Global occurrence of swine vesicular disease 1966 - 2013

Compiled by N.J. Knowles, and last updated 22 November 2013.

 $Accessed\ at\ http://www.svd.org.uk/occurrence.htm\ on\ the\ 2.\ Feb.\ 2014.$

Occurrence of Swine Vesicular Disease (1966 to 1980)

		u c c					. (1300		~,			
Country	1966	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Austria	-	-	-	3	>13	5	3	6	-	1	+ (a)	-
Belgium	-	-	-	-	1 (b)	-	-	-	-	-	6	-
Bulgaria	-	-	+	-	-	-	-	-	-	-	-	-
China ^g	-	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	+	-	3	-	-	-	-	-
Germany (East) ^g	-	-	-	-	-	-	-	-	-	-	-	-
Germany (West)	-	-	-	-	2	2	11	2	1	2	-	1
Great Britain	-	-	-	13	137	187	45	3	18	-	43	60
Greece	-	-	-	-	-	-	-	-	-	-	1	-
Hong Kong	-	1	10	2	2	4	3	3	1	-	1	2
Italy	2	-	-	>23	+	32	23	1	39	21	9	29
Japan	-	-	-	-	16	-	2 (c)	6 (d)	-	-	-	-
Malta	-	-	-	-	-	-	>100	-	-	-	-	-
Netherlands	-	-	-	-	-	-	1	-	-	-	-	-
Poland	-	-	-	2	+ (e)	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	? (f)	+	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	1	-	-	-	-	-	-	-
Taiwan Province of China	-	-	-	-	-	-	-	-	-	-	-	-
USSR	-	-	-	+	-	-	+	-	-	-	-	-

Occurrence of Swine Vesicular Disease (1981 to 1992)

							,	10 133	_,			
Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Austria	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	1 ^h
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-
China ⁹	-	-	-	-	-	-	-	-	-	-	-	-
France	-	1	3	-	-	-	-	-	-	-	-	-
Germany (East) ⁹	-	-	-	-	-	-	-	-	-	-	-	-
Germany (West)	1	1	-	-	1 (b)	-	-	-	-	-	-	-
Great Britain	12	14	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-
Hong Kong	5	-	-	1	3	-	6	2	2	-	4	-
Italy	5	8	4	1	-	-	-	1	1	-	6	31
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	6
Poland	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	+	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-	-	-	-
Taiwan Province of China	-	-	-	-	-	-	-	-	-	-	-	-
USSR	-	-	-	-	-	-	-	-	-	-	-	-

	Occi	urrence	e of Sw	ine Ves	icular	Disease	(1993	to 200	4)			
Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Austria	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	1 (h)	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-
China (g)	-	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	-	-	-
Germany (East)(g)	-	-	-	-	-	-	-	-	-	-	-	-
Germany (West)	-	-	-	-	-	-	-	-	-	-	-	-
Great Britain	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-
Hong Kong	-	-	-	-	-	-	-	-	-	-	-	-
Italy	11	30	16	5	16	25	15	5	10	171 (k)	23 (k)	125
Japan	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	3	-	-	-	-	-	-		-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	1 (i)	-	-	-	-	-	-	-	1	1
Romania	-	-	- (-)	-	-	-	-	-	-	-	-	_
Spain	3	_	_	_	_	_	1 (j)	-	_	_	_	_
Switzerland	-	_	_	_	_	_	- ()/	_	_	_	-	_
Taiwan Province of												
China	-	-	-	-	+	+	-	+	?	-	-	-
Former USSR	-	-	-	-	-	-	-	-	-	-	-	-
	Oc	curren	ce of Sv	wine Ve	sicula	Diseas	e (200	5-2016)			
Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Austria	-	-	-									_
Belgium	_			-	-	-	-	-	-			
Bulgaria	-	-	-	-	-	-	-	-	-			
	-	-	-	-	-		-	-	-			
Chinag						-	- -					
China ^g	-	-	-	-	-	-	- - -	-	-			
	-	-	-	-	-	-		-	-			
China ^g France	-	-	-	-	-	-	-	-	-			
China ⁹ France Germany (East) ⁹	-	-	-	-	-	-	-	-	-			
China ⁹ France Germany (East) ⁹ Germany (West)	-	-	-		- - - -	-	-		-			
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece	-	-		-	-	-	-	-				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong	-	-	-	-	-	-	- - - -	-				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy	- - - - - - 13	- - - - - - - 51	- - - - - - 89	- - - - - - - 65	- - - - - - 18	- - - - - - - 4	- - - - - 25	- - - - - - 7	-			
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan	- - - - - 13	- - - - - - - 51	- - - - - - - 89	- - - - - - - - 65	- - - - - - 18	- - - - - - - 4	- - - - - 25	- - - - - - 7	1			
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta	- - - - - 13	- - - - - - - 51	- - - - - - - 89	- - - - - - - 65	- - - - - - 18	- - - - - - 4	- - - - - 25	- - - - - - 7				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta Netherlands		- - - - - - - - - - - - - - - -	- - - - - - - 89	- - - - - - - - 65	- - - - - - - 18	- - - - - - - 4	- - - - - 25 -	- - - - - - 7				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta Netherlands Poland	- - - - - 13 - -	- - - - - - - 51	- - - - - - - 89 - -	- - - - - - - 65	- - - - - - 18	- - - - - - 4	- - - - - 25	- - - - - - 7				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta Netherlands Poland Portugal		- - - - - - - - - - - - - - - -	- - - - - - - 89	- - - - - - - - 65	- - - - - - - 18	- - - - - - - 4	- - - - - 25 -	- - - - - - 7				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta Netherlands	- - - - - 13 - -	- - - - - - 51 - -	- - - - - - - 89 - -	- - - - - - - 65 - -	- - - - - - 18 - -	- - - - - - 4	- - - - - 25 - -	- - - - - - 7 - -				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta Netherlands Poland Portugal	- - - - - 13 - - -	- - - - - - 51 - - -	- - - - - - 89 - - - 1	- - - - - - 65 - - -	- - - - - 18 - - -	- - - - - - 4	- - - - 25 - - -	- - - - - 7 - - -				
China ⁹ France Germany (East) ⁹ Germany (West) Great Britain Greece Hong Kong Italy Japan Malta Netherlands Poland Portugal Romania		- - - - - - 51 - - -	- - - - - - - - - - - 1	- - - - - - 65 - - -	- - - - - 18 - - - -	- - - - - - 4 - - - -	- - - - 25 - - -	- - - - - - 7				

