

QUINOA: RESULTADOS GRAFICOS

Buscar PeerJ. Author guidelines

Tabla 1. Tabla de Tallos

##	Location	Variety	Yield.KG.HA	Days.to.flowering	Days.to.maturity
## 1	Chile	Regalona	2402.33±465.28a	70	165
## 2	Chile	Salcedo	2743.33±80.13a	100	180
## 3	Chile	Titicaca	4300.33±1841.58b	50	105
## 4	Spain	Regalona	2606.00±0.00a	63	138
## 5	Spain	Salcedo	*	92	187
## 6	Spain	Titicaca	1526.00±0.00a	51	119
##	Plant.height..m.	Stem.diameter..cm.	Panicle.length..cm.		
## 1	1.30±0.06d	15.33±1.53ab	17.00±1.00a		
## 2	0.84±0.09a	11.33±1.53a	31.66±3.51cd		
## 3	1.04±0.09b	12.00±1.00a	22.33±2.08ab		
## 4	1.25±0.05cd	14.80±2.28ab	20.00±2.55a		
## 5	1.36±0.06d	16.80±2.77b	36.00±2.55d		
## 6	1.15±0.03bc	12.20±1.30a	28.00±2.35bc		
##	Panicle.diameter..cm.	Plant.weight..g.	Grain.weight.per.plant..g.		
## 1	11.00±1.00bc	103.00±18.08a	40.33±13.80a		
## 2	7.00±0.00a	78.00±2.65a	36.67±7.02a		
## 3	7.00±0.00a	86.00±19.31a	42.67±9.71a		
## 4	12.00±1.58c	107.80±15.06a	50.60±9.58a		
## 5	9.00±1.00ab	*	*		
## 6	7.00±1.00a	89.60±7.67a	37.20±4.66a		
##	Harvest.index				
## 1	0.42±0.22a				
## 2	0.47±0.09a				
## 3	0.50±0.00a				
## 4	0.47±0.04a				
## 5	*				
## 6	0.42±0.03a				

(*) Quiere decir que no hubo suficiente grano para hacer el analisis porque se perdio.

Los grupos Tukey estan ya en la tabla.

Fig 1. A y B. Analisis elementos. Radarcharts

Comparar variedad (A) y localizaciones (B).

