Table 1a. Questionnaire variables and their proportions for descriptive purposes.

Cases = EGGD present (horses with pure EGGD and horses with EGGD and ESDG); controls = healthy horses and horses with ESGD without EGGD; n= number of responses for each variable; CI = confidence interval.

| No | Variable            | Cases          | Controls       |
|----|---------------------|----------------|----------------|
|    |                     | n | % (95% CI) | n | % (95% CI) |
| 1  | Age (years)         | 83 | 34          |
|    | 1-3                 | 1  | 1.2 (0.1-05.5) | 1  | 2.9 (0.3-12.9) |
|    | 4-6                 | 18 | 21.7 (13.9-31.4) | 6  | 17.6 (7.7-32.8) |
|    | 7-10                | 32 | 38.6 (28.6-49.3) | 13 | 38.2 (23.4-55.0) |
|    | 11-15               | 20 | 24.1 (15.9-34.1) | 10 | 29.4 (16.2-45.9) |
|    | 16-20               | 10 | 12.0 (6.4-20.3)  | 2  | 5.9 (1.2-17.6)  |
|    | 21-25               | 2  | 2.4 (0.5-7.5)    | 2  | 5.9 (1.2-17.6)  |
| 2  | Breed               | 82 | 34          |
|    | Icelandic horse     | 1  | 1.2 (0.1-5.6)   | 1  | 2.9 (0.3-12.9)  |
|    | Standardbred        | 4  | 4.9 (1.7-11.2)  | 3  | 8.8 (2.5-21.7)  |
|    | Other breed         | 5  | 6.1 (2.4-12.8)  | 5  | 14.7 (5.8-29.3) |
|    | Pony                | 3  | 3.7 (0.1-9.4)   | 7  | 20.6 (9.7-36.2) |
|    | Warmblood           | 52 | 63.4 (52.7-73.2)| 15 | 44.1 (28.5-60.7)|
|    | Finnhorse           | 17 | 20.7 (13.1-30.4)| 3  | 8.8 (2.5-21.7)  |
| 3  | Sex                 | 83 | 34          |
|    | Male                | 47 | 56.6 (45.9-66.9)| 21 | 61.8 (45.0-76.6)|
|    | Female              | 36 | 43.4 (33.1-54.1)| 13 | 38.2 (23.4-55.0)|
| 4  | Forage location     | 83 | 34          |
|    | Ground              | 66 | 79.5 (69.9-87.1)| 27 | 79.4 (63.8-90.3)|
|    | Bucket              | 10 | 15.2 (6.4-20.3) | 3  | 8.8 (2.5-21.7)  |
|    | Haynet              | 7  | 8.4 (3.9-15.8)  | 4  | 11.8 (1.4-25.6) |
| 5  | Eating habits       | 83 | 34          |
|    | With other horses   | 22 | 26.5 (17.9-36.7)| 7  | 20.6 (9.7-36.2) |
|    | Alone               | 55 | 66.3 (55.7-75.7)| 24 | 70.6 (54.1-83.8)|
|    | Other               | 6  | 7.2 (3.1-14.3)  | 3  | 8.8 (2.5-21.7)  |
| 6  | Water source at the stable | 83 | 34 |
|    | Ground well         | 45 | 54.2 (43.5-64.6)| 18 | 52.9 (36.5-68.9)|
|    | Communal            | 37 | 44.6 (34.2-55.3)| 16 | 47.1 (31.1-63.5)|
| 7  | Water source at the paddock | 78 | 34 |
|    | Ground well         | 40 | 51.3 (40.3-62.2)| 19 | 55.9 (39.3-71.5)|
|    | Communal            | 34 | 43.6 (33.0-54.7)| 12 | 38.2 (23.4-55.0)|
|    | Other               | 4  | 5.1 (1.8-11.7)  | 2  | 5.9 (1.2-17.6)  |
| Column                                                                 | Frequency | Min-Max | Column                                                                 | Frequency | Min-Max |
|-----------------------------------------------------------------------|-----------|---------|-----------------------------------------------------------------------|-----------|---------|
| **8** Water                                                            | 83        |         | From a bucket                                                         | 63        | 75.9 (65.9-84.1) | 24        | 70.6 (54.1-83.8) |
