Trying Same Rho

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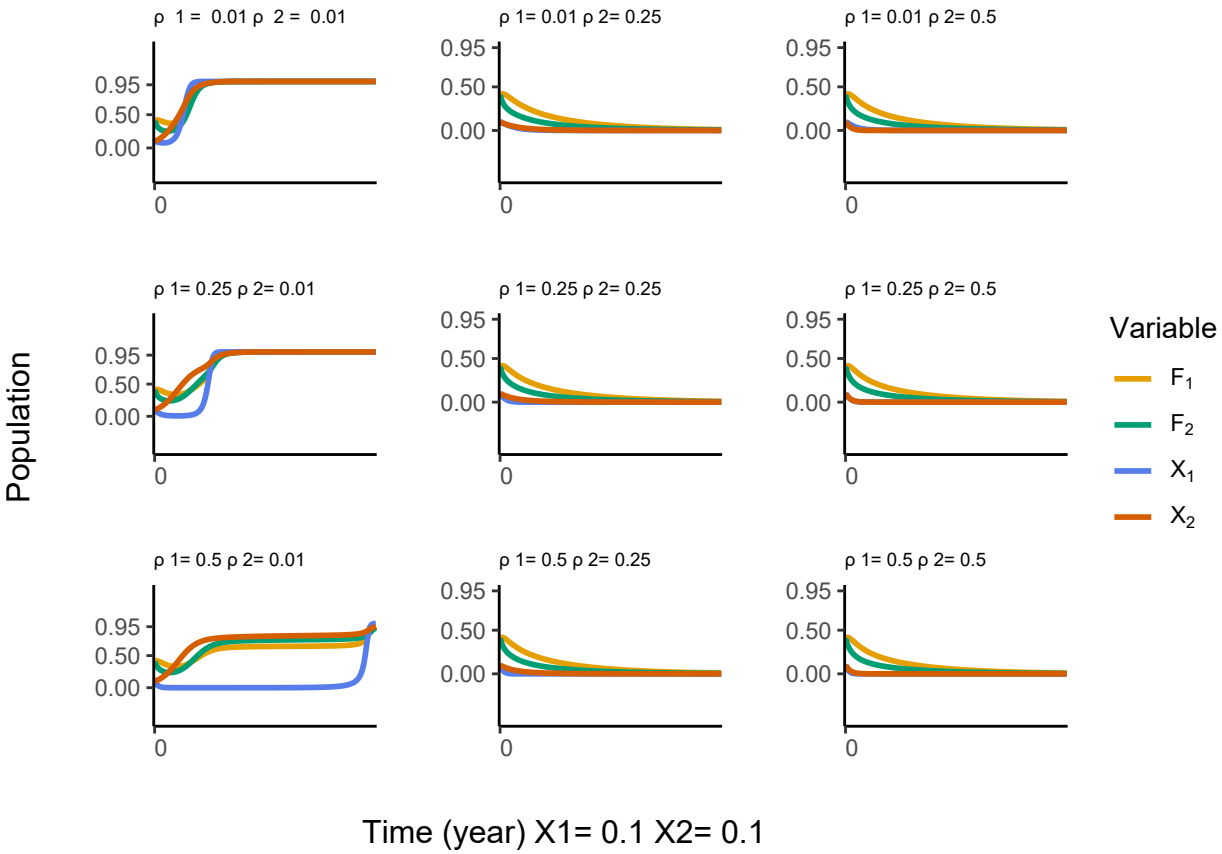
$$\frac{dF_1}{dt} = r_1 F_1(1 - F_1) - \frac{h_1 * F_1(1 - X_1)}{F_1 + s_1} - m_2 F_1 + m_1 F_2 \tag{1}$$

$$\frac{dF_2}{dt} = r_2 F_2(1 - F_2) - \frac{h_2 * F_2(1 - X_2)}{F_2 + s_2} - m_1 F_2 + m_2 F_1 \tag{2}$$