Former USSR

- a, unknown number of outbreaks-
- b, not confirmed by laboratory investigations
- c, one clinical outbreak and one farm where SVDV was isolated from healthy pigs
- d, all from clinically normal pigs
- e, 100-200 outbreaks?
- f, vesicular disease in pigs on a few farms, SVD suspected but no virus isolated (origin: pig meat from China)
- g, dates and numbers of outbreaks not known
- h, no clinical disease, diagnosis based on serology
- i, virus isolated from one farm, however, approx. four more farms were sero-positive
- j, sequence analysis suggested that the virus isolated was a laboratory contaminant
- k, all were sub-clinical infections

GARD analyses

GARD Analysis #	Genome Region	Alignment # seq/51 length	Analysis Converged	Breakpoint positions
1	Full	51/51 7412	NO	566, 3602***, 5206***
2	5'UTR-1B	51/51 1733	YES	566, 932***
3	1B-1D (external capsid)	51/51 2346	YES	1778***
4	1C-2D	51/51 2310	YES	2495*
5	1D-3C	51/51 2583	YES	3088***
6	2B-3C	51/51 2166	YES	4583***
7	3A-3D	51/51 2268	YES	•
8	3D-3'UTR	51/51 1496	YES	-
9	Full	26/51 7412	NO	566, 818, 1295**, 1727***, 3587***, 5216
10	Full	25/51 7412	YES	1295, 3184***
11	Full	23/51 7412	NO	566, 818, 1094***, 1658, 3689**
12	Full	15/51 7412	YES	572, 815, 1082***, 1883, 2271, 3839***, 5206
13	Full	51/51 7412	NO	566, 3482***, 5141***
14	5'UTR- 3'UTR (trimmed)	15/51 7335	NO	574, 819, 1146***, 1878***, 3645, 3873, 5207, 5391
15	5'UTR (trimmed)- 3'UTR (trimmed)	15/51 6938	YES	2702, 3529*, 3716***, 4946

Analysis #1 is the basic SVDV alignment (BSA). Analysis #10 has the complementary taxa to analysis #9. Analyses 11 and 12 are reduced sets of analysis 9. Analysis 13 only differs from #1 by trimmings in the 5'UTR and 3'UTR. No * means that there was no support from the Kishino-Hasegawa test, one, two and three stars mean support at p = 0.10, p = 0.05 and p = 0.01, respectively.

Historical occurrence of foot-and-mouth disease in 4 European countries

Reproduced from G. N.Mowat. Epidemiology of foot-and-mouth disease in Europe. *Rev. sci. tech. Off. Int. Epiz.,* 1986, **5** (2), 271-277.

	Belgium	France	Netherlands	United Kingdom
1957	328	99424	40	184
1958	588	14127	11	116
1959	57	6188	6	45
1960	180	7382	3	298
1961	121	2626	179	103
1962	6	199	5470	5
1963	67	28	2103	0
1964	2	56	146	0
1965	112	10	1426	1
1966	323	59	2194	34
1967	22	17	196	2210
1968	1	40	0	187
1969	3	35	0	0
1970	2	4	0	0
1971	1	8	21	0
1972	0	2	7	0
1973	0	1	0	0
1974	60	89	3	1
1975	21	2	2	0
1976	1	0	0	0
1977	0	0	1	0
1978	0	1	0	0
1979	0	21	0	0
1980	0	0	0	0
1981	0	18	0	2
1982	0	0	0	0
1983	0	0	4	0
1984	0	0	2	0
1985	0	0	0	0

