q_nc = 1e-04; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 10 -6e-05 10 4e-05 5 5 2e-05

100

25

50

25

50

time

100

75

0e+00

0

25

50

75

q_nc = 1e-04; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 0.100 6e-04 0.015 0.075 nutrient low 4e-04 value 0.010 0.050 +N 2e-04 +N+P 0.005 0.025 0.000 0.000 -0e+00 RPV_conc R_p RPV_pop 8e-05 12 10 6e-05 8 4e-05 5 4 2e-05

100

25

50

75

100

25

50

time

0e+00

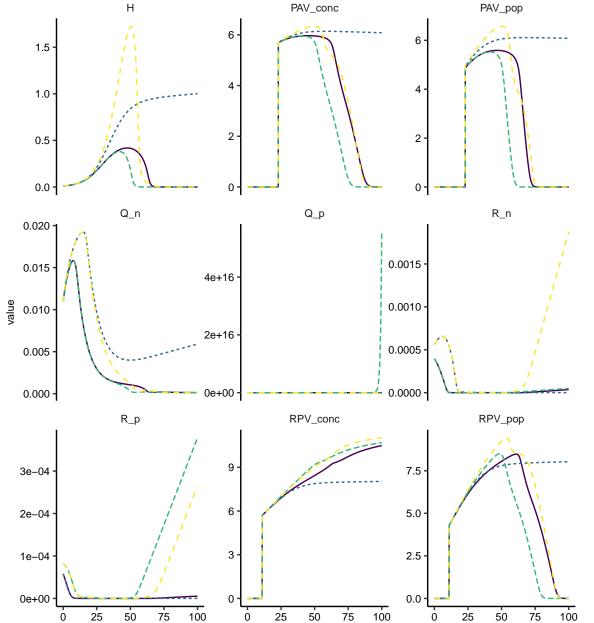
0

. 25 50

75

q_nc = 1e-04; z_nc = 1e-14 Н PAV_conc PAV_pop 6 3 6 2 4 2 1 2 · 0 -Q_n Q_p R_n 0.020 2000000 6e-04 0.015 nutrient 1500000 low 4e-04 value 0.010 1000000 2e-04 +N+P 0.005 500000 0.000 0 -0e+00 R_p RPV_conc RPV_pop 0.00020 12 -12.5 10.0 0.00015 9 7.5 0.00010 -6 · 5.0 0.00005 3 · 2.5 0.00000 0.0 75 . 25 50 . 75 100 Ö . 25 50 100 Ö . 25 50 . 75 100

q_nc = 1e-04; z_nc = 1e-12 Н



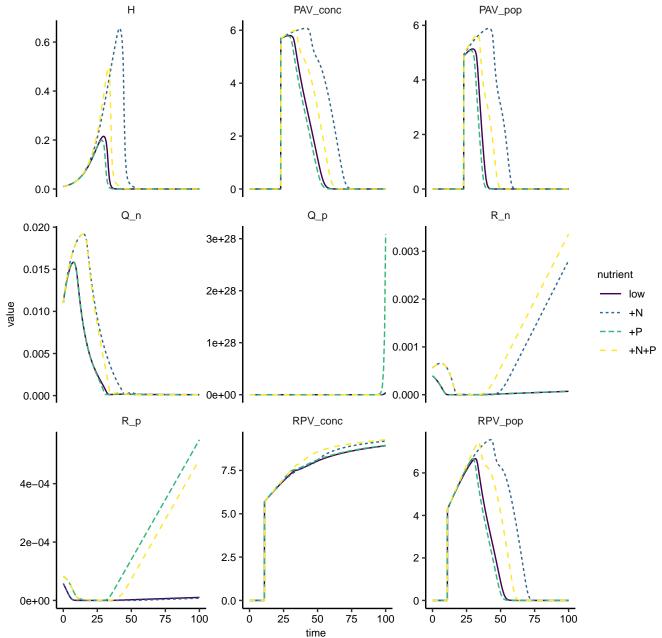
nutrient

low

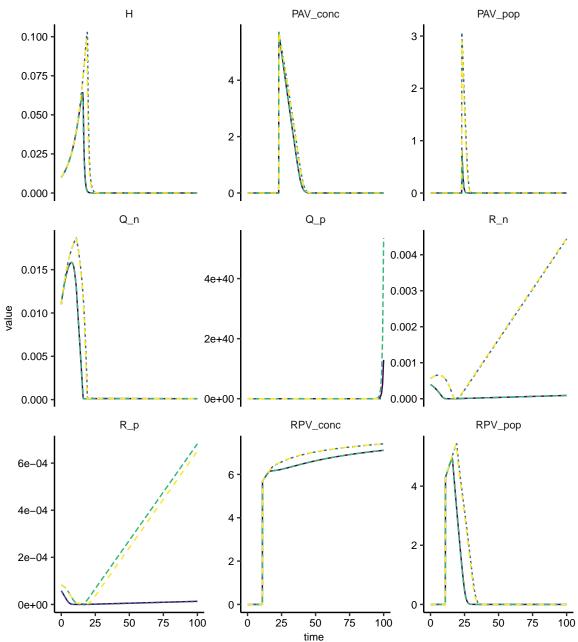
+N

+N+P

q_nc = 1e-04; z_nc = 1e-10



q_nc = 1e-04; z_nc = 1e-08 Н 0.100 0.075



nutrient

low

+N

+N+P

q_nc = 1e-04; z_nc = 1e-06 Н PAV_conc PAV_pop 0.04 -0.03 1e-03 4 0.02 5e-04 2 -0.01 0.00 -0e+00 Q_n Q_p R_n 3e+49 0.015 nutrient 0.004 2e+49 low 0.010 +N 0.002 1e+49 +N+P 0.005 0.000 -0e+00 0.000 R_p RPV_conc RPV_pop 4 6e-04 3 4e-04 2 . 2 -2e-04 1

