

Summary of Studies Supporting USDA Product Licensure

Establishment Name	Zoetis Inc.
USDA Vet Biologics Establishment Number	190
Product Code	1505.25
True Name	Equine Influenza Vaccine, Killed Virus
Tradename(s) / Distributor or	Fluvac Innovator - No distributor specified
(if different from manufacturer)	Fluvac Innovator - Zoetis Argentina
	Fluvac Innovator - Zoetis Mexico
Date of Compilation Summary	January 10, 2023

Disclaimer: Do not use the following studies to compare one product to another. Slight differences in study design and execution can render the comparisons meaningless.

Study Type	Efficacy
Pertaining to	Equine Influenza Virus (EIV)
Study Purpose	To demonstrate efficacy against EIV
Product Administration	
Study Animals	
Challenge Description	
Interval observed after	
challenge	
Results	Study data were evaluated by USDA-APHIS prior to product licensure and met regulatory standards for acceptance at the time of submission. No data are published because this study was submitted to USDA-APHIS prior to January 1, 2007, and APHIS only requires publication of data submitted after that date.
USDA Approval Date	June 05, 2001

Study Type	Efficacy										
Pertaining to	Equine Influenza Virus	5									
Study Purpose	Demonstrate duration of	of effica	cy against Influenza vi	rus							
Product Administration	Two doses administere	d intran	nuscularly 21 days apar	t							
Study Animals	15 vaccinated and 15 c	ontrol h	orses, 11-12 months of	age, and							
	seronegative to equine	influen	za virus (HAI antibody	titers							
	<1:8).										
Challenge Description	Equine Influenza Virus	s – Strai	n Influenza A/equi-2/O	0hio/03							
	(Clade 1) administered 93 days after 2 nd vaccination.										
Interval observed after	Horses were observed	daily fo	llowing challenge for 2	1 days for							
challenge	signs of clinical disease, and fever.										
Results	A horse was considered	A horse was considered affected if at least one occurrence of									
	coughing or mucopurulent nasal discharge was displayed.										
	Table 1: Number of A	nimals	with Clinical Disease								
			Number of Animals								
	Treatment	Ν	with Clinical								
			Disease								
	Vaccinates (Group 1)	15	8								
	vacemates (Group 1)	15	0								
	Controls (Crown 2)	15	15								
	Controls (Group 2)	13	15								
	Individual animal data	can be	found below for the pre	esence of							
	clinical disease, rectal t	tempera	tures, and presence of e	each							
	clinical sign.										
USDA Approval Date	June 24, 2009										

Assigned Number	Group	Coughing ^a	Nasal Discharge ^b	Clinical Disease ^e	Fever ^d		
1	1	Ν	N	N	Y		
2	1	Ν	Y	Y	Ν		
4	1	Ν	N	N	Ν		
5	1	Ν	Y	Y	Ν		
6	1	Y	N	Y	Ν		
7	1	Ν	N	N	Ν		
10	1	Ν	N	N	Ν		
17	1	Ν	Y	Y	Ν		
19	1	Ν	N	N	Ν		
21	1	Y	N	Y	Ν		
22	1	Ν	N	N	Ν		
27	1	Ν	Y	Y	Ν		
30	1	Y	Y	Y	Ν		
31	1	Ν	Y	Y	Ν		
32	1	Ν	N	N	Ν		
3	2	Y	Y	Y	Y		
8	2	Y	Y	Y	Ν		
9	2	Y	N	Y	Ν		
11	2	Y	N	Y	Ν		
14	2	Y	Y	Y	Ν		
15	2	Y	Y	Y	Ν		
16	2	Y	Y	Y	Ν		
18	2	Y	Y	Y	Y		
20	2	Y	Y	Y	Y		
23	2	Y	Y	Y	Ν		
24	2	Y	Y	Y	Y		
25	2	Y	Y	Y	Ν		
26	2	Y	Y	Y	Y		
28	2	Y	Y	Y	Ν		
29	2	Y	N	Y	Ν		

