

Statistics of European Embryo Transfer Activity in 2016

Collected by Marja Mikkola, Finland

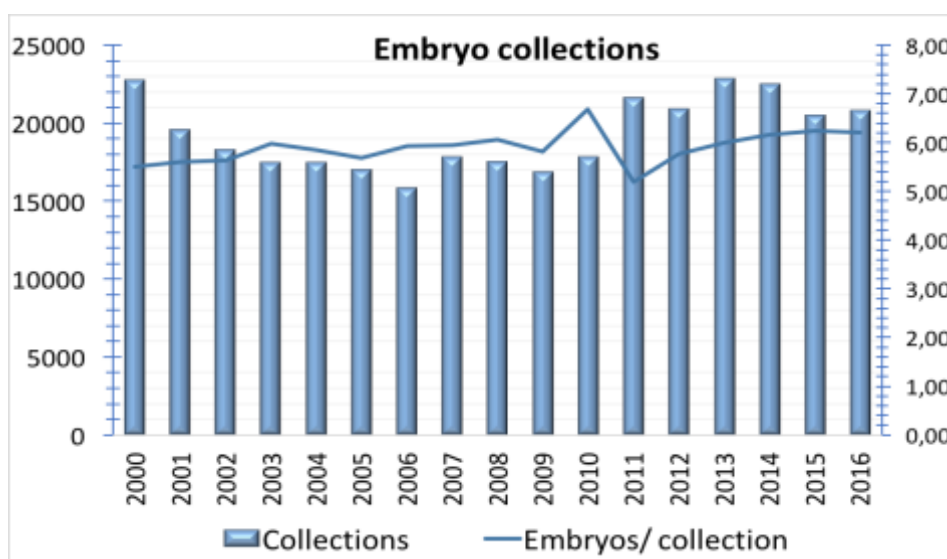
Data questionnaire was sent to 37 European countries, out of which 31 countries replied. Among these 31 countries, there were eight countries having no activity to report. The presented tables and graphs are based on embryo transfer activities for breeding and commercial embryo production reported by these European countries (countries having at least part of their country in Europe) in 2016. The presented data include numbers on embryo production (MOET and OPU-IVP) and transfers for bovine and other species (sheep, goat and horse). These data are included in the report of the International Embryo Technology Society (IETS Data Retrieval Committee) on embryo transfer activities worldwide.

National data collectors in Europe

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Serbia	Aleksandar Milovanovic
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Switzerland	Rainer Saner
Turkey	Ebru Emsen
Ukraine	Viktor Madison
United Kingdom	Roger Sturmey

Bovine *In vivo* embryo production 2016

Country	Collections	Viable embryos	Viable embryos / collection	Dairy (%)	Beef (%)	Sexed semen (%)
Austria	259	2038	7,87	75 %	25 %	10 %
Belgium	1135	5753	5,07	14 %	86 %	1 %
Bosnia and Herzegovina	0	0				
Croatia	0	0				
Denmark	679	4593	6,76	94 %	6 %	0 %
Estonia	0	0				
Finland	329	2090	6,35	100 %	0 %	5 %
France	6260	34896	5,57	79 %	21 %	9 %
Germany	3201	21311	6,66	91 %	9 %	0 %
Greece	0	0				
Hungary	111	917	8,26	17 %	83 %	2 %
Ireland	857	6013	7,02	20 %	80 %	0 %
Italy	1975	15487	7,84	96 %	4 %	0 %
Latvia	0	0				
Luxembourg	180	1242	6,90	89 %	11 %	0 %
Macedonia	0	0				
Netherlands	1836	11370	6,19	100 %	0 %	0 %
Norway	60	361	6,02	58 %	42 %	0 %
Poland	192	1215	6,33	100 %	0 %	21 %
Portugal	131	720	5,50	89 %	11 %	30 %
Russian Federation	1298	8022	6,18	45 %	55 %	35 %
Serbia	11	35	3,18	100 %	0 %	18 %
Slovakia	0	0				
Slovenia	9	14	1,56	100 %	0 %	22 %
Spain	610	3624	5,94	65 %	35 %	27 %
Sweden	204	994	4,87	97 %	3 %	2 %
Switzerland	485	3390	6,99	95 %	5 %	28 %
Turkey	0	0				
Ukraine	2	6	3,00	100 %	0 %	0 %
United Kingdom	959	4786	4,99	78 %	22 %	0 %
Total	20783	128877	6,20	77 %	23 %	7 %



