

Appendix 1

Frequency distribution of 264 animals examined by potential risk factors

1.3 localities

| Risk factors | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|-----------|---------|---------------|--------------------|
| Valid | Aljabel | 34 | 12.9 | 12.9 | 12.9 |
| | Ombeda | 24 | 9.1 | 9.1 | 22.0 |
| | Omdurman | 22 | 8.3 | 8.3 | 30.3 |
| | East Nile | 184 | 69.7 | 69.7 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

2.3 breed:

| Risk factors | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-------|-----------|---------|---------------|--------------------|
| Valid | local | 46 | 17.4 | 17.4 | 17.4 |
| | cross | 218 | 82.6 | 82.6 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

3.3 Sex

| Risk factors | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|--------|-----------|---------|---------------|--------------------|
| Valid | female | 220 | 83.3 | 83.3 | 83.3 |
| | male | 44 | 16.7 | 16.7 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

4.3 Age of animals

| Risk factor S | | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | 1to4 | 23 | 8.7 | 8.7 | 8.7 |
| | Less1 | 32 | 12.1 | 12.1 | 20.8 |
| | more4 | 209 | 79.2 | 79.2 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

5.3 Body condition of the animals

| Risk factor S | | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | good | 6 | 2.3 | 2.3 | 2.3 |
| | poor | 129 | 48.9 | 48.9 | 51.1 |
| | Vgood | 129 | 48.9 | 48.9 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

6.3 P.C.V

| Risk factors | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | low | 101 | 38.3 | 38.3 | 38.3 |
| | moderate | 121 | 45.8 | 45.8 | 84.1 |
| | high | 42 | 15.9 | 15.9 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

7.3 Herd size

| Risk factor | S | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|----------|------------------|----------------|----------------------|---------------------------|
| Valid | 5to10 | 6 | 2.3 | 2.3 | 2.3 |
| | more10 | 258 | 97.7 | 97.7 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

8.3 Other disease

| Risk factor | S | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|----------|------------------|----------------|----------------------|---------------------------|
| Valid | no | 109 | 41.3 | 41.3 | 41.3 |
| | yes | 155 | 58.7 | 58.7 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

9.3 Grazing system

| Risk factors | S | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------|----------|------------------|----------------|----------------------|---------------------------|
| Valid | Indoor | 242 | 91.7 | 91.7 | 91.7 |
| | Outdoor | 22 | 8.3 | 8.3 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

10.3 Other animals shared farm

| Risk factors | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|----------|-----------|---------|---------------|--------------------|
| Valid | No | 240 | 90.9 | 90.9 | 90.9 |
| | presence | 24 | 9.1 | 9.1 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

11.3 Farm hygiene

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-------|-----------|---------|---------------|--------------------|
| Valid | good | 9 | 3.4 | 3.4 | 3.4 |
| | poor | 255 | 96.6 | 96.6 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

12.3 Veterinary care

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|---------------|-----------|---------|---------------|--------------------|
| Valid | available | 149 | 56.4 | 56.4 | 56.4 |
| | Not available | 115 | 43.6 | 43.6 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

13.3 Surgical operation

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | no | 259 | 98.1 | 98.1 | 98.1 |
| | yes | 5 | 1.9 | 1.9 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

14.3 Source of animals

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | inbreed | 241 | 91.3 | 91.3 | 91.3 |
| | market | 23 | 8.7 | 8.7 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

15.3 Production status

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | Milk | 242 | 91.7 | 91.7 | 91.7 |
| | Beef | 22 | 8.3 | 8.3 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

16.3 Density of tick

| Risk factors | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid high | 249 | 94.3 | 94.3 | 94.3 |
| low | 15 | 5.7 | 5.7 | 100.0 |
| Total | 264 | 100.0 | 100.0 | |

17.3 Use acaricide for controlling

| Risk factors | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid no | 246 | 93.2 | 93.2 | 93.2 |
| use | 18 | 6.8 | 6.8 | 100.0 |
| Total | 264 | 100.0 | 100.0 | |

18.3 Control of tick frequency

| Risk factors | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------|-----------|---------|---------------|--------------------|
| Valid monthly | 34 | 12.9 | 12.9 | 12.9 |
| 2weekes | 230 | 87.1 | 87.1 | 100.0 |
| Total | 264 | 100.0 | 100.0 | |

19.3 Presence of insect

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|----------|-----------|---------|---------------|--------------------|
| Valid | Not pres | 163 | 61.7 | 61.7 | 61.7 |
| | pres | 101 | 38.3 | 38.3 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

