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**Base Case – Import 10 Infected Animals
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	13	10	10	10	10	21
Total Infected w/o Imports	2.9	0	0	0	0	11
Total Clinical	4.8	2	3	4	5	8
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0	0	0	0	0	0
Spontaneous	0	0	0	0	0	0
Protein	2.9	0	0	0	0	11
Blood	0.003	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7.4	3	4	6	7	13
Die on Farm - Render	4.7	1	3	4	5	8
Die on Farm - No Render	0.78	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	520	830	1,300	5,800
From Death on Farm	37,000	10,000	20,000	30,000	40,000	62,000
Disposition of ID50s						
1 To Prohibited MBM	3,600	170	1,200	2,100	3,200	12,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	35,000	10,000	20,000	30,000	39,000	60,000
4 To NP MBM - Contamination	0.022	0	0	0	0	0.0033
5 To NP MBM - Mislabeling	190	0	0	0	7.9	1,000
6 Out After Rendering	1,300	0.064	30	200	1,100	10,000
7 To Prohibited Feed	2,500	33	300	1,200	2,200	11,000
8 To NP Feed - Misdirected	6.2	0	0	0	0	0.4
9 To NP Feed - Contamination	0.031	0	0	0	0	0.0025
10 To NP Feed - Mislabeling	70	0	0	0	0.0066	260
11 To Blood	0.38	0	0.032	0.16	0.4	1.4
12 Out After Feed Production	2,500	49	340	1,200	2,200	11,000
13 Misfed to Cattle	17	0	0	0	0	2.6
14 Total to Cattle	37	0	0	0	0.075	100
15 Total Potential to Humans	35	0.11	5.5	12	24	170
Potential Human Exposure						
Brain	9.2	0	0	0	0	0.032
Spinal Cord	1.7	0	0	0	0	0
Blood	0.012	0	0	0	0	0.077
Distal Ileum	0.75	0	0	0	0	1.8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00042	0	0	0	0	0
Contaminated Muscle Meat	0.092	0.00072	0.0022	0.036	0.08	0.32
AMR	20	0.0062	5.1	10	16	61
Beef on Bone	3.8	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Maternal Transmission Probability
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	10	26
Total Infected w/o Imports	4.1	0	0	0	0	16
Total Clinical	5.2	2	3	4	6	9
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0	0	0	0	0	0
Spontaneous	0	0	0	0	0	0
Protein	4.1	0	0	0	0	16
Blood	0.011	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.2	3	4	6	7	17
Die on Farm - Render	5.1	2	3	4	5	8
Die on Farm - No Render	0.87	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	830	1,400	6,300
From Death on Farm	40,000	10,000	20,000	30,000	42,000	72,000
Disposition of ID50s						
1 To Prohibited MBM	4,100	160	1,200	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	37,000	10,000	20,000	30,000	40,000	68,000
4 To NP MBM - Contamination	0.025	0	0	0	0	0.0026
5 To NP MBM - Mislabeling	230	0	0	0	24	1,000
6 Out After Rendering	1,400	0.058	51	260	1,100	10,000
7 To Prohibited Feed	2,700	52	340	1,200	2,200	12,000
8 To NP Feed - Misdirected	5.5	0	0	0	0	1
9 To NP Feed - Contamination	0.043	0	0	0	0	0.0025
10 To NP Feed - Mislabeling	140	0	0	0	0.28	1,000
11 To Blood	0.44	0	0.038	0.17	0.41	1.5
12 Out After Feed Production	2,800	56	380	1,200	2,200	12,000
13 Misfed to Cattle	53	0	0	0	0	9.8
14 Total to Cattle	110	0	0	0	0.14	100
15 Total Potential to Humans	37	0.11	5.9	12	29	180
Potential Human Exposure						
Brain	9.8	0	0	0	0	1.3
Spinal Cord	3.1	0	0	0	0	0.54
Blood	0.018	0	0	0	0	0.1
Distal Ileum	0.75	0	0	0	0	0.87
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00032	0	0	0	0	0
Contaminated Muscle Meat	0.097	0.00072	0.0022	0.029	0.08	0.34
AMR	19	0.022	5.1	10	19	65
Beef on Bone	4.3	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Maternal Transmission Probability
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	11	11	25
Total Infected w/o Imports	4	0	0	1	1	15
Total Clinical	5.3	2	3	5	6	9
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.78	0	0	0	1	3
Spontaneous	0	0	0	0	0	0
Protein	3.2	0	0	0	0	14
Blood	0.007	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.1	3	5	6	7	16
Die on Farm - Render	5	2	3	4	5	9
Die on Farm - No Render	0.87	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	530	890	1,300	5,400
From Death on Farm	40,000	10,000	20,000	31,000	50,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	190	1,200	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	21,000	30,000	41,000	69,000
4 To NP MBM - Contamination	0.012	0	0	0	0	0.0008
5 To NP MBM - Mislabeling	200	0	0	0	7.9	1,000
6 Out After Rendering	1,400	0.14	42	260	1,100	10,000
7 To Prohibited Feed	2,600	51	300	1,200	2,200	11,000
8 To NP Feed - Misdirected	12	0	0	0	0	1
9 To NP Feed - Contamination	0.02	0	0	0	0	0.0026
10 To NP Feed - Mislabeling	100	0	0	0	0.064	700
11 To Blood	0.37	0	0.046	0.19	0.39	1.2
12 Out After Feed Production	2,700	55	330	1,200	2,200	11,000
13 Misfed to Cattle	18	0	0	0	0	2.6
14 Total to Cattle	48	0	0	0	0.08	100
15 Total Potential to Humans	42	0.15	5.4	12	25	170
Potential Human Exposure						
Brain	15	0	0	0	0	0.071
Spinal Cord	2.5	0	0	0	0	1.1
Blood	0.019	0	0	0	0	0.086
Distal Ileum	0.93	0	0	0	0	0.26
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00052	0	0	0	0	0
Contaminated Muscle Meat	0.1	0.00073	0.0022	0.038	0.08	0.32
AMR	19	0.0062	5.1	10	16	56
Beef on Bone	4.7	0	0	0	3.1	24
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Total ID50s in Clinical BSE Case
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	13	10	10	10	11	17
Total Infected w/o Imports	3.2	0	0	0	1	7
Total Clinical	5	2	3	4	6	8
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.57	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	2.6	0	0	0	0	6.5
Blood	0.004	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7.6	3	5	6	7	11
Die on Farm - Render	4.8	1	3	4	5	8
Die on Farm - No Render	0.85	0	0	1	1	3
ID50 Sources						
From Slaughter	730	130	270	440	670	2,600
From Death on Farm	19,000	5,000	10,000	15,000	20,000	35,000
Disposition of ID50s						
1 To Prohibited MBM	2,000	94	590	1,100	1,700	6,200
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	18,000	4,900	10,000	15,000	20,000	33,000
4 To NP MBM - Contamination	0.011	0	0	0	0	0.0013
5 To NP MBM - Mislabeling	110	0	0	0	4	500
6 Out After Rendering	680	0.0082	14	120	560	5,000
7 To Prohibited Feed	1,300	18	180	580	1,100	5,600
8 To NP Feed - Misdirected	7.9	0	0	0	0	0.02
9 To NP Feed - Contamination	0.019	0	0	0	0	0.0057
10 To NP Feed - Mislabeling	91	0	0	0	0.27	500
11 To Blood	0.18	0	0.02	0.084	0.18	0.58
12 Out After Feed Production	1,400	27	210	600	1,100	5,600
13 Misfed to Cattle	17	0	0	0	0	13
14 Total to Cattle	48	0	0	0	0.062	50
15 Total Potential to Humans	19	0.061	2.7	5.8	12	84
Potential Human Exposure						
Brain	6.2	0	0	0	0	0
Spinal Cord	1.4	0	0	0	0	0.0064
Blood	0.014	0	0	0	0	0.067
Distal Ileum	0.44	0	0	0	0	0.13
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.0002	0	0	0	0	0
Contaminated Muscle Meat	0.048	0.00036	0.0011	0.038	0.041	0.16
AMR	8.7	0.0046	2.6	5.1	8	28
Beef on Bone	2	0	0	0	1.5	11
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Total ID50s in Clinical BSE Case
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	36
Total Infected w/o Imports	5.1	0	0	0	1	26
Total Clinical	5.5	2	3	5	6	10
Probability N Infected > 0	0.006					
Mode of Infection						
Maternal	0.67	0	0	0	1	3
Spontaneous	0	0	0	0	0	0
Protein	4.5	0	0	0	0	25
Blood	0.012	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.7	3	5	6	7	23
Die on Farm - Render	5.5	2	3	4	6	10
Die on Farm - No Render	0.93	0	0	1	1	3
ID50 Sources						
From Slaughter	3,300	510	1,100	1,700	3,100	13,000
From Death on Farm	85,000	20,000	41,000	61,000	100,000	160,000
Disposition of ID50s						
1 To Prohibited MBM	8,500	360	2,300	4,200	6,700	29,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	79,000	20,000	41,000	60,000	83,000	160,000
4 To NP MBM - Contamination	0.048	0	0	0	0	0.0051
5 To NP MBM - Mislabeling	440	0	0	0	19	2,000
6 Out After Rendering	2,700	0.54	140	710	2,300	20,000
7 To Prohibited Feed	6,000	61	490	2,300	4,500	24,000
8 To NP Feed - Misdirected	29	0	0	0	0	4.8
9 To NP Feed - Contamination	0.075	0	0	0	0	0.016
10 To NP Feed - Mislabeling	200	0	0	0	0.52	2,000
11 To Blood	0.92	0	0.064	0.34	0.83	3.8
12 Out After Feed Production	6,100	80	600	2,300	4,600	24,000
13 Misfed to Cattle	70	0	0	0	0	5.2
14 Total to Cattle	130	0	0	0	0.18	200
15 Total Potential to Humans	95	0.35	11	23	58	400
Potential Human Exposure						
Brain	25	0	0	0	0	1.7
Spinal Cord	14	0	0	0	0	4.1
Blood	0.042	0	0	0	0	0.17
Distal Ileum	3.3	0	0	0	0	0.53
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00064	0	0	0	0	0
Contaminated Muscle Meat	0.22	0.0014	0.0044	0.094	0.17	0.8
AMR	41	0.013	10	20	35	180
Beef on Bone	11	0	0	0	6.1	52
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Ante Mortem Inspector
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	27
Total Infected w/o Imports	5.2	0	0	0	1	17
Total Clinical	5.4	2	3	4	6	8.5
Probability N Infected > 0	0.004					
Mode of Infection						
Maternal	0.65	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	4.6	0	0	0	0	16
Blood	0.005	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	9	3	5	6	7	18
Die on Farm - Render	5.2	2	3	4	5	9
Die on Farm - No Render	0.94	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	530	820	1,300	4,800
From Death on Farm	41,000	10,000	20,000	30,000	50,000	71,000
Disposition of ID50s						
1 To Prohibited MBM	4,200	190	1,200	2,100	3,500	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	20,000	30,000	40,000	68,000
4 To NP MBM - Contamination	0.024	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	180	0	0	0	3.6	1,000
6 Out After Rendering	1,300	0.13	33	230	1,100	10,000
7 To Prohibited Feed	2,900	38	350	1,200	2,200	12,000
8 To NP Feed - Misdirected	18	0	0	0	0	0.79
9 To NP Feed - Contamination	0.023	0	0	0	0	0.011
10 To NP Feed - Mislabeling	190	0	0	0	0.063	1,000
11 To Blood	0.35	0	0.034	0.18	0.4	1.3
12 Out After Feed Production	3,000	59	380	1,200	2,300	12,000
13 Misfed to Cattle	30	0	0	0	0	26
14 Total to Cattle	100	0	0	0	0.099	100
15 Total Potential to Humans	43	0.12	5.5	12	30	180
Potential Human Exposure						
Brain	13	0	0	0	0	160
Spinal Cord	4.5	0	0	0	0	2
Blood	0.02	0	0	0	0	0.12
Distal Ileum	1.2	0	0	0	0	8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00052	0	0	0	0	0
Contaminated Muscle Meat	0.088	0.00073	0.0022	0.039	0.082	0.32
AMR	18	0.003	5.1	10	16	59
Beef on Bone	5.6	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Ante Mortem Inspector
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	25
Total Infected w/o Imports	4.5	0	0	0	1	15
Total Clinical	5.3	2	3	4	6	8
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.61	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.9	0	0	0	0	13
Blood	0.017	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.3	3	5	6	7	15
Die on Farm - Render	5.2	2	3	4	5	8.5
Die on Farm - No Render	0.95	0	0	1	1	3
ID50 Sources						
From Slaughter	2,700	260	580	1,000	2,500	11,000
From Death on Farm	41,000	10,000	20,000	30,000	50,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	4,100	190	1,200	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	39,000	10,000	21,000	31,000	41,000	69,000
4 To NP MBM - Contamination	0.024	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	180	0	0	0	5	1,000
6 Out After Rendering	1,300	0.14	34	210	1,100	10,000
7 To Prohibited Feed	2,800	55	360	1,200	2,200	12,000
8 To NP Feed - Misdirected	32	0	0	0	0	1
9 To NP Feed - Contamination	0.031	0	0	0	0	0.025
10 To NP Feed - Mislabeling	140	0	0	0	0.8	1,000
11 To Blood	0.74	0	0.047	0.21	0.49	3.1
12 Out After Feed Production	2,900	65	440	1,200	2,400	12,000
13 Misfed to Cattle	57	0	0	0	0	9.2
14 Total to Cattle	93	0	0	0	0.13	100
15 Total Potential to Humans	61	0.11	5.7	15	43	220
Potential Human Exposure						
Brain	15	0	0	0	0	5.1
Spinal Cord	6.1	0	0	0	0	0.028
Blood	0.024	0	0	0	0	0.085
Distal Ileum	1.4	0	0	0	0	8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00021	0	0	0	0	0
Contaminated Muscle Meat	0.16	0.00073	0.0028	0.076	0.091	0.61
AMR	33	0.014	5.1	11	26	200
Beef on Bone	4.6	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Performance Characteristics of the Stunner
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	16	10	10	10	11	31
Total Infected w/o Imports	5.9	0	0	0	1	21
Total Clinical	5.7	2	3	5	6	10
Probability N Infected > 0	0.004					
Mode of Infection						
Maternal	0.65	0	0	0	1	3
Spontaneous	0	0	0	0	0	0
Protein	5.2	0	0	0	0	19
Blood	0.038	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	9.3	3	5	6	7	21
Die on Farm - Render	5.6	2	3	4	5	10
Die on Farm - No Render	1	0	0	1	1	3
ID50 Sources						
From Slaughter	1,700	260	530	880	1,400	6,300
From Death on Farm	43,000	10,000	20,000	30,000	50,000	87,000
Disposition of ID50s						
1 To Prohibited MBM	4,200	190	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	40,000	10,000	21,000	30,000	40,000	79,000
4 To NP MBM - Contamination	0.029	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	260	0	0	0	9.3	1,000
6 Out After Rendering	1,400	0.37	76	300	1,100	10,000
7 To Prohibited Feed	2,900	35	260	1,100	2,200	11,000
