

**Commercial Embryo Transfer Activity
in Europe 2019**

Collated by Helene Quinton

National data collectors

Country	Collector
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Czech Republic*	Pavel Bucek
Denmark	Henrik Callesen
Estonia	Jevgeni Kurykin
Finland	Seija Vahtiala
France	Serge Lacaze
Germany	Hubert Cramer
Greece	Foteini Samartzi
Hungary*	Istvan Pentek
Ireland	Patrick Lonergan
Israel	Amir Shifman, Yoel Zeron
Italy	Giovanna Lazzari
Latvia	Vita Antane
Lithuania	Rasa Nainiene
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Norway	Marja Mikkola
Poland*	Jędrzej Jaśkowski
Portugal	João Nestor Chagas e Silva
Romania	Stefan Ciornei
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Slovenia	Janko Mrkun, Aleksandar Plavsic
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Sweden	Renée Båge
Switzerland	Rainer Saner
Turkey*	Ebru Emsen
Ukraine*	Viktor Madison
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*Countries without 2019 declared embryo transfer activity at the time of the publication

Declared bovine *In vivo* embryo production

Country	Dairy				Beef				All		
	Collections	% Coll. with sexed semen	Embryos & ova	Transferable embryos	Collections	% Coll. with sexed semen	Embryos & ova	Transferable embryos	Collections total	Transferable embryos total	Embryos/collection
Austria	406	3%	3 884	2 984	19	0%	132	106	425	3 090	7,3
Belgium	48	0%	271	184	706	0%	4 857	3 412	754	3 596	4,8
Denmark	787	0%	0	5 011	0		0	0	787	5 011	6,4
Finland	408	12%	3 665	2 352	1	0%	18	15	409	2 367	5,8
France	4 691	8%	49 100	29 408	1 338	5%	14 263	7 415	6 029	36 823	6,1
Germany	2 078	9%	28 583	19 560	247	24%	3 624	2 223	2 325	21 783	9,4
Greece	5	0%		21	0		0	0	5	21	4,2
Ireland	610	0%	7 381	3 321	0		0	0	610	3 321	5,4
Israel	26	4%	115	94	0		0	0	26	94	5,4
Italy	2 590	56%	26 936	18 389	145	0%	1 522	1 015	2 735	19 404	7,1
Latvia	14	0%	97	59	0		0	0	14	59	4,2
Lithuania	4	0%	32	20	6	0%	39	27	10	47	4,7
Netherlands	1 751	1%	14 848	10 615	0		0	0	1 751	10 615	6,1
Norway	174	1%	1 421	1 021	16	0%	175	138	190	1 159	6,1
Portugal	139	35%	1 226	611	18	0%	235	127	157	738	4,7
Romania	15	0%	107	80	1	0%	4	4	16	84	5,3
Russian Federation	326	58%	3 668	1 912	1 869	14%	12 706	9 943	2 195	11 855	5,4
Serbia	7	0%	29	25	0		0	0	7	25	3,6
Slovenia	28	57%	179	131	5	20%	45	27	33	158	4,8
Spain	270	53%	2 455	1 397	202	9%	2 031	1 181	472	2 578	5,5
Sweden	56	5%	524	378	5	0%	0	0	61	378	6,2
Switzerland	327	50%	3 058	1 720	14	0%	133	60	341	1 780	5,2
Grand Total	14 760	20%	147 579	99 293	4 592	9%	39 784	25 693	19 352	124 986	6,5

Declared bovine *In vitro* embryo production (OPU-IVP)

Country	Dairy				Beef				All			
	OPU	% OPU with sexed semen	Oocytes	Embryos	OPU	% OPU with sexed semen	Oocytes	Embryos	OPU	Oocytes	Embryos	Embryos /OPU
Finland	714	5%	6 349	1 365	0		0	0	714	6 349	1 365	1,9
France	325	34%	3 967	960	14	0%	200	106	339	4 167	1 066	3,1
Germany	1 809	0%	24 647	6 570	58	0%	1 185	275	1 867	25 832	6 845	3,7
Italy	126	67%	1 849	473	0		0	0	126	1 849	473	3,8
Netherlands	5 647	1%	56 356	11 705	0		0	0	5 647	56 356	11 705	2,1
Romania	5	0%	31	13	0		0	0	5	31	13	2,6
Russian Federation	595	85%	5 735	547	0		0	0	595	5 735	547	0,9
Serbia	24	38%	115	32	0		0	0	24	115	32	1,3
Spain	182	84%	2 976	850	47	13%	711	335	229	3 687	1 185	5,2
Switzerland	94	67%	572	139	3	0%	12	0	97	584	139	1,4
Grand Total	9 521	23%	53 254	12 246	122	5%	2 108	716	9 643	104 705	23 370	2,4