25

50

75

100

75

100

50

time

25

0e+00

0

75

100

50

q_nc = 1e-04; z_nc = 1e-04 Н PAV_conc PAV_pop 8 + 6 9 -6 4 6 -4 2 3 -2 0 Q_n Q_p R_n 0e+00 6e-04 0.004 nutrient -1e+05 -0.003 low 4e-04 value +N 0.002 -2e+05 2e-04 +N+P 0.001 -3e+05 0e+00 0.000 RPV_conc RPV_pop R_p 10.0 + 8e-05 9 7.5 -6e-05 6 5.0 -4e-05 3 2.5 2e-05 0e+00 0.0 25 100 25 50 75 25 50 . 75 100 50 75 0 100 Ö

q_nc = 1e-04; z_nc = 0.01 Н PAV_conc PAV_pop 8 + 6 9 -6 4 6 -4 2 3 -2 0 Q_n Q_p R_n 0e+00 6e-04 0.004 nutrient -1e+07 -0.003 low 4e-04 value +N 0.002 -2e+07 2e-04 +N+P 0.001 -3e+07 0e+00 -0.000 RPV_conc RPV_pop R_p 10.0 + 8e-05 9 7.5 -6e-05 6 5.0 -4e-05 3 2.5 2e-05 0e+00 0.0 75 25 100 25 50 75 25 50 100 50 75 0 100 Ö Ö

q_nc = 1e-04; z_nc = 1 Н PAV_conc PAV_pop 8 + 6 9 -6 4 6 -4 2 3 -2 0 Q_n Q_p R_n 0e+00 6e-04 0.004 nutrient -1e+09 -0.003 low 4e-04 value +N 0.002 -2e+09 2e-04 +N+P 0.001 -3e+09 0e+00 -0.000 RPV_conc RPV_pop R_p 10.0 + 8e-05 9 7.5 -6e-05 6 5.0 -4e-05 3 2.5 2e-05 0e+00 0.0 75 25 100 25 50 75 25 50 100 50 75 0 100 Ö

q_nc = 0.001; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 10.0 8e-05 10.0 7.5 6e-05 7.5 5.0 4e-05 5.0 2.5 2e-05 2.5

0.0

25

50

100

100

75

75

0.0

25

50

time

100

0e+00

0

25

50

q_nc = 0.001; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 10.0 8e-05 10.0 7.5 6e-05 7.5 5.0 4e-05 5.0 2.5 2e-05 2.5

0.0

25

50

100

100

75

75

0.0

25

50

time

100

0e+00

0

25

50

q_nc = 0.001; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 10.0 -8e-05 10.0 -7.5 6e-05 7.5 5.0 4e-05 5.0 2.5 2e-05 2.5

0.0

25

50

100

100

75

75

0.0

25

50

time

100

0e+00

0

25

50

q_nc = 0.001; z_nc = 1e-12 Н PAV_conc PAV_pop 6 6 2 4 1 2 2 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 10.0 -8e-05 7.5 7.5 6e-05 5.0 5.0 4e-05 2.5 2.5 2e-05 0e+00 0.0 0.0 75 100 25 50 75 100 25 50 100 25 75 0 50

q_nc = 0.001; z_nc = 1e-10 Н PAV_conc PAV_pop 6 -6 -0.6 4 0.4 2 · 2 0.2 0.0 Q_n Q_p R_n 0.020 -0.006 -0.015 nutrient 0.004 low 4e-04 o.010 · 0.002 2e-04 +N+P 0.005 0e+00 -0.000 -RPV_conc R_p RPV_pop 8e-05 6 6 6e-05 4 4e-05 2 2e-05 2

100

25

50

25

50

time

100

75

0e+00

0

25

50

100

q_nc = 0.001; z_nc = 1e-08 Н PAV_conc PAV_pop 4 0.09 4 3 0.06 2 · 2 0.03 1 0 -0 · Q_n Q_p R_n 0.03 0.015 nutrient low 4e-04 o.010 0.02 +N 2e-04 0.01 +N+P 0.005 0e+00 -0.00 -R_p RPV_conc RPV_pop 6 8e-05 6 6e-05 4 4 4e-05 2 2 · 2e-05

100

75

25

50

100

50

time

25

Ö

100

75

50

0e+00

Ö

q_nc = 0.001; z_nc = 1e-06 Н PAV_conc PAV_pop 0.04 -3 4 0.03 2 2 0.02 1 0.01 -0 Q_n Q_p R_n 0.015 0.06 nutrient low 4e-04 0.010 0.04 +N 2e-04 +N+P 0.02 0.005 0.00 -0e+00 -R_p RPV_conc RPV_pop 8e-05 4 6e-05 3 4 4e-05 2 · 2 2e-05 1

25

0

50

time

100

75

25

50

100

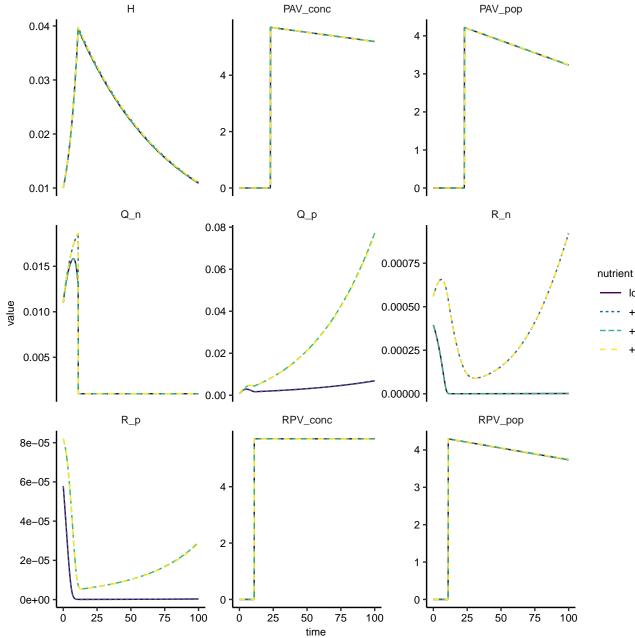
0e+00

Ö

. 25 75

50

q_nc = 0.001; z_nc = 1e−04 H



low

+N

+N+P

q_nc = 0.001; z_nc = 0.01 Н PAV_conc PAV_pop 0.04 -4 3 4 0.03 2 2 · 0.02 1 0.01 -0 Q_n Q_p R_n 0.08 0.00075 0.015 0.06 nutrient low value 0.00050 0.010 0.04 +N +N+P 0.00025 0.02 0.005 0.00000 -0.00 -R_p RPV_conc RPV_pop 8e-05 4 6e-05 3 4 4e-05 2 2