Countries sorted by the total number of collections

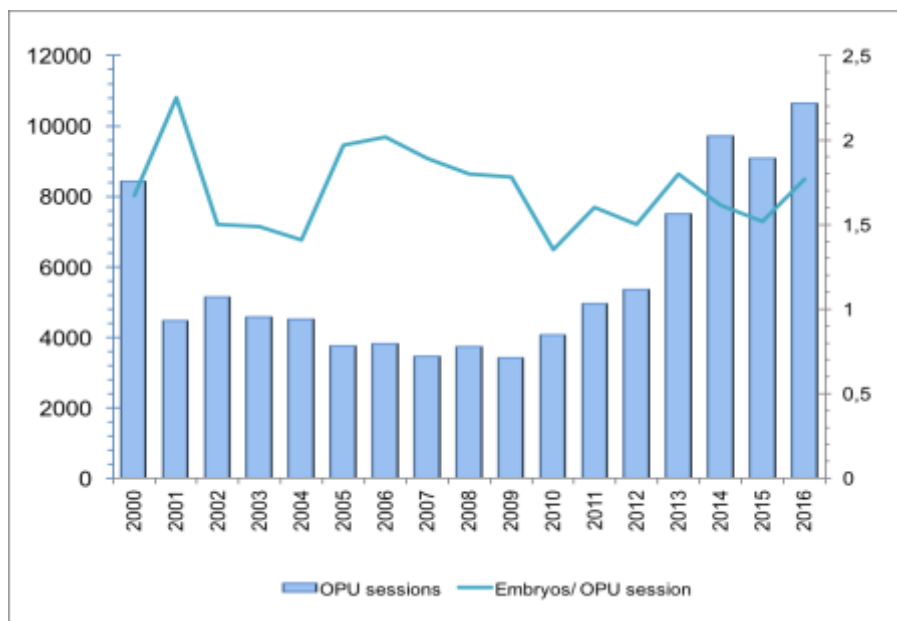
Country	Collections
France	6260
Germany	3201
Italy	1975
Netherlands	1836
Russian Federation	1298
Belgium	1135
United Kingdom	959
Ireland	857
Denmark	679
Spain	610
Switzerland	485
Finland	329
Austria	259
Sweden	204
Poland	192
Luxembourg	180
Portugal	131
Hungary	111
Norway	60
Serbia	11
Slovenia	9
Ukraine	2

Countries sorted by the number of collections in dairy breeds per 1000 cows

Country	Collections/1000 dairy cows
Luxembourg	3,08
France	1,36
Finland	1,20
Denmark	1,12
Netherlands	1,02
Italy	0,92
Switzerland	0,84
Germany	0,69
Sweden	0,60
Portugal	0,49
Spain	0,48
United Kingdom	0,39
Austria	0,36
Belgium	0,31
Norway	0,16
Ireland	0,13
Poland	0,09
Slovenia	0,08
Hungary	0,08
Russian Federation	0,07

Bovine *in vitro* embryo production – OPU

Country	Total sessions			Non-stimulated sessions				Stimulated sessions				Breed distribution		
	Total sessions	Oocytes	Embryos	Sessions	Oocytes	Embryos	Embryos/ session	Sessions	Oocytes	Embryos	Embryos/ session	Dairy (%)	Beef (%)	Sexed semen
Austria	1	7	1	0	0	0		1	7	1	1,0	100 %	0 %	0 %
Finland	214	1477	462	103	687	142	1,4	111	790	320	2,9	100 %	0 %	0 %
France	611	5331	1628	0	0	0		611	5331	1628	2,7	95 %	5 %	9 %
Germany	1352	12505	1919	1352	12505	1919	1,4	0	0	0		97 %	3 %	0 %
Italy	581	7197	1510	581	7197	1510	2,6	0	0	0		62 %	38 %	12 %
Netherlands	4726	45662	8385	0	0	0		4726	45662	8385	1,8	100 %	0 %	0 %
Poland	13	64	34	9	47	24	2,7	4	17	10	2,5	100 %	0 %	0 %
Russian Federation	1519	6076	911	1519	6076	911	0,6	0	0	0		100 %	0 %	100 %
Serbia	14	80	35	6	24	11	1,8	8	56	24	3,0	100 %	0 %	0 %
Spain	734	9892	2579	573	7621	1853	3,2	161	2271	726	4,5	79 %	21 %	60 %
United Kingdom	886	6116	1415	346	2995	710	2,1	540	3121	705	1,3	44 %	56 %	11 %
Total	10651	94407	18879	4489	37152	7080	1,6	6162	57255	11799	1,9	91 %	9 %	21 %



