Pruebas de secado

Tabla descriptiva

```
## # A tibble: 14 x 5
## # Groups:   Temperatura [2]
##    Temperatura Hora      n  Mean    sd
##    <fct>       <fct> <int> <dbl> <dbl>
##  1 60          0         3 20.4  0.246
##  2 60          1         3 14.0  1.31
##  3 60          2         3 12.5  1.34
##  4 60          3         3 10.5  1.56
##  5 60          4         3  8.48 1.74
##  6 60          5         3  6.69 1.75
##  7 60          6         3  4.97 1.59
##  8 60          7         3  2.52 0.482
##  9 80          0         3 19.7  0.401
## 10 80          1         3 12.7  0.572
## 11 80          2         3  9.37 0.804
## 12 80          3         3  5.61 0.810
## 13 80          4         3  2.88 0.336
## 14 80          5         3  2.08 0.124
```

Gráfico de medias con desvío estándar

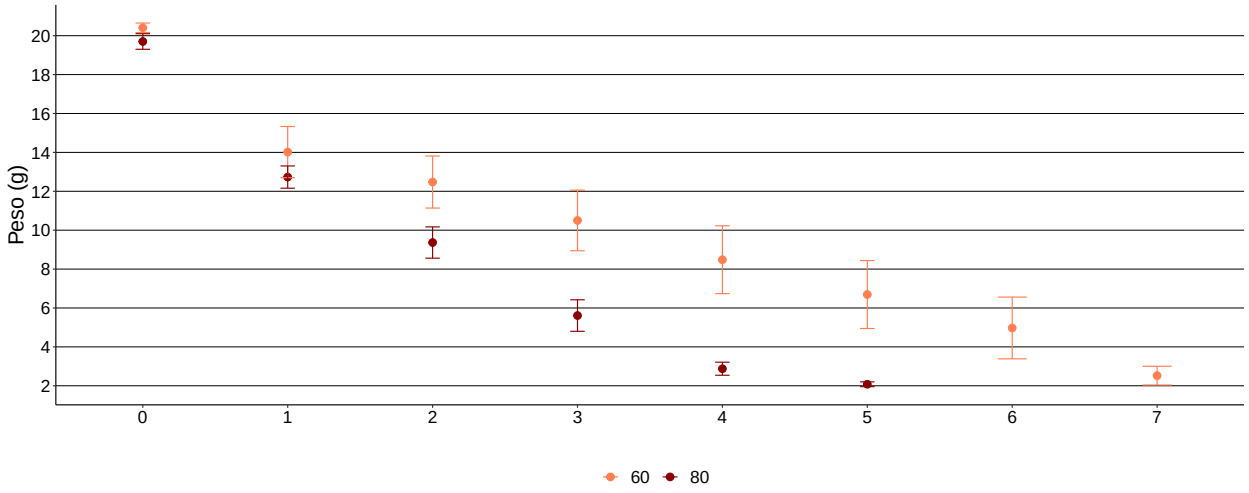
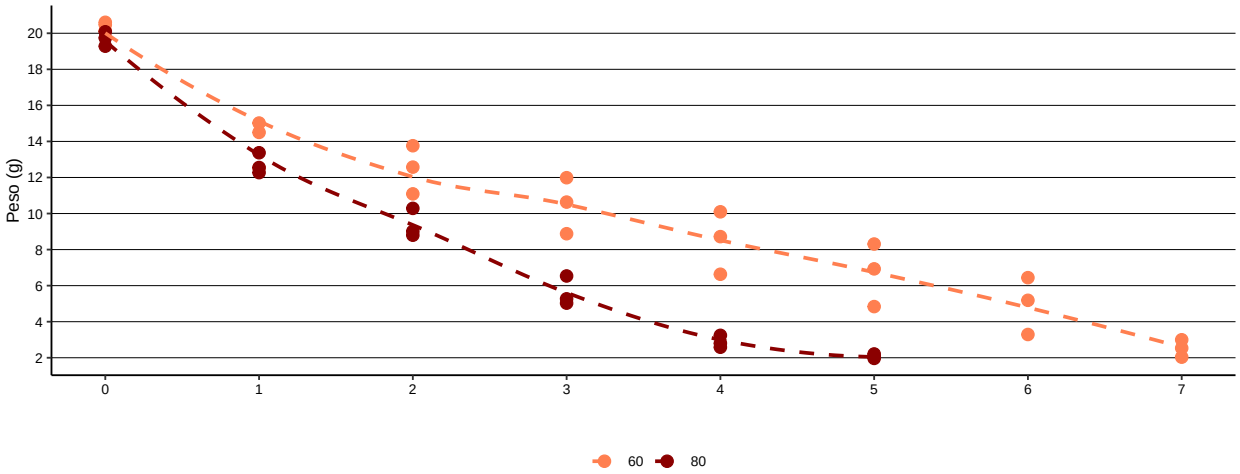