0

25

100

75

50

2e-05

0e+00

0

. 25 75

50

100

25

0

50

time

75

q_nc = 0.001; z_nc = 1 Н PAV_conc PAV_pop 0.04 -4 3 4 0.03 2 2 · 0.02 1 0.01 -0 Q_n Q_p R_n 0.08 0.00075 0.015 0.06 nutrient low value 0.00050 0.010 0.04 +N +N+P 0.00025 0.02 0.005 0.00000 -0.00 -R_p RPV_conc RPV_pop 8e-05 4 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 0 100 75 100 25 50 75 50 100 25 75

0

. 25

0

q_nc = 0.01; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 4 4e-05 2 2 -2e-05 0e+00

0

50

75

100

25

50

time

75

100

25

50

100

q_nc = 0.01; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 4 4e-05 2 2 -2e-05 0e+00

0

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75

100

25

50

time

75

100

25

50

100

q_nc = 0.01; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 4 4e-05 2 2 -2e-05

50

100

. 75

0e+00

0

25

50

75

100

25

50

time

75

q_nc = 0.01; z_nc = 1e-12 Н PAV_conc PAV_pop 5 · 6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 4 4e-05 2 2 -2e-05 0e+00

0

50

75

100

25

50

time

75

100

25

50

100

q_nc = 0.01; z_nc = 1e-10 Н PAV_conc PAV_pop 5 6 4 3 4 2 · 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6 6e-05 4 4e-05 2 2 -2e-05 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75

q_nc = 0.01; z_nc = 1e-08 Н PAV_conc PAV_pop 8 -6 9 6 6 4 2 3 2 0 -Q_n Q_p R_n 0.004 0.015 nutrient 0.003 low 4e-04 0.010 +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 -0.000 -R_p RPV_conc RPV_pop 6 8e-05 6e-05 4 4 -4e-05 2 2 -2e-05 0e+00

100

25

50

time

25

50

100

. 75

100

25

0

50

q_nc = 0.01; z_nc = 1e-06 Н PAV_conc PAV_pop 8 -6 -9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 0.0175 0.004 nutrient 0.003 low 4e-04 value value +N 0.002 0.0125 2e-04 +N+P 0.001 -0.0100 0e+00 -0.000 -R_p RPV_conc RPV_pop 8e-05 6 6e-05 4 4 4e-05 2 · 2 2e-05 0e+00

100

25

50

time

25

50

Ö

25

75

100

100

75

q_nc = 0.01; z_nc = 1e-04 Н PAV_conc PAV_pop 8 -6 -9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 0.0175 0.004 nutrient value value 0.003 low 4e-04 +N 0.002 2e-04 0.0125 +N+P 0.001 -0.0100 -0e+00 -0.000 -R_p RPV_conc RPV_pop 8e-05 6 6e-05 4 -4 4e-05 2 · 2 2e-05 0e+00

100

25

50

time

25

50

Ö

25

75

100

100

75

q_nc = 0.01; z_nc = 0.01 Н PAV_conc PAV_pop 8 -6 -9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 0.0175 0.004 nutrient 0.003 low 4e-04 value 0.0150 · +N 0.002 2e-04 0.0125 +N+P 0.001 -0.0100 -0e+00 -0.000 -R_p RPV_conc RPV_pop 8e-05 6 6e-05 4 -4 4e-05 2 2 2e-05 0e+00

100

25

50

time

25

50

Ö

25

75

100

100

75

q_nc = 0.01; z_nc = 1 Н PAV_conc PAV_pop 8 -6 -9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 0.0175 0.004 nutrient 0.003 low 4e-04 o.0150 · +N 0.002 2e-04 0.0125 +N+P 0.001 -0.0100 -0e+00 -0.000 -R_p RPV_conc RPV_pop 8e-05 6 6e-05 4 -4 4e-05 2 2 2e-05 0e+00 75 100 25 50 75 100 25 50 100 25 75 Ö 50

q_nc = 0.1; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4e-05 2 2 2e-05 1 0e+00

. 25

0

75

100

25

50

time

75

100

25

50

100

q_nc = 0.1; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4e-05 2 2 2e-05 1 0e+00

. 25

0

75

100

25

50

time

75

100

25

50

100

q_nc = 0.1; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4e-05 2 2 2e-05 1 0e+00

. 25

0

75

100

25

50

time

75

100

25

50

100

q_nc = 0.1; z_nc = 1e-12 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4e-05 2 2 2e-05 1 0e+00 50 75 100 25 50 75 100 25 50 100 . 25 . 75

q_nc = 0.1; z_nc = 1e-10 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4e-05 2 2 2e-05 1 0e+00

. 25

0

75

100

25

50

time

75

100

25

50

100

q_nc = 0.1; z_nc = 1e-08 Н PAV_conc PAV_pop 5 6 4 3 4 2 · 2 2 1 0 -Q_n Q_p R_n 0.020 0.004 nutrient 0.015 0.003 low 4e-04 value +N 0.010 0.002 2e-04 +N+P 0.001 0.005 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

50

time

75

100

25

50

100

. 75

100

0e+00

0

25

50

q_nc = 0.1; z_nc = 1e-06 Н PAV_conc PAV_pop 8 -6 9 6 6 4 2 3 2 0 -Q_n Q_p R_n 0.100 -0.004 nutrient 0.075 0.003 low 4e-04 value +N 0.050 0.002 2e-04 +N+P 0.001 0.025 0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6e-05 4 4 4e-05 2 2 2e-05

100

25

50

25

50

time

100

75

0e+00

0

25

50

75

q_nc = 0.1; z_nc = 1e-04 Н PAV_conc PAV_pop 8 | 6 9 6 6 4 2 3 2 0 -Q_n Q_p R_n 0.100 -0.004 nutrient 0.075 0.003 low 4e-04 value +N 0.050 0.002 2e-04 +N+P 0.001 0.025 0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05