Table 2Summary of Clinical Signs in Study Animals Challenged

^a Animal displayed at least	1 instances of coughing						
^b Animal displayed at least	1 instances of mucopurulent nasal discl	narge					
^c Animal has meet case def	inition for disease by meeting any of the	two clinica	al criteria (1 occurrences o	f coughing, 1 occurrences	of mucopurulent nasal disc	harge)	
^d Animal displayed at least	1 instance of fever (> 103.5°F and 1°F abo	ove baselin	e).				
Group 1 = Vaccinates							
Group 2 = Controls							

Table 3		
Clinical Observations	of Coughing in Study Anim	als Challenged

Assigned Number	Group	-2 DPC	-1 DPC	0 DPC	1 DPC	2 DPC	3 DPC	4 DPC	5 DPC	6 DPC	7 DPC	8 DPC	9 DPC	10 DPC	11 DPC	12 DPC
1	1	A	А	А	А	А	А	А	А	A	А	А	А	A	А	А
2	1	A	А	А	А	А	A	A	А	A	A	A	Α	A	А	A
4	1	A	А	А	А	А	А	A	А	A	А	А	А	A	А	А
5	1	А	А	А	А	А	А	А	А	A	А	А	А	А	А	А
6	1	А	А	А	А	А	C1	А	А	А	А	А	А	А	А	А
7	1	А	А	А	А	А	А	А	А	А	А	А	А	А	А	А
10	1	А	А	А	А	А	А	A	А	A	А	А	A	A	А	A
17	1	А	А	А	А	А	А	А	А	А	А	А	А	А	А	А
19	1	А	А	А	А	А	А	А	А	А	А	А	А	А	А	А
21	1	А	А	А	А	А	C1	C1	А	А	А	А	А	А	А	А
22	1	А	А	А	А	А	А	A	А	А	А	А	А	А	А	А
27	1	A	А	А	А	А	А	A	А	A	А	А	Α	A	А	A
30	1	A	А	А	А	А	А	А	А	A	А	А	Α	C1	А	А
31	1	А	А	А	А	А	А	А	А	А	А	А	А	А	А	А
32	1	А	А	А	А	А	А	А	А	Α	А	А	Α	А	А	А
3	2	А	А	А	А	А	C2	C1	C1	A	C2	C2	C2	C2	А	А
8	2	А	А	А	А	А	А	А	А	C1	C2	C2	А	А	C1	А
9	2	А	А	А	А	А	А	A	C1	A	А	C1	А	А	А	А
11	2	A	A	A	A	А	C2	А	A	A	C2	C1	А	C1	А	A
14	2	A	А	А	А	А	А	C1	А	A	А	А	Α	А	А	А
15	2	А	А	А	А	А	А	A	А	A	C2	А	А	C1	А	А
16	2	A	А	А	А	А	C2	А	А	A	C1	А	А	C1	А	A
18	2	A	A	A	A	А	A	C1	А	A	А	А	А	C1	А	A
20	2	Α	А	Α	А	А	A	C1	А	Α	C1	А	Α	Α	А	А
23	2	A	А	A	А	А	A	A	A	A	C2	А	C1	C1	А	A
24	2	A	A	A	Α	А	A	Α	A	A	А	А	Α	C2	А	A
25	2	Α	А	Α	А	C1	C1	А	А	Α	C1	А	C1	C1	C1	А
26	2	A	А	А	А	А	C1	C1	А	C1	C2	C1	C2	C1	C2	C2
28	2	A	А	A	А	А	C2	А	C1	А	A	A	C2	C2	А	A
29	2	Α	А	Α	Α	А	Α	C1	А	Α	А	Α	Α	А	А	Α

DPC = Days post challenge Group 1 = Vaccinates Group 2 = Controls Clinical Codes for Coughing (highlighted in yellow)