Suplementaria: valores absolutos en forma de rawdata organizada en excel

cldlist

##	\$Calcium						
##	VARLOC	emmean	SE	df	lower.CL	upper.CL	.group
##	Salcedo-Peru	513.9967	26.85335	14	429.8014	598.1919	a
##	Titicaca-Chile	618.9567	26.85335	14	534.7614	703.1519	ab
##	Regalona-Spain	728.9567	26.85335	14	644.7614	813.1519	b
##	Titicaca-Spain	888.4100	26.85335	14	804.2147	972.6053	c

```

## Salcedo-Spain 934.4500 26.85335 14 850.2547 1018.6453 c
## Regalona-Chile 1265.5267 26.85335 14 1181.3314 1349.7219 d
## Salcedo-Chile 1360.1733 26.85335 14 1275.9781 1444.3686 d
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05
##
## $Iron
## VARLOC emmean SE df lower.CL upper.CL .group
## Regalona-Spain 55.38333 1.28534 14 51.35331 59.41335 a
## Salcedo-Peru 62.81000 1.28534 14 58.77998 66.84002 b
## Salcedo-Spain 66.80333 1.28534 14 62.77331 70.83335 bc
## Titicaca-Spain 69.26333 1.28534 14 65.23331 73.29335 c
## Titicaca-Chile 82.54000 1.28534 14 78.50998 86.57002 d
## Salcedo-Chile 83.32333 1.28534 14 79.29331 87.35335 d
## Regalona-Chile 90.98333 1.28534 14 86.95331 95.01335 e
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05
##
## $Magnesium
## VARLOC emmean SE df lower.CL upper.CL .group
## Salcedo-Spain 1741.167 23.37673 14 1667.872 1814.461 a
## Titicaca-Chile 1813.973 23.37673 14 1740.679 1887.268 ab
## Titicaca-Spain 1863.863 23.37673 14 1790.569 1937.158 bc
## Salcedo-Peru 1924.093 23.37673 14 1850.799 1997.388 bc
## Regalona-Spain 1962.883 23.37673 14 1889.589 2036.178 c
## Salcedo-Chile 2238.103 23.37673 14 2164.809 2311.398 d
## Regalona-Chile 2278.507 23.37673 14 2205.212 2351.801 d
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05
##
## $Phosphorus
## VARLOC emmean SE df lower.CL upper.CL .group
## Titicaca-Chile 2846.433 52.72691 14 2681.115 3011.752 a
## Salcedo-Spain 3155.847 52.72691 14 2990.528 3321.165 b
## Salcedo-Chile 3246.087 52.72691 14 3080.768 3411.405 bc
## Regalona-Chile 3437.897 52.72691 14 3272.578 3603.215 c
## Titicaca-Spain 3915.373 52.72691 14 3750.055 4080.692 d
## Salcedo-Peru 3934.627 52.72691 14 3769.308 4099.945 d
## Regalona-Spain 4232.863 52.72691 14 4067.545 4398.182 e
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05