8 To NP Feed - Misdirected	18	0	0	0	0	0.1
9 To NP Feed - Contamination	0.033	0	0	0	0	0.0032
10 To NP Feed - Mislabeling	190	0	0	0	0.8	1,000
11 To Blood	3.1	0	0.043	0.25	1	12
12 Out After Feed Production	2,900	54	320	1,200	2,200	11,000
13 Misfed to Cattle	76	0	0	0	0	100
14 Total to Cattle	170	0	0	0	0.11	110
15 Total Potential to Humans	41	0.1	5.4	12	28	210
Potential Human Exposure						
Brain	9.4	0	0	0	0	5.2
Spinal Cord	2.7	0	0	0	0	1.4
Blood	0.65	0	0	0	0	0.13
Distal Ileum	1.2	0	0	0	0	8.4
Contaminated Organ Meat	0.064	0	0	0	0	0.041
Eyes	0.00021	0	0	0	0	0
Contaminated Muscle Meat	0.098	0.00072	0.0023	0.038	0.081	0.4
AMR	21	0.003	5.1	10	19	82
Beef on Bone	5.7	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Performance Characteristics of the Splitter Process
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	29
Total Infected w/o Imports	4.6	0	0	0	1	19
Total Clinical	5.4	2	3	5	6	10
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.57	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	4	0	0	0	0	19
Blood	0.008	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.5	3	5	6	7	19
Die on Farm - Render	5.2	2	3	4	6	11
Die on Farm - No Render	0.94	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	860	1,400	6,000
From Death on Farm	41,000	10,000	20,000	30,000	50,000	80,000
Disposition of ID50s						
1 To Prohibited MBM	4,100	180	1,200	2,100	4,000	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	20,000	30,000	42,000	78,000
4 To NP MBM - Contamination	0.026	0	0	0	0	0.0018
5 To NP MBM - Mislabeling	230	0	0	0	25	1,000
6 Out After Rendering	1,400	0.2	43	240	1,100	10,000
7 To Prohibited Feed	2,700	51	310	1,200	2,300	11,000
8 To NP Feed - Misdirected	31	0	0	0	0	1
9 To NP Feed - Contamination	0.041	0	0	0	0	0.023
10 To NP Feed - Mislabeling	150	0	0	0	0.8	1,000
11 To Blood	0.39	0	0.037	0.18	0.39	1.4
12 Out After Feed Production	2,800	54	360	1,200	2,300	12,000
13 Misfed to Cattle	61	0	0	0	0	38
14 Total to Cattle	94	0	0	0	0.11	100
15 Total Potential to Humans	37	0.12	5.4	11	21	160
Potential Human Exposure						
Brain	12	0	0	0	0	0.15
Spinal Cord	3.5	0	0	0	0	1.4
Blood	0.02	0	0	0	0	0.084
Distal Ileum	1.1	0	0	0	0	0.87
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00031	0	0	0	0	0
Contaminated Muscle Meat	0.0068	0.00071	0.0014	0.0023	0.0042	0.024
AMR	18	0.014	5.1	10	16	62
Beef on Bone	2.5	0	0	0	3.1	12
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Performance Characteristics of the Splitter Process
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	25
Total Infected w/o Imports	4.2	0	0	0	1	15
Total Clinical	5.3	2	3	4	6	8
Probability N Infected > 0	0.001					
Mode of Infection						
Maternal	0.61	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.6	0	0	0	0	13
Blood	0.006	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.1	3	5	6	7	14
Die on Farm - Render	5.2	2	3	4	5	8
Die on Farm - No Render	0.89	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	540	840	1,300	5,600
From Death on Farm	41,000	10,000	20,000	31,000	50,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	4,000	200	1,200	2,100	3,300	12,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	20,000	30,000	42,000	68,000
4 To NP MBM - Contamination	0.051	0	0	0	0	0.014
5 To NP MBM - Mislabeling	230	0	0	0	5.7	1,000
6 Out After Rendering	1,400	0.2	48	340	1,100	10,000
7 To Prohibited Feed	2,700	34	310	1,100	2,200	11,000
8 To NP Feed - Misdirected	32	0	0	0	0	1.8
9 To NP Feed - Contamination	0.034	0	0	0	0	0.0051
10 To NP Feed - Mislabeling	140	0	0	0	0.028	1,000
11 To Blood	0.39	0	0.039	0.17	0.4	1.3
12 Out After Feed Production	2,700	42	360	1,200	2,200	11,000
13 Misfed to Cattle	47	0	0	0	0	5.4
14 Total to Cattle	110	0	0	0	0.08	100
15 Total Potential to Humans	59	0.2	6.6	21	50	210
Potential Human Exposure						
Brain	13	0	0	0	0	0.16
Spinal Cord	3.3	0	0	0	0	0.079
Blood	0.017	0	0	0	0	0.11
Distal Ileum	0.87	0	0	0	0	0.26
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00056	0	0	0	0	0
Contaminated Muscle Meat	0.21	0.0014	0.077	0.11	0.23	0.72
AMR	34	0.01	5.1	14	43	93
Beef on Bone	8	0	0	0	3.1	29
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: BSE Transmissibility Probability Reduction Achieved by
Rendering
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	12	10	10	10	11	22
Total Infected w/o Imports	2.2	0	0	0	1	12
Total Clinical	4.7	2	3	4	6	8
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.57	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	1.7	0	0	0	0	11
Blood	0.005	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7	3	5	6	7	14
Die on Farm - Render	4.5	1	3	4	5	8
Die on Farm - No Render	0.79	0	0	1	1	3
ID50 Sources						
From Slaughter	1,400	260	530	840	1,400	5,000
From Death on Farm	36,000	10,000	20,000	30,000	42,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	2,200	110	220	410	1,200	10,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	35,000	10,000	21,000	31,000	42,000	62,000
4 To NP MBM - Contamination	0.023	0	0	0	0	0.00008
5 To NP MBM - Mislabeling	130	0	0	0	2.5	100
6 Out After Rendering	760	0.08	10	100	210	10,000
7 To Prohibited Feed	1,500	8.6	110	230	510	10,000
8 To NP Feed - Misdirected	13	0	0	0	0	0.1
9 To NP Feed - Contamination	0.014	0	0	0	0	0.00043
10 To NP Feed - Mislabeling	87	0	0	0	0.013	100
11 To Blood	0.35	0	0.044	0.17	0.39	1
12 Out After Feed Production	1,500	11	120	270	530	10,000
13 Misfed to Cattle	24	0	0	0	0	2.5
14 Total to Cattle	69	0	0	0	0.089	100
15 Total Potential to Humans	34	0.2	6.1	13	28	150
Potential Human Exposure						
Brain	9.6	0	0	0	0	0.87
Spinal Cord	1.8	0	0	0	0	0
Blood	0.025	0	0	0	0	0.11
Distal Ileum	0.48	0	0	0	0	0.26
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00053	0	0	0	0	0
Contaminated Muscle Meat	0.085	0.00073	0.0023	0.019	0.08	0.23
AMR	18	0.027	5.1	10	17	62
Beef on Bone	3.4	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: BSE Transmissibility Probability Reduction Achieved by
Rendering
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	17	10	10	10	11	81
Total Infected w/o Imports	6.6	0	0	0	1	71
Total Clinical	5.8	2	3	5	6	18
Probability N Infected > 0	0.006					
Mode of Infection						
Maternal	0.66	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	5.9	0	0	0	0	69
Blood	0.008	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	9.8	3	5	6	7	51
Die on Farm - Render	5.7	2	3	4	6	21
Die on Farm - No Render	1	0	0	1	1	3
ID50 Sources						
From Slaughter	1,700	260	540	830	1,400	6,600
From Death on Farm	45,000	10,000	20,000	35,000	50,000	140,000
Disposition of ID50s						
1 To Prohibited MBM	5,300	280	1,800	3,100	4,600	18,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	41,000	9,700	20,000	30,000	46,000	130,000
4 To NP MBM - Contamination	0.042	0	0	0	0	0.0029
5 To NP MBM - Mislabeling	310	0	0	0	26	1,000
6 Out After Rendering	1,900	0.03	54	1,000	2,000	10,000
7 To Prohibited Feed	3,600	52	1,100	2,000	3,200	13,000
8 To NP Feed - Misdirected	17	0	0	0	0	1
9 To NP Feed - Contamination	0.029	0	0	0	0	0.025
10 To NP Feed - Mislabeling	170	0	0	0	0.28	1,000
11 To Blood	0.44	0	0.045	0.19	0.4	1.8
12 Out After Feed Production	3,700	57	1,100	2,100	3,200	13,000
13 Misfed to Cattle	75	0	0	0	0	100
14 Total to Cattle	100	0	0	0	0.12	1,000
15 Total Potential to Humans	47	0.1	5.4	12	28	200
Potential Human Exposure						
Brain	8	0	0	0	0	0.15
Spinal Cord	8	0	0	0	0	54
Blood	0.028	0	0	0	0	0.14
Distal Ileum	1.2	0	0	0	0	8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00087	0	0	0	0	0
Contaminated Muscle Meat	0.098	0.00073	0.0022	0.035	0.084	0.39
AMR	23	0.0083	5.1	10	18	84
Beef on Bone	6.1	0	0	0	3.1	36
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Probability that Pr. MBM Batch Contaminates NP MBM
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	27
Total Infected w/o Imports	5	0	0	0	1	17
Total Clinical	5.5	2	3	5	6	9.5
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.63	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	4.4	0	0	0	0	17
Blood	0.003	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.8	3	5	6	7	18
Die on Farm - Render	5.3	2	3	4	6	9.5
Die on Farm - No Render	0.92	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	540	810	1,400	6,000
From Death on Farm	42,000	10,000	20,000	31,000	50,000	80,000
Disposition of ID50s						
1 To Prohibited MBM	4,100	160	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	39,000	10,000	21,000	30,000	47,000	77,000
4 To NP MBM - Contamination	0.0069	0	0	0	0	0
5 To NP MBM - Mislabeling	220	0	0	0	25	1,000
6 Out After Rendering	1,400	0.0045	31	210	1,100	10,000
7 To Prohibited Feed	2,700	33	320	1,200	2,200	11,000
8 To NP Feed - Misdirected	21	0	0	0	0	0.13
9 To NP Feed - Contamination	0.038	0	0	0	0	0.0026
10 To NP Feed - Mislabeling	190	0	0	0	0.08	1,000
11 To Blood	0.44	0	0.045	0.18	0.41	1.6
12 Out After Feed Production	2,800	51	360	1,200	2,200	11,000
13 Misfed to Cattle	72	0	0	0	0	25
14 Total to Cattle	130	0	0	0	0.081	100
15 Total Potential to Humans	37	0.21	5.9	12	28	180
Potential Human Exposure						
Brain	7.9	0	0	0	0	3.8
Spinal Cord	2.1	0	0	0	0	0
Blood	0.025	0	0	0	0	0.11
Distal Ileum	0.74	0	0	0	0	8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00032	0	0	0	0	0
Contaminated Muscle Meat	0.11	0.00074	0.0021	0.036	0.082	0.4
AMR	20	0.061	5.1	10	16	66
Beef on Bone	5.3	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Probability that Pr. MBM Batch Contaminates NP MBM
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	23
Total Infected w/o Imports	4.1	0	0	0	1	13
Total Clinical	5.2	2	3	4	6	9
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.63	0	0	0	1	3
Spontaneous	0	0	0	0	0	0
Protein	3.5	0	0	0	0	12
Blood	0.002	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.2	3	5	6	7	14
Die on Farm - Render	5.1	2	3	4	5	8
Die on Farm - No Render	0.85	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	850	1,300	5,600
From Death on Farm	40,000	10,000	20,000	30,000	41,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	170	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	37,000	10,000	20,000	30,000	40,000	67,000
4 To NP MBM - Contamination	0.057	0	0	0	0	0.1
5 To NP MBM - Mislabeling	210	0	0	0	5.1	1,000
6 Out After Rendering	1,300	0.059	32	230	1,100	10,000
7 To Prohibited Feed	2,700	52	300	1,100	2,200	11,000
8 To NP Feed - Misdirected	11	0	0	0	0	1
9 To NP Feed - Contamination	0.023	0	0	0	0	0.0026
10 To NP Feed - Mislabeling	86	0	0	0	0.063	250
11 To Blood	0.35	0	0.039	0.15	0.4	1.2
12 Out After Feed Production	2,700	59	330	1,200	2,200	11,000
13 Misfed to Cattle	52	0	0	0	0	2.6
14 Total to Cattle	88	0	0	0	0.063	100
15 Total Potential to Humans	46	0.18	5.8	12	27	180
Potential Human Exposure						
Brain	16	0	0	0	0	0.071
Spinal Cord	4.1	0	0	0	0	0.93
Blood	0.02	0	0	0	0	0.096
Distal Ileum	1.3	0	0	0	0	2.8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00021	0	0	0	0	0
Contaminated Muscle Meat	0.092	0.00074	0.0022	0.014	0.081	0.32
AMR	20	0.0062	5.1	10	18	81
Beef on Bone	4.3	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Fraction of Pr. MBM Batch Involved During Contamination
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	25
Total Infected w/o Imports	4.6	0	0	0	1	15
Total Clinical	5.2	2	3	4	6	8
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.62	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	4	0	0	0	0	14
Blood	0	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.4	3	5	6	7	16
Die on Farm - Render	5.2	2	3	4	5	8
Die on Farm - No Render	0.92	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	540	830	1,400	5,400
From Death on Farm	40,000	10,000	20,000	30,000	45,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,800	180	1,200	2,100	3,200	12,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	20,000	30,000	40,000	66,000
4 To NP MBM - Contamination	0.0023	0	0	0	0	0.00026
5 To NP MBM - Mislabeling	190	0	0	0	5.5	1,000
6 Out After Rendering	1,200	0.0063	32	260	1,100	7,900
7 To Prohibited Feed	2,600	36	270	1,100	2,200	11,000
8 To NP Feed - Misdirected	8.2	0	0	0	0	0.11
9 To NP Feed - Contamination	0.034	0	0	0	0	0.0025
10 To NP Feed - Mislabeling	140	0	0	0	0.078	1,000
11 To Blood	0.39	0	0.046	0.19	0.42	1.2
12 Out After Feed Production	2,600	49	300	1,200	2,200	11,000
13 Misfed to Cattle	55	0	0	0	0	25
14 Total to Cattle	95	0	0	0	0.08	100
15 Total Potential to Humans	34	0.28	5.6	12	26	170
Potential Human Exposure						
Brain	6.8	0	0	0	0	0.87
Spinal Cord	3	0	0	0	0	0.059
Blood	0.016	0	0	0	0	0.11
Distal Ileum	0.67	0	0	0	0	0.14
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00021	0	0	0	0	0
Contaminated Muscle Meat	0.093	0.00072	0.0022	0.036	0.082	0.33
AMR	19	0.03	5.1	10	17	66
Beef on Bone	4.5	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Fraction of Pr. MBM Batch Involved During Contamination
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	24
Total Infected w/o Imports	4.2	0	0	0	1	14
Total Clinical	5.1	2	3	4	6	8.5