| From an automat                                                        | 20        | 24.1 (15.9-34.1) | 10        | 29.4 (16.2-45.9) |
| **9** Living location                                                  | 83        |         | Loose housing system                                                  | 5         | 6.0 (2.3-12.7)   | 2         | 5.9 (1.2-17.6)   |
| Stable                                                                | 77        | 92.8 (85.7-96.9) | 32        | 94.1 (82.4-98.8) |
| Other                                                                 | 1         | 1.2 (0.1-5.6)   | 0         | 0.0 (0.0-7.1)    |
| **10** Stable cleaning freq.                                          | 82        |         | Once a day                                                           | 54        | 65.9 (55.2-75.4) | 30        | 88.2 (74.4-95.9) |
| Twice a day                                                            | 24        | 29.3 (20.3-39.7) | 4         | 11.8 (4.1-25.6)  |
| 3 times a day                                                          | 1         | 1.2 (0.1-5.6)   | 0         | 0.0 (0.0-7.1)    |
| Less than once a day                                                  | 3         | 3.7 (1.0-9.4)   | 0         | 0.0 (0.0-7.1)    |
| **11** Bedding material                                                | 83        |         | Other                                                                | 4         | 4.8 (1.6-11.1)   | 2         | 5.9 (1.2-17.6)   |
| Peat                                                                  | 39        | 47.0 (36.5-57.7) | 16        | 47.1 (31.1-63.5) |
| Shavings                                                              | 20        | 24.1 (15.9-34.1) | 6         | 17.6 (7.7-32.8)  |
| Straw/straw pellets                                                   | 18        | 21.7 (13.9-31.4) | 10        | 29.4 (16.2-45.9) |
| Woodchips                                                             | 1         | 1.2 (0.1-5.5)   | 0         | 0.0 (0.0-7.1)    |
| Other                                                                  | 1         | 1.2 (0.1-5.5)   | 0         | 0.0 (0.0-7.1)    |
| **12** No of horses in the stable                                      | 82        |         | 15                                                                   | 20        | 24.4 (16.1-34.5) | 9         | 27.3 (14.4-43.9) |
| 21                                                                    | 31        | 37.8 (27.9-48.6) | 6         | 18.2 (8.0-33.7)  |
| 3                                                                     | 12        | 14.6 (8.3-23.5)  | 7         | 21.2 (10.0-37.2) |
| 7                                                                     | 19        | 23.2 (15.1-33.1) | 11        | 33.3 (19.2-50.3) |
| No other horses                                                       | 1         | 1.2 (0.1-5.6)   | 1         | 3.0 (0.3-13.3)   |
| **13** No of caretakers                                                | 83        |         | 1                                                                     | 14        | 16.9 (10.0-26.0) | 5         | 14.7 (5.8-29.3)  |
