Análisis multivariado
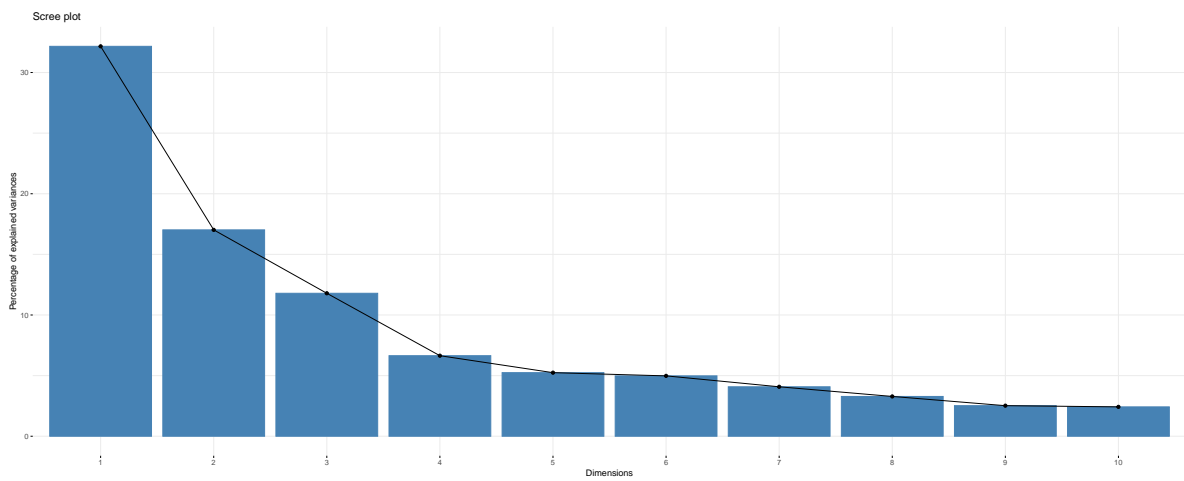
```
## [1] FALSE
```

```
## [1] FALSE
```

