



C

Parameter name	Parameters	Distribution
m1	migration rate	$1-\log(\text{runif}(1, \min=1000^0.5, \max=1000)), 1000$
n1	bottleneck strength of wood/food spoiler population	$1-\log_{10}(\text{runif}(1, \min=1, \max=10))$
n2	bottleneck strength of silage/food spoiler population	$1-\log_{10}(\text{runif}(1, \min=1, \max=10))$
n3	bottleneck strength of Roquefort population	$1-\log(\text{runif}(1, \min=1, \max=1000)), 1000$
n4	bottleneck strength of non-Roquefort population	$1-\log(\text{runif}(1, \min=1, \max=10000)), 10000$
g1	growth rate of wood/food spoiler population	$1-\log_{10}(\text{runif}(1, \min=1, \max=10))$
g2	growth rate of silage/food spoiler population	$1-\log_{10}(\text{runif}(1, \min=1, \max=10))$
g3	growth rate of Roquefort population	$1-\log(\text{runif}(1, \min=1, \max=1000)), 1000$
g4	growth rate of non-Roquefort population	$1-\log(\text{runif}(1, \min=1, \max=10000)), 10000$
t11	time to first split (non-Roquefort population divergence)	$1-\log_{10}(\text{runif}(1, \min=1, \max=10))$
t8	time to second split (Roquefort population divergence)	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t11)}, \max=10))$
t3	time to third split (non-cheese populations divergence)	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t8)}, \max=10))$
t12	time to migration m1	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t3)}, \max=10))$
t1	time of growth g1	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t2)}, \max=10))$
t4	time of growth g2	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t5)}, \max=10))$
t9	time of growth g3	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t7)}, \max=10))$
t6	time of growth g4	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t10)}, \max=10))$
t2	time to bottleneck n1	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t12)}, \max=10))$
t5	time to bottleneck n2	$1-\log_{10}(\text{runif}(1, \min=10^{-(1-t12)}, \max=10))$
t10	time to bottleneck n3	$1-\log(\text{runif}(1, \min=10000^{-(1-t8)}, \max=10000)), 10000$
t7	time to bottleneck n4	$1-\log(\text{runif}(1, \min=10000^{-(1-t11)}, \max=10000)), 10000$

D

Scenarios	Mnlogistic	Neuralnet	Rejection
S4	0.9761	0.9392	0.1573
S7	0.0225	0.0079	0.1891
S9	0.0013	0.0005	0.2028
S6	0.0001	0.0000	0.0635
S1	0.0000	0.0044	0.0104
S2	0.0000	0.0000	0.0852
S3	0.0000	0.0000	0.0908
S5	0.0000	0.0430	0.0774
S8	0.0000	0.0016	0.0700
S10	0.0000	0.0021	0.0280
S11	0.0000	0.0013	0.0255

E

Parameter	Estimation
g1	0.256920 (0.009308-0.921844)
g2	0.249176 (0.008765-0.896058)
g3	0.075184 (0.002811-0.380878)
g4	0.100032 (0.003834-0.510549)
n1	0.259316 (0.011984-0.912613)
n2	0.257800 (0.009990-0.910445)
n3	0.075841 (0.002601-0.407872)
n4	0.096463 (0.003689-0.533536)
t1	0.001361 (0.000003-0.047539)
t2	0.003663 (0.000014-0.090656)
t3	0.028568 (0.000275-0.304626)
t4	0.001394 (0.000003-0.044651)
t5	0.010487 (0.000013-0.090209)
t6	0.007984 (0.000061-0.110627)
t7	0.021897 (0.000281-0.188328)
t8	0.084087 (0.016387-0.551640)
t9	0.017222 (0.000241-0.166293)
t10	0.047856 (0.025126-0.307850)
t11	0.270280 (0.002991-0.921711)
t12	0.010328 (0.000065-0.166664)
m1	0.094850 (0.003252-0.418199)