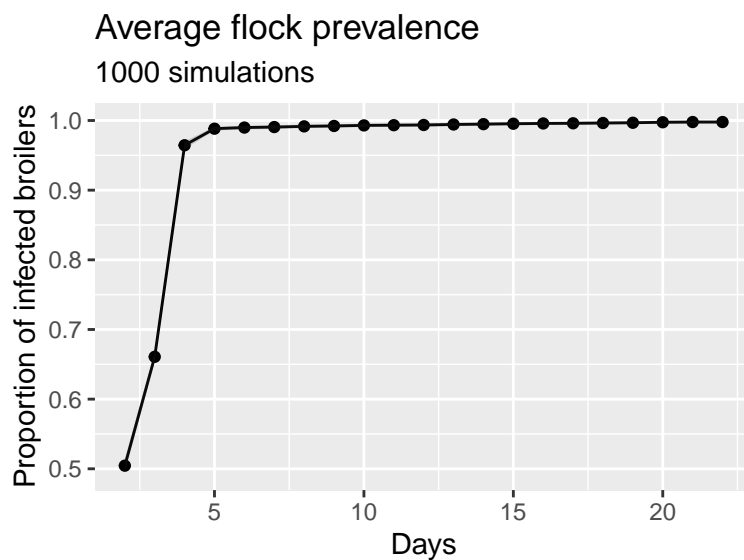


Becker et al.(2022) experiment reproduction

Reference experiment figure 2. page 9 (Becker et al. (2022))

Plots

```
## Plot for average Within flock prevalence
plot_qoi(
  data      = output_avg,
  qoi       = output_avg[, 2],
  ci_lower  = ci.lower[, 2],
  ci_upper  = ci.upper[, 2],
  title     = "Average flock prevalence",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "Proportion of infected broilers"
)
```



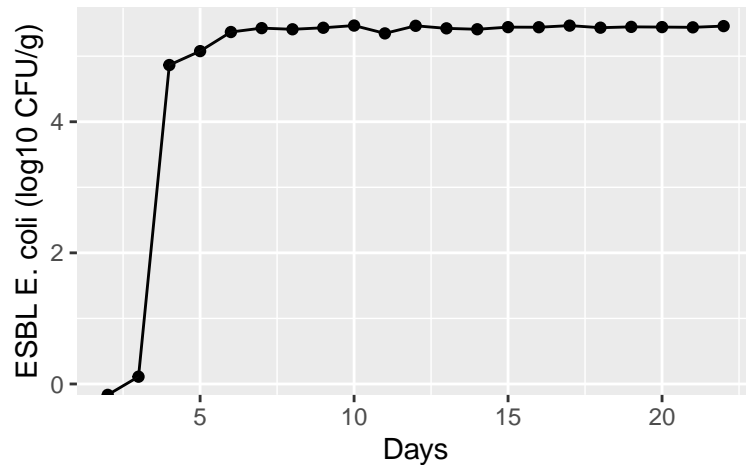
```
## Plot for average (over broilers + iterations) excreted bacteria
plot_qoi(
  data      = output_avg,
  qoi       = log10(output_avg[, 3]),
  ci_lower  = log10(ci.lower[, 3]),
  ci_upper  = log10(ci.upper[, 3]),
  title     = "Average Bacterial concentration in excreted feces",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "log10(Bacterial concentration)"
)
```

```

    ylab      = "ESBL E. coli (log10 CFU/g)"
  )