C1: Infrequent Coughing C2: Frequent Coughing

Table 3	continued
I able 5	continuea

Assigned Number	13 DPC	14 DPC	15 DPC	16 DPC	17 DPC	18 DPC	19 DPC	20 DPC	21 DPC
1	А	А	А	А	А	А	А	А	А
2	А	А	А	А	А	А	А	А	А
4	А	А	А	А	А	А	А	А	А
5	А	А	А	А	А	А	А	А	А
6	А	А	А	А	А	А	А	А	А
7	А	А	А	А	А	А	А	А	А
10	А	А	А	А	А	А	А	А	А
17	А	А	А	А	А	А	А	А	А
19	Α	А	А	А	А	Α	А	А	А
21	А	А	А	А	А	А	А	А	А
22	А	А	А	А	А	Α	А	А	А
27	А	А	А	А	А	А	А	А	А
30	А	А	А	А	А	А	А	А	А
31	А	А	А	А	А	А	А	А	А
32	Α	А	Α	А	Α	Α	А	Α	А
3	А	А	А	А	А	А	А	А	А
8	А	А	А	А	А	А	А	А	А
9	Α	А	А	Α	А	А	А	А	А
11	Α	А	Α	Α	А	Α	А	А	А
14	Α	Α	Α	Α	Α	Α	А	Α	А
15	А	А	А	А	А	А	А	А	А
16	Α	А	А	Α	А	Α	Α	А	А
18	Α	Α	Α	А	Α	Α	А	Α	А
20	А	А	Α	А	Α	Α	А	А	А
23	Α	Α	Α	А	Α	Α	А	Α	А
24	A	А	А	А	А	А	А	А	А
25	А	А	А	А	А	А	А	А	А
26	А	C2	C1	Α	Α	Α	А	Α	А
28	А	А	А	А	А	А	А	А	А
29	Α	А	Α	Α	Α	А	Α	Α	А

DPC = Days post challenge

Group 1 = Vaccinates

Group 2 = Controls

Clinical Codes for Coughing (highlighted in yellow)

C1: Infrequent Coughing

C2: Frequent Coughing

Table 4 Clinical Observations of Mucopurulent Nasal Discharge in Study Animals Challenged

As signed Number	Group	-2 DPC	-1 DPC	0 DPC	1 DPC	2 DPC	3 DPC	4 DPC	5 DPC	6 DPC	7 DPC	8 DPC	9 DPC	10 DPC	11 DPC	12 DPC
1	1	А	А	А	А	А	А	А	А	А	А	А	A	A	A	А
2	1	А	А	А	А	А	А	Ml	А	А	А	А	A	A	А	A
4	1	A	А	А	А	А	А	A	А	А	А	А	A	A	A	A
5	1	А	А	А	А	А	А	А	А	А	А	А	A	A	A	A
6	1	A	A	А	A	А	А	A	А	А	А	A	A	A	A	A
7	1	A	A	А	A	А	A	A	A	A	А	A	A	A	A	A
10	1	A	А	А	А	А	А	А	А	А	А	A	A	A	A	A
17	1	A	A	А	A	А	А	A	A	А	А	A	Ml	A	A	A
19	1	A	A	А	A	А	A	A	A	A	А	A	A	A	A	A
21	1	A	A	А	A	А	А	A	А	A	А	A	A	A	A	A
22	1	A	A	A	A	A	A	A	A	A	А	A	A	A	A	A
27	1	A	A	A	A	А	A	A	A	A	Ml	А	A	A	A	A
30	1	A	A	A	A	A	A	A	A	A	A	A	A	М	Ml	A
31	1	Α	A	А	А	А	А	А	A	A	А	A	A	A	A	A
32	1	A	A	A	A	A	A	А	A	A	A	A	A	A	A	A
3	2	A	A	A	A	A	A	A	MD	M1	A	М	A	М	A	Ml
8	2	A	A	А	A	А	A	A	М	А	А	М	Ml	М	Ml	A
9	2	A	A	A	A	А	A	A	A	A	A	A	A	A	A	A
11	2	A	A	A	А	А	A	A	A	A	А	A	A	A	А	A
14	2	A	A	A	A	А	A	A	A	A	Ml	A	A	MI	A	A
15	2	A	A	A	А	А	A	Ml	А	Ml	А	A	A	М	А	A
16	2	А	A	А	А	А	А	Ml	MI	Ml	А	A	A	A	Ml	A
18	2	A	А	А	А	А	А	A	А	А	А	МІ	A	М	А	A
20	2	A	А	А	A	А	А	A	MI	А	Ml	МІ	A	М	A	A
23	2	A	A	A	A	А	A	A	A	A	А	A	A	A	A	A
24	2	A	A	A	A	А	A	Ml	М	A	А	М	Ml	М	Ml	A
25	2	A	A	А	A	А	A	A	A	А	А	A	Ml	MI	A	A
26	2	A	A	А	A	А	А	A	A	M2	А	А	Ml	М	A	A
28	2	A	A	А	A	А	А	A	А	А	А	М	A	М	А	A
29	2	А	А	А	А	А	А	А	А	А	А	А	A	A	A	A

