

clase-4.R

Andy

2024-05-20

```
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# 2026333  
# 20/05/2024
```

```
#Experimento ganancia en peso (GP) basado en diferentes  
#Niveles de factor: 4 (die1, die2, die3, die4)
```

```
die1 <- c(2.4, 2.2, 3.4, 1.6)  
die2 <- c(2.2, 1.9, 1.7, 2.1)  
die3 <- c(3.3, 1.3, 2.8, 2.1)  
die4 <- c(1.6, 2.5, 1.4, 2.4)
```

```
# Sumatoria de grupos/bloques
```

```
sum(die1[1]+die2[1]+die3[1]+die4[1])
```

```
## [1] 9.5
```

```
sum(die1[2]+die2[2]+die3[2]+die4[2])
```

```
## [1] 7.9
```

```
sum(die1[3]+die2[3]+die3[3]+die4[3])
```

```
## [1] 9.3
```

```
sum(die1[4]+die2[4]+die3[4]+die4[4])
```

```
## [1] 8.2
```

```
# Sumatoria de Las dietas independientes de grupo/bloque
```

```
sum(die1); sum(die2); sum(die3); sum(die4)
```

```
## [1] 9.6
```

```
## [1] 7.9
```

```
## [1] 9.5
```

```
## [1] 7.9
```

```
GP <- c(die1, die2, die3, die4)
```

```
Trat <- gl(4, 4, 16, labels = c("die1", "die2", "die3", "die4"))
```

```

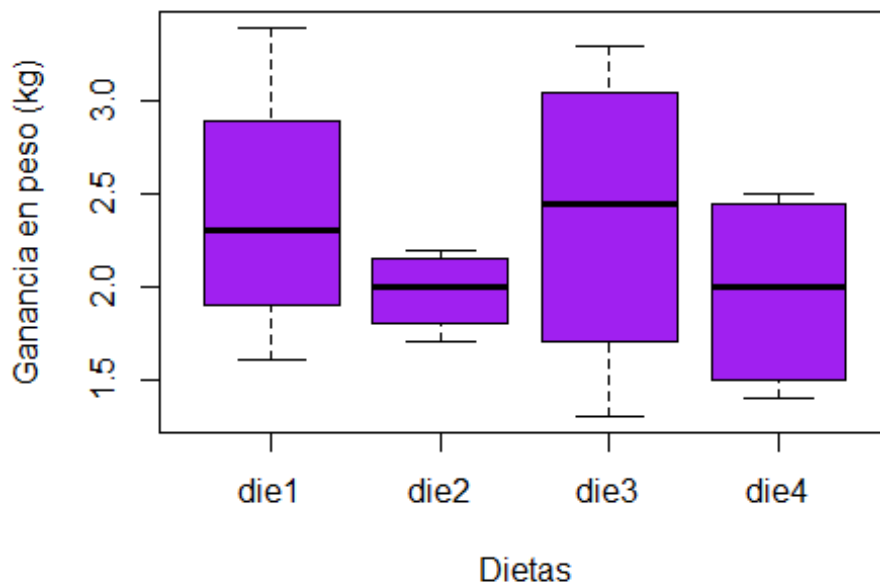
Bloq <- gl(4, 4, 16, labels = c("B", "NM", "SP", "O"))

Dietas <- data.frame(Trat, Bloq, GP)
head(Dietas)

##   Trat Bloq  GP
## 1 die1    B 2.4
## 2 die1    B 2.2
## 3 die1    B 3.4
## 4 die1    B 1.6
## 5 die2   NM 2.2
## 6 die2   NM 1.9

boxplot(Dietas$GP ~ Dietas$Trat, col = "purple",
        xlab = "Dietas",
        ylab = "Ganancia en peso (kg)")

```



```

tapply(Dietas$GP, Dietas$Trat, var)

##      die1      die2      die3      die4
## 0.56000000 0.04916667 0.75583333 0.30916667

fligner.test(Dietas$GP, Dietas$Trat)

##
##  Fligner-Killeen test of homogeneity of variances
##

```

```
## data: Dietas$GP and Dietas$Trat
## Fligner-Killeen:med chi-squared = 4.6369, df = 3, p-value = 0.2004

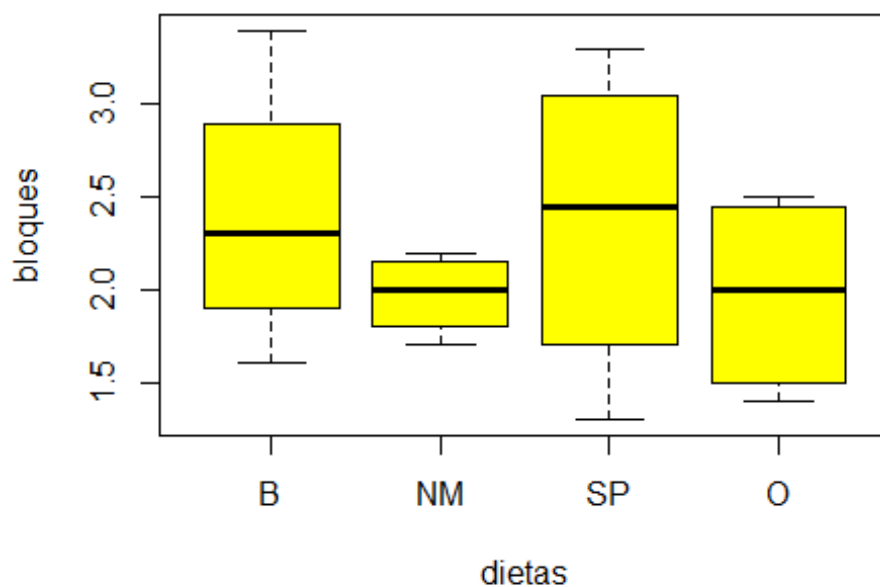
bartlett.test(Dietas$GP, Dietas$Trat)

##
## Bartlett test of homogeneity of variances
##
## data: Dietas$GP and Dietas$Trat
## Bartlett's K-squared = 4.1152, df = 3, p-value = 0.2493

diet.aov <- aov(Dietas$GP ~ Dietas$Bloq)
summary(diet.aov)

##              Df Sum Sq Mean Sq F value Pr(>F)
## Dietas$Bloq   3  0.682   0.2273   0.543   0.662
## Residuals    12  5.022   0.4185

boxplot(Dietas$GP ~ Dietas$Bloq, col = "yellow", xlab = "dietas", ylab =
"bloques")
```



```
di2.aov <- aov(Dietas$GP ~ Dietas$Trat + Dietas$Bloq)
summary(di2.aov)

##              Df Sum Sq Mean Sq F value Pr(>F)
## Dietas$Trat   3  0.682   0.2273   0.543   0.662
## Residuals    12  5.022   0.4185
```