**Supplementary table 1. Fitted parameters of the original broiler chicken harvest model**

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| --- | --- | --- | --- |
| Model | Variable | Odds-ratio(with 95% CI) | p-value |
| Harvest | ONS chickens\* | Same month | 1.39 (0.95 ; 2.04) | 0.09 |
| -1 month | 1.53 (1.03 ; 2.27) | 0.04 |
| -2 months | 0.69 (0.43 ; 1.09) | 0.11 |
| Interaction term ONS chickens\* – flock size (logarithm) | Same month | 0.54 (0.37 ; 0.79) | $$<10^{-2}$$ |
| -1 month | 0.75 (0.51 ; 1.1) | 0.14 |
| -2 months | 1.57 (1.03 ; 2.41) | 0.04 |
| OS chickens\*\* | Same month | 3.73 (1.36 ; 10.26) | 0.02 |
| -1 month | 1.95 (0.58 ; 6.49) | 0.28 |
| -2 months | 1.49 (0.42 ; 5.24) | 0.54 |
| Interaction term ONS chickens\*\* – flock size (logarithm) | Same month | 0.37 (0.14 ; 0.99) | 0.05 |
| -1 month | 0.97 (0.25 ; 3.74) | 0.97 |
| -2 months | 1.11 (0.28 ; 4.36) | 0.89 |
| Number of broiler chickens in the farm (square root) | 1.07 (1.03 ; 1.11) | $$<10^{-2}$$ |
| combined effect of the difference between current age and age at maturity ($δt$), age at maturity ($t^{\*}$) and logarithm of flock size ($n$) (spline transform) |  | $$<10^{-3}$$ |

Variables with p value <0.1 are highlighted in gray

\*ONS: Outbreak with no sudden deaths

\*\*OS: Outbreak with sudden deaths