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.62	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.5	0	0	0	0	12
Blood	0.009	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.3	3	5	6	7	16
Die on Farm - Render	5	2	3	4	5	8
Die on Farm - No Render	0.85	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	540	1,000	1,400	6,000
From Death on Farm	39,000	10,000	20,000	30,000	40,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	4,100	180	1,100	2,000	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	36,000	10,000	20,000	30,000	40,000	66,000
4 To NP MBM - Contamination	0.26	0	0	0	0	0.026
5 To NP MBM - Mislabeling	180	0	0	0	7.9	1,000
6 Out After Rendering	1,400	0.015	29	250	1,100	10,000
7 To Prohibited Feed	2,800	32	260	1,100	2,200	12,000
8 To NP Feed - Misdirected	9.8	0	0	0	0	1.3
9 To NP Feed - Contamination	0.026	0	0	0	0	0.0031
10 To NP Feed - Mislabeling	140	0	0	0	0.13	1,000
11 To Blood	0.43	1E-5	0.053	0.2	0.43	1.5
12 Out After Feed Production	2,800	52	310	1,200	2,200	12,000
13 Misfed to Cattle	57	0	0	0	0	6.7
14 Total to Cattle	98	0	0	0	0.079	100
15 Total Potential to Humans	44	0.22	5.8	12	27	180
Potential Human Exposure						
Brain	15	0	0	0	0	0.41
Spinal Cord	3.5	0	0	0	0	0.028
Blood	0.017	0	0	0	0	0.12
Distal Ileum	0.68	0	0	0	0	0.41
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00052	0	0	0	0	0
Contaminated Muscle Meat	0.087	0.00074	0.0025	0.037	0.081	0.32
AMR	20	0.027	5.1	10	17	80
Beef on Bone	4.5	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Probability that Pr. MBM is Mislabeled as NP MBM
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	25
Total Infected w/o Imports	4.9	0	0	0	1	15
Total Clinical	5.4	2	3	4	6	10
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.64	0	0	0	1	3
Spontaneous	0	0	0	0	0	0
Protein	4.3	0	0	0	0	14
Blood	0.009	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.7	3	5	6	7	16
Die on Farm - Render	5.3	2	3	4	6	10
Die on Farm - No Render	0.9	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	830	1,300	6,300
From Death on Farm	41,000	10,000	20,000	31,000	48,000	87,000
Disposition of ID50s						
1 To Prohibited MBM	4,200	210	1,100	2,200	3,400	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	20,000	30,000	41,000	79,000
4 To NP MBM - Contamination	0.041	0	0	0	0	0.0026
5 To NP MBM - Mislabeled	120	0	0	0	0	140
6 Out After Rendering	1,200	0.07	28	210	1,100	10,000
7 To Prohibited Feed	2,900	51	330	1,200	2,300	11,000
8 To NP Feed - Misdirected	2.5	0	0	0	0	0.0074
9 To NP Feed - Contamination	0.015	0	0	0	0	0.0049
10 To NP Feed - Mislabeled	120	0	0	0	0.2	1,000
11 To Blood	0.36	0	0.039	0.15	0.38	1.3
12 Out After Feed Production	3,000	56	360	1,200	2,300	11,000
13 Misfed to Cattle	43	0	0	0	0	5.5
14 Total to Cattle	82	0	0	0	0.081	100
15 Total Potential to Humans	40	0.11	5.4	12	26	190
Potential Human Exposure						
Brain	10	0	0	0	0	5.2
Spinal Cord	2.3	0	0	0	0	0.013
Blood	0.024	0	0	0	0	0.072
Distal Ileum	0.99	0	0	0	0	8.2
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00061	0	0	0	0	0
Contaminated Muscle Meat	0.096	0.00072	0.0021	0.036	0.08	0.37
AMR	21	0.013	5.1	10	16	73
Beef on Bone	5.2	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Probability that Pr. MBM is Mislabeled as NP MBM
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	29
Total Infected w/o Imports	5.3	0	0	0	1	19
Total Clinical	5.5	2	3	4	6	11
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.69	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	4.6	0	0	0	0	18
Blood	0.005	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	9	3	5	6	7	18
Die on Farm - Render	5.3	2	3	4	5	12
Die on Farm - No Render	0.99	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	540	840	1,500	6,500
From Death on Farm	41,000	10,000	20,000	30,000	42,000	90,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	150	1,100	2,000	3,200	14,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	39,000	10,000	20,000	30,000	40,000	86,000
4 To NP MBM - Contamination	0.026	0	0	0	0	0.0026
5 To NP MBM - Mislabeled	400	0	0	2.5	100	1,100
6 Out After Rendering	1,400	0.06	28	230	1,100	10,000
7 To Prohibited Feed	2,600	35	350	1,200	2,200	11,000
8 To NP Feed - Misdirected	21	0	0	0	0	25
9 To NP Feed - Contamination	0.022	0	0	0	0	0.0066
10 To NP Feed - Mislabeled	180	0	0	0	0.024	1,000
11 To Blood	0.38	0	0.038	0.17	0.4	1.6
12 Out After Feed Production	2,800	52	410	1,200	2,200	11,000
13 Misfed to Cattle	42	0	0	0	0	7.9
14 Total to Cattle	88	0	0	0	0.058	100
15 Total Potential to Humans	49	0.12	5.5	12	30	200
Potential Human Exposure						
Brain	18	0	0	0	0	4.5
Spinal Cord	4.4	0	0	0	0	38
Blood	0.032	0	0	0	0	0.13
Distal Ileum	0.74	0	0	0	0	0.23
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00032	0	0	0	0	0
Contaminated Muscle Meat	0.12	0.00074	0.0023	0.074	0.082	0.4
AMR	20	0.013	5.1	10	17	71
Beef on Bone	5.6	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Probability Pr. Feed Batch Contaminates NP Feed
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	24
Total Infected w/o Imports	3.8	0	0	0	1	14
Total Clinical	5.2	2	3	4	6	8
Probability N Infected > 0	0.001					
Mode of Infection						
Maternal	0.59	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.2	0	0	0	0	13
Blood	0.006	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7.9	3	5	6	7	16
Die on Farm - Render	4.9	1	3	4	5	8
Die on Farm - No Render	0.93	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	880	1,500	5,700
From Death on Farm	39,000	10,000	20,000	30,000	42,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,800	170	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	36,000	10,000	20,000	30,000	40,000	66,000
4 To NP MBM - Contamination	0.032	0	0	0	0	0.0007
5 To NP MBM - Mislabeling	170	0	0	0	22	1,000
6 Out After Rendering	1,300	0.08	29	230	1,100	10,000
7 To Prohibited Feed	2,600	33	300	1,200	2,100	11,000
8 To NP Feed - Misdirected	6.2	0	0	0	0	0.92
9 To NP Feed - Contamination	0.014	0	0	0	0	0
10 To NP Feed - Mislabeling	130	0	0	0	0.23	1,000
11 To Blood	0.38	0	0.038	0.17	0.39	1.5
12 Out After Feed Production	2,700	52	340	1,200	2,200	12,000
13 Misfed to Cattle	33	0	0	0	0	23
14 Total to Cattle	74	0	0	0	0.083	100
15 Total Potential to Humans	37	0.15	5.6	12	27	160
Potential Human Exposure						
Brain	11	0	0	0	0	0
Spinal Cord	1.9	0	0	0	0	0.0038
Blood	0.013	0	0	0	0	0.048
Distal Ileum	0.9	0	0	0	0	0.26
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00065	0	0	0	0	0
Contaminated Muscle Meat	0.098	0.00072	0.0021	0.017	0.081	0.38
AMR	20	0.0088	5.1	10	17	71
Beef on Bone	4.2	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Probability Pr. Feed Batch Contaminates NP Feed
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	16	10	10	10	11	36
Total Infected w/o Imports	5.9	0	0	0	1	26
Total Clinical	5.7	2	3	5	6	13
Probability N Infected > 0	0.004					
Mode of Infection						
Maternal	0.64	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	5.2	0	0	0	0	25
Blood	0.005	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	9.3	3	5	6	7	24
Die on Farm - Render	5.6	2	3	4	5	13
Die on Farm - No Render	0.92	0	0	1	1	3
ID50 Sources						
From Slaughter	1,700	260	540	890	1,400	7,100
From Death on Farm	44,000	10,000	21,000	31,000	50,000	98,000
Disposition of ID50s						
1 To Prohibited MBM	4,200	180	1,200	2,100	3,400	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	41,000	10,000	21,000	30,000	41,000	93,000
4 To NP MBM - Contamination	0.067	0	0	0	0	0.0026
5 To NP MBM - Mislabeling	170	0	0	0	8.5	1,000
6 Out After Rendering	1,400	0.07	34	230	1,100	10,000
7 To Prohibited Feed	2,900	56	360	1,200	2,200	12,000
8 To NP Feed - Misdirected	15	0	0	0	0	1.1
9 To NP Feed - Contamination	0.044	0	0	0	0	0.028
10 To NP Feed - Mislabeling	140	0	0	0	0.79	1,000
11 To Blood	0.42	0	0.046	0.17	0.42	1.8
12 Out After Feed Production	2,900	89	610	1,200	2,300	12,000
13 Misfed to Cattle	81	0	0	0	0	76
14 Total to Cattle	120	0	0	0	0.11	230
15 Total Potential to Humans	36	0.14	5.7	12	27	180
Potential Human Exposure						
Brain	6.2	0	0	0	0	0.87
Spinal Cord	2.7	0	0	0	0	1.8
Blood	0.017	0	0	0	0	0.1
Distal Ileum	0.78	0	0	0	0	0.045
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00082	0	0	0	0	0
Contaminated Muscle Meat	0.1	0.00072	0.0023	0.024	0.083	0.4
AMR	20	0.013	5.1	10	16	93
Beef on Bone	5.3	0	0	0	3.1	27
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Fraction of Pr. Feed Batch Involved During Contamination
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	15	10	10	10	11	30
Total Infected w/o Imports	5.1	0	0	0	1	20
Total Clinical	5.4	2	3	4	6	11
Probability N Infected > 0	0.001					
Mode of Infection						
Maternal	0.61	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	4.4	0	0	0	0	18
Blood	0.008	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.9	3	5	6	7	18
Die on Farm - Render	5.3	2	3	4	5	10
Die on Farm - No Render	0.91	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	900	1,500	6,200
From Death on Farm	41,000	10,000	20,000	30,000	50,000	90,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	160	1,200	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	39,000	10,000	20,000	30,000	41,000	88,000
4 To NP MBM - Contamination	0.023	0	0	0	0	0.003
5 To NP MBM - Mislabeling	200	0	0	0	25	1,000
6 Out After Rendering	1,400	0.022	32	330	1,100	10,000
7 To Prohibited Feed	2,500	33	250	1,100	2,200	11,000
8 To NP Feed - Misdirected	14	0	0	0	0	2.5
9 To NP Feed - Contamination	0.0027	0	0	0	0	0.0023
10 To NP Feed - Mislabeling	150	0	0	0	2.5	1,000
11 To Blood	0.39	0	0.04	0.18	0.41	1.4
12 Out After Feed Production	2,600	48	310	1,200	2,200	11,000
13 Misfed to Cattle	53	0	0	0	0	25
14 Total to Cattle	98	0	0	0	0.11	110
15 Total Potential to Humans	39	0.12	5.6	12	30	190
Potential Human Exposure						
Brain	5.6	0	0	0	0	0.045
Spinal Cord	5.8	0	0	0	0	3.2
Blood	0.016	0	0	0	0	0.13
Distal Ileum	1.1	0	0	0	0	8
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00031	0	0	0	0	0
Contaminated Muscle Meat	0.09	0.00073	0.0022	0.018	0.081	0.33
AMR	21	0.013	5.1	10	19	87
Beef on Bone	5.6	0	0	0	3.1	26
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Fraction of Pr. Feed Batch Involved During Contamination
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	23
Total Infected w/o Imports	3.7	0	0	0	1	13
Total Clinical	5.1	2	3	4	6	9
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.56	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.2	0	0	0	0	12
Blood	0.004	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7.9	3	5	6	7	14
Die on Farm - Render	5	2	3	4	5	8
Die on Farm - No Render	0.83	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	530	820	1,300	5,800
From Death on Farm	39,000	10,000	20,000	30,000	45,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	170	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	37,000	10,000	20,000	30,000	40,000	67,000
4 To NP MBM - Contamination	0.025	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	230	0	0	0	24	1,000
6 Out After Rendering	1,300	0.13	50	230	1,100	10,000
7 To Prohibited Feed	2,700	33	250	1,200	2,200	11,000
8 To NP Feed - Misdirected	7.5	0	0	0	0	0.18
9 To NP Feed - Contamination	0.51	0	0	0	0	0.11
10 To NP Feed - Mislabeling	110	0	0	0	0.028	1,000
11 To Blood	0.42	0	0.04	0.17	0.4	1.4
12 Out After Feed Production	2,800	39	280	1,200	2,300	11,000
13 Misfed to Cattle	17	0	0	0	0	2.5
14 Total to Cattle	52	0	0	0	0.077	100
15 Total Potential to Humans	35	0.16	5.6	12	27	170
Potential Human Exposure						
Brain	8.7	0	0	0	0	5.2
Spinal Cord	2.4	0	0	0	0	0.079
Blood	0.017	0	0	0	0	0.084
Distal Ileum	0.65	0	0	0	0	0.045
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00073	0	0	0	0	0
Contaminated Muscle Meat	0.092	0.00072	0.0022	0.029	0.08	0.39
AMR	18	0.013	5.1	10	17	56
Beef on Bone	4.5	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Probability Pr. Feed Batch Mislabeled as NP Feed
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	24
Total Infected w/o Imports	4.1	0	0	0	1	14
Total Clinical	5.3	2	3	4	6	9
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.6	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.5	0	0	0	0	13
Blood	0.006	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.1	3	5	6	7	16
Die on Farm - Render	5.1	2	3	4	5	9
Die on Farm - No Render	0.89	0	0	1	1	3
ID50 Sources						
From Slaughter	1,600	260	530	810	1,300	6,100
From Death on Farm	40,000	10,000	20,000	30,000	50,000	74,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	150	1,100	2,100	3,200	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	38,000	10,000	20,000	30,000	41,000	70,000
4 To NP MBM - Contamination	0.035	0	0	0	0	0.0019
5 To NP MBM - Mislabeled	210	0	0	0	7.9	1,000
6 Out After Rendering	1,300	0.17	28	200	1,100	10,000
7 To Prohibited Feed	2,700	52	330	1,200	2,200	12,000
8 To NP Feed - Misdirected	12	0	0	0	0	1
9 To NP Feed - Contamination	0.021	0	0	0	0	0.0008