Bovine *in vitro* embryo production – abattoir derived oocytes

Country	Donors	Oocytes	Embryos
France	1	17	10
Italy	8	302	70
Netherlands	61	8998	141
Portugal	1	740	43
Spain	65	1060	471
United Kingdom	120	7200	360
Total	256	18317	1095

Bovine embryo technologies

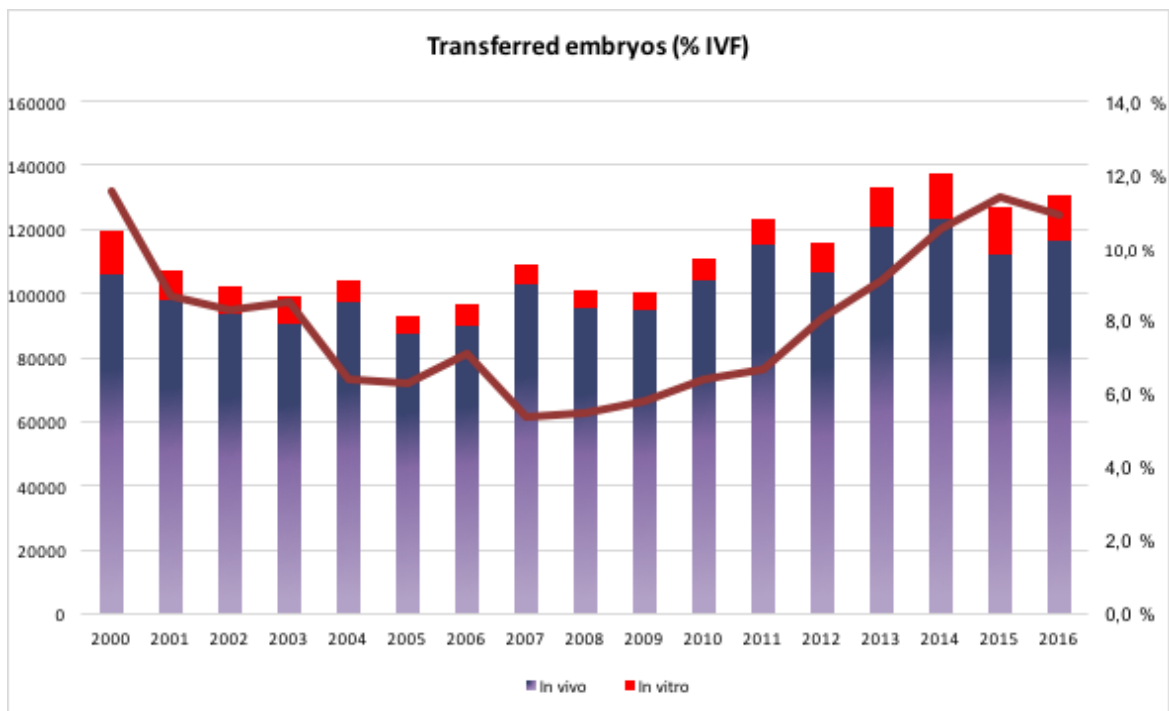
Country	Sexed embryos		Genotyped embryos	
	In vivo	In vitro	In vivo	In vitro
France	2688	0	1595	0
Germany	966	0	416	0
Netherlands	0	0	381	0
Total	3654	0	2392	0