| 2                                                                     | 29        | 34.9 (25.3-45.6) | 13        | 38.2 (23.4-55.0) |
| 3                                                                     | 23        | 27.7 (19.0-38.0) | 10        | 29.4 (16.2-45.9) |
| 4                                                                     | 11        | 13.3 (7.3-21.8)  | 2         | 5.9 (1.2-17.6)   |
| **14** No of owners (horse’s history)                                  | 77        |         | 1                                                                     | 14        | 18.2 (10.8-27.9) | 5         | 16.7 (6.7-32.7)  |
| 2                                                                     | 29        | 37.7 (27.5-48.8) | 13        | 43.3 (26.9-61.0) |
| 3                                                                     | 23        | 29.9 (20.5-40.7) | 10        | 33.3 (18.6-51.1) |
| 4                                                                     | 11        | 14.3 (7.8-23.4)  | 2         | 6.7 (1.4-19.7)   |
| **15** Contact with other stables                                     | 82        |         | No                                                                    | 67        | 81.7 (72.3-88.9) | 29        | 87.9 (73.7-95.8) |
| Yes                                                                   | 15        | 18.3 (11.1-27.7) | 4         | 12.1 (4.2-26.3)  |
|   | Stable change |   |   |
|---|---------------|---|---|
| No | 40            | 48.8 (38.2-59.5) | 15 | 45.5 (29.4-62.2) |
| Yes| 42            | 51.2 (40.5-61.8) | 18 | 54.5 (37.8-70.6) |
|   | Traveling abroad |   |   |
| No | 75            | 90.4 (82.6-95.3) | 30 | 90.9 (77.7-97.4) |
| Yes| 8             | 9.6 (4.7-17.4)   | 3  | 9.1 (2.6-22.3)   |
|   | Transporting frequency |   |   |
| Very seldom | 17 | 20.5 (12.9-30.1) | 9  | 26.5 (14.0-42.8) |
| Less than once/month | 27 | 32.5 (23.2-43.1) | 13 | 38.2 (23.4-55.0) |
| Once/month | 32  | 38.6 (28.6-49.3) | 9  | 26.5 (14.0-42.8) |
| Once/week | 7  | 8.4 (3.9-15.8)   | 3  | 8.8 (2.5-21.7)   |
|   | Time spent outdoors at one time/h |   |   |
| 2 | 3             | 4.0 (1.1-10.3)   | 0  | 0.0 (0.0-7.1)    |
| 4 | 27            | 36.0 (25.8-47.2) | 9  | 26.5 (14.0-42.8) |
| 6 | 48            | 64.0 (52.8-74.2) | 22 | 64.7 (48.0-79.1) |
| free access | 5 | 6.7 (2.4-14.0)   | 3  | 8.8 (2.5-21.7)   |
|   | Sand paddock |   |   |
| No | 66            | 79.5 (69.9-87.1) | 24 | 70.6 (54.1-83.8) |
| Yes| 17            | 20.5 (12.9-30.1) | 10 | 29.4 (16.2-45.9) |
|   | Grass paddock |   |   |
| No | 66            | 79.5 (69.9-87.1) | 25 | 73.5 (57.2-86.0) |
| Yes| 17            | 20.5 (12.9-30.1) | 9  | 26.5 (14.0-42.8) |
|   | Access to pasture |   |   |
| No | 16            | 19.3 (11.9-28.7) | 3  | 8.8 (2.5-21.7)   |
| Yes| 67            | 80.7 (71.3-88.1) | 31 | 91.2 (78.3-97.5) |
|   | Other paddock type |   |   |
| No | 7             | 8.4 (3.9-15.8)   | 3  | 8.8 (2.5-21.7)   |
| Yes| 76            | 91.6 (84.2-96.1) | 32 | 91.2 (78.3-97.5) |
|   | On paddock |   |   |