10 To NP Feed - Mislabeled	59	0	0	0	0	100
11 To Blood	0.37	0	0.038	0.17	0.38	1.4
12 Out After Feed Production	2,800	56	370	1,200	2,200	12,000
13 Misfed to Cattle	50	0	0	0	0	37
14 Total to Cattle	61	0	0	0	0.061	100
15 Total Potential to Humans	40	0.13	5.3	11	24	180
Potential Human Exposure						
Brain	12	0	0	0	0	2.8
Spinal Cord	3.4	0	0	0	0	2
Blood	0.03	0	0	0	0	0.051
Distal Ileum	0.77	0	0	0	0	1.1
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00053	0	0	0	0	0
Contaminated Muscle Meat	0.11	0.00073	0.0022	0.029	0.082	0.4
AMR	19	0.0023	5.1	10	16	78
Beef on Bone	4.4	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Probability Pr. Feed Batch Mislabeled as NP Feed
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	35	10	10	11	14	190
Total Infected w/o Imports	25	0	0	1	4	180
Total Clinical	9.7	2	4	5	7	46
Probability N Infected > 0	0.05					
Mode of Infection						
Maternal	1.1	0	0	0	1	5
Spontaneous	0	0	0	0	0	0
Protein	24	0	0	0	3	180
Blood	0.013	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	22	3	5	7	9.5	130
Die on Farm - Render	10	1	3	5	7	51
Die on Farm - No Render	1.8	0	0	1	2	9
ID50 Sources						
From Slaughter	3,200	260	580	1,000	2,100	16,000
From Death on Farm	75,000	10,000	21,000	40,000	60,000	350,000
Disposition of ID50s						
1 To Prohibited MBM	7,200	190	1,200	2,200	10,000	33,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	70,000	10,000	21,000	34,000	50,000	350,000
4 To NP MBM - Contamination	0.016	0	0	0	0	0.025
5 To NP MBM - Mislabeled	350	0	0	0	51	1,200
6 Out After Rendering	2,400	0.78	75	1,000	2,000	12,000
7 To Prohibited Feed	3,400	8	140	1,100	2,300	15,000
8 To NP Feed - Misdirected	32	0	0	0	0	25
9 To NP Feed - Contamination	0.024	0	0	0	0	0.023
10 To NP Feed - Mislabeled	1,700	0	2.6	100	1,100	11,000
11 To Blood	0.81	0.000013	0.059	0.24	0.56	4.3
12 Out After Feed Production	4,700	31	360	1,300	3,500	21,000
13 Misfed to Cattle	85	0	0	0	0	100
14 Total to Cattle	480	0	0	0.064	26	2,400
15 Total Potential to Humans	83	0.22	6.8	16	49	490
Potential Human Exposure						
Brain	16	0	0	0	0	160
Spinal Cord	6.8	0	0	0	0	66
Blood	0.047	0	0	0	0	0.29
Distal Ileum	2.2	0	0	0	0	8.4
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.0013	0	0	0	0	0
Contaminated Muscle Meat	0.17	0.00073	0.0031	0.077	0.15	0.87
AMR	37	0.021	5.2	11	26	190
Beef on Bone	21	0	0	0.096	6.1	140
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Probability that Pr. Feed Intentionally Fed to Cattle
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	12	10	10	10	11	13
Total Infected w/o Imports	2.3	0	0	0	1	3
Total Clinical	4.7	2	3	4	5	8
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0.54	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	1.8	0	0	0	0	1
Blood	0.009	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7	3	5	6	7	9
Die on Farm - Render	4.5	2	3	4	5	7
Die on Farm - No Render	0.82	0	0	1	1	2
ID50 Sources						
From Slaughter	1,500	260	540	880	1,300	5,600
From Death on Farm	36,000	10,000	20,000	30,000	40,000	66,000
Disposition of ID50s						
1 To Prohibited MBM	3,500	170	1,100	2,100	3,200	12,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	33,000	10,000	20,000	30,000	39,000	59,000
4 To NP MBM - Contamination	0.03	0	0	0	0	0.00013
5 To NP MBM - Mislabeling	170	0	0	0	6.9	1,000
6 Out After Rendering	1,100	0.03	28	210	1,100	10,000
7 To Prohibited Feed	2,400	47	270	1,100	2,200	11,000
8 To NP Feed - Misdirected	22	0	0	0	0	0.21
9 To NP Feed - Contamination	0.022	0	0	0	0	0.00081
10 To NP Feed - Mislabeling	100	0	0	0	0.003	1,000
11 To Blood	0.38	0	0.041	0.18	0.42	1.3
12 Out After Feed Production	2,500	52	300	1,200	2,200	11,000
13 Misfed to Cattle	11	0	0	0	0	0
14 Total to Cattle	31	0	0	0	0.028	6
15 Total Potential to Humans	34	0.25	5.4	11	25	180
Potential Human Exposure						
Brain	7.6	0	0	0	0	0.41
Spinal Cord	4	0	0	0	0	0
Blood	0.024	0	0	0	0	0.08
Distal Ileum	0.29	0	0	0	0	0.0023
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00012	0	0	0	0	0
Contaminated Muscle Meat	0.092	0.00073	0.0022	0.017	0.081	0.31
AMR	19	0.027	5.1	10	16	63
Beef on Bone	3.2	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Probability that Pr. Feed Intentionally Fed to Cattle
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	77	10	10	11	28	440
Total Infected w/o Imports	67	0	0	1	18	430
Total Clinical	17	2	4	5	9	81
Probability N Infected > 0	0.12					
Mode of Infection						
Maternal	1.9	0	0	1	2	9
Spontaneous	0	0	0	0	0	0
Protein	65	0	0	0	17	420
Blood	0.02	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	48	4	6	7	18	270
Die on Farm - Render	19	2	3	5	9	96
Die on Farm - No Render	3.3	0	0	1	2	18
ID50 Sources						
From Slaughter	6,400	260	770	1,300	4,100	33,000
From Death on Farm	130,000	10,000	30,000	40,000	73,000	630,000
Disposition of ID50s						
1 To Prohibited MBM	13,000	190	1,200	2,400	11,000	65,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	120,000	10,000	24,000	39,000	70,000	600,000
4 To NP MBM - Contamination	0.097	0	0	0	0	0.14
5 To NP MBM - Mislabeling	710	0	0	0.18	130	3,300
6 Out After Rendering	4,200	2.4	100	1,000	2,500	23,000
7 To Prohibited Feed	8,400	44	740	1,400	8,600	43,000
8 To NP Feed - Misdirected	77	0	0	0	0.0008	100
9 To NP Feed - Contamination	0.08	0	0	0	0	0.27
10 To NP Feed - Mislabeling	530	0	0	0	28	2,300
11 To Blood	1.5	0	0.074	0.3	1	7.7
12 Out After Feed Production	7,600	55	1,000	1,500	9,300	38,000
13 Misfed to Cattle	1,300	0	0	0.69	100	10,000
14 Total to Cattle	1,400	0	0	1.2	110	10,000
15 Total Potential to Humans	190	0.26	8.7	21	140	1,100
Potential Human Exposure						
Brain	39	0	0	0	0	170
Spinal Cord	18	0	0	0	0	67
Blood	0.067	0	0	0	0.0036	0.4
Distal Ileum	8.9	0	0	0	0	25
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.0018	0	0	0	0	0
Contaminated Muscle Meat	0.36	0.0008	0.0034	0.079	0.25	1.8
AMR	72	0.027	5.5	14	51	370
Beef on Bone	53	0	0	3.1	26	300
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Proportion of Each Tissue Group Available for Human
Consumption
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	13	10	10	10	11	25
Total Infected w/o Imports	3.4	0	0	0	1	15
Total Clinical	5.1	2	3	4	6	9
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0.6	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	2.8	0	0	0	0	13
Blood	0.001	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7.6	3	5	6	7	15
Die on Farm - Render	4.9	2	3	4	5	8
Die on Farm - No Render	0.87	0	0	1	1	3
ID50 Sources						
From Slaughter	1,400	260	540	880	1,400	5,300
From Death on Farm	39,000	10,000	20,000	30,000	50,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	160	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	36,000	10,000	20,000	30,000	41,000	69,000
4 To NP MBM - Contamination	0.044	0	0	0	0	0.0026
5 To NP MBM - Mislabeling	250	0	0	0	11	1,000
6 Out After Rendering	1,300	0.2	42	250	1,100	10,000
7 To Prohibited Feed	2,700	58	310	1,100	2,200	11,000
8 To NP Feed - Misdirected	21	0	0	0	0	1
9 To NP Feed - Contamination	0.02	0	0	0	0	0.0025
10 To NP Feed - Mislabeling	95	0	0	0	0.018	140
11 To Blood	0.33	0	0.04	0.18	0.4	1.2
12 Out After Feed Production	2,800	64	330	1,200	2,200	11,000
13 Misfed to Cattle	15	0	0	0	0	25
14 Total to Cattle	43	0	0	0	0.063	100
15 Total Potential to Humans	25	0.089	5.4	12	23	100
Potential Human Exposure						
Brain	1.1	0	0	0	0	0
Spinal Cord	0.49	0	0	0	0	0
Blood	0.019	0	0	0	0	0.007
Distal Ileum	0.061	0	0	0	0	0
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0	0	0	0	0	0
Contaminated Muscle Meat	0.084	0.00071	0.0022	0.017	0.08	0.32
AMR	20	0.013	5.1	10	19	62
Beef on Bone	3.6	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Proportion of Each Tissue Group Available for Human
Consumption
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	23
Total Infected w/o Imports	3.7	0	0	0	1	13
Total Clinical	5.1	2	3	4	6	9
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.55	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.2	0	0	0	0	12
Blood	0.001	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8	3	5	6	7	15
Die on Farm - Render	4.9	2	3	4	5	8
Die on Farm - No Render	0.89	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	530	820	1,300	5,800
From Death on Farm	38,000	10,000	20,000	30,000	41,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	4,000	190	1,200	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	36,000	10,000	20,000	30,000	39,000	68,000
4 To NP MBM - Contamination	0.045	0	0	0	0	0.0026
5 To NP MBM - Mislabeling	220	0	0	0	2.6	1,000
6 Out After Rendering	1,300	0.08	34	250	1,100	10,000
7 To Prohibited Feed	2,700	36	310	1,200	2,200	11,000
8 To NP Feed - Misdirected	17	0	0	0	0	1
9 To NP Feed - Contamination	0.032	0	0	0	0	0.00039
10 To NP Feed - Mislabeling	130	0	0	0	0.08	1,000
11 To Blood	0.3	0	0.0027	0.088	0.3	1.1
12 Out After Feed Production	2,800	42	360	1,200	2,200	11,000
13 Misfed to Cattle	19	0	0	0	0	2.6
14 Total to Cattle	48	0	0	0	0.044	100
15 Total Potential to Humans	54	0.15	6.4	13	35	210
Potential Human Exposure						
Brain	21	0	0	0	0	160
Spinal Cord	8	0	0	0	0	66
Blood	0.11	0	0	0.00024	0.092	0.44
Distal Ileum	1.2	0	0	0	0	8.4
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00072	0	0	0	0	0
Contaminated Muscle Meat	0.087	0.00072	0.0022	0.021	0.08	0.32
AMR	19	0.003	5.1	10	16	71
Beef on Bone	4.6	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Best Case: Proportion of Animals Dead on Farm Sent to Rendering
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	13	10	10	10	11	15
Total Infected w/o Imports	3.1	0	0	0	1	4.5
Total Clinical	4.9	2	3	4	6	8
Probability N Infected > 0	0.001					
Mode of Infection						
Maternal	0.54	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	2.5	0	0	0	0	4
Blood	0.007	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	7.6	3	5	6	7	10
Die on Farm - Render	3.2	1	2	3	4	6
Die on Farm - No Render	2.2	0	1	2	3	5
ID50 Sources						
From Slaughter	1,500	260	520	820	1,300	5,800
From Death on Farm	26,000	8	10,000	20,000	30,000	50,000
Disposition of ID50s						
1 To Prohibited MBM	2,600	69	350	1,200	2,200	11,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	25,000	1,200	11,000	20,000	30,000	50,000
4 To NP MBM - Contamination	0.0085	0	0	0	0	0.000011
5 To NP MBM - Mislabeling	120	0	0	0	0.83	420
6 Out After Rendering	890	0.003	11	100	1,000	2,600
7 To Prohibited Feed	1,700	8.2	120	1,000	1,300	10,000
8 To NP Feed - Misdirected	2.8	0	0	0	0	0.089
9 To NP Feed - Contamination	0.0072	0	0	0	0	0.0002
10 To NP Feed - Mislabeling	110	0	0	0	0.0015	630
11 To Blood	0.37	0	0.035	0.17	0.38	1.1
12 Out After Feed Production	1,800	17	130	1,000	1,400	10,000
13 Misfed to Cattle	43	0	0	0	0	0.8
14 Total to Cattle	67	0	0	0	0.042	26
15 Total Potential to Humans	32	0.14	5.9	12	26	170
Potential Human Exposure						
Brain	5.3	0	0	0	0	0.019
Spinal Cord	3.3	0	0	0	0	0.72
Blood	0.029	0	0	0	0	0.15
Distal Ileum	0.89	0	0	0	0	0.41
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	4.3E-6	0	0	0	0	0
Contaminated Muscle Meat	0.093	0.00073	0.0022	0.019	0.081	0.32
AMR	19	0.0062	5.1	10	16	67
Beef on Bone	3.9	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Worst Case: Proportion of Animals Dead on Farm Sent to Rendering
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	16	10	10	10	11	44
Total Infected w/o Imports	6.2	0	0	0	1	34
Total Clinical	5.7	2	3	5	6	14
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.63	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	5.6	0	0	0	0	33
Blood	0.008	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	9.6	3	5	6	7	31
Die on Farm - Render	6.6	2	4	5	6	16
Die on Farm - No Render	0.06	0	0	0	0	1
ID50 Sources						
From Slaughter	1,800	260	570	1,000	1,500	7,300
From Death on Farm	51,000	10,000	30,000	40,000	50,000	140,000
Disposition of ID50s						
1 To Prohibited MBM	4,800	260	1,300	2,300	4,200	15,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	48,000	11,000	29,000	38,000	49,000	120,000
4 To NP MBM - Contamination	0.035	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	310	0	0	0	26	1,000
6 Out After Rendering	1,700	0.11	100	1,000	1,200	10,000
7 To Prohibited Feed	3,200	92	1,000	1,300	2,700	12,000
8 To NP Feed - Misdirected	20	0	0	0	0	2.5
9 To NP Feed - Contamination	0.028	0	0	0	0	0.0026
10 To NP Feed - Mislabeling	190	0	0	0	0.71	1,000
11 To Blood	0.44	0	0.045	0.2	0.44	1.8
12 Out After Feed Production	3,300	100	1,000	1,300	3,000	12,000
13 Misfed to Cattle	61	0	0	0	0	100
14 Total to Cattle	130	0	0	0	0.1	260
15 Total Potential to Humans	42	0.16	5.7	12	28	200
Potential Human Exposure						
Brain	11	0	0	0	0	4.5
Spinal Cord	1.9	0	0	0	0	0.0038
Blood	0.028	0	0	0	0	0.17
Distal Ileum	0.88	0	0	0	0	5.9
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00074	0	0	0	0	0
Contaminated Muscle Meat	0.1	0.00076	0.0023	0.075	0.086	0.4
AMR	22	0.0096	5.1	10	19	90
Beef on Bone	6.2	0	0	0	3.1	29
Trigeminal Ganglia	0	0	0	0	0	0

