**Table S1.** Schedule of the study

|  |  |
| --- | --- |
| **Day** | **Scheduled operations** |
| **D -3** | Selection and housing of laying hens in the isolators(8 hens per isolator) |
|  | **Groups A and B** | **Groups C and D** |
| **D-3** | Hens’ acclimation | Hens’ acclimation |
| **D-2** | Hens’ acclimation | Hens’ acclimation |
| **D-1** | Hens’ acclimationCollection of fecal swabs§Collection of blood samples | Hens’ acclimationCollection of fecal swabs§Collection of blood samples |
| **D1** | Infection of hens with SG |  |
| **D2** | Clinical observation twice a day |  |
| **D3** | Clinical observation twice a day |  |
| **D4** | Clinical observation twice a day |  |
| **D5** | Clinical observation twice a dayBeginning of the mite starvation |  |
| **D6** | Clinical observation twice a day |  |
| **D7** | Clinical observation twice a day |  |
| **D8** | Collection of fecal swabs§Mite infestation*Removal of 5 dead hens\***Necropsy of the dead hens\***Collection of organ samples from the necropsied hens\** |  |
| **D9** | Collection of mite samples*Removal of 1 dead hen\***Necropsy of the dead hen\***Collection of organ samples from the necropsied hen\** |  |
| **D10** | Removal of traps and collection of mitescollection of fecal swabs§euthanasia of the survived hensnecropsyCollection of organs samples |  |
| **D11** | Collection of mites | Collection of fecal swabs§ |
| **D12** | Collection of residual mites | Infestation with mites collected from groups A and B on D10 |
| **D13** |  | Clinical observation twice a day |
| **D14** |  | Clinical observation twice a day |
| **D15** |  | Clinical observation twice a day |
| **D16** |  | Clinical observation twice a day |
| **D17** |  | Clinical observation twice a day |
| **D18** |  | Clinical observation twice a day |
| **D19** |  | Clinical observation twice a day |
| **D20** |  | Clinical observation twice a day*Removal of 4 dead hens\***Necropsy of the dead hens\***Collection of organ samples from the necropsied hens\** |
| **D21** |  | Clinical observation twice a day*Removal of 3 dead hens\***Necropsy of the dead hens\***Collection of organ samples from the necropsied hens\** |
| **D22** |  | Clinical observation twice a dayCollection of fecal swabs§Euthanasia of two randomly selected hens†Necropsy of euthanized hens†Collection of organ samples from necropsied hens† |
| **D23** |  | Clinical observation twice a day |
| **D24** |  | Clinical observation twice a day |
| **D25** |  | Clinical observation twice a day*Removal of 2 dead hens\***Necropsy of the dead hens\***Collection of organ samples from the necropsied hens\** |
| **D26** |  | Clinical observation twice a day |
| **D27** |  | Clinical observation twice a day |
| **D28** |  | Clinical observation twice a day |
| **D29** |  | Clinical observation twice a dayCollection of fecal swabs§Euthanasia of three randomly selected hens†Necropsy of euthanized hens†Collection of organ samples from necropsied hens*Removal of 1 dead hen\***Necropsy of the dead hen\** |
| **D30** |  | Clinical observation twice a day |
| **D31** |  | Clinical observation twice a day |
| **D32** |  | Clinical observation twice a day*Removal of 1 dead hen\***Necropsy of the dead hen\***Collection of organ samples from the necropsied hen\** |
| **D33** |  | Clinical observation twice a day |
| **D34** |  | Clinical observation twice a day |
| **D35** |  | Clinical observation twice a dayCollection of fecal swabs§Euthanasia of the survived hensNecropsy of euthanized hens Collection of organ samples from necropsied hens |
| **D36** | Collection of residual mites | Collection of residual mites |

§Fecal swabs were processed immediately after collection.

\*Operation performed but not scheduled because of spontaneous death of hens.

†Operation scheduled but not performed because of spontaneous death of hens.