DPC = Days post challenge Group 1 = Vaccinates Group 2 = Controls Clinical Codes for Mucopurulent Nasal Discharge (highlighted in yellow)

M1: Mild Discharge M2: Moderate Discharge

M3: Severe Discharge

Table 4 co	ontinued
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Assigned Number	13 DPC	14 DPC	15 DPC	16 DPC	17 DPC	18 DPC	19 DPC	20 DPC	21 DPC
1	А	А	А	А	А	А	А	А	А
2	А	А	А	А	А	А	А	А	А
4	А	А	А	А	Α	А	А	А	А
5	Mi	А	А	А	А	А	А	А	А
6	А	А	А	А	Α	А	А	А	А
7	А	А	А	А	А	А	А	А	А
10	А	А	А	А	А	А	А	А	А
17	А	А	А	А	Α	А	А	А	А
19	А	А	А	А	А	А	А	А	А
21	А	А	А	А	А	А	А	А	А
22	А	А	А	А	А	А	А	А	А
27	А	Α	А	А	Α	M1	А	А	А
30	А	А	M1	А	А	А	А	А	А
31	А	А	А	А	Α	А	M1	А	А
32	А	А	А	А	А	А	А	А	А
3	M2	M2	M2	А	Mi	А	А	А	А
8	А	А	А	А	А	А	А	А	А
9	А	А	А	А	А	А	А	А	А
11	А	А	А	А	Α	А	А	А	А
14	А	Α	А	А	Α	А	А	А	А
15	А	А	А	А	А	А	А	А	А
16	А	А	А	А	А	А	А	А	А
18	А	А	А	А	А	А	А	А	А
20	А	А	А	А	А	А	А	А	А
23	Mi	А	А	А	А	А	А	А	А
24	M1	А	А	А	Α	А	А	А	А
25	Mi	А	А	А	А	А	А	А	А
26	А	А	А	А	А	А	А	А	А
28	А	А	А	А	Mi	А	А	А	А
29	А	Α	А	А	Α	А	А	А	А

DPC = Days post challenge

Group 1 = Vaccinates

Group 2 = Controls

Clinical Codes for Mucopurulent Nasal Discharge (highlighted in yellow)