Infectivity in Blood
1000 Simulation Runs

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	24
Total Infected w/o Imports	4	0	0	0	1	14
Total Clinical	5.1	2	3	4	6	9
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.6	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.3	0	0	0	0	14
Blood	0.11	0	0	0	0	1
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8.2	3	5	6	7	14
Die on Farm - Render	5	2	3	4	5	9
Die on Farm - No Render	0.83	0	0	1	1	2
ID50 Sources						
From Slaughter	1,500	260	530	830	1,300	4,700
From Death on Farm	40,000	10,000	20,000	31,000	50,000	80,000
Disposition of ID50s						
1 To Prohibited MBM	3,800	180	1,200	2,100	3,200	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	37,000	10,000	20,000	30,000	41,000	72,000
4 To NP MBM - Contamination	0.027	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	170	0	0	0	11	1,000
6 Out After Rendering	1,400	0.062	34	250	1,100	10,000
7 To Prohibited Feed	2,500	33	300	1,200	2,200	11,000
8 To NP Feed - Misdirected	39	0	0	0	0	1
9 To NP Feed - Contamination	0.048	0	0	0	0	0.0097
10 To NP Feed - Mislabeling	130	0	0	0	0.55	1,000
11 To Blood	7	2	3.8	5.7	8.1	14
12 Out After Feed Production	2,600	55	350	1,200	2,300	11,000
13 Misfed to Cattle	27	0	0	0	0	15
14 Total to Cattle	59	0	0.0013	0.32	1.7	100
15 Total Potential to Humans	34	0.15	5.7	12	28	170
Potential Human Exposure						
Brain	7.6	0	0	0	0	1.3
Spinal Cord	3.2	0	0	0	0	0.079
Blood	0.027	0	0	0	0.000098	0.17
Distal Ileum	1.1	0	0	0	0	0.57
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.000017	0	0	0	0	0
Contaminated Muscle Meat	0.097	0.00071	0.0023	0.032	0.082	0.34
AMR	18	0.0035	5.1	10	16	56
Beef on Bone	4.6	0	0	0	3.1	23
Trigeminal Ganglia	0	0	0	0	0	0

**Infectivity in Trigeminal Ganglia
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	14	10	10	10	11	20
Total Infected w/o Imports	3.9	0	0	0	1	10
Total Clinical	5.1	2	3	4	6	8.5
Probability N Infected > 0	0.003					
Mode of Infection						
Maternal	0.58	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	3.3	0	0	0	0	9
Blood	0.004	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	8	3	5	6	7	11
Die on Farm - Render	5	2	3	4	5	8
Die on Farm - No Render	0.87	0	0	1	1	3
ID50 Sources						
From Slaughter	1,500	260	540	870	1,300	5,700
From Death on Farm	39,000	10,000	20,000	31,000	50,000	70,000
Disposition of ID50s						
1 To Prohibited MBM	3,900	180	1,100	2,100	3,300	13,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	37,000	10,000	20,000	30,000	40,000	67,000
4 To NP MBM - Contamination	0.046	0	0	0	0	0.0025
5 To NP MBM - Mislabeling	190	0	0	0	8.5	1,000
6 Out After Rendering	1,300	0.065	30	260	1,100	10,000
7 To Prohibited Feed	2,700	34	330	1,200	2,200	11,000
8 To NP Feed - Misdirected	21	0	0	0	0	1
9 To NP Feed - Contamination	0.019	0	0	0	0	0.0023
10 To NP Feed - Mislabeling	100	0	0	0	0.13	1,000
11 To Blood	0.39	0	0.038	0.18	0.41	1.4
12 Out After Feed Production	2,700	52	350	1,200	2,200	11,000
13 Misfed to Cattle	40	0	0	0	0	13
14 Total to Cattle	76	0	0	0	0.092	100
15 Total Potential to Humans	42	0.1	5.4	12	27	190
Potential Human Exposure						
Brain	13	0	0	0	0	0.32
Spinal Cord	4.2	0	0	0	0	2
Blood	0.02	0	0	0	0	0.1
Distal Ileum	0.84	0	0	0	0	0.26
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00011	0	0	0	0	0
Contaminated Muscle Meat	0.09	0.00073	0.0022	0.029	0.081	0.32
AMR	19	0.0062	5.1	10	16	76
Beef on Bone	4.4	0	0	0	3.1	23
Trigeminal Ganglia	0.00031	0	0	0	0	8.1E-6