##

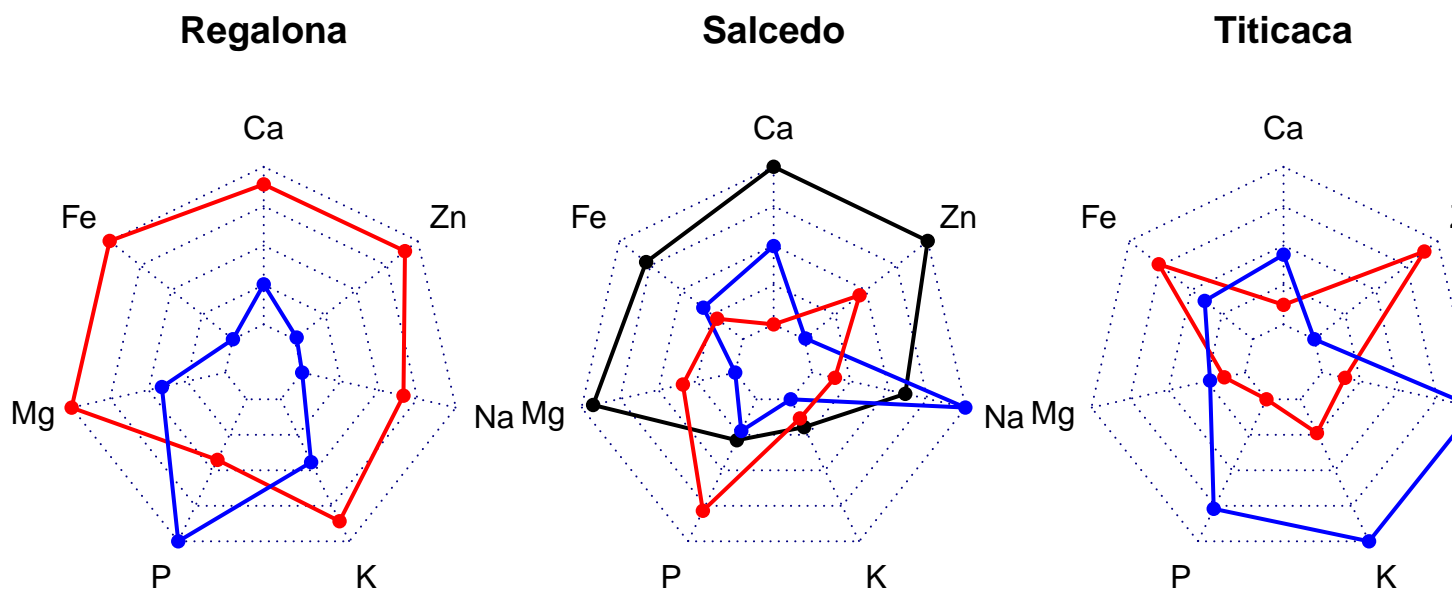
```

```

## $Potassium
## VARLOC          emmean          SE df lower.CL upper.CL .group
## Salcedo-Spain   8866.917 190.6043 14 8269.301 9464.532 a
## Salcedo-Peru    9648.660 190.6043 14 9051.044 10246.276 ab
## Salcedo-Chile   10006.250 190.6043 14 9408.634 10603.866 b
## Titicaca-Chile  10250.257 190.6043 14 9652.641 10847.872 b
## Regalona-Spain  11440.323 190.6043 14 10842.708 12037.939 c
## Regalona-Chile  13856.503 190.6043 14 13258.888 14454.119 d
## Titicaca-Spain  14678.487 190.6043 14 14080.871 15276.102 d
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05
##
## $Sodium
## VARLOC          emmean          SE df lower.CL upper.CL .group
## Regalona-Spain  3.116667 0.3939039 14 1.881631 4.351702 a
## Salcedo-Peru    5.146667 0.3939039 14 3.911631 6.381702 b
## Titicaca-Chile  5.160000 0.3939039 14 3.924964 6.395036 b
## Salcedo-Chile   11.383333 0.3939039 14 10.148298 12.618369 c
## Regalona-Chile  12.103333 0.3939039 14 10.868298 13.338369 c
## Salcedo-Spain   16.710000 0.3939039 14 15.474964 17.945036 d
## Titicaca-Spain  16.746667 0.3939039 14 15.511631 17.981702 d
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05
##
## $Zinc
## VARLOC          emmean          SE df lower.CL upper.CL .group
## Titicaca-Spain  25.13000 0.2758594 14 24.26508 25.99492 a
## Salcedo-Spain   25.26667 0.2758594 14 24.40174 26.13159 a
## Regalona-Spain  25.43000 0.2758594 14 24.56508 26.29492 a
## Salcedo-Peru    32.98333 0.2758594 14 32.11841 33.84826 b
## Titicaca-Chile  40.80667 0.2758594 14 39.94174 41.67159 c
## Regalona-Chile  40.86667 0.2758594 14 40.00174 41.73159 c
## Salcedo-Chile   42.69333 0.2758594 14 41.82841 43.55826 d
##
## Confidence level used: 0.95
## Conf-level adjustment: sidak method for 7 estimates
## P value adjustment: tukey method for comparing a family of 7 estimates
## significance level used: alpha = 0.05

