Model selection with all PCs

Model 1: logvol\_t1 ~ logvol\_t + (logvol\_t|Year\_t)

Model 2: logvol\_t1 ~ logvol\_t + PC1 + PC2 + (logvol\_t|Year\_t)

Model 3: logvol\_t1 ~ logvol\_t + PC1 + PC2 + PC3 + (logvol\_t|Year\_t)

Model 4: logvol\_t1 ~ logvol\_t + PC1 + PC2 + PC3 + PC4 + (logvol\_t|Year\_t)

Model 5: logvol\_t1 ~ logvol\_t + PC1 + PC2 + PC3 + PC4 + PC5 + (logvol\_t|Year\_t)

Model 6: logvol\_t1 ~ logvol\_t + PC1 + PC2 + PC3 + PC4 + PC5 + PC6 + (logvol\_t|Year\_t)

Model 7: logvol\_t1 ~ logvol\_t + PC1 + PC2 + PC3 + PC4 + PC5 + PC6 + PC7 + (logvol\_t|Year\_t)

Model 8: logvol\_t1 ~ logvol\_t + PC1 + PC2 + PC3 + PC4 + PC5 + PC6 + PC7 + PC8 + (logvol\_t|Year\_t)

**Flowering Model:**

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

mod7 12 2383.69 0.00 0.83 0.83 -1179.81

mod8 13 2387.03 3.33 0.16 0.98 -1180.47

mod6 11 2392.67 8.97 0.01 0.99 -1185.30

mod1 5 2393.91 10.21 0.01 1.00 -1191.95

mod2 7 2396.79 13.10 0.00 1.00 -1191.38

mod3 8 2396.89 13.19 0.00 1.00 -1190.43

mod4 9 2398.11 14.42 0.00 1.00 -1190.04

mod5 10 2399.80 16.11 0.00 1.00 -1189.87

**Flower Production Model:**

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

mod8 13 27251.88 0.00 1 1 -13612.90

mod7 12 27264.64 12.76 0 1 -13620.28

mod6 11 27276.89 25.01 0 1 -13627.42

mod1 5 27282.23 30.35 0 1 -13636.11

mod4 9 27283.28 31.40 0 1 -13632.62

mod5 10 27283.97 32.09 0 1 -13631.96

mod3 8 27284.71 32.83 0 1 -13634.34

mod2 7 27284.75 32.87 0 1 -13635.36

**Growth Model:**

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

mod8 14 10363.29 0.00 0.95 0.95 -5167.60

mod7 13 10369.33 6.04 0.05 1.00 -5171.62

mod6 12 10376.32 13.03 0.00 1.00 -5176.12

mod2 8 10377.46 14.17 0.00 1.00 -5180.71

mod3 9 10378.91 15.62 0.00 1.00 -5180.43

mod4 10 10379.39 16.10 0.00 1.00 -5179.67

mod1 6 10379.68 16.39 0.00 1.00 -5183.83

mod5 11 10381.39 18.10 0.00 1.00 -5179.66

**Survival Model:**

Model selection based on AICc:

K AICc Delta\_AICc AICcWt Cum.Wt LL

mod5 10 1493.35 0.00 0.34 0.34 -736.65

mod6 11 1494.45 1.09 0.20 0.54 -736.20

mod4 9 1495.15 1.79 0.14 0.67 -738.55

mod1 5 1495.39 2.04 0.12 0.80 -742.69

mod7 12 1496.34 2.99 0.08 0.87 -736.14

mod8 13 1496.48 3.12 0.07 0.94 -735.20

mod2 7 1497.97 4.62 0.03 0.98 -741.97

mod3 8 1498.77 5.42 0.02 1.00 -741.37