20.3 Wild life in the area

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-------|-----------|---------|---------------|--------------------|
| Valid | no | 29 | 11.0 | 11.0 | 11.0 |
| | yes | 235 | 89.0 | 89.0 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

21.3 Vegetation

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-------|-----------|---------|---------------|--------------------|
| Valid | Poor | 230 | 87.1 | 87.1 | 87.1 |
| | Good | 34 | 12.9 | 12.9 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

22.3 Structure of farm

| Risk factor | | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|--------------|------------------|----------------|----------------------|---------------------------|
| Valid | Build | 175 | 66.3 | 66.3 | 66.3 |
| | wood | 56 | 21.2 | 21.2 | 87.5 |
| | metal | 33 | 12.5 | 12.5 | 100.0 |
| | Total | 264 | 100.0 | 100.0 | |

Appendix 2

Cross tabulation of 264 animals examined by potential risk factors

1.1.3 Locality

| | Locality | | | | Total |
|--------------|--------------------------|--------------------------|------------------------|---------------------------|-----------------------------|
| | Aljabel | Ombeda | Omdurman | East Nile | |
| Outcome _ve | 25 25/34*100 73.5% | 23 23/24*100 95.8% | 18 81.8% | 155 84.2% | 221 221/264*100 83.7% |
| +ve | 9 9/34*100 26.5% | 1 1/24*100 4.2% | 4 4/22*100 18.2% | 29 29/184*100 15.8% | 43 43/264*100 16.3% |
| Total | 34 | 24 | 22 | 184 | 264 |

1.2.3 Breed

| | Breed | | Total |
|--------------|--------------------------|-----------------------------|-----------------------------|
| | Local | cross | |
| outcome _ve | 41 41/46*100 89.1% | 180 180/218*100 82.6% | 221 221/264*100 83.7% |
| +ve | 5 5/46*100 10.9% | 38 38/218*100 17.4% | 43 43/264*100 16.3% |
| Total | 46 | 218 | 264 |

1.3.3 Sex

| | Sex | | Total | |
|---------|--------|-------------------------------|----------------------------|-------------------------------|
| | female | male | | |
| outcome | _ve | 184 $184/220*100$ 83.6% | 37 $37/44*100$ 84.1% | 221 $221/264*100$ 83.7% |
| | +ve | 36 $36/220*100$ 16.4% | 7 $7/44*100$ 15.9% | 43 $43/264*100$ 16.3% |
| Total | | 220 | 44 | 264 |

1.4.3 Age of animals

| | Age | | | Total | |
|---------|------|----------------------------|----------------------------|-------------------------------|-------------------------------|
| | Lto4 | Less1 | more4 | | |
| outcome | _ve | 19 $19/23*100$ 82.6% | 28 $28/32*100$ 87.5% | 174 $174/209*100$ 83.3% | 221 $221/264*100$ 83.7% |
| | +ve | 4 $4/23*100$ 17.4% | 4 $4/32*100$ 12.5% | 35 $35/209*100$ 16.7% | 43 $43/264*100$ 16.3% |
| Total | | 23 | 32 | 209 | 264 |

1.5.3 Body condition

| | Body condition | | | Total |
|--------------|-------------------------|-----------------------------|-------------------------------|-------------------------------|
| | Good | Poor | vgood | |
| outcome _ve | 5 $5/6*100$ 83.3% | 99 $99/129*100$ 76.7% | 117 $117/129*100$ 90.7% | 221 $221/264*100$ 83.7% |
| +ve | 1 $1/6*100$ 16.7% | 30 $30/129*100$ 23.3% | 12 $12/129*100$ 9.3% | 43 $43/264*100$ 16.3% |
| Total | 6 | 129 | 129 | 264 |

1.6.3 P.C.V

| | Pcv | | | Total |
|--------------|-----------------------------|-------------------------------|----------------------------|-------------------------------|
| | Low | moderate | high | |
| Outcome _ve | 73 $73/101*100$ 72.3% | 108 $108/121*100$ 89.3% | 40 $40/42*100$ 95.2% | 221 $221/264*100$ 83.7% |
| +ve | 28 $28/101*100$ 27.7% | 13 $13/121*100$ 10.7% | 2 $2/42*100$ 4.8% | 43 $43/264*100$ 16.3% |
| Total | 101 | 121 | 42 | 264 |

