**ExamplePlot:**

init = [1000,1,0,1,10000,0,0];

opt\_params1 =

beta\_h: 0.2400

beta\_v: 0.2400

gamma\_h: 0.1667

mu\_h: 3.9139e-05

nu\_h: 0.3333

psi\_v: 0.3000

mu\_v: 0.0714

nu\_v: 0.0909

sigma\_h1: 5

sigma\_h2: 50

sigma\_v: 0.5000

H0: 1000

theta1: 0.8000

theta2: 0.2000

theta0: 0.2000

init\_cumulative\_infected: 10

K\_v: 10000

pi1: 1

pi2: 1

R01 = 1.9212