**USA - Impact of Spontaneous With Feed Ban
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	27	17	22	25	29	37
Total Infected w/o Imports	27	17	22	25	29	37
Total Clinical	2.6	0	1	2	3	6
Probability N Infected > 0	0.87					
Mode of Infection						
Maternal	0.25	0	0	0	0	1
Spontaneous	25	17	21	25	28	33
Protein	1.9	0	0	0	0	5.5
Blood	0.022	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	18	10	14	17	20	26
Die on Farm - Render	5.9	2	4	5	7	11
Die on Farm - No Render	1	0	0	1	2	3
ID50 Sources						
From Slaughter	3,000	1,300	2,100	2,600	3,400	5,800
From Death on Farm	18,000	260	10,000	11,000	22,000	42,000
Disposition of ID50s						
1 To Prohibited MBM	2,000	120	330	1,100	1,700	11,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	19,000	2,000	11,000	13,000	23,000	42,000
4 To NP MBM - Contamination	0.0089	0	0	0	0	0.0026
5 To NP MBM - Mislabeling	150	0	0	2.3	26	470
6 Out After Rendering	640	5.2	51	130	560	1,800
7 To Prohibited Feed	1,400	61	170	460	1,200	10,000
8 To NP Feed - Misdirected	19	0	0	0	0	25
9 To NP Feed - Contamination	0.018	0	0	0	0	0.025
10 To NP Feed - Mislabeling	62	0	0	0.000024	3	130
11 To Blood	0.79	0.11	0.4	0.65	1	1.7
12 Out After Feed Production	1,500	68	180	490	1,300	10,000
13 Misfed to Cattle	19	0	0	0	0	25
14 Total to Cattle	39	0	0.00042	0.1	0.79	27
15 Total Potential to Humans	77	16	26	39	85	220
Potential Human Exposure						
Brain	25	0	0	0	0	170
Spinal Cord	9	0	0	0	0	66
Blood	0.052	0	0	0	0.024	0.29
Distal Ileum	0.83	0	0	0	0	8.4
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00084	0	0	0	0	0
Contaminated Muscle Meat	0.19	0.0074	0.084	0.16	0.24	0.46
AMR	40	11	23	32	48	84
Beef on Bone	1.5	0	0	0	0.0006	3.5
Trigeminal Ganglia	0	0	0	0	0	0

**Base Case -- Import 1 Infected Animal
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	1.3	1	1	1	1	2
Total Infected w/o Imports	0.32	0	0	0	0	1
Total Clinical	0.53	0	0	0	1	1
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0.066	0	0	0	0	1
Spontaneous	0	0	0	0	0	0
Protein	0.25	0	0	0	0	0
Blood	0	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	0.74	0	0	1	1	1
Die on Farm - Render	0.49	0	0	0	1	1
Die on Farm - No Render	0.085	0	0	0	0	1
ID50 Sources						
From Slaughter	150	0	0	0	260	260
From Death on Farm	3,900	0	0	0	10,000	10,000
Disposition of ID50s						
1 To Prohibited MBM	300	0	0.057	2.7	100	1,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	3,700	0	1.3	230	9,000	9,900
4 To NP MBM - Contamination	0.012	0	0	0	0	0
5 To NP MBM - Mislabeling	24	0	0	0	0	0
6 Out After Rendering	100	0	0	0	0.08	1,000
7 To Prohibited Feed	210	0	0	0.08	26	1,000
8 To NP Feed - Misdirected	1	0	0	0	0	0
9 To NP Feed - Contamination	0.0014	0	0	0	0	0
10 To NP Feed - Mislabeling	10	0	0	0	0	0
11 To Blood	0.026	0	0	0	0	0.1
12 Out After Feed Production	220	0	0	0.26	26	1,000
13 Misfed to Cattle	1.1	0	0	0	0	0
14 Total to Cattle	3.2	0	0	0	0	0
15 Total Potential to Humans	2.7	0	0	0	0.076	5.7
Potential Human Exposure						
Brain	0.0052	0	0	0	0	0
Spinal Cord	0.61	0	0	0	0	0
Blood	0.0018	0	0	0	0	0
Distal Ileum	0.018	0	0	0	0	0
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0	0	0	0	0	0
Contaminated Muscle Meat	0.009	0	0	0	0.00071	0.076
AMR	1.7	0	0	0	0.0062	5.1
Beef on Bone	0.34	0	0	0	0	0
Trigeminal Ganglia	0	0	0	0	0	0

**Base Case -- Import 5 Infected Animals
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	7.1	5	5	5	6	7
Total Infected w/o Imports	2.1	0	0	0	1	2
Total Clinical	2.6	0	1	2	3	5
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	0.29	0	0	0	0	1
Spontaneous	0	0	0	0	0	0
Protein	1.8	0	0	0	0	2
Blood	0.002	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	4.2	1	2	3	4	5
Die on Farm - Render	2.5	0	1	2	3	4
Die on Farm - No Render	0.44	0	0	0	1	2
ID50 Sources						
From Slaughter	740	0.31	260	370	760	2,500
From Death on Farm	20,000	0	10,000	20,000	20,000	40,000
Disposition of ID50s						
1 To Prohibited MBM	2,000	25	140	1,000	1,400	10,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	18,000	460	9,500	18,000	20,000	38,000
4 To NP MBM - Contamination	0.012	0	0	0	0	0
5 To NP MBM - Mislabeling	99	0	0	0	0	1,000
6 Out After Rendering	690	0	0.13	26	1,000	2,100
7 To Prohibited Feed	1,300	0.8	30	230	1,100	10,000
8 To NP Feed - Misdirected	6.9	0	0	0	0	0.0029
9 To NP Feed - Contamination	0.024	0	0	0	0	7.4E-7
10 To NP Feed - Mislabeling	90	0	0	0	0	100
11 To Blood	0.2	0	9.4E-6	0.042	0.2	0.67
12 Out After Feed Production	1,300	1.2	36	270	1,100	10,000
13 Misfed to Cattle	8.5	0	0	0	0	0.071
14 Total to Cattle	41	0	0	0	0.000012	17
15 Total Potential to Humans	17	0.000059	0.12	5.1	10	79
Potential Human Exposure						
Brain	3.6	0	0	0	0	0
Spinal Cord	1.5	0	0	0	0	0
Blood	0.019	0	0	0	0	0.02
Distal Ileum	0.95	0	0	0	0	0
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0	0	0	0	0	0
Contaminated Muscle Meat	0.044	1.9E-7	0.00071	0.0015	0.076	0.15
AMR	8.1	0	0.0069	5.1	8.7	38
Beef on Bone	2.3	0	0	0	0	6.9
Trigeminal Ganglia	0	0	0	0	0	0

**Base Case -- Import 20 Infected Animals
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	29	20	20	21	23	97
Total Infected w/o Imports	9	0	0	1	2.5	77
Total Clinical	11	5	7	9	11	26
Probability N Infected > 0	0.005					
Mode of Infection						
Maternal	1.2	0	0	1	2	4
Spontaneous	0	0	0	0	0	0
Protein	7.8	0	0	0	0	74
Blood	0.02	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	17	8	10	12	14	64
Die on Farm - Render	10	5	7	8	10	29
Die on Farm - No Render	1.8	0	1	1	2	5
ID50 Sources						
From Slaughter	3,000	780	1,300	1,900	3,100	10,000
From Death on Farm	81,000	32,000	53,000	70,000	90,000	200,000
Disposition of ID50s						
1 To Prohibited MBM	7,900	1,400	2,600	4,400	12,000	23,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	75,000	32,000	50,000	63,000	80,000	180,000
4 To NP MBM - Contamination	0.042	0	0	0	0	0.1
5 To NP MBM - Mislabeling	530	0	0	2.5	100	1,400
6 Out After Rendering	2,600	35	260	1,100	2,200	12,000
7 To Prohibited Feed	5,600	340	1,500	2,900	7,800	17,000
8 To NP Feed - Misdirected	58	0	0	0	0	25
9 To NP Feed - Contamination	0.053	0	0	0	0	0.026
10 To NP Feed - Mislabeling	190	0	0	0	25	1,000
11 To Blood	0.77	0.026	0.19	0.44	0.83	2.5
12 Out After Feed Production	5,700	410	1,600	3,100	8,900	17,000
13 Misfed to Cattle	120	0	0	0	0	120
14 Total to Cattle	190	0	0	0.038	1.2	1,000
15 Total Potential to Humans	75	6.3	17	32	77	270
Potential Human Exposure						
Brain	19	0	0	0	0	160
Spinal Cord	7.5	0	0	0	0	66
Blood	0.041	0	0	0	0.000031	0.22
Distal Ileum	1.8	0	0	0	0	8.4
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00097	0	0	0	0	0
Contaminated Muscle Meat	0.18	0.0029	0.03	0.086	0.17	0.68
AMR	37	5.4	14	22	40	120
Beef on Bone	9.9	0	0	3.1	6.1	49
Trigeminal Ganglia	0	0	0	0	0	0

**Base Case -- Import 50 Infected Animals
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	72	50	52	54	67	140
Total Infected w/o Imports	22	0	2	4	17	95
Total Clinical	26	16	20	23	27	48
Probability N Infected > 0	0.005					
Mode of Infection						
Maternal	3.1	0	2	3	4	7
Spontaneous	0	0	0	0	0	0
Protein	19	0	0	0	13	90
Blood	0.031	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	42	24	28	31	39	91
Die on Farm - Render	25	15	19	22	26	50
Die on Farm - No Render	4.5	1	3	4	6	10
ID50 Sources						
From Slaughter	8,000	3,000	4,400	6,100	9,700	18,000
From Death on Farm	200,000	110,000	150,000	180,000	220,000	380,000
Disposition of ID50s						
1 To Prohibited MBM	20,000	5,700	9,600	18,000	27,000	46,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	190,000	110,000	140,000	170,000	200,000	350,000
4 To NP MBM - Contamination	0.15	0	0	0	0.0018	1
5 To NP MBM - Mislabeling	990	0	11	110	1,000	3,500
6 Out After Rendering	7,000	980	2,400	4,200	12,000	22,000
7 To Prohibited Feed	13,000	3,000	5,700	11,000	17,000	31,000
8 To NP Feed - Misdirected	94	0	0	0	0.26	1,000
9 To NP Feed - Contamination	0.13	0	0	0	0.0026	1
10 To NP Feed - Mislabeling	810	0	0.22	31	1,000	3,100
11 To Blood	2	0.42	0.89	1.4	2.3	5.5
12 Out After Feed Production	14,000	3,300	6,000	12,000	18,000	31,000
13 Misfed to Cattle	170	0	0	0	3.2	1,000
14 Total to Cattle	380	0	0.13	2.5	100	1,100
15 Total Potential to Humans	200	39	69	120	250	510
Potential Human Exposure						
Brain	46	0	0	0	0.032	170
Spinal Cord	19	0	0	0	0.088	66
Blood	0.1	0	0	0.00069	0.097	0.42
Distal Ileum	3.7	0	0	0	0.093	8.7
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.0037	0	0	0	0	0
Contaminated Muscle Meat	0.49	0.088	0.2	0.32	0.53	1.6
AMR	100	30	48	72	130	270
Beef on Bone	24	0	3.1	7.4	29	94
Trigeminal Ganglia	0	0	0	0	0	0

**Base Case -- Import 200 Infected Animals
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	290	210	220	280	330	470
Total Infected w/o Imports	94	9	22	82	130	270
Total Clinical	110	79	90	100	120	150
Probability N Infected > 0	0.062					
Mode of Infection						
Maternal	12	6	9	12	15	21
Spontaneous	0	0	0	0	0	0
Protein	81	0	12	71	110	250
Blood	0.12	0	0	0	0	1
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	170	110	120	160	200	290
Die on Farm - Render	100	74	85	97	120	160
Die on Farm - No Render	19	10	14	18	22	30
ID50 Sources						
From Slaughter	32,000	18,000	24,000	30,000	37,000	53,000
From Death on Farm	810,000	580,000	680,000	770,000	890,000	1,200,000
Disposition of ID50s						
1 To Prohibited MBM	80,000	43,000	60,000	76,000	95,000	130,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	760,000	550,000	640,000	730,000	840,000	1,100,000
4 To NP MBM - Contamination	0.6	0	0.000078	0.026	1	2
5 To NP MBM - Mislabeling	4,300	230	1,300	2,400	4,400	14,000
6 Out After Rendering	27,000	9,000	17,000	25,000	34,000	51,000
7 To Prohibited Feed	54,000	25,000	40,000	51,000	65,000	91,000
8 To NP Feed - Misdirected	380	0	0.1	4.4	100	1,100
9 To NP Feed - Contamination	0.64	0	0.00056	0.029	0.35	2
10 To NP Feed - Mislabeling	3,000	54	410	1,300	3,100	12,000
11 To Blood	8.1	3.6	5.3	7	9.3	17
12 Out After Feed Production	55,000	27,000	42,000	53,000	66,000	93,000
13 Misfed to Cattle	960	0	2.6	100	1,000	7,300
14 Total to Cattle	1,800	2.1	100	1,000	2,000	11,000
15 Total Potential to Humans	810	300	490	670	950	1,700
Potential Human Exposure						
Brain	210	0	0	160	180	690
Spinal Cord	78	0	0	65	69	230
Blood	0.37	4.8E-6	0.063	0.24	0.46	1.1
Distal Ileum	18	0	0.0023	8.4	17	45
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.01	0	0	0	0	0.1
Contaminated Muscle Meat	1.9	0.77	1.2	1.7	2.3	4.2
AMR	400	190	280	360	480	730
Beef on Bone	100	13	42	81	140	250
Trigeminal Ganglia	0	0	0	0	0	0