```

A. Incluir estadística por Tukey (tres grupos) o t-Student (dos grupos) para cada elemento subyeteando por VARIEDAD, anova-1 factor (pais) y Tukey/t-student para sacar grupos A-B-C-D... Leyenda. Rojo-Chile, Azul-Spain, Negro-Peru



B. Incluir estadística por Tukey (tres grupos) o t-Student (dos grupos) para cada elemento subseando por PAIS, anova-1 factor (variedad) y Tukey/t-student para sacar grupos A-B-C-D...

Leyenda. Rojo-Salcedo, Negro-Regalona, Azul-Titicaca

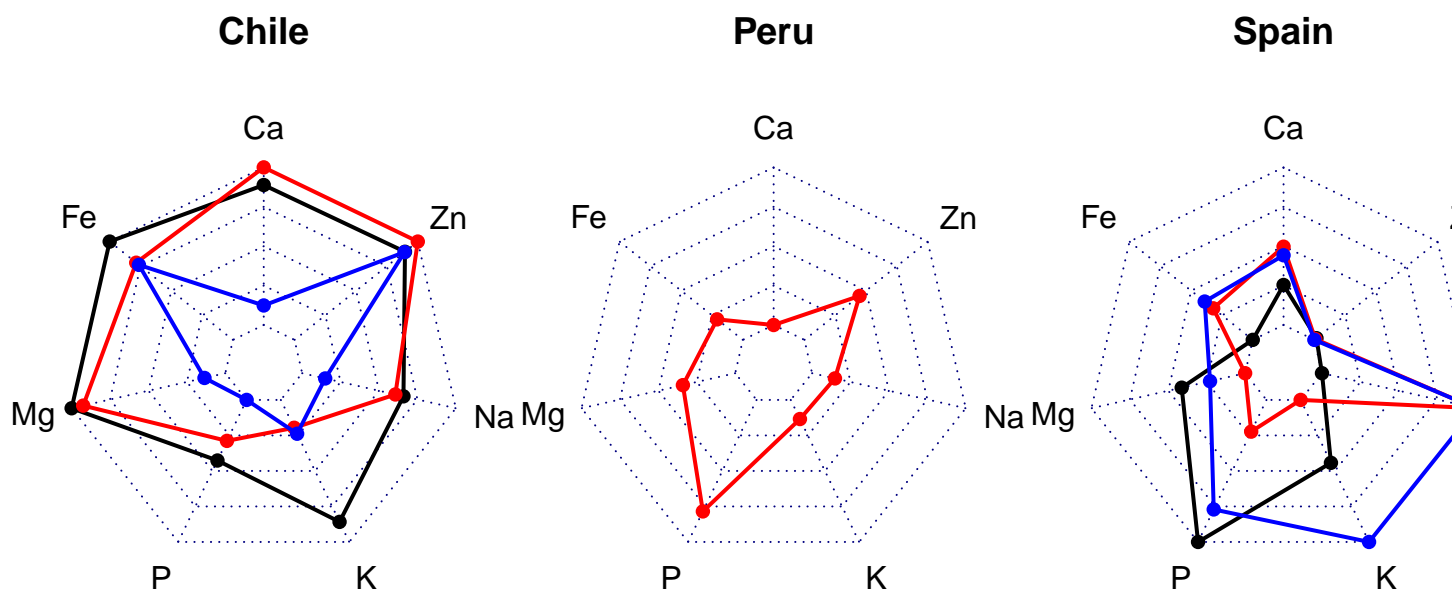


Fig 2. Fitato

Datos no disponibles.

