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

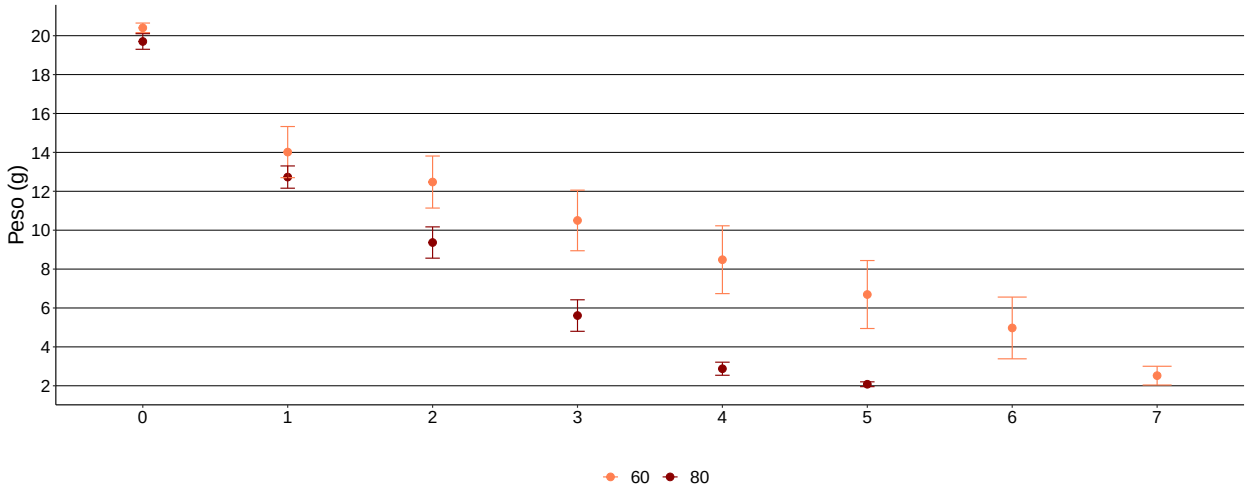
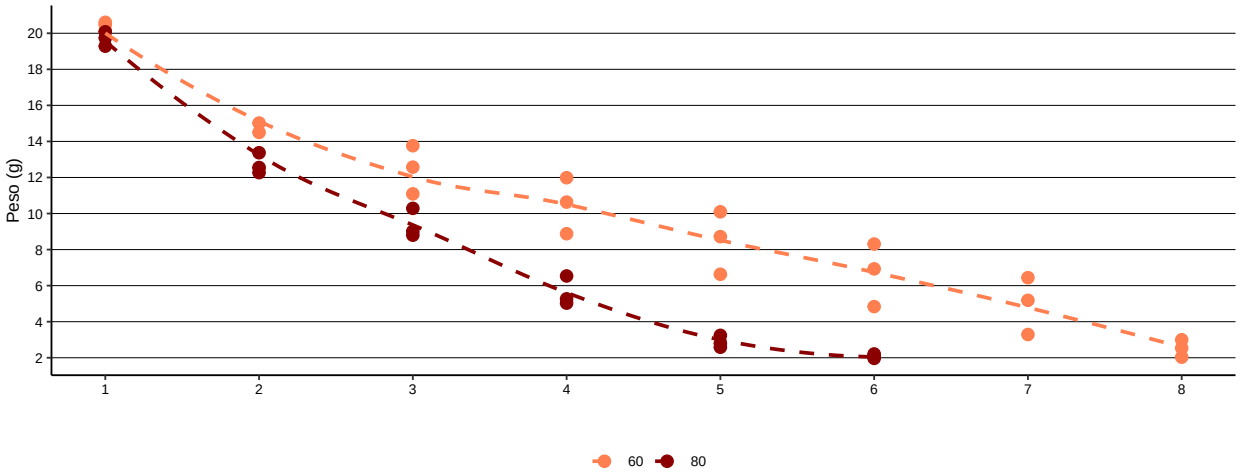