$$\frac{dX_1}{dt} = k_1 X_1(1 - X_1)[\frac{1}{F_1 + c_1} - \omega_1 + d_1(2X_1 - 1) + \rho_1(2X_2 - 1)] \tag{3}$$

$$\frac{dX_2}{dt} = k_2 X_2(1 - X_2)[\frac{1}{F_2 + c_2} - \omega_2 + d_2(2X_2 - 1) + \rho_2(2X_1 - 1)] \tag{4}$$



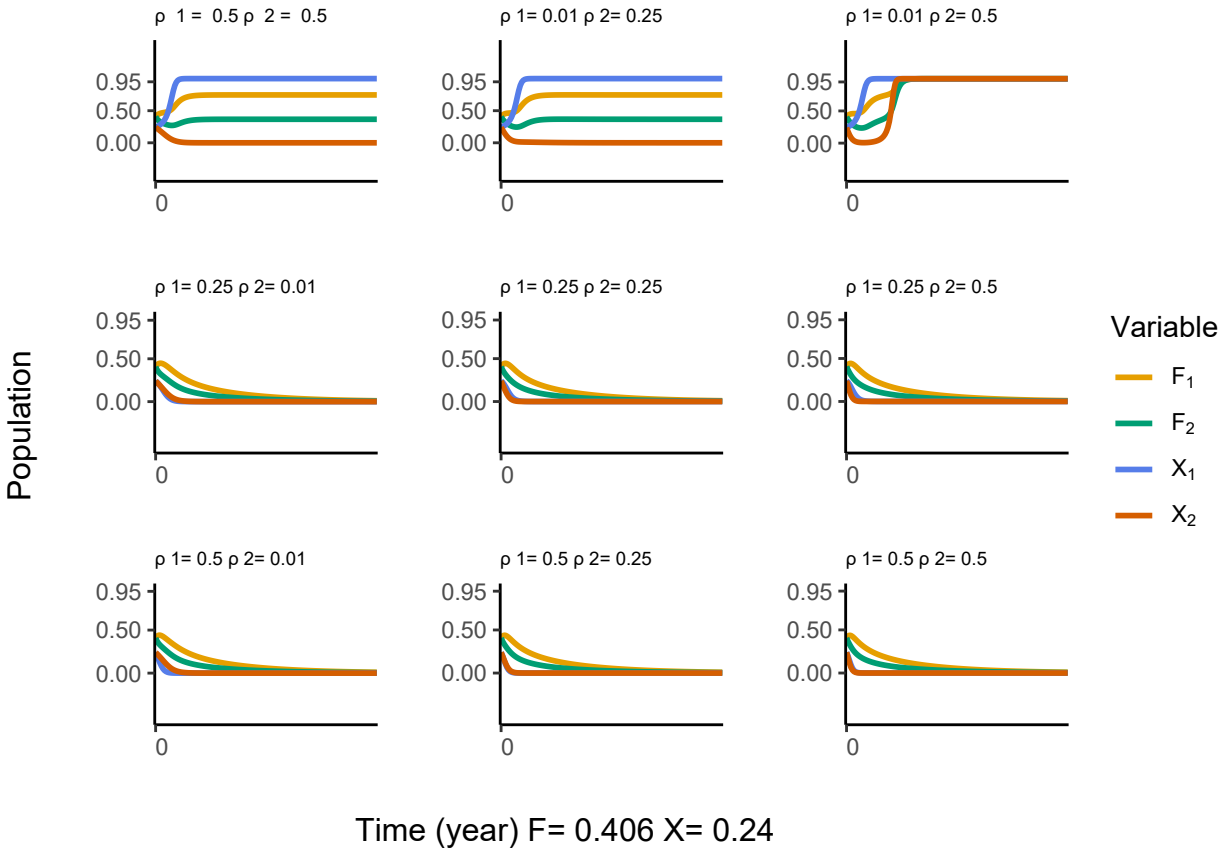
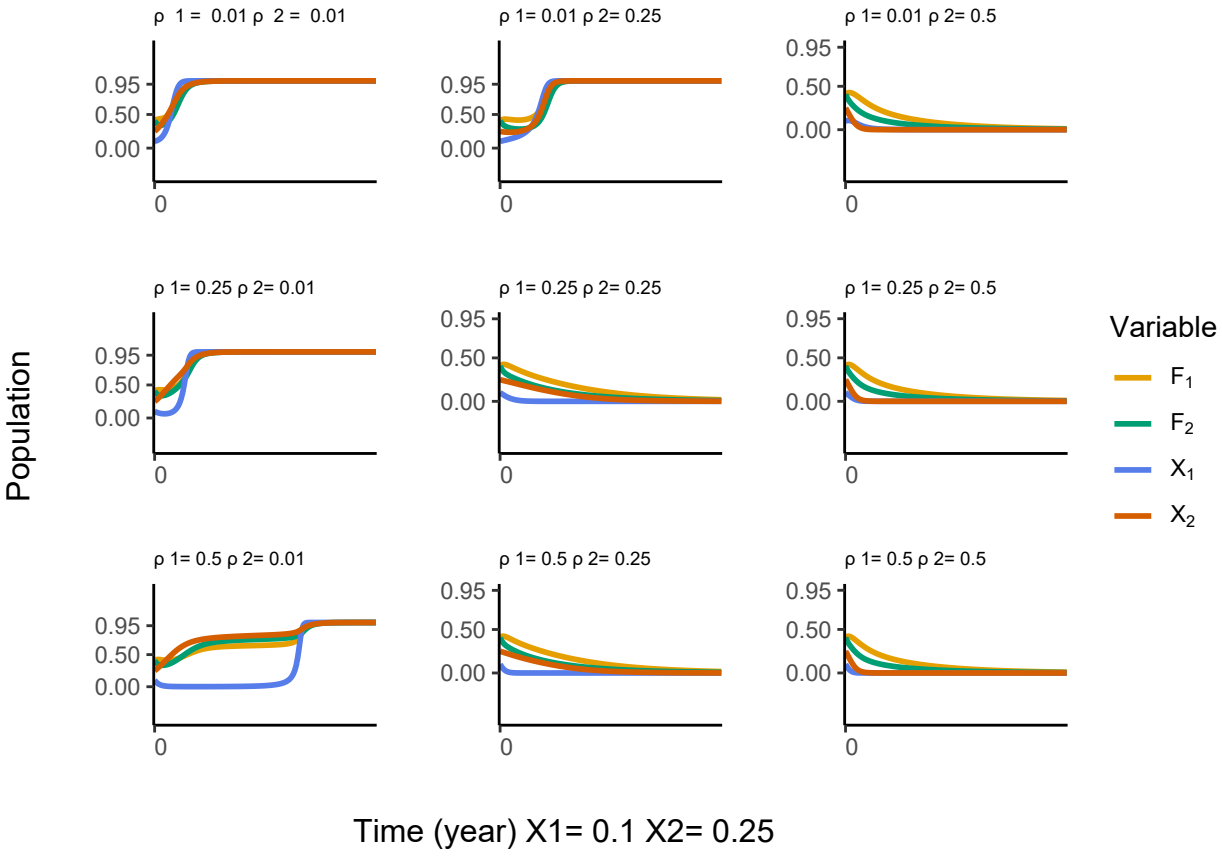


