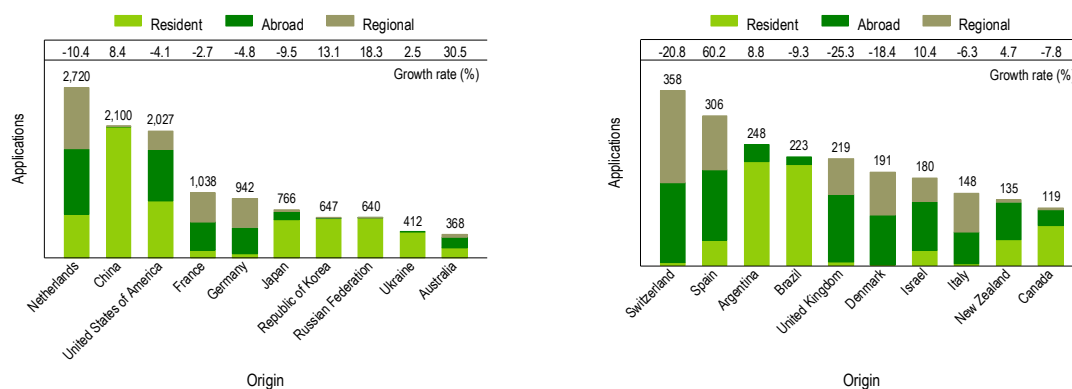
D9 Equivalent plant variety applications by origin, 2015



Note: The origin of an application is determined by the residence of the first-named applicant. See the glossary for the definition of equivalent application.

Source: WIPO Statistics Database, October 2016.

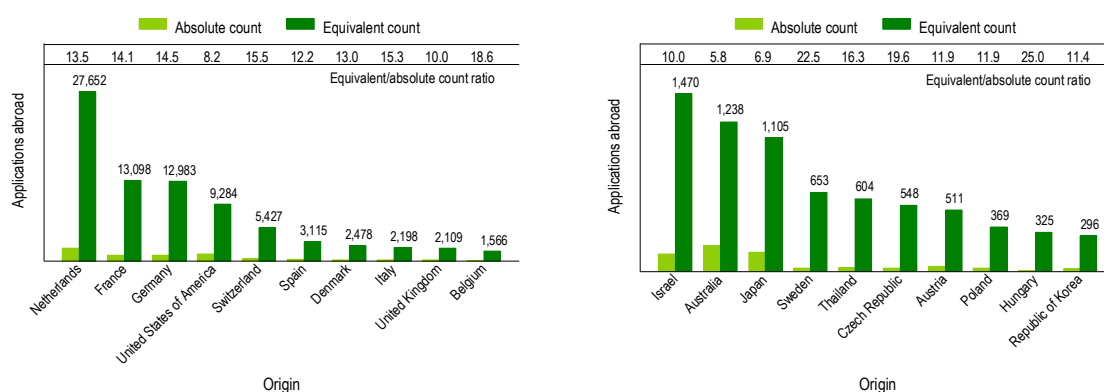
D10 Plant variety applications for the top 20 origins, 2015



Note: Data are based on absolute count, not equivalent count. The origin of an application is determined by the residence of the first-named applicant. Regional refers to applications filed at the EU's Community Plant Variety Office.

Source: WIPO Statistics Database, October 2016.

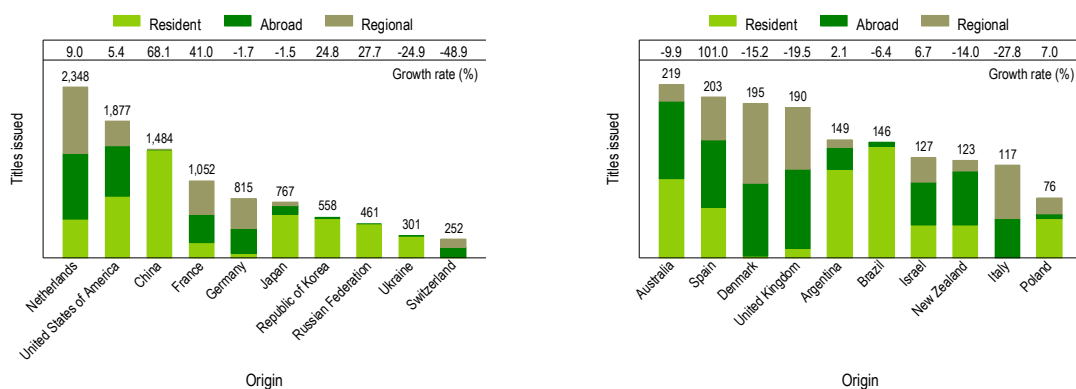
D11 Plant variety applications abroad for the top 20 origins, 2015



