Table S1: Colibacillosis-focused lesion scoring system used by all veterinarians performing necropsies on breeding and broiler farms during the trial.

|  |  |  |
| --- | --- | --- |
| Organ | Score | Lesions |
| Ovarian cluster | 0 | No visible lesion |
|  | 1 | Small quantity of fibrin on the organ surface |
|  | 2 | Clearly visible fibrin on the organ surface |
|  | 3 | Expansive fibrin deposits, salpingitis |
| Lungs | 0 | No visible lesion |
|  | 1 | Small quantity of fibrin on the organ surface |
|  | 2 | Clearly visible fibrin on the organ surface |
|  | 3 | Expansive fibrin deposits, cooked appearance of lungs et/or pulmonary haemorrhage |
| Air sac | 0 | No visible lesion |
|  | 1 | Thoracic and/or abdominal air sacs slightly covered with fibrin |
|  | 2 | Thoracic and/or abdominal air sacs completely covered with fibrin, with slight exudation |
|  | 3 | Air sacs completely covered with fibrin, with strong exudation |
| Heart | 0 | No visible lesion |
|  | 1 | Large quantity of hyaline liquid in the pericardial cavity |
|  | 2 | Turbid liquid in the pericardial cavity and/or opaque pericardial membrane |
|  | 3 | Large quantity of fibrin in the pericardial cavity |
| Liver | 0 | No visible lesion |
|  | 1 | Small quantity of fibrin on the organ surface |
|  | 2 | Clearly visible fibrin on the organ surface |
|  | 3 | Expansive fibrin deposits, hypertrophied liver and/or necrotic foci on the liver |

Table S2: Detailed average lesion scores from breeders, as noted over necropsy sessions (10 dead poultry per session).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Groups |  | Ovarian cluster | | Lungs | | Air sacs | | Heart | | Liver | | Average | |
| Site 1 | Site 2 | Site 1 | Site 2 | Site 1 | Site 2 | Site 1 | Site 2 | Site 1 | Site 2 | Site 1 | Site 2 |
| Vaccinated | 1 | 0,87 | 0,96 | 1,43 | 1,36 | 1,30 | 0,75 | 1,67 | 1,50 | 1,12 | 1,07 | 1,28 | 1,13 |
| 2 | 1,20 | 1,55 | 1,24 | 1,56 | 0,55 | 1,77 | 0,80 | 0,95 | 0,80 | 1,20 | 0,92 | 1,41 |
| 3 | 0,98 | 1,21 | 0,76 | 1,24 | 1,23 | 1,91 | 0,92 | 1,03 | 1,05 | 0,93 | 0,99 | 1,26 |
| Control | 1 | 1,28 | 1,39 | 0,85 | 1,58 | 1,78 | 1,83 | 0,98 | 2,78 | 2,33 | 1,50 | 1,44 | 1,82 |
| 2 | 2,10 | 2,35 | 1,67 | 2,10 | 2,20 | 2,25 | 2,13 | 2,41 | 2,28 | 2,32 | 2,08 | 2,29 |
| 3 | 2,57 | 2,40 | 2,44 | 2,58 | 2,15 | 2,79 | 2,50 | 2,14 | 2,76 | 1,97 | 2,48 | 2,38 |

Table S3: Average zootechnical performance and mortality rate of the broilers hatched to the vaccinated and non-vaccinated flocks involved in the trial.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Control groups | Vaccinated groups | Difference (%) | p-value |
| Mortality (%) | 3,07% | 2,55% | 20,39% | 0.001 |
| Body weight at slaughter (g) | 1,797 | 1,832 | 1,95% | 0.0001 |
| Feed Conversion Ratio (FCR) | 1,71 | 1,68 | -1,79% | 0.02 |

Table S4:Detailed average lesion scores from broilers hatched to vaccinated or control laying hens, as noted over necropsy sessions (10 dead poultry per session).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organ | Lungs | | Air sacs | | Heart | | Liver | | Global average | |
| Site | V | V | V | C | V | C | V | C | V | C |
| 1 | 0,43 | 0,38 | 0,78 | 0,8 | 0,51 | 0,77 | 0,82 | 1,05 | 0,64 | 0,75 |
| 2 | 1,46 | 1,66 | 1,53 | 2,47 | 0,95 | 1,15 | 1,74 | 2,58 | 1,42 | 1,97 |
| 3 | 1,93 | 2,01 | 1,7 | 2,08 | 1,33 | 1,81 | 2,12 | 2,09 | 1,77 | 2 |
| 4 | 0,93 | 1,17 | 0,29 | 0,56 | 0,91 | 1,34 | 0,76 | 0,85 | 0,72 | 0,98 |
| 5 | 0,65 | 0,59 | 0,28 | 0,76 | 0,72 | 1,03 | 0,9 | 1,21 | 0,64 | 0,9 |
| 6 | 1,13 | 1,30 | 0,51 | 0,48 | 1,02 | 1,87 | 1,4 | 2,05 | 1,02 | 1,43 |
| 7 | 0,67 | 1,44 | 1,33 | 1,12 | 0,99 | 1,8 | 1,69 | 2,42 | 1,17 | 1,7 |
| 8 | 0,79 | 0,87 | 0,3 | 0,35 | 0,66 | 0,97 | 1,04 | 1,32 | 0,7 | 0,88 |
| 9 | 1,80 | 2,65 | 1,77 | 2,46 | 1,84 | 1,79 | 1,63 | 2,27 | 1,76 | 2,29 |
| 10 | 0,97 | 0,89 | 0,75 | 1,1 | 0,84 | 1,9 | 1,31 | 2,19 | 0,97 | 1,52 |
| 11 | 0,73 | 1,04 | 0,93 | 1,33 | 1,08 | 2,15 | 1,07 | 1,79 | 0,95 | 1,58 |
| 12 | 0,72 | 0,69 | 0,43 | 0,81 | 0,91 | 1,71 | 1,06 | 2,21 | 0,78 | 1,36 |

V : Vaccinated ; C : Control