- M1: Mild Discharge
- M2: Moderate Discharge

M3: Severe Discharge

Table 5	
Daily Rectal Temperatures (°F) in	n Horses Challenged

Assigned Number	Group	-2 DPC	-1DPC	0 DPC	Baseline	1DPC	2DPC	3DPC	4DPC	SDPC	@PC	7DPC	SDPC	9DPC	10DPC	11DPC	12DPC
1	1	100.6	100.0	100.0	100.2	101.3	100.8	103.5	99.7	99.9	99.1	100.4	99.9	100.6	99.9	100.2	99.9
2	1	101.1	100.4	100.8	100.8	100.0	100.9	101.3	100.4	100.8	100.6	100.8	100.8	101.3	100.8	100.6	99.5
4	1	100.6	100.6	100.4	100.5	99.5	1011	100.6	100.8	100.4	100.0	99.7	100.0	100.2	101.7	100.2	99.7
5	1	100.9	100.8	101.1	100.9	100.8	102.7	100.8	100.0	100.4	99.9	100.0	99.9	100.8	100.2	100.9	100.6
6	1	100.0	99.7	99.7	99.8	99.9	100.2	99.7	100.2	100.0	99.9	100.0	99.5	99.9	100.2	99.7	99.5
7	1	99.9	100.0	100.4	100.1	100.2	100.0	100.9	99.7	99.9	99.5	100.0	99.5	98.8	100.0	100.4	99.5
10	1	100.4	100.6	100.0	100.3	99.9	100.2	100.4	99.5	103.1	102.6	101.8	100.4	100.2	99.9	100.6	100.0
17	1	99.7	100.0	100.0	99.9	99.5	100.4	100.2	99.7	100.0	100.0	99.9	99.7	100.4	100.6	100.0	100.0
19	1	99.7	100.2	99.5	99.8	100.0	100.0	100.2	99.3	100.6	99.5	99.7	100.0	100.0	100.0	100.2	100.0
21	1	100.4	100.2	99.9	100.2	99.7	100.6	100.6	100.4	100.0	99.5	100.0	100.0	100.2	99.9	100.2	100.0
22	1	100.0	99.9	100.0	100.0	99.9	100.0	99.5	100.4	100.0	99.1	99.7	99.5	100.0	100.0	100.4	99.7
27	1	100.4	100.0	99.9	100.1	100.4	100.2	100.6	99.7	100.4	100.0	100.4	100.2	100.8	100.0	100.0	100.0
30	1	100.6	99.9	99.7	100.0	100.0	100.6	99.9	99.5	99.9	99.9	99.9	100.4	100.2	100.0	100.0	99.9
31	1	99.7	100.0	100.2	100.0	100.6	99.1	100.8	99.5	99.7	99.3	100.2	99.7	100.4	100.0	99.7	99.5
32	1	100.8	100.4	100.2	100.5	100.0	100.6	99.9	99.7	100.4	100.0	100.4	100.0	100.6	100.4	100.6	99.9
3	2	100.9	100.4	100.0	100.5	100.0	102.7	103.5	101.7	100.8	100.0	103.5	101.8	100.6	100.0	100.0	99.9
8	2	100.4	99.9	99.1	99.8	99.1	100.2	99.9	100.0	100.0	100.2	100.6	102.7	100.8	100.6	100.8	99.9
9	2	100.0	99.9	100.0	100.0	100.2	100.9	100.6	99.7	100.6	100.0	100.0	100.4	100.9	99.5	99.9	100.0
11	2	99.9	99.5	99.9	99.7	99.7	100.4	101.7	100.0	102.0	100.8	100.4	100.4	100.6	99.9	99.9	100.4
14	2	99.9	99.7	99.7	99.7	99.7	100.0	100.0	100.0	99.1	100.4	100.0	100.0	100.6	99.5	99.9	99.7
15	2	100.6	100.2	100.6	100.5	100.0	100.8	101.8	99.9	100.6	99.9	100.6	100.9	100.8	100.6	99.9	99.9
16	2	100.8	100.6	100.4	100.6	100.2	1015	102.9	100.0	100.8	100.6	100.8	100.4	100.9	100.2	100.6	100.2
18	2	100.0	100.0	100.0	100.0	100.4	108.5	101.7	98.8	103.5	100.9	100.4	99.7	100.4	100.0	100.6	100.0
20	2	100.9	100.6	100.4	100.6	99.9	100.9	101.1	99.7	100.6	101.3	100.6	100.0	100.0	100.8	101.3	101.3
23	2	99.7	99.9	99.7	99.7	99.1	99.9	101.5	99.7	100.4	100.6	100.4	99.9	100.4	99.9	100.4	99.7
24	2	100.6	99.9	100.0	100.2	99.3	102.6	100.9	100.2	102.9	102.0	104.7	102.6	101.7	100.8	100.6	99.7
25	2	100.8	100.4	100.0	100.4	100.4	102.7	100.4	99.9	100.0	100.9	100.4	99.9	100.2	99.7	100.0	99.9
26	2	99.9	99.7	99.9	99.8	99.9	1015	104.4	1015	101.5	100.9	102.9	102.2	103.3	101.7	101.8	100.2
28	2	100.0	100.0	99.9	100.0	99.5	100.2	101.7	100.6	101.5	100.6	100.2	99.7	100.4	99.7	99.9	99.3
29	2	99.7	100.4	100.4	100.2	100.0	101.8	102.7	1011	102.4	100.8	100.6	100.8	100.2	99.9	100.2	99.5