| With many other horses | 23 | 28.0 (19.2-38.4) | 7  | 20.6 (9.7-36.2)   |
| With one other horse | 24 | 29.3 (20.3-39.7) | 9  | 26.5 (14.0-42.8) |
| Alone | 35  | 42.7 (32.4-53.5) | 18 | 52.9 (36.5-68.9) |
|   | Summer pasture |   |   |
| No | 16            | 19.5 (12.1-29.1) | 6  | 17.6 (7.7-32.8)  |
| Yes| 66            | 80.5 (70.9-87.9) | 28 | 82.4 (67.2-92.3) |
|   | Time at pasture/months |   |   |
| 0.5 | 12            | 17.1 (9.7-27.2)  | 3  | 10.7 (3.1-25.9)  |
|       |     |                  |     |                  |
|-------|-----|-----------------|-----|-----------------|
|       |     | 11.4 (5.6-20.4) |     | 10.7 (3.1-25.9) |
| 2     | 14  | 20.0 (12.0-30.5) | 5   | 17.9 (7.2-34.8) |
| 3     | 25  | 35.7 (25.2-47.3) | 11  | 39.3 (23.0-57.7) |
| 4     | 11  | 15.7 (8.6-25.5)  | 5   | 17.9 (7.2-34.8) |
| 5     | 0   | 0.0 (0.0-3.5)    | 1   | 3.6 (0.4-15.5)  |
| 27    |     | 69               | 27  |                 |
|       | 13  | 18.8 (11.0-29.2) | 7   | 25.9 (12.4-44.3) |
|       | 56  | 81.2 (70.8-89.0) | 20  | 74.1 (55.7-87.6) |
| 28    |     | 83               | 34  |                 |
|       | 43  | 51.8 (41.2-62.3) | 22  | 64.7 (87.1-99.7) |
|       | 40  | 48.2 (37.7-58.8) | 12  | 35.3 (20.9-52.0) |
| 29    |     | 50               | 15  |                 |
|       | 20  | 40.0 (27.3-53.8) | 6   | 40.0 (18.8-64.7) |
|       | 20  | 40.0 (27.3-53.8) | 6   | 40.0 (18.8-64.7) |
|       | 8   | 16.0 (7.9-27.9)  | 1   | 6.7 (0.7-27.2)  |
|       | 1   | 2.0 (0.2-9.0)    | 0   | 0.0 (0.0-15.2)  |
|       | 1   | 2.0 (0.2-9.0)    | 2   | 13.3 (2.9-36.3) |
| 30    |     | 82               | 34  |                 |
|       | 75  | 91.5 (84.1-96.1) | 33  | 97.1 (87.1-99.7) |
|       | 7   | 8.5 (3.9-16.0)   | 1   | 2.9 (0.3-12.9)  |
| 31    |     | 77               | 30  |                 |
|       | 23  | 29.9 (20.5-40.7) | 14  | 46.7 (29.8-64.1) |
|       | 32  | 41.6 (31.0-52.7) | 13  | 43.3 (26.9-61.0) |
|       | 17  | 22.1 (13.9-32.3) | 3   | 10.0 (2.4-24.3) |
|       | 2   | 2.6 (0.5-8.1)    | 0   | 0.0 (0.0-8.0)   |
|       | 3   | 3.9 (1.1-10.0)   | 0   | 0.0 (0.0-8.0)   |
| 32    |     | 71               | 31  |                 |
|       | 37  | 52.1 (40.6-63.5) | 18  | 58.1 (40.6-74.1) |
|       | 34  | 47.9 (36.5-59.4) | 13  | 41.9 (25.9-59.4) |
| 33    |     | 68               | 28  |                 |
|       | 56  | 82.3 (72.0-90.0) | 27  | 96.4 (84.5-99.6) |
|       | 12  | 17.6 (10.0-28.0) | 1   | 3.6 (0.4-15.5)  |
| 34    |     | 72               | 30  |                 |
|       | 52  | 72.2 (61.2-81.5) | 19  | 63.3 (45.5-78.7) |
|       | 20  | 27.8 (18.5-38.8) | 11  | 36.7 (21.3-54.5) |
| 35    |     | 72               | 31  |                 |
|       | 39  | 54.2 (42.7-65.3) | 16  | 51.6 (34.5-68.4) |
|       | 33  | 45.8 (34.7-57.3) | 15  | 48.4 (31.6-65.5) |
| 36    |     | 76               | 32  |                 |
|       | 47  | 61.8 (50.6-72.2) | 14  | 43.8 (27.7-60.9) |
|       | 29  | 38.2 (27.8-49.4) | 18  | 56.3 (39.1-72.3) |
|   | Diarrhoea |   |   |
|---|-----------|---|---|
|   | No        | 41 | 56.9 (45.4-67.9) |
|   | Yes       | 31 | 43.1 (32.1-54.6) |
|   |           | 72 |               |