Biplot de PCA con Individuos y Variables

site ● Concordia ● Palmar ● Gualeguaychu   year ● 2019 ▲ 2021 ■ 2022

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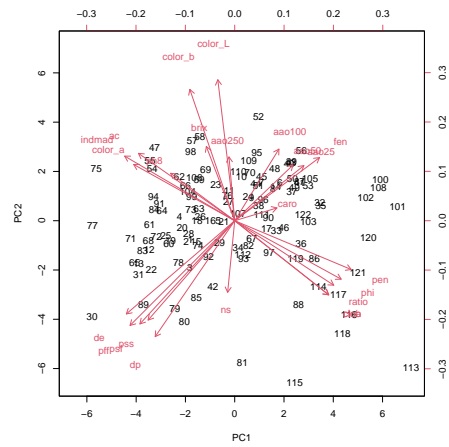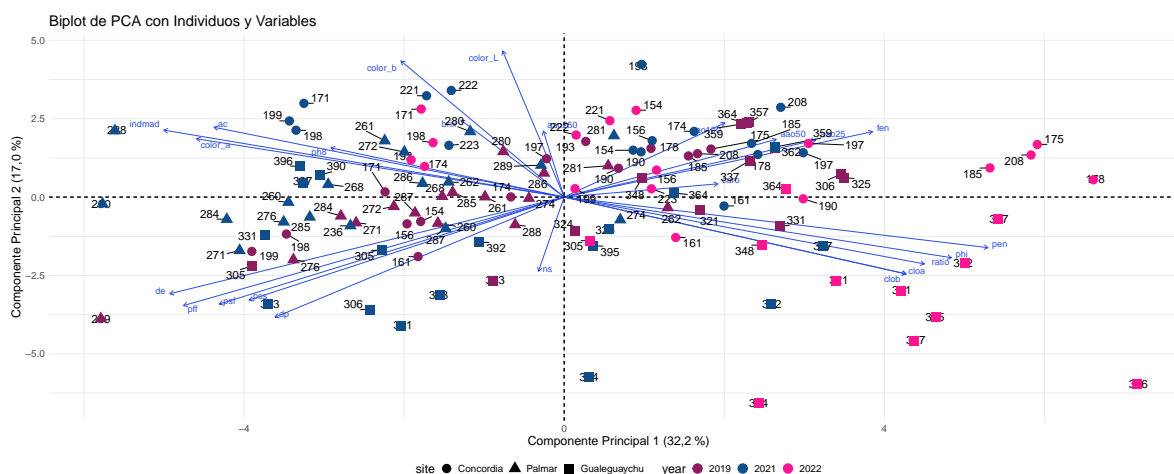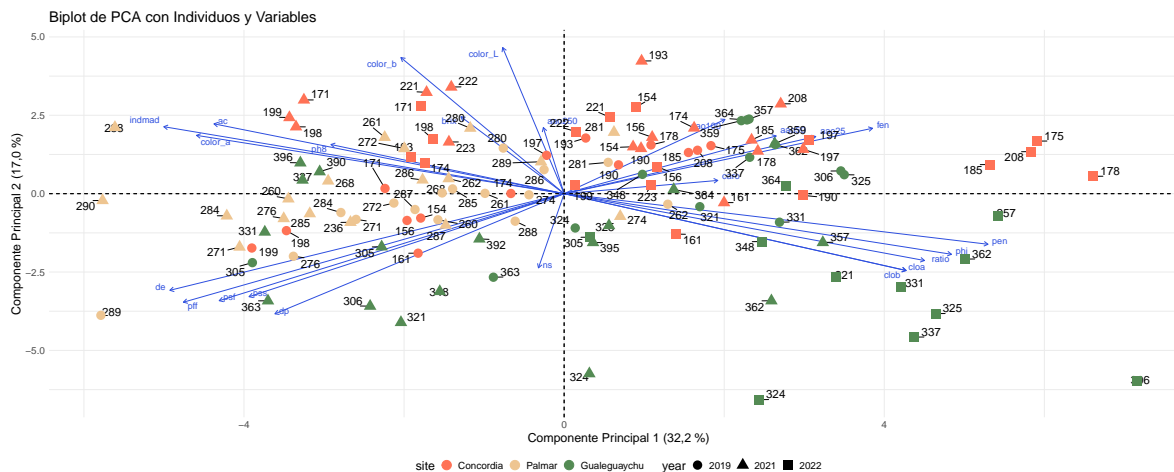
```
##        pen      indmad         de         phi         pff     color_a       ratio          ac         psf
## 8.70827124  7.76789015  7.53413101  7.27058886  7.02575009  6.54985768  6.29330913  5.94357995  5.76768814  5
##        ph8       aao50     color_b       aao100        caro        brix     color_L          ns      aao250
## 2.63564975  2.18002277  1.29162007  1.25386278  1.14500902  0.51619777  0.18318633  0.03196175  0.02097578
```

```