100

25

50

25

50

time

100

75

0e+00

0

25

50

75

q_nc = 0.1; z_nc = 0.01 Н PAV_conc PAV_pop 8 -6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 0.100 -0.004 nutrient 0.075 0.003 low 4e-04 value +N 0.050 0.002 2e-04 +N+P 0.001 0.025 0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 100 75 100 75 25 50 25 50 100 25 50 75 0

q_nc = 0.1; z_nc = 1 Н PAV_conc PAV_pop 8 -6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 0.100 -0.004 nutrient 0.075 0.003 low 4e-04 value +N 0.050 0.002 2e-04 +N+P 0.001 0.025 0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 75 100 75 100 25 50 25 50 100 25 50 75 0

q_nc = 1; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 25 100 0 100 Ö 50 . 75

q_nc = 1; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 25 100 0 100 Ö 50 . 75

q_nc = 1; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 25 100 0 100 Ö 50 . 75

q_nc = 1; z_nc = 1e-12 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 100 25 100 0 Ö 50 . 75

q_nc = 1; z_nc = 1e-10 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 25 100 0 100 Ö 50 . 75

q_nc = 1; z_nc = 1e-08 Н PAV_conc PAV_pop 5 6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 6e-04 0.020 0.004 nutrient 0.015 0.003 low 4e-04 value +N 0.002 0.010 2e-04 +N+P 0.001 0.005 0e+00 0.000 -0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 100 25 50 75 25 50 75 100 25 100 0 Ö 50 . 75

q_nc = 1; z_nc = 1e-06 Н PAV_conc PAV_pop 8 | 6 -9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 0.3 0.004 nutrient 0.003 low 4e-04 0.2 value +N 0.002 2e-04 0.1 +N+P 0.001 0.0 -0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

Ö

50

time

75

100

25

Ö

50

100

. 75

75

100

0e+00

0

25

q_nc = 1; z_nc = 1e-04 Н PAV_conc PAV_pop 8 | 6 9 6 6 4 2 3 2 0 -Q_n Q_p R_n 1.00 -0.004 0.75 nutrient 0.003 low 4e-04 value 0.50 +N 0.002 2e-04 +N+P 0.25 0.001 0e+00 0.00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00

100

25

50

25

50

time

100

75

100

25

0

50

q_nc = 1; z_nc = 0.01 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 1.00 · 6e-04 0.004 0.75 nutrient 0.003 low 4e-04 value 0.50 +N 0.002 2e-04 +N+P 0.25 0.001 0e+00 0.00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 100 75 100 75 25 50 25 50 100 25 50 75

q_nc = 1; z_nc = 1 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 1.00 · 6e-04 0.004 0.75 nutrient 0.003 low 4e-04 value 0.50 +N 0.002 2e-04 +N+P 0.25 0.001 0e+00 0.00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 75 100 75 100 25 50 25 50 100 25 50 75 Ö

q_nc = 10; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 10; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 10; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 10; z_nc = 1e-12 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 100 25 0 Ö 50 . 75 100

q_nc = 10; z_nc = 1e-10 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 10; z_nc = 1e-08 Н PAV_conc PAV_pop 5 6 4 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 6e-04 0.020 0.004 nutrient 0.003 low 0.015 4e-04 value +N 0.002 0.010 2e-04 +N+P 0.001 0.005 0e+00 0.000 -0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0e+00

0

25

50

75

100

25

Ö

50

time

75

100

25

50

Ö

100

. 75

q_nc = 10; z_nc = 1e-06 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 0.4 0.004 nutrient 0.003 0.3 low 4e-04 value +N 0.2 0.002 2e-04 +N+P 0.1 0.001 0.0 -0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0e+00

0

25

50

75

100

25

50

time

75

100

25

Ö

50

100

. 75

q_nc = 10; z_nc = 1e-04 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 10.0 -6e-04 0.004 7.5 nutrient 0.003 low 4e-04 value 5.0 -+N 0.002 2e-04 +N+P 2.5 0.001 0.0 -0e+00 0.000 -RPV_conc R_p RPV_pop 8e-05 6e-05 4 4 4e-05 2 · 2 2e-05

100

25

50

25

50

time

100

75

0e+00

0

25

50

75

q_nc = 10; z_nc = 0.01 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 10.0 -0.004 7.5 nutrient 0.003 low 4e-04 value 5.0 +N 0.002 2e-04 +N+P 2.5 0.001 0.0 -0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00

100

25

50

25

50

time

100

75

100

25

0

50

q_nc = 10; z_nc = 1 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 10.0 -0.004 7.5 nutrient 0.003 low 4e-04 value 5.0 +N 0.002 2e-04 +N+P 2.5 0.001 0.0 -0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 100 100 75 25 50 75 25 50 100 25 75 0 50

q_nc = 100; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 100; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 25 50 75 100 25 50 75 100 25 Ö 50 . 75 100

q_nc = 100; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

0

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 100; z_nc = 1e-12 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00 50 75 100 25 50 75 100 25

Ö

50

. 75

100

0

. 25

q_nc = 100; z_nc = 1e-10 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

. 25

0

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 100; z_nc = 1e-08 Н PAV_conc PAV_pop 5 6 4 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 6e-04 0.020 0.004 nutrient 0.003 low 0.015 4e-04 value +N 0.002 0.010 2e-04 +N+P 0.001 0.005 0e+00 0.000 -0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0e+00

0

25

50

75

100

25

Ö

50

time

75

100

25

50

Ö

100

. 75

q_nc = 100; z_nc = 1e-06 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 0.5 -6e-04 0.004 0.4 nutrient 0.003 low 4e-04 0.3 +N 0.002 0.2 -2e-04 +N+P 0.001 0.1 0.0 -0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0e+00