Gráfico de líneas de tendencia medias y valores puntuales



Correlación de cada unidad observacional en el tiempo

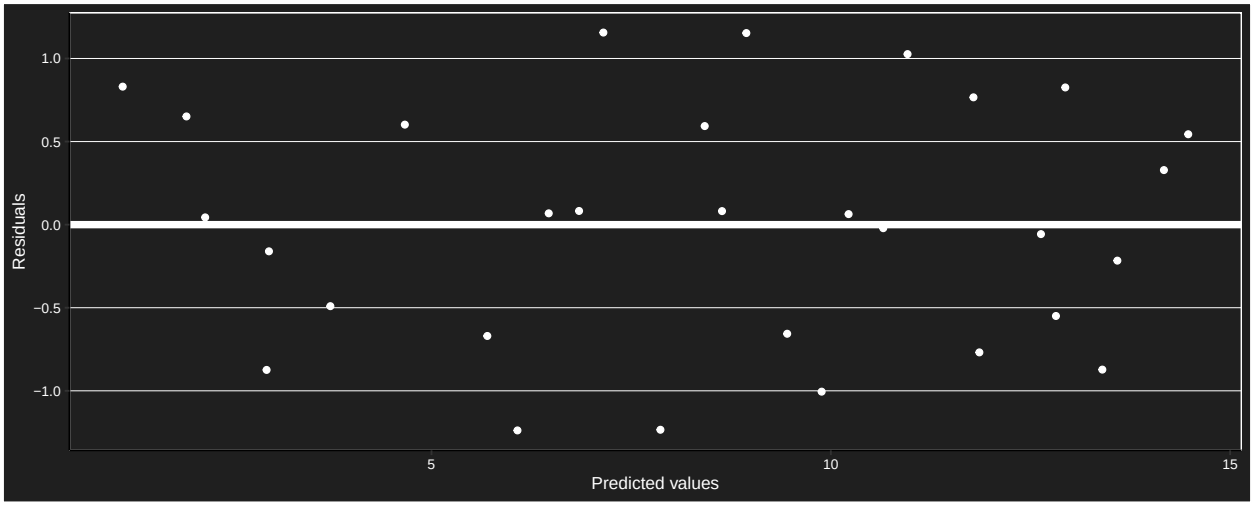
Matriz de covarianzas

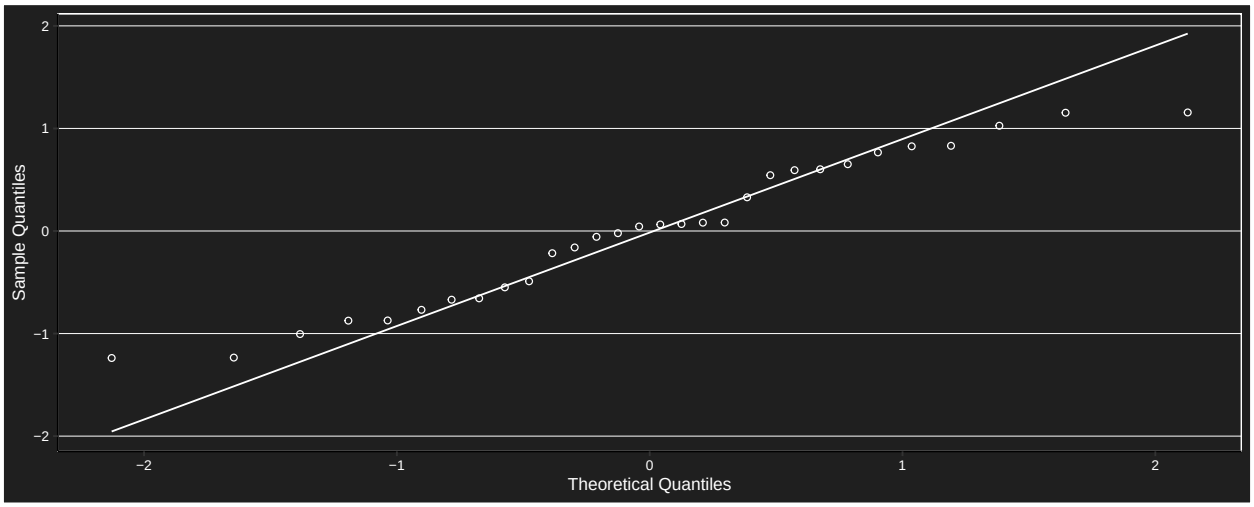
```
##      0    1    2    3     4    5
## 0 0.24 0.46 0.88 1.28  1.40 1.15
## 1 0.46 1.32 2.06 2.86  3.12 2.67
## 2 0.88 2.06 3.88 5.66  6.26 5.23
## 3 1.28 2.86 5.66 8.41  9.40 7.84
## 4 1.40 3.12 6.26 9.40 10.69 8.98
## 5 1.15 2.67 5.23 7.84  8.98 7.61
```