|   |           | 32 |               |
|   | Positive FEC | 71 | 31 |
|   | No        | 62 | 87.3 (75.1-91.6) |
|   | Yes       | 9  | 12.7 (6.4-21.6)  |
|   |           | 72 |               |
|   |           | 32 |               |
|   | Deworming freq. | 81 | 34 |
|   | Less often than twice/year | 5  | 6.2 (2.4-13.0) |
|   | Twice/year | 53 | 65.4 (54.7-75.1) |
|   | 4 times/year | 21 | 25.9 (17.3-36.2) |
|   | More often than 4 times/year | 1  | 1.2 (0.1-5.6) |
|   | No deworming | 1  | 1.2 (0.1-5.7) |
|   |           | 81 |               |
|   |           | 34 |               |
|   | Use of antihelminthics | 83 | 34 |
|   | No        | 19 | 22.9 (14.9-32.8) |
|   | Yes       | 64 | 77.1 (67.2-85.1) |
|   |           | 49 |               |
|   |           | 21 |               |
|   | EHV vaccination | 47 | 18 |
|   | No        | 31 | 63.3 (43.9-75.7) |
|   | Yes       | 18 | 36.7 (24.3-50.7) |
|   |           | 47 |               |
|   |           | 18 |               |
|   | Rabies vaccination | 47 | 18 |
|   | No        | 34 | 72.3 (58.5-83.5) |
|   | Yes       | 13 | 27.7 (16.5-41.5) |
|   |           | 40 |               |
|   |           | 17 |               |
|   | Botulism vaccination | 40 | 17 |
|   | No        | 37 | 92.5 (83.1-97.8) |
|   | Yes       | 3  | 7.5 (2.2-18.7)  |
|   |           | 40 |               |
|   |           | 17 |               |
|   | Use of NSAIDs | 83 | 34 |
|   | No        | 52 | 62.7 (52.0-72.5) |
|   | Yes       | 31 | 37.3 (27.5-48.0) |
|   |           | 79 |               |
|   |           | 30 |               |
|   | Use of neutraceuticals for prevention of EGUS | 79 | 30 |
|   | No        | 61 | 77.2 (67.1-85.4) |
|   | Yes       | 18 | 22.8 (14.6-32.9) |
|   |           | 83 |               |
|   |           | 34 |               |
|   | Hay type | 83 | 34 |
|   | Hay       | 39 | 47.0 (36.5-57.7) |
|   | Haylage   | 20 | 24.1 (15.9-34.1) |
|   | Hay & haylage | 24 | 13 |
|   |           | 40 |               |
|   |           | 17 |               |
|   | Hay amount kg/d | 64 | 27 |
|   | 5-7       | 5  | 7.8 (3.0-16.3)  |
|   | 8-10      | 12 | 18.8 (10.7-29.6) |
|   | 10-12     | 30 | 46.9 (35.0-59.0) |
|   | >12       | 17 | 26.6 (16.9-38.2) |
|   |           | 64 |               |
|   |           | 27 |               |
|   | Concentrate amount | 56 | 20 |
|   |           | 30 |               |
| l/vrk       | # | Median (IQR) | # | Median (IQR) |
|------------|---|--------------|---|--------------|
| 0.2-0.9    | 7 | 12.5 (5.8-23.0) | 4 | 20.0 (7.2-40.8) |
| 1.0-1.5    | 9 | 16.1 (8.3-27.3) | 4 | 20.0 (7.2-40.8) |
| 1.6-2.0    | 10 | 17.9 (9.6-29.4) | 6 | 30.0 (13.6-51.7) |
| 2.1-2.5    | 2 | 3.6 (0.7-11.0) | 0 | 0.0 (0.0-0.117) |
| 2.6-3.0    | 7 | 12.5 (5.8-23.0) | 2 | 10.0 (2.1-28.4) |
| 3.1-3.5    | 1 | 1.8 (0.2-8.0) | 0 | 0.0 (0.0-0.117) |
| 3.6-4.0    | 7 | 12.5 (5.8-23.0) | 1 | 5.0 (0.5-21.1) |
| 4.1-4.5    | 5 | 8.9 (3.5-18.5) | 2 | 10.0 (2.1-28.4) |
| 4.6-5.0    | 3 | 5.4 (1.5-13.6) | 1 | 15.0 (4.4-34.9) |
| > 5.0      | 5 | 8.9 (3.5-18.5) | 0 | 0.0 (0.0-0.117) |

| 49 | Gastroscopy | 83 | 34 |
| 49 | Hospitalized | 17 | 14 | 41.2 (25.9-57.9) |
| 49 | Outpatient  | 66 | 20 | 58.8 (42.1-74.1) |