0

25

50

75

100

25

Ö

50

time

75

100

25

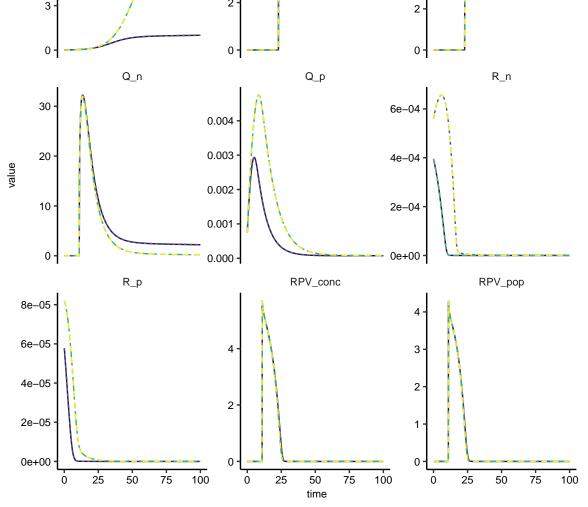
50

Ö

100

. 75

q_nc = 100; z_nc = 1e-04 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 30 6e-04 0.004 nutrient 0.003 20 low 4e-04 +N 0.002 10 -2e-04 +N+P 0.001 0 -0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05



q_nc = 100; z_nc = 0.01 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 100 0.004 75 nutrient 0.003 low 4e-04 value 50 +N 0.002 2e-04 +N+P 25 0.001 0 -0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 100 75 100 25 50 75 25 50 100 25 75 0 50

q_nc = 100; z_nc = 1 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 100 0.004 75 nutrient 0.003 low 4e-04 value 50 +N 0.002 2e-04 +N+P 25 0.001 0 -0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00 100 75 100 25 50 75 25 50 100 25 75 0 50

q_nc = 1000; z_nc = 1e-18 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2

Ö

25

50

. 75 100

2e-05

0e+00

0

25

50

75

100

25

50

time

75

q_nc = 1000; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0e+00

0

25

50

75

100

25

50

time

75

100

25

50

. 75 100

q_nc = 1000; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05

0

25

50

75

100

25

50

time

75

100

1

Ö

25

50

. 75

q_nc = 1000; z_nc = 1e-12 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0

50

. 25 75

100

25

50

time

75

100

25

50

. 75 100

Ö

q_nc = 1000; z_nc = 1e-10 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4e-05 2 2 2e-05 1

0

50

. 25 75

100

25

50

time

75

100

25

50

. 75 100

Ö

q_nc = 1000; z_nc = 1e-08 Н PAV_conc PAV_pop 5 6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 6e-04 0.020 0.004 nutrient 0.003 low 0.015 4e-04 value +N 0.002 0.010 2e-04 +N+P 0.001 0.005 0e+00 0.000 -0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2

Ö

25

50

100

. 75

2e-05

0e+00

0

25

50

75

100

25

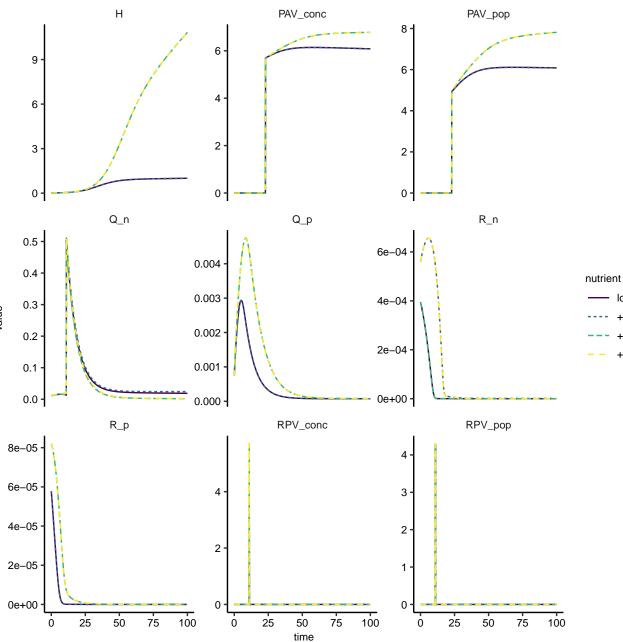
Ö

50

time

75

q_nc = 1000; z_nc = 1e-06 Н



+N

q_nc = 1000; z_nc = 1e-04 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 40 0.004 nutrient 30 0.003 low 4e-04 value +N 20 · 0.002 2e-04 +N+P 10 -0.001 0 -0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0

25

50

75

100

25

50

time

75

100

25

Ö

50

100

. 75

q_nc = 1000; z_nc = 0.01 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 1000 -6e-04 0.004 750 nutrient 0.003 low 4e-04 value 500 +N 0.002 2e-04 +N+P 250 0.001 0 -0e+00 0.000 -RPV_conc R_p RPV_pop 8e-05 4 6e-05 4 4e-05 2 2 2e-05

100

25

50

25

50

time

100

75

0e+00

0

25

50

75

q_nc = 1000; z_nc = 1 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 1000 0.004 750 nutrient 0.003 low 4e-04 value 500 +N 0.002 2e-04 +N+P 250 0.001 0 -0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00