Gráfico de líneas de tendencia medias y valores puntuales



Correlación de cada unidad observacional en el tiempo

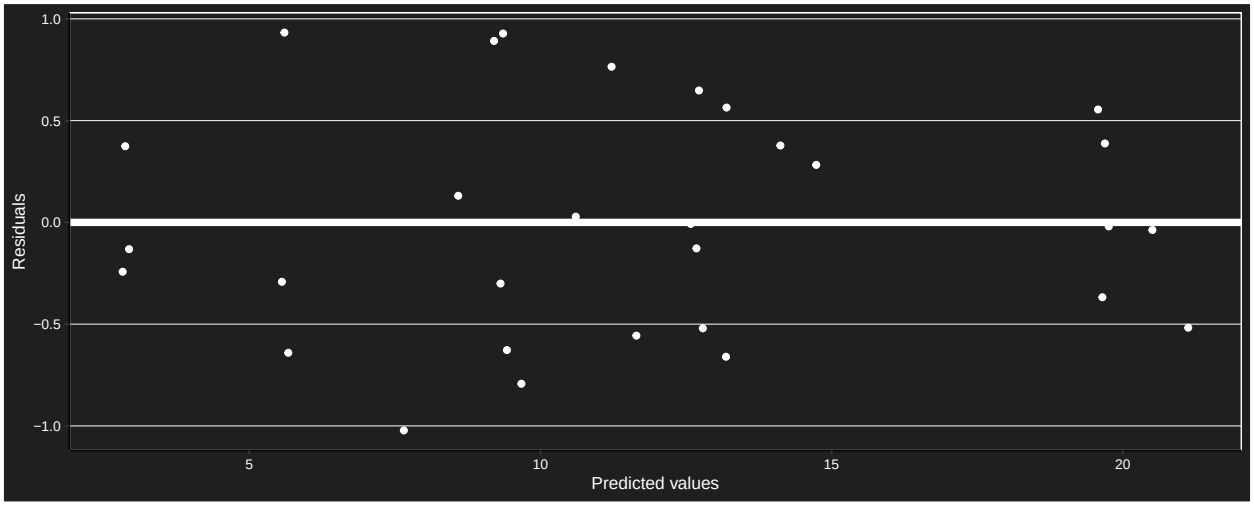
Matriz de covarianzas

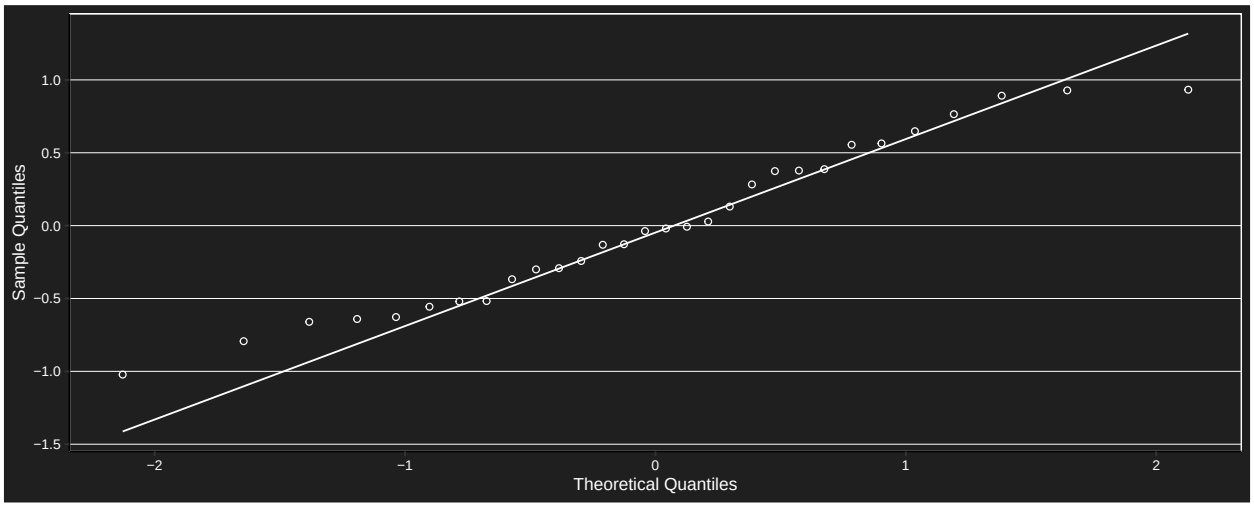
```
##      1    2    3    4     5    6
## 1 0.24 0.46 0.88 1.28  1.40 1.15
## 2 0.46 1.32 2.06 2.86  3.12 2.67
## 3 0.88 2.06 3.88 5.66  6.26 5.23
## 4 1.28 2.86 5.66 8.41  9.40 7.84
## 5 1.40 3.12 6.26 9.40 10.69 8.98
## 6 1.15 2.67 5.23 7.84  8.98 7.61
```