1.7.3 Herd size

| | Herd size | | Total |
|-------------|-------------------------|-------------------------------|-------------------------------|
| | 5to10 | more10 | |
| outcome _ve | 5 $5/6*100$ 83.3% | 216 $216/258*100$ 83.7% | 221 $221/264*100$ 83.7% |
| +ve | 1 $1/6*100$ 16.7% | 42 $42/258*100$ 16.3% | 43 $43/264*100$ 16.3% |
| Total | 6 | 258 | 264 |

1.8.3 Other disease

| | other disease | | Total |
|-------------|-----------------------------|-------------------------------|-------------------------------|
| | No | yes | |
| outcome _ve | 93 $93/109*100$ 85.3% | 128 $128/155*100$ 82.6% | 221 $221/264*100$ 83.7% |
| +ve | 16 $16/109*100$ 14.7% | 27 $27/155*100$ 17.4% | 43 $43/264*100$ 16.3% |
| Total | 109 | 155 | 264 |

1.9.3 Grazing system

| | grazing system | | Total |
|-------------|-------------------------------|-----------------------------|-------------------------------|
| | indoor | outdoor | |
| outcome _ve | 203 $203/242*100$ 83.9% | 18 $18/22*100$ 81.8% | 221 $221/264*100$ 83.7% |
| | +ve | 39 $39/242*100$ 16.1% | 4 $4/22*100$ 18.2% |
| Total | 242 | 22 | 264 |

10.1.3 Other animals in farm

| | other animals in farm | | Total |
|-------------|-------------------------------|-----------------------------|-------------------------------|
| | No | presence | |
| outcome _ve | 198 $198/240*100$ 82.5% | 23 $23/24*100$ 95.8% | 221 $221/264*100$ 83.7% |
| | +ve | 42 $42/240*100$ 17.5% | 1 $1/24*100$ 4.2% |
| Total | 240 | 24 | 264 |

11.1.3 Farm hygiene

| | farm hygiene | | Total |
|---------------------------------|--------------------------|-------------------------------|-------------------------------|
| | Good | poor | |
| outcome _ve Count | 9 $9/9*100$ 100.0% | 212 $212/255*100$ 83.1% | 221 $221/264*100$ 83.7% |
| +ve Count | 0 $0/9*100$.0% | 43 $43/255*100$ 16.9% | 43 $43/264*100$ 16.3% |
| Total | 9 | 255 | 264 |

12.1.3 Veterinary care

| | veterinary care | | Total |
|--------------------|-------------------------------|-----------------------------|-------------------------------|
| | available | Not available | |
| outcome _ve | 125 $125/149*100$ 83.9% | 96 $96/115*100$ 83.5% | 221 $221/264*100$ 83.7% |
| +ve | 24 $24/149*100$ 16.1% | 19 $19/155*100$ 16.5% | 43 $43/264*100$ 16.3% |
| Total | 149 | 115 | 264 |

13.1.3 Surgical operation

| | surgical operation | | Total |
|--------------|-------------------------------|--------------------------|-------------------------------|
| | No | yes | |
| outcome _ve | 216 $216/259*100$ 83.4% | 5 $5/5*100$ 100.0% | 221 $221/264*100$ 83.7% |
| +ve | 43 $43/259*100$ 16.6% | 0 $0/5*100$.0% | 43 $43/264*100$ 16.3% |
| Total | 259 | 5 | 264 |

14.1.3 Source of animals

| | source of animals | | Total |
|--------------|-------------------------------|----------------------------|-------------------------------|
| | inbreed | market | |
| outcome _ve | 202 $202/241*100$ 83.8% | 19 $19/23*100$ 82.6% | 221 $221/264*100$ 83.7% |
| +ve | 39 $39/241*100$ 16.2% | 4 $4/23*100$ 17.4% | 43 $43/264*100$ 16.3% |
| Total | 241 | 23 | 264 |

15.1.3 Production status

| | production status | | Total | |
|---------|-------------------|-------------------------------|----------------------------|-------------------------------|
| | Milk | beef | | |
| outcome | _ve | 203 $203/242*100$ 83.9% | 18 $18/22*100$ 81.8% | 221 $221/264*100$ 83.7% |
| | +ve | 39 $39/242*100$ 16.1% | 4 $4/22*100$ 18.2% | 43 $43/264*100$ 16.3% |
| Total | | 242 | 22 | 264 |