100

25

50

25

50

time

100

75

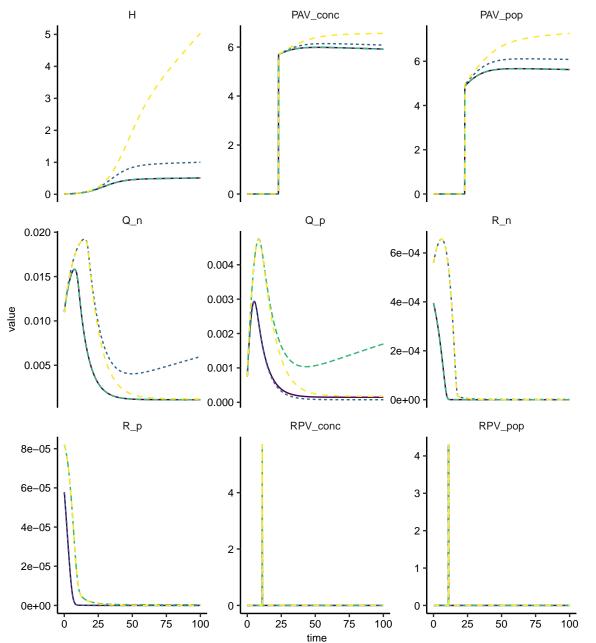
100

25

0

50

q_nc = 10000; z_nc = 1e-18

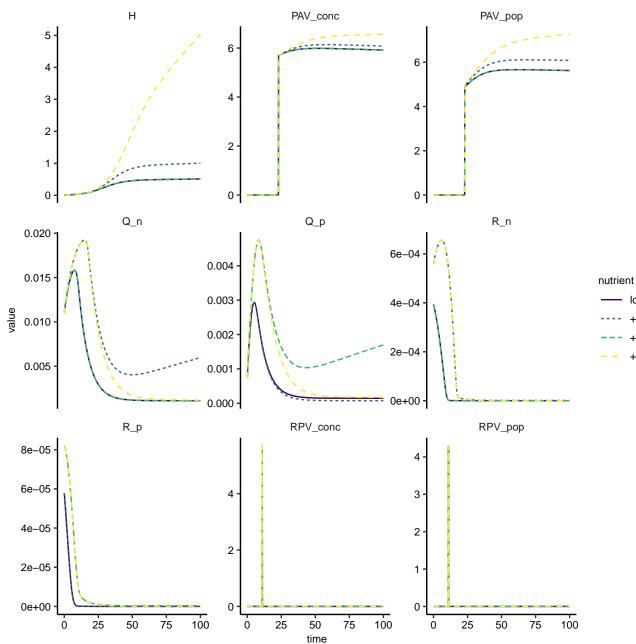


nutrient

low

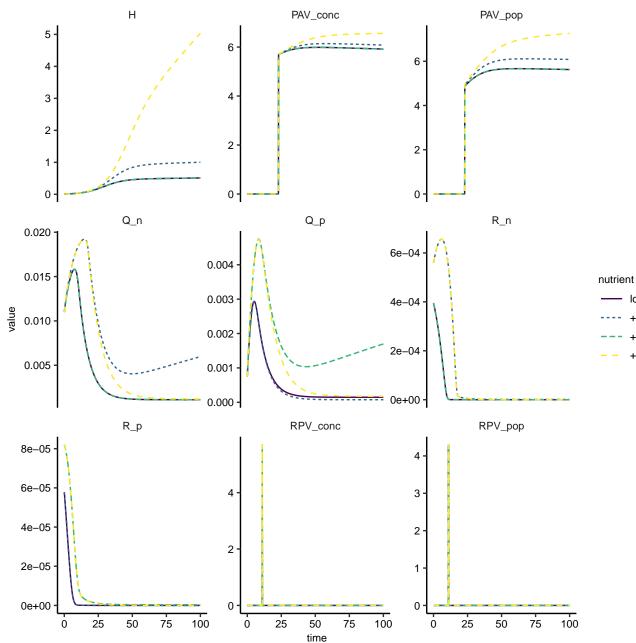
+N

q_nc = 10000; z_nc = 1e-16



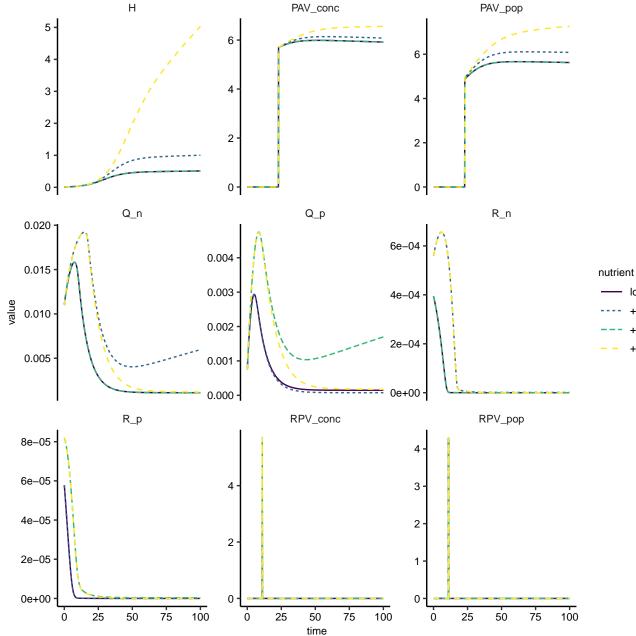
+N

q_nc = 10000; z_nc = 1e-14



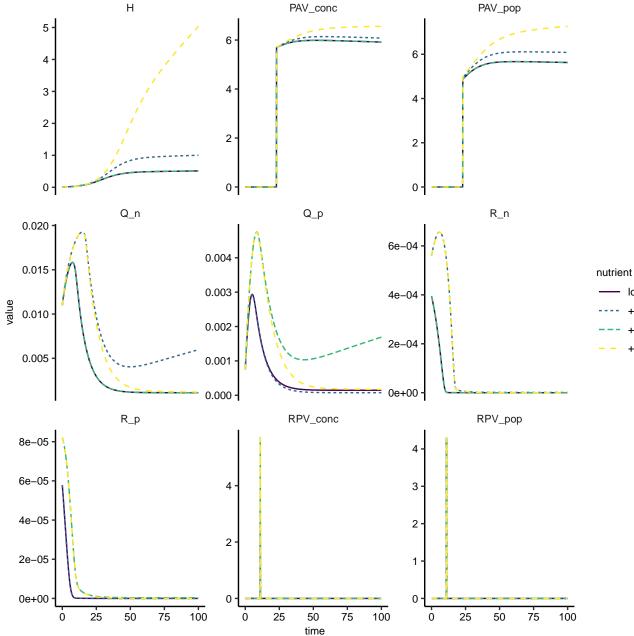
+N

q_nc = 10000; z_nc = 1e-12 Н



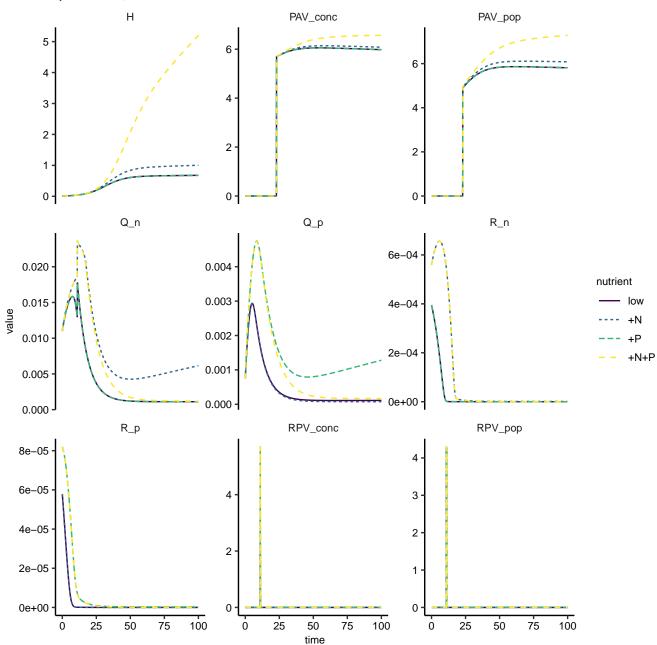
+N

q_nc = 10000; z_nc = 1e-10 Н 5 -

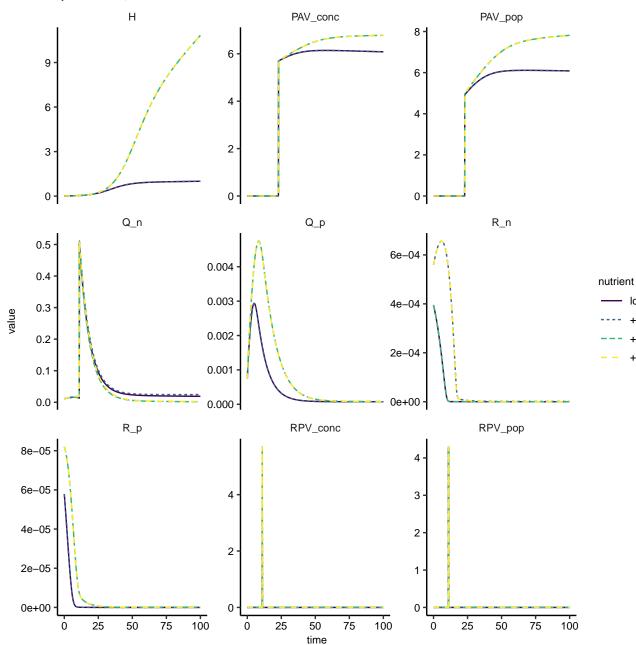


+N

q_nc = 10000; z_nc = 1e-08

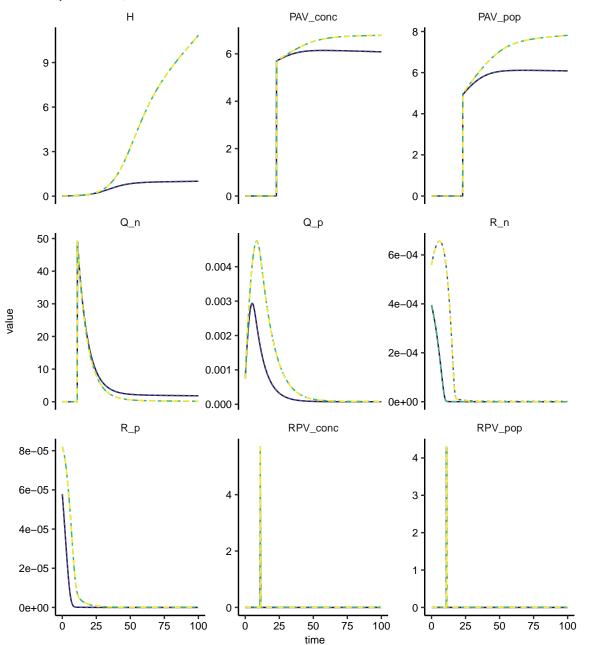


q_nc = 10000; z_nc = 1e-06