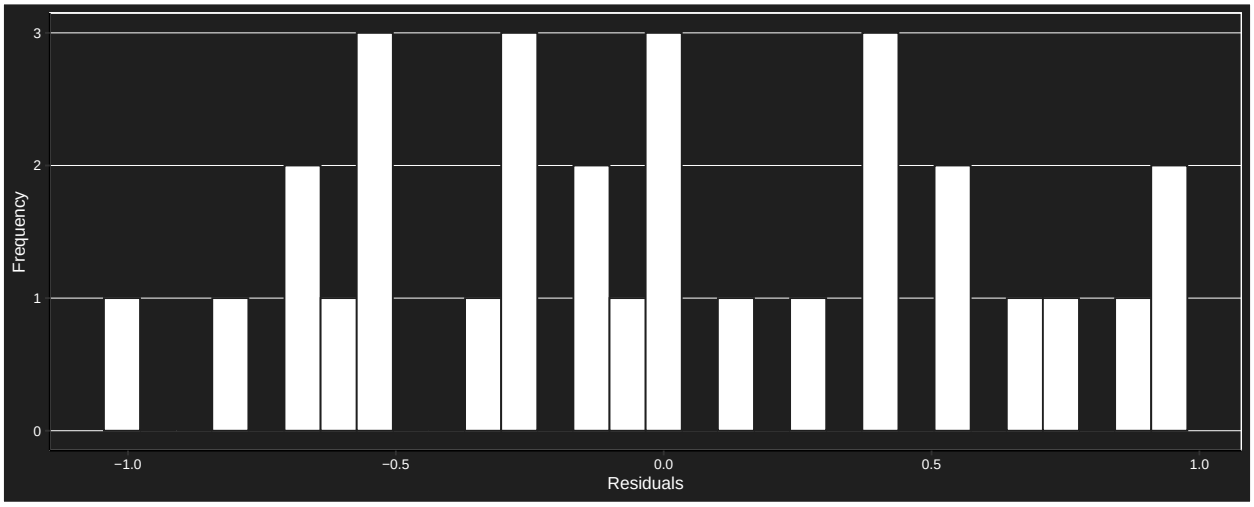
Modelo marginal. Estructura autoregresiva de orden 1

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

Comprobación de supuestos








```
##
##  Shapiro-Wilk normality test
##
## data:  e
## W = 0.96317, p-value = 0.3724
```

Coeficientes del modelo

```
##         (Intercept)               Hora2               Hora3               Hora4               Hora5
##           17.4161821          -6.3890000          -7.9286667          -9.9033333         -11.9220000
##       Temperatura80                basal Hora2:Temperatura80 Hora3:Temperatura80 Hora4:Temperatura80
##           1.3578918           0.4464761          -0.5823333          -2.4076667          -4.1876667
## Hora5:Temperatura80
##          -4.9033333
```