Fig 3. Proteina-Total

Barras mas estrechas. Grupos Tukey. Barras de error representan CI

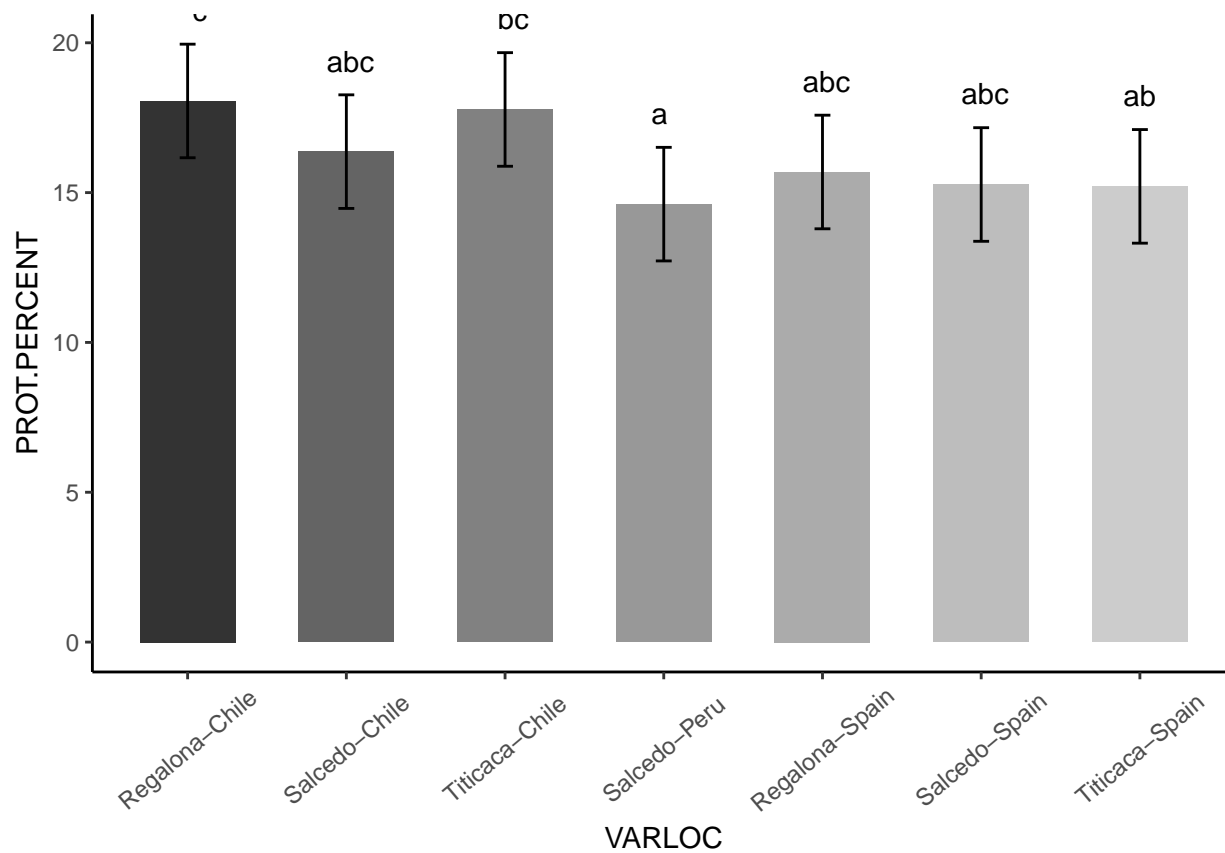


Fig 4. Aminoacidos

Barras de error 95% CI

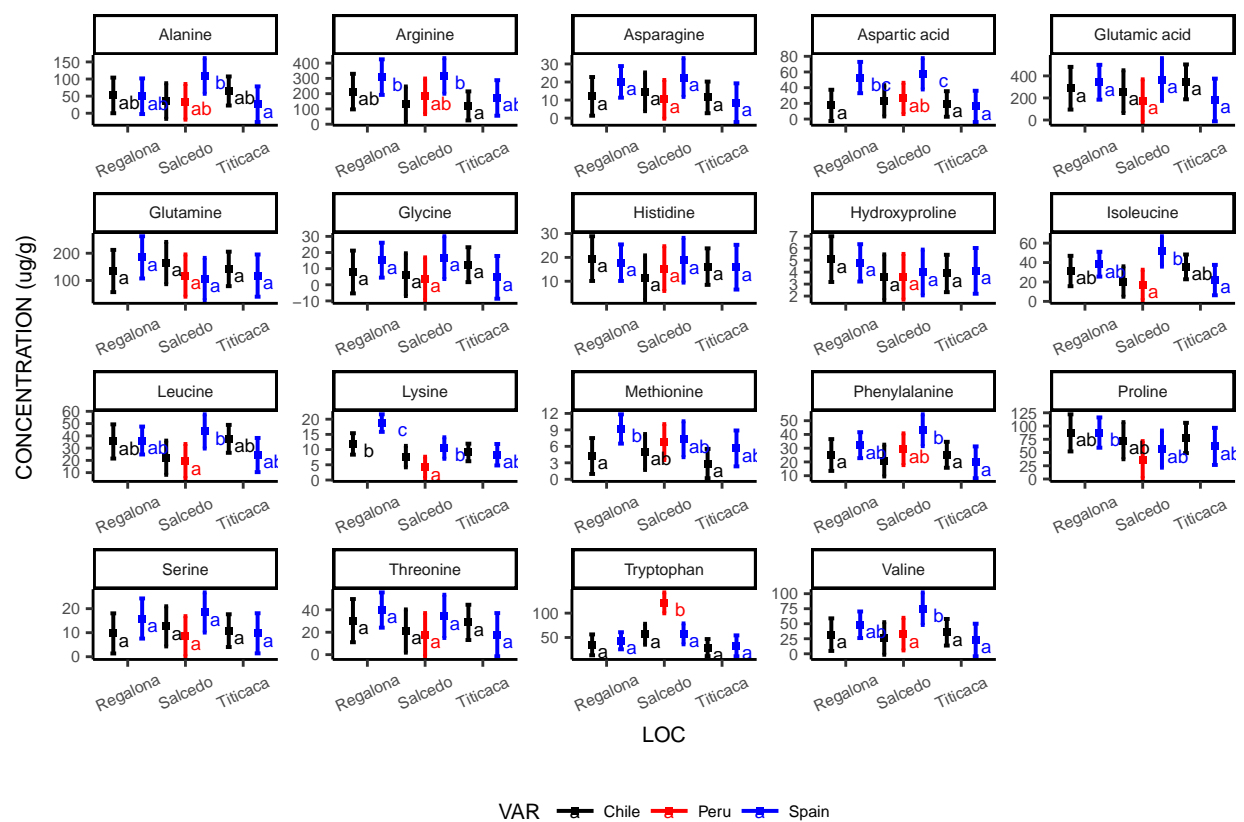


Fig 5. FRAP (antioxidante)

