APPENDIX I

MODEL INPUT DATA

RISKS FROM BSE INFECTIVITY IN DORSAL ROOT GANGLIA

a) Input Data for Probabilistic Variables

The variables shown below have been assigned distributions as input to the Monte Carlo simulation. All other variables have fixed values and are given in Section b) below.
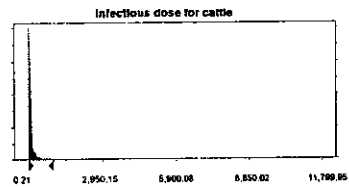
Crystal Ball Report
Simulation started on 01-7-31 at 17:36:08
Simulation stopped on 01-7-31 at 17:36:27

<u>Assumptions</u>

Assumption: Infectious dose for cattle

Lognormal distribution with parameters:
|	
Geometric Mean	50.00
95% - tile	1,000.00

Selected range is from 10.00 to 1,000.00
Mean value in simulation was 147.06

Assumption: Cattle human species barrier

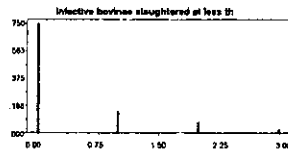| Custom distribution with parameters:		<u>Relative Prob.</u>
Single point	1.00	0.010000
Single point	10.00	0.250000
Single point	100.00	0.250000
Single point	1,000.00	0.250000
Single point	10,000.00	0.240000
Total Relative Probability		1.000000

Mean value in simulation was 2,677.51
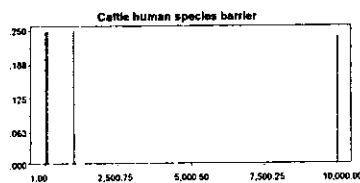
Assumption: Infective bovines slaughtered at less than 30 months

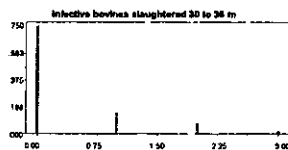| Custom distribution with parameters:		Relative Prob.
Single point	0.00	0.750000
Single point	1.00	0.150000
Single point	2.00	0.075000
Single point	3.00	0.025000
Total Relative Probability		1.000000

Mean value in simulation was 0.38

Assumption: Infective bovines slaughtered 30 to 36 months

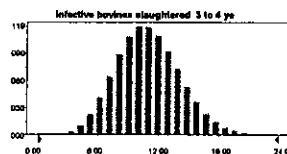| Custom distribution with parameters:		Relative Prob.
Single point	0.00	0.750000
Single point	1.00	0.150000
Single point	2.00	0.075000
Single point	3.00	0.025000
Total Relative Probability		1.000000

Mean value in simulation was 0.38

Assumption: Infective bovines slaughtered 3 to 4 yeears

Poisson distribution with parameters:
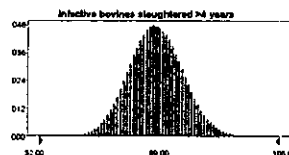Rate   11.00

Selected range is from 0.00 to +Infinity
Mean value in simulation was 11.00

Assumption: Infective bovines slaughtered >4 years

Poisson distribution with parameters:
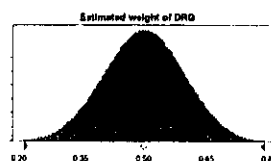Rate   68.00

Selected range is from 0.00 to +Infinity
Mean value in simulation was 68.00

Assumption: Estimated weight of DRG

Normal distribution with parameters:
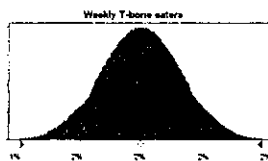Mean   0.50
Standard Dev.   0.10

Selected range is from 0.00 to +Infinity
Mean value in simulation was 0.50

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Assumption: Weekly T-bone eaters

Normal distribution with parameters:
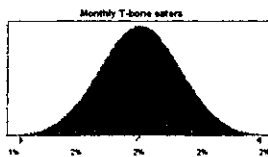   Mean   2%
    Standard Dev,   0%

Selected range is from 0% to +Infinity
Mean value in simulation was 2%

Assumption: Monthly T-bone eaters

Normal distribution with parameters:
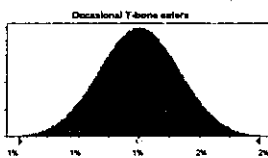   Mean   2%
    Standard Dev.   0%