##    color_L     color_b          dp         pff         psf         pss          de        brix        cloa
## 12.7458133  11.0571486   8.6185104   7.0304350   6.8346191   6.3341881   5.5738117   3.5306837   3.5237796   3
##     aao250         fen         phi      color_a       aao50       aao25         pen         ph8        caro
##  2.6095983   2.5532503   2.1928534   2.0297828   1.9890855   1.9473648   1.5279107   1.4417688   0.1045918
```
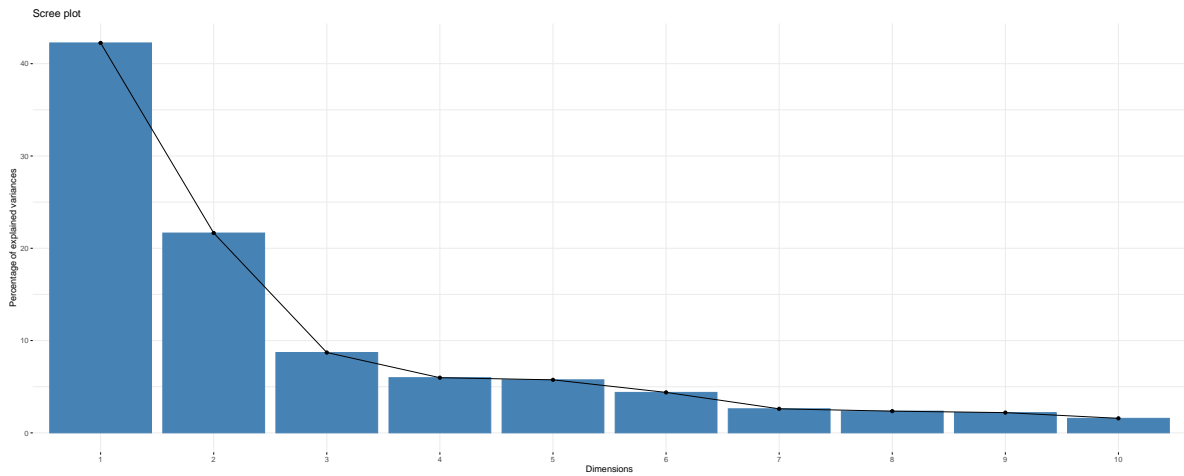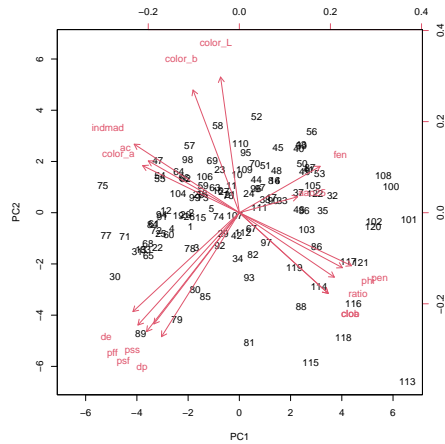
Supresión de variables

```
##     pff          de  color_L          dp         psf  color_b        pss  indmad        pen        phi        clob        cloa       ra
##   14.06       13.10    12.93       12.67       12.60    12.35      11.14   10.45      10.24       9.46        9.19        9.18        8
##      ns      aao250     caro
##    3.32        2.63     1.25
```

```
## [1] FALSE
```

```
## [1] FALSE
```