16.1.3 Density of tick

| | density of tick | | Total | |
|---------|-----------------|-------------------------------|-----------------------------|-------------------------------|
| | High | low | | |
| outcome | _ve | 206 $206/249*100$ 82.7% | 15 $15/15*100$ 100.0% | 221 $221/264*100$ 83.7% |
| | +ve | 43 $43/249*100$ 17.3% | 0 $0/15*100$.0% | 43 $43/264*100$ 16.3% |
| Total | | 249 | 15 | 264 |

17.1.3 Use acaricide for controlling

| | Use acaricide for controlling | | Total |
|-------------|-------------------------------|----------------------------|-------------------------------|
| | No | use | |
| outcome _ve | 204 $204/246*100$ 82.9% | 17 $17/18*100$ 94.4% | 221 $221/264*100$ 83.7% |
| +ve | 42 $42/246*100$ 17.1% | 1 $1/18*100$ 5.6% | 43 $43/264*100$ 16.3% |
| Total | 246 | 18 | 264 |

18.1.3 Control of tick frequency

| | control of tick frequency | | Total |
|-------------|----------------------------|-------------------------------|-------------------------------|
| | monthly | 2weekes | |
| outcome _ve | 25 $25/34*100$ 73.5% | 196 $196/230*100$ 85.2% | 221 $221/264*100$ 83.7% |
| +ve | 9 $9/34*100$ 26.5% | 34 $34/230*100$ 14.8% | 43 $43/264*100$ 16.3% |
| Total | 34 | 230 | 264 |

19.1.3 Presence of insect

| | Presence of insect | | Total |
|--------------|-------------------------------|-----------------------------|-------------------------------|
| | no | pres | |
| outcome _ve | 144 $144/163*100$ 88.3% | 77 $77/101*100$ 76.2% | 221 $221/264*100$ 83.7% |
| +ve | 19 $19/163*100$ 11.7% | 24 $24/101*100$ 23.8% | 43 $43/264*100$ 16.3% |
| Total | 163 | 101 | 264 |

20.1.3 Wild life in the area

| | wild life in the area | | Total |
|--------------|----------------------------|-------------------------------|-------------------------------|
| | No | yes | |
| outcome _ve | 24 $24/29*100$ 82.8% | 197 $197/235*100$ 83.8% | 221 $221/264*100$ 83.7% |
| +ve | 5 $5/29*100$ 17.2% | 38 $38/235*100$ 16.2% | 43 $43/264*100$ 16.3% |
| Total | 29 | 235 | 264 |

21.1.3 Vegetation

| | Vegetation cavity | | Total |
|--------------|-------------------|-------------|---------------|
| | Poor | good | |
| outcome _ve | 196 | 25 | 221 |
| | $196/230*100$ | $25/34*100$ | $221/264*100$ |
| | 85.2% | 73.5% | 83.7% |
| +ve | 34 | 9 | 43 |
| | $34/230*100$ | $9/34*100$ | $43/264*100$ |
| | 14.8% | 26.5% | 16.3% |
| Total | 230 | 34 | 264 |

22.1.3 Structure of farm

| | structure of farm | | | Total |
|--------------|-------------------|-------------|-------------|---------------|
| | Build | wood | metal | |
| outcome _ve | 149 | 43 | 29 | 221 |
| | $149/175*100$ | $43/56*100$ | $29/33*100$ | $221/264*100$ |
| | 85.1% | 76.8% | 87.9% | 83.7% |
| +ve | 26 | 13 | 4 | 43 |
| | $26/175*100$ | $13/56*100$ | $4/33*100$ | $43/264*100$ |
| | 14.9% | 23.2% | 12.1% | 16.3% |
| Total | 175 | 56 | 33 | 264 |

Appendix 3

The association between anaplasmosis and potential risk factors using the Chi- square (χ^2) test

1.2.3 Localities

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 5.267 ^a | 3 | .153 |
| Likelihood Ratio | 5.844 | 3 | .119 |
| Linear-by-Linear Association | .582 ^c | 1 | .446 |
| N of Valid Cases | 264 | | |

2.2.3 Breed

| | Value | Df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 1.199 ^a | 1 | .273 |
| Likelihood Ratio | 1.303 | 1 | .254 |
| Linear-by-Linear Association | 1.195 ^c | 1 | .274 |
| N of Valid Cases | 264 | | |

3.2.3 Sex

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .006 ^a | 1 | .941 |
| Likelihood Ratio | .006 | 1 | .940 |
| Linear-by-Linear Association | .006 ^c | 1 | .941 |
| N of Valid Cases | 264 | | |

4.2.3 Age

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .390 ^a | 2 | .823 |
| Likelihood Ratio | .413 | 2 | .813 |
| Linear-by-Linear Association | .036 ^c | 1 | .850 |
| N of Valid Cases | 264 | | |