**Base Case -- Import 500 Infected Animals
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	720	540	620	700	800	980
Total Infected w/o Imports	220	41	120	200	300	480
Total Clinical	260	220	240	260	290	330
Probability N Infected > 0	0.11					
Mode of Infection						
Maternal	30	20	26	30	35	42
Spontaneous	0	0	0	0	0	0
Protein	190	15	90	180	270	440
Blood	0.32	0	0	0	1	2
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	420	300	350	410	480	590
Die on Farm - Render	260	200	220	250	280	330
Die on Farm - No Render	45	32	39	44	51	62
ID50 Sources						
From Slaughter	79,000	54,000	67,000	77,000	90,000	110,000
From Death on Farm	2,000,000	1,600,000	1,800,000	2,000,000	2,200,000	2,600,000
Disposition of ID50s						
1 To Prohibited MBM	200,000	130,000	170,000	190,000	220,000	280,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	1,900,000	1,500,000	1,700,000	1,900,000	2,000,000	2,400,000
4 To NP MBM - Contamination	1.4	0.0008	0.059	0.37	1.2	10
5 To NP MBM - Mislabeling	10,000	2,600	4,700	7,700	15,000	25,000
6 Out After Rendering	66,000	35,000	52,000	64,000	78,000	100,000
7 To Prohibited Feed	130,000	87,000	110,000	130,000	150,000	190,000
8 To NP Feed - Misdirected	1,000	0.18	25	130	1,000	7,200
9 To NP Feed - Contamination	1.7	0.0026	0.1	1	1.3	10
10 To NP Feed - Mislabeling	6,700	1,100	2,600	4,300	10,000	17,000
11 To Blood	20	12	15	18	23	34
12 Out After Feed Production	140,000	91,000	110,000	130,000	160,000	190,000
13 Misfed to Cattle	2,200	5.1	150	1,100	2,200	11,000
14 Total to Cattle	4,200	120	1,200	2,300	4,700	13,000
15 Total Potential to Humans	2,000	1,000	1,400	1,800	2,200	3,400
Potential Human Exposure						
Brain	490	0.0097	170	330	500	1,600
Spinal Cord	190	0.16	66	130	200	550
Blood	1	0.14	0.46	0.77	1.2	2.5
Distal Ileum	44	0.028	9.9	21	34	270
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.026	0	0	0	0	0.1
Contaminated Muscle Meat	4.9	2.6	3.6	4.6	5.9	8.5
AMR	1,000	630	810	960	1,200	1,500
Beef on Bone	250	87	160	230	310	470
Trigeminal Ganglia	0	0	0	0	0	0

**USA - Impact of Scrapie With Feed Ban
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	38	24	30	33	39	63
Total Infected w/o Imports	38	24	30	33	39	63
Total Clinical	6.4	2	4	6	8	13
Probability N Infected > 0	0.95					
Mode of Infection						
Maternal	0.72	0	0	0	1	3
Spontaneous	0	0	0	0	0	0
Protein	4.9	0	0	0	0	28
Blood	0.011	0	0	0	0	0
Exogenous	32	23	28	32	36	42
Mode of Death						
Slaughter	26	16	20	23	27	45
Die on Farm - Render	7	2	4	6	8	13
Die on Farm - No Render	1.2	0	0	1	2	4
ID50 Sources						
From Slaughter	3,100	1,100	1,900	2,600	3,400	7,300
From Death on Farm	49,000	10,000	30,000	40,000	60,000	100,000
Disposition of ID50s						
1 To Prohibited MBM	4,800	290	1,400	2,600	5,400	14,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	47,000	12,000	29,000	40,000	57,000	97,000
4 To NP MBM - Contamination	0.021	0	0	0	0	0.026
5 To NP MBM - Mislabeling	240	0	0.004	2.6	52	1,000
6 Out After Rendering	1,600	28	110	1,000	1,400	10,000
7 To Prohibited Feed	3,300	130	1,000	1,500	3,300	12,000
8 To NP Feed - Misdirected	28	0	0	0	0.00008	22
9 To NP Feed - Contamination	0.038	0	0	0	0	0.025
10 To NP Feed - Mislabeling	140	0	0	0.12	25	1,000
11 To Blood	0.7	0.056	0.27	0.53	0.85	1.9
12 Out After Feed Production	3,300	150	1,000	1,700	3,300	12,000
13 Misfed to Cattle	71	0	0	0	0.068	100
14 Total to Cattle	100	0	0.0007	0.13	2.5	220
15 Total Potential to Humans	90	18	39	61	110	260
Potential Human Exposure						
Brain	15	0	0	0	0	160
Spinal Cord	5.9	0	0	0	0	66
Blood	0.033	0	0	0	0.002	0.22
Distal Ileum	4.9	0	0	0	0	8.4
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00072	0	0	0	0	0
Contaminated Muscle Meat	0.18	0.0043	0.08	0.089	0.23	0.42
AMR	30	7.2	15	23	35	74
Beef on Bone	33	4.2	13	29	45	84
Trigeminal Ganglia	0	0	0	0	0	0

Switzerland: 1986 - 2000
1000 Simulation Runs

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	480	350	420	470	540	650
Total Infected w/o Imports	410	280	350	400	470	580
Total Clinical	170	120	150	170	200	230
Probability N Infected > 0	0.31					
Mode of Infection						
Maternal	20	11	15	19	24	31
Spontaneous	0	0	0	0	0	0
Protein	260	130	200	250	320	420
Blood	0.11	0	0	0	0	1
Exogenous	130	130	130	130	130	130
Mode of Death						
Slaughter	260	190	230	260	290	350
Die on Farm - Render	120	87	110	120	140	170
Die on Farm - No Render	92	64	78	91	110	130
ID50 Sources						
From Slaughter	41,000	25,000	33,000	40,000	48,000	62,000
From Death on Farm	890,000	600,000	740,000	870,000	1,000,000	1,300,000
Disposition of ID50s						
1 To Prohibited MBM	4,900	2,600	3,700	4,700	5,800	7,700
2 Eliminated by SRM ban	1,700	0	240	510	1,900	8,700
3 Eliminated by Rendering	920,000	620,000	770,000	900,000	1,100,000	1,300,000
4 To NP MBM - Contamination	0	0	0	0	0	0
5 To NP MBM - Mislabeling	3,400	1,500	2,500	3,200	4,200	5,700
6 Out After Rendering	1,300	390	620	1,000	1,700	2,900
7 To Prohibited Feed	4,600	2,500	3,500	4,500	5,500	7,400
8 To NP Feed - Misdirected	2,200	810	1,300	2,100	2,900	4,200
9 To NP Feed - Contamination	0.8	0.046	0.18	0.43	0.74	3.4
10 To NP Feed - Mislabeling	150	2.5	16	63	130	1,000
11 To Blood	10	4.5	6.9	9	12	20
12 Out After Feed Production	4,600	2,500	3,500	4,500	5,600	7,400
13 Misfed to Cattle	190	8	24	110	200	1,100
14 Total to Cattle	2,400	890	1,400	2,200	3,100	4,400

**USA - Impact of Spontaneous With No Feed Ban
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	42,000	39	1,000	9,000	45,000	190,000
Total Infected w/o Imports	42,000	39	1,000	9,000	45,000	190,000
Total Clinical	1,500	2	36	320	1,600	6,600
Probability N Infected > 0	1					
Mode of Infection						
Maternal	160	0	4	34	170	710
Spontaneous	25	17	21	24	28	33
Protein	42,000	17	1,000	8,900	45,000	180,000
Blood	6.5	0	0	1	7	29
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	19,000	27	450	4,100	20,000	84,000
Die on Farm - Render	2,300	6	59	500	2,400	10,000
Die on Farm - No Render	400	1	10	86	430	1,800
ID50 Sources						
From Slaughter	1,800,000	3,400	45,000	390,000	1,900,000	8,000,000
From Death on Farm	9,600,000	11,000	230,000	2,100,000	10,000,000	43,000,000
Disposition of ID50s						
1 To Prohibited MBM	0	0	0	0	0	0
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	10,000,000	14,000	250,000	2,200,000	11,000,000	45,000,000
4 To NP MBM - Contamination	0	0	0	0	0	0
5 To NP MBM - Mislabeling	1,100,000	820	28,000	240,000	1,200,000	5,000,000
6 Out After Rendering	390,000	280	10,000	85,000	420,000	1,800,000
7 To Prohibited Feed	0	0	0	0	0	0
8 To NP Feed - Misdirected	730,000	150	18,000	160,000	770,000	3,300,000
9 To NP Feed - Contamination	0	0	0	0	0	0
10 To NP Feed - Mislabeling	0	0	0	0	0	0
11 To Blood	390	0.71	11	87	420	1,700
12 Out After Feed Production	15,000	0.67	70	2,200	15,000	72,000
13 Misfed to Cattle	0	0	0	0	0	0
14 Total to Cattle	710,000	150	17,000	160,000	760,000	3,200,000
15 Total Potential to Humans	57,000	58	1,300	13,000	60,000	250,000
Potential Human Exposure						
Brain	9,800	0	170	2,100	10,000	44,000
Spinal Cord	3,800	0	68	800	4,100	16,000
Blood	21	0	0.51	4.7	21	93
Distal Ileum	3,300	0	33	750	3,400	15,000
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.61	0	0	0.11	0.62	2.8
Contaminated Muscle Meat	91	0.16	2.3	20	98	400
AMR	17,000	36	440	3,700	19,000	78,000
Beef on Bone	23,000	6.2	550	4,900	24,000	100,000
Trigeminal Ganglia	0	0	0	0	0	0

**USA: 1980 - 2010 With 0.1 ID50s reaching cattle in 1980
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	45	0	0	0	0	0
Total Infected w/o Imports	45	0	0	0	0	0
Total Clinical	10	0	0	0	0	0
Probability N Infected > 0	0.002					
Mode of Infection						
Maternal	1.1	0	0	0	0	0
Spontaneous	0	0	0	0	0	0
Protein	44	0	0	0	0	0
Blood	0.082	0	0	0	0	0
Exogenous	0.017	0	0	0	0	0
Mode of Death						
Slaughter	31	0	0	0	0	0
Die on Farm - Render	12	0	0	0	0	0
Die on Farm - No Render	2	0	0	0	0	0
ID50 Sources						
From Slaughter	3,900	0	0	0	0	0
From Death on Farm	80,000	0	0	0	0	0
Disposition of ID50s						
1 To Prohibited MBM	7,000	0	0	0	0	0
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	75,000	0	0	0	0	0
4 To NP MBM - Contamination	0.049	0	0	0	0	0
5 To NP MBM - Mislabeling	1,400	0	0	0	0	0
6 Out After Rendering	2,700	0	0	0	0	0
7 To Prohibited Feed	4,700	0	0	0	0	0
8 To NP Feed - Misdirected	670	0	0	0	0	0
9 To NP Feed - Contamination	0.079	0	0	0	0	0
10 To NP Feed - Mislabeling	300	0	0	0	0	0
11 To Blood	4.8	0	0	0	0	0
12 Out After Feed Production	4,900	0	0	0	0	0
13 Misfed to Cattle	99	0	0	0	0	0
14 Total to Cattle	830	0	0	0	0	0
15 Total Potential to Humans	170	0	0	0	0	0
Potential Human Exposure						
Brain	19	0	0	0	0	0
Spinal Cord	9.7	0	0	0	0	0
Blood	0.19	0	0	0	0	0
Distal Ileum	3.9	0	0	0	0	0
Contaminated Organ Meat	0.088	0	0	0	0	0
Eyes	0.0016	0	0	0	0	0
Contaminated Muscle Meat	0.34	0	0	0	0	0
AMR	84	0	0	0	0	0
Beef on Bone	55	0	0	0	0	0
Trigeminal Ganglia	0	0	0	0	0	0

USA: 1980 - 2010 With 1.0 ID50s reaching cattle in 1980
1000 Simulation Runs

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	350	0	0	0	0	1
Total Infected w/o Imports	350	0	0	0	0	1
Total Clinical	80	0	0	0	0	0
Probability N Infected > 0	0.013					
Mode of Infection						
Maternal	8.6	0	0	0	0	0
Spontaneous	0	0	0	0	0	0
Protein	340	0	0	0	0	0
Blood	0.54	0	0	0	0	0
Exogenous	0.13	0	0	0	0	1
Mode of Death						
Slaughter	240	0	0	0	0	1
Die on Farm - Render	91	0	0	0	0	0
Die on Farm - No Render	16	0	0	0	0	0
ID50 Sources						
From Slaughter	31,000	0	0	0	0	8
From Death on Farm	630,000	0	0	0	0	0
Disposition of ID50s						
1 To Prohibited MBM	55,000	0	0	0	0	0
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	590,000	0	0	0	0	230
4 To NP MBM - Contamination	0.46	0	0	0	0	0
5 To NP MBM - Mislabeling	12,000	0	0	0	0	2.6
6 Out After Rendering	21,000	0	0	0	0	0.48
7 To Prohibited Feed	37,000	0	0	0	0	0
8 To NP Feed - Misdirected	5,500	0	0	0	0	0.08
9 To NP Feed - Contamination	0.5	0	0	0	0	0
10 To NP Feed - Mislabeling	2,200	0	0	0	0	0
11 To Blood	35	0	0	0	0	0
12 Out After Feed Production	39,000	0	0	0	0	0
13 Misfed to Cattle	630	0	0	0	0	0
14 Total to Cattle	6,200	0	0	0	0	0.08
15 Total Potential to Humans	1,400	0	0	0	0	0.095
Potential Human Exposure						
Brain	170	0	0	0	0	0
Spinal Cord	72	0	0	0	0	0
Blood	1.7	0	0	0	0	0
Distal Ileum	39	0	0	0	0	0
Contaminated Organ Meat	0.51	0	0	0	0	0
Eyes	0.013	0	0	0	0	0
Contaminated Muscle Meat	2.6	0	0	0	0	0.000047
AMR	670	0	0	0	0	0
Beef on Bone	440	0	0	0	0	0
Trigeminal Ganglia	0	0	0	0	0	0