Rectal temperatures were recorded in °C, however they have been converted to °F. Temperatures greater than or equal to 103.5°F are fever and highlighted in yellow

DPC = Days post challenge

Group 1 = Vaccinates

Group 2 = Controls

Assigned Number	13DPC	14DPC	15DPC	16DPC	17DPC	18DPC	19DPC	20DPC	21DPC
1	99.1	99.7	99.7	99.9	100.4	99.5	100.4	99.9	99.9
2	100.4	100.8	99.9	100.4	101.5	101.8	100.8	100.0	100.4
4	99.5	99.5	100.0	100.4	100.0	99.9	100.4	100.0	100.0
5	100.6	100.2	99.9	100.6	99.5	99.5	100.0	99.9	99.9
6	98.8	100.0	99.3	99.5	99.9	99.3	99.7	99.9	99.0
7	99.5	99.9	99.9	99.7	99.3	100.0	100.4	100.0	100.0
10	99.9	100.2	100.4	101.1	100.2	100.6	100.2	100.0	99.9
17	99.7	100.2	99.9	99.9	99.9	101.3	100.6	99.5	100.0
19	99.7	99.5	99.9	100.0	99.7	100.0	100.0	100.6	100.2
21	99.5	100.2	100.2	100.4	99.7	99.9	99.7	100.4	99.9
22	100.0	100.0	99.9	99.7	100.2	99.7	100.2	99.7	99.7
27	99.9	100.8	99.5	100.0	100.0	100.2	100.6	100.6	100.4
30	99.9	99.9	99.9	99.9	99.1	99 .7	100.4	100.4	99.3
31	100.0	99.5	99.1	100.2	99.7	99.5	100.0	100.0	100.0
32	99.9	99.9	99.5	99.9	100.0	100.0	100.6	100.4	99.5
3	99.7	99.5	99.7	100.2	99.9	100.0	100.6	99.9	100.0
8	99.9	99.5	99.3	100.4	99.7	99.7	100.9	100.4	99.1
9	99.7	99.5	99.5	99.7	99.1	100.0	100.0	99.3	99.5
11	99.0	99.9	99.9	100.0	99.7	99.5	100.6	100.2	100.0
14	99.7	99.7	99.7	99.7	99.5	99.9	100.0	99.7	100.2
15	99.0	100.0	99.9	100.2	99.9	102.2	100.8	100.8	100.6
16	99.5	100.6	100.0	99.5	100.2	100.4	100.6	100.0	100.0
18	100.0	100.4	100.0	100.9	100.0	100.2	100.0	100.2	100.0
20	100.0	100.8	99.5	100.2	100.0	103.5	100.4	99.1	100.8
23	99.9	99.9	99.5	99.7	100.0	100.6	100.0	99.7	99.5
24	99.5	99.9	99.5	99.9	99.9	99.9	100.0	99.9	99.7
25	99.7	100.0	99.9	100.4	99.9	100.0	100.0	99.9	99.7
26	99.9	99.5	99.7	99.9	99.3	99.5	99.1	99.7	99.5
28	99.3	100.0	99.7	100.2	99.7	99.1	100.0	99.9	99.5
29	100.0	100.0	100.9	100.9	100.0	100.4	100.6	100.4	100.4

Table 5 continued

Rectal temperatures were recorded in °C, however they have been converted to °F. Temperatures greater than or equal to 103.5°F are fever and highlighted in yellow.