Note: The origin of an application is determined by the residence of the first-named applicant. See the glossary for the definition of equivalent application.

Source: WIPO Statistics Database, October 2016.

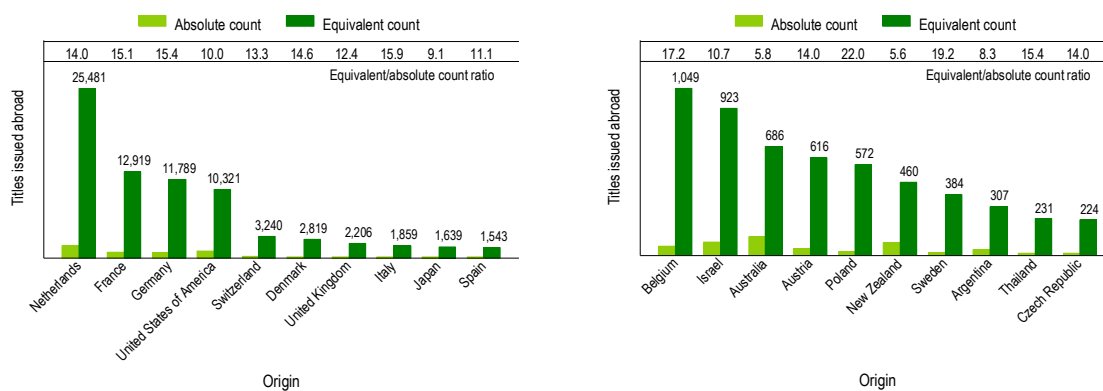
D12 Plant variety titles issued for the top 20 origins, 2015



Note: Data are based on absolute count, not equivalent count. The origin of an application is determined by the residence of the first-named applicant.

Source: WIPO Statistics Database, October 2016.

D13 Plant variety titles issued abroad for the top 20 origins, 2015

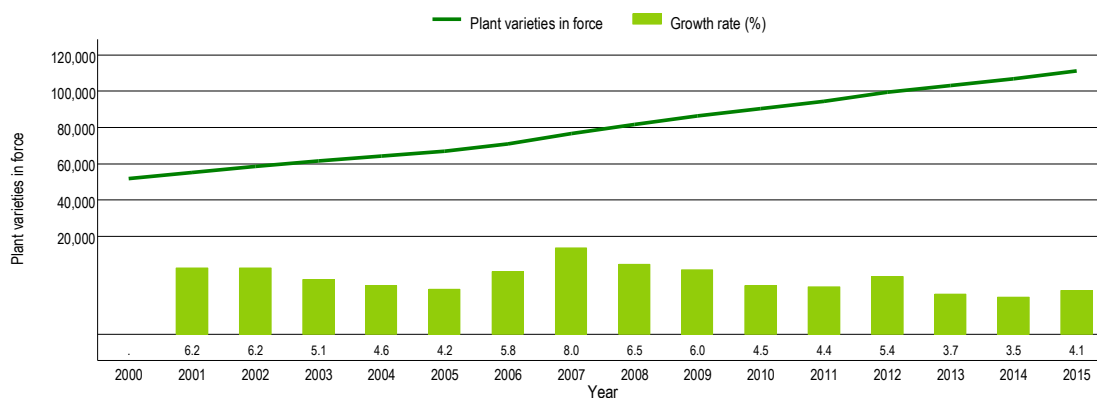


Note: See the glossary for the definition of equivalent grant (registration).