5.2.3 Body condition

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 9.211 ^a | 2 | .010 |
| Likelihood Ratio | 9.472 | 2 | .009 |
| Linear-by-Linear Association | 7.675 ^c | 1 | .006 |
| N of Valid Cases | 264 | | |

6.2.3 P.C.V

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 16.506 ^a | 2 | .000 |
| Likelihood Ratio | 16.773 | 2 | .000 |
| Linear-by-Linear Association | 15.120 ^c | 1 | .000 |
| N of Valid Cases | 264 | | |

7.2.3 Herd size

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .001 ^a | 1 | .980 |
| Likelihood Ratio | .001 | 1 | .980 |
| Linear-by-Linear Association | .001 ^c | 1 | .980 |
| N of Valid Cases | 264 | | |

8.2.3 Other disease

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .352 ^a | 1 | .553 |
| Likelihood Ratio | .356 | 1 | .551 |
| Linear-by-Linear Association | .351 ^c | 1 | .553 |
| N of Valid Cases | 264 | | |

9.2.3 Grazing system

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .063 ^a | 1 | .802 |
| Likelihood Ratio | .061 | 1 | .804 |
| Linear-by-Linear Association | .063 ^c | 1 | .802 |
| N of Valid Cases | 264 | | |

10.2.3 Other animals in farm

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.845 ^a | 1 | .092 |
| Likelihood Ratio | 3.747 | 1 | .053 |
| Linear-by-Linear Association | 2.834 ^c | 1 | .092 |
| N of Valid Cases | 264 | | |

11.2.3 Farm hygiene

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 1.813 ^a | 1 | .178 |
| Likelihood Ratio | 3.261 | 1 | .071 |
| Linear-by-Linear Association | 1.806 ^c | 1 | .179 |
| N of Valid Cases | 264 | | |

12.2.3 Veterinary care

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .008 ^a | 1 | .928 |
| Likelihood Ratio | .008 | 1 | .928 |
| Linear-by-Linear Association | .008 ^c | 1 | .928 |
| N of Valid Cases | 264 | | |

13.2.3 Source of animals

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .022 ^a | 1 | .881 |
| Likelihood Ratio | .022 | 1 | .882 |
| Linear-by-Linear Association | .022 ^c | 1 | .881 |
| N of Valid Cases | 264 | | |

14.2.3 Production status

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .063 ^a | 1 | .802 |
| Likelihood Ratio | .061 | 1 | .804 |
| Linear-by-Linear Association | .063 ^c | 1 | .802 |
| N of Valid Cases | 264 | | |

15.2.3 Density of tick

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 3.094 ^a | 1 | .079 |
| Likelihood Ratio | 5.507 | 1 | .019 |
| Linear-by-Linear Association | 3.083 ^c | 1 | .079 |
| N of Valid Cases | 264 | | |

16.2.3 Use acaricide

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 1.632 ^a | 1 | .201 |
| Likelihood Ratio | 2.060 | 1 | .151 |
| Linear-by-Linear Association | 1.626 ^c | 1 | .202 |
| N of Valid Cases | 264 | | |

17.2.3 Control frequency

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.968 ^a | 1 | .085 |
| Likelihood Ratio | 2.648 | 1 | .104 |
| Linear-by-Linear Association | 2.957 ^c | 1 | .086 |
| N of Valid Cases | 264 | | |

18.2.3 Presence insect

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 6.703 ^a | 1 | .010 |
| Likelihood Ratio | 6.521 | 1 | .011 |
| Linear-by-Linear Association | 6.677 ^c | 1 | .010 |
| N of Valid Cases | 264 | | |

19.2.3 Wild life in the area

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .022 ^a | 1 | .883 |
| Likelihood Ratio | .021 | 1 | .884 |
| Linear-by-Linear Association | .022 ^c | 1 | .883 |
| N of Valid Cases | 264 | | |

20.2.3 Vegetation cavity

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.968 ^a | 1 | .085 |
| Likelihood Ratio | 2.648 | 1 | .104 |
| Linear-by-Linear Association | 2.957 ^c | 1 | .086 |
| N of Valid Cases | 264 | | |

21.2.3 Structure of farms

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.653 ^a | 2 | .265 |
| Likelihood Ratio | 2.508 | 2 | .285 |
| Linear-by-Linear Association | .071 ^c | 1 | .790 |
| N of Valid Cases | 264 | | |