Declared bovine *In vitro* embryo production – abattoir

Country	Dairy			Beef		
	Donors	Oocytes	Embryos	Donors	Oocytes	Embryos
Italy	2	123	30	3	139	53
Netherlands	612	6 408	917	0	0	0
Serbia	0	0	0	5	53	12
Spain	48	968	502	196	1 825	584

Declared bovine embryo technologies – embryo genotyping

Country	Sexed embryos		Genotyped embryos	
	In Vivo	In Vitro	In Vivo	In Vitro
Finland	92	77	92	77
France	2 595	0	2 526	0
Germany	0	0	206	154
Netherlands	0	0	6 137	0
Spain	0	92	0	92
Total	2 687	169	8 961	323

Declared bovine embryo transfers and exports– *In vivo*

Country	Dairy				Beef				Total embryos transferred
	Fresh embryos transferred	Frozen embryos			Fresh embryos transferred	Frozen embryos			
		Domestic transferred	Foreign transferred	Exported		Domestic transferred	Foreign transferred	Exported	
Austria	1 161	1 316	38	58	31	54	23	0	2 623
Belgium	59	118	18	6	491	2 157	22	76	2 865
Denmark									4 411
Finland	491	1 121	176	611	0	0	0	0	1 788
France	13 740	12 405	1 192	208	2 194	4 215	182	219	33 928
Germany	8 136	12 300	0	132	493	1 152	0	0	22 081
Greece	0	0	9	0	0	0	0		9
Ireland									1 340
Israel	42	2							44
Italy									7 450
Latvia	44	25	0	0	0	0	0	0	69
Lithuania	0	0	0	0	0	7	0	0	7
Netherlands	936	1 926	63	0	0	0	0	0	2 925
Norway	37	553	47	0	23	7	33	41	700
Portugal	152	370	37	0	17	57	62	0	695
Romania	58	12	0	0	0	4	55	0	129
Russian Federation	451	1 635	0	0	881	10 150	381	0	13 498
Serbia	15	0	0	0	0	0	60	0	75
Slovenia	75	20	6	0	17	6	12	0	136
Spain	605	474	17	0	455	277	57	70	1 885
Sweden	200	770	0	0	0	0	0	0	970
Switzerland	625	958	492	51	7	21	10	0	2 113
Grand Total	39 394	32 6364	2 095	1 066	4 609	18 107	897	406	99 741

Declared bovine embryo transfers and exports – *In vitro*

Country	OPU				Abattoir		Total embryos transferred
	Fresh embryos transferred	Domestic frozen embryos transferred	Foreign frozen embryos transferred	Embryos exported	Fresh embryos transferred	Domestic frozen embryos transferred	
Belgium	0	56	7	0	0	0	63
Finland	2	360	0	353	0	0	362
France	368	299	78	126	0	0	745
Germany	3 873	3 238	0	0	0	0	7 111
Italy	156	0	0	0	0	12	168
Netherlands	3 241	3 101	210	0	0	0	6 552
Portugal	0	0	17	0	0	0	17
Russian Federation	101	281	0	0	0	0	382
Serbia	0	18	0	0	0	5	23
Spain	474	56	10	0	12	12	564
Grand total	5 766	4 589	322	479	12	29	15 987

Declared embryo production, transfer and export in other species – *In vivo*

Species	Country	Embryo collection		Embryo transfer			
		Collections	Viable embryos	Fresh embryos	Frozen domestic	Frozen foreign	Exported embryos
Buffalo	Italy	0	0	0	19	0	0
	Romania	5	6	6	0	0	0
	Total	5	6	6	19	0	0
Sheep	Greece	12	33	0	0	0	0
	Portugal	3	18	10	0	0	0
	Romania	2	11	8	0	0	0
	Russian Federation	0	0	0	0	681	0
	Serbia	0	0	12	0	0	0
	Spain	12	111	53	12	0	350
	Sweden	0	0	0	0	225	0
	Total	29	173	83	12	906	350
Horse	France	1 543	783	939	0	0	0
	Italy	298	212	212	0	0	0
	Russian Federation	33	22	5	0	0	0
	Spain	9	7	7	0	0	0
	Sweden	34	20	20	0	0	0
	Total	1 917	1 044	1 183	0	0	0

Declared embryo production, transfer and export in other species – *In vitro*

Species	Country	Oocyte collection			IVP embryo transfer			Exported embryos
		OPU	Oocytes	Embryos	Fresh embryos	Frozen domestic	Frozen foreign	
Sheep	Spain	15	340	142	142	0	0	0
Goat	Spain	31	1 631	748	21	12	0	0
Horse	Italy	2 045	25 917	3 711	48	501	0	0
	France	0	0	0	0	12	0	0
	Switzerland	49	236	11	0	0	0	1
	Total	2 045	25 917	3 711	48	513	0	0