+N

q_nc = 10000; z_nc = 1e-04

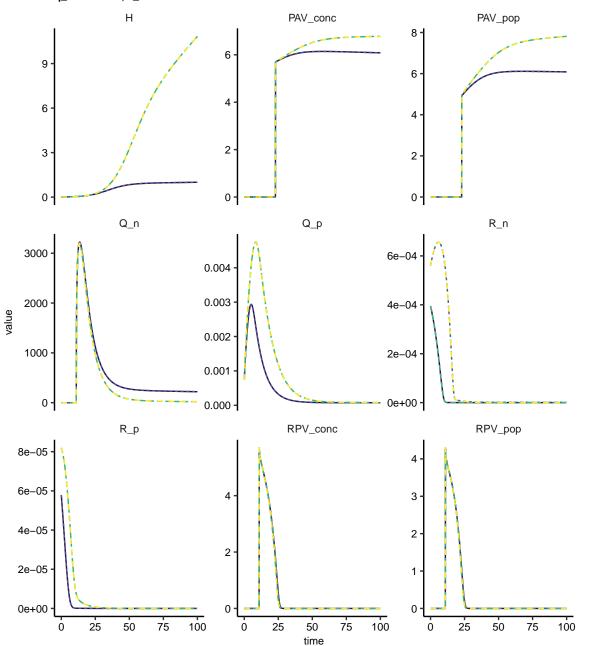


nutrient

low

+N

q_nc = 10000; z_nc = 0.01



nutrient

low

+N

q_nc = 10000; z_nc = 1 Н PAV_conc PAV_pop 8 -6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 10000 -0.004 7500 nutrient 0.003 low 4e-04 value 5000 +N 0.002 2e-04 +N+P 2500 0.001 0e+00 0.000 -RPV_conc RPV_pop R_p 8e-05 6 6e-05 4 4 4e-05 2 2 2e-05 0e+00

100

25

50

25

50

time

100

75

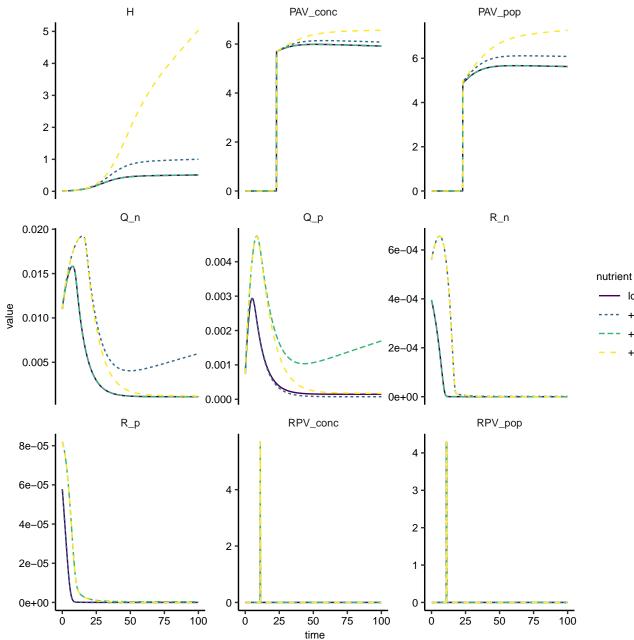
100

25

0

50

q_nc = 1e+05; z_nc = 1e-18 Н 5 -



+N

q_nc = 1e+05; z_nc = 1e-16 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2

