

Additional file 7: Comparison of spatial transmission kernel estimates used in articles studying between-farm transmission.

| Spatial kernel $K(d_{ij})$ | Reference | Parameters |
|--|--|--|
| Pareto distribution $\begin{cases} 1, & 0 \leq d_{ij} < x_{min} \\ \left(\frac{x_{min}}{d_{ij}}\right)^\alpha, & d_{ij} \geq x_{min} \end{cases}$ | Hill et al. [42, 43] | $x_{min} = 0.1 \text{ km}$ $\alpha = -0.358$ $(-0.666, -0.159)$ |
| | | $\alpha = 0.0136$ $(-0.122, 0.143)$ |
| Power-law $\left(\frac{\delta}{d_{ij}}\right)^\rho$ | Rorres et al. [51] | $\delta = 1.529 \times 10^{-5} \text{ km}$ $\rho = 2.2$ |
| | Rorres et al. [52] | $\delta = 9.334 \times 10^{-5} \text{ km}$ $\rho = 2.5$ |
| | Pelletier et al. [46] | $\delta = 5.899 \times 10^{-5} \text{ km}$ $\rho = 2.009$ |
| Logistic expression $\frac{1}{1 + \left(\frac{d_{ij}}{r_0}\right)^\alpha}$ | Boender et al. [67]; Backer et al. [70] | $r_0 = 1.9 \text{ km}$ $(1.1, 2.9)$ $\alpha = 2.1$ $(1.8, 2.4)$ |
| | Dorigatti et al. [62] | $r_0 = 3.160 \text{ km}$ $(1.770, 4.549)$ $\alpha = 2.192$ $(1.894, 2.490)$ |
| | Bonney et al. [53] | $r_0 = 7.02 \text{ km}$ $(3.07, 16.16)$ $\alpha = 2.46$ $(1.80, 4.38)$ |
| | Salvador et al. [57] | $r_0 = 3.4 \text{ km}$ $(1.001, 10.0)$ $\alpha = 1.4$ $(1.001, 5.0)$ |

For estimated parameter values, the mean and 95% confidence or credible interval (when reported) are indicated.