```

Average Bacterial concentration in excreted feces
1000 simulations

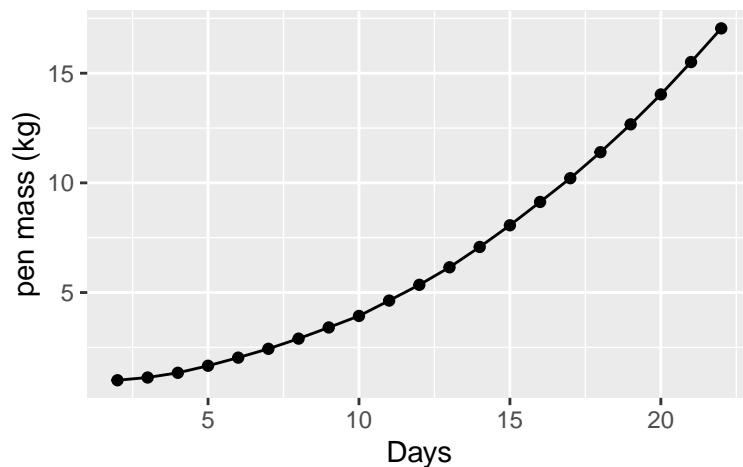


```

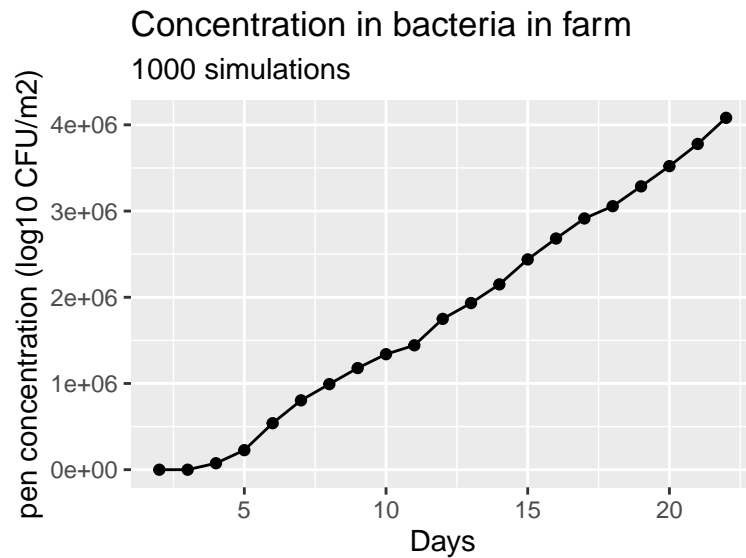
## Plot for amount of litter + feces
plot_qoi(
  data      = output_avg,
  qoi       = (output_avg[, 4]+inputs$litter_mass)/1000,
  ci_lower  = NA,
  ci_upper  = NA,
  title     = "Mass of litter + feces",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "pen mass (kg)"
)

```

Mass of litter + feces
1000 simulations

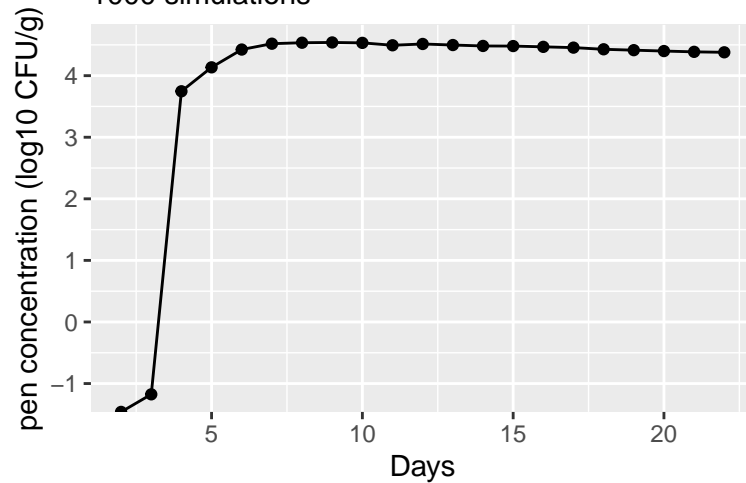


```
## Plot for number of bacteria per sq. meter
plot_qoi(
  data      = output_avg,
  qoi       = output_avg[, 1]/inputs$farm_size,
  ci_lower  = NA,
  ci_upper  = NA,
  title     = "Concentration in bacteria in farm",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "pen concentration (log10 CFU/m2)"
)
```