Existing full or near-full genome sequenced SVDV isolates included in the basic SVDV alignment

Accession#	Isolate ref.	Origin	Date collected
KF963276	HKN/8/73	Tong Yan San	
		Tsuen, Ping Shan,	30. Mar. 1973
		Y.L., Hong Kong	
KF963277	HKN/18/74	Lo Shu Leng, Ta	
		Kwu Ling, N.T.,	11. Sep. 1974
		Hong Kong	
KF963278	HKN/25/75	Shueng Tsuen, Pat	
		Heung, Y.L., N.T.,	1. Mar. 1975
		Hong Kong	
KF963274	HKN/1/77	Pak Sah, Sap Pat	
		Hueng, Y.L., Hong	10. Mar. 1976
		Kong	
KF963275	HKN/5/77	Ping Che, Ta Kwu	
		Ling, N.T., Hong	7. May 1976
		Kong	·
AY429470	HK'70	Hong Kong	
X54521	UKG/27/72	United Kingdom	11. Dec. 1972
D16364	J1'73	Japan	NovDec. 1973
D00435	Н3'76	Japan	1976
AF268065	NET/1/92	Netherlands	1992
EU151450	ITL/1/92	Italy	1. Jun. 1992
EU151454	ITL/2/92	Italy	2. Sep. 1992
EU151451	ITL/6/92	Italy	16. Jun. 1992
EU151452	ITL/8/92	Italy	14. Aug. 1992
EU151448	ITL/18/92	Italy	5. Nov. 1992
EU151455	ITL/19/92	Italy	16. Nov. 1992
EU151456	ITL/1/97	Italy	30. Jan. 1997
EU151457	ITL/2/97	Italy	3. Feb. 1997
EU151449	ITL/3/97	Italy	7. Feb. 1997
EU151458	ITL/10/98	Italy	2. Nov. 1998
EU151459	ITL/1/99	Italy	11. Jan. 1999
EU151460	ITL/3/99	Italy	25. Jan. 1999
EU151461	ITL/5/99	Italy	4. Feb. 1999
EU151453	ITL/7/99	Italy	5. Feb. 1999

Analyses run in GARLI

Alignment	#Taxa	Length	Model
5'UTR	189	741	SYM [012345] eq. freq. + I + 4G
1A (VP4)	180	207	TIM2 [010232] + I + 4G
1B (VP2)	124	767	TIM2 [010232] + I + 4G
1C (VP3)	98	714	TIM2 [010232] eq. freq. + 4G
1D (VP1)	427	850	GTR + 4G
2A	197	450	TIM2 [010232] eq. freq. + I + 4G
2C	307	987	GTR + I + 4G
3C (Protease)	218	549	GTR + I + 4G
3D (Polymerase)	489	1386	GTR + I + 4G

Parameter priors used in BEAST analyses

Parameter	Prior	Bound
CP1+2.kappa	LogNormal [1, 1.25], initial = 2	[0, inf.]
CP3.kappa	LogNormal [1, 1.25], initial = 2	[0, inf.]
CP1+2.mu	LogNormal [0, 1], initial = 1	[0, inf.]
CP3.mu	LogNormal [0, 1], initial = 1	[0, inf.]
frequencies	Uniform [0, 1], initial = 0.25	[0, 1]
CP1+2.alpha	Exponential [0.5], initial = 0.5	[0, inf.]
CP3.alpha	Exponential [0.5], initial = 0.5	[0, inf.]
clock.rate	Gamma [0.001, 1000], initial = 1	[0, inf.]
uced.mean	Gamma [0.001, 1000], initial = 1	[0, inf.]
ucld.mean	Gamma [0.001, 1000], initial = 1	[0, inf.]
ucld.stdev	Exponential [0.333333], initial = 0.3333	[0, inf.]
treeModel.rootHeight	Using Tree Prior in [40.167123, inf.]	-
constant.popSize	Gamma [0.001, 1000], initial = 10	[0, inf.]
exponential.popSize	Gamma [0.001, 1000], initial = 10	[0, inf.]
logistic.popSize	Gamma [0.001, 1000], initial = 10	[0, inf.]
skyline.popSize	Exponential [1000], initial = 100	[0, inf.]
exponential.growthRate	Laplace [0, 0.023026], initial = 0.4	[-inf., inf.]
logistic.growthRate	Laplace [0, 0.017269], initial = 1	[-inf., inf.]
logistic.t50	Gamma [0.001, 1000], initial = 1	[0, inf.]
meanRate	Indirectly Specified Through Other Parameters	n/a
covariance	Indirectly Specified Through Other Parameters	n/a
coefficientOfVariation	Indirectly Specified Through Other Parameters	n/a
origin	Exponential [100], initial = 440	[0, inf.]
R0	LogNormal [1, 1], initial = 5	[0, inf.]
recoveryRate	Gamma [1, 1], initial = 0.05	[0, inf.]
samplingProbability	Beta [1, 1], initial = 0.05	[0, 1]