Valores de parámetros

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Para la obtención de los valores de parámetros del modelo, se tomará en cuenta el tiempo en días. Posteriormente, se ajustarán de acuerdo a la intensidad de interacción (1-5) entre individuos, descritas a continuación:

```
Fuerza_int <- read.csv ("Fuerza_interacciones.csv", header = FALSE, sep = ",")
Fuerza_int
```

```
##                 V1              V2             V3                 V4
## 1                   Hembras_adultas Machos_adultos Hembras_juveniles
## 2   Hembras_adultas               5              3                  5
## 3    Machos_adultos               3              4                  2
## 4 Hembras_juveniles               5              2                  5
## 5  Machos_juveniles               4              2                  2
## 6     Hembras_crias               4              2                  5
## 7      Machos_crias               4              2                  5
##                 V5           V6           V7
## 1 Machos_juveniles Hembras_crias Machos_crias
## 2                4             4            4
## 3                2             2            2
## 4                2             5            5
## 5                4             3            3
## 6                3             5            5
## 7                3             5            5
```

Entonces, se asigarán los parámetros iniciales, obtenidos de la literatura:

```
VF <- 1 / (25 * 365)
VM <- 1 / (20 * 365)
GAF <- 1 / (365 * 13)
GAM <- 1 / (365 * 13)
GJF <- 1 / (365 * 1.5)
GJM <- 1 / (365 * 1.5)
Beta <- 1 / ((11 + 17) / 2)
Gamma <- 1 / ((120 + 96 + 30) / 3)
Delta <- 1 / 30
MuA <- 1 / (365 * (90-45))
MuJ <- 1 / (365 * (90-8))
MuC <- 1 / (365 * (90-1.5))
```

Para los parámetros a utilizar en el modelo, se ajustarán de acuerdo a la intensidad de interacción y del estado en del que se trate:

```
NuF <- VF
NuM <- VM
GAFS <- GAF * 1
GAFI <- GAF * 0.3
GAFR <- GAF * 0.6
GAMS <- GAM * 1
GAMI <- GAM * 0.3
GAMR <- GAM * 0.6
GJFS <- GJF * 1
GJFI <- GJF * 0.3
GJFR <- GJF * 0.6
GJMS <- GJM * 1
GJMI <- GJM * 0.3
GJMR <- GJM * 0.6
BetaAFAF <- Beta * 1
BetaAFAM <- Beta * 0.6
BetaAFJF <- Beta * 1
BetaAFJM <- Beta * 0.8
BetaAFCF <- Beta * 0.8
BetaAFCM <- Beta * 0.8
BetaAMAF <- Beta * 0.6
BetaAMAM <- Beta * 0.8
BetaAMJF <- Beta * 0.4
BetaAMCF <- Beta * 0.4
BetaAMJM <- Beta * 0.4
BetaAMCM <- Beta * 0.4
BetaJFAF <- Beta * 1
BetaJFAM <- Beta * 0.4
BetaJFJF <- Beta * 1
BetaJFJM <- Beta * 0.4
BetaJFCF <- Beta * 1
BetaJFCM <- Beta * 1
BetaJMAF <- Beta * 0.8
BetaJMAM <- Beta * 0.4
BetaJMJF <- Beta * 0.4
BetaJMJM <- Beta * 0.8
BetaJMCF <- Beta * 0.6
BetaJMCM <- Beta * 0.6
BetaCFAF <- Beta * 0.8
BetaCFAM <- Beta * 0.4
BetaCFJF <- Beta * 1
BetaCFJM <- Beta * 0.6
BetaCFCF <- Beta * 1
BetaCFCM <- Beta * 1
BetaCMAF <- Beta * 0.8
BetaCMAM <- Beta * 0.4
BetaCMJF <- Beta * 1
BetaCMJM <- Beta * 0.6
BetaCMCF <- Beta * 1
BetaCMCM <- Beta * 1
GammaAF <- Gamma * 0.8
GammaAM <- Gamma * 0.7
GammaJF <- Gamma * 1
```

```
GammaJM <- Gamma * 1
GammaCF <- Gamma * 0.8
GammaCM <- Gamma * 0.8
DeltaAF <- Delta * 0.6
DeltaAM <- Delta * 0.8
DeltaJF <- Delta * 0.3
DeltaJM <- Delta * 0.3
DeltaCF <- Delta * 0.6
DeltaCM <- Delta * 0.6
MuAFS <- MuA * 0.3
MuAFI <- MuA * 0.6
MuAFR <- MuA * 0.4
MuAMS <- MuA * 0.4
MuAMI <- MuA * 0.8
MuAMR <- MuA * 0.6
MuJFS <- MuJ * 0.15
MuJFI <- MuJ * 0.3
MuJFR <- MuJ * 0.27
MuJMS <- MuJ * 0.15
MuJMI <- MuJ * 0.3
MuJMR <- MuJ * 0.27
MuCFS <- MuC * 0.3
MuCFI <- MuC * 0.6
MuCFR <- MuC * 0.4
MuCMS <- MuC * 0.3
MuCMI <- MuC * 0.6
MuCMR <- MuC * 0.4
```