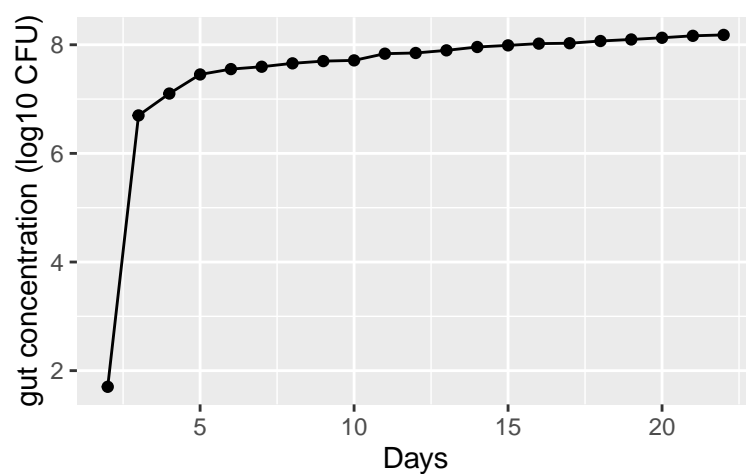
```
## Plot for number of bacteria per g of pen mass
plot_qoi(
  data      = output_avg,
  qoi       = log10(output_avg[, 1]/(output_avg[, 4]+inputs$litter_mass)),
  ci_lower  = NA,
  ci_upper  = NA,
  title     = "Concentration in bacteria in manure (litter + feces)",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "pen concentration (log10 CFU/g)"
)
```

Concentration in bacteria in manure (litter + 1
1000 simulations



```
## Plot for average number of bacteria in the broiler's gut
plot_qoi(
  data      = output_avg,
  qoi       = log10(output_avg[, 5]),
  ci_lower  = NA,
  ci_upper  = NA,
  title     = "Concentration in bacteria in broilers gut",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "gut concentration (log10 CFU)"
)
```

Concentration in bacteria in broilers gut
1000 simulations

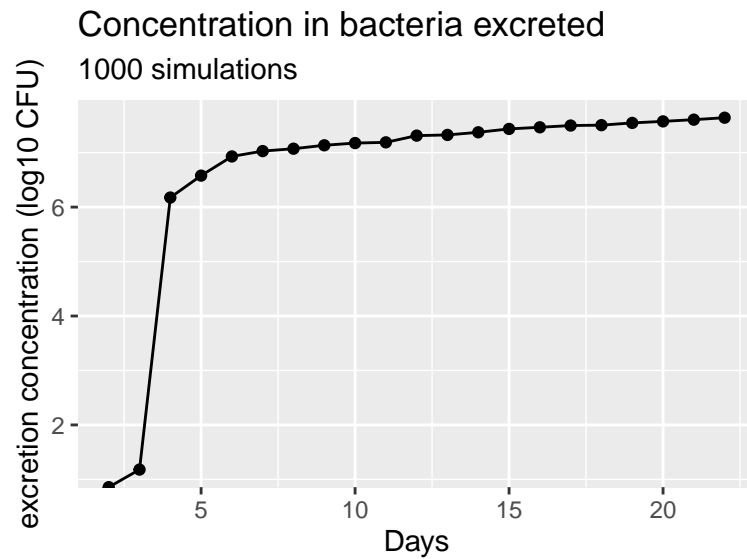


```
## Plot for average number of bacteria excreted
plot_qoi(
  data      = output_avg,
```

```

qoi      = log10(output_avg[, 6]),
ci_lower = NA,
ci_upper = NA,
title    = "Concentration in bacteria excreted",
subtitle = paste(dim(parallel_output)[3], "simulations"),
xlab     = "Days",
ylab     = "excretion concentration (log10 CFU)"
)

```



```

## Plot for average number of bacteria ingested
plot_qoi(
  data      = output_avg,
  qoi       = log10(output_avg[, 7]),
  ci_lower  = NA,
  ci_upper  = NA,
  title     = "Concentration in bacteria ingested",
  subtitle  = paste(dim(parallel_output)[3], "simulations"),
  xlab      = "Days",
  ylab      = "ingestion concentration (log10 CFU)"
)

```