Ö

25

50

. 75 100

2e-05

0e+00

0

50

. 25 75

100

25

50

time

75

q_nc = 1e+05; z_nc = 1e-14 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2

Ö

25

50

. 75 100

2e-05

0e+00

0

50

. 25 75

100

25

50

time

75

q_nc = 1e+05; z_nc = 1e-12 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 en 0.010 -+N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05

0

50

. 25

75

100

25

50

time

75

100

1

Ö

25

50

. 75

q_nc = 1e+05; z_nc = 1e-10 Н PAV_conc PAV_pop 5 -6 4 3 4 2 2 2 1 0 -Q_n Q_p R_n 0.020 -0.004 0.015 nutrient 0.003 low 4e-04 o.010 · +N 0.002 2e-04 +N+P 0.005 0.001 0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1

0

50

. 25 75

100

25

50

time

75

100

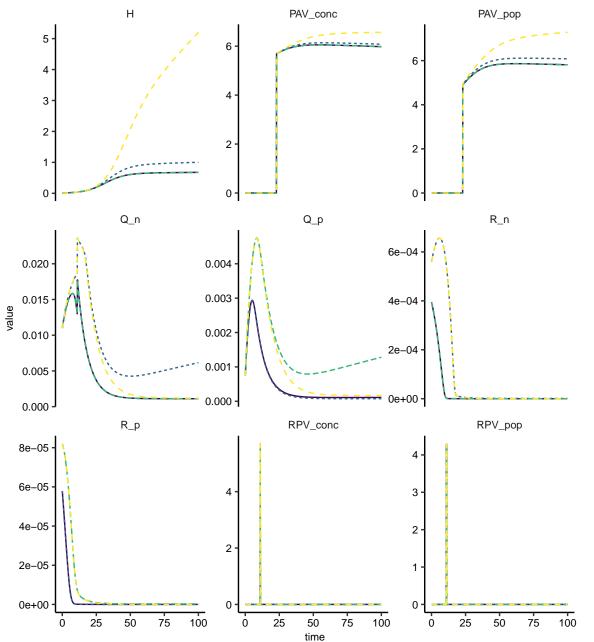
25

50

. 75 100

Ö

q_nc = 1e+05; z_nc = 1e-08

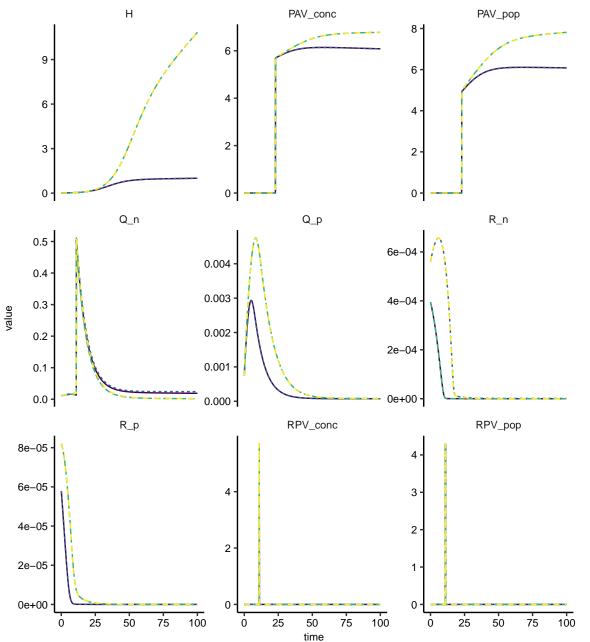


nutrient

low

+N

q_nc = 1e+05; z_nc = 1e-06

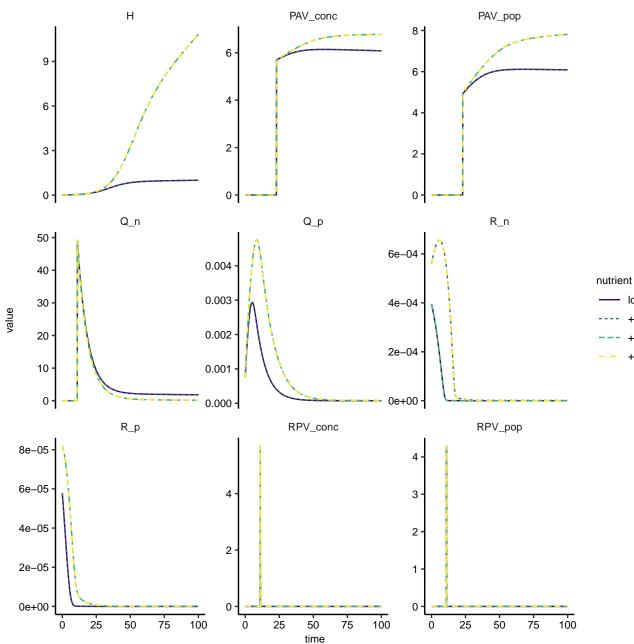


nutrient

low

+N

q_nc = 1e+05; z_nc = 1e-04



+N

q_nc = 1e+05; z_nc = 0.01 Н PAV_conc PAV_pop 8 | 6 9 6 4 6 4 2 3 2 0 -Q_n Q_p R_n 6e-04 4000 0.004 nutrient 3000 0.003 low 4e-04 value +N 2000 0.002 2e-04 +N+P 1000 0.001 0 -0e+00 0.000 -R_p RPV_conc RPV_pop 8e-05 6e-05 3 4 4e-05 2 2 2e-05 1 0e+00

25

Ö

50

time

75

100

25

Ö

50

100

. 75

25

0

50