2

```
## Error in `geom_text_repel()`:
## ! Problem while computing aesthetics.
## i Error occurred in the 8th layer.
## Caused by error:
## ! objeto 'phenotype' no encontrado
```

```
## Error in `geom_text_repel()`:
## ! Problem while computing aesthetics.
## i Error occurred in the 8th layer.
## Caused by error:
## ! objeto 'phenotype' no encontrado
```

```
##       pen        de    indmad       phi       pff   color_a     ratio       psf        ac      clob
## 9.4979398 8.5296807 8.3292185 8.0039985 7.7488815 7.0460675 6.7995607 6.4859841 6.2437314 5.9496840 5
```

```
##   color_L        dp   color_b       psf       pff       pss        de      cloa      clob    indmad
## 13.861935 11.580254 11.336556 10.648967  9.504779  9.320923  7.367315  4.905522  4.903379  3.536766
```

Cluster de fenotipos de ubajay
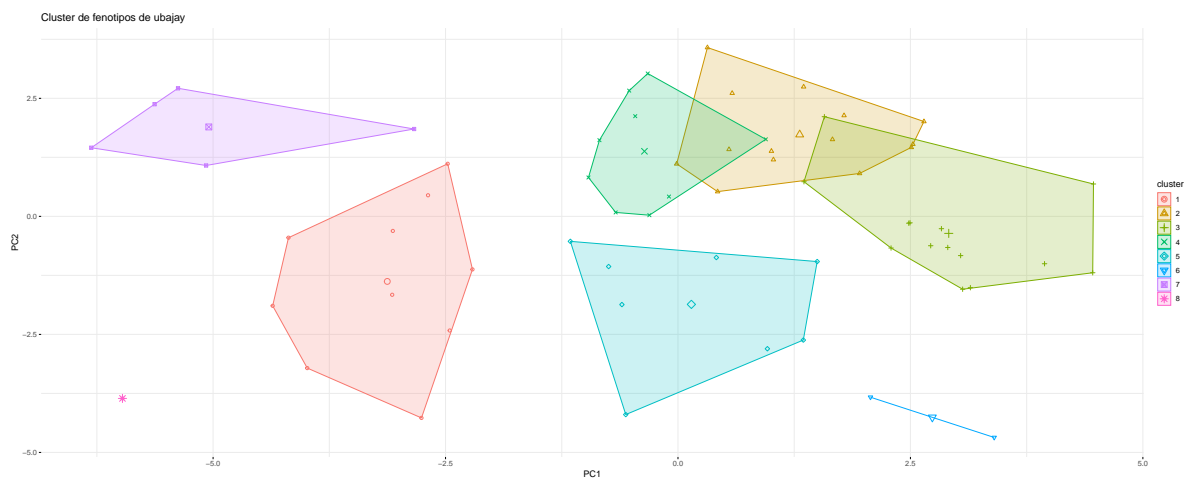
Análisis univariado
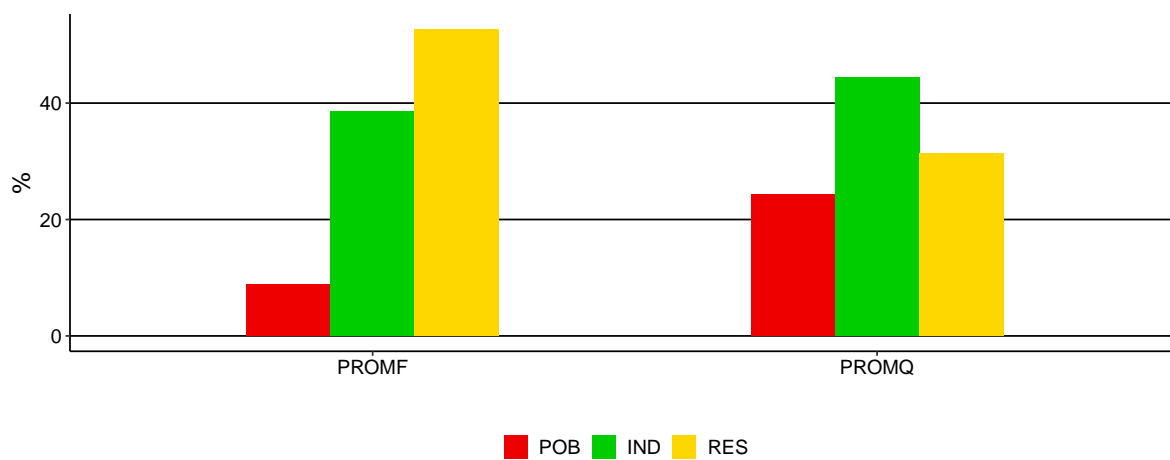
- QUIM chemical variables

- FIS physical variables

- PFF Peso fresco del fruto

- DE Diámetro ecuatorial

- DP Diámetro polar

- PEN Resistencia a la penetración

- PSF Peso seco del fruto

- PSS Peso seco semilla

- IM Índice de madurez

- AAO Actividad Anti Oxidante

- CAR Carotenoides

- CLOA Clorofila a

- CLOB Clorofila b

- PHE Fenoles totales

- TSS Solidos solubles totales

- TTA Acidez Total Titulable

- POB population

- IND phenotype

- RES residual