Source: WIPO Statistics Database, October 2016.

Plant varieties in force

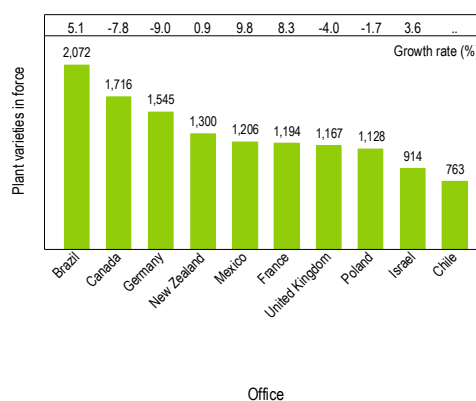
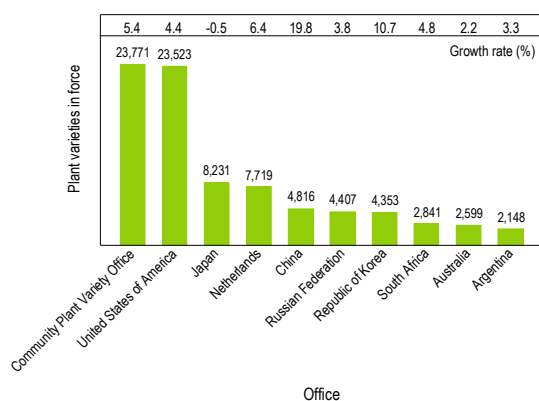
D14 Trend in plant varieties in force worldwide



Note: World totals are WIPO estimates using data covering 68 offices.

Source: WIPO Statistics Database, October 2016.

D15 Plant varieties in force at selected offices, 2015



.. indicates not available.

Source: WIPO Statistics Database, October 2016.

Statistical table

D16 Plant variety applications and titles issued by office and origin, 2015

Name	Applications by office			Applications by origin		Equivalent applications by origin	Grants by office			Plant varieties in force
	Total	Resident	Non-resident	Total	Total	Total	Resident	Non-resident	Office	
African Intellectual Property Organization (a)	..	..	..	n.a.	n.a.	9	0	9	49
Argentina	285	212	73	248	248	149	112	37	2,148	
Australia	359	156	203	368	1,394	227	100	127	2,599	
Austria (a)	..	..	..	43	529	1	0	1	27
Belarus	15	7	8	9	9	26	5	21	259	
Belgium	1	1	0	85	1,624	..	..	..	65
Bolivia (Plurinational State of)	5	5	0	5	5	7	6	1	50	
Brazil	355	207	148	223	223	266	140	126	2,072	
Bulgaria	16	16	0	21	21	24	24	0	383	
Canada	273	81	192	119	227	189	41	148	1,716	
Chile	107	17	90	32	194	103	22	81	763	
China	2,342	2,090	252	2,100	2,127	1,589	1,476	113	4,816	
China, Hong Kong SAR (b)	..	..	..	2	2	..	..	..	..
Colombia	113	2	111	5	59	68	4	64	543	
Community Plant Variety Office	3,111	2,420	691	n.a.	n.a.	2,844	2,218	626	23,771	
Costa Rica	2	1	1	6	87	3	0	3	11	
Croatia	7	7	0	9	9	8	8	0	49	
Cyprus (b)	..	..	..	1	1	..	..	..	..
Czech Republic	80	68	12	96	636	64	59	5	725	
Democratic People's Republic of Korea (b)	..	..	..	2	2	..	..	..	..
Denmark	1	1	0	191	2,567	5	2	3	127	
Ecuador (a)	..	..	..	1	1	..	..	..	..
Estonia (a)	..	..	..	1	28	..	..	..	..
Finland	13	10	3	16	43	17	14	3	185	
France	119	108	11	1,038	13,674	220	197	23	1,194	
Georgia	24	9	15	9	9	48	6	42	..	
Germany	66	49	17	942	13,497	57	50	7	1,545	
Hungary	26	26	0	39	363	10	10	0	145	
India (b)	..	..	..	1	1	..	..	..	..
Ireland (a)	..	..	..	11	65	..	..	..	..
Israel	50	33	17	180	1,503	76	41	35	914	
Italy	4	4	0	148	2,281	..	..	..	..
Japan	914	606	308	766	1,711	847	586	261	8,231	
Jordan	12	0	12	..	..	7	0	7	47
Kenya	71	23	48	23	23	69	1	68	383	
Kyrgyzstan	3	3	0	3	3	1	1	0	5	
Lao People's Democratic Republic (b)	..	..	..	2	2	..	..	..	..
Latvia	7	7	0	7	7	4	4	0	210	
Lithuania	11	8	3	8	8	11	8	3	70	
Luxembourg (b)	..	..	..	24	51	..	..	..	..
Mauritius (b)	..	..	..	12	12	..	..	..	..
Mexico	193	56	137	58	58	134	43	91	1,206	
Morocco	50	0	50	..	..	74	0	74	301
Netherlands	799	678	121	2,720	29,315	613	527	86	7,719	
New Zealand	123	53	70	135	297	129	41	88	1,300	
Nicaragua	12	12	0	12	12	4	4	0	13	
Norway	36	9	27	13	121	20	9	11	228	
Panama (a)	..	..	..	3	3	3	3	0	19
Paraguay (a)	..	..	..	10	10	..	..	..	..
Peru	63	13	50	13	13	20	9	11	92	
Poland	97	66	31	97	448	61	50	11	1,128	
Portugal	1	0	1	..	..	..	..	..	11
Puerto Rico (b)	..	..	..	2	56	..	..	..	..
Republic of Korea	757	621	136	647	917	619	535	84	4,353	
Republic of Moldova	37	37	0	37	37	28	20	8	157	