Selected range is from 0% to +Infinity
Mean value in simulation was 2%

Assumption: Occasional T-bone eaters

Normal distribution with parameters:
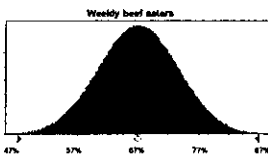   Mean   1%
    Standard Dev.   0%

Selected range is from -Infinity to +Infinity
Mean value in simulation was 1%

Assumption: Weekly beef eaters

Normal distribution with parameters:
    Mean   67%
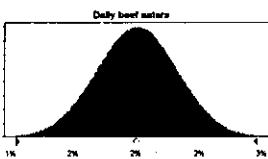   Standard Dev.   7%

Selected range is from 0% to 100%
Mean value in simulation was 67%

Assumption: Daily beef eaters

Normal distribution with parameters:
    Mean   2%
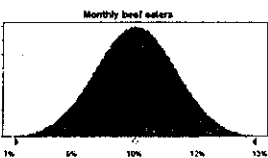   Standard Dev.   0%

Selected range is from -Infinity to +Infinity
Mean value in simulation was 2%

Assumption: Monthly beef eaters

Normal distribution with parameters:
    Mean   10%
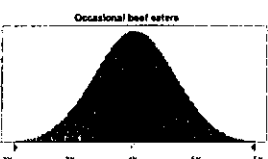   Standard Dev.   1%

Selected range is from -Infinity to +Infinity
Mean value in simulation was 10%

Assumption: Occasional beef eaters

Normal distribution with parameters:
    Mean   4%
    Standard Dev.   0%

Selected range is from -Infinity to +Infinity
Mean value in simulation was 4%

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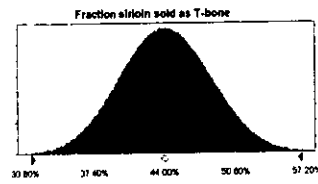### Assumption: Fraction sirloin sold as T-bone

Normal distribution with parameters:
Mean   44.00%
Standard Dev.   4.40%

Selected range is from -Infinity to +Infinity
Mean value in simulation was 44.00%

Fraction sirloin sold as T-bone

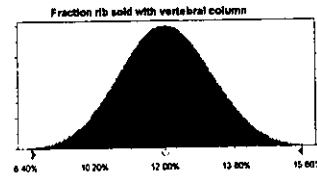### Assumption: Fraction rib sold with vertebral column

Normal distribution with parameters:
Mean   12.00%
Standard Dev.   1.20%

Selected range is from -Infinity to +Infinity
Mean value in simulation was 12.00%

Fraction rib sold with vertebral column
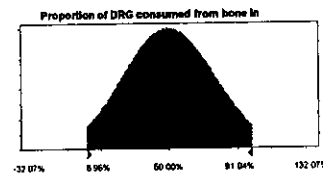
Assumption: Proportion of DRG consumed from bone in

Normal distribution with parameters:
5% - tile   5.00%
95% - tile   95.00%

Selected range is from 0.00% to 100.00%
Mean value in simulation was 50.00%

Proportion of DRG consumed from bone in

End of Assumptions

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b) Input Data for Fixed Variables

Age Profile of Cattle Slaughtered in 2000 (as Table 2.1)

Proportion of domestic consumption from export plant: 33.3%

Age range	Domestic consumption		Export approved meat plants		Total
1. Less than 30 months	177,330	86.2%	791,431	45.4%	909,651
2. 30 to 36 months	18,070	8.8%	395,063	22.7%	407,110
3. 3 years to 4 years	7,535	3.7%	230,309	13.2%	235,332
4. Greater than 4 years	2,769	1.3%	326,409	18.7%	328,255
	205,704		**1,743,212**		**1,880,348**

DRG in Carcase

Number of DRG in split carcase	31	
DRG in Sirloin section	9	29.0%
DRG in forerib section	4	12.9%
Remaining DRG	18	58.1%

Exposure to DRG

	Case1	Case 2
Proportion of DRG removed with bone	99.0%	99.9%

Irish Population in 2000: 3,626,087 (1996 census)

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