Figure 1: The difference in increasing outside social pressure on population 1 (the ρ_1 parameter is increased down the columns of graphs) versus increasing social pressure from population 1 onto population 2 (the ρ_2 parameter is increased across rows of graphs) which compares self-pressure to pressuring the other gropu.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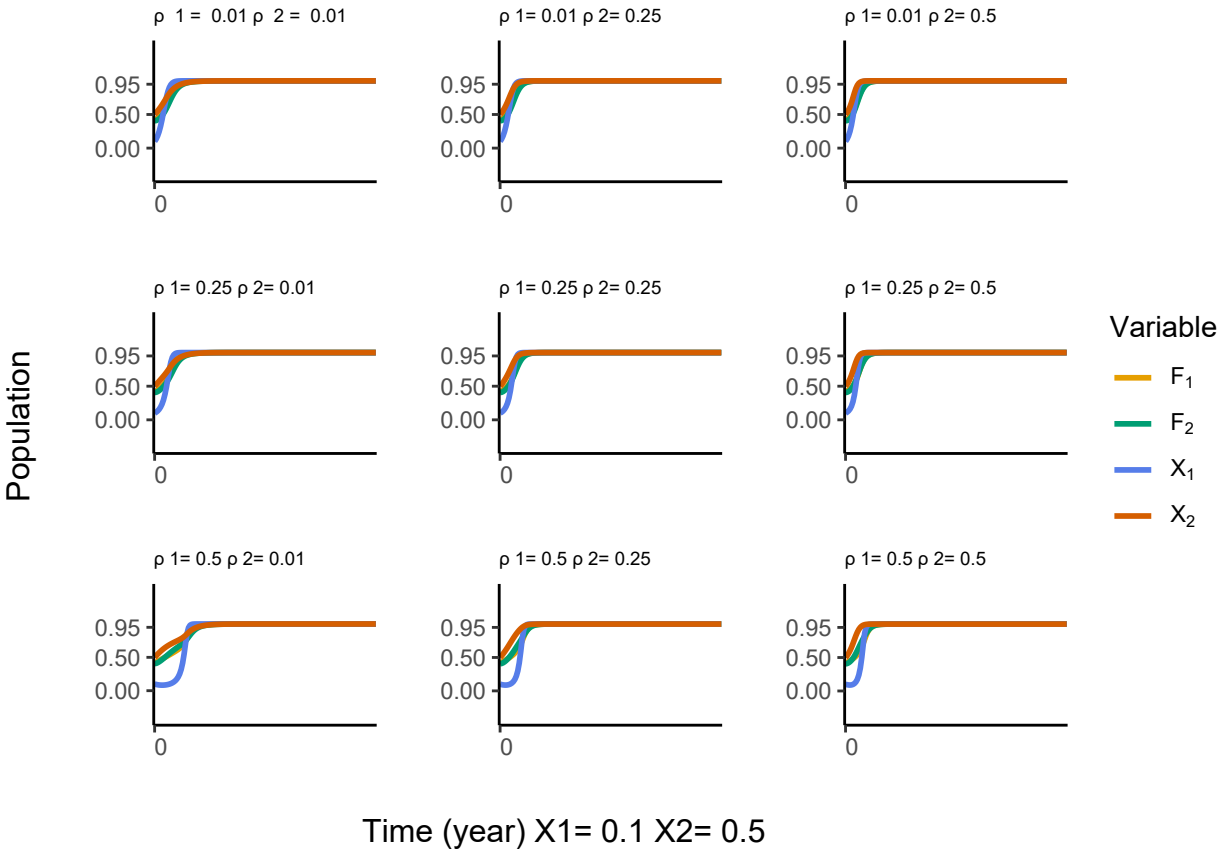
ρ 1= 0.25 ρ 2= 0.5
ρ 1= 0.5 ρ 2= 0.01
ρ 1= 0.5 ρ 2= 0.25
ρ 1= 0.5 ρ 2= 0.5
0.95
0.50
0.00
0
Population
Time (year) X1= 0.1 X2= 0.25
Variable
F1
F2
X1