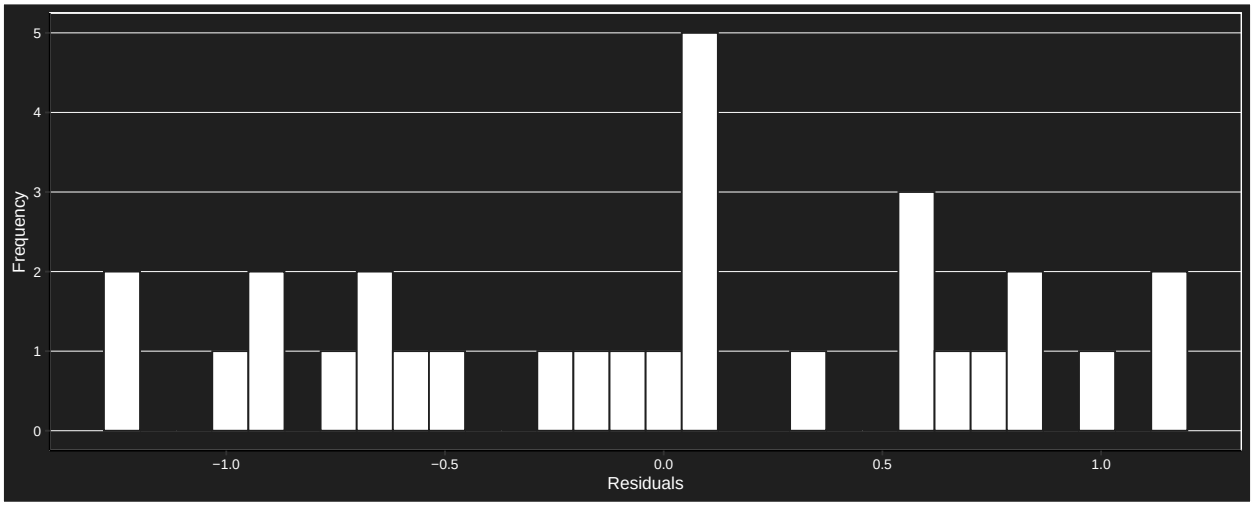
Modelo marginal. Estructura autoregresiva de orden 1

```
## gls(model = (Peso) ~ Hora * Temperatura + basal, data = datospeso2w,
##     correlation = corAR1(form = ~1 | Repeticion))
```

Comprobación de supuestos








```
##
##  Shapiro-Wilk normality test
##
## data:  e
## W = 0.9558226, p-value = 0.241377
```

Coeficientes del modelo

```
##         (Intercept)               Hora2               Hora3               Hora4
##       -31.996552210        -1.539666667        -3.514333333        -5.533000000
##               Hora5       Temperatura80               basal Hora2:Temperatura80
##        -7.323000000         0.298694977         2.255026084        -1.825333333
## Hora3:Temperatura80 Hora4:Temperatura80 Hora5:Temperatura80
##        -3.605333333        -4.321000000        -3.329333333
```