ANOVA

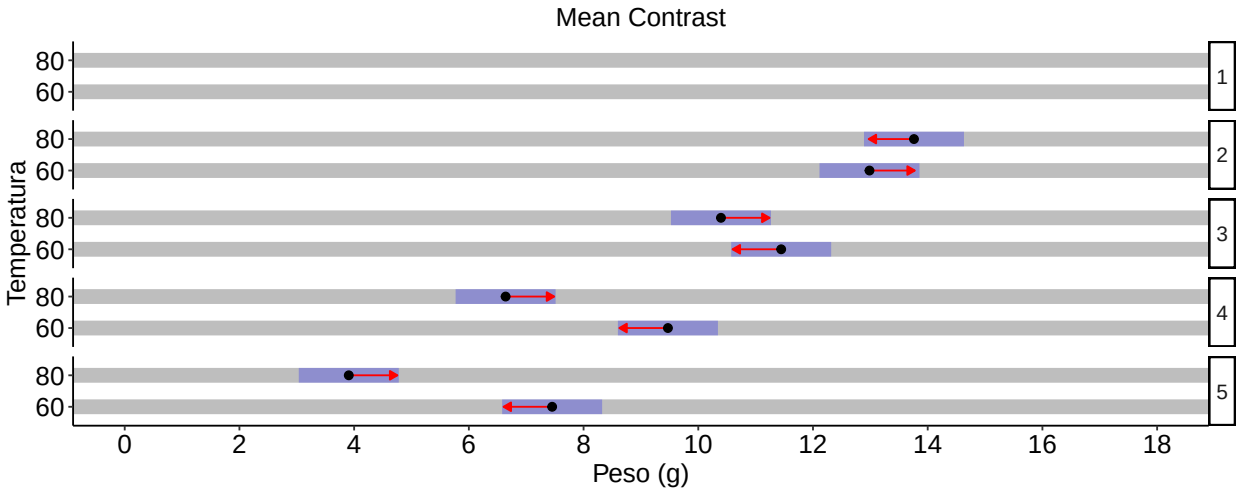
```
## Denom. DF: 19
##                   numDF  F-value p-value
## (Intercept)           1 71443.31  <.0001
## Hora                  4  2670.19  <.0001
## Temperatura           1    40.22  <.0001
## basal                 1    59.40  <.0001
## Hora:Temperatura      4     8.39   4e-04
```

Efectos simples

```
## $emmeans
## Hora = 1:
##  Temperatura emmean    SE   df lower.CL upper.CL
##  60           19.37 0.386 9.08    18.50    20.25
##  80           20.73 0.386 9.08    19.86    21.60
##
## Hora = 2:
##  Temperatura emmean    SE   df lower.CL upper.CL
##  60           12.99 0.386 9.08    12.11    13.86
##  80           13.76 0.386 9.08    12.89    14.63
##
## Hora = 3:
##  Temperatura emmean    SE   df lower.CL upper.CL
##  60           11.45 0.386 9.08    10.57    12.32
##  80           10.40 0.386 9.08     9.52    11.27
##
## Hora = 4:
##  Temperatura emmean    SE   df lower.CL upper.CL
##  60            9.47 0.386 9.08     8.60    10.34
##  80            6.64 0.386 9.08     5.77     7.51
##
## Hora = 5:
##  Temperatura emmean    SE   df lower.CL upper.CL
##  60            7.45 0.386 9.08     6.58     8.32
##  80            3.91 0.386 9.08     3.03     4.78
##
## 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   -1.358 0.731 7.74  -1.856  0.1017
##
## Hora = 2:
##  contrast                      estimate    SE   df t.ratio p.value
##  Temperatura60 - Temperatura80   -0.776 0.731 7.74  -1.060  0.3210
##
## Hora = 3:
##  contrast                      estimate    SE   df t.ratio p.value
##  Temperatura60 - Temperatura80    1.050 0.731 7.74   1.435  0.1904
##
## Hora = 4:
```

```
##  contrast                       estimate    SE   df t.ratio p.value
##  Temperatura60 - Temperatura80    2.830 0.731 7.74   3.869  0.0051
##
## Hora = 5:
##  contrast                       estimate    SE   df t.ratio p.value
##  Temperatura60 - Temperatura80    3.545 0.731 7.74   4.847  0.0014
##
## Note: contrasts are still on the ( scale
## Degrees-of-freedom method: appx-satterthwaite
```

Gráfico de comparaciones



Modelo