X2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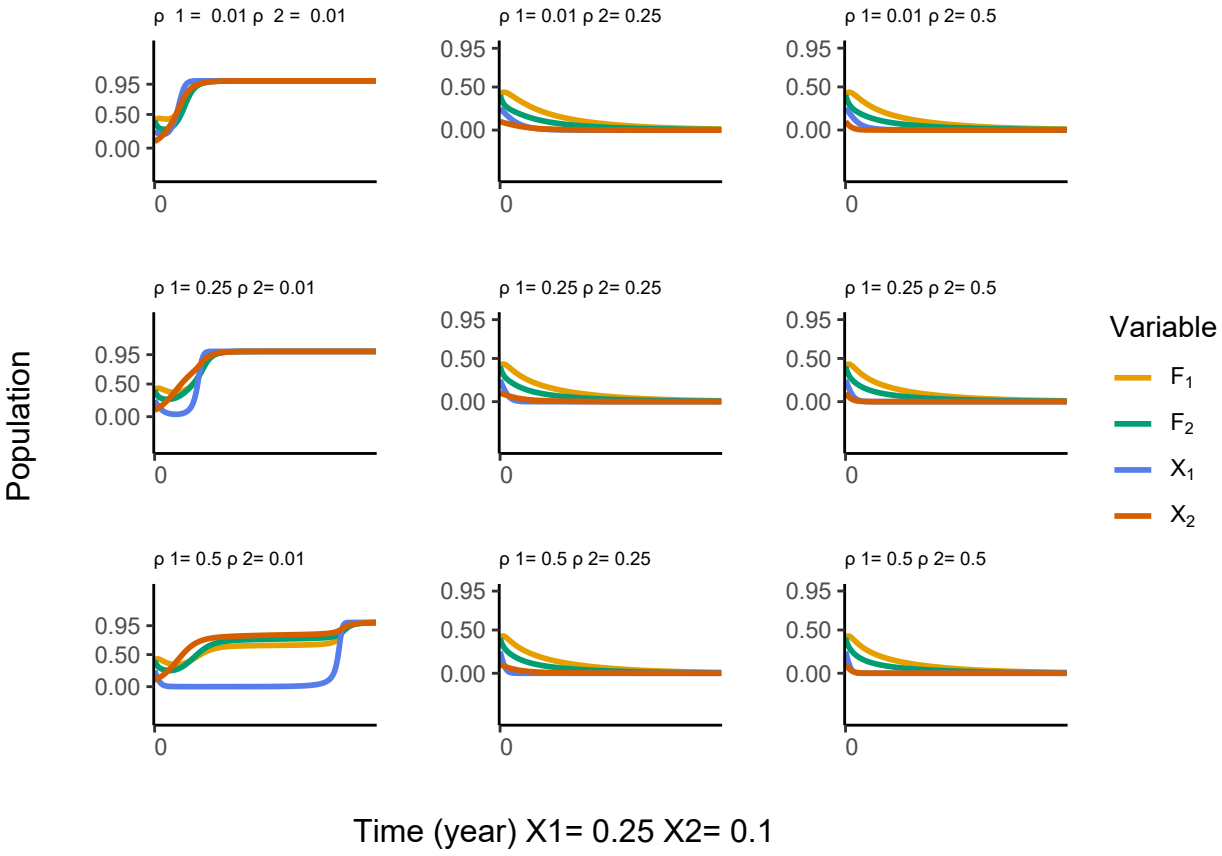
ρ 1= 0.25 ρ 2= 0.5
ρ 1= 0.5 ρ 2= 0.01
ρ 1= 0.5 ρ 2= 0.25
ρ 1= 0.5 ρ 2= 0.5
0.95
0.50
0.00
0
Population
Time (year) X1= 0.1 X2= 0.5
Variable
F1
F2
X1
X2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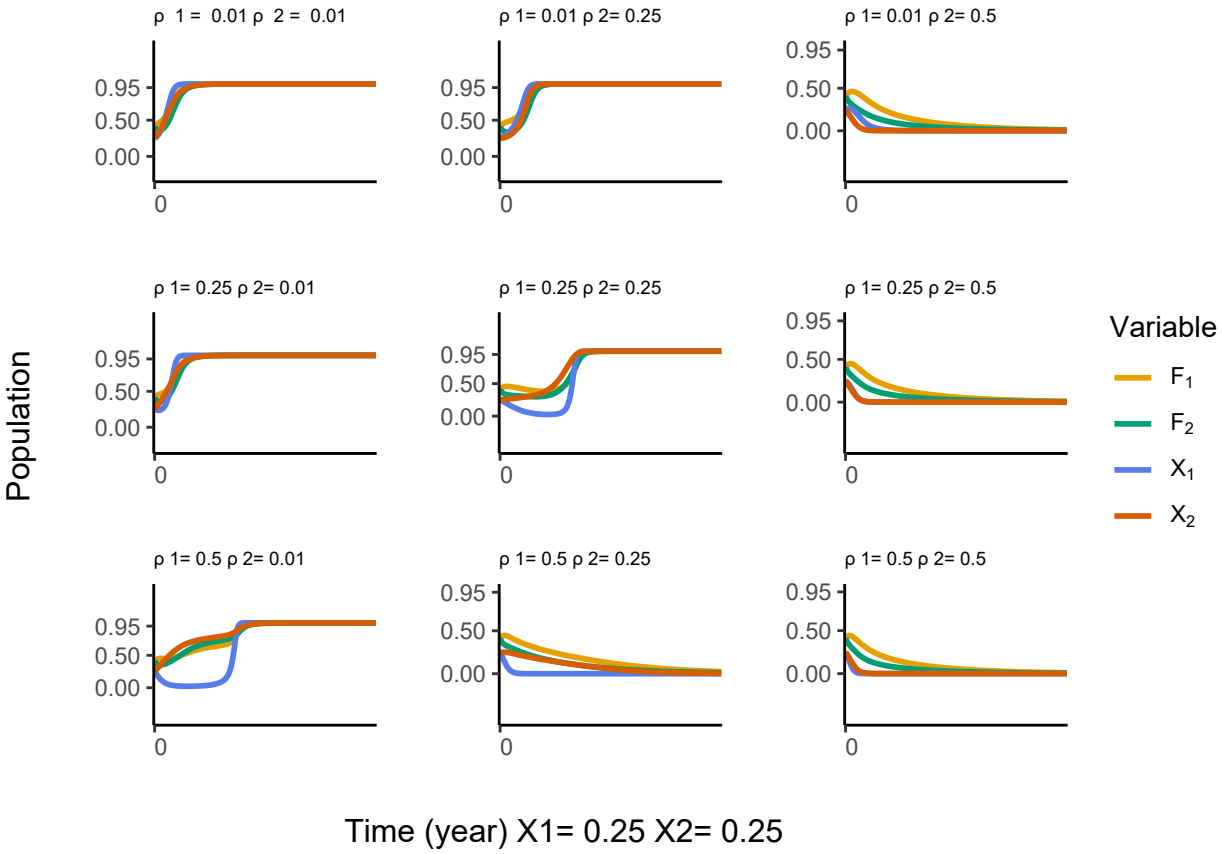
ρ 1= 0.25 ρ 2= 0.5