DPC = Days post challenge Group 1 = Vaccinates Group 2 = Controls

Study Type	Safety
Pertaining to	ALL
Study Purpose	Demonstration of safety under typical field conditions
Product Administration	
Study Animals	809 horses
Challenge Description	
Interval observed after	
challenge	
Results	Study data were evaluated by USDA-APHIS prior to product licensure and met regulatory standards for acceptance at the time of submission. No data are published because this study was submitted to USDA-APHIS prior to January 1, 2007, and APHIS only requires publication of data submitted after that date.
USDA Approval Date	September 26, 2001

Study Type	Safety								
Pertaining to	ALL								
Study Purpose	Determine safety of product in horses 3 months of age in typical								
	field conditions								
Product Administration	2 doses administered in	ntramuscularly 3 to 4	weeks apart						
Study Animals	247 foals approximately 3 months of age were enrolled at 3								
	different geographical sites								
Challenge Description	N/A								
Interval observed after	Animals were observed	d for immediate post-	vaccination reactions						
challenge	30 minutes after vaccin	nation, and observed d	laily for 21 days						
	after each vaccination								
Results	Two hundred and forty	-three foals (98.4%) of	completed the study.						
	Four (3) horses did not	complete the study for	or reasons unrelated						
	to the vaccine. There w	vere no immediate sys	temic or local						
	reactions using 490 do	ses of product.							
	Table 1: Frequency Di	stribution of Abnorma	al Health Events in						
	Vaccinates:								
	Number of Abrems 1 Health New Lew (D.)								
	INumber of Abnormal Health Number (Percent Vaccinations Event of Vaccinations)								
	Vaccillations	Cough	4 (0.82%)						
		Depression	$\frac{4(0.3270)}{1(0.20\%)}$						
		Diarrhea	3(0.61%)						
		Fever	5 (1.02%)						
		Hematoma	1(0.20%)						
		Lameness	3(0.61%)						
	490 Vaccinations	Leukocytosis	1 (0 20%)						
		Leakoeytosis	1 (0.20%)						
		Nasal Discharge	3 (0.61%)						
		Pneumonia	5 (1.02%)						
	$\begin{array}{c c c c c c c c c c c c c c c c c c c $								
	$\frac{5 \text{ Kin Ecsion NOS}}{5 (0.0176)} = \frac{2 (0.41\%)}{2 (0.41\%)}$								
	*Not otherwise specifi	ed	2 (0. T1 / 0)						
		~~							
	Additional data is provided on the next page								
USDA Approval Date	May 02, 2016	interne puge	•						
Contractional Date	1.1.4. 02, 2010								

Animal #	Start Day	End Day	Abnormal Health Event	Outcome
ND001	2	4	Skin Lesion NOS*	Resolved
KS078	2	2	Diarrhea	Resolved
10001	29	32	Lameness	Resolved
29		29	Fever	Resolved
KY002	13	29	Pneumonia	Resolved
KY027	34	46	Lameness	Resolved
KY034	25	28	Nasal Discharge	Resolved
	25	28	Cough	Resolved
	25	28	Leukocytosis	Resolved
KY035	41	41	Fever	Resolved
	41	42	Leukocytosis	Resolved
	41	67	Pneumonia	Resolved
KV027	13	15	Nasal Discharge	Resolved
K1037	45	46	Skin Lesion NOS*	Resolved
KY038	22	23	Lymphadenopathy	Resolved
KV041	25	97	Cough	Resolved
1041	25	97	Pneumonia	Resolved
KY042	29	29	Fever	Resolved
KY043	29	29	Fever	Resolved
KY044	23	26	Diarrhea	Resolved
11044	23	24	Depression	Resolved
KY045	29	29	Diarrhea	Resolved
KY053	6	8	Lameness	Resolved
KY058	6	13	Hematoma	Resolved
KY059	29	60	Pneumonia	Resolved
KY061	9	14	Skin Edema	Resolved
KY062	10	12	Skin Edema	Resolved
KY063	29	60	Pneumonia	Resolved
KY083	34	48	Skin Lesion NOS*	Resolved
KV089	22	24	Cough	Resolved
11009	22	24	Nasal Discharge	Resolved
KY102	7	11	Cough	Resolved
11102	7	7	Fever	Resolved

Table 2: Abnormal Health Events and Relation to Investigational Veterinary Product (IVP) for Individual Animals

* NOS = Not otherwise specified