STANDARD FIGURES AND TABLES

Name	Applications by office			Applications by origin		Equivalent applications by origin	Grants by office			Plant varieties in force
	Total	Resident	Non-resident	Total	Total	Total	Total	Resident	Non-resident	Office
Romania	27	25	2	37	37	37	15	15	0	321
Russian Federation	743	633	110	640	775	544	456	88	4,407	
Saudi Arabia (b)	..	..	..	1	1	..	..	..	..	..
Serbia	46	4	42	27	27	60	9	51	221	
Singapore (a)	..	..	..	5	5	..	..	..	..	..
Slovakia	19	16	3	22	76	16	13	3	416	
Slovenia (a)	..	..	..	1	28	3	3	0	14	
South Africa	350	91	259	116	170	233	37	196	2,841	
Spain	68	51	17	306	3,276	73	64	9	367	
Sri Lanka (b)	..	..	..	1	28	..	..	..	..	..
Sweden	1	1	0	30	678	4	3	1	158	
Switzerland	64	7	57	358	5,434	61	9	52	714	
Syrian Arab Republic (b)	..	..	..	6	6	..	..	..	..	..
Thailand (b)	..	..	..	37	604	..	..	..	..	..
Tunisia	31	6	25	6	6	5	0	5	118	
Turkey	231	87	144	95	95	119	45	74	524	
Ukraine	1,075	410	665	412	412	946	297	649	..	
United Kingdom	20	8	12	219	2,190	21	12	9	1,167	
United States of America (PPA) (c)	1,140	466	674	n.a.	n.a.	1,074	400	674	16,336	
United States of America (PVPA)	494	431	63	2,027	10,181	521	444	77	7,187	
Viet Nam	148	103	45	103	103	60	35	25	191	
Others/Unknown	..	..	..	25	349	..	..	..	..	..
Total (2015 estimates)	15,240	10,200	5,040	15,240	n.a.	12,620	8,000	3,900	111,180	

(a) The office did not report data; therefore, applications by origin data may be incomplete.

(b) Is not a member of the International Union for the Protection of New Varieties of Plants (UPOV).

(c) Applications by origin are reported under United States of America (PVPA), because statistics by origin do not distinguish between applications under the Plant Variety Protection Act (PVPA) or the Plant Patent Act (PPA).

n.a. indicates not applicable.

.. indicates not available.

Source: WIPO Statistics Database, October 2016.



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