ρ 1= 0.5 ρ 2= 0.01
ρ 1= 0.5 ρ 2= 0.25
ρ 1= 0.5 ρ 2= 0.5
0.95
0.50
0.00
0
Population
Time (year) X1= 0.25 X2= 0.1
Variable
F1
F2
X1
X2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ρ 1= 0.25 ρ 2= 0.5
ρ 1= 0.5 ρ 2= 0.01
ρ 1= 0.5 ρ 2= 0.25
ρ 1= 0.5 ρ 2= 0.5
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0.00
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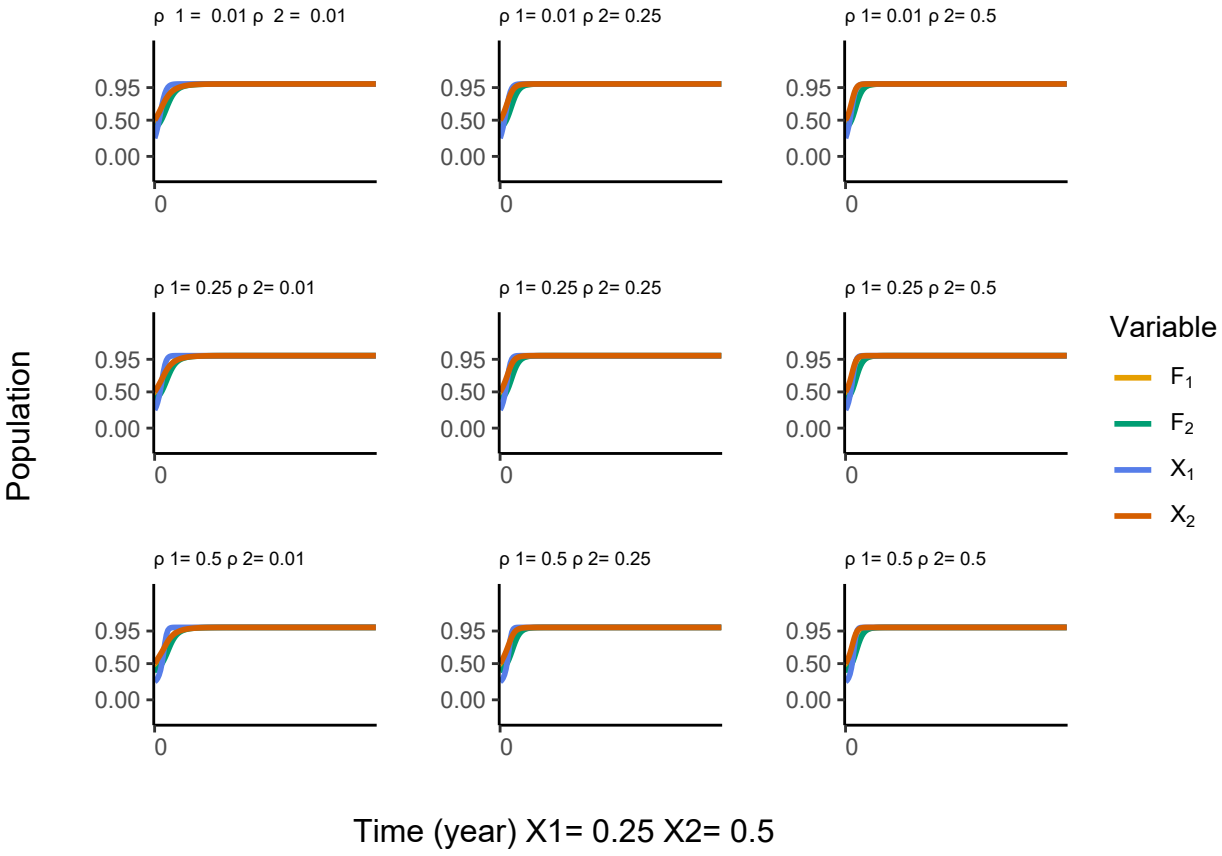
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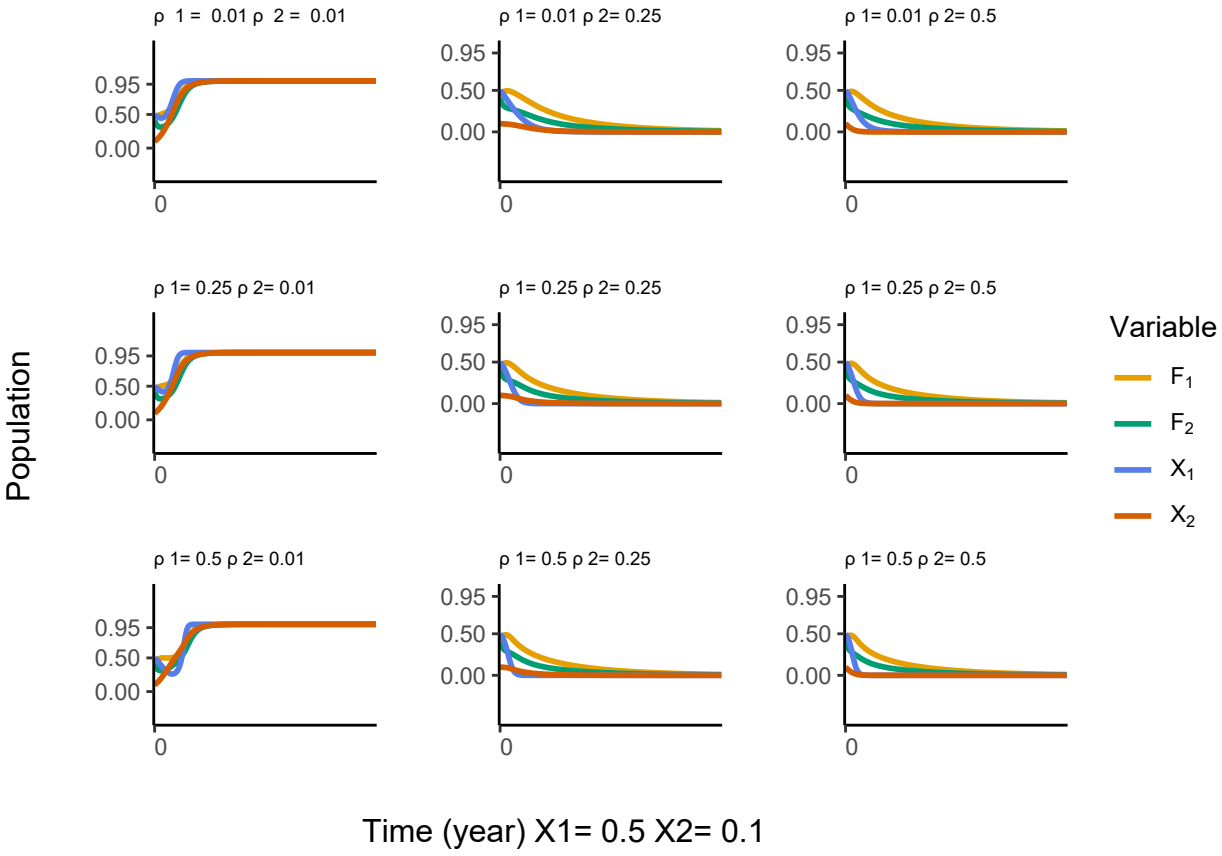
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ρ 1= 0.5 ρ 2= 0.01
ρ 1= 0.5 ρ 2= 0.25
ρ 1= 0.5 ρ 2= 0.5