Bovine *in vivo* embryo transfer

Country	Dairy breeds			Beef breeds			Non-separated breeds			Total transfers
	Fresh	Frozen domestic	Frozen foreign	Fresh	Frozen domestic	Frozen foreign	Fresh	Frozen domestic	Frozen foreign	
Austria	396	773	40	242	269	12	0	0	0	1732
Belgium	189	440	1426	1006	3030	34	0	0	0	6125
Bosnia and Herzegovina	0	0	0	0	0	0	0	0	0	0
Croatia	0	0	0	0	0	0	0	0	0	0
Denmark	2498	966	0	54	124	0	0	0	0	3642
Estonia	0	0	0	0	0	6	0	0	6	12
Finland	892	1415	252	0	0	0	0	0	0	2559
France	15590	14321	1134	1729	6588	190	48	36	0	39636
Germany	7781	11215	0	0	0	0	350	972	0	20318
Greece	0	0	0	0	0	0	0	0	0	0
Hungary	28	79	0	124	232	0	0	0	38	501
Ireland	573	629	0	2294	2517	0	0	0	0	6013
Italy	6000	0	0	300	0	0	0	0	0	6300
Latvia	0	0	0	0	0	0	0	0	0	0
Luxembourg	0	0	0	0	0	0	600	0	0	600
Macedonia	0	0	0	0	0	0	0	0	0	0
Netherlands	2522	9519	0	0	0	0	0	0	0	12041
Norway	0	0	70	0	0	0	0	0	0	70
Poland	611	524	0	0	0	3	0	0	0	1138
Portugal	120	434	4	10	9	63	0	0	0	640
Russian Federation	717	1290	82	22	4466	143	0	0	0	6720
Serbia	12	23	0	0	0	0	0	0	0	35
Slovakia	0	0	0	0	0	0	0	0	0	0
Slovenia	10	6	4	0	0	6	0	0	0	26
Spain	988	752	50	736	408	58	0	0	0	2992
Sweden	0	0	0	0	0	0	78	744	181	1003
Switzerland	859	1657	374	21	29	16	0	0	0	2956
Turkey	0	0	0	0	0	0	0	0	0	0
Ukraine	0	0	35	0	0	0	0	0	0	35
United Kingdom	70	173	1	326	585	154	0	0	0	1309
Total	39856	44216	3472	6864	18257	685	1076	1752	225	116403

Bovine *in vitro* embryo transfer

Country	OPU			Abattoir		
	Fresh	Frozen domestic	Frozen foreign	Fresh	Frozen domestic	Frozen foreign
Finland	61	226	0	0	0	0
France	526	543	2	8	2	0
Germany	1556	265	0	0	0	0
Italy	479	372	0	0	20	0
Luxembourg	0	0	50	0	0	0
Netherlands	6448	1242	0	23	111	0
Portugal	0	0	0	9	0	0
Russian Federation	81	47	0	0	0	0
Serbia	5	30	0	0	0	0
Spain	1196	413	149	0	0	0
Switzerland	0	0	91	0	0	0
United Kingdom	55	195	0	0	0	0
Total	10424	3343	292	40	133	0



Embryo export

Country	Embryos exported			
	Bovine, dairy	Bovine, beef	Sheep	Goat
Austria	35	21	0	0
Belgium	20	58	0	0
Denmark	97	0	0	0
Finland	67	0	0	0
France	1883	419	0	0
Spain	37	20	0	0
Switzerland	48	0	0	0
United Kingdom	0	222	1200	200
Total	2187	740	1200	200

Embryo production and transfer in other species

Country	Sheep, <i>In vivo</i>				
	Embryo production		Embryo transfer		
	Collections	Embryos	Fresh embryo	Frozen domestic	Frozen foreign
France	20	64	0	0	0
Hungary	6	24	20	0	96
Norway	0	0	0	0	250
Sweden	0	0	0	0	465
Turkey	29	151	117	34	0
United Kingdom	2500	12000	0	300	0
Total	2555	12239	137	334	811

Country	Goat, <i>In vivo</i>			
	Embryo production		Embryo transfer	
	Collections	Embryos	Fresh embryo	Frozen domestic
France	17	73	0	0
Spain	20	42	0	42
Turkey	5	43	43	0
United Kingdom	25	200	0	0
Total	67	358	43	42

Country	Horse, <i>In vivo</i>			
	Embryo production		Embryo transfer	
	Collections	Embryos	Fresh	Frozen
France	983	529	0	0
Poland	17	17	11	0
Spain	594	300	203	10
Sweden	22	14	14	0
Total	1616	860	228	10

Country	Horse, <i>In vitro</i>				
	Embryo production			Embryo transfer	
	OPU sessions	Oocytes	Embryos	Fresh	Frozen
Italy	965	11056	800	61	229