ANOVA

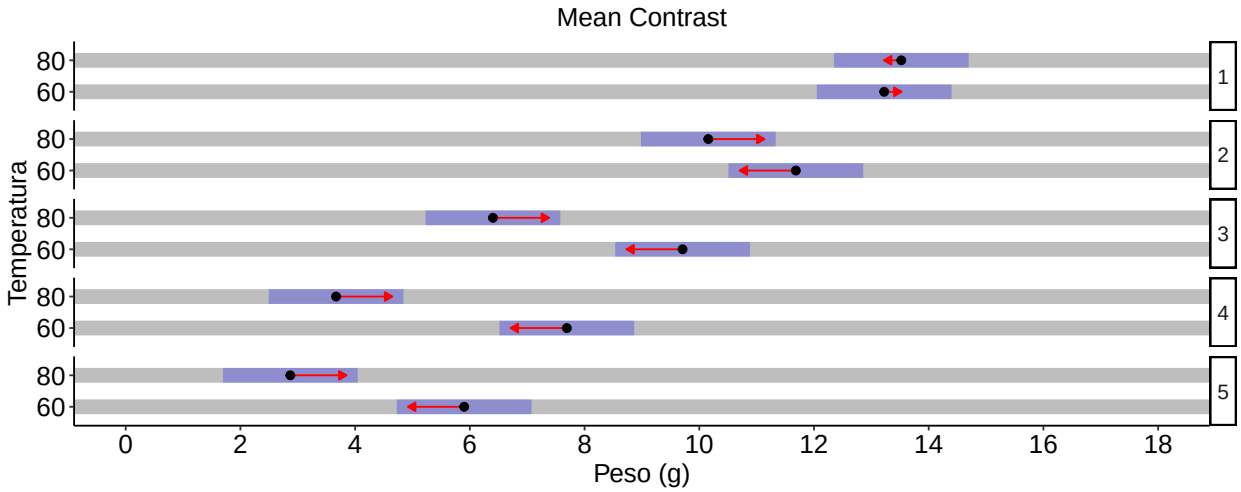
```
## Denom. DF: 19
##                   numDF    F-value p-value
## (Intercept)           1 3275.92959  <.0001
## Hora                  4  124.49491  <.0001
## Temperatura           1  120.00027  <.0001
## basal                 1   13.07197  0.0018
## Hora:Temperatura      4    4.95217  0.0066
```

Efectos simples

```
## $emmeans
## Hora = 1:
##  Temperatura      emmean          SE    df    lower.CL    upper.CL
##  60          13.22348584 0.557653114 17.24 12.04818823 14.39878346
##  80          13.52218082 0.557653114 17.24 12.34688321 14.69747843
##
## Hora = 2:
##  Temperatura      emmean          SE    df    lower.CL    upper.CL
##  60          11.68381918 0.557653114 17.24 10.50852157 12.85911679
##  80          10.15718082 0.557653114 17.24  8.98188321 11.33247843
##
## Hora = 3:
##  Temperatura      emmean          SE    df    lower.CL    upper.CL
##  60           9.70915251 0.557653114 17.24  8.53385490 10.88445012
##  80           6.40251416 0.557653114 17.24  5.22721654  7.57781177
##
## Hora = 4:
##  Temperatura      emmean          SE    df    lower.CL    upper.CL
##  60           7.69048584 0.557653114 17.24  6.51518823  8.86578346
##  80           3.66818082 0.557653114 17.24  2.49288321  4.84347843
##
## Hora = 5:
##  Temperatura      emmean          SE    df    lower.CL    upper.CL
##  60           5.90048584 0.557653114 17.24  4.72518823  7.07578346
##  80           2.86984749 0.557653114 17.24  1.69454988  4.04514510
##
## Degrees-of-freedom method: appx-satterthwaite
## Results are given on the ( (not the response) scale.
## Confidence level used: 0.95
##
## $contrasts
## Hora = 1:
##  contrast                          estimate          SE  df t.ratio p.value
##  Temperatura60 - Temperatura80 -0.29869498 0.877104027 9.7  -0.341  0.7407
##
## Hora = 2:
##  contrast                          estimate          SE  df t.ratio p.value
##  Temperatura60 - Temperatura80  1.52663836 0.877104027 9.7   1.741  0.1133
##
## Hora = 3:
##  contrast                          estimate          SE  df t.ratio p.value
##  Temperatura60 - Temperatura80  3.30663836 0.877104027 9.7   3.770  0.0039
##
## Hora = 4:
```

```
##  contrast                          estimate          SE  df t.ratio p.value
##  Temperatura60 - Temperatura80  4.02230502 0.877104027 9.7   4.586  0.0011
##
## Hora = 5:
##  contrast                          estimate          SE  df t.ratio p.value
##  Temperatura60 - Temperatura80  3.03063836 0.877104027 9.7   3.455  0.0064
##
## Note: contrasts are still on the ( scale
## Degrees-of-freedom method: appx-satterthwaite
```

Gráfico de comparaciones



Modelo