0.95
0.50
0.00
0
Population
Time (year) X1= 0.5 X2= 0.1
Variable
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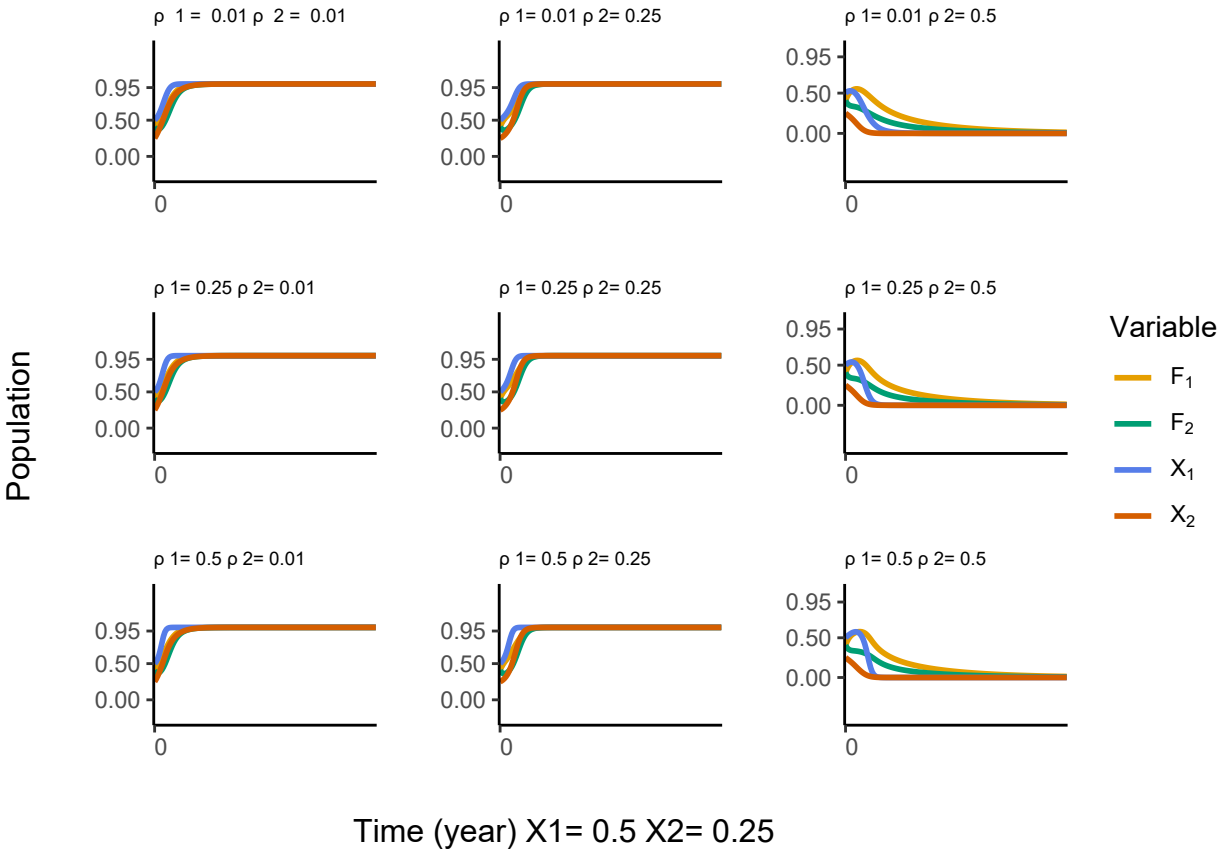
F2
X1
X2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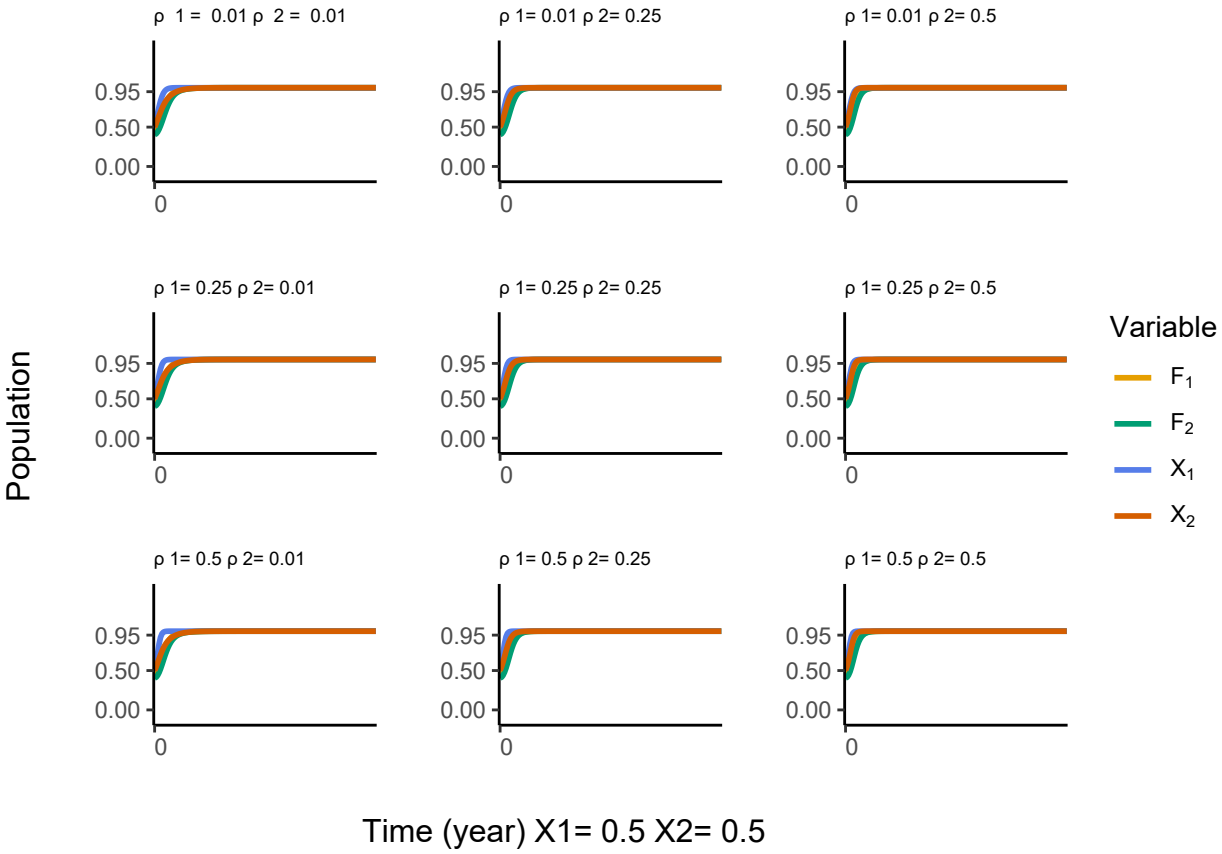
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