Barras mas estrechas. Barras de error representan CI

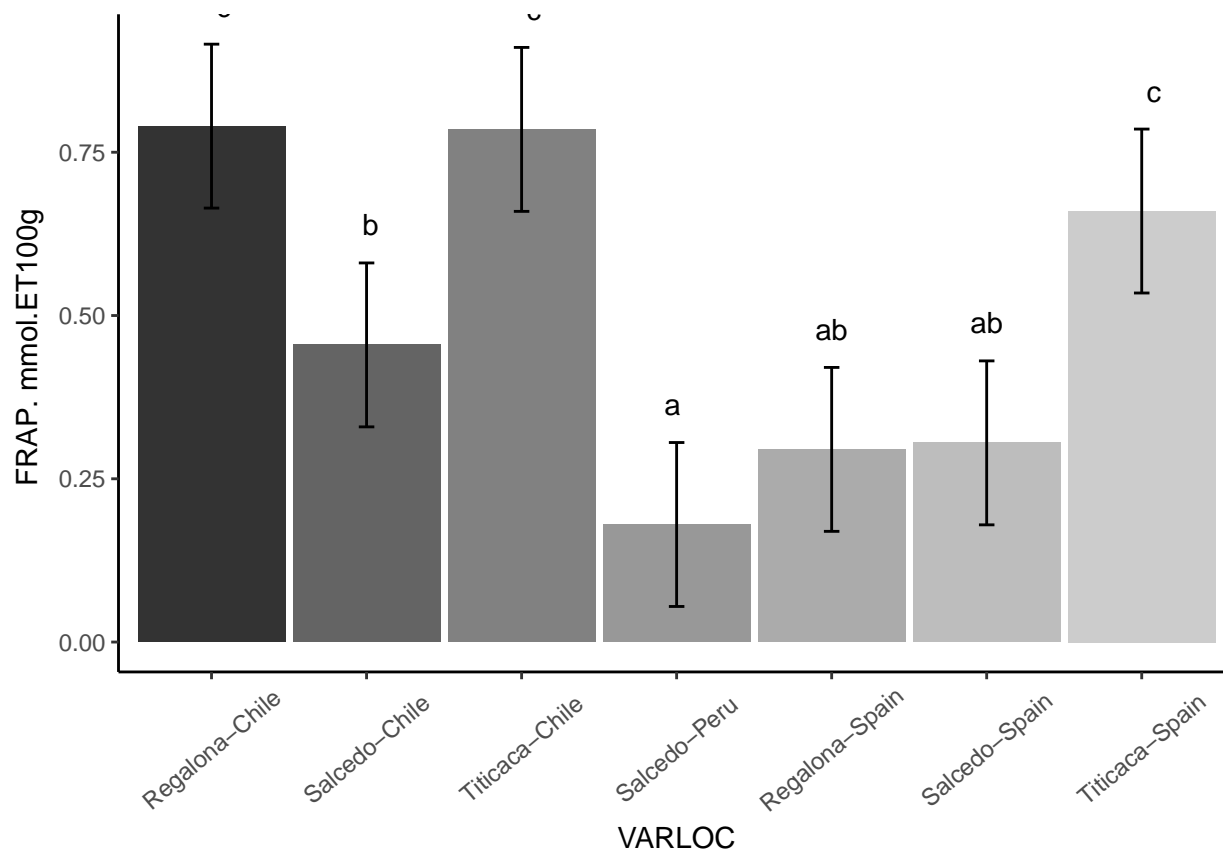
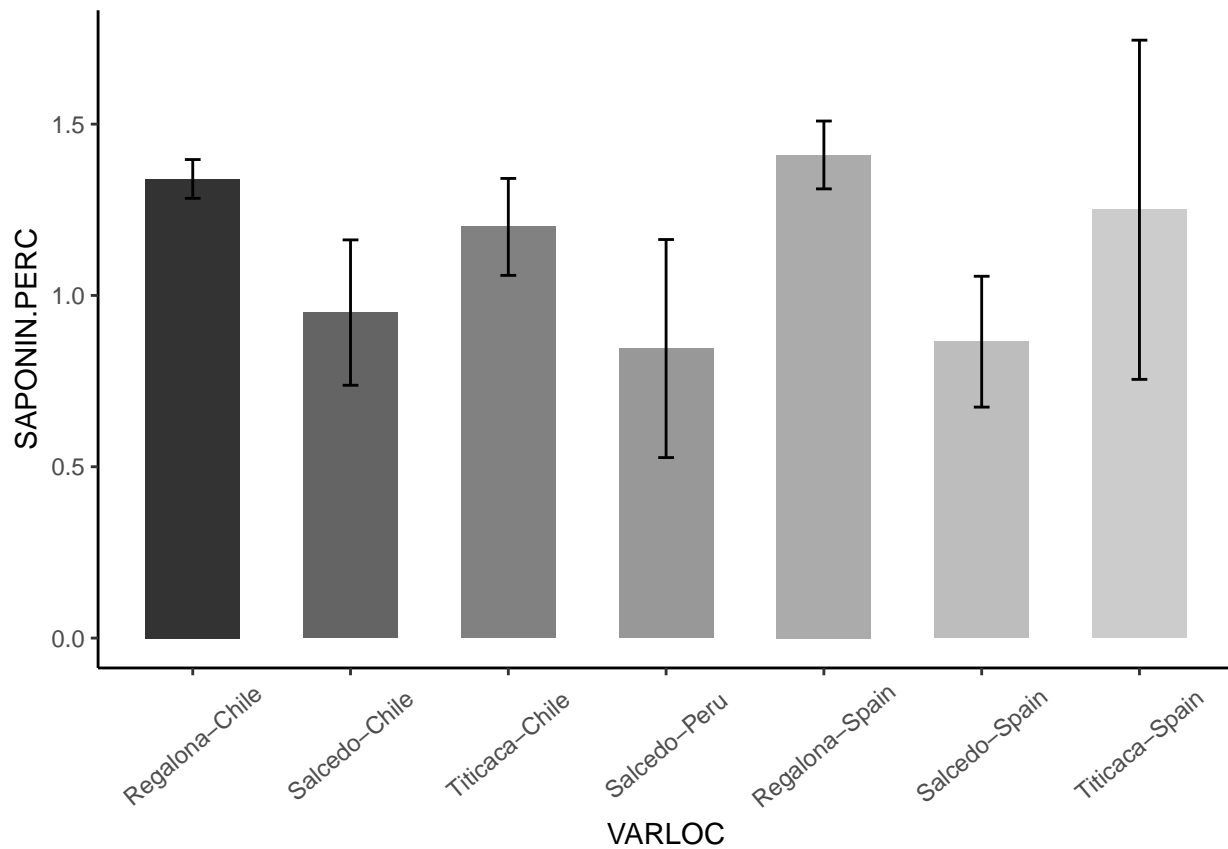
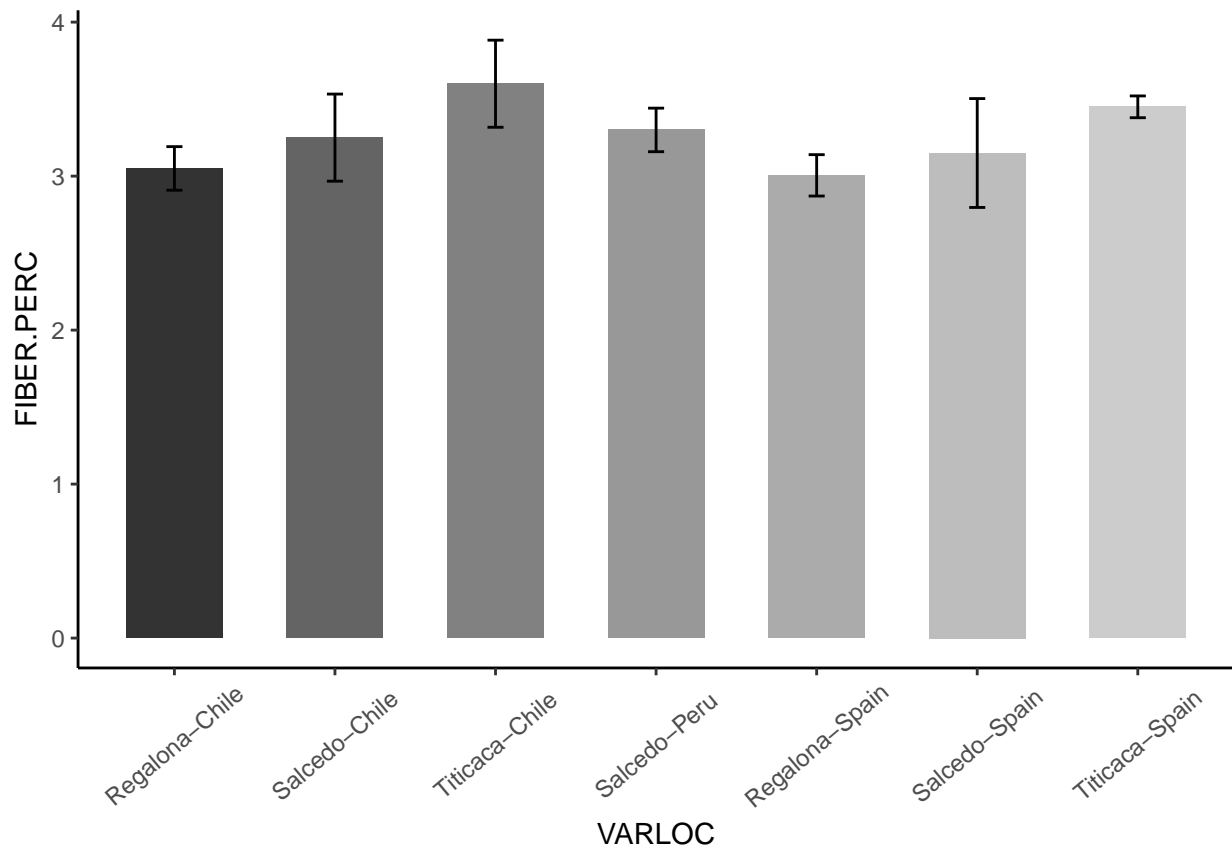


Fig 6. Porcentaje de Fibra y saponina. Media y Std.dev

```
ggplot(sumSAP,aes(x=VARLOC,y=SAPONIN.PERC,fill=VARLOC))+
  geom_bar(position="dodge", stat="identity",width = 0.6)+
  geom_errorbar(aes(ymin=SAPONIN.PERC-sd, ymax=SAPONIN.PERC+sd),width=0.1)+
  theme_classic()+
  ylab('SAPONIN.PERC')+
  scale_fill_grey()+
  theme(legend.position='none')+
  theme(axis.text.x=element_text(angle = 40, vjust = 0.5))
```



```
ggplot(sumFIB,aes(x=VARLOC,y=FIBER.PERC,fill=VARLOC))+
  geom_bar(position="dodge", stat="identity",width = 0.6)+
  geom_errorbar(aes(ymin=FIBER.PERC-sd, ymax=FIBER.PERC+sd),width=0.1)+
  theme_classic()+
  ylab('FIBER.PERC')+
  scale_fill_grey()+
  theme(legend.position='none')+
  theme(axis.text.x=element_text(angle = 40, vjust = 0.5))
```

Datos suplementarios

Rawdata, codigo...