USA: 1980 - 2010 With 5.0 ID50s reaching cattle in 1980
1000 Simulation Runs

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	2,300	0	0	0	1	12,000
Total Infected w/o Imports	2,300	0	0	0	1	12,000
Total Clinical	530	0	0	0	0	2,600
Probability N Infected > 0	0.093					
Mode of Infection						
Maternal	58	0	0	0	0	280
Spontaneous	0	0	0	0	0	0
Protein	2,300	0	0	0	0	11,000
Blood	3.8	0	0	0	0	20
Exogenous	0.62	0	0	0	1	2
Mode of Death						
Slaughter	1,600	0	0	0	1	8,000
Die on Farm - Render	600	0	0	0	0	3,000
Die on Farm - No Render	110	0	0	0	0	520
ID50 Sources						
From Slaughter	210,000	0	0	0	16	1,000,000
From Death on Farm	4,200,000	0	0	0	0	21,000,000
Disposition of ID50s						
1 To Prohibited MBM	360,000	0	0	0	0	1,800,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	3,900,000	0	0	0	210	20,000,000
4 To NP MBM - Contamination	3.1	0	0	0	0	17
5 To NP MBM - Mislabeling	75,000	0	0	0	2.5	390,000
6 Out After Rendering	140,000	0	0	0	0.08	700,000
7 To Prohibited Feed	240,000	0	0	0	0	1,200,000
8 To NP Feed - Misdirected	36,000	0	0	0	0.16	180,000
9 To NP Feed - Contamination	3.2	0	0	0	0	16
10 To NP Feed - Mislabeling	16,000	0	0	0	0	82,000
11 To Blood	230	0	0	0	0	1,100
12 Out After Feed Production	250,000	0	0	0	0	1,200,000
13 Misfed to Cattle	3,900	0	0	0	0	19,000
14 Total to Cattle	41,000	0	0	0	0.15	200,000
15 Total Potential to Humans	9,300	0	0	0	0.0077	49,000
Potential Human Exposure						
Brain	1,200	0	0	0	0	7,100
Spinal Cord	440	0	0	0	0	2,000
Blood	12	0	0	0	0	56
Distal Ileum	270	0	0	0	0	1,300
Contaminated Organ Meat	3.9	0	0	0	0	20
Eyes	0.062	0	0	0	0	0.31
Contaminated Muscle Meat	18	0	0	0	0.000045	89
AMR	4,400	0	0	0	0	22,000
Beef on Bone	2,900	0	0	0	0	15,000
Trigeminal Ganglia	0	0	0	0	0	0

**USA: 1980 - 2010 With 10.0 ID50s reaching cattle in 1980
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	4,700	0	1	1	4	31,000
Total Infected w/o Imports	4,700	0	1	1	4	31,000
Total Clinical	1,100	0	0	0	1	7,000
Probability N Infected > 0	0.16					
Mode of Infection						
Maternal	120	0	0	0	0	760
Spontaneous	0	0	0	0	0	0
Protein	4,600	0	0	0	1	30,000
Blood	7.5	0	0	0	0	52
Exogenous	1.4	0	1	1	2	4
Mode of Death						
Slaughter	3,300	0	0	1	3	21,000
Die on Farm - Render	1,200	0	0	0	1	8,000
Die on Farm - No Render	210	0	0	0	0	1,400
ID50 Sources						
From Slaughter	420,000	0	0	8.1	510	2,800,000
From Death on Farm	8,300,000	0	0	0	10,000	55,000,000
Disposition of ID50s						
1 To Prohibited MBM	720,000	0	0	0	0	4,700,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	7,900,000	0	0	26	9,000	52,000,000
4 To NP MBM - Contamination	6.1	0	0	0	0	38
5 To NP MBM - Mislabeling	150,000	0	0	2.1	100	1,000,000
6 Out After Rendering	280,000	0	0	0.075	100	1,900,000
7 To Prohibited Feed	480,000	0	0	0	0	3,200,000
8 To NP Feed - Misdirected	73,000	0	0	0.08	23	470,000
9 To NP Feed - Contamination	6.6	0	0	0	0	46
10 To NP Feed - Mislabeling	31,000	0	0	0	0	190,000
11 To Blood	460	0	0	0	0.16	3,000
12 Out After Feed Production	500,000	0	0	0	0.15	3,300,000
13 Misfed to Cattle	7,800	0	0	0	0	51,000
14 Total to Cattle	84,000	0	0	0.08	17	540,000
15 Total Potential to Humans	18,000	0	0	0.000059	23	120,000
Potential Human Exposure						
Brain	2,400	0	0	0	0	14,000
Spinal Cord	880	0	0	0	0	5,600
Blood	24	0	0	0	0	170
Distal Ileum	550	0	0	0	0	3,700
Contaminated Organ Meat	7.5	0	0	0	0	49
Eyes	0.14	0	0	0	0	0.82
Contaminated Muscle Meat	35	0	0	0.000022	0.076	230
AMR	8,800	0	0	0	0.38	58,000
Beef on Bone	5,800	0	0	0	5	37,000
Trigeminal Ganglia	0	0	0	0	0	0

USA: 1980 - 2010 With 50.0 ID50s reaching cattle in 1980
1000 Simulation Runs

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	21,000	3	8	4,600	32,000	89,000
Total Infected w/o Imports	21,000	3	8	4,600	32,000	89,000
Total Clinical	4,800	0	1	1,000	7,300	20,000
Probability N Infected > 0	0.57					
Mode of Infection						
Maternal	530	0	0	110	790	2,200
Spontaneous	0	0	0	0	0	0
Protein	21,000	0	1	4,500	31,000	86,000
Blood	34	0	0	7	48	150
Exogenous	6.5	3	5	6	8	11
Mode of Death						
Slaughter	15,000	2	6	3,200	22,000	61,000
Die on Farm - Render	5,500	0	1	1,200	8,200	23,000
Die on Farm - No Render	970	0	0	210	1,400	4,000
ID50 Sources						
From Slaughter	1,900,000	24	550	410,000	2,800,000	7,800,000
From Death on Farm	38,000,000	0	10,000	8,100,000	57,000,000	160,000,000
Disposition of ID50s						
1 To Prohibited MBM	3,300,000	0	0	660,000	4,900,000	14,000,000
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	36,000,000	230	9,300	7,700,000	54,000,000	150,000,000
4 To NP MBM - Contamination	28	0	0	3.6	40	130
5 To NP MBM - Mislabeling	680,000	2.6	130	150,000	1,000,000	2,800,000
6 Out After Rendering	1,300,000	0.078	100	280,000	1,900,000	5,200,000
7 To Prohibited Feed	2,200,000	0	0	450,000	3,300,000	9,300,000
8 To NP Feed - Misdirected	330,000	0.14	10	75,000	490,000	1,300,000
9 To NP Feed - Contamination	29	0	0	3.7	41	130
10 To NP Feed - Mislabeling	140,000	0	0	29,000	190,000	590,000
11 To Blood	2,100	0	0.16	450	3,100	8,500
12 Out After Feed Production	2,300,000	0	0.18	470,000	3,400,000	9,700,000
13 Misfed to Cattle	34,000	0	0	4,900	51,000	140,000
14 Total to Cattle	380,000	0.089	8.7	82,000	570,000	1,600,000
15 Total Potential to Humans	84,000	0.00071	23	18,000	130,000	350,000
Potential Human Exposure						
Brain	11,000	0	0	2,000	16,000	44,000
Spinal Cord	3,900	0	0	690	5,200	16,000
Blood	110	0	0	19	150	480
Distal Ileum	2,400	0	0	540	3,500	10,000
Contaminated Organ Meat	33	0	0	5.9	46	140
Eyes	0.66	0	0	0.1	0.93	2.9
Contaminated Muscle Meat	160	0.000028	0.078	35	240	650
AMR	40,000	0	0.43	8,400	60,000	170,000
Beef on Bone	26,000	0	23	5,700	40,000	110,000
Trigeminal Ganglia	0	0	0	0	0	0

**USA - SRM Ban
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	11	10	10	10	11	12
Total Infected w/o Imports	0.51	0	0	0	1	2
Total Clinical	4.5	2	3	4	6	7
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0.49	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	0.007	0	0	0	0	0
Blood	0.007	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	5.6	3	5	6	7	8
Die on Farm - Render	0	0	0	0	0	0
Die on Farm - No Render	4.9	2	4	5	6	8
ID50 Sources						
From Slaughter	1,200	260	520	780	1,300	3,000
From Death on Farm	0	0	0	0	0	0
Disposition of ID50s						
1 To Prohibited MBM	2.7	0.052	0.52	1.1	2.3	11
2 Eliminated by SRM ban	1,100	250	500	760	1,200	3,000
3 Eliminated by Rendering	31	4.6	12	20	31	93
4 To NP MBM - Contamination	0.000043	0	0	0	0	0
5 To NP MBM - Mislabeling	0.12	0	0	0	0	0.45
6 Out After Rendering	1	0	0.00073	0.1	0.61	5.1
7 To Prohibited Feed	1.7	0.00049	0.11	0.61	1.3	7.8
8 To NP Feed - Misdirected	0.0048	0	0	0	0	5.3E-6
9 To NP Feed - Contamination	0.000058	0	0	0	0	0
10 To NP Feed - Mislabeling	0.065	0	0	0	0	0.11
11 To Blood	0.3	0	0.029	0.14	0.34	0.83
12 Out After Feed Production	2	0.012	0.28	0.88	1.7	8.6
13 Misfed to Cattle	0.039	0	0	0	0	0
14 Total to Cattle	0.11	0	0	0	0.011	0.35
15 Total Potential to Humans	1.7	0.00076	0.0031	0.08	0.42	6.2
Potential Human Exposure						
Brain	0	0	0	0	0	0
Spinal Cord	0	0	0	0	0	0
Blood	0.01	0	0	0	0	0.046
Distal Ileum	0	0	0	0	0	0
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0	0	0	0	0	0
Contaminated Muscle Meat	0.079	0.00071	0.0021	0.018	0.079	0.23
AMR	0	0	0	0	0	0
Beef on Bone	1.6	0	0	0	0.096	6.1
Trigeminal Ganglia	0	0	0	0	0	0

**USA - No Rendering of Animals that Die on Farm
1000 Simulation Runs**

Label	Mean	5th	25th	50th	75th	95th
Epidemic Statistics						
Total Infected	11	10	10	10	11	12
Total Infected w/o Imports	0.68	0	0	0	1	2
Total Clinical	4.4	2	3	4	6	7
Probability N Infected > 0	0					
Mode of Infection						
Maternal	0.5	0	0	0	1	2
Spontaneous	0	0	0	0	0	0
Protein	0.17	0	0	0	0	0
Blood	0.007	0	0	0	0	0
Exogenous	0	0	0	0	0	0
Mode of Death						
Slaughter	5.9	3	5	6	7	9
Die on Farm - Render	0	0	0	0	0	0
Die on Farm - No Render	4.8	2	4	5	6	7
ID50 Sources						
From Slaughter	1,200	260	530	820	1,300	3,100
From Death on Farm	0	0	0	0	0	0
Disposition of ID50s						
1 To Prohibited MBM	110	2.5	26	48	84	380
2 Eliminated by SRM ban	0	0	0	0	0	0
3 Eliminated by Rendering	1,100	230	480	740	1,200	2,700
4 To NP MBM - Contamination	0.00033	0	0	0	0	0
5 To NP MBM - Mislabeling	4.3	0	0	0	0	25
6 Out After Rendering	37	0	0.08	3.3	26	250
7 To Prohibited Feed	69	0.099	3.5	28	53	280
8 To NP Feed - Misdirected	0.41	0	0	0	0	0.000069
9 To NP Feed - Contamination	0.00074	0	0	0	0	0
10 To NP Feed - Mislabeling	2.5	0	0	0	0	8
11 To Blood	0.3	0	0.036	0.16	0.37	0.81
12 Out After Feed Production	71	0.27	4.9	28	54	280
13 Misfed to Cattle	0.8	0	0	0	0	0
14 Total to Cattle	1.4	0	0	0	0.031	2.5
15 Total Potential to Humans	28	0.15	5.5	11	24	120
Potential Human Exposure						
Brain	6.9	0	0	0	0	0.045
Spinal Cord	1.9	0	0	0	0	0
Blood	0.021	0	0	0	0	0.11
Distal Ileum	0.57	0	0	0	0	0
Contaminated Organ Meat	0	0	0	0	0	0
Eyes	0.00046	0	0	0	0	0
Contaminated Muscle Meat	0.073	0.00072	0.0022	0.016	0.079	0.19
AMR	16	0.0062	5.1	10	16	51
Beef on Bone	1.9	0	0	0	0.71	23
Trigeminal Ganglia	0	0	0	0	0	0