Por lo tanto, los valores de los parámetros son:

```
NuF
```

```
## [1] 0.000109589
```

```
NuM
```

```
## [1] 0.0001369863
```

```
GAFS
```

```
## [1] 0.0002107482
```

```
GAFI
```

```
## [1] 6.322445e-05
```

```
GAFR
```

```
## [1] 0.0001264489
```

```
GAMS
```

```
## [1] 0.0002107482
```

```
GAMI
```

```
## [1] 6.322445e-05
```

```
GAMR
```

```
## [1] 0.0001264489
```

```
GJFS
```

```
## [1] 0.001826484
```

```
GJFI
```

```
## [1] 0.0005479452
```

```
GJFR
```

```
## [1] 0.00109589
```

```
GJMS
```

```
## [1] 0.001826484
```

```
GJMI
```

```
## [1] 0.0005479452
```

```
GJMR
```

```
## [1] 0.00109589
```

```
BetaAFAF
```

```
## [1] 0.07142857
```

```
BetaAFAM
```

```
## [1] 0.04285714
```

```
BetaAFJF
```

```
## [1] 0.07142857
```

```
BetaAFJM
```

```
## [1] 0.05714286
```

```
BetaAFCF
```

```
## [1] 0.05714286
```

```
BetaAFCM
```

```
## [1] 0.05714286
```

```
BetaAMAF
```

```
## [1] 0.04285714
```

```
BetaAMAM
```

```
## [1] 0.05714286
```

```
BetaAMJF
```

```
## [1] 0.02857143
```

```
BetaAMCF
```

```
## [1] 0.02857143
```

```
BetaAMJM
```

```
## [1] 0.02857143
```

```
BetaAMCM
```

```
## [1] 0.02857143
```

```
BetaJFAF
```

```
## [1] 0.07142857
```

```
BetaJFAM
```

```
## [1] 0.02857143
```

```
BetaJFJF
```

```
## [1] 0.07142857
```

```
BetaJFJM
```

```
## [1] 0.02857143
```

```
BetaJFCF
```

```
## [1] 0.07142857
```

```
BetaJFCM
```

```
## [1] 0.07142857
```

```
BetaJMAF
```

```
## [1] 0.05714286
```

```
BetaJMAM
```

```
## [1] 0.02857143
```

```
BetaJMJF
```

```
## [1] 0.02857143
```

```
BetaJMJM
```

```
## [1] 0.05714286
```

```
BetaJMCF
```

```
## [1] 0.04285714
```

```
BetaJMCM
```

```
## [1] 0.04285714
```

```
BetaCFAF
```

```
## [1] 0.05714286
```

```
BetaCFAM
```

```
## [1] 0.02857143
```

```
BetaCFJF
```

```
## [1] 0.07142857
```

```
BetaCFJM
```

```
## [1] 0.04285714
```

```
BetaCFCF
```

```
## [1] 0.07142857
```

```
BetaCFCM
```

```
## [1] 0.07142857
```

```
BetaCMAF
```

```
## [1] 0.05714286
```

```
BetaCMAM
```

```
## [1] 0.02857143
```

```
BetaCMJF
```

```
## [1] 0.07142857
```

```
BetaCMJM
```

```
## [1] 0.04285714
```

```
BetaCMCF
```

```
## [1] 0.07142857
```

```
BetaCMCM
```

```
## [1] 0.07142857
```

```
GammaAF
```

```
## [1] 0.009756098
```

```
GammaAM
```

```
## [1] 0.008536585
```

```
GammaJF
```

```
## [1] 0.01219512
```

```
GammaJM
```

```
## [1] 0.01219512
```

```
GammaCF
```

```
## [1] 0.009756098
```

```
GammaCM
```

```
## [1] 0.009756098
```

```
DeltaAF
```

```
## [1] 0.02
```

```
DeltaAM
```

```
## [1] 0.02666667
```

```
DeltaJF
```

```
## [1] 0.01
```

```
DeltaJM
```

```
## [1] 0.01
```

```
DeltaCF
```

```
## [1] 0.02
```

```
DeltaCM
```

```
## [1] 0.02
```

```
MuAFS
```

```
## [1] 1.826484e-05
```

```
MuAFI
```

```
## [1] 3.652968e-05
```

```
MuAFR
```

```
## [1] 2.435312e-05
```

```
MuAMS
```

```
## [1] 2.435312e-05
```

```
MuAMI
```

```
## [1] 4.870624e-05
```

```
MuAMR
```

```
## [1] 3.652968e-05
```

```
MuJFS
```

```
## [1] 5.011694e-06
```

```
MuJFI
```

```
## [1] 1.002339e-05
```

```
MuJFR
```

```
## [1] 9.021049e-06
```

```
MuJMS
```

```
## [1] 5.011694e-06
```

```
MuJMI
```

```
## [1] 1.002339e-05
```

```
MuJMR
```

```
## [1] 9.021049e-06
```

```
MuCFS
```

```
## [1] 9.287207e-06
```

```
MuCFI
```

```
## [1] 1.857441e-05
```

```
MuCFR
```

```
## [1] 1.238294e-05
```

```
MuCMS
```

```
## [1] 9.287207e-06
```

```
MuCMI
```

```
## [1] 1.857441e-05
```

```
MuCMR
```

```
## [1] 1.238294e-05
```